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

NEBRASKA DEPARTMENT OF TRANSPORTATION
LETTING DATE: February 07, 2019

CALL ORDER: 200
CONTROL NO. SEQ. NO.: 22638 000

TENTATIVE START DATE: 04/01/2019
LOCATION: I-680 / WEST CENTER BRIDGE, OMAHA
IN COUNTY: DOUGLAS

GROUP 1  GRADING
GROUP 4  CULVERTS
GROUP 5  SEEDING
GROUP 6  BRIDGE AT STA 5132+75.42
GROUP 6A BRIDGE AT STA 5123+87.51
GROUP 6B BRIDGE AT STA 5123+62.18
GROUP 7  GUARDRAIL
GROUP 9  BITUMINOUS
GROUP 10 GENERAL ITEMS

THIS PROPOSAL CONTAINS A DBE GOAL OF 3.00 %
SEE SPECIAL PROVISIONS FOR GROUP TIES

NOTES

THE TOTAL AMOUNT OR WORK WHICH WILL BE ACCEPTED IN
THIS LETTING IS LIMITED TO $__________

THE NUMBER OF GROUP ________ CONTRACTS WHICH WILL BE
ACCEPTED IN THIS LETTING IS LIMITED TO _________.

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NOTICE TO ALL BIDDERS

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

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

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

LETTING QUESTIONS

Prior to the letting, any questions pertaining to the Special Provisions or the Plans for this project should be submitted to NDOT in a written format through the Bid Express (BidX) website at https://www.bidx.com/ne/lettings. Likewise, NDOT will post answers exclusively to the BidX website. All official answers will be identified as “Authorized by NDOT.” Questions will not be answered verbally.
REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, 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 supervision and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

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, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) 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 provisions of the Americans with 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 contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its 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, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program 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 minorities and women.

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 minorities and women 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 minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women 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, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such 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 its 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 their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are
applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

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. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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 employees who are minorities and women 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 good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 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 good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith 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 contracting agency 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 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 minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. 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. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. 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 the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

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

(1) The number and work hours 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; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontracts will submit an annual report to the contracting agency 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. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor
will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

   a. All laborers and mechanics 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 issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). 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. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) 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.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

   (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

   (ii) The classification is utilized in the area by the construction industry; and

   (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), 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 Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The 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.

(3) In the event the contractor, the laborers or mechanics to be employed in the 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. The Wage and Hour 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. 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 shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as 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.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor 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, so 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 contracting agency 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.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of 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. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/wh/forms/w347Instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5(a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5(a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each 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 Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
(3) 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 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 31 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, 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 FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action 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.

4. Apprentices and trainees

   a. Apprentices (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or 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 Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen 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 worker 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 on 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 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 journeymen's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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 journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeymen 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 wage rate on the wage determination which provides for less than full fringe benefits for apprentices. 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 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.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor 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. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.
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.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 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 U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to anyperson or firm ineligible for award of a government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).


V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation: liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the 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 or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys 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 (1.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.
VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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 contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor’s own organization (23 CFR 635.116).

   a. The term “perform work with its own organization” refers to workers employed or leased 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 or lower tier subcontractor, agents of the prime contractor, or any other assignee. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

      (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
      (2) the prime contractor remains responsible for the quality of the work of the leased employees;
      (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
      (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

   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 or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI 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 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 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 contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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 contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

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. 3704).

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.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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 respecting the seriousness of these and similar acts, Form FHWA-1022 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.

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

- 10 -
"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 under this title or imprisoned not more than 5 years or both."

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

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

   a. By signing and submitting this proposal, the prospective first tier 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 first tier 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 first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

   c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

   d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier 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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

   f. The prospective first 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 entering into this transaction.

   g. The prospective first tier 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 Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

   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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epis.gov), which is compiled by the General Services Administration.
2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment 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;

3. 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 (a)(2) of this certification; and

4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

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,” “participant,” “person,” “principal,” and “voluntarily excluded,” as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contractor); “First Tier Participants” refers to any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled “Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction” in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

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, declared ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epis.gov), which is compiled by the General Services Administration.

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 Participants:

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 participating in covered transactions 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.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

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

   a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

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

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

3. The prospective participant also agrees by submitting its bid or proposal that the participant 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.
ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

   a. To the extent that qualified persons regularly residing in the area are not available.

   b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

   c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.
NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(EXECUTIVE ORDER 11246)

1. The Offeror’s or Bidder’s attention is called to the “Equal Opportunity Clause” and the “Standard Federal Equal Employment Specifications” set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor’s aggregate work force in each trade on all construction work in the covered area are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE

<table>
<thead>
<tr>
<th>Economic Area</th>
<th>Goal %</th>
</tr>
</thead>
<tbody>
<tr>
<td>103 Sioux City, IA:</td>
<td></td>
</tr>
<tr>
<td>SMSA Counties:</td>
<td></td>
</tr>
<tr>
<td>7720 Sioux City, IA-NE</td>
<td>1.9</td>
</tr>
<tr>
<td>IA Woodbury, NE Dakota</td>
<td>1.2</td>
</tr>
<tr>
<td>Non-SMSA Counties:</td>
<td></td>
</tr>
<tr>
<td>IA Cherokee, IA Crawford, IA Ida, IA Monona, IA O’Brien, IA Plymouth, IA Sioux, NE Antelope, NE Cedar, NE Cuming, NE Dixon, NE Knox, NE Madison, NE Pierce, NE Stanton, NE Thurston, NE Wayne, SD BonHomme, SD Clay, SD Union, SD Yankton</td>
<td>2.8</td>
</tr>
<tr>
<td>142 Lincoln, NE:</td>
<td></td>
</tr>
<tr>
<td>SMSA Counties:</td>
<td></td>
</tr>
<tr>
<td>4363 Lincoln, NE</td>
<td>2.8</td>
</tr>
<tr>
<td>Non-SMSA Counties:</td>
<td></td>
</tr>
<tr>
<td>NE Butler, NE Fillmore, NE Gage, NE Jefferson, NE Johnson, NE Nemaha, NE Otoe, NE Pawnee, NE Polk, NE Richardson, NE Saline, NE Seward, NE Thayer, NE York</td>
<td>1.9</td>
</tr>
<tr>
<td>143 Omaha, NE:</td>
<td></td>
</tr>
<tr>
<td>SMSA Counties:</td>
<td></td>
</tr>
<tr>
<td>5920 Omaha, NE-IA</td>
<td>7.5</td>
</tr>
<tr>
<td>IA Pottawattamie, NE Douglas, NE Saunders</td>
<td>5.3</td>
</tr>
<tr>
<td>Non-SMSA Counties:</td>
<td></td>
</tr>
<tr>
<td>IA Adams, IA Audubon, IA Cass, IA Fremont, IA Harrison, IA Mills, IA Montgomery, IA Page, IA Shelby, IA Taylor, NE Burt, NE Cass, NE Colfax, NE Dundy, NE Platte, NE Saunders, NE Washington</td>
<td>5.3</td>
</tr>
<tr>
<td>144 Grand Island, NE:</td>
<td></td>
</tr>
<tr>
<td>Non-SMSA Counties:</td>
<td></td>
</tr>
<tr>
<td>NE Adams, NE Arthur, NE Blaine, NE Boone, NE Bovd, NE Brown, NE Buffalo, NE Chase, NE Cherry, NE Clay, NE Custer, NE Dawson, NE Dundy, NE Franklin, NE Frontier, NE Furnas, NE Garfield, NE Gosper, NE Grant, NE G veel, NE Hall, NE Hamilton, NE Harlan, NE Hayes, NE Hitchcock, NE Holt, NE Hooker, NE Howard, NE Kearney, NE Keith, NE Keya Paha, NE Lincoln, NE Logan, NE Loup, NE McPherson, NE Merrick, NE Nance, NE Nuckolls, NE Perkins, NE Phelps, NE Red Willow, NE Rock, NE Sherman, NE Thomas, NE Valley, NE Webster, NE Wheeler</td>
<td>6.9</td>
</tr>
<tr>
<td>145 Scottsbluff, NE:</td>
<td></td>
</tr>
<tr>
<td>Non-SMSA Counties:</td>
<td></td>
</tr>
<tr>
<td>NE Banner, NE Box Butte, NE Cheyenne, NE Dawes, NE Deuel, NE Garden, NE Kimball, NE Morrill, NE Scotts Bluff, NE Sheridan, NE Sioux, WY Goshen</td>
<td>5.3</td>
</tr>
</tbody>
</table>

GOALS AND TIMETABLES FOR FEMALE PARTICIPATION IN EACH TRADE

<table>
<thead>
<tr>
<th>Timeframes</th>
<th>Goals (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>From April 1, 1980 until further notice</td>
<td>6.9</td>
</tr>
</tbody>
</table>

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 is also subject to the goals for both its federally involved and nonfederally involved construction.

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

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

4. As used in this Notice, and in the contract resulting from this solicitation, the “covered area” is by county.

November 3, 1980

-1-
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;
   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.

November 3, 1980
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its action. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. 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 data 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.

j. 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.

l. 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 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.

11. 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 paragraphs 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, woman, 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 Number: NE180028 01/05/2018 NE28
Superseded General Decision Number: NE20170028
State: Nebraska
Construction Type: Highway
Counties: Cass, Douglas, Sarpy and Washington Counties in Nebraska.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number     Publication Date
0             01/05/2018

* ELEC1525-004 09/02/2013

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ENGI0571-006 01/01/2013

| OPERATOR: Roller (Cass County)...............| $ 15.16 | 9.60 |

SUNE2011-024 08/29/2011
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Line Construction; (Lineman)
  Cass, Sarpy & Washington
  Counties........................$ 26.74  11.29

Operating Engineers: (Skid Loader)
  Cass, Sarpy & Washington
  County.........................$ 17.60   6.75
  Douglas County...............$ 14.99   6.75

OPERATOR: Asphalt Grinder
  Cass & Sarpy Counties.......$ 19.91   3.77
  Douglas & Washington
  Counties......................$ 26.00  10.32

OPERATOR: Asphalt Spreader.....$ 20.25

OPERATOR: Backhoe/Excavator
  Cass County..................$ 19.93   6.60
  Douglas County..............$ 22.32   6.75
  Sarpy County...............$ 21.25   6.60
  Washington County...........$ 20.93   7.10

OPERATOR: Broom/Sweeper.......$ 13.21

OPERATOR: Bulldozer
  Cass County..................$ 20.27   6.67
  Douglas County..............$ 20.21   6.75
  Sarpy County...............$ 20.21   6.60
  Washington County...........$ 20.27   6.65

OPERATOR: Compactor
  Cass, Sarpy & Washington...$ 18.66   6.75
  Douglas County...............$ 18.66   6.92

OPERATOR: Crane
  Cass County..................$ 22.96   6.60
  Douglas County...............$ 24.67   6.75
  Sarpy County...............$ 23.25   6.60
  Washington County...........$ 24.28   6.75

OPERATOR: Grader/Blade
  Cass County..................$ 20.21   6.60
  Douglas County...............$ 21.17   6.75
  Sarpy County...............$ 20.35   6.75
  Washington County...........$ 20.99   6.75

OPERATOR: Hydrohammer.........$ 17.03

OPERATOR: Loader
  Cass, Douglas & Washington
  County........................$ 20.21   6.75
  Sarpy County...............$ 20.21   6.60

OPERATOR: Mechanic
  Cass County..................$ 26.35   6.75
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  Sarpy & Washington Counties.$ 23.54   6.75
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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours.
they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

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 (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates
the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

-----------------------------------------------

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, DC 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, DC 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, DC 20210

4.) All decisions by the Administrative Review Board are final.

================================================================
END OF GENERAL DECISION

NOTICE TO BIDDERS
(1-50-0618)

Executive Order (EO) 13658 and Executive Order (EO) 13706 do not apply to this contract.
SPECIAL PROVISIONS
FOR
FEDERAL AID
PROJECT NO. NH-680-9(37)

GENERAL CONDITIONS

Bids for the work contemplated in this proposal form will be received at the office of the Nebraska Department of Transportation in Room 104 of the Central Office Building at 1500 Highway 2 at Lincoln, Nebraska, on February 7, 2019, until 1:30 P.M.

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


The 2017 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 Required Contract Provisions, Form FHWA 1273, (Rev. 5-12), 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.

GROUPS 1, 4, 5, 6, 6A, 6B, 7, 9 & 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 BRIDGES OR BITUMINOUS.

DISADVANTAGED BUSINESS ENTERPRISES
(1-6-1217)

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.

DISADVANTAGED BUSINESS ENTERPRISES
(Prime Contractor Reporting of DBE Payments)
(1-6-1217)

This project is funded with Federal Funds and NDOT is required by law to collect DBE payment data from the Contractor. The Prime Contractor shall complete the DBE Total Paid To Date portion on the Monthly Employment Report. This report can be found by using the “Contractor Reports” link at www.nebraskatransportation.org/letting/index.htm. All reports must be completed by the Prime Contractor no later than the 10th day of the following month. No estimates/invoices will be processed until this information is received.

USE OF DISADVANTAGED BUSINESS ENTERPRISES
(1-7-1217)

I. INTRODUCTION: The specific requirements of the use of Disadvantaged Business Enterprises, hereinafter referred to as DBEs, are set forth in these Required Contract Provisions and are imposed pursuant to the Code of Federal Regulations, Title 49, Part 26 and the Nebraska Department of Transportation’s Disadvantaged Business Enterprise (DBE) Program, which are hereby made a part of and incorporated by this reference into this proposal. Copies of these documents are available, upon request, from the Nebraska Department of Transportation, Disadvantaged Business Enterprise Office, P.O. Box 94759, Lincoln, Nebraska 68509-4759.

A. Definitions:

1. Whenever “NDOT” is used within these special provisions it shall refer to the Nebraska Department of Transportation.

2. Whenever “DOT” is used within these special provisions, it shall refer to the United States Department of Transportation.
3. For the purpose of these special provisions, the following definitions will apply:

a. Disadvantaged Business Enterprise (DBE) means a for profit small business concern, as defined pursuant to Section 3 of the Small Business Act and Small Business Administration regulations implementing it, which is independently owned and controlled by one or more socially and economically disadvantaged individuals.

b. Owned and controlled means a business:

(1) Which is at least 51 percent (51%) owned by one or more socially and economically disadvantaged individuals or women, or, in the case of a public owned business, such individuals must own at least 51 percent (51%) of each class of voting stock and 51 percent of the aggregate of all stock outstanding.

(2) Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged owners.

c. Socially and economically disadvantaged individual means a person who is a citizen (or lawful permanent resident) of the United States, and who is:

(1) “African American,” which includes persons having origins in any of the Black racial groups of Africa;

(2) “Hispanic American,” which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;

(3) “Native American,” which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;

(4) “Asian-Pacific American,” which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong;

(5) “Subcontinent Asian American,” which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;

(6) A Woman;
(7) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

II. DBE CONTRACT GOALS:

A. DBE goals are set by the NDOT for specific contracts. The specific DBE contract goals are stated on the Required DBE Participation Form included in the proposal. The Contractor must meet or exceed the goal or demonstrate good faith efforts to meet the goal. Requirements for submission of DBE good faith effort information are contained in Section IV of these special provisions.

B. A current list of certified DBE firms will be posted on the NDOT website (www.dot.nebraska.gov). Only the DBE firms whose names appear on the list will be considered in meeting the contract goal for this project. The DBE firms will be considered only for the items of work listed under the heading, “Nature of Business.” DBE firms may request to have additional items of work added to their “Nature of Business,” however, no items of work will be added after 5:00 p.m., ten (10) calendar days preceding the letting.

C. Contractors shall, as a minimum, seek DBE subcontractors in the same geographic area in which they seek subcontractors generally for a given solicitation. If the Contractor cannot meet the DBE goals using DBEs from the normal area, the Contractor will expand its search to a reasonably greater geographic area.

D. Contractors are required to make good faith efforts to replace a DBE subcontractor that is unable to perform with another DBE. In order to ensure compliance with this requirement, any substitution of DBE subcontractors after execution of the contract must be approved by the NDOT.

E. Contractors are also encouraged to use the services of banks owned and controlled by minorities and women; however, this will not be counted toward the contract DBE goal.

III. MEETING DBE CONTRACT GOAL CRITERIA: The award of the contract will be made upon satisfaction of the requirements of these special provisions. The apparent low bidder must either meet or exceed the DBE goals for the contract or satisfy the NDOT that good faith efforts were made to meet the goals.

A. REQUIRED DBE PARTICIPATION INFORMATION: All bidders are required to submit to the NDOT the "Required DBE Participation Form" with their bid proposal on the form provided in this proposal.

B. THE REQUIRED DBE PARTICIPATION FORM SHALL INCLUDE:

1. The names and addresses of the DBE subcontractors that will actually participate in meeting the contract goal.

2. A complete description (by item number or group, etc.) of the work each named DBE subcontractor will perform.
3. The dollar amount of participation by each named DBE subcontractor.

4. Written and signed documentation from the bidder of commitment to use a DBE subcontractor whose participation it submits to meet a contract goal.

5. The apparent low bidder must submit written and signed confirmation from each DBE that it is participating in the contract as provided in the Prime Contractor’s commitment, by 5:00 p.m. on the fifth (5th) calendar day following the letting.

6. If the contract goal is not met, evidence of good faith efforts.

C. The proposal will not be read if the "Required DBE Participation Form" is not included.

If no DBE participation is intended, the form must indicate that good faith effort documentation will be submitted. A blank form that is signed will be interpreted as meaning no DBE participation is intended and will be read.

Listing options and/or alternates for DBE subcontractors and/or items or groups of work to be performed is not allowed, and will cause this bid to be declared non-responsive.

Required DBE information shall not be subject to revision after bids are opened.

D. The information submitted on the DBE Participation Form will be verified by the NDOT. Errors in addition will be treated in accordance with current NDOT specifications and procedures.

E. If the use of non-certified firms or the use of DBE firms not certified for the type of work indicated results in under achievement of the goal, the bid will be declared non-responsive.

F. If, at any time prior to execution of the contract, previously undetected errors (such as mathematical errors) result in under-achievement of the goal, the low bidder, along with the other bidders on the project, will be given 5 days from receipt of notification by the NDOT to submit good faith information as outlined in Section IV of these specifications.

The use of firms not certified as DBEs by NDOT, or the use of DBE firms that are not certified for the type of work indicated by the bidder, are not considered previously undetected errors.

G. REQUIRED SUBCONTRACTOR/SUPPLIER QUOTATIONS LIST: All bidders must provide to the NDOT the identity of all firms who provided quotations on DOT-assisted projects, including both DBEs and non-DBEs.

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

Each bidder will be required to submit one list per letting to cover all projects bid.
IV. GOOD FAITH DETERMINATION: It is the low bidder's responsibility to meet the DBE contract goals or to provide sufficient information to enable the NDOT to determine that, prior to bidding, the low bidder actually made good faith efforts to meet such goals.

A. The NDOT will, in the "Apparent Low Bidder" listing (available 24 hours after bid opening) identify all projects which contain a DBE goal. The listing will indicate the apparent low bidder's status in attaining the goal, i.e., "Contractor Meets DBE Goal," or "Contractor Requires Good Faith Determination."

B. If the low bidder's "Required DBE Participation Form" submitted with the bid indicates the DBE contract goal will be met, and the NDOT concurs, the contract will proceed toward award and the low bidder need not submit any further DBE information prior to award.

C. Good Faith Information Submittal: If the contract DBE goals have not been met, the "Apparent Low Bidders" listing will reflect that the apparent low bidder is required to submit good faith effort information. Complete and accurate documented information to support a good faith efforts determination must be submitted by 5:00 p.m. on the fifth (5th) day following the letting.

D. Any other bidder on the contract who requires a good faith effort submittal must also follow the time frames set forth in "C" above if they wish to be considered for award of the contract. Any bidder who does not meet the submittal deadlines, will not be eligible for award of the contract. (The only exception is a case where the apparent low bidder who met the goal initially is declared ineligible for the award for reasons other than DBE goal attainment.) If this results in a new apparent low bidder who did not initially meet the goal, all other bidders on the contract indicating good faith effort will be notified, and given 5 days after receipt, to submit complete information to support their good faith efforts. Bidders are cautioned by the NDOT to retain documentation of their good faith efforts until an award is made, or all bids are rejected.

E. The NDOT will review all information submitted to determine whether the apparent low bidder actually made good faith efforts to meet the contract goal. The decision as to whether the good faith efforts are acceptable will be made jointly by a committee comprised of the NDOT Highway Civil Rights Coordinator, the Contracts Letting Manager, and an at-large NDOT staff member appointed by the Director.

A NDOT determination that the low bidder's information failed to show acceptable good faith efforts shall be cause for declaring the low bid non-responsive. In making a determination, information submitted by other bidders will be considered. If the low bid is declared non-responsive, the above procedure will be applied to the next lowest bid, and other higher bids if necessary, until a bid is found that meets the goal, or establishes that good faith efforts were made to meet it. NDOT reserves the right to reject all bids and readvertise the contract if none of the bids result in a satisfactory level of DBE participation at a reasonable price.

F. Establishing Good Faith Efforts: To demonstrate good faith efforts to meet the DBE contract goals, documentation shall be maintained and submitted to the
NDOT as set forth above. Such documentation may include any or all of the following: This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

1. Soliciting through all reasonable and available means (e.g., attendance at pre-bid meetings, advertising and/or written notices) the interest of all Certified DBE firms that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE firms to respond to the solicitation. The bidder must determine with certainty if the DBE firms are interested, by taking steps to follow up initial solicitations.

2. Selecting portions of the work to be performed by DBE firms in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Prime Contractor might otherwise prefer to perform work items with its own workforce.

3. Providing interested DBE firms with adequate information about the plans, specifications and requirements of the contract in a timely manner to assist them in responding to a solicitation.

4. (1) Negotiating in good faith with interested DBE firms. It is the bidder’s responsibility to make a portion of the work available to DBE subcontractors and suppliers, and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation should include the names, addresses, and telephone numbers of DBE firms that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE firms to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm’s price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE firms, is not in itself sufficient reason for a bidder’s failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a Prime Contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime Contractors are not, however, required to accept higher quotes from DBE firms if the price difference is excessive or unreasonable.

5. Not rejecting DBE firms as being unqualified without sound reasons based on a thorough investigation of their capabilities. The Contractor’s
standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection, or non-solicitation of bids in the Contractor’s efforts to meet the project DBE goal.

6. Making efforts to assist interested DBE firms in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.

7. Making efforts to assist interested DBE firms in obtaining necessary equipment, supplies, materials, or related assistance or services.

8. Effectively using the services of available minority/women community organizations; minority/women contractors’ groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

G. If the NDOT’s preliminary finding is that the bidder did not demonstrate a satisfactory effort to meet the contract goal, the bidder may appeal the decision by submitting a written request for reconsideration within three (3) days of the decision. The bidder may then present information either in a written narrative supporting its good faith effort submittal, or may appear in person. Any new information not included in the original submittal will not be used in the final determination. The appeal will be heard by a Hearing Officer appointed by the NDOT Director. The Hearing Officer will be an individual who is knowledgeable about the DBE Program and its good faith efforts provision, but who had no part in the initial decision.

The Hearing Officer will hear the appeal within five (5) days of receipt of the written request, and will issue a written decision within three (3) days after the appeal. The reconsideration process is administratively final and has no further appeal.

V. COMMERCIALLY USEFUL FUNCTION:

A. A Contractor may count toward its DBE goals only expenditures to DBE firms that perform a Commercially Useful Function (CUF) in the work of a contract. A DBE firm is considered to perform a CUF when it is responsible for the execution of a distinct element of the work of a contract, and carrying out its responsibilities by actually performing, managing, and supervising the work involved. The DBE firm must also be responsible for materials and supplies used by the DBE firm on the contract, for negotiating price, determining quality and quantity, ordering the material, installing (where applicable), and paying for the material.

B. A DBE Supplier may be considered to perform a CUF if the products or material (other than bulk items: petroleum products, steel, cement, gravel, stone, asphalt) the DBE supplies for a contract are typically kept in stock in a store, warehouse or other establishment maintained by the DBE and regularly sold to the public. The DBE Supplier must be responsible for identifying the specific products or material to be supplied determining price and quantity, and arranging delivery. The DBE Supplier must be paid directly by the Contractor for products or material
supplied unless the Contractor and the DBE have provided the NDOT a signed agreement as set forth in “DBE Goal Credit, paragraph C” of these Required Contract Provisions.

Guidelines:

1. As a general rule, it is expected that workers on a DBE subcontract shall be regular employees of the DBE subcontractor, and shall be listed on the subcontractor's payroll. A regular employee is a person who would normally be working for the DBE firm on any other subcontract with any other Prime Contractor, and whose immediate past employment has not been with the Prime Contractor on the present project, or with the renter-lessee of equipment being used on the present project.

2. On DBE subcontracts, the DBE must perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the DBE will not be considered to be performing a Commercially Useful Function. (If a DBE subcontracts part of its work to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.) Operators of leased specialized equipment are included under this provision. In any case, all employees shall be listed on the DBE firm’s payroll and paid by that firm.

3. In addition, a DBE subcontractor shall be required to designate a project superintendent/foreman who is a regular employee of the subcontractor, and who shall be active in the day-to-day management of the project.

4. If a DBE subcontractor purchases supplies and/or materials from the Prime Contractor, which are to be incorporated into the project, the supplies and/or materials will not count toward the established DBE contract goals.

5. TWO PARTY CHECKS: The NDOT does not totally prohibit a DBE firm and a Prime Contractor from using two-party checks to pay for material and/or supplies under certain circumstances, so long as the Prime Contractor acts solely as a guarantor and the funds do not come from the Prime Contractor. Two-party checks cannot be used unless formal written requests to do so from the DBE firm and the Prime Contractor are delivered to the NDOT DBE Office and written approval is given. If this provision is not strictly followed, the Prime Contractor will not be allowed credit for the cost of the material and/or supplies toward the DBE contract goal commitment. The NDOT will closely monitor the use of two-party checks to avoid abuse of this practice.

A DBE does not perform a Commercially Useful Function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, you must examine similar transactions, particularly those in which DBEs do not participate.
When a Prime Contractor commits to use material and/or supplies provided by a DBE Supplier to meet a DBE contract goal, the DBE Supplier must pay for the material and/or supplies without the use of two-party checks or the cost of the material and/or supplies will not be counted toward the Prime Contractor meeting the contract goal. The only exception to this policy might be if unanticipated circumstances prevent the DBE Supplier from being able to pay for a portion of the material and/or supplies and the use of two-party checks is the only viable alternative. The NDOT DBE Office will make the final determination on allowing the use of two-party checks in all such circumstances.

VI. PROHIBITED PRACTICES:

A. An area of special concern is exclusive arrangements between the Prime Contractor and DBE subcontractors. The DBE subcontractors must be willing to contract with more than one Prime Contractor.

B. Any subcontracting arrangement which artificially inflates DBE participation is not acceptable. Of utmost concern are the interjection of DBE middlemen or passive conduits and arrangements in which a DBE subcontractor is acting essentially as a broker.

VII. ADMINISTRATION OF THE DBE PROGRAM:

A. The NDOT intends to achieve its annual overall DBE participation goal with a “narrowly tailored” DBE Program that meets the “strict scrutiny” requirements as defined by case law. The NDOT will adhere to all of the rules and regulations of the DOT’s DBE Program Regulations as contained in 49 CFR Part 26.

It is the intention of the NDOT that DBE subcontractors be independent companies, and function in the same capacity as majority Contractors. It is not the intention of the NDOT to be involved with "in name only" DBE subcontractors who are not providing a Commercially Useful Function to the highway industry. The following will be used in administering the DBE Program.

Situation #1:

Prime Contractor “A” subcontracts to a DBE subcontractor, who performs the work with its own workforce (the employees work on a full-time basis for the DBE firm, or were hired from a union hall, employment service, or other hiring sources by the DBE firm, and are supervised by a full-time employee of the DBE), and uses its own equipment, or equipment rented or leased from an equipment dealer. Prime Contractor “A” is not involved in the DBE firm’s operation, other than coordinating when the work is to be performed, and/or other normal industry practices of contracts between a Prime Contractor and a subcontractor.

This is the ideal situation, is totally acceptable, and is within the intent of the DBE Program.
Situation #2:

Prime Contractor “A” subcontracts to a DBE firm, that performs the work with its own workforce, (the employees work on a full-time basis for the DBE firm, or were hired from a union hall, employment service, or other sources by the DBE firm for the project, and are supervised by a full-time employee of the DBE). The DBE firm uses equipment owned by a majority Contractor, (other than Prime Contractor “A”), on a long-term rent or lease arrangement at rates consistent with normal industry standards, and not leased on an “as equipment is needed” basis. This situation would be no different than the DBE firm leasing or renting equipment from a commercial equipment supplier.

This is totally acceptable, and is within the intent of the DBE Program.

Situation #3:

A DBE firm is a subcontractor to Prime Contractor "A." When it is time for the subcontract work to be performed, the work is actually performed using Prime Contractor "A's" equipment, work force, and supervisory personnel. The DBE firm then makes a certified payroll using the names of Prime Contractor "A's" employees. Basically, the subcontract work was performed by Prime Contractor “A.” This is a very close association with the Prime Contractor, and the DBE’s owner is not considered to be in control of the DBE firm, or the project in question.

This situation described is not considered to be a Commercially Useful Function, and may be subject to any of the administrative actions as cited in Section VIII, C. below.

Situation #4:

A DBE firm is a subcontractor to Prime Contractor "A.” When it is time for the subcontract work to be performed, the work is actually done using the workforce, equipment, and supervisory personnel of a majority Contractor, Contractor “B.” The DBE firm makes a certified payroll showing Contractor "B's" employees. This condition is not considered to be within the intent of the DBE Program. In reality, majority Contractor "B" is the one that performed the work. The NDOT does not consider this to be a Commercially Useful Function, as Prime Contractor "A" is actually subcontracting to majority Contractor "B," in an unapproved status, rather than the DBE firm.

This situation described is not considered to be a Commercially Useful Function, and may be subject to any of the administrative actions as cited in Section VIII, C. below.

Situation #5:

Prime Contractor "A" is buying supplies from a DBE Supplier to fulfill the DBE goal. This is only acceptable if the DBE firm is a true supplier. The mere fact that the DBE firm purchases the products or material (other than bulk items: petroleum products, steel, cement, gravel, stone, asphalt) from another supplier or manufacturer, then adds some cost and sells the material to a Prime Contractor, does not constitute the DBE as being a supplier. A DBE Supplier must maintain a place of business with an inventory and be generally recognized as a material supplier.
The above situations are very broad and general. While it is known that many different situations may arise, these are basic guidelines used to administer the DBE Program.

The NDOT is more than willing to discuss particular situations with either DBE firms or Prime Contractors prior to a letting in the hope of developing DBE firms.

VIII. INVESTIGATORY POWERS, ADMINISTRATIVE PROCEDURES FOR ENFORCEMENT AND PENALTIES

A. INVESTIGATORY POWERS:

1. The NDOT specifically reserves the right and power to investigate, monitor and/or review all actions taken, statements made, documents submitted, by any Contractor, subcontractor or DBE firm under the terms of these provisions.

B. ADMINISTRATIVE PROCEDURES FOR ENFORCEMENT:

Whenever the NDOT believes a Contractor, subcontractor or DBE firm may not be operating in compliance with the terms of these provisions, the NDOT will conduct an investigation. If the NDOT finds any person or entity not in compliance with these provisions, the NDOT will notify such person or entity in writing as to the specific instances or matters found to be in non-compliance. At the option of the NDOT, the person or entity shall then be allowed a reasonable time to correct any deficiencies noted, and to come into compliance. In the event that the person or entity cannot, thereafter, come into compliance, or fails or refuses to do so, then the NDOT may impose one or more of the penalties hereafter provided for. It is specifically provided by the NDOT that any person or entity will be found to be out of compliance with these provisions if an investigation reveals any violation or act of such serious or compelling nature that the violation or act indicates a serious lack of business integrity or honesty.

C. PENALTIES:

1. In the event the NDOT finds any Contractor, subcontractor, or DBE firm, to be out of compliance with these provisions, the NDOT may impose one or more of the following sanctions:

   a. Termination of the contract.

   b. The DBE firm may be decertified and/or suspended from participating in the NDOT DBE Program.

   c. The Prime Contractor may not be able to count the work performed toward his project DBE goal, and if possible to do so, may need to subcontract other work on the project to DBE subcontractors to achieve the goal.

   d. The contract items involved may be considered for a monetary reduction equal to the amount of work not done by the DBE subcontractor.
e. The Prime Contractor may be suspended and/or debarred.

f. If at any time during the life of the contract, it is determined that the Contractor is out of compliance with these provisions, the NDOT may withhold payment of progress payments.

g. If at the completion of the project, the Contractor is determined to be out of compliance, the NDOT may sustain damages, the exact extent of which would be difficult or impossible to ascertain and, therefore, in order to liquidate such damages, the monetary difference between the amount stated by the Contractor and the amount actually paid to the DBEs will be deducted from the Contractor's payment as liquidated damages. These damages would be in addition to any liquidated damages assessed in accordance with Subsection 108.08 of the Standard Specifications.

h. Referral to the Attorney General for possible prosecution for fraud.

i. Other action as appropriate, within the discretion of the NDOT.

**DISADVANTAGED BUSINESS ENTERPRISE (DBE) GOAL (1-7-1217)**

All bidders shall submit written assurance that the minimum goal for Disadvantaged Business Enterprise (DBE) participation will be met. The required DBE Participation Form included in this proposal shall be used. The bidder shall submit the name and address of the DBE(s), a complete description of the participation by the DBE(s), and the dollar value of the participation. If the bidder cannot meet the minimum goal for DBE participation, as specified herein, the bidder shall submit complete documentation of its efforts, following the time limits set forth in IV. A., "Good Faith Information Submittal." These efforts shall include but not be limited to those stated previously in IV. E., "Establishing Good Faith Efforts."

Bidders that fail to meet DBE goals or fail to demonstrate sufficient good faith efforts shall be declared non-responsive and ineligible for award of the contract.

Bidders shall assume the responsibility of determining if they are the apparent low bidders by contacting the Nebraska Department of Transportation's Contract Lettings Section in Lincoln, Nebraska. Such information is made public 24 hours after the announced time for opening bids. This information is available from the NDOT Internet web site (http://www.dot.nebraska.gov/).

The contract shall be awarded to the lowest responsive responsible bidder.

The standard NDOT procedure concerning subcontractors and suppliers shall apply.

The DBE firms identified at the time of bid opening are the firms to whom subcontracts will be issued. The work subcontracted to be done, and the amount to be paid for the work, shall be as identified at the time of bid opening.
If the Prime Contractor desires to alter this list after execution of the contract, it must demonstrate to the NDOT that the listed DBE firm(s) is unable to perform, and provide the necessary written justification for approval. Justification must also include written documentation from the affected DBE firm(s) stating their position on the Prime Contractor’s request. There must be a solid basis for any change.

Any substitution of the named DBE firms must be approved by the Department of Transportation’s Disadvantaged Business Enterprise Office. Substitution of DBE’s will only be allowed when the DBE firm(s) is not able to perform because of default or over-extension on other jobs or other similar justification. A Prime Contractor’s ability to negotiate a more advantageous contract with another subcontractor is not considered as a valid basis for change.

VERIFICATION OF DBE GOAL COMMITMENTS

In order to verify achievement of the DBE commitments on each project, the following forms must be completed and submitted to the NDOT DBE Office.

A. NDOT Form 441, DBE I. This form shall be filled out and submitted by the Prime Contractor, indicating the DBE firms used, actual work performed, the total amount of money paid to the DBE firms, and the date on which it was paid.

B. NDOT Form 442, DBE II. This form shall be filled out and submitted by the DBE subcontractor, indicating the name of the DBE firm, actual work performed, the total amount of money received from the Prime Contractor, and the date on which it was received.

C. The above referenced forms will be sent out by the DBE Office when notification of the project completion has been received. The forms are also available on NDOT’s website, www.dot.nebraska.gov.

SUBLETTING OR ASSIGNING OF CONTRACT

Prior to beginning work, a copy of all executed subcontracts, written agreements and/or lease agreements used to meet DBE goals shall be submitted to the Construction Engineer for forwarding to the NDOT DBE office. These copies must contain prices.

PROMPT PAYMENT CLAUSE:

The Prime Contractor shall include a “Prompt Payment Clause” as a part of every subcontract (including second tier subcontracts) for work and material. The “Prompt Payment Clause” will require payment to all subcontractors for all labor and material, for work completed, within twenty (20) calendar days of receipt of progress payments from the NDOT for said work. The “Prompt Payment Clause” will also stipulate the return of retainage within thirty (30) calendar days after the subcontractor achieves the specified work as verified by payment from the NDOT.

The failure by the Prime Contractor to carry out the requirements of the “Prompt Payment Clause” and/or timely return of retainage, without just cause, is a material breach of this contract, which may result in the NDOT withholding payment from the Prime Contractor until all
delinquent payments have been made (no interest will be paid for the period that payment was withheld), termination of this contract, or other such remedy as the NDOT deems appropriate.

NOTE: The Prime Contractor may withhold payment only for just cause, and must notify the NDOT in writing of its intent to withhold payment prior to actually withholding payment. The Prime Contractor shall not withhold, delay or postpone payment without first receiving written approval from the NDOT.

**DBE GOAL CREDIT**

(1-7-1217)

It is the intent of the NDOT to assure eligible DBE firms have a “level playing field” and equal opportunity to participate in federal-aid contracts, and maintain the integrity of the DBE Program. DBE participation is counted toward goals as follows:

When a DBE firm participates in a contract, only the value of the work actually performed by the DBE firm counts toward the goal.

A. The entire amount of that portion of a construction contract that is performed by the DBE firm’s own forces is counted toward the goal. This includes the cost of supplies and materials obtained by the DBE firm for the work of the contract, including supplies purchased or equipment leased by the DBE, but not supplies or equipment the DBE purchases or leases from the Prime Contractor or its affiliate.

Example: A DBE firm furnishing and erecting steel or concrete superstructure members, furnishing and driving piling for bridge structures, furnishing and placing prestressed concrete deck panels, and furnishing and placing panels for retained earth walls will be considered a Commercially Useful Function for attaining contract goals for Disadvantaged Business Enterprise (DBE) participation unless the supplies or materials are purchased from the Prime Contractor or its affiliate.

When a DBE subcontractor is responsible for substantially constructing a complete structure the total value of the subcontract may be credited to the DBE goal.

Paragraph 8.a. (4) of Subsection 109.07 in the 2017 Edition of the Standard Specifications is void and superseded by the following:

When applicable a NDOT Form 441, "Identification of DBE Goal Achievement".

B. Manufacturers, Suppliers, and Haulers:

DBE Manufacturers may be given 100% credit towards the DBE goal for products they produce for the contract.

DBE Suppliers may be given 60% credit towards the DBE goal for products they furnish for the contract.

DBE Haulers may be given 100% credit towards a DBE goal for the delivery fees charged.
A DBE firm certified as both a supplier and hauler may be given 60% credit for supplying a given product and 100% credit for hauling that same product.

See the DBE Goal Credit Table for a guide to DBE credit.

C. Supplier, Supplier/Hauler Required Documentation:

When a DBE Supplier is used to meet a DBE goal on a project, the Prime Contractor must provide a signed subcontract agreement identifying specifically the material and the quantities the DBE firm will be supplying, and the amount the DBE firm will be paid for the material.

When a DBE Supplier/Hauler is used to meet a DBE goal on a project by both supplying and hauling material directly to a project for use by the Prime Contractor, the subcontract agreement must identify the material and the quantities the DBE firm will be supplying and hauling, and the separate amounts to be paid to the DBE firm for the material and the hauling.

If a Prime Contractor has its own plant for manufacturing the concrete or asphalt to be used on the project, the DBE firm may be used to supply and haul material to the plant so long as the material is actually incorporated in the project.

In the situations above, the DBE firm must be paid directly by the Prime Contractor.

**NOTE:** If a Prime Contractor is purchasing concrete or asphalt for the project from a commercial plant, the DBE firm is not allowed to haul material to the commercial plant for DBE goal credit.

**Subcontractor:**

A DBE Supplier/Hauler may be used to meet a DBE goal on a project by supplying and/or hauling material to a Subcontractor; however, in order for this to be approved the following requirements must be met:

The Subcontractor must be a first-tier subcontractor on the project.

The material supplied and hauled by the DBE firm to the Subcontractor shall be incorporated in the project by the Subcontractor.

**Example:** The Prime Contractor is using the Subcontractor to do the paving on the project. The DBE Supplier/Hauler may supply and/or haul aggregate to a plant owned by the Subcontractor provided the plant is set up specifically for the project and the aggregate is only used in the concrete or asphalt for the project.

**NOTE:** If the Subcontractor is doing the paving on the project and is purchasing the concrete or asphalt from a commercial plant, the DBE firm is not allowed to haul material to the commercial plant for DBE goal credit.
Documentation Required:

When a DBE Supplier/Hauler is to be used to meet a DBE goal on a project by supplying and/or hauling material to a Subcontractor, specific documentation must be provided by the Prime Contractor.

1. The Prime Contractor’s original DBE Commitment information submitted with their bid must identify the material and quantities the DBE firm will be supplying/hauling to the Subcontractor.

2. DBE Commitment Confirmation must be signed by the Prime Contractor, the Subcontractor and the DBE firm.

3. A signed agreement (which may include a purchase order) between the Prime Contractor, the Subcontractor, and the DBE firm identifying specifically how the DBE firm is going to be used to meet the project DBE goal and how payment is to be made to the DBE firm.

NOTE: Load tickets must be maintained and be available for review by the Department to verify the type and amount of material supplied/haulled by the DBE and the dates of delivery.

DESCRIPTIONS
(1-7-1217)

Manufacturer - To be certified as a manufacturer, a DBE firm must operate or maintain a factory or establishment that produces, on the premises, the materials, supplies, articles or equipment required under the contract and of the general character described by the specifications.

Supplier - A DBE Supplier, or regular dealer, is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles, or equipment of the general character described by the specifications, and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a Supplier or regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

A DBE firm may be a Supplier or regular dealer in such bulk products as petroleum products, steel, cement, gravel, stone, or asphalt without owning a place of business if the DBE firm both owns and operates distribution equipment for the products. Any supplementing of a DBE Supplier’s or regular dealer’s own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.

NOTE: It is an unacceptable practice to “drop-ship” items which are not typically stocked by a DBE Supplier. If the DBE Supplier does not inventory or take possession of the items being supplied prior to shipping to a project, the items will not count toward the DBE goal. Items supplied for a project that are not typically stocked by the DBE Supplier will not be counted toward the DBE goal.

Packagers, manufacturers’ representatives, brokers, or other persons who arrange or expedite transactions are not suppliers (regular dealers) within the meaning of this paragraph.
Broker - With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a supplier, DBE goal credit may be given for the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, provided the fees are reasonable and not excessive as compared with fees customarily allowed for similar services. However, no credit will be given for any portion of the cost of the materials and supplies themselves toward DBE goals.

Rebar Installer - When a DBE is used to install rebar, the Prime Contractor will receive credit for 100 percent of the cost of the installation. The DBE must be responsible for actually performing, managing, and supervising the work.

Rebar Supplier - When a DBE is used to supply rebar, the Prime Contractor will receive credit for 60 percent of the cost of the rebar, provided that the DBE Supplier is performing a Commercially Useful Function (CUF) and is not merely an extra participant in a transaction through which funds are passed in order to obtain the appearance of DBE participation. To perform a CUF, the DBE Supplier must be responsible for negotiating price, determining quality and quantities, ordering, inventorying or taking possession of prior to delivery to a project, and paying for the rebar with the DBE’s own funds. The use of two-party checks to pay for the rebar will NOT be allowed.

If a DBE Rebar Supplier does not own, operate, or maintain a store, warehouse, or other establishment in which rebar is kept in stock, and regularly sold in the usual course of business, the DBE must both own and operate distribution equipment for rebar.

Rebar Supplier/Installer - If a DBE is used to both supply and install rebar, the Prime Contractor will receive 100 percent credit for the cost of the rebar and the cost of the installation, provided that the DBE is performing a CUF and is not merely an extra participant in a transaction through which funds are passed in order to obtain the appearance of DBE participation. To perform a CUF, the DBE must be responsible for negotiating price, determining quality and quantities, ordering, inventorying or taking possession of prior to delivery to a project, and paying for the rebar with the DBE’s own funds. The use of two-party checks to pay for the rebar will NOT be allowed.

If the DBE Rebar Supplier/Installer does not own, operate, or maintain a store, warehouse, or other establishment in which rebar is kept in stock, and regularly sold in the usual course of business, the DBE must both own and operate distribution equipment for rebar.

The DBE Supplier/Installer must also be responsible for performing, managing, and supervising the installation of the rebar.

The above-cited provisions will be closely monitored and Commercial Useful Function Reviews will be conducted by NDOT to ensure compliance. If the provisions are violated in any manner, the Department will impose penalties as prescribed in the contract provision, “USE OF DISADVANTAGED BUSINESS ENTERPRISES,” paragraph VIII. C. 1., a. thru i.

Hauler - The DBE firm must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract. There cannot be a contrived arrangement for the purpose of meeting DBE goals.

The DBE firm must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
The DBE firm receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.

The DBE firm may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE firm that leases trucks from another DBE firm receives credit for the total value of the transportation services the lessee DBE firm provides on the contract.

The DBE firm may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of the transportation services provided by non-DBE lessees not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE lessees receives credit only for the fee or commission it receives as a result of the lease arrangement.

**Example:** DBE Firm X uses two of its own trucks on a contract. It leases two trucks from DBE Firm Y and six trucks from non-DBE Firm Z. DBE credit would be awarded for the total value of transportation services provided by DBE Firm X and DBE Firm Y, and may also be awarded for the total value of transportation services provided by four of the six trucks provided by non-DBE Firm Z. In all, full credit would be allowed for the participation of eight trucks. With respect to the other two trucks provided by non-DBE Firm Z, DBE credit could be awarded only for the fees or commissions pertaining to those trucks that Firm X receives as a result of its lease with Firm Z.

For the purposes of the above paragraphs, a lease must indicate that the DBE firm has exclusive use of, and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE firm, so long as the lease gives the DBE firm absolute priority for the use of the leased truck. Leased trucks must display the name and identification number of the DBE firm.

If a DBE firm performs in the manner outlined above, it will be performing a Commercially Useful Function.

Pass-throughs and/or brokering will not be tolerated. A pass-through/brokering situation is one in which a DBE firm contracts to haul materials for a project, then hires another hauler to actually perform on the contract.

**CERTIFICATION**

(1-7-1217)

Certain DBE’s may be certified in multiple classifications as manufacturers, suppliers, and haulers. The certification will be limited by the products being manufactured, supplied, or hauled.

For example, a manufacturer of certain steel products or aggregates, may also be a supplier of products they store or deliver, but do not manufacture.

A supplier of bulk products, such as aggregates or fuel, may also be certified as a hauler.
## DBE GOAL CREDIT TABLE

<table>
<thead>
<tr>
<th>DBE Manufacturer &amp; DBE Hauler</th>
<th>100% Credit for Materials &amp; 100% Credit for Hauling</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBE Manufacturer &amp; Non-DBE Hauler</td>
<td>100% Credit for Materials &amp; No Credit for Hauling</td>
</tr>
<tr>
<td>Non-DBE Manufacturer &amp; DBE Hauler</td>
<td>No Credit for Materials &amp; 100% Credit for Hauling</td>
</tr>
<tr>
<td>DBE Supplier &amp; DBE Hauler</td>
<td>60% Credit for Materials &amp; 100% Credit for Hauling</td>
</tr>
<tr>
<td>DBE Supplier &amp; Non-DBE Hauler</td>
<td>60% Credit for Materials &amp; No Credit for Hauling</td>
</tr>
<tr>
<td>Non-DBE Supplier &amp; DBE Hauler</td>
<td>No Credit for Materials &amp; 100% Credit for Hauling</td>
</tr>
</tbody>
</table>
This On-the-Job Training (OJT) Program was created by the Federal Highway Administration (FHWA) and the Nebraska Department of Transportation (NDOT) to fulfill the Training Special Provisions requirements of federal-aid construction contracts (23 CFR 230, Appendix B to Subpart A). The purpose of the provision is to address the under-representation of minority and female workers in the construction trades through the assignment of OJT training goals. Therefore, the training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision.

Accordingly, the Contractor shall make every effort to enroll minority and women trainees (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment.

All Contractors will be responsible for demonstrating the steps that they have taken to recruit minority and women trainees prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not. The Contractor shall provide on-the-job training aimed at developing full journey-level status in the type of trade or job classification involved. The number of training hours under this Training Special Provision will be assigned to each Contractor as set forth below.

1. Under the NDOT Contractor-Specific On-the-Job Training (OJT) Program, OJT hours will be assigned to Contractors and will not be contract or project specific.
   a. A Contractor who has received an OJT assignment will be allowed to provide training on any NDOT-let project on which the Contractor is working as either a Prime Contractor or a subcontractor. A Contractor will have the flexibility to transfer trainees from one project to another after providing notification of the transfer to NDOT.
   b. This project does not have a contract-specific training requirement. NDOT has added a training pay item with a nominal 100-hour quantity, that may overrun or underrun, which will be utilized only if the Contractor elects to provide training on this contract.

2. In January each year, NDOT will allocate OJT assignments to Contractors based on the total average dollar amount of all work performed by a Contractor on NDOT-let projects during the previous three (3) calendar years. The total dollar amount will consist of:
   a. The total dollar amount of the Contractor’s prime contracts let by NDOT (both federal and state funded) minus the total dollar amount of the work subcontracted out to others, and
   b. The total dollar amount of the subcontract work the Contractor performed for others on NDOT-let projects.
The Contractor’s average dollar amount for the previous three calendar years will be calculated, and training hours will then be assigned as follows:

<table>
<thead>
<tr>
<th>Three Year Average</th>
<th>Training Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $2,500,000</td>
<td>0 hours</td>
</tr>
<tr>
<td>$2,500,000 to 5,000,000</td>
<td>1,000 hours</td>
</tr>
<tr>
<td>Over $5,000,000 to 7,500,000</td>
<td>1,500 hours</td>
</tr>
<tr>
<td>Over $7,500,000 to 10,000,000</td>
<td>2,000 hours</td>
</tr>
<tr>
<td>Over $10,000,000 to 15,000,000</td>
<td>3,000 hours</td>
</tr>
<tr>
<td>Over $15,000,000 to 20,000,000</td>
<td>4,000 hours</td>
</tr>
<tr>
<td>Over $20,000,000 to 25,000,000</td>
<td>5,000 hours</td>
</tr>
<tr>
<td>Over $25,000,000 to 30,000,000</td>
<td>6,000 hours</td>
</tr>
<tr>
<td>Over $30,000,000 to 40,000,000</td>
<td>8,000 hours</td>
</tr>
<tr>
<td>Over $40,000,000 to 50,000,000</td>
<td>10,000 hours</td>
</tr>
<tr>
<td>Over $50,000,000 to 60,000,000</td>
<td>12,000 hours</td>
</tr>
<tr>
<td>Over $60,000,000</td>
<td>15,000 hours</td>
</tr>
</tbody>
</table>

Example: Contractor A, who averaged $28.66 million, would be assigned 6,000 hours of OJT. Contractor B, who averaged $10.33 million, would be assigned 3,000 hours of OJT. Contractor C, who averaged $2.26 million, would not be assigned any OJT hours.

3. The OJT hours assigned to a Contractor in January are to be completed during that calendar year (e.g., OJT hours assigned in January of 2014 are to be completed during the period of January 1, 2014 thru December 31, 2014).

   a. If a Contractor exceeds the number of OJT hours assigned for a calendar year, the Contractor may request to bank up to 30 percent of the excess hours. Banked hours may then be credited toward the Contractor’s OJT assignment for the next calendar year.

4. Completion of the annual OJT assignment is the Contractor’s responsibility. The Contractor is not allowed to assign any of the OJT hours to any other Contractor. The Contractor must make a Good Faith Effort to enroll an adequate number of trainees and provide the trainees a sufficient number of hours training to achieve the Contractor’s annual OJT assignment.

5. While trainees may be assigned to NDOT-let federally or state funded projects, the Contractor should attempt to schedule and assign trainees so that at least 50 percent of a trainee’s hours are earned on federally funded projects - unless otherwise approved in advance by NDOT.

6. The Contractor must use an OJT program approved by NDOT and/or the FHWA. An OJT program shall be approved if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and qualify the average trainee for journey-level status in the job classification concerned by the end of the training period.
An approved OJT program must specify the number of hours required for a trainee to achieve journey-level status in each job classification. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training, shall also be considered acceptable provided they are being administered in a manner consistent with the equal employment obligations of federal-aid highway construction contracts.

7. The Contractor shall furnish each trainee a copy of the OJT Program he/she will follow in providing the training. The Contractor shall also provide each trainee with a certification showing the type and length of training satisfactorily completed.

8. The Contractor’s Equal Employment Opportunity (EEO) Officer shall be responsible for administering the Contractor’s OJT and monitoring the trainees’ progress. The EEO Officer shall serve as the point of contact for NDOT regarding OJT information, documentation, and conflict resolution. If necessary, the EEO Officer may designate another individual to assist with the OJT monitoring responsibilities. NDOT must be provided the name and contact information for any such designee.

9. At least seven (7) days prior to commencing training, the Contractor must submit a “Request for Trainee Approval” form to NDOT for each individual to be enrolled as a trainee and a tentative list of the projects to which the trainee will be assigned. Requests for Trainee Approval may be submitted by mail, fax, or email.

10. If the Contractor submits a “Request for Trainee Approval” form to NDOT for an individual who is not a minority or female, or cannot replace departing trainees with minorities or females, the Contractor must also produce sufficient Good Faith Efforts documentation of the type set forth below. NDOT may reject non-minority male trainees for entry into the program if it determines that a Contractor failed to make sufficient Good Faith Efforts to hire minorities or female trainees and/or the Contractor failed to document or submit evidence of its Good Faith Efforts to do so.

11. Any training hours provided to a trainee prior to the Contractor receiving approval from NDOT will not be credited toward the Contractor’s annual OJT assignment.

12. When an individual is first enrolled as a trainee, the individual will be approved for the number of hours of OJT required to achieve journey-level status in the classification for which the individual is to receive training. (A Contractor will not be penalized if a trainee does not achieve the full number of hours for which the trainee is approved.)

13. If the Contractor is unable to provide a trainee the full number of training hours required to achieve journey-level status on one project, the trainee should be transferred to other NDOT-let projects on which the Contractor is working.

14. At least one (1) day before all such transfers of trainees are made, the Contractor must provide NDOT in writing the name of the trainee and current project, the project to which the trainee will be transferred, and when the transfer is to take place. Notifications of trainee transfers may be submitted by mail, fax, or email.
15. Any training hours provided to a transferred trainee prior to the Contractor having notified NDOT of the transfer will not be credited toward the Contractor's annual OJT assignment.

16. No individual may be employed as a trainee in any classification in which they have successfully completed training leading to journey-level status or in which they have been employed at journey-level. No individual may be employed as a trainee in any classification with a lower skill level than any classification in which they have successfully completed training leading to journey-level status or in which they have been employed at journey-level (e.g., an individual who has achieved journey-level status as an equipment operator may not be trained as a laborer). The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records should document the findings in each case.

An individual may be trained in multiple classifications that require relatively equal skill levels but different skill sets (e.g., an individual who has received training as a milling machine operator may also receive training as a roller operator, or a scraper operator, etc.). Preferably, an individual should have achieved journey-level status in a classification before beginning training in another classification.

The Contractor must request and receive approval from NDOT for an individual to receive training in a classification other than the classification for which the individual was originally approved. Any training hours provided prior to receiving approval from NDOT will not be credited toward the Contractor's annual OJT assignment.

17. Training shall be provided in construction crafts rather than clerk-typist or secretarial-type positions. Training is permissible in positions that are not assigned to a specific project such as office engineers, estimators, timekeepers, shop mechanics, etc., if the selected OJT program includes these classifications. Training in such positions will not be eligible for reimbursement, but will be eligible to be credited toward the Contractor's annual OJT assignment.

18. Some off-site training is permissible as long as the training is an integral part of an approved OJT program and does not comprise a significant part of the overall training (e.g., 16 hours training per trainee per year in areas such as jobsite safety or accident response would be permissible). A copy of a training certificate, agenda, or curriculum must be provided to verify off-site training.

19. The Contractor will be reimbursed $2.00 per each hour of training provided in accordance with an approved OJT program and the NDOT Training Special Provisions.

20. Contractors shall be allowed to transfer trainees or utilize trainees on other NDOT-let projects which do not contain the Training Special Provisions. NDOT will utilize a Change Order / Supplemental Agreement to incorporate the Training Special Provisions and the appropriate pay item into the contracts of such projects.

21. On all federally funded NDOT-let projects, trainees must be paid at least 60 percent of the appropriate minimum journey-level rate specified in the contract for the first half of the training period, 75 percent for the third quarter, and 90 percent for the last quarter of the training period - or the appropriate rates approved by the U.S. Department of Labor.
or the U.S. Department of Transportation in connection with the program in which the trainee is enrolled.

22. In order to document and evaluate a trainee’s progress toward journey-level status, the Contractor must provide NDOT at the end of each month a “Special Training Provision Monthly On-The-Job Training Report” listing each trainee, the number of hours trained during the month, and the total number of hours trained as of the date of the report.

**NOTE:** The monthly reporting requirements may change if/when on-line reporting is implemented by NDOT.

23. If a trainee’s employment is terminated for any reason prior to completion of the number of OJT hours for which the individual was approved, the Contractor must make Good Faith Efforts to replace the trainee with another minority or female.

24. Contractors must submit an annual summary report to NDOT by January 15th each year giving an account of all trainee hours provided during the previous year. The report shall show a breakdown of training provided on each project and/or contract.

25. Contractors will have fulfilled their OJT responsibilities if they have provided acceptable training for the number of hours assigned, or have demonstrated that they made a Good Faith Effort to provide the number of OJT hours assigned. Where a Contractor cannot meet his or her annual training hour goal with females and minorities, the Contractor remains responsible for demonstrating the Good Faith Efforts taken in pursuance of the goal. Examples of what actions constitute Good Faith Efforts are set forth below. NDOT will make compliance determinations regarding the Training Special Provisions based upon either attainment of the annual goal or Good Faith Efforts to meet it.

26. Good Faith Efforts are those designed to achieve equal opportunity through positive, aggressive, and continuous results-oriented measures (23 CFR § 230.409(g)(4)). Good Faith Efforts should be taken as trainee-hiring opportunities arise and when minorities and women are under-represented in the Contractor’s workforce. NDOT will consider all Contractors’ documentation of Good Faith Efforts on a case-by-case basis and take into account the following:

   a. Availability of minorities, females, and disadvantaged persons for training;
   b. The potential for effective training;
   c. Duration of the contract;
   d. Dollar value of the contract;
   e. Total normal work force that the average Contractor could be expected to use;
   f. Geographic location;
   g. Type of work;
   h. The need for journey level individuals in the area.
Good Faith Efforts may include, but are not limited to, documentation of efforts to:

- Contact minority and female employees to gain referrals on other minority and female applicants;
- Refer specific minorities and females to training programs and specifically request these trainees by name in the future;
- Upgrade minority and female unskilled workers into the skilled classifications when possible;
- Accept applications at the project site or at the Contractor’s home office;
- Review and follow up on previously received applications from minorities and females when hiring opportunities arise;
- Maintain monthly evaluations that monitor efforts made to achieve diversity in the Contractor’s workforce in general (i.e., significant numbers of minorities and females employed on a company-wide basis);
- Provide incentives for project management personnel or superintendents when hiring goals are met on a project (i.e., similar to performance bonuses paid when a job is completed in a timely manner and under budget).

27. Liquidated damages will be assessed the Contractor for failure to demonstrate a Good Faith Effort to achieve their full OJT assignment or for failure to demonstrate a Good Faith Effort to achieve their full OJT assignment with minority and women trainees.

Liquidated damages will be assessed at the rate of $4.00 per hour for the number of OJT hours not achieved or, even if achieved, the number of OJT hours in which the Contractor fails to demonstrate Good Faith Efforts to hire minorities and women. (e.g., if the Contractor was assigned 3,000 hours but only achieved 2,000 hours and did not demonstrate a Good Faith Effort, the liquidated damages would be assessed at 1,000 hours x $4.00 = $4,000.00.)

28. NDOT will invoice a Contractor for liquidated damages assessed as a result of the Contractor’s failure to demonstrate a Good Faith Effort to achieve the number of OJT hours assigned.

The Contractor’s failure to promptly pay any invoice for liquidated damages may result in the Contractor being disqualified to bid work with NDOT for a time period determined by the Director/State Engineer.

29. At the end of the calendar year, if the dollar amount of work the Contractor performed on NDOT-let projects is substantially below the three-year average upon which the Contractor’s OJT assignment was based, the Contractor’s OJT goal for that year may be adjusted according to the table in Paragraph 2. above.

30. The established per hour unit price for the item “Training” shall be full compensation for all costs incurred, which includes but is not limited to providing the necessary supervision, labor, equipment, tools and material. Any additional costs due to payment
of wages in excess of the minimum rates specified and for the payment of any fringe benefits shall not be paid for directly, but shall be considered subsidiary to the items for which direct payment is made.

AMENDMENT TO CONSTRUCTION TRAINING REPORT REQUIREMENTS


FHWA Form 1409 “Federal-aid Highway Construction Contractor’s Semi-Annual Training Report” is not required.

CERTIFICATION FOR FEDERAL-AID CONTRACTS
(1-9-1217)

The bidder certifies, by signing and submitting this bid, 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 bidder also agrees by submitting his or her bid 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 November 27, 2018.

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

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

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

To arrange for utilities to locate and flag their underground facilities, contact Diggers Hotline of Nebraska at 1-800-331-5666 or dial 811.

Any work necessary will be concurrent with construction.

STATUS OF RIGHT OF WAY

The right of way for this project has been acquired and physical possession is held by the State of Nebraska and ready for the Contractor’s use, except tracts listed below:

Unacquired Right-of-Way Tracts as follows:

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<th>Tract Number</th>
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Right-of-Way Tracts with Pay Items:

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<th>Pay Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
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</tr>
</tbody>
</table>

- No encroachments on the old right of way.
- Acquisition of right of way is not required for this project.
SPECIAL PROSECUTION AND PROGRESS
(Accommodation of Public Vehicular Traffic)

I. Peak Hours

Peak hours for I-680 shall be from 6:00 am to 10:00 pm, Monday through Friday, and from 6:00 am to 11:00 pm on Saturday and Sunday. During peak hours all I-680 traffic lanes shall be open to traffic, except as noted in these provisions. All other hours are non-peak.

Peak hours for the I-680 Collector-Distributor (CD) roadways, including all ramps and loops within the CD shall be from 6:00 am to 10:00 pm, Monday through Friday, and from 6:00 am to 11:00 pm on Saturday and Sunday. During peak hours all I-680 Collector-Distributor traffic lanes and associated roadways shall be open to traffic, except as noted in these provisions. All other hours are non-peak.

II. Temporary Lane Closure

The Contractor will be allowed to close a lane during non-peak hours to perform the following operations (see Section V Procedure for Temporary Lane Closures):

1. For specific tasks requiring work immediately adjacent to the traveled lanes, which in the opinion of the Engineer, would constitute a hazard for the traveling public or the construction workers.
2. For the purpose of installing and removing permanent pavement markings.
3. For the purpose of installing and removing temporary pavement marking.
4. For the purpose of installing and removing concrete protection barriers.
5. For the purpose of delivering material to the work site.

III. Lane Closure

The Contractor will be allowed to close a lane or an entire ramp for an extended period of time (see Special Prosecution and Progress (Phasing)) to perform the following operations (see Section VI Procedure for Lane Closures):

1. For the purpose of installing and removing permanent pavement markings.
2. For the purpose of installing and removing temporary pavement marking.
3. For the purpose of installing and removing concrete protection barriers.
4. For the purpose of delivering material to the work site.
5. Reconstruct pavement approaches and adjacent bridge concrete pavement.
7. For the purpose of delivering material to the work site.
8. For the purpose of reducing traffic through the project.

9. Constructing liquid membrane and asphalt deck overlay

IV. Shoulder Closure

The Contractor will be allowed to close the shoulder during non-peak hours or for southbound I-680 CD shoulders that are adjacent to the southbound I-680 outside lane bridge work to perform the following operations (see Section VII Procedure for Non-Peak Shoulder Closures):

1. For specific tasks requiring work immediately adjacent to the traveled lanes, which in the opinion of the Engineer, would constitute a hazard for the traveling public or the construction workers.

2. For the purpose of installing and removing concrete protection barriers.

3. For the purpose of installing and removing temporary pavement marking.

4. For the purpose of delivering material to the work site.

V. Procedure for Temporary Lane Closures

The Contractor shall notify the Engineer in writing of each specific lane closure. Each notification shall describe the work occurring and the approximate time needed for the closure.

The Contractor is required to have a work crew on the site at all times during a non-peak hour lane closure.

A lane closure will not be permitted during inclement weather conditions or during periods of time that atmospheric conditions may constitute a hazard to the traveling public, as determined by the Engineer.

Lane closures for emergency service situations will not be assessed liquidated damages for either peak or non-peak hours.

In cases where multiple liquidated damage charges can be assessed for violations of peak or non-peak hour lane closure requirements, the highest single lane closure assessment charge will be in assessed. The closure assessments described in this proposal will be in addition to other liquidated damage assessments described elsewhere in the contract.

VI. Procedure for Lane Closures

The Contractor shall notify the Engineer and the City of Omaha a minimum of two weeks prior to the closing of a lane or entire ramp. A notification shall again occur 48 hours before the actual closing. If the 48-hour time period falls on a weekend or a holiday, the notification shall be given 72 hours prior to the actual closing. The Contractor shall contact Public Works Department, City of Omaha, at (402) 444-5950.
VII. Procedure for Shoulder Closures

The Contractor shall notify the Engineer in writing of each specific shoulder closures. Each notification shall describe the work occurring and the approximate time needed for the closure.

The Contractor is required to have a work crew on the site at all times during a non-peak hour lane closure or have work occurring on the opposite roadway of the closed shoulder.

A shoulder closure will not be permitted during inclement weather conditions or during periods of time that atmospheric conditions may constitute a hazard to the traveling public, as determined by the Engineer.

VIII. Peak Hour Lane Closure Assessment

The Contractor’s failure to have all lanes and ramps open to traffic during peak hours shall result in the assessment of a $3,615 per lane per hour per direction assessment. Any portion of an hour shall be considered as a full hour. This peak hour lane closure assessment has not been provided for elsewhere in the contract and shall therefore be considered in addition to other liquidated damages assessments, which are a part of the contract. The following formula is used to determine this assessment:

\[
\text{Cost} = [(1-%T)(vplpphpd)(Pass) + (%T)(vplpphpd)(Truck)] \times D
\]

\[
= [(1-0.04)(2,137)(0.33) + (0.04)(2,137)(0.54)] \times 5
\]

\[
= $677.00 + $46.16 \times 5
\]

\[
= $3,615.80 \Rightarrow \text{Round To} \ $3,615/\text{hour/lane/direction}
\]

Where: \ vplpphpd = vehicle per lane per peak hour per direction

\ %T = percent trucks
\ Pass Factor = passenger car factor
\ Truck Factor = truck factor
\ Delay = delay, in minutes

SPECIAL PROSECUTION AND PROGRESS
(Phasing)

I. General

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

Temporary pavement geometrics and pavement marking alignments required for the performance of work are included in the plans. Any modification of these geometrics or alignments shall require written approval of the NDOT Traffic Engineer, the Roadway Design, and the Project Engineer. Prior to opening a modified phasing sequence to traffic, the NDOT Traffic Engineer and the Roadway Design Division shall be notified.

The new guardrail shall be installed in Phase 1.
II. Overview

**Phase 1** represents a lane closure on the southbound CD and shift of lane on the northbound CD to allow the outside work of both CD bridges (S680 00083A and S680 00083B). This includes the preparatory work associated with striping changes. The Contractor will not be allowed to perform any work in other areas, which will affect traffic operations.

**Phase 2** represents the shift of single lanes across both CD bridges (S680 00083A and S680 00083B) to allow work on the remaining portion of the inside lanes to both bridges.

Construction of the southbound I-680 crossover will occur in phase 2. The northbound crossover can occur in phase 1 or 2.

**Phase 3** represents the construction to the inside lanes and shoulders of the S680 00083 Bridge in the northbound and southbound direction. During this phase, northbound and southbound I-680 will be reduced to two lanes to the outside lanes and shoulder. The southbound I-680 to westbound I-80 traffic will be moved onto the CD road and can access southbound I-680 via a cross-over south of S680 00083 or remain on the CD road to westbound I-80. For the northbound direction, eastbound I-80 on-ramp to northbound I-680 will be reduced to a single lane and the on-ramp to northbound I-680 (north of S680 00017R) will be closed with traffic shifted onto the CD roadway and will access northbound I-680 via a crossover north of West Center.

**Phase 4** represents the construction to the outside lanes and shoulders of the S680 00083 Bridge in the northbound and southbound direction of I-680. During this phase, northbound and southbound I-680 will be reduced to two lanes on the inside lane and shoulder. Southbound I-680 to westbound I-80 traffic will remain on the CD road and access southbound I-680 via a crossover south of West Center. The eastbound I-80 to northbound I-680 will remain shifted onto the northbound CD roadway and access I-680 via a crossover north of West Center.

III. Phase Descriptions

A. **Phase 1**

**Northbound I-680 Collector-Distributor roadway**

The Contractor shall shift the single northbound CD lane to the inside lane to perform work on S680 00083A outside lane. See SPECIAL PROSECUTION AND PROGRESS (Accommodation of Public Vehicular Traffic) Section II Temporary Lane Closure and Section III Lane Closure.

To and from Northbound I-680 Collector-Distributor road:
The Contractor’s equipment shall enter or leave work areas from the collector-distributor traffic lanes with adequate deceleration and acceleration length.
Southbound I-680 Collector-Distributor roadway
The Contractor shall reduce southbound CD traffic to a single inside lane to perform work on S680 00083B outside lanes. See SPECIAL PROSECUTION AND PROGRESS (Accommodation of Public Vehicular Traffic) Section II Temporary Lane Closure and Section III Lane Closure.

To and from Southbound I-680 Collector-Distributor road:
The Contractor’s equipment shall enter or leave work areas from the collector-distributor traffic lanes with adequate deceleration and acceleration length.

B. Phase 2

Northbound I-680 Collector-Distributor roadway
The Contractor shall shift the single northbound CD lane to the outside lane to perform work on S680 00083A inside lane. See SPECIAL PROSECUTION AND PROGRESS (Accommodation of Public Vehicular Traffic) Section II Temporary Lane Closure and Section III Lane Closure.

To and from Northbound I-680 Collector-Distributor road:
The Contractor’s equipment shall enter or leave work areas from the collector-distributor traffic lanes with adequate deceleration and acceleration length.

Southbound I-680 Collector-Distributor roadway
The Contractor shall reduce southbound CD traffic to a single outside lane to perform work on S680 00083B inside lanes. See SPECIAL PROSECUTION AND PROGRESS (Accommodation of Public Vehicular Traffic) Section II Temporary Lane Closure and Section III Lane Closure.

To and from Southbound I-680 Collector-Distributor road:
The Contractor’s equipment shall enter or leave work areas from the collector-distributor traffic lanes with adequate deceleration and acceleration length.

C. Phase 3

Southbound I-680
Southbound I-680 to eastbound I-80 will be reduced to two lanes north of West Center and shifted to the outside to allow construction to the inside lanes of S680 00083. Southbound I-680 to westbound I-80 traffic will be split north of West Center to use the two lanes across S680 00083B. South of West Center, the two lanes on S680 00083B will have the option to return to southbound I-680 via a cross-over or remain on the CD roadway. See SPECIAL PROSECUTION AND PROGRESS (Accommodation of Public Vehicular Traffic) Section III Lane Closure.

To and from Southbound I-680:
The Contractor’s equipment shall enter or leave work areas from I-680 traffic lanes with adequate deceleration and acceleration length.
Northbound I-680
Northbound I-680 will be reduced to two lanes south of West Center and shifted to the outside to allow construction to the inside lanes of S680 00083. Eastbound I-80 to northbound I-680 traffic will be reduced to a single lane across S680 00017R and shifted to the northbound CD with the on-ramp to northbound I-680 closed. The traffic will remain on the CD road and return to northbound I-680 via a crossover north of West Center. See SPECIAL PROSECUTION AND PROGRESS (Accommodation of Public Vehicular Traffic) Section III Lane Closure.

To and from Northbound I-680:
The Contractor’s equipment shall enter or leave work areas from I-680 traffic lanes with adequate deceleration and acceleration length.

D. Phase 4

Southbound I-680
Southbound I-680 to eastbound I-80 will be remain reduced to two lanes north of West Center and shifted to the inside of S680 0083 to allow construction to the outside lanes of S680 00083. Southbound I-680 to westbound I-80 traffic will remain split north of West Center to use the two lanes across S680 00083B. South of West Center, the two lanes on S680 00083B will continue to have the option of returning to southbound I-680 via a cross-over or remaining on the CD roadway. See SPECIAL PROSECUTION AND PROGRESS (Accommodation of Public Vehicular Traffic) Section III Lane Closure.

To and from Southbound I-680:
The Contractor’s equipment shall enter or leave work areas from I-680 traffic lanes with adequate deceleration and acceleration length.

Northbound I-680
Northbound I-680 will remain reduced to two lanes south of West Center and shifted to the inside of S680 00083 to allow construction to the outside lanes of S680 00083. Eastbound I-80 to northbound I-680 traffic will remain reduced to a single lane across S680 00017R and shifted to the northbound CD with on-ramp to northbound I-680 closed. The traffic will remain on the CD road and return to northbound I-680 via a crossover north of West Center. See SPECIAL PROSECUTION AND PROGRESS (Accommodation of Public Vehicular Traffic) Section III Lane Closure.

To and from Northbound I-680:
The Contractor’s equipment shall enter or leave work areas from I-680 traffic lanes with adequate deceleration and acceleration length.
SPECIAL PROSECUTION AND PROGRESS
(Migratory Bird Responsibility)

The Department will be responsible for preventing migratory birds from nesting on this project until the following day after the execution of the contract. At that time, the Contractor shall assume the responsibility for attempting to prevent the nesting of migratory birds throughout the duration of the project, in accordance with other provisions contained in the contract.

The Department will issue the Contractor a Notice to Proceed for this migratory bird-related work, but the work can be performed without the charge of Working/Calendar Days prior to the tentative starting date shown in the Proposal or other mutually agreed upon date for the remainder of the work to commence --- or the actual date the remainder of the work commences --- whichever occurs first.

SPECIAL PROSECUTION AND PROGRESS
(Coordination with Others)

The Contractor for this project shall be required to coordinate signing and construction activities with the Contractor for Project NH-80-9(79), CN 22575, EB I-80 at I-680, Omaha, which will be let to contract in the February 7, 2019 letting. This project consists of repairing two bridges and overlaying those bridges with asphaltic concrete.

The Contractor for this project shall be required to coordinate signing and construction activities with the Contractor for Project ITS-NH-680-9(40), CN 22651, I-680 Fiber Optic, which will be let to contract in the February 28, 2019 letting. This project consists of installing fiber optic conduit and pull boxes.
### STATUS OF ENVIRONMENTAL COMMITMENTS

Control No. 2283.8  
Project No. NH-680-9(37)  
Project Name: 480 wheat Center Bridge, Omaha

<table>
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<tr>
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<th>Yes</th>
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Comments: No 404 permit required.

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Comments: No historic properties affected.

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Comments: No Effect

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Comments: Level 1 CE Approved 11/29/2018

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Special Provisions: See attached Environmental Commitment sheet

Special Notes on Plans:

I have compared environmental documentation and project correspondence with environmental commitments shown on this form and found them to be accurate and complete.
Below are the Conservation Conditions that will be required for this project. All conditions and regulations of any permit obtained for this project will be followed by the contractor.

(Responsible Party for the measure is found in parentheses)

Conservation Measure for Environmentally Sensitive Areas

The Contractor shall not stage, store, waste or stockpile materials and equipment in undisturbed locations, or in known/potential wetlands and/or known/potential streams that exhibit a clear “bed and bank” channel. Potential wetland areas consist of any area that is known to pond water, swampy areas or areas supporting known wetland vegetation or areas where there is a distinct difference in vegetation (at lower elevations) from the surrounding upland areas. (Contractor, NDOT District)

Contact Person: Roger Yerdon, Highway Environmental Biologist, (402) 479-4419

General Conservation Conditions

A-1 Changes in Project Scope. If there is a change in the project scope, the project limits, or environmental commitments, the NDOT Environmental Section must be contacted to evaluate potential impacts prior to implementation. Environmental commitments are not subject to change without prior written approval from the NDOT Environmental Section. (District Construction, Contractor)

A-2 Conservation Conditions. Conservation conditions are to be fully implemented within the project boundaries as shown on the plans. (District Construction, Contractor)

A-3 Early Construction Starts. Request for early construction starts must be coordinated by the Project Construction Engineer with NDOT Environmental for approval of early start to ensure avoidance of listed species sensitive lifecycle timeframes. Work in these timeframes will could require consultation with the USFWS and NGPC. (District Construction, Contractor)

A-4 E&T Species. If federal or state listed species are observed during construction, contact NDOT Environmental. Contact NDOT Environmental for a reference of federal and state listed species. (NDOT Environmental, District Construction, Contractor)

A-5 Refueling. Refueling will be conducted outside of those sensitive areas identified on the plans, in the contract, and/or marked in the field. (Contractor)

A-6 Restricted Activities. The following project activities shall, to the extent possible, be restricted to between the beginning and ending points (stationing, reference posts, mile markers, and/or section-township-range references) of the project, within the right-of-way designated on the project plans: borrow sites, burn sites, construction debris waste
disposal areas, concrete and asphalt plants, haul roads, stockpiling areas, staging areas, and material storage sites.

For activities outside the project limits, the contractor should refer to the Nebraska Game and Park Commission website to determine which species ranges occur within the off-site area. The contractor should plan accordingly for any species surveys that may be required to approve the use of a borrow site or other off-site activities. The contractor should review Chapter 11 of the Matrix (on NDOT’s website), where species survey protocol can be found, to estimate the level of effort and timing requirements for surveys.

Any project related activities that occur outside of the project limits must be environmentally cleared/permitted with the Nebraska Game and Parks Commission as well as any other appropriate agencies by the contractor and those clearances/permits submitted to the District Construction Project Manager prior to the start of the above listed project activities. The contractor shall submit information such as an aerial photo showing the proposed activity site, a soil survey map with the location of the site, a plansheet or drawing showing the location and dimensions of the activity site, a minimum of 4 different ground photos showing the existing conditions at the proposed activity site, depth to ground water and depth of pit, and the “Platte River depletion status” of the site. The District Construction Project Manager will notify NDOT Environmental which will coordinate with FHWA for acceptance if needed. The contractor must receive notice of acceptance from NDOT, prior to starting the above listed project activities. These project activities cannot adversely affect state and/or federally listed species or designated critical habitat. (NDOT Environmental, District Construction, Contractor)

A-7 Waste/Debris. Construction waste/debris will be disposed of in areas or a manner which will not adversely affect state and/or federally listed species and/or designated critical habitat. (Contractor)

A-8 Post Construction Erosion Control. Erosion control activities that may take place by NDOT Maintenance or Contractors after construction is complete, but prior to project close-out, shall adhere to any standard conservation conditions for species designated for the project area during construction. (NDOT Maintenance, District Construction, Contractor)

Contact Person: Jon Soper, Highway Environmental Biologist, (402) 479-3546

Section 4(f)

The contractor shall not complete work, stage, stockpile or store materials within the boundary of the following Section 4(f) properties: Rockbrook Elementary School and Prairie Lane Elementary School. If it is determined that temporary or permanent right-of-way is required from or access is restricted to a Section 4(f) property, coordination shall occur with NDOT Environmental. (Contractor)

Utilities

Utility relocation or replacement is not anticipated for the project. If utility relocation or replacement is required in a later phase of the project, a reevaluation will be required if: (1) federal funds will be used for the utility work; or (2) the project construction contractor will be responsible for the work. If this utility work is identified during final design, the project sponsor
will initiate the reevaluation prior to project letting. If the work is identified during construction, the project sponsor will initiate the reevaluation prior to the commencing utility work. (NDOT Environmental, NDOT District)

If any one of the above two conditions do not apply, later relocation or replacement of utilities shall be coordinated through NDOT and the Contractor per NDOT’s Standard Specifications for Highway Construction, Subsection 105.06. Any environmental permits required for these utility relocations or replacements shall be the responsibility of the Utility. (NDOT District, Utility Provider(s))

**Unexpected Waste**

If contaminated soils/water or unexpected wastes are discovered, the Contractor shall stop all work within the immediate area. The Contractor shall secure the area of the discovery and notify the NDOT Construction Project Manager (CPM). The Contractor shall not re-enter the discovery area until allowed to do so by the CPM. At the time of discovery, the CPM and Contractor shall utilize the NDOT Unexpected Waste Action Plan (UWAP) to coordinate appropriate actions. The actions to be carried out by the NDOT CPM are (but not limited to): verification that the contractor has suspended construction activities in the area of the discovery, contact the Environmental Section Manager and make an entry into Site Manager that an unexpected waste discovery was made. The CPM shall then utilize the UWAP Site Discovery Check List to properly document the extent and type of waste. The CPM shall ensure that proper disposal of the waste and any required health and safety mitigation is implemented by the Contractor. The Contractor is required by NDOT's Standard Specification section 107 (legal relations and responsibilities to the public) to handle and dispose of regulated material in accordance with applicable laws.

**Traffic Disruption**

The project shall be constructed primarily under traffic with lane closures controlled by approved temporary traffic control. The duration of the northbound I-680 off-ramp to West Center Road closure must be less than 30 working days. (Contractor)

**Access Disruption**

Access to adjacent properties shall be maintained at all time during construction but may be disrupted temporarily at times due to construction activities, but will not be closed. (Contractor)

**Public Involvement**

A minimum of one news release shall go to all local and area media and be posted on the NDOT website prior to the start of construction work. (NDOT District, NDOT Communication)

**Airport**

Because of the proximity to the Millard Airport in Omaha, NE, the height of any equipment used in the construction of the project (or any antennae installed on the equipment) shall not exceed the local airport’s Height Restriction Zoning. Any Contractor involved in the project shall use the Notice Criteria Tool available at [https://oeaaa.faa.gov/oeaaa/external/portal.jsp](https://oeaaa.faa.gov/oeaaa/external/portal.jsp). (Contractor)

If required, the Contractor shall file a 7460-1 Form with the Federal Aviation Administration (FAA). The form shall be required if the Contractor uses any equipment over 200’ tall or the equipment breaks a 100:1 slope from a public-use airport. This includes any trucks or
equipment used during the construction of the project. NDOT’s Roadway Design Division shall verify clearance for permanent construction in the controlled zone from the NDOT Aeronautics Division and FAA. NDOT’s Roadway Design Division shall identify those contracts that shall require the special provision concerning the Contractor’s responsibility to gain FAA and Aeronautics Division clearance for temporary encroachments due to construction operations. NDOT’s Plans, Specification & Estimates (PS&E) / Contracts shall include the special provision in the appropriate project contracts. (Contractor)

Contact Person:  Caroline Jezierski, Highway Environmental Biologist, (402) 479-4415

Borrow, Debris Disposal, and Staging

Any material needed will be provided by the Contractor. The Contractor shall try to obtain borrow from an upland site to prevent depletion issues. If the borrow site is within a depletion area of concern, the Contractor shall coordinate with the appropriate agencies and NDOT to offset or minimize impacts. The Contractor shall obtain all environmental clearances and permits required for the borrow site prior to obtaining borrow material for the project. (Contractor)

The Contractor shall have a staging area for the project where material and equipment for the project is stored (e.g. re-steel, forms, etc.). The Contractor shall be required to dispose of material removed as part of the project described above and miscellaneous obstructions encountered and removed along the project. The disposal shall be the responsibility of the Contractor. A waste site may be needed. The Contractor shall be responsible to obtain all permits and clearances and all conditions of those permits. (Contractor)

Contact Person:  Tony Ringenberg, Highway Environmental Biologist, (402) 479-4410

Impaired Waters, MS4, and Section 402

Areas disturbed during construction will be stabilized utilizing NDOT approved erosion control methods. A Temporary Erosion Control Plan will be required by NDOT Standard Specifications for Highway Construction. (NDOT Environmental)

Construction Stormwater

This project does not require a Construction Stormwater Permit or a Storm Water Pollution Prevention Plan (SWPPP). Temporary water pollution prevention practices (including sediment and erosion control measures) are still required by Nebraska State Title 119. The Contractor shall exercise every reasonable precaution throughout the life of the contract to prevent sedimentation within rivers, streams, impoundments (lakes, reservoirs, etc.), the project site, and adjacent property. (Contractor)

Contact Person:  Ron Poe, Highway Environmental Program Manager, (402) 479-4499
STORM WATER DISCHARGES
(1-43-1217)

In compliance with the Federal Water Pollution Control Act, authorization to discharge storm water on this project has been granted under National Pollutant Discharge Elimination System (NPDES) General NPDES Permit Number NER110000 for Storm Water Discharges from Construction Sites to Waters of the State of Nebraska. This permit became effective on January 1, 2008.

Contractors are advised that, under the Construction Storm Water General Permit, plant sites, camp sites, storage sites, and borrow or waste sites not shown on the plans may be subject to separate NPDES permit authorization requirements for stormwater discharges from those locations. Contractors shall be responsible for verifying the need for NPDES permit coverage with the Nebraska Department of Environmental Quality (NDEQ). When required for these locations, the filing of a "Notice of Intent" shall be made by the Contractor directly to the NDEQ.

Additionally, asphalt (SIC Code 2951) or concrete (SIC Code 3273) batch plants that are owned by a private Contractor and are operated on a contract-for-service basis to perform work for the Contractor completing the project may be subject to NPDES General Permit Number NER000000 for Industrial Storm Water Discharges. While the plant may be required for completion of the project, it is not under the control of the Department (or other project owner); and the filing of a "Notice of Intent" shall be made by the Contractor directly to the NDEQ.

The NDEQ may be contacted at 402-471-4220 for additional information.

REQUIRED SUBCONTRACTOR/SUPPLIER QUOTATIONS LIST
(1-43-1217)

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

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

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

WORKER VISIBILITY
(1-43-1217)

Pursuant to Part 634, Title 23, Code of Federal Regulations, the following modified rule is being implemented:

Effective on January 1, 2008, all workers within the right-of-way who are exposed either to traffic (vehicles using the highway for purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel.
High-visibility safety apparel is defined to mean personal protective safety clothing that:

1 - is intended to provide conspicuity during both daytime and nighttime usage, and

2 - meets the Performance Class 2 or Class 3 requirements of the ANSI/ISEA 107-2004 publication titled "American National Standards for High-Visibility Safety Apparel and Headwear."

**SPECIAL PROSECUTION AND PROGRESS**
*(Federal Immigration Verification System)*
*(1-43-1217)*

The Contractor shall register with and use a Federal Immigration Verification System to determine the work eligibility status of newly hired employees physically performing services within the State of Nebraska. The Prime Contractor shall contractually require every subcontractor to register with and use a Federal Immigration Verification System to determine the work eligibility status of newly hired employees physically performing services within the State of Nebraska.


The Prime Contractor shall furnish a letter to the NDOT Construction Division in Lincoln on company letterhead and signed by an officer of the company stating that documentation is on file certifying that the Contractor and all subcontractors have registered with and used a Federal Immigration Verification System. The Contractor shall maintain all records of registration and use for a period of three years and make records available upon request. The Contractor shall contractually require subcontractors to maintain all records for a period of three years and make records available upon request.

Payment will not be made to the Contractor for using the Federal Immigration Verification System or the maintenance of the records. This work shall be subsidiary to the work being performed.

The Contractor’s Certification shall become part of the final records of the Contract. The Department considers this document to have direct bearing to the beginning interest date and may affect the amount of interest earned.
Paragraph 1.b. of Subsection 102.14 in the Standard Specifications is void.

PERMITS, LICENSES, AND TAXES
(Contractor Site Use Approval)
(1-43-1118)

Paragraph 4. of Subsection 107.02 Paragraph 4. in the Standard Specifications is void and superseded by the following:

4. Contractor Site Use Approval:
   
   a. (1) When a Contractor intends to obtain borrow and/or dispose of excess excavation at a site (or sites) not shown or otherwise designated in the contract the Contractor shall submit a completed NDOT Form 119 “Borrow Site - Waste Excavation Site Request Identification and Evaluation” to the Lincoln Construction Office for processing and approval.

   (2) When a Contractor intends to: (i) dispose of construction debris, (ii) stockpile materials, equipment or other tangible property for the project, and/or (iii) install and operate a mobile asphaltic concrete plant, mobile Portland cement concrete plant or other mobile production plant at a site (or sites) not shown or otherwise designated in the contract the Contractor shall submit a completed NDOT Form 56 “Plant Site - Stockpile Site - Construction Debris Site Request Identification and Evaluation” to the Lincoln Construction Office for processing and approval.

   (3) The NDOT Form 56 and NDOT Form 119 (hereafter referred to as “the Contractor Site Request form(s)” can be found on the NDOT website. Each Contractor Site Request form shall represent only one site and shall be project specific.

   (4) The time frame required to obtain site approvals varies and is dependent upon whether the project has a Corps Section 404 notifying-permit and upon the complexities of each site listed in each request.

   b. The Contractor shall contact the Nebraska Department of Environmental Quality (NDEQ) to determine if it is necessary for the Contractor to obtain a NPDES permit. The Contractor shall also be responsible for obtaining any and all other permits required by local governments.

   c. The Contractor shall not begin work at any borrow, waste, debris, stockpile or plant site until receiving written approval for the submitted
Contractor Site Request form(s) from NDOT, before obtaining a NPDES permit (if required), or any other permits required.

d. No extension of completion time will be granted due to any delays in securing approval of a borrow, waste, debris, stockpile or plant site unless a review of the time frames concludes that there were conditions beyond the Contractor’s control.

MEASUREMENT AND PAYMENT
(Partial Payment)
(1-43-0318A)

Paragraph 6 of Subsection 109.07 of the Standard Specifications is void and superseded by the following:

6. When payrolls must be submitted, the Department may withhold partial payments if the Contractor does not provide all payrolls (including Subcontractor payrolls) within seven (7) days of each payroll ending date.

WAGES AND CONDITIONS OF EMPLOYMENT
(Employment of Labor – Payrolls)
(1-43-0119)

Paragraph 3 of Subsection 110.03 of the Standard Specifications shall be amended to include the following:

i. On projects requiring submittals of certified payrolls, Contractors shall submit their payrolls electronically, meeting the following requirements:

1. Format – Portable Document Format (PDF)
2. Size of file – Limited to 25 MB
3. Signatures – A scanned copy of the original certified payroll or Adobe digitally signed.

Payrolls certified by the Prime Contractor must be emailed to the Project Manager within seven (7) days of the payment date thereof. Payrolls must be complete and accurate.

LIABILITY INSURANCE
(1-49-0118)

Paragraph 1.b.(5) of Subsection 107.15 in the Standard Specifications is void and superseded by the following:

(5) Automobile liability coverage shall be obtained from an insurance carrier who is licensed in Nebraska and any other State in which the project is located.
Paragraph 1.c. of Subsection 107.15 is amended to include the following:

   Limit: Statutory coverage for Nebraska and for any other State in which the project is located.

Paragraph 1.c.(3) of Subsection 107.15 is void and superseded by the following:

   (3) Workers’ compensation coverage shall be obtained from an insurance carrier who is licensed in Nebraska and any other State in which the project is located.

Paragraph 1.f.(5) of Subsection 107.15 in the Standard Specifications is void and superseded by the following:

   (5) Prior to execution of the contract, Contractor shall provide the State of Nebraska, Department of Transportation evidence of such insurance coverage in effect in the form of an ACORD© (or equivalent) certificate of insurance executed by a licensed representative of the participating insurer(s). Certificates of insurance shall show the Nebraska Department of Transportation as the certificate holders.

Paragraph 1.f. of Subsection 107.15 is amended to include the following:

   (9) For so long as insurance coverage is required under this agreement, the Contractor shall have a duty to notify the State of Nebraska Department of Transportation (State) when the Contractor knows, or has reason to believe, that any insurance coverage required under this agreement will lapse, or may be cancelled or terminated. The Contractor must forward any pertinent notice of cancellation or termination to the State by mail (return receipt requested), hand-delivery, email, or facsimile transmission within 2 business days of receipt by Contractor of any such notice by an insurance carrier. Notice shall be sent to the State at the following address:

   Nebraska Department of Transportation
   Construction Division -- Insurance Section
   1500 Highway 2, P.O. Box 94759
   Lincoln, NE 68509-4759
   Facsimile No. 402-479-4854
   NDOT.ConstructionInsurance@nebraska.gov

AWARD AND EXECUTION OF CONTRACT

The first sentence of Subsection 103.06 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.
Paragraphs 2.a. and b. of Subsection 103.07 are void and superseded by the following:

a. The contract has been signed by a person authorized to sign for the bidder as shown in the prequalification (when prequalification is required for the contract) and returned to the Department within 5 calendar days from the date of award.

b. The Contractor has provided a satisfactory bond and certificate of insurance within 5 calendar days from the date of award.

CONSTRUCTION DETAILS

TEMPORARY WATER POLLUTION CONTROL
(2-1-1217)

Section 204 in the Standard Specifications is void.

CONSTRUCTION STORMWATER MANAGEMENT CONTROL
(2-1-1217)

A. General

1. This Section defines some best management practices (BMPs) for erosion and sediment control measures and construction practices the Contractor shall use to prevent soil erosion and avoid water pollution.

2. a. The Department and the Contractor are co-permittees of the NPDES Construction Storm Water General Permit.

b. The Contractor shall comply with all conditions required by the current NPDES Construction Storm Water General Permit.

3. The Contractor shall exercise every reasonable precaution throughout the life of the contract to prevent silting of the waters of the state, the project site, and adjacent property. Construction of drainage facilities, as well as performance of other contract work which will contribute to the control of siltation, shall be carried out in conjunction with earthwork operations or as soon thereafter as is practicable.

4. a. The Contractor shall take sufficient precautions to prevent pollution of the waters of the state, the project site, and adjacent property from construction debris, petroleum products, chemicals, or other harmful materials.

The Contractor shall conduct and schedule the operations to avoid interference with any protected species.

b. The Contractor shall comply with all applicable statutes relating to pollution of the waters of the state and fish and game regulations.
5. All construction debris shall be disposed in a manner that it cannot enter any waterway. Excavation shall be deposited as to protect the waters of the state from siltation.

6. All erosion and sediment control measures shall be properly installed and maintained by the Contractor until all permanent drainage facilities have been constructed, and all slopes are sufficiently vegetated to be an effective erosion deterrent; or until tentative acceptance of the work.

7. All erosion and sedimentation resulting from the Contractor's operations and the weather conditions must be corrected by the Contractor.

LIMITATION OF OPERATIONS
(2-1-1217)

A. General

1. The maximum exposed surface area for the Contractor's operations in excavation, borrow, and embankment is 18 acres (72,800 m²) plus an equal area of clearing and grubbing/large tree removal. A written request for an increase in the maximum exposed surface area may be approved by the Engineer. This approval will be based on the soil, moisture, seasonal conditions, the Contractor's operation, or other conditions.

2. The Engineer shall have the authority to reduce the maximum exposed surface area when any of the following conditions warrant:
   a. Soil and moisture conditions are such that erosion is probable.
   b. Seasonal conditions may force extended delays.
   c. Proximity to the waters of the state requires more stringent controls.
   d. Equipment and personnel available on the job is not sufficient to properly maintain erosion and dust control measures.
   e. Any other environmental condition in the area that may exist which would be affected by erosion from the project.

3. Construction operations in rivers, streams, wetlands, and impoundments shall be restricted to those areas specifically shown in the contract. Rivers, streams, wetlands, and impoundments shall be promptly cleared of all false work, piling, debris, or other obstructions placed therein or caused by the construction operations.

4. Fording and operation of construction equipment within streams and wetlands will not be allowed, unless explicitly allowed in the contract. Streams are defined as any area between the high banks, regardless of the flow conditions.
CONSTRUCTION METHODS  
*(2-1-1217)*

A. General

1. The Contractor shall conduct all construction activities and install temporary erosion control measures, as necessary, to control sediment and avoid soil erosion during construction.

2. The Contractor shall incorporate all permanent erosion control features into the project at the earliest practicable time.

3. Construction stormwater management control measures for Contractor obtained work areas located outside the right-of-way, such as borrow site operations, haul roads, plant sites, staging sites, waste sites, equipment storage sites, etc. are the sole responsibility of the Contractor. All construction stormwater management control measures for these areas are at the Contractor’s expense. The Contractor is responsible for securing all required permits for use of these sites.

4. The construction stormwater management procedures contained herein shall be coordinated with any permanent erosion control measures specified elsewhere in the contract to the extent practical to assure economical, effective, and continuous erosion and sediment control throughout the construction period.

5. The Contractor shall be responsible to limit erosion and prevent siltation into the waters of the state during the construction period, as well as during the times that work may be suspended.

6. a. All erosion and sediment control items shall be installed by personnel who are knowledgeable in the principles and practice of various BMP installations.

b. The installation of all erosion and sediment control items shall be done under the direct supervision of the Contractor’s employee who has successfully completed training provided by the Department and has been certified as an Erosion and Sediment Control Inspector (Inspector). The Contractor’s Inspector shall be present at each site during installation to direct and inspect all erosion and sediment control BMP installations.

i. The NDOT Erosion and Sediment Control Inspector Certification is obtained by completing an Erosion and Sediment Control Inspector Training Course provided by the Nebraska Department of Transportation and passing the examination that accompanies the training.

c. The Contractor shall notify the Engineer of all employees, who have been certified as Inspectors, who will be on the project to direct and inspect all erosion and sediment control BMP installations.

d. No payment will be made for any erosion and sediment control item unless a Contractor’s Inspector was present to directly supervise and inspect the work.
e. No payment will be made for any erosion and sediment control item that is not properly installed. All erosion and sediment control items shall be installed as per the contract.

ENVIRONMENTAL COMMITMENT DOCUMENT
(2-1-1217)

A. Environmental Commitment Document

1. a. An Environmental Commitment Document will be created by the Department to identify all project specific environmental commitments and will be included in the Contract.

b. The Department will provide information for the following, when applicable:

   i. Storm Water Pollution Prevention Plan (SWPPP)
   ii. U.S. Army Corps of Engineers (USACE) Section 404 Permit
   iii. Nebraska Department of Environmental Quality 401 Water Quality Certification
   iv. State Title 117 Waters (USACE Non-Jurisdictional)
   v. Floodplain Permit
   vi. Historic Clearance
   vii. Endangered Species Act Clearance
   viii. Nebraska Nongame and Endangered Species Conservation Act Clearance
   ix. National Environmental Policy Act Compliance
   x. NPDES Construction Stormwater Permit (within Right-of-Way limits, only)
   xi. Conservation Measures
   xii Migratory Bird Treaty Act
   xiii. Bald and Golden Eagle Protection Act Compliance
   xiv. Other pertinent issues
c. The Contractor shall provide information for the following, when applicable:

i. Temporary Erosion Control Plan

ii. Spill Prevention and Control Plan

iii. Migratory Bird Treaty Act Compliance Plan

iv. Name and telephone number of the Contractor’s representative responsible for the Environmental Commitments

v. Name and telephone number of the employees that are NDOT-Certified Erosion and Sediment Control Inspectors

vi. Critical Path Construction Schedule

vii. Other items as defined elsewhere in the contract

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (2-1-1217)

A. General

1. A SWPPP is required for projects that construction activities will cause a land disturbance of one (1) acre or more. The Department will prepare the SWPPP for the areas within the Right-of-Way, temporary easements and permanent easements.

2. For projects not requiring a SWPPP, the Contractor shall comply with the requirements of Environmental Commitment Document, Paragraph 1.b. of this Special Provision, as applicable.

3. Contractor obtained work areas, located on private property, are not included in the NDOT Project SWPPP.

B. Temporary Erosion Control Plan

1. The Contractor shall prepare and submit the Temporary Erosion Control Plan prior to the start of any work. The Contractor shall not begin work until the Temporary Erosion Control Plan has been submitted to the Engineer and appropriate erosion control measures are in place. Payment for any work on the contract will be withheld if erosion control measures are not in place or properly maintained.

2. The Temporary Erosion Control Plan will be reviewed at project progress meetings. All active Contractors shall have their Inspectors present and work in cooperation to determine any necessary changes. Necessary changes will be documented on the Temporary Erosion Control Plan by the Engineer.
3. Payment for preparing the Temporary Erosion Control Plan, inspections and meeting reviews are subsidiary to items that direct payment is made.

C. Spill Prevention and Control Plan

1. All project activities shall be addressed in the Spill Prevention and Control Plan. The Contractor shall prepare and submit the plan to the Engineer and install all appropriate spill prevention and control measures prior to the start of any work.

2. The Spill Prevention and Control Plan shall clearly state measures to prevent, contain, document and clean up a spill. It shall state measures for disposal of the contaminated material, disposal documentation and incident review to train personnel to prevent spills from reoccurring.

3. Spill Prevention and Control Plans are applicable to construction sites where hazardous materials are stored, used and/or generated onsite. Hazardous materials include, but not limited to, hazardous wastes, pesticides, paints, cleaners, petroleum products, fertilizers, solvents and porta-potty wastes.

4. Direct payment will not be made for the Spill Prevention and Control Plan.

D. Migratory Bird Treaty Act Compliance Plan

1. The Contractor shall not begin work until a Migratory Bird Treaty Act Compliance Plan has been submitted to the Engineer and appropriate nesting migratory bird avoidance measures are in place.

2. a. The Contractor shall clearly state the necessary measures they intend to use to avoid a “Take” of nesting migratory birds in the Migratory Bird Treaty Act Compliance Plan. Measures may include but are not limited to:

   i. Clearing and grubbing prior to April 1st or after September 1st
   ii. Tree removal prior to April 1st or after September 1st
   iii. Clearing empty nests on structures prior to April 1st
   iv. Maintaining clear structures until commencement and throughout the duration of work on structures
   v. Netting structures to prevent nesting
   vi. Commitment to perform surveys according to protocol
   vii. Hire a biologist to survey areas to be disturbed prior to commencement of work during the nesting season
   viii. Submittal of required bird survey reports
   ix. Training of Contractor Personnel to insure compliance
3. a. The Migratory Bird Treaty Act Compliance Plan is applicable to the entire project site to avoid the “Take” of migratory birds protected under the Migratory Bird Treaty Act.

b. “Take” is defined as: pursuit, hunt, shoot, wound, kill, trap, capture, collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect.

4. The Migratory Bird Treaty Act Compliance Plan shall adhere to the NDOT’s Avian Protection Plan located at:


Direct payment will not be made for the Migratory Bird Treaty Act Compliance Plan.

E. SWPPP Inspection

1. The Contractor shall accompany the Engineer on inspections in accordance with the NPDES Construction Storm Water General Permit.

2. The SWPPP will be maintained and updated by the Engineer as work progresses and site conditions change to accurately describe the BMPs that are currently in place.

3. The Contractor’s participation in SWPPP inspections, maintenance and updates shall begin on the first day construction activities cause land disturbance and end on the date of project completion as evidenced as the completion date in the District Engineer’s Letter of Tentative Acceptance.

4. a. The Contractor’s Inspector shall be responsible for ensuring that all BMPs are installed in accordance with the contract or the manufacturers’ recommendations. The Contractor’s Inspector shall be capable of reading and interpreting these documents.

b. The Contractor’s Inspector shall be familiar with product and structural BMPs. The Contractor’s Inspector shall inspect, assess, and supervise the maintenance of erosion and sediment control BMPs to ensure compliance with the NPDES Construction Storm Water General Permit while preserving BMP functionality.

5. Payment for project inspection is subsidiary to items that direct payment is made.
ENVIRONMENTAL COMMITMENT ENFORCEMENT  
(2-1-1217)

A. General

1. This specification establishes payment and disincentive assessment for the Contractor’s performance in complying with Contract Environmental Commitments.

2. Deficiencies are described but not limited to:
   a. Failure to install pollution prevention control BMPs as work progresses or as described in the SWPPP.
   b. Failure to maintain existing pollution prevention control BMPs.
   c. Failure to remove non-functioning pollution prevention control BMPs.
   d. Failure to comply with USACE Section 404 Permit requirements.
   e. Failure to comply with NPDES Construction Storm Water General Permit requirements.
   f. Failure to comply with all applicable statutes relating to pollution of the waters of the state.
   g. Exceeding the maximum exposed surface area for excavation of 18 Acres without written request for permission and written approval.
   h. Failure to comply with wildlife species-specific conservation conditions.
   i. Failure to comply with the Contract.
   j. Failure to comply with the Engineers directives.

B. SWPPP Deficiency Notification

1. The Engineer will document and direct the Contractor to correct deficiencies.

2. a. The Contractor shall commence correcting deficiencies, provide adequate equipment and personnel, and diligently pursue correcting deficiencies without cessation until all deficiencies have been corrected.
   b. The count of Working Days and/or Calendar Days will continue during the time period that corrective work is being performed.
   c. Delays to the project as a result of the Contractor conducting corrective actions for the Contract Environmental Commitments will not constitute a valid reason for an extension of the contract time allowance.

3. Deficiencies shall be corrected within seven (7) calendar days of notification or within an approved extension. When deficiencies are not corrected within
seven (7) calendar days or within an approved extension, the Engineer will make a disincentive assessment to the contract as stated herein.

4. a. If soil, weather, or other conditions prevent the Contractor from completing the corrective actions within seven (7) calendar days, the Contractor shall notify the Engineer in writing. The Contractor's letter shall state the reasons preventing corrective action within the time allowed. The Contractor shall propose a written Corrective Action Plan within 48 hours. Corrective work shall continue while the Corrective Action Plan is developed. The Contractor's Corrective Action Plan must contain a course of action and a timeframe for completion. If the reasons and the Corrective Action Plan are acceptable, the Engineer may extend the time in which to complete the corrective work.

b. The Contractor will be allowed to proceed with the plan as proposed without incurring a disincentive assessment. If all corrective work is completed within the time allowance shown in the Notification or within an approved extension, a disincentive assessment will not be imposed upon the Contractor.

c. Storm events or soil and weather conditions occurring on other projects, which interfere with a Contractor completing corrective actions on the project within seven (7) calendar days, will not be justification for a time extension to complete the corrective work.

5. If all corrective work identified in the Notification has not been completed at the end of the seventh (7th) calendar day after the Initial Notice Date or within an approved extension, a Shut-Down Notice will be issued on the eighth (8th) calendar day after the Initial Notice Date or on the calendar day following the last day of an approved extension.

6. All operations shall cease as of the date and time cited in the Shut-Down Notice. The Contractor shall work, exclusively, on the deficiencies until all have been corrected or as directed by the Engineer. Upon issuance of the Shut-Down Notice, a disincentive of $500.00 per deficiency per calendar day will be assessed thru the day the corrective work is completed, inclusive.

7. The Engineer may require the Contractor to provide a written Procedures Plan that describes the process to prevent reoccurrence of deficiencies. The written Procedures Plan shall be provided within two (2) calendar days of the request. Failure to correct all deficiencies and provide a Procedures Plan may result in payments being withheld until such time that procedures are outlined.

a. Payment for preparing a written Procedures Plan is subsidiary to items that direct payment is made.

C. Storm Event Restoration – Incentive and Disincentive

1. The Department will pay “Storm Event Restoration - Incentive” when the Contractor completes the restoration work to eliminate the pollution prevention control deficiencies within seven (7) calendar days of Notification or within an approved extension. Multiple deficiencies may be included in one notification. If
the restoration work has not been completed within seven (7) calendar days after
the Initial Notice or within an approved extension, payment for the item of “Storm
Event Restoration - Incentive” will not be made.

2. A storm event is defined as a storm exceeding 0.50-inch of rain in a 24-hour
period.

3. The Department will notify the Contractor of pollution prevention control
deficiencies.

4. a. Payment for the item of “Storm Event Restoration - Incentive” may not be
made when the Contractor is notified to correct pollution prevention
devices not installed in accordance with the contract or the
manufacturer’s recommended installation instructions.

5. If the restoration work is not completed within seven (7) calendar days or within
an approved extension, a disincentive assessment of $500.00 per deficiency per
calendar day will be assessed. The disincentive assessment will begin on the
eighth (8th) calendar day after the issuance of the Initial Notice Date or on the
calendar day following the last day of an approved extension(s) and continue
through the day that the restoration work is completed, inclusive.

D. Method of Measurement

1. a. “Storm Event Restoration – Incentive” will be measured by the each upon
completion of restoration of all deficiencies included in a notification within
the allowed time and only one payment per notification is allowed when
multiple deficiencies are included on the notification.

b. If deficiencies from multiple notifications are restored during the same
restoration operation, only one (1) incentive is eligible for payment.

c. If multiple notifications are the result of successive storm events and
deficiencies are transferred to ensuing notifications, incentive payment is
only eligible for the latest notification.

2. “Storm Event Restoration – Disincentive” will be measured by the calendar day in
accordance with Paragraph C.5. above.

E. Basis of Payment

1. Pay Item Pay Unit
   Storm Event Restoration – Incentive Each
   Storm Event Restoration – Disincentive Calendar Day

2. All equipment, materials, etc. used in the restoration work will be paid for in
accordance with Division 800 of the Standard Specifications.

3. Payment is full compensation for all other incidentals required to complete the
restoration work included in the notification within the allowed time.
F. Environmental Commitments – Contractor Compliance

1. To provide payment for all plans, inspections, surveys, reports, travel, qualified inspection person’s, carrion removal, and any other subsidiary activities for the work of implementing threatened and endangered species commitments, temporary erosion control or any other environmental commitments prescribed in the contract.

2. Multiple visits to the project may be required to comply with environmental commitments prescribed in the contract.

G. Method of Measurement

1. No measurement is required.

H. Basis of Payment

1. Pay Item
   Environmental Commitments – Contractor Compliance
   Pay Unit
   Lump Sum

2. Partial payments will be made as follows:
   a. The Department will pay 50 percent of the total amount bid for the item Environmental Commitments – Contractor Compliance within seven (7) calendar days after the Notice to Proceed Date.
   b. Upon completion of 50 percent of the Original Contract Amount, the Department will pay 30 percent of the amount bid for the item Environmental Commitments – Contractor Compliance.
   c. Upon completion of 75 percent of the Original Contract Amount, the Department will pay the remaining 20 percent of the amount bid for the item Environmental Commitments – Contractor Compliance.
   d. Failure to comply with any or all of the contract requirements, included for payment under the item of Environmental Commitments – Contractor Compliance, will preclude all payment for the item, including any previous payment.

3. Payment is full compensation for all work prescribed in the contract.

I. Immediate Action Deficiencies

1. Deficiencies that pose an imminent threat to the environment are considered an emergency situation. These deficiencies will be identified in the Immediate Action Deficiencies Section of the Environmental Commitment Deficiency Notification Form. The corrective work for Immediate Action Deficiencies shall begin immediately and continue without cessation until completed.

2. The Engineer will issue a shut-down notice. All work on the contract shall cease until the corrective work has been completed. The Engineer may allow the Contractor to continue working in areas unaffected by the Immediate Action
Deficiency, provided corrective actions are being actively performed on the deficiency.

3. Immediate Action Deficiencies are not eligible for an incentive payment.

4. The Contractor will be assessed a disincentive assessment of $1,000.00 per deficiency per calendar day for failure to begin corrective actions or failing to continue to completion as directed by the Engineer or by the regulatory agency with jurisdiction.

5. Examples of Immediate Action Deficiencies include but are not limited to:
   a. Threatened & Endangered Species habitat protection deficiencies
   b. USACE Section 404 Permit Noncompliance
   c. Petroleum Spills/Tank Leakage
   d. Hazardous Material Spills

J. Rights Reserved

1. The Department reserves the right to initiate and perform corrective action on any deficiencies which result from the Contractors’ actions, inactions, or for failure to comply with the NPDES Construction Stormwater General Permit, USACE Section 404 Permit, or any other applicable permit.

2. The Contractor shall be liable to the Department for any and all costs incurred by the Department for corrective actions taken by the Department.

3. It is expressly understood that the provisions of this specification shall not relieve the Contractor of their responsibilities nor shall it relieve the Surety of its obligation for and concerning any just claim.

4. The Contractor shall indemnify and save harmless the Department and all of its representatives from any and all actions or claims brought because of the Contractor’s actions, inactions, or for failure to comply with the NPDES Construction Storm Water General Permit, USACE Section 404 Permit, or any other applicable permit.

HAZARDOUS MATERIALS MANAGEMENT (2-1-1217)

Description

This work shall consist of minimizing the exposure of the environment, including waters of the state, to hazardous materials. This specification also includes the requirements for clean-up of releases of hazardous materials.
Material Requirements

1. Prior to beginning work on the project, the Contractor shall prepare a Spill Prevention and Control Plan (SPCP) that clearly states measures to prevent a spill, contain a spill, clean up a spill, dispose of contaminated materials and train personnel to prevent and control spills. The plan shall include the notification contacts, as well as the processes and timeframes to address the situation in the event that a spill occurs. The following shall be included in the plan:
   a. A site plan showing locations for loading of equipment and materials, storage of equipment and materials, equipment fueling and wash areas, portable toilet locations and waste disposal areas.
   b. Descriptions of the following that may be used on projects:
      i. Best Management Practices (BMPs) for secondary containment.
      ii. Description of spill response equipment and materials, including safety and clean up equipment.
      iii. Preventative inspection and maintenance techniques for equipment to minimize leaks.
      iv. Procedures for filling tanks and equipment to prevent spills.
      v. Procedures for containing, diverting, isolating and cleaning up a spill.
      vi. Procedures and BMPs to be administered at bridge and culvert sites to ensure that hazardous materials do not runoff.
         (1) When water is present, immediate action to contain and remediate a spill is required.
         (2) The Contractor shall notify the NDOT Project Manager and NDEQ upon release of any quantity of material to waters of the state. The NDOT Project Manager will notify the NDOT Environmental Section upon notification of a release.
      vii. Spill training agenda and materials for the Contractor’s staff and subcontractors.
   c. Identify individuals responsible for implementing the plan.
   d. Specify how and when to notify appropriate authorities such as Nebraska Department of Environmental Quality and Nebraska State Patrol.

2. The Contractor shall provide and maintain a spill kit with appropriate materials to clean up minor spills on site as described in the Spill Prevention and Control Plan. A minor spill is defined as a release that is less than the reportable quantity for a given material and not entering waters of the state.
3. Material Safety Data Sheets (MSDS) shall be maintained on site for all hazardous materials being used or stored for the project. The MSDS Sheets shall contain reportable quantities and spill response information.

**Construction Methods**

1. The Contractor shall store paints, solvents, pesticides, petroleum products, and other hazardous materials in areas with secondary containment.

2. Hazardous materials storage, including portable toilets, shall be restricted to specific areas away from:
   a. vehicular traffic
   b. restricted areas shown on the plans
   c. waters of the state, including wetlands (50 feet minimum distance)
   d. Wellhead Protection Areas, unless designated in a Wellhead Protection Plan that has been approved by the local authority.

3. The Contractor shall inspect hazardous material containers weekly to ensure that all containers are clearly identified and that no leaks are present.

4. The Contractor shall inspect the site weekly to ensure that cleanup procedures are posted and that a spill kit is adequately stocked and readily available.

5. The Contractor shall verify and update the SPCP site maps as necessary during inspections to accommodate changes in the site.

6. A spill kit shall be readily available, in close proximity and appropriately stocked when applying petroleum based or other hazardous materials to bridge and culvert sites.

7. The Contractor shall develop, implement and maintain a training program regarding hazardous materials management. Training of the Contractor’s staff and subcontractors shall be conducted to ensure that workers are knowledgeable of the procedures, materials and equipment outlined in the SPCP. The Contractor shall maintain a database of individuals that have been trained.
   a. Specific hazardous materials and their handling procedures shall be discussed during safety briefings.

8. The Contractor shall maintain and provide to the Project Manager, upon request, a record of all spills occurring on site. This record shall include:
   a. The circumstances leading to the spill
   b. The date of the release
   c. Measures taken to resolve the incident
   d. Measures taken to prevent a reoccurrence
9. The Contractor shall follow NDEQ notification procedures for all spills in excess of a reportable quantity as defined by NDEQ Title 126 or the products MSDS Sheets. The NDOT Project Manager will notify the NDOT Environmental Section.

10. The Contractor shall follow all local, state and federal regulations associated with the release and/or cleanup, including disposal of the hazardous material.

Method of Measurement and Basis of Payment

1. Direct payment will not be made for work associated with Hazardous Materials Management, but is considered subsidiary to the items for which direct payment.

2. The Contractor shall solely bear all penalties and costs associated with the containment, cleanup, remediation and disposal of material associated with a spill.

ACCEPTANCE TESTING OF SOILS BY USE OF THE LIGHT WEIGHT DEFLECTOMETER (LWD) SCOPE

(2-2-1217)

This test method covers the in-place measurement of deflection and moisture content of Class III embankments, subgrade preparation, granular fill and backfill for acceptance testing on Nebraska Department of Transportation Projects. Refer to Subsection 205.03 of the NDOT Standard Specifications for Highway Construction for a definition of Class III embankments. Refer to NDOT Test Method T 2835 for the proper operation of the LWD.

The deflection test measurement shall be the average measured deflection of the fourth, fifth, and sixth drops of the falling weight of the LWD. The first three drops are to be used to seat the LWD.

The Deflection Target Value (DTV) is the deflection value of each soil determined by using a test strip or from correlation with the Nebraska Group Index for an individual Soil.

Option 1

A. Determination of DTV using a Test Strip

1. A test strip shall be constructed for each soil type to determine the deflection target value.

2. A new test strip shall be constructed when there is an observed change in material or as determined by the Engineer.

3. The test strip dimensions for roadway embankment and subgrades shall have a minimum length of 200 feet and a width equal to the embankment or roadway. The total thickness shall be no less than 6 inches for roadway subgrade and no less than 1 foot and no more than 3 feet for roadway embankment.
4. The test strip dimensions for trenches, culverts, and structures shall have a minimum length of 10 feet and a width equal to that of the excavation. The total thickness shall be no less than 1 foot and no more than 3 feet.

5. The optimum moisture of fine-grained soils shall either be determined in the NDOT Branch Lab or Central Lab, and shall be based on a correlation with the Plastic Limit or determined from AASHTO T-99. A 10-lb sample of proposed material shall be submitted to the NDOT Branch Lab or Central Lab a minimum of 14 days prior to grading operations.

6. The moisture content for granular soils shall be “as necessary” to achieve proper compaction.

7. The moisture content limits of the soil shall follow the requirements provided in Table 1.

8. The test strip area construction shall be incidental to the embankment construction.

9. The testing rate during the test strip construction is provided in Table 2.

<table>
<thead>
<tr>
<th>Location</th>
<th>Soil Type</th>
<th>Depth Below Finished Subgrade</th>
<th>Minimum %</th>
<th>Maximum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil materials receiving gravel surfacing</td>
<td>All materials</td>
<td>All Depths</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Stabilized Subgrade</td>
<td>-</td>
<td>-</td>
<td>See Specifications</td>
<td></td>
</tr>
<tr>
<td>Granular Structural Fill (MSE Walls, bridges, culverts, et.)</td>
<td>Granular</td>
<td>All Depths</td>
<td>**</td>
<td>**</td>
</tr>
</tbody>
</table>

** Moisture as necessary to obtain proper compaction. The moisture target value for granular materials shall be established in the field by the Contractor during the compaction process. Once established the target moisture shall not vary by more than ± 2%.
Table 2 - Test Strip Testing Rate

<table>
<thead>
<tr>
<th>Material Location</th>
<th>Minimum Testing Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway embankment and subgrade</td>
<td>3 tests/ pass*</td>
</tr>
<tr>
<td>Trenches, culverts, and miscellaneous structures</td>
<td>1 test / pass*</td>
</tr>
</tbody>
</table>

* Number of passes with compaction equipment as described in paragraph 13c of Subsection 205.03 of the NDOT Standard Specifications for Highway Construction.

B. Test Strip Construction and Testing

1. Prior to placing the fill material for the test strip, the subgrade shall be scarified and re-compacted.

2. The fill material shall be placed with a lift thickness no greater than 8 inches uncompacted.

3. The test strip shall be constructed with uniform material and moisture content, and compaction; until it meets the requirements of numbers 3 or 4 of Section A of this provision.

4. The deflection target value is obtained when:
   i. The moisture content is within the acceptable range.
   ii. The average of the deflection test measurements for three consecutive passes of compaction equipment does not change by more than 10% with additional compaction. The DTV shall be based on the lowest average deflection test measurement from these passes.

5. A 10-lb sample of the test strip material shall be submitted to the NDOT Branch Lab or Materials and Research Soil Lab for index testing.

6. The DTV shall be re-evaluated when:
   i. Deflection test measurements are consistently less than the DTV. (3 out of 5 consecutive deflection test measurements are less than 0.80 of the DTV).
   ii. Failing test results are consistently occurring and adequate compaction is observed.

Option 2

C. Determination of Deflection Target Values based on the Nebraska Group Index (NGI)

1. Prior to construction a 10-lb bag of representative material shall be submitted to the nearest NDOT Branch Lab or Materials and Research Soil Lab for each different soil type no less than 21 days prior to grading operations.

2. From the laboratory testing NDOT will determine the Nebraska Group Index (NGI) for each soil type submitted and provide a correlated minimum DTV and optimum moisture content.
3. If no correlation data is available for an individual NGI, a test strip shall be used to determine the DTV as discussed in parts A and B in this provision.

4. The DTV shall be re-evaluated when:
   i. Deflection test measurements are consistently less than the DTV. (More than 20% of the deflection test measurements are less than 0.80 of the DTV.
   ii. Failing test results are consistently occurring and adequate compaction is observed.

Acceptance Testing

1. The Deflection Target Value for use as acceptance testing shall be:

   DTV ≤ 1.10 x average deflection value determined from Option 1, Part B, of this provision

   DTV ≤ Correlated DTV determined from the NGI correlation, Option 2, Part C

2. The testing frequency for moisture and deflection shall follow the NDOT Materials Sampling Guide.

3. The moisture content of soil shall be performed using NDOT’s approved equipment and methods. Approved equipment includes: 1) hot plates, stove, or microwave, 2) Speedy Moisture Method, or 3) Laboratory oven method.

4. Moisture content results shall be reported to the nearest tenth of a percent.

REMOVE ASPHALT SURFACE

The Contractor shall be required to saw cut or mill the asphaltic concrete full depth to expose a vertical face at locations where removed asphalt surface will abut new pavement or surfacing, as shown in the plans, or using other methods approved by the Engineer. The work of cutting, removing and disposing of the existing bituminous material will not be measured for payment directly but shall be considered subsidiary to the item "Remove Asphalt Surface".

BITUMINOUS FOUNDATION COURSE

(3-1-0118)

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

(i) If the salvaged bituminous material is to be obtained from existing stockpiles described in the contract, the salvaged bituminous material shall be screened to
meet the requirements of Paragraph 2.b. prior to delivery to the roadway. Any oversized bituminous material remaining from the screening operation shall remain the property of the Department.

**FOUNDATION COURSE**

Amend Subsection 307.03 of the Standard Specifications to include:

**Equipment**

A minimum of one self-propelled double drum vibratory roller shall be required. The vibratory roller shall have a minimum operating weight of 18,000 pounds.

**Compaction and Stiffness**

The Department shall monitor the in-place stiffness by measuring the deflection of the foundation course by using a control strip by performing Light Weight Deflectometer measurements of the foundation course for acceptance. Refer to NDOT Test Method T 2835 for the proper operation of the Light Weight Deflectometer (LWD). The procedure for conducting Lightweight Deflectometer testing is as follows:

1. The deflection test is defined as the average of the fourth, fifth, and sixth drops of the deflectometer at one location.

2. The deflection value is defined as the average of 3 test locations.

3. The Deflection Target Value (DTV) is the lowest deflection value determined by using a control strip.

4. A single coverage is defined as the compacting of unbound material over a given point a single time.

5. A new control strip shall be constructed when there is an observed change in material or as determined by the Engineer.

A Control Strip shall be constructed for the purpose of determining the Deflection Target Value.

6. The control strip dimensions for roadway shall have a minimum length of 200 feet.

7. The control strip area construction shall be incidental to the pay item Foundation Course.

8. During construction of the control strips, the Contractor shall make repeated compaction coverages. When the material is visibly densified, the Engineer will take deflection tests at 3 locations to get an average deflection value. Following each test, additional coverages shall be conducted and deflection tests taken until a Deflection Target Value is established.
9. The Deflection Target Value of the control strip shall be determined by compacting the foundation course to a point that three consecutive coverages do not change the deflection by more than 10%. The DTV shall be based on the lowest average deflection test. The roller procedure shall have a minimum of 6 consecutive coverages unless an alternate rolling pattern is approved by the Engineer.

10. The Deflection Target Value shall be re-evaluated when:
   i. Deflection test measurements are consistently less than the DTV. (3 out of 5 consecutive deflection tests are less than 0.8 of the DTV).
   ii. Failing test results are consistently occurring and adequate compaction is observed.

Acceptance Testing

A passing deflection test is defined as a deflection value that is less than 1.10 x DTV. The frequency of testing deflection is 1 test at one location for every 1500 square yards or less.

FOUNDATION COURSE 4"

The Contractor shall have the option of using either Aggregate Foundation Course-D, Crushed Concrete Foundation Course or Bituminous Foundation Course; and the Contractor shall bid the pay item "Foundation Course ___" accordingly.

These different foundation courses may be used interchangeably throughout the project, with the exception being that the same type of foundation course shall be used across the entire width of a pavement section to provide uniform drainage across that template. The Contractor shall make every attempt to use the same type of foundation course in long paving runs and any changes in foundation course type shall be approved by the Engineer.

Regardless of the type of material used it shall be obtained from Contractor sources, the cold milling operations, or pavement removal operation on the project.

Regardless of the type of material used it shall be measured and paid for as “Foundation Course 4”.

Method of Measurement

Foundation Course shall be measured as prescribed in Paragraph 2 of Subsection 307.04.

Paragraph 2. of Subsection 307.04 is amended to include the following:

Any increased depth Foundation Course of more than 4 inches will not be measured for payment. Payment for such increased depth shall be considered as included within payment for Foundation Course 4".
Basis of Payment

Amend Subsection 307.05 of the Standard Specifications to include the following:

1. Pay Item  Pay Unit
   Foundation Course_____  Square Yard

WORK ZONE TRAFFIC CONTROL SIGNS
(4-3-1217)

The Department has adopted the FHWA 2009 Manual of Uniform Traffic Control (MUTCD) and the 2011 Nebraska Supplement to the MUTCD as the official guidance for work zone traffic control signs. Many work zone traffic control signs have been revised, redesigned, or replaced in the 2009 MUTCD (and 2011 Nebraska Supplement). Accordingly, all work zone signs shall comply with the following:

1 - All signs, regardless of age, shall meet the design standards of the 2009 MUTCD (and 2011 Nebraska Supplement).

TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES
(4-3-1018)

Paragraph 19. of Subsection 422.04 in the Standard Specifications is void.

WET REFLECTIVE POLYUREA PAVEMENT MARKING, GROOVED
(4-8-1217)

I. Description

This work shall consist of furnishing and installing wet night retroreflective polyurea pavement markings in accordance with this provision and in conformance to the dimensions and lines shown on the plans or established by the Engineer.

The wet reflective polyurea marking material shall be applied by spray method onto asphaltic cement concrete and Portland cement concrete surfaces. Following an application of glass beads or black aggregate, and upon curing, the resulting marking shall be an adherent reflectorized stripe of the specified thickness and width that is capable of resisting deformation by traffic.

The Contractor shall field verify the pavement marking quantities required for the project prior to purchasing materials. The Department will not be held responsible for the Contractor's shortage or surplus of material. The Contractor's verification of quantities and purchasing material shall not delay the project or the installation of pavement marking when required.
The polyurea pavement marking shall be applied in grooves cut into the surfacing. The grooves shall be made in a single pass dry cut; the equipment used shall be self-vacuuming and leave the cut groove ready for polyurea pavement marking application. The equipment and method used shall be approved by the polyurea pavement marking manufacturer. The polyurea pavement marking shall be applied in the grooves the same day as the cut. Grooves shall be clean and dry prior to polyurea pavement marking application. All conflicting pavement markings which remain after application of the polyurea pavement markings shall be removed. The removal of conflicting, pre-existing temporary or permanent pavement marking shall be paid for with the appropriate removal pay item. The removal of conflicting temporary or permanent pavement marking placed as part of this work shall be at no cost to the Department.

Groove width: pavement marking width + 1 inch to 2 inch maximum
Groove depth: per manufacturer’s recommendations to a minimum of 60 mils
Groove length: full length of marking + required grooving transition
Groove position: 2 inches off of joint line (per plan)

Grooving of the surfacing shall be performed in accordance with the polyurea manufacturer's recommendations. Grooving the surfacing shall not be measured and paid for but shall be considered subsidiary to "____ Polyurea Pavement Marking, Grooved".

II. Materials

A. Polyurea

Composition Requirements:

Composition requirements are per manufacturer’s specifications. The Polyurea Pavement Markings approved for use are shown on the NDOT Approved Products List. Markings which have not been previously approved by the Department will not be permitted on the project until approved by the Traffic Engineer.

Properties:

1. Color and Weathering Resistance: The mixed polyurea compound, white, yellow and black, when applied to a 3" x 6" aluminum panels at 15±1 mil in thickness with no glass beads or elements and exposed for 500 hours in a Q.U.V. Environmental Testing Chamber, as described in ASTM-G154, Cycle #1, shall conform to the following minimum requirements. The color of the white polyurea system shall not be darker than Federal Standard No. 595A-17778. The color of the yellow polyurea system shall conform to Federal Standard No. 595A-17038. The color of the black polyurea system shall conform to Federal Standard No. 595A-17038.

2. Track-Free Time (Laboratory): When tested in accordance with ASTM D 711, the polyurea marking material shall reach a track-free condition in 10 minutes or less for a 15 mil thickness. This test shall be performed with AASHTO Type 1 beads coated at a rate of 0.099 pounds.
per square foot. The track-free time shall not increase substantially with decreasing temperature.

3. Adhesion to Concrete: The polyurea coating, when tested according to ACI Method 503, shall have such a high degree of adhesion to the specified concrete surface that there shall be a 100% concrete failure in the performance of this test. The prepared specimens shall be conditioned at room temperature (75°± 2° F) for a minimum of 24 hours and maximum of 72 hours prior to the performance of the tests indicated.

4. Adhesion to Asphalt: The polyurea coating, when tested according to ACI Method 503, shall have such a high degree of adhesion to the specified asphalt surface that there shall be a 100% asphalt failure in the performance of this test. The prepared specimens shall be conditioned at room temperature (75°± 2° F) for a minimum of 24 hours and maximum of 72 hours prior to the performance of the tests indicated.

B. Reflective Media

The reflective media application shall incorporate a double drop technique to maximize wet night reflectivity and color. The reflective media used shall ensure the wet reflective polyurea pavement markings meet the retroreflectance performance requirements in Section II.D.3. The glass beads for drop-on application shall conform to the following requirements or be an approved equivalent.

1. Glass Beads

The required glass beads shall be a 60/40 blend (60% sinkers and 40% floaters) of AASHTO M 247-81 Type I gradation 1.5 index glass beads. The glass beads shall have a minimum of 70% Rounds as measured according to ASTM D1155. Crush Resistance shall be measured according to the procedures of ASTM D1213 and shall be a minimum of 30 pounds retained on US #40 Mesh.

Acid Resistance: A sample of glass beads supplied by the manufacturer shall show resistance to corrosion of their surface after exposure to a 1% solution (by weight) of sulfuric acid. The 1% acid solution shall be made by adding 5.7 cc of concentrated acid into 1000 cc of distilled water. CAUTION: Always add the concentrated acid into the water, not the reverse. The test shall be performed as follows:

Take a 1" x 2" sample, adhere it to the bottom of a glass tray and place just enough acid solution to completely immerse the sample. Cover the tray with a piece of glass to prevent evaporation and allow the sample to be exposed for 24 hours under these conditions. Then decant the acid solution (do not rinse, touch, or otherwise disturb the bead surfaces) and dry the sample while adhered to the glass tray in a 150° F (66° C) oven for approximately 15 minutes. Microscopic examination (20X) shall show not more than 15% of the beads having a formation of very distinct opaque white (corroded) layer on their entire surface.
2. Wet Reflective Media

Wet Reflective Media shall be approved for use by the polyurea manufacturer. The Wet Reflective Media approved for use are shown in the NDOT Approved Products List.

C. Non-Reflective Media

Black aggregate shall be broadcast to saturation on all black lines to provide a matte, non-reflective finish. The black aggregate shall be either a fine or medium gradation.

D. Finished Markings

Because of normal variances in road surfaces, application processes and measurement, the properties of markings made from the materials specified herein will vary from one installation to the next. When the materials are applied according to the specifications in Section III, they shall be capable of forming markings with the following reproducibility of properties:

1. On-the-road Track-Free Time: When installed at 77° F and at a wet film thickness of 15±1 mils, the markings shall reach a no-track condition in less than 10 minutes. Track-free shall be considered as the condition where no visual deposition of the polyurea marking to the pavement surface is observed when viewed from a distance of 50 feet, after a free-rolling traveling vehicle’s tires have passed over the line. The track-free time shall not increase substantially with decreasing temperature.

2. Skid Resistance: The average initial skid resistance shall be 45 BPN or greater when tested according to ASTM E303.

3. Retroreflectance – Required initial retroreflectance values are shown in the table below. Typical retroreflectivity is determined as the average of many readings (mcd(ft-2)(fc-1)) metric equivalent (mcd(m-2)(lux-1)) as described below.

<table>
<thead>
<tr>
<th>Average Minimum Initial Retroreflectance</th>
<th>White</th>
<th>Yellow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry (ASTM E1710)</td>
<td>500</td>
<td>350</td>
</tr>
<tr>
<td>Wet Recovery (ASTM E2177)</td>
<td>350</td>
<td>275</td>
</tr>
<tr>
<td>Wet Continuous (ASTM E2832)</td>
<td>100</td>
<td>75</td>
</tr>
</tbody>
</table>

3.1.1 Some reasonable variance should be expected (for example, application on very rough road surfaces or differences in glass beads).

3.1.2 The initial retroreflectance value of a single installation or unit of work shall be the average value determined according to the measurement and sampling procedures outlined in ASTM D7585, using a 30-meter (98.4 feet) retroreflectometer, except as modified...
below. The 30-meter retroreflectometer shall measure the coefficient of retroreflected luminance, \( R_l \), at an observation angle of 1.05 degrees and an entrance angle of 88.76 degrees. \( R_l \) shall be expressed in units of millicandela per square foot per foot-candle \([\text{mcd(f}^{-2}\text{)(fc}^{-1})]\). The metric equivalent shall be expressed in units of millicandela per square meter per lux \([\text{mcd(m}^{-2}\text{)(lux}^{-1})]\).

3.1.3 The initial retroreflectance values of the pavement marking shall be measured no sooner than 48 hours after application, but not later than 30 days after application. The Contractor shall provide an acceptable 30-meter retroreflectometer to use on the project (the retroreflectometer will remain the property of the Contractor). The contractor will take measurements in the presence of the Engineer. Prior to taking measurements, the Contractor shall calibrate the retroreflectometer according to the manufacturer’s requirements.

Measurements will be taken at equally spaced (or nearly so) test areas located by the Engineer in each evaluation section. An evaluation section is defined as a 3 mile (or major fraction) portion of a segment. If the last evaluation section is less than 1.5 miles in length, it shall be combined with the preceding section.

The test areas shall be at least 400 ft. in length and a minimum of 10 readings shall be taken over the length of each test area.

All measurements shall be made in the direction of travel. On centerlines of undivided highways, measurements shall be taken in both directions in each test area and averaged to determine the value of that color line in that test area.

Measurements shall be taken for each type and color of line in the evaluation section.

Individual symbols and legends will be treated as separate evaluation sections. Three (3) readings shall be taken on each symbol to determine the average retroreflectance value for the symbol.

The Department will do verification testing. When the average of the readings for an evaluation section fall below the minimum, the entire section represented by those readings will be further evaluated by the Engineer and may be subject to removal and replacement.

3.1.4 The Department may elect to determine wet retroreflectance values measured under a “condition of continuous wetting” (simulated rain) in accordance with ASTM E2832. To reduce variability between measurements, the test method shall be performed in a controlled laboratory environment while the marking is positioned with a 3 to 5 degree lateral slope. Measurements shall be reported as the average of the minimum
III. Application

The Contractor shall furnish equipment and apply the materials according to the following specifications:

A. Equipment:

Application equipment shall be capable of producing markings that meet the specifications of the manufacturers listed on the NDOT Approved Products List for Polyurea Pavement Marking.

At any time throughout the duration of the project, the Contractor shall provide free access to his application equipment for inspection by the Engineer, his authorized representative or a materials representative.

When black and white polyurea are applied together to create a contrast pattern, they shall be applied from one truck in a single pass operation.

B. Application Conditions:

1. **Moisture**: The markings shall only be applied during conditions of dry weather and when the pavement surface is dry and free of moisture.

2. **Air Temperature**: The markings shall only be applied when road and air temperatures are above 40 degrees F, unless manufacturer's guidelines state otherwise.

3. **Surface Preparation**: Marking operations shall not begin until applicable surface preparation work is completed and approved by the Engineer.

   3.1 Prior to applying the markings, the Contractor shall remove any remaining existing markings to expose a minimum of 80% of the pavement surface.

   3.2 Prior to applying the markings, the Contractor shall remove all curing compounds on new Portland cement concrete surfaces.

   3.3 Prior to applying the markings, the Contractor shall remove all dirt, sand, dust, oil, grease and any other contaminants from the road surface.

   3.4 Application over temporary paint is not acceptable.

4. **Dimensions**: The pavement markings shall be placed only on properly prepared surfaces and at the widths and patterns as designated in the contract. The markings shall be applied in accordance with the "Manual
on Uniform Traffic Control Devices® and in accordance with the Engineer’s plans.

Any markings that are found to be 0.5 inches less than the width shown in the plans shall be removed and replaced by the Contractor.

5. **Other Restrictions**: The Engineer and/or Contractor shall determine further restrictions and requirements of weather and pavement conditions necessary to meet the all other application specifications and produce markings that perform to the satisfaction of the Engineer.

6. **Binder Thickness**: The polyurea binder (mixed Part A and Part B) coating shall be applied at rates to achieve minimum uniform wet thicknesses as follows:

<table>
<thead>
<tr>
<th>Surface Type</th>
<th>Recommended Polyurea Pavement Marking Thickness (1 inch=1000 mils)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Smooth Asphalt or Concrete Surface</td>
<td>20±2 mils</td>
</tr>
<tr>
<td>New Concrete Surface¹</td>
<td>20±2 mils</td>
</tr>
<tr>
<td>New Asphalt Surface (Standard Asphalt Mix)</td>
<td>20±2 mils</td>
</tr>
<tr>
<td>Open Grade Friction Course (OGFC) or Stone Matrix Asphalt (SMA)²</td>
<td>25±2 mils</td>
</tr>
<tr>
<td>Rough Concrete or Asphalt</td>
<td>22±2 mils</td>
</tr>
<tr>
<td>Concrete or Asphalt after Grinding Off Pavement Markings³</td>
<td>22±2 mils</td>
</tr>
</tbody>
</table>

¹ Use thicker binder (20 mils) on new concrete surfaces with heavy tines.
² Very large aggregate sizes for open grade friction course or stone matrix asphalt mixes may require a thickness of 25 mils for proper coverage.
³ Pavement marking thickness determined by the type of surface and roughness/texture created from grinding operation.

7. **Reflective Media Application**: The Contractor shall ensure that the reflective media are properly set in the polyurea coating so that their exposed portions are free of polyurea coating material. The specified reflective media shall be dropped per the manufacturer’s specified rates to achieve their recommended coating weights.

8. **Volumetric Proportioning**: The Contractor shall ensure proper proportioning as required by manufacturer’s specifications and mixing of the polyurea components so that the markings are adequately hardened
throughout and are free of soft or uncured material. Typically, such areas will darken over time from dirt and tire residue.

9. **Overspray**: The Contractor shall ensure the polyurea coating does not exhibit excessive overspray.

10. **Adhesion**: The Contractor shall ensure that the polyurea coating is well adhered to the road surface, and that the reflective media are well adhered to the binder.

**IV. Observation Period**

Following initial completion of all pavement marking, there will be a 180-day observation period before final acceptance. During the observation period, the Contractor, at no expense to the Department of Transportation, shall replace any marking that the Engineer determines are not performing satisfactorily due to defective materials and/or workmanship in manufacture and/or application. At the end of the observation period the minimum required retention percentage for marking installed shall be 90%.

Determination of Percentage Retained - The percentage retained shall be calculated as the nominal area of the strip less the area of loss divided by the nominal area and expressed as a percentage of the nominal area. A claim, made by the State against the Contractor, shall be submitted to the Contractor in writing within 30 days after the 180-day observation period. When such a claim is made prior to August 1, the replacement material shall be installed during that same construction season. Replacement material for any claim after August 1, shall be installed prior to June 1, of the following year. Marking replacement shall be performed in accordance with requirement specified herein for the initial application, including but not limited to surface cleaning, sealer application, etc.

Final acceptance of all marking will include an inspection of the appearance of the markings during daylight and darkness. Any markings that fail to have a satisfactory appearance during either period, as determined by the Engineer, shall be reapplied at no expense to the Department of Transportation.

Final acceptance of the pavement marking will be: (1) 180 days after the initial completion of all work, or (2) upon completion of all corrective work, whichever occurs last.

**V. Contract Units and Basis for Payment**

A. Linear pavement markings will be measured in linear feet complete-in-place for the width specified.

B. Arrows and Legends are measured by the each.

Subsection 423.05 of the Standard Specifications is amended to include the item: "____ Polyurea Pavement Marking, Grooved". Payment shall be full compensation for grooving the pavement surface, furnishing and applying all markings, and for all materials, labor, tools, equipment and incidentals necessary to complete the work.
Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurea Pavement Marking, Grooved</td>
<td>Linear Feet</td>
</tr>
<tr>
<td>Polyurea Pavement Marking, Grooved</td>
<td>Each</td>
</tr>
</tbody>
</table>

Payment is full compensation for all work prescribed in this Section.

**CONCRETE PROTECTION BARRIERS**

(4-9-0718)

Guidance for concrete protection barriers:

1. Type A: 4-loop barriers with a large opening at the bottom.
   Type B: 6-loop barriers with 4 lifting slots and no slots for tie-down rods.
   Type C: 6-loop barriers with 4 lifting slots and 6 slots for tie-down rods.

2. Type A barriers and 10-foot barriers will not be allowed for use on NDOT projects.

3. Existing Type “B” and “C” concrete protection barriers that meet NCHRP 350 and were built prior to December 31, 2019 can be used throughout their normal service life until December 31, 2027. The Engineer will determine if the barriers are within their normal service life using the Nebraska Department of Transportation Evaluation Guide Concrete Protection Barriers 2018 Edition.

4. Only Type “C” barriers shall be fabricated for use on this project on or prior to December 31, 2019. After December 31, 2019, all new concrete protection barriers shall meet the 2016 MASH criteria.

5. Other existing barriers meeting NCHRP 350 or MASH (Test Level 3) testing guidelines and FHWA approval may only be used with written permission (containing this project name and/or control number) from the District and Roadway Design Division.

**REMOVABLE WET REFLECTIVE TAPE, TYPE 4**

I. **Description**

This work shall consist of furnishing and installing retroreflective preformed patterned pavement markings in accordance with this provision and in reasonably close conformance to the dimensions and lines shown on the plans and/or required by the engineer.
II. **Materials - General**

The preformed patterned markings shall consist of white or yellow films with clear microcrystalline ceramic beads incorporated to provide immediate and continuing retroreflection during both wet and dry conditions. This film shall be manufactured without the use of lead chromate pigments or other similar, lead-containing chemicals.

The quality of the pavement marking shall be such that the performance requirements for the marking shall be met. The markings shall be precoated with a pressure sensitive adhesive and shall be capable of being adhered to Asphalt concrete or Portland cement concrete at temperatures as low as 50°F (10°C) in accordance with the manufacturer's recommendations. When stored in a cool dry area indoors, the materials shall be suitable for use for one year after the date of purchase.

III. **Classification**

The removable retroreflective pavement marking tape must be designed and constructed in such a manner that it can be readily removed when the markings are no longer applicable. The tape shall be capable of performing for the duration of a normal construction season and shall then be capable of being removed intact or in large pieces. The tape shall be wet and dry reflective throughout its useful life. (A normal construction season is defined as the time after the last snowplowing in the spring and before the first snowplowing in the fall/winter.)

IV. **Composition and Retroreflectivity Requirements**

**Composition:** The retroreflective pliant polymer pavement markings shall consist of a mixture of high-quality polymeric materials, pigments and glass beads distributed throughout its base cross-sectional area, with a reflective layer of microcrystalline ceramic beads bonded to a durable polyurethane topcoat surface. The patterned surface shall have approximately 20% ± 10% of the surface area raised and presenting a near vertical face (β angle of 0° to 60°) to traffic from any direction. (See diagram below.) The channels between the raised areas shall be substantially free of exposed beads or particles.

![Diagram](attachment:diagram.png)

**Retroreflectance:** The white and yellow markings shall have the initial expected retroreflectance values as shown in Table 1 under dry, wet, and rainy conditions. The photometric quantity to be measured shall be coefficient of retroreflected luminance \( R_l \) and shall be expressed as millicandela per square foot per foot-candle \([(mcd \cdot ft^{-2}) \cdot fc^{-1}] \). The metric equivalent shall be expressed as millicandela per square meter per lux \([(mcd \cdot m^2) \cdot lx^{-1}] \).

Retroreflectance values shall be measured under dry conditions in accordance with the testing procedures of ASTM D4061.
Retroreflectance values shall be measured under wet conditions in accordance with ASTM E2176 or ASTM E2177. Wet retroreflectance values measured under a “condition of continuous wetting” (simulated rain) shall be in accordance with ASTM E2176, and to reduce variability between measurements, test method shall be performed in controlled laboratory environment while the marking is positioned with a 3 to 5 degree lateral slope. A wetting agent shall be used to improve wetting of the pavement marking by the water. It is recommended that a 0.1% by volume liquid soap solution be used. Measurements shall be reported as an average for each roll tested, in a minimum of three locations.

Wet retroreflectance values measured under a “condition of wetness” shall be in accordance with ASTM E2177, and the test may be performed with the marking installed on the road. New markings shall be tested using a wetting agent, as previously described. Laboratory measurements shall be performed using a 3 to 5 degree lateral slope. Measurements shall be reported as an average for each roll tested, in a minimum of three locations.

### Table 1

<table>
<thead>
<tr>
<th></th>
<th>White Dry</th>
<th>White Wet &amp; Rainy</th>
<th>Yellow Dry</th>
<th>Yellow Wet &amp; Rainy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance Angle</td>
<td>88.76°</td>
<td>88.76°</td>
<td>88.76°</td>
<td>88.76°</td>
</tr>
<tr>
<td>Observation Angle</td>
<td>1.05°</td>
<td>1.05°</td>
<td>1.05°</td>
<td>1.05°</td>
</tr>
<tr>
<td>Retroreflected Luminance $R_L$ (mcd $m^{-2}$ $lx^{-1}$)</td>
<td>500</td>
<td>250</td>
<td>300</td>
<td>200</td>
</tr>
</tbody>
</table>

Note: The test instrument shall use an Entrance Angle of 88.76° and Observation Angle of 1.05° which represents a simulated driver viewing geometry at a 30 meter distance.

Beads: Index of Refraction: All “dry-performing” microcrystalline ceramic beads bonded to the polyurethane-coated, patterned surface of the material shall have a minimum index of refraction of 1.70 when tested using the liquid oil immersion method. All “wet-performing” microcrystalline ceramic beads bonded to the polyurethane-coated, patterned surface of the material shall have a minimum index of refraction of 2.30 when tested using the liquid oil immersion method. The glass beads mixed into the pliant polymer shall have a minimum index of refraction of 1.5 when tested by the liquid oil immersion method.

**Testing Procedure For Refractive Index of Beads By Liquid Immersion**

Equipment Required:

1. Microscope (minimum 100X magnification)
2. Light source - preferably sodium light or other monochromatic source, but not absolutely essential

3. Refractive index liquids

4. Microscope slide and slide cover

5. Mortar and pestle

Procedure:

1. Using the mortar and pestle, crush a few representative beads and place a few of these crushed particles on a microscope slide.

2. Place a drop of a refractive index liquid, with an index as close to that of the glass as can be estimated, on the particles.

3. Cover the slide with a microscope slide cover and view the crushed particles by transmitted light normal to the slide surface (illuminated from the bottom).

4. Adjust the microscope mirror to allow a minimum light intensity for viewing. This is particularly important if sodium light is not used.

5. Bring a relatively flat and transparent particle into focus.

6. By slightly raising and lowering the objective (microscope tube), look for one or both of the following:
   
   a. Becke Line - This light line will appear to move either into the particle or away from it. In general, if the objective is raised, the line will move toward the material of higher refractive index; if the objective is lowered, the line will move toward the material of lower index.

   b. Variation in Particle Brightness - When raising the object from a sharp focus, the particle will appear to get brighter or darker than the surrounding field. If it becomes brighter, the glass has a higher refractive index than the liquid. If it becomes darker, the glass has a lower refractive index than the liquid. In both cases, the opposite will be true if the object is lowered.

7. This test can be used to confirm that the beads are above or below a specified index. It can also be used to give an accurate determination of the index (± 0.001). This is done by using several refractive index liquids until a match or near match of indices occurs. The index of the glass will equal that of the liquid when no Becke line and no variation in bead brightness can be observed.

The size and quality of the beads shall be such that the performance requirements for the retroreflective pliant polymer shall be met.
Acid Resistance: The beads shall show resistance to corrosion of their surface after exposure to a 1% solution (by weight) of sulfuric acid. The 1% acid solution shall be made by adding 5.7cc of concentrated acid into 1000cc of distilled water. CAUTION: Always add the concentrated acid into the water, not the reverse. The test shall be performed as follows:

Take a 1-inch x 2-inch sample, adhere it to the bottom of a glass tray and place just enough acid solution to completely immerse the sample. Cover the tray with a piece of glass to prevent evaporation and allow the sample to be exposed for 24 hours under these conditions. Then decant the acid solution (do not rinse, touch or otherwise disturb the bead surfaces) and dry the sample while adhered to the glass tray in a 150° F. (66° C.) oven for approximately 15 minutes.

Microscopic examination (20X) shall show no more than 15% of the beads having a formation of a very distinct opaque white (corroded) layer on their entire surface.

Color: The preformed markings shall consist of white film with pigments selected and blended to conform to standard highway colors.

Removability: The pavement markings shall be removable from Asphalt concrete and Portland cement concrete intact or in large pieces, at temperatures above freezing without the use of heat, solvents, grinding or blasting without permanently scarring the roadway surface.

Skid Resistance: The patterned surface of the retroreflective pliant polymer shall provide an initial average skid resistance value upon manufacturing of 45 BPN when tested according to ASTM E303 except values shall be taken in one direction and then at a 45° angle from that direction. These two values shall then be averaged to find the skid resistance of the patterned surface.

Patchability: The pavement marking material shall be capable of use for patching worn areas of the same type in accordance with manufacturer’s instructions.

Thickness: The patterned material without adhesive shall have a minimum caliper of 0.075 inches (1.651mm) at the thickest portion of the patterned cross-section and a minimum caliper of 0.020 inches (.508mm) at the thinnest portion of the cross-section.

V. Installation

The markings shall be applied in accordance with the manufacturer’s installation instructions. Marking configurations shall be in accordance with the “Manual on Uniform Traffic Control Devices.” Tape shall not be installed unless the surface and air temperatures are in compliance with the manufacturer’s specifications. Pavement markings shall be applied to clean, dry surfaces in accordance with the manufacturer’s installation instructions or a method approved by the Engineer.
The Contractor shall have on the project at all times during the application of the removable pavement markings at least one employee with a valid American Traffic Safety Services Association (ATSSA) certification. The ATSSA certification may be for either a "Certified Pavement Marking Technician" or a "Certified Pavement Marking Specialist." The Contractor shall provide the Engineer a copy of the employee’s certification prior to the beginning of work.

VI. **Observation**

During the project phase the markings are intended for, the contractor, at no expense to the Department of Transportation, shall replace any markings that the Engineer determines are not performing satisfactorily due to defective materials and/or workmanship in manufacture and/or application. The installation of all markings will include an inspection of the appearance of the markings during daylight and darkness. Any markings that fail to have a satisfactory appearance during either period, as determined by the Engineer, shall be reapplied at no expense to the Department of Transportation.

VII. **Removal**

Upon completion of the project or phase, the contractor shall remove the tape in whole. The removal procedure shall not damage the roadway surface.

VIII. **Contract Units And Basis For Payment**

Subsection 424.01 of the Standard Specifications is amended to include the item: “Removable Wet Reflective Tape, Type 4”. The price shall be full compensation for furnishing, installing, and removing all markings, and for all materials (including adhesive), labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>____ Removable Wet Reflective Tape, Type 4</td>
<td>Linear Foot</td>
</tr>
</tbody>
</table>

**PERMANENT PAVEMENT MARKING**

Section 423 in the Standard Specifications is amended to provide that for the items “___ Permanent Pavement Marking” the following materials may be used.

I. **Concrete Roadways**

For pavement markings being placed on concrete surfaces, "Preformed Pavement Marking, Type 4, Grooved", "Preformed Pavement Marking, Thermoplastic", or "Polyurea, Grooved” may be used. Approved preformed pavement markings are shown on the NDOT Approved Products List. The material used shall be installed in accordance with the manufacturer’s specifications.
II. Asphalt Roadways

For pavement markings being placed on asphalt surfaces, “Preformed Pavement Marking, Type 4, Grooved”, “Preformed Pavement Marking, Thermoplastic”, “Thermoplastic, Grooved”, or “Polyurea, Grooved” may be used. Approved preformed pavement markings are shown on the NDOT Approved Products List. The material used shall be installed in accordance with the manufacturer's specifications.

Paragraph 1. of Subsection 423.05 is amended to include the following:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ Permanent Pavement Marking</td>
<td>Linear Foot (LF)</td>
</tr>
<tr>
<td>___ Permanent Pavement Marking</td>
<td>Each (ea)</td>
</tr>
</tbody>
</table>

Regardless of the material used it shall be measured and paid for as “___ Permanent Pavement Marking”.

INSTALL OVERLAY SIGNS

Care will be taken to ensure that affixing and removal of the overlay sign will not cause damage to the existing sign. If the existing sign is damaged to the point of it being unsuitable, the Contractor shall replace said sign at their own cost through State approved means.

The item “Install Overlay Sign” shall be measured and paid for on an each basis. Payment shall be considered full compensation for all work prescribed.

SURFACING UNDER GUARDRAIL

(5-3-1217)

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

At the Contractor’s option, the surfacing may be constructed using Class “47B-3000” Concrete, Class “BX-3000” Concrete, Class “PR-3000” Concrete (Class 47B-20 Concrete, Class BX-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.

If asphalt is used in the surfacing, the Contractor shall monitor the density through a combination of rolling pattern and field testing as deemed necessary by the Engineer.

The surfacing under guardrail may be placed in a single lift. If placing in multiple lifts, the lower lifts may be placed by means other than a paver, however, the final lift must be placed with a paver.
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 304.04 in the Standard Specifications is amended to provide that the work of earth shoulder construction associated with 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**  
(Cold Weather Asphaltic Concrete Placement)  
(5-8-1118)

Table 503.03 in Subsection 503.04 in the Standard Specifications is void and superseded by the following:

<table>
<thead>
<tr>
<th>Lift Thickness</th>
<th>Minimum Surface Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 inch (25 mm) or less</td>
<td>50°F (10°C)</td>
</tr>
<tr>
<td>Greater than 1 inch (25 mm) and</td>
<td>45°F (7°C)*</td>
</tr>
<tr>
<td>Less than 2 inches (50 mm)</td>
<td></td>
</tr>
<tr>
<td>2 to 3 inches (50 to 75 mm)</td>
<td>37°F (3°C)*</td>
</tr>
<tr>
<td>Greater than 3 inches (75mm)</td>
<td>35°F (2°C)*</td>
</tr>
</tbody>
</table>

* 32°F (0°C) when a warm mix additive is used in accordance with the contract.
ASPHALTIC CONCRETE PAVEMENT SMOOTHNESS

Amend Subsection 502.01 to include:

5. When the contract contains no item for smoothness testing, the asphaltic concrete pavement sections shall be measured for bumps and dips with either a profilograph, non-contact profiler, or a 10-foot straight edge. If the profilograph or non-contact profiler is used, the deviation shall not exceed 0.40 inch in a 25 ft. span. The deviation of the surface shall not exceed 1/8 inch if a 10-foot straightedge is used.

MILLING CONCRETE FOR INLAYS

Subsection 510.04 of the Standard Specifications is amended to include the following:

The Contractor shall use waterblasting equipment operated with sufficient consistent pressure to effectively clean the pavement surface of all dirt, foreign materials, loose surfacing material, and any residue before placement of the asphaltic concrete overlay. Care shall be taken to prevent any debris or construction materials from entering any inlets on the project that lead directly to:

1. waterways,
2. poorly-vegetated ditches, or
3. well-vegetated ditches having less than 200 feet between the conduit outlet and the point of discharge of the ditch into a waterway.

Inlets shall not be blocked or otherwise restricted in such a way to cause water to collect within an active traffic lane.

The concrete must be completely dry before placement of any asphaltic concrete on these areas.

Milling work for the inlays shall be performed after any concrete repair work that is required in the inlay area.

Paragraph 10. of Subsection 510.04 of the Standard Specifications is void and superseded by the following:

The milled concrete material shall be stockpiled at a site provided by the State. The State provided stockpile site will be located in one of the project site quadrants, as directed by the Engineer.
Paragraph 9. of Subsection 601.02 is amended to include the following:

**e.** For slip-form construction, an electronic monitoring device displaying the operating frequency of each individual internal vibrator shall be required for the construction of mainline pavement exceeding 600 feet in length.

(1) The monitoring device shall have a readout display near the operator’s controls visible to the paver operator and to the Engineer.

(2) It shall operate continuously while paving, and shall display all vibrator frequencies with manual or automatic sequencing among all individual vibrators.

**f.** (1) Each vibrator monitor shall be routinely checked for functionality and adequate frequency no less than once an hour or 300 feet of paving, whichever is more frequent.

(2) If a vibrator monitor fails to function properly, a hand held device may be used until the monitor is repaired. The Contractor shall measure and record the vibrations of each vibrator at least once an hour.

**g.** (1) For projects having 50,000 or more square yards of mainline pavement, the electronic monitoring device shall record the following information:

i. the clock time

ii. station location

iii. paver track speed

iv. operating frequency of individual vibrators

(2) These recorded values shall be made after each 25 feet of paving or after each 5 minutes of time, whichever is more frequent.

(3) These recorded values shall be provided to the Engineer at the end of each day’s placement on paper or in an electronic format suitable to the Engineer.
Paragraph 4.a.(3) of Subsection 603.05 in the Standard Specifications is void and superseded by the following:

(3) The results of the additional two cores taken by the Contractor will be averaged for the final compressive strength calculation and pay factor.

**THICKENED CONCRETE ABUTTING EXISTING PAVEMENT (Crossovers)**

The 14” thickened concrete abutting the existing pavement edge is subsidiary to the item 10” Concrete Pavement.

**CONCRETE CONSTRUCTION (7-3-1217)**

Paragraph 6.g.(3) of Subsection 704.03 in the Standard Specifications is void and superseded by the following:

(3) Steel stay-in-place form material shall conform to the requirements of ASTM A 653/A 653M Coating Designation G165/Z500.

Paragraphs 8.b. and c. of Subsection 704.05 in the Standard Specifications are void and superseded by the following:

8. Payment Deductions:

b. If the 28-day compressive strength is less than the design compressive strength by more than 500 psi, the Contractor may request approval to take cores at the Contractor’s expense.

   (i) A minimum of two cores shall be taken within 45 days after the concrete was poured under the supervision of the Engineer.

   (ii) The location of the cores shall be approved by the Engineer.

   (iii) The Engineer will take immediate possession of the cores and take them to the nearest lab for testing.

   (iv) Cores shall be taken in accordance with ASTM C42.

   (v) The average compressive strength of all the cores taken for a Group’s class of concrete poured that day will be used.
c. If the 28-day compressive strength of the cylinders or the average core compressive strength, whichever is greater, is less than the specified compressive strength and the Engineer determines that the concrete is acceptable for use, a pay factor will be applied to all pay items represented by that 28-day strength. The pay factors are as shown in Table 704.03.

<table>
<thead>
<tr>
<th>Amount Below Specified Compressive Strength (PSI)</th>
<th>Pay Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 50</td>
<td>100</td>
</tr>
<tr>
<td>Greater than 50 to 100</td>
<td>99</td>
</tr>
<tr>
<td>Greater than 100 to 200</td>
<td>97</td>
</tr>
<tr>
<td>Greater than 200 to 300</td>
<td>93</td>
</tr>
<tr>
<td>Greater than 300 to 400</td>
<td>88</td>
</tr>
<tr>
<td>Greater than 400 to 500</td>
<td>80</td>
</tr>
<tr>
<td>Greater than 500</td>
<td>40 or Remove and Replace</td>
</tr>
</tbody>
</table>

BRIDGE DECK CRACK SEALING  
(7-3-1217)  

1. Prior to project acceptance, the contractor can end his responsibility to seal cracks at no cost provided that all cracks have been sealed in accordance with the following requirements:

a. The Contractor shall not seal any bridge deck cracks until after the following:
   i. Concrete has reached a minimum age of 28-days.
   ii. Work on all phases of the bridge is complete, excluding bump grinding and grooving,
   iii. The bridge is no longer being used as a haul road for construction equipment

b. The Contractor shall clean the bridge to remove any asphalt, curing compound, or other materials that may impair the ability to identify cracks.

c. The Contractor shall wet the deck and mark all visible cracks as it dries.

d. The bridge deck shall be dry for 24 hours prior to installation of crack sealant.

e. Crack sealing shall be performed in the presence of the Engineer.

f. The Contractor shall submit a letter certifying that all cracks have been sealed in accordance with the requirements above.
2. The sealing of any additional cracks which develop may be considered for payment as extra work.

3. Bridge decks with excessive cracking will be evaluated by the engineer and may require additional sealing procedures.

**BRIDGE JOINT NOSING**

*(7-7-1217)*

**Description**

This work shall include sawing, removals (including existing angle irons), forming, and placing of the bridge joint nosing materials required at the expansion joint locations, as specified in the plans. This provision applies to:

- New construction, such as when a new approach slab is being constructed
- Breaking out concrete bridge deck or approaches and building new expansion joint seat
- Saw cutting existing concrete to allow installation of a new expansion joint
- Repairing broken edges of expansion joint gaps such as with nosing material
- Asphalt overlays on bridge decks and approaches

**Material Requirements**

Products for repair of expansion joint seats or gap edges or used to enhance the durability of gap edges are known as nosing materials. Such materials are given on the Approved Products List as “Bridge Joint Nosing Materials”. Products not shown on the Approved Products List may be used as allowed by Materials and Research Division.

**Equipment**

Appropriate equipment, in good working order shall be employed to ensure proper mixing and timely application of nosing materials.

**Construction Methods**

Construction of expansion joint seats shall be done as shown in the plans and compliant with all applicable Special Provisions.

All faces of the joint gap or seat shall be laid out in a straight line (shall not deviate from a straight line by more than ¼ inch at any point). This rule is applicable to whatever method is used to construct the gap, whether it is saw cutting, concrete forming, placing nosing material, etc.

Nosing materials shall be used as prescribed by the manufacturer. In addition, or to augment the manufacturer’s instructions as to preparation, all concrete surfaces against which repair or reconstruction material is to be placed, shall be thoroughly cleaned and free of all dust, laitance, moisture or any substances that may interfere with proper adhesion of the material to the concrete. Concrete against which nosing materials are applied shall have been cured for a period as specified by the nosing manufacturer.
Method of Measurement

The quantity of nosing for which payment will be made shall be computed by the Department in cubic feet from dimensions shown in the plans. No field measurement is required unless actual geometry deviates substantially from what is shown in the plans. No deduction shall be made for the amount of material displaced by reinforcement.

Basis of Payment

The Bridge Joint Nosing shall be paid by the cubic foot of the nosing installed and accepted by the Engineer. Preparation of the joint, including sawing, removals, sandblasting and forming will not be paid for directly but shall be considered subsidiary to the Bridge Joint Nosing.

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge Joint Nosing</td>
<td>Cubic Feet (CF)</td>
</tr>
</tbody>
</table>

PREPARATION OF BRIDGE AT STATIONS 5132+75.42, 5123+87.51 RT AND 5123+62.18 LT (7-12-1217)

Description

Preparation of the existing bridge structure(s) shall be in accordance with the pertinent provisions of Section 704 of the Standard Specifications.

Removal Items

The work shall include all work prescribed in the plans necessary to prepare the existing bridge for repair including but not limited to any of the following that apply:

a. The removal of existing concrete bridge components as shown in the plans
b. The saw-cutting and breaking back of existing concrete structures to the limits shown in the plans
c. The removal of the existing steel structures as indicated in the plans
d. The removal of the existing bearing devices as indicated in the plans
e. The cleaning and roughening of the existing concrete that comes into contact with the new work
f. The cleaning, straightening and extending of the existing reinforcing steel into the new work
g. The cleaning and removal of loose rusted areas of piling to be incorporated into the new work
h. The removal of expansion devices and/or expansion joint material, if removal is not covered elsewhere in the contract documents or manufacturer’s instructions

i. Cutting down of bearing piles and sheet piles to 2'-0” below the finished grade, if applicable

Jackhammer Requirements

This paragraph shall apply to concrete removals for which specifications have not been provided elsewhere in the contract documents: When breaking existing concrete, the use of a 15-lb. maximum hammer applied at a 45º angle is required to chip along the edges of removal, and a 30-lb. maximum hammer applied at a 45º angle is required for all other concrete removal.

Exclusions

This provision shall not pertain to removals or preparation for some items of work that may be covered in other contract documents or manufacturer’s installation instructions for those specific items.

Phasing

The existing structure may be used to maintain traffic during the phased construction. In such case, the work shall be done in phases according to the details shown on the plans.

Handling and Disposal of Materials

If there are lead plates under the existing steel rail posts, the lead plates shall be recycled in accordance with Subsection 203.01 Paragraph 3 of the Standard Specifications for Highway Construction.

All other material resulting from the removal of specified bridge components; e.g., structural steel (painted or unpainted) shall become the property of the Contractor and shall be promptly removed from the right-of-way. It is the responsibility of the Contractor to handle materials that may contain toxic substances in accordance with federal, state and local regulations.

Extreme caution shall be exercised in removing the existing bridge components so that no material or debris falls or upon the roadway or into the channel (if so located) below the bridge. The Contractor shall take adequate precautions to protect all traffic and roadways.
Existing Reinforcing Encountered During Concrete Removal

When existing reinforcing steel is broken or has a section loss greater than 20%, the Contractor shall lap splice the existing bar with a bar of matching size. Lap splices shall be as given in the following table:

<table>
<thead>
<tr>
<th>Bar #</th>
<th>Non-epoxy Length (in.)</th>
<th>Epoxy Length (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td>6</td>
<td>26</td>
<td>31</td>
</tr>
<tr>
<td>7</td>
<td>33</td>
<td>39</td>
</tr>
<tr>
<td>8</td>
<td>45</td>
<td>54</td>
</tr>
<tr>
<td>9</td>
<td>59</td>
<td>71</td>
</tr>
<tr>
<td>10</td>
<td>74</td>
<td>89</td>
</tr>
<tr>
<td>11</td>
<td>95</td>
<td>139</td>
</tr>
</tbody>
</table>

The bar used to splice, shall lap, by the length given above, with a portion of the existing bar of which 80% or more of the full section is present, on either side of a break or deteriorated or damaged segment.

All existing reinforcing steel exposed during removal of defective concrete shall be incorporated into the new work. Such bars shall be blast cleaned to remove all rust and corrosion. The bars shall be either reformed, as required, to assume their original (intended) shape or bent to allow placement into the new work. Bars that are required to be cut shall be left as long as possible, reformed if necessary and incorporated into the new work. Deviations from these instructions shall be allowed only when clearly indicated in the plans.

For any reinforcing bar that has more than 2/3 of its diameter exposed, the existing concrete shall be removed so that a minimum clearance of 3/4” is provided all around the bar for the placement of new concrete.

**DOWELING INTO CONCRETE STRUCTURES - POST INSTALLED ADHESIVE ANCHORS**

Materials

1. This provision is concerned with reinforcing bars adhered to hardened concrete. The adhesive anchor system used for post-installed anchorage of reinforcing steel to concrete shall conform to requirements of the most recently published ACI 355.4, *Acceptance criteria for Qualification of Post-Installed Anchors in Concrete and Commentary*.

2. With regard to epoxy resin adhesives for the anchor system, one of the following requirements shall be met:

   a. Adhesives for post-installed anchors are acceptable for use if they are given on the Approved Products List and they also comply with minimum requirements as stated in this provision.
b. Adhesives for post-installed anchors shall meet ACI 355.4 and also comply with minimum requirements as stated in this provision. Bulk mixed adhesives are not permitted.

3. The adhesive anchors, shall be supplied as an entire system. The system shall include, but not be limited to, the new adhesive cartridge, a clean mixing nozzle, extension tube, a dispensing gun and all manufacturer recommended supplies for properly cleaning the drilled hole.

4. Anchorage design is in accordance with Appendix D of ACI 318-11. For adhesive anchors, the following minimum values for bond stress were assumed for design using the above adhesive anchor assemblies:

\[
T = 2050 \text{ psi}
\]

5. Epoxy resin adhesives used for doweling reinforcing bars into hardened concrete shall be capable of providing the full tensile resistance of the reinforcement at the embedment depths specified in the plans. The ultimate tensile force for 60 ksi reinforcement is given in the table below for various bar sizes. If the particular product used requires a greater embedment depth to achieve the required pull-out capacity than that shown in the plans, the Engineer shall be informed.

<table>
<thead>
<tr>
<th>Size</th>
<th>Ultimate Tensile Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>#3</td>
<td>7,425 lb.</td>
</tr>
<tr>
<td>#4</td>
<td>13,500 lb.</td>
</tr>
<tr>
<td>#5</td>
<td>20,925 lb.</td>
</tr>
<tr>
<td>#6</td>
<td>29,700 lb.</td>
</tr>
</tbody>
</table>

**General Installation Guidelines**

1. Concrete shall have a minimum compressive strength (f') of 2500 psi at the time of adhesive anchor installation.

2. Concrete temperature at the time of anchor installation shall be 50°F (10°C) or warmer.

3. Anchor embedment depth and projection (length protruding) from the concrete surface are shown on the drawing or detail for the particular anchor being installed. The Engineer shall be consulted in cases where this information is unclear or absent from the plans.

4. Adhesives shall be stored and installed within the service temperature ranges recommended by the manufacturer.

**Installation Techniques**

1. Post-installed adhesive anchors shall be installed in accordance with the Manufacturer's Printed Installation Instructions (MPII) with the exception, as follows. When the instructions of this provision are more stringent than the MPII, adhesive anchors shall be installed in accordance with these provisions, as a minimum requirement.

2. Installation of adhesive anchors, horizontally or upwardly inclined or those used to support sustained tension loads, shall be performed by personnel certified by the
ACI/CRSI Adhesive Anchor Installer Certification Program. It is recommended that all adhesive anchors are installed under the supervision of a certified installer.

3. The installer's qualifications, when required, shall be submitted to the Engineer, prior to any work being done on the project.

4. The Contractor shall provide all equipment required to install the adhesive anchor, including but not limited to drills, setting tools, clean-out brushes, blow-out bulbs, oil-free compressed air, shop vacuums, wrenches, etc.

5. Anchors shall be installed in holes drilled with a rotary impact hammer drill or rock drill.

6. Anchor holes shall be thoroughly cleaned prior to adhesive injection, as required by the MPII. At a minimum, this consists of cleaning with compressed air free of oil and moisture using a nozzle extended to the bottom of the hole. This shall be supplemented with brush or other tool cleaning to remove all concrete dust and loose material followed by a second compressed air cleaning. This is commonly known as “blow-brush-blow” (BBB).

7. Drilled and cleaned anchor holes shall be protected from contamination until the adhesive is installed.

8. A drilled hole shall be re-cleaned if, in the opinion of the Engineer, the hole has become contaminated after cleaning.

9. Unless otherwise indicated on the MPII, adhesive shall be dispensed through a tube or cartridge extension, beginning at the maximum depth of the hole that is withdrawn as adhesive is injected until the hole is entirely filled. This shall be followed by insertion and rotation of the anchor to the specified depth. Where necessary, spaces around anchors, at the surface, shall be sealed to prevent loss of the adhesive during curing where holes are drilled in a range from horizontally to upward.

10. Anchors to be installed in the adhesive shall be clean and free of any surface contaminants or imperfections; e.g., oil, loose rust, paint or other coatings.

11. Installed adhesive anchors shall be securely fixed in place to prevent displacement during curing of the adhesive. Unless shown otherwise on the drawings, anchors shall be installed perpendicular to the concrete surface. Anchors displaced before full adhesive cure shall be considered damaged and replaced at the Contractor’s expense.

12. Reinforcing bars shall not be bent after being adhered to the concrete unless permitted by the Engineer.

**Basis of Payment**

1. Pay shall be made subsidiary to other items for which payment is made.
BRIDGE DECK REPAIR AND BRIDGE APPROACH REPAIR
(7-21-1217)

Bridge deck repair and bridge approach repair are treated similarly in this provision, except where a distinction is made.

CONCRETE BRIDGE DECK/APPROACH REPAIR
WITH CLASS 47BD 4000 CONCRETE

Description
1. The work shall include removing unsound concrete, disposing of the old concrete, preparation of the repair area, and furnishing, placing, finishing, and curing the concrete for repairs to bridge decks and/or approaches.

Material Requirements
1. Materials shall conform to the requirements in Table A.

<table>
<thead>
<tr>
<th>Material Requirements</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement Concrete</td>
<td>1002</td>
</tr>
<tr>
<td>Curing Materials</td>
<td>1010, 1011</td>
</tr>
<tr>
<td>Water for Concrete</td>
<td>1005</td>
</tr>
<tr>
<td>Adhesive</td>
<td>1018</td>
</tr>
<tr>
<td>Joint Sealing Filler</td>
<td>1014</td>
</tr>
</tbody>
</table>

2. The 47BD concrete may use Class F coarse aggregate shown in Table 1033.03A

Equipment
1. Surface preparation equipment shall be of the following types:
   a. Concrete saws capable of sawing to a specified depth.
   b. Sandblasting equipment able to remove rust and concrete from exposed reinforcing bars. The equipment shall also be able to remove loose and fractured particles from the prepared concrete surface.
   c. Power-driven hand tools will be allowed with the following restrictions:
      (1) Jackhammers greater than the nominal 60-lb (27 kg) class shall not be used.
      (2) Jackhammers or chipping tools shall not be operated at an angle greater than 45 degrees measured from the deck surface.
(3) Chipping hammers greater than the 30-lb (13.5 kg) class shall not be used to remove concrete from around reinforcing bars.

2. Vibrating screeds, either mechanical or hand operated shall be used to finish the concrete.

**Construction Methods**

1. General Requirements:
   
a. No loads other than construction equipment shall be allowed on any portion of the concrete bridge deck or approach which has undergone preparation and removal of the old concrete surface. No construction load will be allowed which exceeds either an 8,000 lb (3625 kg) wheel load or a 16,000 lb (7250 kg) axle load. Any combination of axles closer than 4 feet (1.2 m) center-to-center will be considered to be one axle.

b. The Contractor shall take all necessary precautions to prevent damage to persons or property beneath the structure.

2. Concrete Removal Requirements:
   
a. All unsound concrete shall be removed from the concrete bridge deck or approach. When no overlay is indicated on the plan, the Contractor shall use a diamond blade to cut around the perimeter of the repair area to a depth of one inch. All repairs shall be cut so the edges are either parallel or perpendicular to the traveled way. When an overlay is indicated on the plan, saw-cutting is not necessary and edges shall be left irregular.

b. The Contractor shall remove, scarify or chip the concrete deck or approach to a minimum depth of two inches in any area requiring repair until all unsound concrete is removed. Where scarifying equipment cannot be used, hand chipping will be required.

   (1) Care shall be exercised to prevent cutting or otherwise damaging any exposed reinforcing bars. Repairs to damaged reinforcing steel shall be performed by the Contractor as directed by the Engineer at no expense to the Department. Additional concrete removal and replacement necessary to repair damaged reinforcing steel shall be at no expense to the Department.

   (2) Any damaged epoxy coating of existing reinforcing steel shall be repaired according to Subsection 1021.03.

c. Defective concrete shall be removed in the following manner:

   (1) Where machine scarifying is employed to remove concrete, extreme care shall be used to avoid cutting reinforcing bars. Any damage caused by the Contractor shall be repaired by the Contractor as directed by the Engineer at no additional cost to the Department.
(2) When existing reinforcing steel is encountered that is broken or has a section loss greater than 20%, the Contractor shall lap splice the existing bar with a bar of matching size. Lap splices shall be as given in the following table:

<table>
<thead>
<tr>
<th>Bar #</th>
<th>Non-epoxy Length (in.)</th>
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<td>89</td>
</tr>
<tr>
<td>11</td>
<td>95</td>
<td>139</td>
</tr>
</tbody>
</table>

The bar used to splice, shall lap, by the length given above, with a portion of the existing bar of which 80% or more of the full section is present, on either side of a break or deteriorated or damaged segment.

(3) At points where removal of unsound concrete is adjacent to reinforcing bars or the removal of unsound concrete leaves over 2/3 of the bar diameter exposed, the removal shall be continued so that at least 3/4-inch clearance surrounds the bar allowing new concrete to bond to the entire periphery of the exposed bar.

(4) Wherever removal of unsound concrete extends to the top of the bottom layer of steel, the remaining thickness shall be removed to the full depth of the bridge deck or approach.

(5) When concrete removal goes lower than three inches from the bottom of the bridge deck or approach, the remaining concrete, in that location, shall be removed to full depth.

(6) Any removals shall be carefully done to prevent damage to the bottom of the deck or approach and to leave removal boundaries which will allow complete filling with plastic concrete.

3. Preparation of the Surface:

a. All debris and rubble resulting from bridge deck or approach removal shall be thoroughly swept up and disposed of. The Contractor shall sandblast all exposed reinforcing bars, all prepared concrete surfaces, and the portion of the bridge curb and all surfaces of steel roadway joints that will be in contact with the concrete. The remaining concrete surface and reinforcing bars shall be cleaned with compressed air, vacuum, brushes or other methods as necessary to produce a surface free of particles, dust, liquids or other contaminants.

b. In cases where the placement of the concrete is delayed beyond 24 hours after the sandblasting has been completed, the formation of incidental rust on the rebars due to humidity or rain shall not be cause for re-sandblasting.
4. Forming:
   a. Forms shall be provided in areas where the removal goes through the entire depth of the bridge deck. Forms for small areas (1 square yard or less) may be wired to the reinforcing bars for support. Forms for larger areas shall be supported by blocking from the beams.
   b. Forms shall be provided as required to re-establish edges of approaches that have been removed. Voids discovered under approaches shall be filled with flowable fill concrete.

5. Placing Concrete:
   a. The Engineer shall inspect and be satisfied that all removal and preparation has been done in compliance with this provision.
   b. The clean dry vertical and horizontal faces of the repair shall be coated with Grade 2 Epoxy Adhesive from the NDOT Approved Products List just before placing the new concrete.
      (1) The epoxy adhesive shall be applied to the vertical sides of the repair with a brush.
      (2) The epoxy application rate shall be limited so the epoxy adhesive does not become dry before it is covered with the new concrete.
   c. The Contractor shall furnish and place Class 47BD 4,000 psi concrete for the deck or approach repair. The concrete shall be handled and consolidated so there will be no separation of the aggregate and the mortar.
   d. An internal vibrator shall be used to consolidate the concrete. Excessive vibration shall be avoided.
   e. A vibrating screed shall be used on repairs 5 feet or wider to finish the concrete to the final elevation.
   f. The surface shall be floated with a magnesium bull float. The surface shall be hand tined parallel to the existing tining in the deck or approach. If the deck or approach is to be overlayed prior to opening to traffic, no tining is required.

6. Sealing Joints:
   a. All transverse and longitudinal joints surrounding the repair shall be sealed and the work considered subsidiary to the pay item “Bridge Deck Repair” or “Bridge Approach Repair”.
   b. Sealing is not required if the repairs will be overlaid with asphalt or concrete.
7. Curing:
   a. The Contractor shall apply curing compound to all concrete deck or approach repairs.
   b. The application rate shall be 1 Gal/200 SF

8. Smoothness:
   a. The elevation of deck or approach repairs shall be corrected in a manner that eliminates swales or bumps. Swales and bumps are defined as having 1/8-inch or greater deviation using an approved 10-foot straightedge. Corrective actions shall be completed by diamond grinding or replacement. The condition of the adjacent pavement shall be considered when evaluating the 1/8-inch deviation requirement.

Method of Measurement

1. "Concrete Bridge Deck Repair" shall be measured for payment by the square yard of deck repaired, as determined by field measurements.

2. "Bridge Approach Repair" shall be measured for payment by the square yard of approach repaired, as determined by field measurements.

Basis of Payment

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Concrete Bridge Deck Repair</td>
<td>Square Yard (SY)</td>
</tr>
<tr>
<td>2. Bridge Approach Repair</td>
<td>Square Yard (SY)</td>
</tr>
<tr>
<td>3. Areas of repair that, at the direction of the Engineer, extend through the full thickness of the deck or approach shall be measured and paid for at an additional 1.5 x the price for &quot;Concrete Bridge Deck Repair&quot; or &quot;Bridge Approach Repair&quot;.</td>
<td></td>
</tr>
<tr>
<td>4. Payment for above pay items shall be full compensation for the completion of the work and for providing all materiel described in the contract documents.</td>
<td></td>
</tr>
</tbody>
</table>

COLD LIQUID-APPLIED MEMBRANE
(7-26-1217)

000.01 - - Description of Work

1. This work shall consist of preparation of the deck or approach surfaces, providing and installing a seamless spray elastomer waterproofing membrane to suitable concrete or miscellaneous metal surfaces. The tack coat and asphaltic surface course are not part of this item.
000.02 - Material Requirements

1. The Cold Liquid-Applied Membrane (CLAM) shall be a spray applied, 100% solids, fast cure, and high-build polymer system consisting of the following components:
   a. A two component polymer primer shall be applied at 130-200 ft²/gallon, or at the rate specified by the manufacturer.
      (1) The primer materials shall meet the requirements shown in Table 2.
      (2) The primer shall be provided by the same manufacturer as the base membrane.
   b. The base membrane shall be applied to the primer at a minimum thickness of 80 mils or at the minimum thickness required to pass the crack bridging test, whichever is thicker.
      (1) The base membrane materials shall meet the requirements shown in Table 3.
   c. The Bridge Deck Top Coat shall be applied to the base membrane at 30 - 40 mils and an aggregate layer shall be broadcast into it before it hardens.
      (1) The Bridge Deck Top Coat shall be a 100% solids, two component, rapid curing elastomer that is compatible with the base membrane.
      (2) The Bridge Deck Top Coat materials shall meet the requirements shown in Table 4.
      (3) The aggregate for the top coat shall be 1/4 Inch Clean Chips of Crushed Rock of 100% Ledge Rock Material and shall comply with Section 1033 of the Specifications amended as per Table 1.
      (4) The top coat aggregate shall be broadcast into the top 40 mils of waterproofing membrane at a rate of 0.5 to 1.0 pound per square foot or approved equal subject to approval by the Engineer.
   d. Products on the Approved Products List under “Wick Drains for Asphalt Overlays on Bridges” may be used without additional approval. Other products meeting the requirements of Table 5 may be submitted to the Engineer for approval.

2. Base Membrane, Bridge Deck Top Coat and aggregate layer shall be capable of accepting emergency and temporary vehicular traffic at highway speeds greater than 65 mph one hour after application.
   a. A non-skid aggregate surface shall be retained without significant aggregate loss throughout the duration of traffic exposure.
   b. Membrane system shall not be exposed to traffic for more than 7 days or as allowed by the product manufacturer.
3. Material certifications must be submitted and approved 10 days prior to construction. Material Submittals shall include the following:

a. Manufacturer shall provide independent laboratory test results certifying each component’s conformance to the physical property requirements listed in Tables 2, 3, and 4. All testing shall be current (conducted within the past three (3) years).

b. The manufacturer’s material safety data sheets (MSDS) for each of the components. All primers and membranes shall be from the same manufacturer.

c. Two sample coupons (4”x4”) that are representative of the finished membrane surface, texture, and color.

```
Table 1.
Top Coat Aggregate Gradation

<table>
<thead>
<tr>
<th>size</th>
<th>percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 inch</td>
<td>98 - 100</td>
</tr>
<tr>
<td>#4</td>
<td>75 - 100</td>
</tr>
<tr>
<td>#8</td>
<td>2 - 40</td>
</tr>
<tr>
<td>#16</td>
<td>1 - 10</td>
</tr>
<tr>
<td>#200</td>
<td>0 - 0.3</td>
</tr>
</tbody>
</table>
```

```
Table 2.
Material Properties of Primer

<table>
<thead>
<tr>
<th>Properties</th>
<th>Test Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Gel Time (minutes)</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Maximum Tack Free Time at 77 °F (hours)</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Mixing Ratio</td>
<td>Per Manufacturer</td>
<td></td>
</tr>
<tr>
<td>Minimum Adhesion to Concrete (psi)</td>
<td>ASTM D 4541</td>
<td>150</td>
</tr>
</tbody>
</table>
### Table 3. Material Properties of Base Coat

<table>
<thead>
<tr>
<th>Properties</th>
<th>Test Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solids Content (%)</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Minimum Shore Hardness Type D</td>
<td>ASTM D2240</td>
<td>50</td>
</tr>
<tr>
<td>Minimum Elongation (%)</td>
<td>ASTM D638</td>
<td>250</td>
</tr>
<tr>
<td>Minimum Tensile strength (psi)</td>
<td>ASTM D638</td>
<td>2000</td>
</tr>
<tr>
<td>Tear Strength, pli, Die C</td>
<td>ASTM D624</td>
<td>390</td>
</tr>
<tr>
<td>Maximum Taber Abrasion (mg loss)</td>
<td>ASTM D4060</td>
<td>250</td>
</tr>
<tr>
<td>Moisture Vapor Transmission (perms)</td>
<td>ASTM E96 Procedure B</td>
<td>0.90</td>
</tr>
<tr>
<td>Maximum Gel Time (seconds)</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Tack Free (seconds)</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Open to Traffic (hours)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Crack Bridging Test opening (inches)</td>
<td>ASTM C1305 for minimum of 80 mils at -15 °F for 40 cycles with 1/8 inch opening</td>
<td>pass</td>
</tr>
</tbody>
</table>

### Table 4. Material Properties of Top Coat

<table>
<thead>
<tr>
<th>Physical Property</th>
<th>Test Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solids Content (%)</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Minimum Gel Time (seconds)</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Minimum Tack Free Time (minutes)</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Minimum Cure Time to Open to Traffic (hours)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Minimum Shore Hardness Type D</td>
<td>ASTM D2240</td>
<td>40</td>
</tr>
<tr>
<td>Minimum Tensile strength (psi)</td>
<td>ASTM D 638</td>
<td>2000</td>
</tr>
<tr>
<td>Tear Strength Die C (pli)</td>
<td>ASTM D 638</td>
<td>350</td>
</tr>
<tr>
<td>Minimum Elongation at break (%)</td>
<td>ASTM D 638</td>
<td>150</td>
</tr>
<tr>
<td>Crack Bridging Test</td>
<td>ASTM C1305 for minimum of 80 mils Base Coat + 40 mils Top Coat with Aggregate at -15 °F for 40 cycles with 1/8 inch opening</td>
<td>pass</td>
</tr>
</tbody>
</table>
### Table 5.
**Physical Requirements of Wick Drain**

<table>
<thead>
<tr>
<th>Fabric Properties</th>
<th>Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Polypropylene</td>
<td></td>
</tr>
<tr>
<td>Minimum Grab Tensile Strength (lb)</td>
<td>130</td>
<td>ASTM D-4632</td>
</tr>
<tr>
<td>Minimum Puncture Strength (lb)</td>
<td>41</td>
<td>ASTM D-4833</td>
</tr>
<tr>
<td>Minimum Trapezoidal Tear (lb)</td>
<td>60</td>
<td>ASTM D-4533</td>
</tr>
<tr>
<td>Minimum Elongation (%)</td>
<td>50</td>
<td>ASTM D-4632</td>
</tr>
<tr>
<td>EOS (AOS) (sieve size)</td>
<td>70</td>
<td>ASTM D-4751</td>
</tr>
<tr>
<td>Minimum Permittivity (1/sec)</td>
<td>0.8</td>
<td>ASTM D-4491</td>
</tr>
<tr>
<td>Minimum Flow Rate (gpm/sqft)</td>
<td>60</td>
<td>ASTM D-4491</td>
</tr>
<tr>
<td>Minimum UV Stability (%)</td>
<td>70</td>
<td>ASTM D-4355</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Properties</th>
<th>Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Polypropylene</td>
<td></td>
</tr>
<tr>
<td>Minimum Tensile Strength (lb)</td>
<td>225</td>
<td>ASTM D-4595</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product Properties</th>
<th>Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Discharge Capacity (gpm)</td>
<td>1.6</td>
<td>ASTM D-4716</td>
</tr>
<tr>
<td>Roll width (in)</td>
<td>3 to 4.5</td>
<td></td>
</tr>
<tr>
<td>Maximum total thickness (in)</td>
<td>0.5</td>
<td></td>
</tr>
</tbody>
</table>

---

**000.03 - Construction Methods**

1. Construction methods and procedures must be submitted to the Engineer for approval at least 10 days prior to construction. Construction method submittal shall include the following:


   b. The manufacturer’s current installation and testing procedure document. This document shall conform in its entirety with all the requirements specified herein.

   c. Service record showing that the membrane applicator has a satisfactory record of not less than 3 years, prior to the date of submission, for similar applications with names of specific structures and owner contact information.

   d. Service record showing that the membrane manufacturer has a satisfactory record of not less than 5 years, prior to the date of submission, for similar applications with names of specific structures and owner contact information.

   e. Scheduling and phasing of the installation.

2. **Storage**

   a. All materials shall be shipped and stored in a dry shaded area between 35°F to 90°F and according to the manufacturer’s recommendations.
3. Preparation of the Surface to be covered by Waterproof Membrane

a. Concrete substrate shall be clean and sound. Unsound concrete shall be removed and replaced with approved repair concrete.

   (1) Newly placed concrete shall be broom finished. No belting, scoring, tining or other texturing shall be used.

   (2) Portland cement concrete to be covered by Waterproof Membrane shall cure for a minimum of 12 days before applying the waterproof membrane.

b. The Engineer shall be contacted for guidance if ponding of water is observed on the concrete bridge deck before membrane is placed.

c. If deck drain pipes are present the tops of the pipes shall be level with the surface of the deck or below the surface of concrete deck by not more than 1/4-inch.

d. Concrete surfaces to be covered by membrane shall be prepared to SSPC-SP13/NACE No. 6.

e. Metal surfaces to be covered by membrane shall be prepared in accordance with SSPC-SP10 Near White Blast.

f. Surfaces that are not to be covered with membrane shall be protected to prevent defacement by membrane system. Should defacement occur the Contractor shall clean surfaces on the structure as directed by the Engineer at no cost to the Department.

4. Weather and Moisture Conditions

a. The membrane system shall not be applied in wet weather or at ambient temperatures below 35 °F without approval by the Engineer and the Product manufacturer. The primer or adhesive shall only be applied on clean and dry surfaces when the temperature of the substrate exceeds the dew point by at least 5 °F (3º C). Special attention shall be given to assure that there is no moisture present at the interface between the deck and bridge curb.

   (1) The Contractor shall verify that surfaces to which membrane system will be applied are sufficiently dry by one of the two following methods.

   (a) No condensation shall be found by taping an 18 inch by 18 inch plastic sheet tightly to the surface of the concrete per ASTM D4263. The plastic sheet test shall be performed only when surface temperatures and ambient conditions are within the established parameters for application of the overlay system. In the event of rain, the concrete shall be allowed to air dry for a minimum of 24 hours before performing the plastic sheet test. This test shall be performed by the Contractor and observed by the Engineer. The Department will allow a 4 hour test duration instead of the 16 hours specified in ASTM D4263.
(b) Substrate moisture content shall be 5.0% or less when tested concrete moisture content with a non-destructive concrete moisture meter. This method shall be accepted only if accurate calibration can be demonstrated to the Engineer.

(2) The Contractor shall supply a digital weather instrument that can measure both ambient temperature and dew point, and an infrared surface temperature measuring instrument.

5. Membrane System Placement

a. Installation of Membrane system shall not begin until all materials and equipment to complete the work are on the job site. All equipment shall be maintained in good working order and reserve equipment shall be available as required.

b. Manufacturer’s representative shall be on-site throughout the installation process and shall perform and record relevant quality control readings.

c. The primer shall be applied on prepared surfaces at the rate specified by the manufacturer.

d. Primer shall be tack free before placement of the membrane. Primer shall be reapplied if set more than 24 hours.

e. Spray waterproofing membrane over primed surfaces at a minimum thickness of 80 mils (20 ft² per gallon) or the minimum thickness required to pass the ASTM C 1305 Crack Bridging Test. Spray additional base coats as required to achieve the specified thickness.

(1) The lips of drain openings and edges of open joints, deck slab, and other openings at deck level shall be completely sealed by extending the full waterproofing course over the lip or edge.

(2) Edge of membrane shall extend up the face of curbs to 1/2 inch below the height of the overlay surface.

f. Spray top coat membrane over base membrane at a thickness of 30-40 mils and immediately broadcast aggregate at 0.33-0.50 lbs. per ft² to achieve a minimum coverage rate of 95%.

g. Wick drains shall be placed on a thin layer of tacky mastic on top of Membrane. Wick drains shall be placed at the face of low-side curbs extending longitudinally to terminate at deck drains or ends of closed bridge rail or as shown in the plans. Wick drains are not required on bridges with open rails.
6. **Asphalt Overlay**

   a. **Tack coat** shall be applied to the surface of the membrane top coat to aid in bonding the asphaltic concrete to the membrane. The rate of application shall not be less than 0.1 gal./sy. Application rate will be verified during construction.

      (1) Surfaces to which tack coat is applied shall be clean and dry.

      (2) The surface shall be paved with asphalt the same day the tack coat is placed.

      (3) When multiple lifts of asphalt are placed, tack coat shall be applied at the specified rate to each underlying lift.

   b. A minimum of 3 inches compacted overlay thickness is required unless otherwise shown in plans.

   c. The use of a pickup machine and the dumping of asphaltic concrete directly on the membrane are not allowed unless a placement program is submitted for approval by the Engineer.

   d. Rollers shall be operated in static mode unless permitted by the Engineer.

   e. A vibratory plate compactor shall be on site and used in areas that cannot be roller-compact ed such as near the face of bridge rails.

7. **Quality Control**

   a. The Contractor shall use magnetic, ultrasonic, or destructive testing to assure proper application, including identifying unbonded areas. The Contractor shall include with other submittals the method, minimum number, and randomness of the locations for testing. Any destructive testing areas shall be repaired by re-spraying or filling with the production liquid membrane material.

   b. All areas of unbonded membrane shall be removed and replaced, or repaired with means acceptable to the Engineer at the Contractor’s expense prior to the placement of the asphalt overlay.

   c. After membrane system is inspected and accepted, the tack coat and Hot Mix overlay can be placed as shown in the plans. The hot mix contractor shall take care and make placement operations as in accordance by the membrane manufacturer and any other requirements of the Certified Representative.

   d. All details for the installation, plan, materials, schedules, certifications, and construction of the membrane and Asphalt overlay shall be submitted, reviewed and approved prior to installation. A pre-paving meeting shall be scheduled by the Contractor with the Project Manager and NDOT Staff, and all subcontractors involved in performing this work, at least 72 hours prior to construction.
000.04 - - Method of Measurement

1. The unit of payment for the Cold Liquid-Applied Membrane is by the Square Foot.
   a. The area receiving the membrane system will not be measured directly, but will be plan dimension of the surface receiving the treatment.

000.05 - - Basis of Payment

1. Pay Item           Pay Unit
   Cold Liquid-Applied Membrane Waterproofing       Square Foot (SF)

2. Payment is full compensation for all work prescribed in this Section.

HIGH EARLY CONCRETE
CLASS 47B-HE-4000 CONCRETE FOR BRIDGE

Description

This work shall consist of furnishing, placing, and curing High Early Concrete at the following locations shown in the design plans:

1. Placement of concrete into the longitudinal joints between the approach slab panels.
2. Placement of concrete into the transverse Approach Slab Haunch near End of Floor.
3. Placement of concrete into the dowel holes in the approach slab panels.

Material Requirements

1. The High Early Concrete shall be in accordance with Section 1002 of the Standard Specifications. The Class of Concrete shall be 47B-HE.
2. The High Early Concrete placed shall meet the following requirements:
   a. Attain a compressive strength of 3,500 psi before any construction equipment loads are placed on the approach slabs.
   b. Attain a compressive strength of 4,000 psi before the bridge is open to traffic.
   c. Attain a compressive strength of 4,000 psi at 28 days.
Construction Methods

1. The longitudinal joints and dowel holes shall be overfilled with the High Early Concrete, the excess concrete screeded off, and the top surfaces finished to a uniform, even texture.

2. Following the placement of the High Early Concrete in the longitudinal joints in the approach slabs, the Contractor shall give the concrete surface a drag finish with wet burlap. The drag finish shall create a uniform, fine-grained finish on the concrete surface.

Method of Measurement

1. The quantity of concrete for which payment will be made shall be computed by the Department in cubic yards from dimensions shown in the contract. No field measurement is required. Pay quantities are those shown in the contract.

Basis of Payment

1. Pay Item                  Pay Unit
   Class 47B-HE-4000 Concrete for Bridge    Cubic Yards (CY)

PRECAST CONCRETE APPROACH SLAB ELEMENTS

Description of Work

This work shall consist of furnishing and installing precast concrete approach slab panels as shown in the plans and in accordance with the Standard Specifications and this special provision. This work includes all necessary materials and equipment to complete the work as shown on the plans. The use of cast-in-place concrete will not be considered for substitution.

Material Requirements

1. The class of concrete and grade of reinforcing steel shall be as shown in the plans.

Construction Methods

1. Shop Drawings for Precast Elements
   a. The Contractor shall submit shop drawings of the precast concrete elements for review.
   b. The Contractor shall design the devices used to lift and handle the precast concrete elements. The shop drawing(s) showing the details of
the lifting device system shall be prepared and sealed by a Professional Engineer licensed in the State of Nebraska and shall include the following:

1. Show locations and details of the lifting devices and the type and amount of any additional reinforcing required for lifting.

2. Show minimum compressive strength required prior to lifting and handling the precast concrete elements.

2. Fabrication
   a. No concrete shall be placed in the forms until the Engineer has inspected the forms and has approved the materials and the placement of the materials in the forms.
   b. The top surface of the precast panels for the approach section and paving section shall be drag finished with wet burlap, carpet, or a soft bristled broom. The drag finish shall create a uniform, fine-grained finish on the concrete surface.

3. Handling, Storage, and Transportation
   a. The Contractor shall be responsible for exercising extreme care in lifting, handling, storing and transporting the precast concrete elements to prevent cracking or damage.
   b. Storage areas shall be smooth and well compacted to prevent damage due to differential settlement.
   c. Proper support bearings shall be used to avoid twisting of the precast concrete element.
   d. The precast concrete elements shall be transported in such manner that the points of support and direction of reactions with respect to the element shall be approximately the same during transportation and storage as when the element is in its final position.
   e. Adequate padding shall be provided between chains and cables to prevent chipping of the concrete.

4. Installation of the Precast Approach Slab Panels
   a. The precast approach slab panels for the approach sections and the paving sections shall be installed at the locations specified in the plans.

Method of Measurement

1. The quantity of concrete for which payment will be made shall be the plan quantity in cubic yards.
2. All reinforcing steel is measured in pounds (LB). Payment will be based on the plan quantities when the structure is built according to the plans.

Basis of Payment

1. **Pay Item** | **Pay Unit**
   - Class 47BD-4000 Concrete for Precast Approach Section Panels | Cubic Yards (CY)
   - Class 47BD-4000 Concrete for Precast Paving Section Panels | Cubic Yards (CY)
   - Epoxy Coated Reinforcing Steel for Precast Approach Section Panels | Pounds LB)
   - Epoxy Coated Reinforcing Steel for Precast Paving Section Panels | Pounds (LB)

2. Payment is full compensation for all work prescribed in this Section.

**FLOWABLE FILL CONCRETE**

The flowable fill concrete shall be placed as shown in the plans and as directed by the engineer. The flowable fill material shall meet the requirements of Section 1003 in the Standard Specifications.

The item “Flowable Fill Concrete” shall be measured and paid for by the cubic yard. Payment shall be considered full compensation for all work required to provide and place the material to the lines and dimensions shown in the plans.

**EROSION CONTROL**

Subsection 810.02 in the Standard Specifications is amended to include the following:

<table>
<thead>
<tr>
<th>Plant Species</th>
<th>Minimum Purity (%)</th>
<th>Application rate in lb. of Pure Live Seed/1000 yd.²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard fescue (Festuca trachyphylla)</td>
<td>85</td>
<td>1.25</td>
</tr>
<tr>
<td>Red fescue (Festuca rubra)</td>
<td>85</td>
<td>1.5</td>
</tr>
<tr>
<td>Kentucky bluegrass, Low Maintenance (Poa pratensis Low Maintenance)</td>
<td>85</td>
<td>0.75</td>
</tr>
<tr>
<td>Fults alkali grass (Puccinellia distans)</td>
<td>85</td>
<td>0.5</td>
</tr>
<tr>
<td>Kentucky fescue</td>
<td>85</td>
<td>4.5</td>
</tr>
<tr>
<td>Inland saltgrass (Distichlis spicata)</td>
<td>85</td>
<td>0.25</td>
</tr>
<tr>
<td>Rye (Secale cereale)</td>
<td>90</td>
<td>5</td>
</tr>
</tbody>
</table>
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 Engineer’s 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:

<table>
<thead>
<tr>
<th>Rate of Application</th>
<th>Per 1000 yd.² (Min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Nitrogen (N₂)</td>
<td>8 or 9 lb.</td>
</tr>
<tr>
<td>Available Phosphoric Acid (P₂O₅)</td>
<td>23 or 24 lb.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Rate of Application</th>
<th>Per 1000 yd.² (Min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (Total Available)</td>
<td>0 lb.</td>
</tr>
</tbody>
</table>

**COVERCROP SEEDING**

*(8-6-1217)*

Paragraph 3. of Subsection 802.02 in the Standard Specifications is void and superseded by the following:

Fertilizer is not required for covercrop seeding.

Paragraph 6. of Subsection 802.03 is void.

**TEMPORARY SEEDING**

*(8-7-0218)*

Paragraph 3. of Subsection 803.02 in the Standard Specifications is void and superseded by the following:

Fertilizer is not required for temporary seeding.

Paragraph 3.c. of Subsection 803.03 is void.

Paragraph 2. of Subsection 803.04 is void and superseded by the following:

The mulch will not be measured for payment, but shall be considered subsidiary to the item “Temporary Seeding”.
GUARDRAIL END TREATMENT, TYPE I
(9-1-0718)

Section 902 in the Standard Specifications is amended to include “Guardrail End Treatment, Type I”.

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 which meet NCHRP 350 or MASH TL-3:

1.) MSKT-SP-MGS
Manufactured by Road Systems, Inc.
3616 Old Howard County Airport
Big Springs, TX 79720
(915) 263-2435

2.) MaX-Tension
Manufactured by Lindsay Manufacturing
505 Crown Point Ave.
Omaha, NE 68110
(402) 210-4593

3.) Softstop
Manufactured by Trinity Industries, Inc.
2525 N. Stemmons Freeway
Dallas, TX 75207
(800) 644-7976

The lengths of manufacturers’ end treatments vary; the Contractor must install a total length of 53’-1.5”, including the end treatment, to last post with curved end or rectangular “head” beyond the last post. The additional length required will be W-beam guardrail with Midwest Guardrail System 31” design.

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.

GRANULAR SUBDRAINS

Subsection 915.02 of the Standard Specifications is void and superseded by the following:

Aggregate that is used in granular subdrains shall consist of crushed gravel or crushed rock and shall conform to the requirements of Paragraphs 1. and 2. of Subsection 1033.02.
Crushed gravel shall have a fine aggregate angularity value of 43.0 or greater. The specific gravity for calculation of the Fine Aggregate Angularity (FAA) shall be determined on a combined aggregate sample of the material passing the No. 8 (2.36 mm) sieve and retained on the No. 100 (150 µm) sieve as defined in AASHTO T 304 Method A, except the specific gravity material shall be washed over the No. 100 (150 µm) sieve. Gravel aggregate shall have a soundness loss of not more than 12 percent by weight at the end of 5 cycles using sodium sulfate solution.

Crushed rock shall consist of clean, hard particles of crushed limestone, quartzite, or dolomite. Crushed rock shall have a percent loss of not more than 14 at the end of 16 cycles of the freezing and thawing test.

The crushed gravel or crushed rock shall meet the following gradation requirements.

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Target Value (Percent Passing)</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 inch</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>No. 4</td>
<td>40</td>
<td>±20</td>
</tr>
<tr>
<td>No. 10</td>
<td>15</td>
<td>±15</td>
</tr>
<tr>
<td>No. 200</td>
<td>4</td>
<td>±4</td>
</tr>
</tbody>
</table>

Paragraph 5. of Subsection 915.03 is void and superseded by the following:

Excavated material shall become the property of the Contractor and removed from the project or used for shoulder construction on the project. Excess material shall become the property of the Contractor and removed from the project.

Traffic will not be permitted to travel next to these trenched areas until the trench has been filled to top of the existing adjacent surfacing.

Earth Shoulder Construction shall be completed prior to granular subdrain installation.

**PERFORMANCE GRADED BINDER**

The Performance Graded Binder to be used on this project shall be PG Binder 58V-34 supplied by a Certified Supplier.
PERFORMANCE GRADED BINDER
(10-1-0318)

Table 1029.03 of Subsection 1029.03 in the Standard Specifications is void and superseded by the following:

<table>
<thead>
<tr>
<th>AASHTO T350 Multiple Stress Creep Recovery (MSCR) @ 58°C Test and Specifications</th>
<th>Test Results</th>
<th>Pay Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>AASHTO M332 Performance Grade 58H-34 Average % Recovery @ 3.2 kPa Min. 30%</td>
<td>&gt; 29</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>0.95</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>&lt; 27</td>
<td>0.70 or Reject</td>
</tr>
<tr>
<td>AASHTO M332 Performance Grade 58V-34 Average % Recovery @ 3.2 kPa Min. 55%</td>
<td>&gt; 54</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>54</td>
<td>0.95</td>
</tr>
<tr>
<td></td>
<td>53</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>&lt; 52</td>
<td>0.70 or Reject</td>
</tr>
<tr>
<td>AASHTO M332 Performance Grade 58E-34 Average % Recovery @ 3.2 kPa Min. 75%</td>
<td>&gt; 74</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>74</td>
<td>0.95</td>
</tr>
<tr>
<td></td>
<td>73</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>72</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>&lt; 72</td>
<td>0.70 or Reject</td>
</tr>
</tbody>
</table>

1 If a lot sample has more than one test that results in a reduced pay factor (less than 1.00) from either or both of the above Pay Factor Tables, the single largest pay factor reduction will be the one used in determining the lot pay factor. If a lot sample passes all testing (1.00 or greater), and one or more test pay factors are 1.05, the pay factor of 1.05 will be the one used in determining the lot pay factor.

HYDRATED LIME FOR ASPHALT MIXTURES
(10-3-1217)

1. General

Hydrated lime will be added to all aggregates (at the Contractor's option, limestone may be excluded) used for asphalt mixtures except Asphaltic Concrete used for Temporary Surfacing, and Asphaltic Concrete Type SPS, and SPL. Hydrated lime will be added to pre-moistened aggregates whether it is used directly into the mix or stockpiled for marinating purposes. The application of moisture and hydrated lime to the aggregates along with equipment calibration and procedures to prevent any "dusting" shall be documented and approved in the Contractor's Quality Control (QC) Plan.
2. **Material Requirements**

The lime shall meet the chemical and physical properties defined in AASHTO M 303 for Type I - High calcium-hydrated lime, or meet the requirements of ASTM 1097 for Type S Hydrated Lime.

The hydrated lime being used, whether for mix design or plant mix production, shall be stored in an enclosed container and must be used within 90 days. Stockpiles marinating shall also be used within 90 days. Lime that is stored over 90 days in a protected storage silo environment may be submitted for chemical analysis to verify that it meets the specification for use in the mix.

Water shall conform to the requirements of Section 1005.

3. **Construction**

Prior to the addition of hydrated lime the aggregates shall have a minimum moisture content of 3% by weight of aggregate. The surface of the aggregate shall be uniformly dampened by water.

If additional moisture is required it shall be added at the entry end of an enclosed pug mill mixer and prior to the addition of hydrated lime.

Hydrated Lime shall be added at a rate of 1.25 percent by weight of virgin aggregate, including the weight of the limestone.

4. **Equipment**

The addition of lime shall be plant controlled, and blended with an enclosed twin-shaft pug mill with a production capacity rating that exceeds the aggregate feed rate. It shall be capable of effective mixing in the full range of asphaltic concrete production rates.

The pug mill set up shall be located in the system at a location where the mixed material can be readily inspected on a belt prior to entry into the drum.

The pug mill shall be designed such that the mixture of aggregate and hydrated lime is moved in a near horizontal direction (within 20 degrees of horizontal) by the mixing paddles without the aid of conveyor belts for a distance of at least three feet (900 mm). Mixing devices which permit the mixture of aggregate and hydrated lime to fall through the mixing blades onto a belt or chute are not acceptable.

A positive signal system and a limit switch device shall be installed in the plant at the point of introduction of the hydrated lime. The positive signal system shall be placed between a metering device and the drum plant, and utilized during production whereby an alarm is activated; alerting the plant that the hydrated lime is not being introduced into the mixture.

The hydrated lime storage silo shall have enough capacity for continuous production. The silo shall be replenished by pneumatic delivery from road tankers at a pressure that will not create dusting. Hydrated lime will be dispensed from the silo into the pug mill by a conventional vane feeder or a load cell pod system.
The mechanism for adding moisture to the aggregate will be configured and located to insure that all virgin aggregate is uniformly coated with moisture prior to the lime application.

5. **Sampling and Testing**

Hydrated lime shall be certified by the supplier stating its compliance to the specifications.

A physical inventory of hydrated lime usage will be required during mix production. A daily silo inventory, noting "beginning weight", "weight added during the day's production", and "end of day weight", will be recorded and made available for review by the Engineer. When a weigh pod system is used, an accumulative accounting method shall be used to calculate and review lime addition rates throughout production. When calculations indicate a hydrated lime usage of ±0.15 percent from the design percentage the Contractor shall assume the responsibility to cease production and recalibrate the system prior to resuming mix production. Any asphaltic concrete placed having 0.15 percent below the design percentage shall be removed and replaced at no cost.

The percent of moisture shall be determined and documented: 1) from belt samples or 2) from stockpile samples, a minimum of once per day.

6. **Mixture QC and Verification Testing**

During an ignition oven burn off, lime will combine with the sulfur in the binder and produce ash. Therefore, when mix containing hydrated lime is being designed and produced a correction factor to the ignition oven burn off result of +0.30% shall be used. This correction factor shall be added to the ignition oven binder content reading in order for the actual binder content to be determined.

7. **Method of Measurement:**

Hydrated Lime shall be measured for payment by the unit of each for each ton of hot mix asphalt used and incorporated into the project, or for State Maintenance Patching.

Water applied shall not be measured and paid for but shall be considered subsidiary to the item "Hydrated Lime/Warm Mix Asphalt".

8. **Basis of Payment:**

Lime, measured as provided herein and incorporated into the project, shall be paid for at the contract unit price per each for the item "Hydrated Lime/Warm Mix Asphalt". Lime measured as provided herein and used for State Maintenance Patching shall be paid for at the contract unit price per each for the item “Hydrated Lime/Warm Mix Asphalt for State Maintenance Patching”. This price shall be full compensation for furnishing, delivering, hauling, storing, all labor, equipment, tools and incidentals necessary to complete the work.
HYDRATED LIME SLURRY FOR ASPHALT MIXTURES  
(10-3-1217)

1. **General** — The Contractor will have the option of using Hydrated Lime Slurry For Asphalt Mixtures or Hydrated Lime For Asphalt Mixtures. Hydrated lime slurry will be added to all aggregates (at the Contractor’s option, limestone may be excluded) used for asphalt mixtures except Asphaltic Concrete used for Temporary Surfacing, and Asphaltic Concrete Type SPS and SPL. Hydrated lime slurry will be added to aggregates whether it is used directly into the mix or stockpiled for marinating purposes. The application of hydrated lime slurry to the aggregates along with equipment calibration and procedures shall be documented and approved in the Contractor’s Quality Control (QC) Plan.

2. **Material Requirements** — The lime shall meet the chemical and physical properties defined in AASHTO M 303 for Type I - High calcium-hydrated lime, or meet the requirements of ASTM 1097 for Type S Hydrated Lime.

   The dry hydrated lime being used, whether for mix design or plant mix production, shall be stored in an enclosed container and must be used within 90 days. Stockpiles marinating shall also be used within 90 days. Hydrated lime (dry or slurry) that is stored over 90 days in a protected storage silo or slurry tank may be submitted for chemical analysis to verify that it meets the specification for use in the mix.

   Water shall conform to the requirements of Section 1005.

3. **Construction** — Hydrated Lime shall be added at a rate of 1.25 percent by weight of virgin aggregate, including the weight of the limestone.

4. **Equipment** — The addition of lime shall be plant controlled, and blended with an enclosed twin-shaft pug mill with a production capacity rating that exceeds the aggregate feed rate. It shall be capable of effective mixing in the full range of asphaltic concrete production rates.

   The pug mill set up shall be located in the system at a location where the mixed material can be readily inspected on a belt prior to entry into the drum.

   The pug mill shall be designed such that the mixture of aggregate and hydrated lime is moved in a near horizontal direction (within 20 degrees of horizontal) by the mixing paddles without the aid of conveyor belts for a distance of at least three feet (900 mm).

   Mixing devices which permit the mixture of aggregate and hydrated lime to fall through the mixing blades onto a belt or chute are not acceptable.

   A positive signal system and a limit switch device shall be installed in the plant at the point of introduction of the hydrated lime. The positive signal system shall be placed between a metering device and the drum plant, and utilized during production whereby an alarm is activated; alerting the plant that the hydrated lime is not being introduced into the mixture.

   A minimum of two hydrated lime slurry tanks shall be used for blending and supply. Slurry shall be drawn for production from only one tank at a time. The hydrated lime slurry tanks shall have enough capacity for continuous production.
Hydrated lime slurry shall be dispensed from a slurry tank into the pug mill by a pressure regulated spray system having an electronic flow measurement system that has been calibrated to insure the proper application rates will be provided. Certificate of Calibration for the spray bar system should be provided by the Contractor with the calibration being performed by a third party every 12 months (minimum) or at the Engineer’s request.

The electronic flow measurement system shall automatically record the flow rate of the lime slurry being fed to the pug mill. The data recorder system shall be capable of recording the flow rate (in gallons per minute) at intervals of not more than 5 minutes and shall have the capability of calculating the volume of lime slurry used each day, from each slurry tank, and shall be capable of printing a summary of the daily lime slurry usage for each tank. This printout of the daily lime slurry volumes shall be presented to the NDOT representative at the end of each day’s production.

5. **Blending and Supply Hydrated Lime Slurry** — The Contractor shall determine the target hydrated lime slurry concentration (percent solids) that will be used to produce the asphalt mixture. This target concentration value shall be provided to the Engineer prior to production of the asphalt mixture and shall not be less than 30 percent. The target concentration value shall not be modified without the approval of the Engineer. It is the Contractor’s responsibility to control the concentration of the hydrated lime slurry.

Only valid weights of dry hydrated lime shall be added to the required quantity of water to provide uniform hydrated lime slurry having a dry solids content within ±0.5 percent of the Contractor’s target value. Water or dry hydrated lime shall not be added to a tank that is actively supplying hydrated lime slurry to the pug mill. Hydrated lime slurry shall not be drawn from a tank that is not completely blended in accordance with the manufacturer’s recommendations.

The hydrated lime slurry in the active supply tank shall be agitated prior to and during production in accordance with the manufacturer’s recommendations.

Dry hydrated lime shall be transferred at a pressure that will not create dusting.

5.1 If individual hydrated lime slurry tanks are dedicated to only blending or supply, then thoroughly mixed hydrated lime slurry may be added from the blending tank(s) to the supply tank during production, provided the concentrations are within ±0.5 percent.

5.2 If the hydrated lime slurry tanks are used for both blending and supply, the tanks shall be plumbed such that hydrated lime slurry can be supplied to the pug mill from any of the blending/supply tanks without disruption of the slurry supply.

6. **Sampling and Testing** — Hydrated lime shall be certified by the supplier stating its compliance to the specifications.

The concentration of the lime slurry shall be controlled within ±0.5 percent of the target hydrated lime slurry concentration (percent solids). The concentration of the hydrated lime shall be determined in accordance with Section 6.1. It is the Contractor’s
responsibility to halt production to make adjustments when the concentrations fall out of compliance.

The concentration of the lime slurry shall be determined and recorded by the Contractor immediately following blending each batch of lime slurry for the project. These records shall include date and time of test, sample collection information, and the unit weight, temperature and concentration of slurry. These records shall be made available to the Engineer upon request.

A physical inventory of hydrated lime usage will be required during mix production. This inventory shall be used to verify the lime application rate, and for payment of the hydrated lime. The concentration of the lime slurry shall be determined and recorded by the Contractor at the beginning and at approximately the mid-point of each day’s production. The hydrated lime slurry samples shall be collected from the supply line leading to the pug mill. These records shall include date and time of test, sample collection information, and the unit weight, temperature and concentration of slurry. These records shall be presented to the NDOT representative at the end of each day’s production.

When calculations indicate that the application rate of “dry” hydrated lime to the aggregate is ±0.15 percent from the design percentage the Contractor shall assume the responsibility to cease production and recalibrate the system prior to resuming mix production. Any asphaltic concrete placed having a “dry” hydrated lime application rate (applied to aggregate) of 0.15 percent below the design percentage shall be removed and replaced at no cost.

6.1 The Contractor shall determine the solids content (concentration) of the hydrated lime slurry using Table 1, Table 2 and the Slurry Worksheet. The Contractor shall provide and use the standard weight per 83.205-ml Gardner cup meeting the requirements of ASTM D 244.

After a batch of lime slurry has been produced, use the following procedures to verify that the intended percent solids have been achieved.

1. Fill a quart container 3/4 full with lime slurry. Samples can be taken from ports located at either end of the vessel. Do not use glass.

2. Weigh a dry, empty Gardner (WPG) cup and cover to the nearest 0.01 of a gram. Record this weight.

3. Shake the lime slurry sample well. Immediately fill the WPG cup.

4. Tap the WPG cup lightly on an immovable object to allow for the escape of air bubbles.

5. Slowly turn the cap of the WPG cup until it is completely seated. If the cover is pushed on quickly, lime slurry will squirt out through the hole in the center. Be sure to point the top of the WPG away from you (or others) while putting on the cap.

6. Hold the WPG cup by the top and bottom with thumb and forefinger. Be sure to cover the hole in the cap.
7. Rinse the WPG cup under running water to remove any lime from the outside of the cup.

8. Dry the outside of the cup thoroughly.

9. Weigh the dry, filled WPG cup to the nearest 0.01 of a gram. Record this weight.

10. Promptly remove the cover, insert thermometer and record the temperature.

11. Subtract the empty cup weight (from step 2) from the filled cup weight (step 9) and record the difference.

12. Multiply the difference by 0.1. This number is the density (lbs./gallon) of the lime slurry. Record this number.

13. Look up the temperature correction in Table 2 and record the value.

14. Multiply the slurry density times the temperature correction value. This is the adjusted slurry density. Record the adjusted slurry density on the slurry worksheet.

15. Find the nearest density to that recorded above on the "Slurry Solids Chart" on Table 1, Slurry Solids Chart - 24 degrees C. The corresponding number is the percent solids (concentration) of the lime slurry sample. Record on worksheet.

7. **Mixture QC and Verification Testing** — During an ignition oven burn off, lime will combine with the sulfur in the binder and produce ash. Therefore, when mix containing hydrated lime is being designed and produced a correction factor to the ignition oven burn off result of +0.30% shall be used. This correction factor shall be added to the ignition oven binder content reading in order for the actual binder content to be determined.

8. **Method of Measurement** — Hydrated Lime shall be measured for payment by the unit of each for each ton of hot mix asphalt used and incorporated into the project, or for State Maintenance Patching.

Water applied shall not be measured and paid for but shall be considered subsidiary to the item "Hydrated Lime/Warm Mix Asphalt".

9. **Basis of Payment** — Lime, measured as provided herein and incorporated into the project, shall be paid for at the contract unit price per each for the item "Hydrated Lime/Warm Mix Asphalt". Lime measured as provided herein and used for State Maintenance Patching shall be paid for at the contract unit price per each for the item "Hydrated Lime/Warm Mix Asphalt for State Maintenance Patching". This price shall be full compensation for furnishing, delivering, hauling, storing, all labor, equipment, tools and incidentals necessary to complete the work.
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### Table 2
Correction Factor to Adjust Slurry Densities for Temperature

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<th>Factor</th>
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<td>1.00438</td>
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<td>1.02179</td>
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<td>1.00469</td>
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<td>60</td>
<td>1.01134</td>
<td>101</td>
<td>1.03276</td>
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### Slurry Worksheet

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
</tr>
<tr>
<td>WPG Cup Weight Empty</td>
<td></td>
</tr>
<tr>
<td>WPG Cup Weight Full</td>
<td></td>
</tr>
<tr>
<td>Slurry Weight (Full Empty)</td>
<td></td>
</tr>
<tr>
<td>Slurry Density</td>
<td></td>
</tr>
<tr>
<td>(Slurry Vt. x 0.10)</td>
<td></td>
</tr>
<tr>
<td>Temp. Correction Factor (Table 2)</td>
<td></td>
</tr>
<tr>
<td>Adjust. Density x Temp. Corr. Factor (Table 1)</td>
<td></td>
</tr>
<tr>
<td>Percent Solids</td>
<td></td>
</tr>
</tbody>
</table>
INCENTIVE PAYMENT FOR THE USE OF RECYCLED ASPHALTIC PAVEMENT (RAP) FOR ASPHALTIC MIXTURES (10-7-1217)

General

This specification establishes a standard method for paying an incentive to use Recycled Asphaltic Pavement (RAP) in asphalt mixture types: SPH, SPS, SPR, SRM, SLX and LC. The intent of this specification is to provide an incentive for incorporating as much RAP into the asphalt mixtures as allowed by the respective mixture’s specification.

Method of Measurement

1. The RAP Incentive Payment shall be based on the actual total of asphalt production for the entire project. A RAP Incentive Payment shall be calculated for each eligible asphaltic concrete type.

2. The following formula will be used to calculate the “RAP Incentive Factor”.

\[
\text{RAP Incentive Factor} = \left( \frac{A - B}{100} \right) \times C \times D
\]

Where:

- \( A \) = State’s Established Percent Binder – based on gradation band.
- \( B \) = Actual Percentage of Binder – added to asphaltic mixture.
- \( C \) = Unit Bid price of Binder
- \( D \) = RAP Pay Factor

3. The State’s established percent binder values (‘A’ values) are as follows:

<table>
<thead>
<tr>
<th>Asphaltic Concrete Types</th>
<th>‘A’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPH having 0.500-inch grading band</td>
<td>5.2% Binder</td>
</tr>
<tr>
<td>SPS, SPL, SPR and SPR (Fine)</td>
<td>5.2% Binder</td>
</tr>
<tr>
<td>SLX</td>
<td>5.5% Binder</td>
</tr>
<tr>
<td>SPH having 0.375-inch grading band</td>
<td>5.8% Binder</td>
</tr>
<tr>
<td>LC</td>
<td>6.2% Binder</td>
</tr>
<tr>
<td>SRM</td>
<td>4.8% Binder</td>
</tr>
</tbody>
</table>

*Incentive payments will be made for only the mix types list in this table.*

4. The actual percentage of binder added to the particular asphaltic mixture (‘B’ value) shall be calculated as follows:

\[
B = \left( \frac{\text{Actual Pay Tons of Binder}}{\text{Actual Pay Tons of Asphaltic Concrete}} \right) \times 100
\]

5. The Unit Bid Price of Binder (‘C’ value) is the established contract price for the performance graded binder type used to produce the mix for which the incentive is being calculated.
6. The RAP Pay Factor (‘D’ value) shall be as follows:

<table>
<thead>
<tr>
<th>RAP Source</th>
<th>‘D’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor supplied RAP</td>
<td>0.50</td>
</tr>
<tr>
<td>State supplied RAP coming from an <strong>OFF</strong>-project source</td>
<td>0.35</td>
</tr>
<tr>
<td>* RAP coming from an <strong>ON</strong>-project source</td>
<td>0.15</td>
</tr>
</tbody>
</table>

* RAP coming from an **ON**-project source shall be completely utilized before allowing RAP from any other source to be used in the asphalt production. An **ON**-project source shall be considered any asphaltic material removed on the project.

7. Contractor supplied RAP and RAP supplied from either off-project or on-project sources shall be stored, handled and used separately. Incentive payments for RAP from these three source types shall be paid separately. The Contractor may propose a RAP consumption plan that will use multiple RAP sources concurrently and will follow the utilization hierarchy (as detailed above) upon the completion of the project.

8. The Contractor has sole responsibility for determining the quality, quantity, and uniformity of the RAP material. The maintenance of any stockpiles and processing of the RAP material shall also be the sole responsibility of the Contractor.

**Basis of Payment**

1. Pay Item                          Pay Unit
   RAP Incentive Payment ____ Each (ea)

2. The overall RAP Incentive Payments shall be full compensation for all RAP materials and all hauling, handling and processing necessary to complete the work described in this section.

3. The overall RAP Incentive Payments – for each eligible mix type and/or RAP source – shall be the RAP Incentive Factor multiplied by the total accepted tons of asphaltic concrete in which the RAP was incorporated.

4. RAP Incentive Payment is paid for as an “established” contract unit price which is shown in the bid proposal “Schedule of Items”.

5. The actual quantity for RAP Incentive Payment will be calculated based on the Method of Measurement stated above in this provision.

---

**PORTLAND CEMENT**

(10-8-1118)

Paragraph 1. of Subsection 1004.04 is void and superseded by the following:

1. Portland and Interground/Blended cements shall be on the Nebraska Qualified Material Vendors List (NQMVL).
The reference to “the APL” in Paragraph 2. of Subsection 1004.04 is revised to “the NQMVL”.

Paragraph 2.a.(9) of Subsection 1004.04 is void and superseded by the following:

(9) Report test results per ASTM C 1567 at 28 days and/or AASHTO T 380 at 56 days.

Paragraph 3. of Subsection 1004.04 is void and superseded by the following:

3. Alkali Silica Reaction Requirements and Testing:
   a. Interground/Blended cement shall be tested according to the provisions of ASTM C 1567.
      (1) The mortar bars shall be composed of Type IP, IS or IT Interground/blended cement and sand/gravel from an approved Platte River Valley (Saunders County) and/or Elkhorn River (Madison County) aggregate source.
      (2) The mortar bars for the ASTM C 1567 shall not exceed 0.10% expansion at 28 days.
         i. If the expansion is greater than 0.10% at 28 days, then the Interground/Blended cement shall be tested in accordance with AASHTO T 380 using sand/gravel from an approved Platte River Valley (Saunders County) and/or Elkhorn River (Madison County) aggregate source with an expansion not greater than 0.03% at 56 days.

Paragraph 2. of Subsection 1004.05 is void and superseded by the following:

2. Noncompliant material shall be tested in accordance with ASTM C 1567 and in accordance with Subsection 1004.04, Paragraph 3.a.(1).
   a. The mortar bars for the ASTM C 1567 shall not exceed 0.10% expansion at 28 days.
   b. If the expansion for ASTM C 1567 is greater than 0.10% at 28 days, then the Interground/Blended cement shall be tested in accordance with AASHTO T 380 using the most reactive aggregate from the project with an expansion not greater than 0.03% at 56 days.
   c. If the expansion for ASTM C 1567 is greater than 0.10% at 28 days or if the expansion for the AASHTO T 380 is greater than 0.03% at 56 days, then the Interground/Blended cement shall be subject to removal, 40% pay, and/or removal from NDOT’s NQMVL in accordance with NDOT’s Acceptance Policy on Portland and Interground/Blended Cements.
BITUMINOUS LIQUID COMPOUNDS FOR CURING CONCRETE  
(10-8-1217)

Subsection 1013.02 in the Standard Specifications is amended to include the following:

2. The Contractor has the option of using bituminous tack coat. The tack coat shall conform to all requirements of Section 504.

AGGREGATES  
(10-8-1118)

Paragraph 2. of Subsection 1033.02 in the Standard Specifications is amended to include the following:

g. All Portland cement concrete aggregates - regardless of their source - will be sampled and tested by the Engineer for their potential alkali reactivity in accordance to ASTM C 1260. This testing is a part of the materials source and quarries approval process.

(1) The expansion shall not be greater than 0.57% at 28 days.

(2) If the expansion is greater than 0.57%, the aggregate shall not be used.

Paragraph 3.a.(8) of Subsection 1033.02 is void and superseded by the following:

(8) Lightweight pieces (measured by percent volume values) shall not exceed 0.5%. For Class R aggregate, fine aggregate is defined as any material passing a No. 4 sieve.

Paragraph 3.b.(2) of Subsection 1033.02 is void and superseded by the following:

(2) The percent of clay lumps, shale, or soft particles shall not exceed the following amounts:

- Clay Lumps: 0.5%
- Shale: 1.0%
- Soft Particles: 3.5%
- Lightweight Pieces: 0.5%

Paragraph 3.b.(8) of Subsection 1033.02 is void.
TIMBER AND LUMBER  
(10-9-1217)

Paragraph 2.b. of Subsection 1075.02 in the Standard Specifications is amended to include the following:

Minimum retentions for all timber and lumber shall conform to Use Category UC4C. Minimum retentions for fence posts shall conform to Use Category UC4A.

SUPERPAVE ASPHALTIC CONCRETE  
(10-11-0218)

Paragraph 8.d. of Subsection 1028.03 in the Standard Specifications is void and superseded by the following:

d. Normally, 1 (one) sample for determination of density will be taken from each sublot at locations determined by the Engineer.

Table 1028.18 (SLX) of Subsection 1028.03 is void and superseded by the following:

<table>
<thead>
<tr>
<th>Air voids test results for Asphaltic Concrete Type SLX</th>
<th>Pay Factor</th>
</tr>
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<td></td>
<td>Moving average of four</td>
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<td>Less than 0.5%</td>
<td>50% or Reject</td>
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<tr>
<td>0.5% to 0.9%</td>
<td>50% or Reject</td>
</tr>
<tr>
<td>1.0% to 1.4%</td>
<td>50% or Reject</td>
</tr>
<tr>
<td>1.5% to 1.9%</td>
<td>90%</td>
</tr>
<tr>
<td>2.0% to 2.4%</td>
<td>100%</td>
</tr>
<tr>
<td>2.5% to 3.5%</td>
<td>102%</td>
</tr>
<tr>
<td>3.6% to 4.0%</td>
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<tr>
<td>4.1% to 4.5%</td>
<td>95%</td>
</tr>
<tr>
<td>4.6% to 5.0%</td>
<td>90%</td>
</tr>
<tr>
<td>5.1% to 5.5%</td>
<td>50% or Reject</td>
</tr>
<tr>
<td>5.6% to 6.0%</td>
<td>50% or Reject</td>
</tr>
<tr>
<td>6.1% and over</td>
<td>50% or Reject</td>
</tr>
</tbody>
</table>
PREFORMED JOINT FILLER  
(10-13-0818)

Section 1015 in the Standard Specifications is void and superseded by the following:

1015.01 – Description

1. Preformed expansion joint filler shall be furnished in strips of the dimensions specified in the contract.

1015.02 – Material Characteristics

1. Nonextruding and Resilient Bituminous Type (Fiber Type) preformed joint filler shall conform to the requirements of AASHTO M 213.

2. Bituminous Type (Asphalt Type) preformed joint filler shall conform to the requirements of AASHTO M 33 except it will not be subject to a requirement for brittleness.

3. Preformed joint filler (Sponge Rubber Type) shall be a flexible cellular rubber product meeting the classification requirements of the latest edition of ASTM D1056 for Type 2, Class A or B, Grade 2 or 3, except that reclaimed rubber shall not be used in the manufacture of the material. The color shall be gray.

4. Semi-Rigid, Closed-Cell Polypropylene Foam Type (Polypropylene Type) preformed expansion joint filler shall conform to the requirements of ASTM D8139.

1015.03 – Procedures

1. For structures, the Bituminous Type (Asphalt Type) or Preformed Joint filler (Sponge Rubber Type) shall be used, unless otherwise shown in the contract.

2. Except for structures, the Non-extruding and Resilient Bituminous Type (Fiber Type) or the Semi-Rigid Closed-Cell Polypropylene Foam Type (Polypropylene Type) shall be used, unless otherwise shown in the contract.

1015.04 – Acceptance Requirements

1. Preformed joint fillers that are on the Department’s Approved Products List are acceptable.

2. The preformed joint fillers may be accepted based on manufacturer’s certification of compliance letters when they are not on the Department’s Approved Products List.
PROPOSAL GUARANTY
(1-37-1217)

As an evidence of good faith in submitting a bid for this work, the bidder shall indicate the type of bid bond applied to this project in accordance with Subsection 102.14 of the Standard Specifications.

200INFFEB19
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