Project Number: 140037 PID #: 24073 **Contract ID: MAH24073** DBE Goal: 11% Mahoning US-62-18.23 (CITY OF YOUNGSTOWN) E050(115) **BRIDGE REPAIR** Work Type Percentage Performed by Prime: 50 THE 2013 CONSTRUCTION AND MATERIAL SPECIFICATION BOOK IS PART OF THE **BIDDING DOCUMENTS ON THIS PROJECT PROPOSAL STATE OF OHIO DEPARTMENT OF TRANSPORTATION** Jerry Wray, Director February 18, 2014 Submitted by _____

Bidder Id

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PN 019 - 05/07/2013 - PREPARATION OF PROPOSAL

ELECTRONIC BIDDING REQUIREMENTS

The Department uses the Bid Express website (http://www.bidx.com) as an official repository for electronic bid submittal. Bidders must prepare their bids electronically using Expedite and submitted via Bid Express.

The Department will not accept handwritten bids or bids generated electronically from software other than that used and supplied by the Department. All handwritten bids and bids generated electronically from software other than that used and supplied by the Department shall be considered non-responsive and ineligible for award. The Department will only accept and consider bids that have been produced using Expedite and submitted via Bid Express.

The Department's Office of Contracts will provide planholders with a proposal, plan set and any required addenda. Most addenda will not be provided by hard copy, but will be available on the Office of Contracts website at: http://contracts.dot.state.oh.us. Planholders will be notified of all addenda via email. All proposals, plans, Expedite (EBS) files and addenda are also available on the Office of Contracts web site.

Electronic bids must comply with all special provisions, the Construction and Material Specifications, Supplemental Specifications and the rules and regulations of the Ohio Department of Transportation regarding bid preparation and bid submittal.

Blank unit prices will be considered an invalid bid EXCEPT in the case of optional designs (projects where the bidder is required to bid on only one design). Unit prices of zero are not permitted at any time.

Addenda and/or amendments must be acknowledged in the Miscellaneous Section of the Expedite (EBS) file in order for your bid to be considered for award of this project. The section contains the certification of receipt of all hard copy proposals, addenda, amendments, plans, standard specifications and supplemental specifications. Supplemental Questionnaire information regarding the bidder's outstanding ODOT and non-ODOT work, EEO certification (on Federally-funded projects only), and certification against debarment and suspension have also been included in this section. Bid Express will not accept bids that do not have amendments incorporated. Failure to incorporate changed quantities or items in your Expedite (EBS) submissions will result in the rejection of your bid.

Each bidder is required to file with his bid a <u>certified check</u> or <u>cashier's check</u> for an amount equal to five percent (5%) of its bid, but in no event more than <u>fifty thousand dollars</u>, or a <u>bid bond</u> for <u>ten percent</u> (10%) of its bid payable to the "Director of Transportation." Electronic bid bonds will be verified upon submission of bids through Bid Express. Bidders must obtain and verify a Bond ID number from the surety. This Bond ID must be entered in the "Bond ID Number" field in the Bid Bond Section of the Expedite file.

If the contractor chooses to submit a certified check to guaranty its bid, the Department's Office of Contracts will accept a check up to 72 hours in advance of the letting. The Office of Contracts must receive the certified check by 10:00 a.m. on the day the project sells. All checks must be sent to ODOT, Office of Contracts, Attention: Letting Manager, First Floor, 1980 W. Broad St., Columbus, Ohio 43223.

The successful bidder must furnish a performance bond and a payment bond in an amount equal to one hundred percent (100%) of the awarded contract amount. (Ohio Revised Code Section 5525.16)

Any bid received after 10:00 a.m. on the scheduled day of opening will receive no further consideration for award. The Department will not be responsible for a late bid due to failure of the bidder to allow sufficient time for delivery of the bid.

The Department will ensure that this electronic bid depository is available for a two-hour period prior to the deadline for submission of bids. In the case of disruption of national communications or loss of services by http://www.bidx.com during this two-hour period, the Department will delay the deadline for bid submissions to ensure the ability of potential bidders to submit bids. If this occurs, instructions will be communicated to potential bidders.

PN 007 - 10/15/2004 - TRUCK LEASING

The Code of Federal Regulations Title 49, Section 26.55(d)(4)(5)(6) governs trucking operations. This section states that the Disadvantaged Business Enterprise (DBE) may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract. The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE will receive credit for only the fee or commission it receives as a result of the lease agreement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by a DBE. The law requires that a lease must indicate that the DBE has exclusive use of and control over the truck for credit to be accorded to the DBE. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

In lieu of a truck owner displaying the name and identification number of the DBE, the truck owner shall be required to furnish a photocopy of the lease agreement. Thereby, fulfilling the rule without causing undue hardship on any entity.

Credit for expenditures with DBEs for materials or supplies toward the DBE goal is described as follows:

- 1. When the materials or supplies are obtained from a DBE manufacturer the prime contractor may receive credit for 100 percent of the cost of the materials or supplies toward the DBE goal. For purposes of this section, a manufacturer is a firm that operates or maintains 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.
- 2. When the materials or supplies are purchased from a DBE regular dealer or supplier the prime contractor may receive credit for 60 percent of the cost of the materials or supplies toward the DBE goal. For purposes of this section, a regular dealer or supplier 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.

For subcontract agreement (C-92) purposes the following definitions will be used:

Install - DBE contractor who obtains goods, materials and supplies and fixes in place, for use, the same goods, materials and supplies. (e.g., DBE contractor obtains and fixes in place re-bar on project site). Must spend 20% or more time on project per day. 100% credit toward prime's DBE goal.

Stockpiling - DBE Contractor/Trucker who delivers materials, goods, or supplies to project site. 60% credit toward prime's DBE goal.

Tailgating - DBE Contractor/Trucker who delivers and installs materials, goods, or supplies to project site. Must spend 20% or more time on project per day. 100% credit toward prime's DBE goal.

PN 033 - 04/18/2008 - AS PER PLAN DESIGNATION - PROPOSAL NOTE

For the last several years the "As Per Plan" designation has been added to some item descriptions in the proposal to assist the Contractors to easily identify standard items that have been altered by plan notes.

The "As Per Plan" designation has proven to be a very useful tool for the Contractors. However, its use was <u>never</u> intended to relieve the Contractors of their responsibility to read, bid and construct all items in accordance with all governing plan notes. Therefore, the absence of an "As Per Plan" designation on some item descriptions in the proposal for which there are clear and controlling plan notes does not relieve the Contractors of the responsibility to read, bid and construct those particular items in accordance with the governing plan notes.

Be advised that the item descriptions in the bidding proposal must be read or interpreted with the governing plan notes and the Ohio Department of Transportation Construction and Materials Specifications. A claim based upon an "order of precedence" basis will be denied. In the event that a conflict, either real or perceived, exists between the item description and the governing plan note, the Contractors are to request clarification through the pre-bid process.

PN 038 - 10/15/2004 - UNRESOLVED FINDING FOR RECOVERY

The Contractor affirmatively represents to the Department that it is not subject to a finding for recovery under Ohio Revised Code §9.24, or that it has taken the appropriate remedial steps required under §9.24 or otherwise qualifies under that section. The Contractor agrees that if this representation is deemed to be false, the contract shall be void ab initio as between the parties to this contract, and any funds paid by the state hereunder shall be immediately repaid to the Department, or an action for recovery may be immediately commenced by the Department for recovery of said funds.

PN 039 - 10/15/2004 - ASSIGNMENT OF ANTITRUST CLAIMS IN STATE CONTRACT LANGUAGE

It is the policy of the Ohio Department of Transportation that ODOT and the Contractor recognize that in actual economic practice, overcharges resulting from antitrust violations are usually borne by ODOT. As consideration for the Award of the Contract and intent to be legally bound, the Contractor acting herein by and through the person signing this contract on behalf of the Contractor as a duly authorized agent, hereby assigns, sells, conveys, and transfers to ODOT any and all right, title and interest to any and all claims and causes of action the Contractor now has or hereafter requires under state or federal antitrust laws provided that the claims or causes of action related to the goods or services that are the subject to the contract. In addition, the Contractor warrants and represents that it will require any and all of its subcontractors and first tier suppliers to assign any and all federal and state antitrust claims and causes of action to ODOT. The provisions of this article shall become effective at the time ODOT executes this contract without further acknowledgment by any of the parties.

All contracting entities shall assign their rights and responsibilities to ODOT for all antitrust claims and causes of action regarding subcontractors.

PN 008 - 07/20/2012 - SPECIFICATION AND SUPPLEMENTAL SPECIFICATIONS, POLICIES AND SPECIAL PROVISIONS INCORPORATED BY REFERENCE AS IF REWRITTEN HEREIN

The version at the time of bid of the following will govern this improvement:

Policies:

Standard Procedures:

Copies of the above-referenced Policies, Standard Procedures and Special Provisions policies can be found on our website at

http://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Pages/ConstructionPolicies.aspx

PN 015 - 07/06/2012 - CONTRACT PROVISIONS FOR FEDERAL-AID CONSTRUCTION CONTRACTS

The required contract provisions for federal-aid construction contracts (contained in Form FHWA 1273 revised May, 2012) are hereby incorporated reference as if rewritten herein.

PN 017 - 10/15/2004 - FEDERALLY REQUIRED EEO CERTIFICATION CLAUSE

The Federally Required EEO Certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontractors which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

PN 020 - 11/21/2011 - NOTICE OF REQUIREMENT OF AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY

The Bidder's attention is called to the affirmative action obligations required by the specifications set forth in 23 CFR Part 230, 41 CFR Part 60, Executive Order 11246, Section 503, and the affirmative action provisions of Vietnam Era Veterans' Readjustment Assistance Act (VEVRAA) of 1974.

Utilization goals applicable to the project, expressed in percentages, for minority and female participation for each construction craft can be found on ODOT's website at http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/default.aspx. These goals are based on 2000 census data and represent the area, per craft, minority and female availability pool.

Minority and female utilization obligations by craft per county (applicable to project): http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Construction/CountyAvailability-ByTrade.pdf

Statewide utilization obligations by craft (applicable to the Contractor's statewide workforce): http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Construction/StatewideAverages-ByTrade.pdf

The New Hire Definition is as follows:

An individual who has a break in service (not on an employer's payroll) for a period of 12 months or longer and the person affected is not a salaried employee, but belongs to a union craft. Individuals compensated for training or incidental work which does not cause a break in unemployment compensation, i.e., paid by voucher check or petty cash, are considered new hires if the individual's break in service is 12 months or longer.

The time frame for a new hire shall be associated with the first project worked for that contractor regardless of whether it is public or private. When reporting new hires the contractor shall identify that employee as a new hire on that specific project only. Subsequent work, barring a break in service of 12 monthsor more, would **not** qualify the employee as a new hire for that contractor.

The Contractor's compliance shall be based on the implementation of affirmative action obligations required by the specifications set forth in 23 CFR Part 230, and its good faith efforts to meet these obligations. 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 females 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 affirmative action obligations shall be a violation of the contract and regulations in 23 CFR Part 230. The good faith efforts put forth by the contractor will be measured against the total work hours performed. Under FHWA, ODOT is the authority tasked with ensuring that the contractor adheres to the aforementioned regulations. In addition to complying with the Required Contract Provisions as outlined in the attached subcontract agreement the Contractor shall provide immediate written notification to the ODOT and the Prime Contractor when referral practices of the union or unions with which the Contractor has a collective bargaining agreement impede the company's efforts to meet its equal opportunity obligations.

The Office of Federal Contract Compliance Programs (OFCCP) administers and enforces equal employment opportunity laws that apply to Federal government contractors and subcontractors supplying goods and services, including construction, to the Federal Government under 41 CFR Part 60, Executive Order 11246, Section 503, and the affirmative action provisions of VEVRAA. The OFCCP monitors compliance with these laws primarily through compliance evaluations, during which a compliance officer examines the contractor's affirmative action efforts and employment practices. Under Executive Order 11246, the OFCCP may perform contract compliance reviews on contractors involved with federally funded ODOT projects.

Requirements for affirmative action obligations governing OFCCP contract compliance reviews are those listed in the Federal Register for the Economic Area. http://www.dol.gov/ofccp/TAguides/consttag.pdf page E-32

The Department of Administrative Services (DAS), Equal Opportunity Division, is responsible for ensuring state contractors implement and adhere to the State of Ohio's affirmative action program pursuant to Ohio Administrative Code (OAC) 123:2-3-02. Specifically, this unit's responsibilities includes the issuance of certificates of compliance under ORC 9.47 and 153.08, conducting project site visits and compliance reviews (desk audits) to ensure contractors utilize minorities and women in the construction trades, as well as maintaining a working environment free of discrimination, harassment and intimidation. The DAS may perform contract compliance reviews on contractors involved with state funded ODOT projects. Requirements for affirmative action obligations governing DAS contract compliance reviews are those listed in the O.A.C. for the Metropolitan Statistical Area in which a project is located. http://www.das.ohio.gov/Eod/123_2_3_02.htm

All prime and subcontractors regardless on the number of employees or the state contract amount are required to submit monthly utilization reports (Input Form 29) to Ohio Department of Administrative Services covering the contractor's total workforce within the state of Ohio. The reports must be filed electronically by the 10th of each month, beginning with the contract award and continuing until the contractor or subcontractor completes performance of the state contract. http://www.das.ohio.gov/Eod/ccinputform29.htm

The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs, 200 N. High Street, Room 409, Columbus, Ohio 43215, 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.

PN 029 - 10/15/2004 - ON THE JOB TRAINING PROVISIONS

The requirements of this Training Special Provision supersede subparagraph 7b of the Special Provision entitled Special Employment Opportunity Responsibilities, and implements 23 U.S.C. 140(a).

The following must be included as part of the Contractor's equal employment opportunity affirmative action training program:

The Contractor must provide on-the-job training aimed at developing full journey persons in the type or job classification in which they work.

The contractor is not required to have a specific number of trainees assigned to this project. The number of trainees will be distributed among the work classifications on the basis of the Contractor's needs and the availability of the journey persons in the various classifications. The Contractor will be credited for each trainee employed by him or her who is currently enrolled or becomes enrolled in an approved program.

Training and upgrading of minorities and women toward journey person status is a primary objective of this Training Special Provision. Accordingly, the Contractor must make every effort to enroll minority trainees and women (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. This training commitment is not intended, and will not be used, to discriminate against any applicant for training, regardless of whether the applicant is a member of a minority group or not.

No employee will be employed as a trainee in any classification in which he or she has successfully completed a training course leading to journey person status or in which he or she has been employed as a journey person. The Contractor must satisfy this requirement by including appropriate questions in the employee's application or by other suitable means. Regardless of the method used, the Contractor's records must document the findings in each case.

The minimum length and type of training for each classification will be established in the training program selected by the Contractor.

No payment by ODOT will be made to the Contractor for providing this training. However, if the Contractor fails to provide adequate training and cannot show good faith efforts on its part to provide adequate training, it will be subject to a formal compliance review to determine the Contractor's efforts in meeting the EEO laws and regulations.

The Contractor must provide the following reports:

- 1. CR1 Report
- A. To be completed on each trainee
- B. To be filled out at the start of training and finish of training or at the end of the year, whichever comes first
- C. To be submitted to the District in which the Contractor's home office is located.
- 2. Tracking will be on an annual basis. The Contractor must submit the subsequent CR1 to the District in which the Contractors home office is located.

The prime or subcontractor conducting the training must be involved in at least one Federal project per calendar year in order to get FHWA training credit. Participation in the OJT Program is not project or contract specific.

All Contractors are encouraged to participate in the OJT program. Such a program will be considered when examining the contractor's Good Faith Efforts toward meeting its contractual affirmative action obligations.

All Contractors shall submit their own Training Program or Apprenticeship Certificate, for approval, to the District in which the company's home office is located.

All OJT Trainees must have the appropriate certification. Apprenticeship Certificates can be obtained from the State of Ohio, Bureau of Apprenticeship and Training. The union apprenticeship agreement is not acceptable verification of an apprentice's enrollment in a union sponsored training program. A copy of the Apprenticeship Certificate along with a statement indicating the number of months/years the employee has been in the apprenticeship program must be submitted to the EEO Coordinator in the company's home district and to the prevailing wage coordinator in the district responsible for the project within 90 days of the apprentice beginning work on the project.

PN 035 - 10/15/2004 - SPECIAL PROVISIONS OF FEDERAL-AID HIGHWAY PROGRAM OF MANUAL 6-4-1-2 SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES

1. GENERAL

- a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract Provisions (Form PR- 1273 or 1316, as appropriate) and these Special Provisions which are imposed pursuant to Section 140 of Title 23, U.S.C., as established by Section 22 of the Federal-Aid Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions.
- b. The contractor will work with the State Highway Agencies and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.
- c. The contractor and all his/her subcontractors holding subcontracts not including material suppliers, of \$10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal Employment Opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection I of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors.) The contractor will include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. 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, pre-apprenticeship, and/or on-the-job training.

3. EQUAL EMPLOYMENT OPPORTUNITY OFFICE

The contractor will designate and make known to the State Highway Agency contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable to effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. DISSEMINATION OF POLICY

- a. 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 equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity 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:
- (1) 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 equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.
- (2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the contractor.
- (3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the contractor's procedures for locating and hiring minority group employees.
- b. In order to make the contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the contractor will the following actions:
- (1) Notices and posters setting forth the contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
- (2) The contractor's equal employment opportunity 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.

5. RECRUITMENT

- a. When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Employment Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.
- b. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including, but not limited to, State employment agencies, schools, colleges and minority group organizations. To meet this requirement, the contractor will, through his EEO Officer, identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to extent that the systems permits the

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contractor's compliance with equal employment opportunity contract provisions. (The U.S. Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or women or obligates the contractor to do the same, such implementation violates Executive Order 1 1246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants will be discussed with employees.

6. 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, or national origin. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

7. TRAINING AND PROMOTION

- a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.
- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event the "Training Special Provisions" are included in this bid proposal, this subparagraph will be superseded as indicated in said provisions.
- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

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

8. UNIONS

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

- a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
- b. The contractor will use best efforts to incorporate an equal employment opportunity 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, or national origin.
- 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 State Highway Department and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex or national origin, making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the State highway agency.

9. SUBCONTRACTING

- a. The contractor will use his best efforts to solicit bids from and to utilize minority group subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of minority-owned construction firms from State Highway Agency personnel.
- b. The contractor will use his best efforts to ensure subcontractor compliance with their equal employment opportunity obligations.

10. RECORDS AND REPORTS

- 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:
- (1) the number of minority and non-minority group members and women employed in each work classification on the project,
- (2) the progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force),
- (3) the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and
- (4) the progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority and female representation among their employees.
- 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 contractors will submit to the State Highway Agency a monthly report for the first three months after construction begins and every month of 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 PR 139 1. If on-the-job training is being required by "Training Special Provisions," the contractor will be required to furnish Form FHWA 1409.

PN 026 - 10/15/2004 - CERTIFICATION OF NONSEGREGATED FACILITIES

- (a) A Certification of Nonsegregated Facilities, as required by the May 9, 1967, Order of the Secretary of Labor (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities (is included in the proposal and must be submitted prior to the award of a Federal-aid highway construction contract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause).
- (b) Bidders are cautioned as follows: By signing this bid, the bidder will be deemed to have signed and agreed to the provisions of the "Certification of Nonsegregated Facilities" in this proposal. This certification provides that the bidder does not maintain or provide for his employees facilities which are segregated on a basis of race, creed, color, or national origin, whether such facilities are segregated by directive or on a de facto basis. The certification also provides that the bidder will not maintain such segregated facilities.
- (c) Bidders receiving Federal-aid highway construction contract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause, will be required to provide for the forwarding of the following notice to prospective subcontractors for construction contracts and material suppliers where the subcontracts or material supply agreements exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity clause.

"Notice to Prospective Subcontractors and Material Suppliers of Requirement for Certification of Nonsegregated Facilities" -

- (a) A Certification of Nonsegregated Facilities as required by the May 9, 1967, Order of the Secretary of Labor (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, which is included in the proposal, or attached hereto, must be submitted by each subcontractor and material supplier prior to the award of the subcontract or consummation of a material supply agreement if such subcontract or agreement exceeds \$10,000 and is not exempt from the provisions of the Equal Opportunity clause.
- (b) Subcontractors and material suppliers are cautioned as follows: By signing the subcontract or entering into a material supply agreement, the subcontractor or material supplier will be deemed to have signed and agreed to the provisions of the "Certification of Nonsegregated Facilities" in the subcontract or material supply agreement. This certification provides that the subcontractor or material supplier does not maintain or provide for his employees facilities which are segregated on the basis of race, creed, color, or national origin, whether such facilities are segregated by directive or on a de facto basis. The certification also provides that the subcontractor or material supplier will not maintain such segregated facilities.
- (c) Subcontractors or material suppliers receiving subcontract awards or material supply agreements exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause will be required to provide for the forwarding of this notice to prospective subcontractors for construction contracts and material suppliers where the subcontracts or material supply agreements exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity clause.

PN 031 - 10/15/2004 - AFFIDAVIT OF SUBCONTRACTOR PAYMENT

The Code of Federal Regulations 49, 26.37(b), requires the Ohio Department of Transportation (ODOT) to monitor and verify that work committed to Disadvantaged Business Enterprise (DBE) firms at contract award is actually performed by the DBE's. Additionally, ODOT is required to report the DBE participation on each project, including all work, materials or service sublets. Therefore, it is ODOT's responsibility to discern whether payments are made to DBE firms. An affidavit is to be completed and signed by the contractor within 15 days of the completion of the project. The affidavit seeks to verify actual payments made to DBE firms on the project. Each DBE firm must verify the actual payment amount.

The blank spaces in the affidavit must be filled in correctly, where indicated. The affidavit must be signed by the prime contractor and subcontractor, or by the subcontractor and DBE sub-contractor, if applicable. By signing the affidavit, the noted firm agrees that the payment amount recorded is true and accurate as of the payment time period.

Completed and signed affidavit shall be mailed to the Ohio Department of Transportation, Office of Contracts, DBE Services section, 1980 West Broad Street, Columbus, Ohio 43223.

PN 046 - 10/15/2004 - SUBCONTRACT AGREEMENTS

Prime contractors will not be required to submit executed C-92s with their subcontract agreements for Disadvantaged Business Enterprises (DBE) subcontractors prior to the execution of the prime contract with ODOT. The prime contractor must only furnish to the Department subcontract agreements from the DBE subcontractors with whom they propose to utilize to fulfill the project goal. Again, this requirement is at the time of contract execution with ODOT.

However, the prime contractor must submit C-92s prior to the DBE commencing work. At the time of submission of the C-92 the DBE subcontractor must have sufficient dollar and work type qualifications to perform the work. The prime contractor will be held accountable to meet the project goal.

PN 013 - 04/15/2013 - DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS

It is the policy of the Ohio Department of Transportation that Disadvantaged Business Enterprises (DBEs) shall have equal opportunity to compete for and perform subcontracts which the Contractor enters into pursuant to this contract. The Contractor must use its best efforts to solicit bids from and to utilize DBE subcontractors with meaningful minority groups and female representation among their employees. Consequently, the requirements of Title 49 CFR Part 26 and Ohio Revised Code §5525.011 apply to this contract. The Contractor must ensure that the DBE subcontractor(s) is performing a "commercially useful function" as defined in CFR 26.55.

The percentage indicated on the front cover of this bid is the percent of the contract amount which must be subcontract to certified ODOT DBE firms. The percentage goal may be met if the awarded Contractor is DBE certified.

In order to be assured that the Contractor complies with this contract requirement the Contractor shall provide certified payrolls from its DBE subcontractors where appropriate. When the Contractor utilizes a service, for example trucking, to satisfy a part or its entire contractual goal, the Contractor, when requested, must provide a copy of each canceled check issued to the DBE service provider until the goal amount is reached. The Department shall total the amounts of the canceled checks and compare that total to the subcontract agreement by the parties and the C-92 issued to the Contractor for the work to be performed by the DBE subcontractor.

WAIVER PROCESS FOR DBE GOAL

The Contractor must document the progress and efforts being made in securing the services of DBE subcontractors. In the event the Contractor is unable to meet the DBE Goal placed on this project, a request for a waiver of all or part of the goal may be made to the DBE Services Section. The written request must indicate a good faith effort was made to meet the goal and be sent to the DBE Services Section, Division of Construction Management, 1980 West Broad Street, Mail Stop 4110, Columbus, Ohio, 43223. There will be no extension of time for the project granted if the Contractor wishes to avail himself of this process. If an item of work subcontracted to a DBE firm is non-performed by the Department or the subject of an approved VECP, the Contractor may request a waiver for the portion of work excluded.

The Department shall consider the following information and documentation when a request for a DBE goal waiver is received:

- 1. Dollar value and % of DBE goal. Dollar value and % of waiver request.
- 2. Signed copy of each subcontract or purchase order agreement between the prime and DBE subcontractor utilized in meeting the contract goal.
- 3. Copy of dated written communication, fax confirmation, personal contact, follow up and negotiation with the DBE's.

- 4. Copy of dated written communication and/or fax confirmation that bidder solicited and provided DBE's with adequate information about the plans, specifications and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- 5. Copy of dated written communication and/ or fax confirmation of each noncompetitive DBE quote that includes the dollar value of each reference item and work type.
- 6. Copy of dated written communication and/ or dated fax confirmation of DBE's that were not interested in providing a quote for the project.
- 7. Documentation of all negotiating efforts and reason for rejecting bids.
- 8. All solicitations made by the Contractor for subcontracting opportunities and DBE quotes through the Small Business Network.
- 9. Documentation of good faith efforts (GFE) to meet the DBE subcontract goal, by looking beyond the items typically subcontract or consideration of subcontracting items normally performed by the prime as a way to meet the DBE goal.

The Department will review the submitted documentation and issue a written decision within ten (10) business days. The Contractor may request administrative reconsideration within 14 days of being informed that it did not perform a GFE. The Contractor must make this request in writing to the following official:

Ohio Department of Transportation Attention: Deputy Director, Division of Construction Management 1980 West Broad Street, Mail Stop 4110 Columbus, Ohio 43223

The reconsideration official will not have played any role in the original determination that the contractor did not document sufficient good faith effort.

As part of this reconsideration, the contractor will have the opportunity to provide written documentation or an argument concerning the issue of whether it met the goal or made adequate good faith efforts to do so. ODOT will send the contractor a written decision on reconsideration explaining the basis for finding that the contractor did or did not meet the goal or make adequate good faith efforts. The result of the reconsideration process is not administratively appealable to the US Department of Transportation. However, it is appealable to the Court of Claims.

SANCTIONS

The Ohio Department of Transportation will issue sanctions if the Contractor chooses not to request a waiver, the Contractor fails to comply with the contract requirements and/or fails to demonstrate the necessary good faith effort.

The Ohio Department of Transportation may impose any of the following sanctions:

- 1) letter of reprimand;
- 2) liquidated damages computed up to the amount of goal dollars not met;
- 3) cross-withhold from future projects;
- 4) contract termination and/or

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5) other remedies available by law including suspension, revocation, and/or debarment.

Factors to be considered in issuing sanctions include, but are not limited to:

- 1) the magnitude and the type of offense;
- 2) the degree of the Contractor's culpability;
- 3) any steps taken to rectify the situation;
- 4) the Contractor's record of performance on other projects including, but not limited to:
 - a. annual DBE participation over DBE goals;
 - b. annual DBE participation on projects without goals;
 - c. number of complaints the Ohio Department of Transportation has received from DBEs regarding the Contractor; and
 - the number of times the Contractor has been previously sanctioned by the Department of Transportation; and
- 5) whether the Contractor falsified, misrepresented, or withheld information.

PN 090 - 01/21/2011 - WORK TYPE CODES AND DESCRIPTIONS

The Department will indicate the work type required for each pay item. If the line item does not have a corresponding work type, NR will be shown in the work type column. This proposal note will govern the assignment of work types to pay items.

However, the Contractor may perform incidental work items for which it does not hold the required work type provided the cost of the work does not exceed 5% of the total bid. The Contractor may also perform Work Type 26 (Structural steel painting) without holding the required work type provided the total area to be painted does not exceed 700 SF per structure. The Contractor may perform Work Type 57 (Sealing of Concrete Surfaces with Epoxy or Non-Epoxy Sealers) without holding the required work type provided the total area to be sealed does not exceed 75 SY per project.

Listed below are the work types for this proposal. In accordance with Ohio law, a bidder must possess work types, and perform work equal to the percentage included on the front cover of this proposal. This is a percentage of the total amount of the submitted bid price. The Director may, by insertion of a contract provision, reduce the fifty percent amount.

Work Type Code	Work Type Description		Work Type Description
1	Clearing & Grubbing	29	Structure Repairs
2	Building Removal	30	Hydrodemolition
3	Gas, Oil, Water Well Abandonments	31	Structural Steel Repairs
4	Roadway Excavation & Embankment Construction	32	Heat Straightening
5	Major Roadway Excavations	33	Tieback Installation
6	Incidental Grading	34	Earth Retaining Structures
7	Soil Stabilization	35	Drainage (Culverts, Misc.)
8	Temporary Soil Erosion & Sediment Control	36	Guardrail / Attenuators
9	Aggregate Bases	37	Fence
10	Flexible Paving	38	Misc. Concrete
11	Apply Bituminous Treatments	39	Maintenance of Traffic

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12	Rigid Paving	40	Waterproofing				
13	Pavement Planning, Milling, Scarification	41	Raised Pavement Markers				
14	Concrete Texturing	42	Signing				
15	Sawing	43	Highway Lighting				
16	Flexible Replacement	44	Traffic Signals - Standard				
17	Rigid Pavement Replacement	45	Pavement Markings				
18	Pavement Rubblizing, Breaking, Pulverizing	46	Landscaping				
19	Structure Removal	47	Mowing				
20	Level 1 Bridge	48	Trucking				
21	Level 2 Bridge	49	Herbicidal Spraying				
22	Level 3 Bridge	50	Railroad Track Construction				
23	Reinforcing Steel	51	Micro Tunneling				
24	Structural Steel Erection	52	Tunneling				
25	Stud Welding	53	Piling				
26	Structural Steel Painting	54	Post-Tensioning Bridge Members				
27	Expansion & Contraction Joints, Joint	55	Fiber Optic Cable Installation, Splicing,				
	sealers,		Termination				
	Bearing Devices		and Testing – Traffic Signal System				
28	Caissons / Drilled Shafts	56	Fiber Optic Cable Installation, Splicing,				
			Termination				
			and Testing – Intelligent Transportation System				
		57	Sealing of Concrete Surfaces with Epoxy or Non-				
			Epoxy Sealers				

PN 059 - 10/15/2004 - 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 for 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 Determination Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D. C. 20210

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

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

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

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

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

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

PN 061 - 10/22/2012 -WAGE SCALE ON ALL FEDERAL-AID PROJECTS

The wage rates for this project were determined by the Secretary of Labor in accordance with Federal-Aid requirements.

Contractors shall use only the classifications and wage rates set forth in the United States Department of Labor (USDOL) wage decision found at the website noted below on payrolls submitted to the District Office. Additionally, please note that the wage modification in effect at the time of the project sale date, shall be used by all contractors.

This USDOL wage decision may be viewed, by accessing the United States Department of Labor (USDOL) website at:

http://www.wdol.gov/wdol/scafiles/archive/davisbacon/2013/oh2.r2

This contract requires the payment of the total of the basic hourly rates plus the fringe benefits payments for each classification in accordance with the following regulations which by reference are made part of this contract:

- 1) The U.S. Department of Labor Regulations, Title 29, Subtitle A, Part 5, Sections 5.5, 5.31, and 5.32, most recent revision at contract execution.
- 2) Form FHWA-1273 (most recent revision at contract execution) Part IV. Payment of Predetermined Minimum Wage and Part V. Statements and Payrolls.

The failure to pay prevailing wages to all laborers and mechanics employed on this project, shall be considered a breach of contract. Such a failure may result in the termination of the contract and debarment.

The Contractor and all subcontractors shall pay all wages and fringe benefits by company check. All payroll records and canceled pay checks shall be maintained for at least three years after final acceptance as defined in section 109.12 of the Ohio Department of Transportation Construction and

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Materials Specifications. The Contractor's and all subcontractors_ payroll records and canceled pay checks shall be made available for

inspection by the Department and the U.S. Department of Labor, upon request, anytime during the life of the contract, and for three years thereafter by the U.S. Department of Labor. Additionally, the Contractor and all subcontractors shall permit such representatives to interview any employees during working hours while the employee is on the job.

The wage and fringe rates determined for this project shall be posted by the Contractor in a prominent and accessible place on the project, field office, or equipment yard where they can be easily read by the workers.

The Contractor shall submit to the designated Department representative, certified payrolls for the Contractor and all subcontractors each week beginning three weeks after the start of work. These payrolls shall be on a Form WH-347 or equivalent and shall show the following:

- 1. Employee name, address, social security number, classification, and hours worked.
- 2. The basic hourly and overtime rate paid, total pay, and the manner in which fringe benefit payments have been irrevocably made.
- 3. The project number and pay week dates.
- 4. Signature of an authorized company representative on the certification statement.

Additionally, a copy of the "Apprentice Certification" obtained from the Ohio State Apprenticeship Council, must accompany all certified payrolls submitted for all apprentices working on this project.

Please be aware that it is ultimately the responsibility of the Contractor to ensure that all laws relating to prevailing wages in the USDOL Regulations, Title 29, parts 1 and 5, are strictly adhered to by all subcontractors on the project.

If the Contractor or any subcontractor fails to comply with any of the provisions contained in this proposal note, the Department may terminate the contract, debar the Contractor or Subcontractor and/or withhold or suspend pay estimates after written notice and a reasonable opportunity to comply has been provided

PN 050 - 10/15/2004 - LIMITATION ON USE OF CONTRACT FUNDS FOR LOBBYING

- 1. The prospective bidder certifies, by signing and submitting this bid 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. 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 civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
- 3. The prospective bidder also agrees by submitting his or her bid proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such sub-recipients shall certify and disclose accordingly.

PN 045 - 10/15/2004 - NON - COLLUSION AFFIDAVIT

In accordance with Title 23 United States Code, Section 112 and Ohio Revised Code, Chapter 1331 et. seq: and Sections 2921.11 and 2921.13, the bidder hereby states, under penalty of perjury and under other such penalties as the law provides, that he or his agents or employees have not entered either directly or indirectly into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal. Execution of this proposal on the signature portion thereof shall constitute also signature of this Non-Collusion Affidavit as permitted by title 28 United States Code, Section 1746.

REPORTING BID RIGGING

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.

PN 107 - 06/27/2012 - CRITICAL PATH METHOD PROGRESS SCHEDULE FOR MULTI-SEASON PROJECTS

A. General. The progress schedule required for this project is the critical path method schedule (CPM schedule). The Contractor shall designate a Schedule Representative who shall be responsible for coordinating with the Engineer during the preparation and maintenance of the schedule. The requirements of this note replace the progress schedule requirements in 108.03 of the Construction & Material Specifications.

The contractor shall submit an interim schedule followed by a baseline schedule, or only a baseline schedule, depending on when the contractor starts work as described below.

B. Interim Schedule. If the Contractor starts work within 60 days of execution of the contract, they shall submit an interim schedule. The interim schedule can be in bar chart format or CPM schedule format. The interim schedule shall include detailed activities for the work to be accomplished during the first 90 days of the Contract, and summary activities for the balance of the work.

C. Baseline Schedule. The Contractor shall submit a baseline schedule within 60 days of the execution of the Contract. The baseline schedule will be in CPM schedule format and as described below. The Engineer will review the baseline schedule and will either "approve", "approve as noted" or "reject" the schedule within 21 days of receipt. If the Engineer does not provide written notification regarding the disposition of the baseline schedule within 21 days, the submission will be considered approved.

For baseline schedules that are "approved as noted", the Contractor shall make the necessary revisions and resubmit the revised schedule within 14 days. The Engineer will only reject baseline schedules that are not in compliance with contract requirements.

For baseline schedules that are "rejected", the Engineer shall indicate in writing all portions of the schedule that are not in compliance with the contract requirements. The Project Engineer shall conduct a mandatory meeting with the Contractor and the Contractor's Schedule Representative within 14 days of the Engineer's written notice. The purpose of this meeting is to resolve all issues with the baseline schedule. At this meeting the Contractor shall provide clarification and all requested information necessary for the Engineer to "approve" the baseline schedule.

In the event the baseline schedule is not "approved" within 120 days of execution of the contract, all work shall cease on the project until the baseline schedule is "approved".

Approval of the baseline schedule does not revise the Contract Documents. The baseline schedule must be "approved" or "approved as noted" by the Engineer prior to the Engineer evaluating any contractor claims associated with time impacts.

 Schedule Requirements. Submit an .xer file prepared in Primavera software manufactured by Oracle. The Department will "Import" or accept progress schedule files from the Contractor. All

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Calendars assigned to activities must be project level Calendars not Global or Resource Calendars; all Activity Codes shall be project level and not Global or EPS level Activity Codes; no Resources shall be assigned to activities, and no Project Codes shall be assigned.

Table 1 – Schedule Filename Convention					
Progress Schedule	1 st Submission	2 nd Submission	3 rd Submission		
Interim Schedule	YYPPPP1IS	YYPPPP2IS	YYPPPP3IS		
Baseline Schedule	YYPPPP1B	YYPPPP2B	YYPPPP3B		
Schedule Update #1	YYPPPP1SU1	YYPPPP2SU1	YYPPPP3SU1		
Schedule Update #2	YYPPPP1SU2	YYPPPP2SU2	YYPPPP3SU2		
Delay Analysis	YYPPPP1TIA1	YYPPPP2TIA1	YYPPPP3TIA1		
Weather Delay Analysis	YYPPPP1WD1	YYPPPP2WD1	YYPPPP3WD1		
Recovery Schedule	YYPPPP1RS1	YYPPPP2RS1	YYPPPP3RS1		

YY - Project Year PPPP - Project Number

Provide a working day schedule that shows the various activities of work in sufficient detail to demonstrate a reasonable and workable plan to complete the Project by the Original Contract Completion Date. Show the order and interdependence of activities and the sequence for accomplishing the work. Describe all activities in sufficient detail so that the Engineer can readily identify the work and measure the progress of each activity. The baseline schedule must reflect the scope of work, required phasing, maintenance of traffic requirements, interim completion dates, the Completion Date, and other project milestones established in the Contract Documents. Include activities for submittals, working drawings, shop drawing preparation, submittal review time for the Department shop drawings, material procurement and fabrication, and the delivery of materials, plant, and equipment, and other similar activities.

The Contractor shall be responsible for assuring all work, including all subcontractor work, is included in the schedule. The Contractor shall be responsible for assuring that all work sequences are logical and that the schedule indicates a coordinated plan.

Failure by the Contractor to include any element of work required for performance of the Contract shall not excuse the Contractor from completing all work within the required time. The Engineer's review of the baseline schedule will be for compliance with the specifications and contract

requirements. Approval by the Engineer will not relieve the Contractor of any of their responsibilities for the accuracy or feasibility of the schedule. Omissions and errors will be corrected as described in Section F or I in this note and will not affect contract time.

- a) Administrative Identifier Information:
 - i. Project Number
 - ii. County
 - iii. Route Number
 - iv. FHWA Number
 - v. PID Number
 - vi. Contract Signed Date
 - vii. Completion Date
 - viii. Contractor's Name
 - ix. Contractor's Dated Signature
 - x. ODOT's Dated Approval Signature

b) Project Activities:

- Activity Identification (ID). Assign each activity a unique identification number.
 Activity ID length shall not exceed 10 characters. Once accepted, the Activity ID shall be used for the duration of the project.
- ii. Activity Description. Each activity shall have a narrative description consisting of a verb or work function (e.g.; form, pour, excavate) and an object (e.g.; slab, footing, underdrain).
- iii. Activity Original Duration. Assign a planned duration in working days for each activity. Do not exceed a duration of 20 working days for any construction activity, unless approved by the Engineer. Do not represent the maintenance of traffic, erosion control, and other similar items as single activities extending to the Completion Date. Break these Contract Items into component activities in order to meet the duration requirements of this paragraph.

iv. Activity Relationships:

- All activities, except the first activity, shall have a predecessor(s). All activities, except the final activity, shall have a successor(s).
- Use only finish-to-start relationships with no leads or lags to link activities, or use start-to-start relationships with lags no greater than the predecessor duration to link activities.
- Use of finish-to-finish relationship is permitted when both activities are already linked with a start-to-start relationship.

c) Project Milestones:

- i. Start Project: The Contractor shall include as the first milestone in the schedule, a milestone named "Start Project". The date used for this milestone is the date the contract is executed and signed by the Department.
- ii. End Project Milestone: The Contractor shall include as the last activity in the project schedule, a milestone named "End Project". The date used for this milestone is considered the project completion date.
- iii. Start Phase Milestone: The Contractor shall include as the first activity for a project phase, an activity named "Start Phase X", where "X" identifies the phase of work. The Contractor may include additional milestones but, as a minimum, must include all contractual milestones.
- iv. End Phase Milestone: The Contractor shall include as the last activity in a project phase, an activity named "End Phase X" where "X" identifies the phase of work. The Contractor may include additional milestones, but at a minimum contractual milestones.

d) Level of Effort Activities:

Use level of effort activities to show the duration of specified contract work periods, phases and road closures. The level of effort activity type is allowed to have a start-to-start relationship with the first activity in a series of activities and a finish-to-finish relationship with the last activity in a series of activities.

e) Constraints:

Use constraints sparingly in the schedule. If constraints are used, use only Early Constraints or Late Constraints.

f) Calendars:

Weather, seasonal (winter) and environmental shutdown periods shall be shown using non-work calendars. The activity can be assigned to a calendar indicating time periods of non-work. These custom calendars can be created to show days, weeks, or months of non-work. Weather and seasonal conditions, as shown in CMS 108.06-1 or PN 130, shall be evenly dispersed into the CPM schedule calendars as non-work days and be included in the planning and scheduling of all work. All calendars developed by the Contractor shall be established as Project Calendars, with the calendar name including the project year, project number and describing the function (i.e. 120345 – 5 day workweek, 120345 – earthwork, 120345 – structures, 120345 – asphalt). No Global Calendars shall be incorporated into any progress schedule submission.

g) Activity Codes:

The Contractor shall, at a minimum, include Project Activity Codes for Area, Phase, and Responsibility for each activity. Work Breakdown Structure is permitted, but not required. No Global Activity Codes shall be incorporated into any progress schedule submission.

h) Schedule Options:

The schedule may only be calculated using retained logic. Show open ends as non-critical. Schedule durations are to be contiguous. Total float shall be calculated as finish float. Ignore relationships to and from other projects.

- 2. Submission Requirements. Submit all schedules within the time frames specified. Submit the schedule and information in electronic file format via email or compact disc (CD) compatible with the Engineer's computer. Submit the following information along with the electronic baseline schedule:
 - a) A hard copy of the baseline schedule in CPM format including the Administrative Identifier Information discussed in Section C.1.a on the first page of the schedule. For each activity on the chart, indicate the Activity ID, Activity Description, Original Duration, Remaining Duration, Total Float, Start Date, Finish Date, and Calendar ID. Use arrows to show the relationships among activities. Identify the critical path of the project on the bar chart in red. The critical path is defined as; the longest path of activities in the project that determines the project completion date. The activities that make-up the critical path of activities are the "Critical Activities."
 - b) A hard copy of the Six Week Look Ahead Schedule in CPM format. This schedule will have all the requirements of the baseline schedule in bar chart format except that it shall be limited to those activities that have an early start or early finish within a six week period of the data date.
 - c) A complete Scheduling/Leveling Report (SCHEDLOG.TXT file generated by the Primavera scheduling software application) which includes Schedule Settings, Statistics, Errors, Warnings, Scheduling/Leveling Results, Exceptions, Activities with unsatisfied constraints, Activities with unsatisfied relationships, and Activities with external dates. The statistics shall include, number of Activities, number of Activities Not Started, number of Activities In Progress, number of Activities Completed, number of Activity Relationships, and number of Activities with Constraints. Total number of activities on the critical path, percent complete, activities without predecessors, activities without successors, and activities out of sequence.
- **D. Float.** Use of float suppression techniques, such as; preferential sequencing (arranging critical path through activities more susceptible to Department caused delay), lag logic restraints, zero total or free float

constraints, extending activity times, or imposing constraint dates other than as required by the contract, shall be cause for rejection of the project schedule or its updates.

- 1. Definitions of Float: Total Float is the length of time along a given network path that the actual start and finish of activity(s) can be delayed without delaying the project completion date. Project Float is the length of time between the End Project Milestone and the Contract Completion Date.
- 2. Ownership of Float: Float available in the schedule, at any time shall not be considered for the exclusive use of either the Department or the Contractor. During the course of contract execution, any float generated due to the efficiencies of either party is not for the sole use of the party generating the float; rather it is a shared commodity to be reasonably used by either party. Efficiencies gained as a result of favorable weather within a calendar month, where the number of days of normally anticipated weather is less than expected, will also contribute to the Project Float. A schedule showing work completing in less time than the contract time, and accepted by the Department, will be considered to have Project Float. Project Float will be a resource available to both the Department and the Contractor. No time extensions will be granted nor delay damages paid unless a delay occurs which impacts the project's critical path, consumes all available float and extends the work beyond the Contract Completion Date.
- 3. Negative Float: Negative float will not be a basis for requesting time extensions. Any extension of time will be addressed in accordance with the Section F. Scheduled completion date(s) that extend beyond the contract (or phase) completion date(s) may be used in computations for assessment of liquidated damages. The use of this computation is not to be construed as an order by the Department to accelerate the project.
- **E. Monthly Update Schedule.** A monthly update schedule is a schedule in which only progress is updated from the prior data date to the current data date. Work added and/or excusable delays encountered since the prior data date must be represented as a schedule revision as described in Section F.
 - 1. Update Requirements. On the tenth day of the current month, during the life of the Project, submit an updated schedule and all required information with a data date of the last day of the preceding month. The date for submission and data date may be adjusted to accommodate regularly scheduled progress meetings. Submit the monthly updated bar chart on paper and a copy of the updated schedule in electronic format in Section C.2. The Engineer shall "approve" or "reject" the schedule update within 5 days of receipt of the updated CPM schedule. The Engineer may withhold estimates if the updated schedule is not submitted as required by this section. For each

updated schedule, identify the actual start and finish dates for all completed activities and the actual start date and remaining duration for all activities in progress. Correct out-of-sequence progress listings generated by the Scheduling Statistics Report on the critical path. The project schedule shall be reviewed at each monthly progress meeting. Any corrections shall be made prior to the next monthly progress meeting.

Submit the following with each updated schedule:

- i. A hard copy of the updated schedule in CPM format.
- ii. A hard copy of the Six Week Look Ahead Schedule in CPM Format
- iii. Provide a written narrative that identifies any changes or shifts in the critical path and submit reasons for the changes or shifts in the critical path.
- iv. A complete Scheduling/Leveling Report (SCHEDLOG.TXT) file generated by the Primavera scheduling software application.
- A hard copy or .pdf of the Claim Digger Report (generated by the Primavera Software application) providing a comparison between this updated schedule and the previous Monthly Updated Schedule.
- vi. Electronic files (formatted as described above)
- 2. Early Completion Monthly Update Schedule. An Early Completion Monthly Update Schedule is defined as a monthly update schedule submitted by the Contractor in which the Finish Date precedes the Contract Completion Date. If after incorporating necessary revisions in accordance with Section F, the Finish Date precedes the Contract Completion Date by at least the number of days shown Table A the Engineer will initiate a change order amending the Contract Completion Date to the Early Completion Date shown on the accepted Early Completion Monthly Update. The amended Completion Date will be effective upon execution of that change order and all contract provisions concerning the Completion Date such as incentives, disincentives, excusable delays, compensable delays, and liquidated damages will be measured against the amended Completion Date. The Contractor may elect not to execute the change order amending the Completion Date; however, in so doing, the Contractor waives its rights to delay damages in

meeting the projected early Completion Date and the time between the Early Completion Date and the Contract Completion Date is used as Project Float.

Table A

Original Project Duration	# days prior to Contract Completion Date			
one year or less	30			
one year to two years	60			
two years or more	90			

- 3. Late Completion Monthly Update Schedule. A Late Completion Monthly Update Schedule is defined as a monthly update schedule submitted by the Contractor in which the Finish Date exceeds the Contract Completion Date. In the event the Finish Date is more than 14 days beyond the current contract completion date and a schedule revision is not warranted, the contractor must proceed in accordance with Section H.
- **F. Revisions.** The Work may require and/or the Contractor may make revisions to the CPM schedule. Addition of new activities or new calendars or changes to existing activities, calendars or logic constitute a revision. All revisions must be reported in narrative form on a cover sheet accompanying the monthly update schedule. Any revision which modifies the critical path or impacts an interim date or project completion date must be represented on a companion schedule submitted with the monthly update schedule or as a fragnet within the monthly update schedule. A fragnet is defined as the sequence of new activities that are proposed to be added to the existing schedule. The fragnet shall identify the predecessors to the new activities and demonstrate the impacts to successor activities. If submitted as a fragnet, the Contractor shall compute two Finish Dates. The first Finish Date shall be computed without consideration of any impact by the fragnet. The second Finish Date shall be computed with consideration of any impact by the fragnet. The Contractor shall also submit a written narrative stating the reason for the proposed revisions. The Engineer shall "approve" or "reject" proposed revisions within ten days of receipt of appropriate schedules and narrative. All approved revisions will be incorporated into the Monthly Update Schedule which will become the Revised Monthly Update Schedule.
- **G. Time Extensions for Delays in Accordance with C&MS 108.06.B and 108.06.D.** The Work may require and/or the Contractor may request an extension of the Completion Date. Perform the following analysis to compute the duration of the time extension. Submit two paper copies and two electronic copies of each analysis performed.
 - 1. Determine project progress prior to circumstance(s) necessitating the time extension. , The previous accepted monthly update, updated to the date of the circumstance alleging to have

caused delay, shall be used to display the prior progress of the project. This schedule is referred to as the Un-impacted Schedule

- 2. Prepare a fragmentary network (fragnet) depicting the circumstance that is believed to have delayed the project.
- 3. Insert the fragnet into the Un-impacted Schedule, run the schedule calculations and determine the finish date. This schedule is referred to as the Impacted Schedule.
- 4. Compare the Impacted Schedule finish date with the Un-impacted Schedule finish date in order to determine the duration of any warranted time extension.

Submit the impacted schedule with the request for time extension. Include a narrative report describing the effects of new activities and relationships to interim and contract completion dates. All approved time extensions will be incorporated into the monthly update with the fragnet used to determine impacts incorporated into the schedule.

- **H. Weather Days in Accordance with C&MS 108.06.C.** The Contractor may request and/or the Engineer will determine an extension of the completion date due to weather days. Perform the following analysis to compute the duration of the time extension. Submit two paper copies and two electronic copies of each analysis performed.
 - 1. The previously accepted monthly update shall be used to display progress of the project and planned activities for the next 30 day period that incurred weather days. Make a copy of the schedule file to use for the analysis. This schedule is referred to as the Non-weather Schedule.
 - 2. Prepare a list of actual weather days believed to have delayed the project and the activities that were impacted.
 - 3. Utilizing the calendar(s) of those impacted activities, remove any planned weather days. Insert the actual weather day(s) into the calendar(s) for the planned work as a non-work day. Run the schedule calculations and determine the finish date. This schedule is referred to as the Weather Schedule.
 - 4. Compare the Weather Schedule finish date with the Non-weather Schedule finish date in order to determine the duration of any warranted time extension.

Submit the weather schedule with the request for time extension on a monthly basis. Include a narrative report describing the effects of weather days to interim and contract completion dates.

I. Recovery Schedule. If the Monthly Update Schedule or Revised Monthly Update Schedule projects a finish date for the Project more than 14 calendar days later than the current Completion Date, submit a

recovery schedule showing a plan to finish by the current Completion Date if requested by the Engineer. The Department will withhold Estimates until the Engineer approves the recovery schedule. The Engineer will use the schedule to evaluate time extensions and associated costs requested by the Contractor. In the event the current Completion Date is in dispute, the recovery schedule will need to be submitted once the dispute has been resolved.

- **J. Basis of Payment.** The Department will make partial payments according to C&MS 109.09 and as modified by the following schedule:
 - The Department will release 60 percent of the lump sum amount bid for CPM Progress Schedule
 to the Contractor with the first regular estimate payable after the Engineer has approved the CPM
 Baseline schedule submission.
 - 2. The Department will release an additional 30 percent of the lump sum amount bid for CPM Progress Schedule to the Contractor with the first regular estimate payable after 50 percent of the original contract amount is complete.
 - 3. The Department will release the remaining 10 percent of the lump sum amount bid for CPM Progress Schedule to the Contractor with the first regular estimate payable after 90 percent of the original contract amount is complete.

The Department will pay for the accepted quantities at the contract price as follows:

Item Unit Description

108E10000 Lump Sum CPM Progress Schedule

PN 417 - 7/15/2005 - DESIGN REQUIREMENTS FOR PLANT MIX PAVEMENTS (MEDIUM)

On this project, design all 301 bases and asphalt pavements requiring 441 for MEDIUM traffic volumes.

PN 520 - 04/15/2011 - FUEL PRICE ADJUSTMENT

General: This Fuel Price Adjustment (Fpa) provision is intended to minimize risk to the Contractor or Design Build Team, (DBT) due to fuel price fluctuations that may occur during the Contract. This provision is not designed to estimate actual quantities of fuel used in construction operations, but to provide a reasonable basis for calculating a fuel price adjustment based on average conditions.

The Department determines adjustments under the provisions of this Proposal Note, and presumes that the Contractor/(DBT) has relied on these provisions when determining unit bid prices. The monthly application range for percent change (Mbp/Cbp) will not exceed 50% for a Fuel Price Adjustment increase or decrease as outlined in Section B, Calculation of Fuel Price Adjustment.

A. Price Adjustment Criteria: These requirements provide for a price adjustment, positive or negative, to payments due the Contractor/(DBT) for fluctuations in the cost of fuel consumed in the performance of certain items of work. These price adjustment provisions apply only to those items in the contract as grouped by category and identified in Table A-1. All adjustments will be made based on fuel consumption indicated by Table A-1, and no changes will be made for actual consumption rates.

Category descriptions and the fuel usage factors which are applicable to each are as follows:

Fuel Adjustment Categories, Table A-1					
Category	Basis of Calculation and Threshold Quantity	Eligible Items	Units	Fuel Usage Factor	
Earthwork	Apply only to the greater of the sum of all	203, 204	Gallons per	0.50	
	Excavation quantities or the sum of all		cubic yard		
	Borrow and Embankment quantities.		(Gallons per	(0.65)	
	Threshold Quantity* = 30,000 c.y. (22,936		cubic meter)		
	c.m.)				
Aggregate	Apply to quantity calculated based on the	304, 307	Gallons per	0.75	
Bases	Method of Measurement and Basis of		cubic yard		
	Payment. Threshold Quantity* = 2,500 c.y.		(Gallons per	(0.98)	
	(1,912 c.m.)		cubic meter)		
Select	Apply to quantity calculated based on the	840	Gallons per	0.75	
Granular	Method of Measurement and Basis of		cubic yard		
Backfill	Payment. Threshold Quantity* = 2,000 c.y.		(Gallons per	(0.98)	
	(1,529 c.m.)		cubic meter)		
Flexible	Apply to quantity calculated based on the	301, 302,	Gallons per	4.50	
Bases and	Method of Measurement and Basis of	308, 424,	cubic yard		
Pavements	Payment. Threshold Quantity* = 1,200 c.y.	442, 443,	(Gallons per	(5.88)	
	(917 c.m.)	446, 448,	cubic meter)		
		803, 826,			
		857, 880			
Rigid Bases	Apply to quantity calculated based on the	305, 306,	Gallons per	1.00	
and	Method of Measurement and Basis of	451, 452,	cubic yard		
Pavements	Payment. Threshold Quantity* = 1,200 c.y.	526, 884,	(Gallons per	(1.31)	
_	(917 c.m.)	888, 896	cubic meter)		
Structural	Apply to quantity calculated based on the	511, 524,	Gallons per	4.00	
Concrete	Method of Measurement and Basis of	842, 892,	cubic yard		
	Payment. Threshold Quantity* = 350 c.y.	893, 894, 898	(Gallons per	(5.23)	
	(268 c.m.)		cubic meter)		

^{*} A Fuel Price Adjustment will only apply when the sum of all **original** contract quantities or for Design Build Projects all completed in-place accepted final quantities for the category meet or exceed the specified Threshold Quantity. When a Fuel Price Adjustment applies, calculate the Fuel Price Adjustment for the sum of all quantities for the category per this proposal note.

The Department will calculate a Monthly Base Price (Mbp) for fuel for each month of each calendar year beginning with January 2001. The method for calculating the Monthly Base Price (Mbp) will be on file in

B. Calculation of Fuel Price Adjustment: Fuel Price Adjustments may be either positive or negative. A positive Fuel Price Adjustment will result in a payment to the Contractor/(DBT) while a negative Fuel Price Adjustment will result in a deduction.

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the Division of Construction Management. The Monthly Base Price (Mbp) will be used to calculate all Fuel Price Adjustments. The Contract Base Price (Cbp) will be the Monthly Base Price (Mbp) for the month the contract was bid. All Monthly Base Price (Mbp) values will be posted on the Division of Construction Management, Office of Construction Administration website at: http://www.dot.state.oh.us/Divisions/ConstructionMgt/Admin/Pages/PriceIndexes.aspx

During each month of the contract the Engineer will select the applicable Monthly Base Price (Mbp) and calculate the ratio of the Monthly Base Price (Mbp) divided by the Contract Base Price (Cbp). The formulas below allow for a variation in fuel prices without recognizing cost increases/ decreases within the range of 90% to 110% of the Contract Base Price (Cbp).

When, and only when, the Monthly Base Price (Mbp) divided by the Contract Base Price (Cbp) is less than 0.90 or greater than 1.10 will the Engineer calculate a Fuel Price Adjustment (Fpa).

Cost increases in excess of 150% of the Contract Base Price (Cbp) will not be recognized. When, the Monthly Base Price (Mbp) divided by the Contract Base Price (Cbp) is greater than 1.50, the Fpa shall be calculated using a Cbp/Mbp ratio of 1.50.

Cost decreases in excess of 50% of the Contract Base Price (CBP) will not be recognized. When, the Monthly Base Price (Mbp) divided by the Contract Base Price (Cbp) is less than 0.50, the Fpa shall be calculated using a Cbp/Mbp ratio of 0.50.

For a Price Increase:

 $Fpa = [(Mbp/Cbp) - 1.10] \times Cbp \times Q$

For a Price Decrease:

 $Fpa = [(Mbp/Cbp) - 0.90] \times Cbp \times Q$

Where:

Fpa = Fuel Price Adjustment

Mbp = Monthly Base Price

Cbp = Contract Base Price

Q = The number of gallons of fuel used in the placement of items identified in Table A-1 during that month at the specified Fuel Usage Factor. Q will be determined by the Engineer for each category by multiplying the applicable Fuel Usage Factor by the sum of quantities of completed and accepted work for the specified items.

The total Monthly Fuel Price Adjustment will be the algebraic sum of the Fuel Price Adjustments for materials placed during the month for each applicable category identified in Table A-1. The Total Fuel Price Adjustment for the project will be the algebraic sum of all Monthly Fuel Price Adjustments.

The Department will calculate the Monthly and Total Fuel Price Adjustment on a monthly basis and make contract modifications as provided in Section C, Payment/Deduction.

C. Payment/Deduction: The Fuel Price Adjustment will be paid, or deducted, upon approval of a change order prepared after completion of all work. Contractor/(DBT) markups are not permitted. Partial payments or deductions will be processed prior to total completion when the unpaid accrued Total Fuel Price Adjustment exceeds \$10,000 or once every 12 months.

- **D. Expiration of Contract Time:** When eligible items of work grouped by category and identified in Table A-1 are performed after expiration of contract time and liquidated damages are chargeable, the value of Monthly Base Price (Mbp) used to compute the price adjustment will be either the Monthly Base Price (Mbp) at the time of actual performance or the Monthly Base Price (Mbp) at the time contract time expired, whichever is less.
- **E. Extra Work:** When eligible items of work grouped by category and identified in Table A-1 are added to the contract as Extra Work and for which a unit price is negotiated the Contractor/(DBT) must use the appropriate price for fuel when preparing required backup data for the negotiated price. No Fuel Price Adjustment will be made for fuel consumed in the performance of eligible work added to the contract as Extra Work at a negotiated price when the work commences within 90 days of the approval of the change order authorizing said extra work. If the eligible work at a negotiated price commences more than 90 days after the approval of the change order authorizing said extra work a Fuel Price Adjustment will be made if said extra work quantities exceed the applicable threshold quantity in Table A-1. The Fuel Price Adjustment will be calculated using the Monthly Base Price (Mbp) value for the month the change order authorizing said extra work was approved as the value for its Contract Base Price (Cbp).

When Extra Work is added to the contract as a Force Account operating costs for equipment used in the performance of this work will be paid in accordance with C&MS 109.05.C.4 with no further adjustment.

F. Final Quantities: Upon completion of the work and determination of final pay quantities a change order will be prepared to reconcile any difference between estimated quantities previously paid and the final quantities. In this situation, the value for the Monthly Base Price (Mbp) used in the price adjustment formula will be the average of all Monthly Base Price (Mbp) values previously used for computing price adjustments.

PN 525 -4/15/2011 Steel Price Adjustment

A. General: This proposal note acknowledges fluctuations in the cost of manufactured steel used in the materials defined below and placed as part of the applicable construction work in the form of a pay adjustment. This proposal note will be used in bidding documents, including design-build projects only for as long as the price of the steel products set out below are subject to volatile spikes as determined solely by the Department.

These price adjustment provisions apply to items in the contract including any modified standard or nonstandard item where the work to be performed involves the placement or installation of one or more of the steel products specified herein.

The Department will post monthly adjustment indices for steel using data obtained in Table B-1.

For Category 1, Table B-1:

The Department will post monthly adjustment indices (BI and MI) for wide flange steel beams plus a scrap surcharge using data obtained from the steel producers listed.

http://www.stld-cci.com/pdf/Price_list.pdf

http://www.gerdauameristeel.com/products/mp/pl.cfm

http://www.nucoryamato.com/

For Category 2, Table B-1:

The Department will post monthly adjustment indices (BI and MI) for steel using data obtained on the last Wednesday of the month from the American Metal Market (**AMM**), based on the price for Steel Plate, Cutto-length as reported for National Mills.

B. Price Adjustment Criteria and Conditions: The BI monthly values apply to projects sold during the same month in which the data is posted. The MI monthly values apply to projects for which qualifying items are shipped from the mill during the same month in which the data is posted. Adjustments will be made to the contract for fluctuations in the cost of steel used in the manufacture of the primary components of only the steel products listed in Table B-1:

Product Relationship Table B-1			
Steel Product (Title)	BI, MI		
Category 1: Structural Steel Members, Levels UF, 1, 2, and 3 Steel H-Piling	Average of lowest and highest 27" to 36" tall, 10"- 12" wide flange beams, up to 256 lbs./ft., prices plus scrap surcharge from Nucor-Yamato, SDI, and Gerdau Ameristeel		
Category 2: Structural Steel Members, Levels 4, 5, and 6 Stay in-place steel casing (Piling & Caissons)	AMM Product Designation: Steel Plate, Cut-to-length (National Mills)		

Nuts, bolts, rebar chairs, connecting bands and other miscellaneous hardware items shall not be included in the price adjustment. No other steel products shall be considered for a price adjustment.

Adjustments will only be made for fluctuations in the cost of the steel used in the above products as shipped from the producing mill. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

Adjustments may be positive, negative, or non-existent depending on the circumstances. Adjustments for the steel price will be calculated by the Engineer and processed by change order on the Contractor's progress estimate.

No steel price adjustments will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

Furnish the following documentation for all Table B-1 steel products to be incorporated into the work. Submit all documentation to the Engineer prior to incorporation of the steel into the work. The Department will withhold progress payments if the documentation is not provided and at the discretion of the Engineer the work is allowed to proceed. Progress payments will be made upon receipt of the delinquent documentation. Submit separate documentation packages for each steel product in Table B-1

and for each quantity represented by items 2) c and d below. Label each documentation package with a unique number.

- 1) An affidavit signed by the Contractor, or Design-Build Team, (DBT) stating that the documentation provided is true and accurate.
- 2) Identification of the steel product subject to adjustment.
 - a. Documentation package number: PN525 (Insert the steel product "title" from Table B-1)
 (Insert sequential package number beginning with "1"). Example: PN525 Steel H
 Piling 1, PN 525 Structural Steel 2, etc...
 - b. The steel product quantity in pounds (kg).
 - c. Steel Certification and Mill Test Reports for the steel product.
 - d. The date the steel product, subject to adjustment, was shipped from the producing mill.

Upon the incorporation of the steel product into the work provide the Engineer the following:

- 1) An affidavit signed by the Contractor, or DBT stating that the documentation provided is true and accurate.
- 2) Identification of the steel product subject to adjustment.
 - a. Documentation package number that was initially established for the steel product for which the price adjustment will be calculated.
 - b. The actual steel product quantity in pounds (kg) that was incorporated into the work.

Price Adjustment Calculations

The below formulas allow for a variation in steel prices without recognizing cost increases/decreases within the range of - 90 % to 110% of the Bidding Index (BI). The total steel price adjustment (SPA) will not be computed unless the percent **% Change** is - 10% or more, increase or decrease:

% Change =
$$[(MI/BI) - 1] \times 100$$

For a Price Increase:

$$SPA = [(MI/BI) - 1.10] \times BI \times (Q/100)$$

MI and BI are in terms of dollars (\$) per hundredweight (CWT). Therefore, Quantity (Q) of structural steel is divided by 100.

Example: If the Project was bid on 4/8/2008, the BI for a category 1 pay item in March 2008 is \$46.48. If wide flange beams have a documented weight of 34500 pounds and the mill date of 9/8/2009, the MI for September 2008 is \$60.23

Check threshold:

% Change =
$$[(\$60.23/CWT / \$46.48/CWT) - 1] \times 100 = 29.58,$$

Calculate SPA = [(\$60.23/CWT / \$46.48/CWT)-1.10] x \$46.48/CWT x 34,500 lbs/100

= \$3,140.19 (positive adjustment)

For a Price Decrease:

 $SPA = [(MI/BI) - 0.90] \times BI \times (Q/100)$

MI and BI are in terms of dollars (\$) per hundredweight (CWT). Therefore, Quantity (Q) of structural steel is divided by 100.

Example: If the Project was bid on 1/8/2009, the BI for a category 1 pay item in January 2009 is \$47.83. If wide flange beams have a documented weight of 34500 pounds and the mill date of 4/8/2009, the MI for April 2009 is \$37.38.

Check threshold:

% Change = $[(\$37.38/CWT/\$47.83/CWT) - 1] \times 100 = -21.85$,

Is ABS (-21.85) > 10? Yes

Calculate SPA = [(\$37.38/CWT/\$47.83/CWT)-0.90] x \$47.83/CWT x 34,500 lbs/100

= -\$1,955.12-(negative adjustment)

Where:

SPA = Steel Price Adjustment

MI = Mill Shipping Index. – in Dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill and properly documented. The adjustment indices will be posted on ODOT's website.

BI = Bidding Index. - in Dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month in which the project is bid. The adjustment indices will be posted on ODOT's website.

Q = Quantity of the steel product, pounds actually incorporated into the work as documented by the Contractor, or DBT and verified by the Engineer.

C. Price Adjustment Limitations: The price adjustments are limited to a % Change of 50%, increase or decrease.

Example 1: When the Project was bid, the BI for a category 1 pay item with a quantity of 50,000 pounds, was \$39.00, and the MI for the month in which the steel was shipped was \$60.23.

Check threshold:

% Change =
$$[(\$60.23/CWT)\$39.00/CWT)-1] \times 100 = 54.44\%$$

The limit is 50%, thus the SPA is calculated as follows:

Example 2: When the Project was bid, the BI for a category 1 pay item with a quantity of 50,000 pounds, was \$60.23, and the MI for the month in which the steel was shipped was \$29.00

Check threshold:

% Change =
$$[(\$29.00/CWT/\$60.23/CWT)-1] \times 100 = -51.85\%$$

The limit is -50 %, thus the SPA is calculated as follows:

SPA =
$$[0.50-0.90] \times BI \times Q$$

SPA = $[0.50-0.90] \times $60.23/CWT \times 50,000 \text{ lbs/}100$
= $-$12,046.00$

D. Payment/Deductions: The price adjustment will be paid, or deducted from the Contractor's, or DBT's progress estimate, upon approval of a change order.

If the price adjustment is based on estimated material quantities for that time, and a revision to the total material quantity is made in a subsequent or final estimate, an appropriate adjustment will be made to the price adjustment previously calculated. The adjustment will be based on the same indices used to calculate the price adjustment which is being revised. If the shipping date(s) of the revised material quantity cannot be determined, the adjustment for the quantity in question, will be based on the indices utilized to calculate the steel price adjustment for the last initial documentation package submission, for the steel product subject to adjustment, that was incorporated into the particular item of work, for which quantities are being finalized.

Example: Structural steel for a particular bridge was provided for in three different shipments with each having a different mill shipping date. The quantity of structural steel actually used for the bridge was calculated and a steel price adjustment was made in a progress payment. At the conclusion of the work an error was found in the calculation of the final quantity of structural steel used for the bridge. The quantity to be adjusted can not be directly related to any one of the three mill shipping dates. The steel price adjustment for the quantity in question would be calculated using the indices that were utilized to calculate the steel price adjustment for the quantity of structural steel represented by the last initial structural steel documentation package submission. The package used would be the one with the greatest sequential number.

- **E.** Mill Index after the Approved Completion Date: When steel products are shipped from the mill after the approved contract completion date, steel price adjustments will be based on the MI for the month of the approved contract completion date or the MI for the actual month the steel was shipped, using whichever MI is less.
- **F. Documentation Review:** The Department reserves the right to inspect the records of the Contractor or DBT, its subcontractors, material fabricators and suppliers to verify the accuracy of the documentation submitted to the Department.
- **G. Extra Work/Force Account:** When steel product, as specified herein, are added to the contract as Extra Work, in accordance with the provisions of C&MS Section 109, no steel price adjustments will be made for any products manufactured from steel having a mill shipping date 5 business days after the Department's request. Price adjustments will be made as provided herein however the BI shall be based on the month of the Department's request. The MI will be based on the month the steel was shipped from the producing mill and after the Extra Work request. For extra work performed on force account basis, reimbursement of actual material costs, along with the specified overhead and profit markup, will be considered to include full compensation for the current cost of steel and no steel price adjustments will be made.

PN 555 -4/19/2013 - SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES

- **1.0 DESCRIPTION**: The Surface smoothness requirements of C&MS 451.12 are modified as follows for bridge encounters defined as 25 feet (7.6 m) of entry pavement, entry approach slab, bridge deck, exit approach slab and 25 feet (7.6 m) of exit pavement including all joints and pavement transitions within this length of roadway.
- **2.0 MATERIALS AND EQUIPMENT**: Provide smoothness measuring equipment conforming to Supplement 1058. Provide a certified profiler who is on the approved list on the Office of Technical Services website. Furnish the Department's approval letter of the profiler and the operator to the Engineer prior to commencing work. Furnish equipment meeting the requirements of C&MS 257.02 for performing corrective diamond grinding.
- **3.0 SMOOTHNESS MEASUREMENT**: Collect surface smoothness measurements for both wheelpaths in each proposed travel lane during one continuous pass. The wheelpaths are located parallel to the centerline or baseline of the roadway or ramp and approximately 3.0 feet (1.0 m) inside all lane edges, measured transversely. Start the profile measurement approximately 250 feet (76 m) before the approach slab/pavement interface at the entry end and continue to approximately 250 feet (76 m) after the approach slab/pavement interface at the exit end. Ensure the profiler will meet the surface smoothness requirements per 451.12 for the bridge encounter.

Notify the engineer a minimum of 24 hours prior to surface smoothness measurements. Do not perform any measurements until all final wearing courses are in place within the bridge encounter lanes being measured and all concrete surfaces have reached specified curing and loading requirements. Remove all dirt and debris from the surface of the travel lanes prior to performing the surface smoothness measurements. Provide temporary pavement markings for all travel lanes that are of sufficient size to be visible during surface smoothness measurements. Ensure the path of the profiler is parallel to the lane edges at all times during data collection.

Develop an International Roughness Index (IRI) according to ASTM E 1926 for the bridge encounter using a continuous 25 foot (7.6 m) base length analysis for each wheelpath and calculate the Mean IRI (MRI) for each travel lane. The MRI is the average of the IRI values for the right and left wheelpaths in each travel lane. Submit two copies of the summary report from ProVAL conforming to Supplement 1112 and two electronic copies of all bridge encounter profiles in ProVAL compatible format to the Engineer of

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which one copy of the summary report and one electronic copy of the profiles will be submitted to the Office of Technical Services.

Provide necessary traffic control and survey stationing for all surface smoothness measurements.

4.0 MANDATORY CORRECTIVE WORK: For bridge encounters exceeding 265 feet (80 m) in length, corrective work is required for each travel lane with an MRI above 130 inches per mile (2.08 m/km). Perform corrective action to reduce the MRI for each corrected lane to 100 inches per mile (1.58 m/km) or less. The MRI threshold does not apply to bridge encounters less than 265 feet (80 m) in length.

Corrective work is required where the IRI in any 25 foot (7.6 m) segment of the bridge encounter exceeds 250 inches per mile (3.94 m/km), except in segments that include a steel armored expansion joint system, where the limit would be 350 inches per mile (5.52 m/km). Perform corrective action to reduce the IRI for each corrected lane to 250 inches per mile (3.16 m/km) or less, except in segments that include a steel armored expansion joint system, reduce the IRI for each corrected lane to 350 inches per mile (4.74 m/km), or less. Do not perform corrective diamond grinding within 1.5 feet (0.45 m) of a steel armored expansion joint system installed prior to the corrective work. Do not exceed 0.5 inches (13 mm) of material removed by corrective diamond grinding without approval of the Engineer.

If corrective work is required, develop a corrective work plan. At least 7 days before beginning corrective work, submit one copy of the following information to the Engineer: (1) corrective work plan; (2) all IRI and MRI analyses; and (3) all collected road profiles in ProVAL compatible format and one copy of the information will be sent to the Office of Technical Services; Attn.: Infrastructure Management Section, 1980 W. Broad St., Columbus, OH 43223. Do not begin corrective work until receiving the Engineer's acceptance of the corrective work plan.

Upon completion of the corrective work, re-measure surface smoothness according to these specifications. Re-groove diamond ground surfaces according to 511.17, if the existing grooves are less than 0.08 inches (2 mm) deep, at no additional cost to the Department.

UTILITY NOTE

Mahoning County – State Route 62 – Section 18.23 PID #24073

Date September 3, 2013

- Bidders are advised that the following utility facilities may not be cleared from the construction area at the time of award of the contract. These utility facilities shall remain in place **or** be relocated within the construction limits of the project as set out below.
- All station locations listed below are approximate unless otherwise stated.
- Relocations are based on the *Proposed R/W & Construction Centerline*.
- All changes to relocation work as described in the Utility Note must be approved by the ODOT Project Engineer and District Utilities Coordinator. ODOT shall not be held responsible for delay claims resulting from agreements made between the utility companies and the State's Highway Contractor without ODOT's prior consent to the agreement.
- The State's Highway Contractor shall notify ODOT's Project Engineer, in writing, within 24 hours of any project related contact with a utility company.
- Company work time frames **DO NOT** include Ohio Revised Code 48 hour One Call requirements.
- Utility relocation work is based on the sequence of construction in the highway plan. Any changes made to the sequence of construction, after the project is sold, may impact the utility relocation completion dates.
- It **should not** be assumed a Company's work, in all locations, can be performed concurrently, unless otherwise noted. The number of working days for a Company to perform their relocation work may not be consecutive.
- Non-compliance in meeting established target dates could cause ODOT to incur project delays and/or additional costs. In this regard, 5515.02 ORC gives the Department the authority to ensure project clearance and recover costs.
- For further responsibilities of the State's Highway Contractor and Utility Companies, see the *Department of Transportation Construction and Material Specifications*, sections 105.07 & 107.16.
- The following aerial relocation work is complex and must be performed in a certain order. One company's time schedule will depend on the other companies performing their work. The aerial relocation work will be performed in the following descending order.

Access

The Company does not anticipate any (other) conflicts with proposed work. If a conflict does arise, the State's Highway Contractor will immediately contact the Company and ODOT Project Engineer so the proper actions can be taken to prevent delay of construction.

Elantic Telecom

The Company does not anticipate any (other) conflicts with proposed work. If a conflict does arise, the State's Highway Contractor will immediately contact the Company and ODOT Project Engineer so the proper actions can be taken to prevent delay of construction.

Verizon Business

The Company does not anticipate any (other) conflicts with proposed work. If a conflict does arise, the State's Highway Contractor will immediately contact the Company and ODOT Project Engineer so the proper actions can be taken to prevent delay of construction

Time Warner Cable

The Company does not anticipate any (other) conflicts with proposed work. If a conflict does arise, the State's Highway Contractor will immediately contact the Company and ODOT Project Engineer so the proper actions can be taken to prevent delay of construction

AT&T

The Company does not anticipate any (other) conflicts with proposed work. If a conflict does arise, the State's Highway Contractor will immediately contact the Company and ODOT Project Engineer so the proper actions can be taken to prevent delay of construction

HLG Engineering for AT&T Long Distance

The Company does not anticipate any (other) conflicts with proposed work. If a conflict does arise, the State's Highway Contractor will immediately contact the Company and ODOT Project Engineer so the proper actions can be taken to prevent delay of construction

Owest

The Company does not anticipate any (other) conflicts with proposed work. If a conflict does arise, the State's Highway Contractor will immediately contact the Company and ODOT Project Engineer so the proper actions can be taken to prevent delay of construction

Ohio Edison

Unless otherwise specified, the overhead conductors within this project area will remain energized for the duration of the project. Caution must be exercised by the State's Highway Contractor to insure that OSHA safety standards are observed.

Dominion East Ohio

The State's Highway Contractor shall use caution when digging near the Company's facilities including but not limited to test boxes, curb stops, gate valve boxes, mainline and services. Costs incurred by damages to the Company's facilities could be billed to damaging party.

Utility Note prepared by James McGrath

MAHONING COUNTY MAH-62-18.23; PID 24073 CSX TRANSPORTATION INC.

CSX Great Lakes Division
New Castle Subdivision MP BG-75.01
&
PLE Connector Track MP PLE-64.05
CSX OP#0519

SPECIAL CLAUSES IN THE PROPOSAL

The bidder, if awarded the contract for this improvement agrees:

- 1. To cooperate at all times with the local officials of the railroad company.
- 2. To use all reasonable care and diligence in the work in order to avoid accidents, damage or unnecessary delay to, or interference with the trains and other property of the railroad company.
- 3. To conduct his work in a manner satisfactory to the Chief Engineer of the railroad company or his authorized representative, to perform his work in such manner and at such time as not to unnecessarily interfere with the movements of trains or railroad traffic, and to hold his work at all times open to inspection of railroad company inspectors.
- 4. To cooperate with a public utility, railroad or other organizations having occasion to do work on or in connection with the improvement.
- To avoid unnecessary use of railroad property without written permission of the railroad company and to leave railroad roadbed and property in a condition acceptable to the Chief Engineer of the railroad company.
- 6. To execute a bond conditioned according to Section 5525.16 of the Revised Code of Ohio, in favor of the State of Ohio and further to carry insurance of the following kinds and amounts:

a) Railroad Protective Liability Insurance.

In addition to the above, he shall furnish evidence to the highway department that, with respect to the operations he or any of his sub-contractors perform, he has provided for and in behalf of CSX Transportation Inc. in the amount of \$5,000,000 per occurrence and subject to that limit per occurrence, an aggregate limit in the amount of \$10,000,000 for each annual period, and must be on the ISO/RIMA Form of Railroad Protective Insurance – Insurance Services Office (ISO) Form CG 00 35.

The above railroad protective policy of insurance shall conform to the Railroad Liability requirements prescribed by the Federal Highway Administration in Federal-Aid Policy Guide 23 CFR 646A as amended. The insurer must be rated A- and Class VII or better by A.M. Best Company, Inc.

The corporate name and address of the "Named Insured" as listed on the policy shall be as follows:

CSX Transportation, Inc. 500 Water Street, C-907 Jacksonville, FL 32202

The description of operations must appear on the Declarations, must match the project description in this agreement and must include the appropriate MP and/or OP number as identified at the top of pg. 1

The job location must appear on the Declarations page and must include the city, state and appropriate highway name/number.

The name and address of the prime contractor must appear on the Declarations.

The name and address of the Department must be identified on the Declarations as the "Involved Governmental Authority or Other Contracting Party."

Endorsements that **must** be included:

- Pollution Exclusion Amendment CG 28 31 (not required with CG 00 35 01 96 and newer versions)
- Delete Common Policy Conditions Section E. Premiums

Other endorsements/forms that will be accepted are:

- Broad Form Nuclear Exclusion Form IL 00 21
- 30-day Advance Notice of Non-renewal or cancellation
- Required State Cancellation Endorsement
- Quick Reference or Index Form CL/IL 240

Endorsements/forms that are NOT acceptable are:

- Any Pollution Exclusion Endorsement except CG 28 31
- Any Punitive or Exemplary Damages Exclusion
- A "Common Policy Conditions: Endorsement
- Any other endorsement/form not specifically authorized above.
- Any type of deductible policy

2 Freight trains per day @ 25 miles per hour.

The number of trains operating through the improvement at MP BG-75.01 is estimated to be:
0 Passenger trains per day @ miles per hour.
35 Freight trains per day @ 30 miles per hour.
The number of trains operating through the improvement at MP PLE-64.05 is estimated to be:
0_Passenger trains per day @ miles per hour.

Additional Terms

1. Contractor must submit its original Railroad Protective Liability policy, Certificates of Insurance and all notices and correspondence regarding the insurance policies to:

Jonathan MacArthur, MBA CSX Corporation Insurance Department 500 Water Street – C907 Jacksonville, FL. 32202 Phone: 904-359-3394 FAX: 904-306-5325

Email: jonathan_macarthur@csx.com

2 Neither Agency nor Contractor may begin work on the Project until it has received CSXT's written approval of the required insurance policies.

Certificate must be provided which evidences the following coverages and lists the Certificate Holder as:

CSX Transportation, Inc. 500 Water Street, C-907 Jacksonville, FL 32202

<u>Commercial General Liability</u>: Limits of minimum of \$5,000,000 in combined single limits for bodily injury and/or property damage per occurrence, and lists CSX Transportation, Inc. as additional insured.

<u>Automobile Liability</u>: Limits of minimum of \$1,000,000 combined single limit for bodily injury and/or property damage per occurrence, and lists CSX Transportation, Inc. as additional insured.

(b) General Insurance Requirements

The insurance hereinbefore specified shall be with an acceptable insurance company authorized to do business in the State of Ohio, and shall be taken out before execution of the Contract by the Director and kept in effect until all work required to be performed under the terms of the contract is satisfactorily completed as evidenced by the formal acceptance by the State. Such policies shall include thirty (30) days canceling notice. The cost of insurance hereinbefore specified in subsection (a) will be a specific bid item.

Notwithstanding the Department's Construction and Material Specification No. 107.12 "Evidence" as above set forth shall consist of furnishing the Director of Transportation three (3) certified copies of the railroad policy.

- 7. To indemnify, defend, and hold CSXT and its affiliates harmless from and against all claims, demands, payments, suits, actions, judgments, settlements, and damages of every nature, degree, and kind (including direct, indirect, consequential, incidental, and punitive damages), for any injury to or death to any person(s) (including, but not limited to the employees of CSXT, its affiliates, the State or the Contractor), for the loss of or damage to any property whatsoever (including but not limited to property owned by or in the care, custody, or control of CSXT, its affiliates, the State or the Contractor, and environmental damages and any related remediation brought or recovered against CSXT and its affiliates), arising directly or indirectly from the negligence, recklessness or intentional wrongful misconduct of the Contractor, the State, and their respective agents, employees, invitees, contractors, or its contractor's agents, employees or invitees in the performance of work in connection with the project or activities incidental thereto, or from their presence on or about CSXT's property. The foregoing indemnification obligation shall not be limited to the insurance coverage required in paragraph 6 above
- 8. The Railroad company will assign, at the sole cost and expense of the Department, railroad flaggers or other protective services and devices as necessary to insure the safety and continuity of the work to be performed as a part of this contract. Said services and devices will be provided when necessary, as determined by the railroad company, because of any of the Contractor's operations over, under or adjacent to tracks over which trains are operating.

The provision of such protective personnel and devices does not relieve the Contractor from the liability of payment for damage caused by his operations.

Such protection will be required when men or equipment are working within clearances limits of 25 feet of a rail or when work being performed adjacent to operating tracks may present hazards to tracks, train operation, or when equipment does or may infringe upon such limits.

The Contractor will not be permitted to operate any of his own equipment on railroad tracks except under an acceptable arrangement with the railroad company. Such equipment and the operation of such equipment, or equipment rented from the railroad company, shall be arranged for by the Contractor with the railroad and the cost for its use, including protection or railroad traffic, shall be borne by the Contractor.

The Contractor shall notify the following named individual for each railroad company at least 30 days, or as directed by the authorized representative of the Railroad, in advance of starting any work which might require protection:

Mr. David C. Clark
Director Construction Engineering
CSX Transportation, Inc.
1717 Dixie Highway, Suite 400
Fort Wright, KY 41011 - 2785
Telephone: (859) 426-6914

The Contractor shall notify the railroad at least 5 working days in advance of suspending or ceasing operations that require a flagger.

Railroad protective personnel assigned to the project will be responsible for notifying the Engineer upon arrival at the job site on the first working day that protective services begin and on the last day that he performs such services. This will be required for each separate period that such services are provided. The Engineer will document such notification in the project diary.

The Contractor will be responsible for protective services provided at his request and not utilized due, in the opinion of the Engineer, to a change in the Contractor's construction schedule or if it is determined by the Engineer that the requested services were not necessary. The actual costs for such protective services so assessed to the Contractor will be deducted from the Contract.

The decision of the Director of Transportation shall be final in the event of controversy as to the necessity for any protection services provided and not utilized by the Contractor as described in the preceding paragraph.

- To pay the railroad or owning company for any changes, requested for his convenience, to railroad property, facilities, wire, fiber optic and/or pipe lines other than shown on the plans for the project.
- 10. If at any time the contractor desires a temporary crossing of the railroad's tracks, he shall make a request for a temporary crossing from the railroad. If approved, he shall arrange with the railroad company, execute its regular form of private grade crossing agreement covering the crossing desired, paying all construction, maintenance, removal, protection and other costs.

11. Methods and procedures for performing work on property of **CSX Transportation**, **Inc.** must be approved by:

Mr. David C. Clark Director Construction Engineering CSX Transportation, Inc. 1717 Dixie Highway, Suite 400 Fort Wright, KY 41011-2785 Phone: (859) 426-6914

12. The Contractor will be required to follow all terms and conditions of the attached CSX Transportation *Construction Submission Criteria*.

End of Special Clauses

CSX TRANSPORTATION

CONSTRUCTION SUBMISSION CRITERIA

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Office of Chief Engineer Design, Construction & Capacity

Jacksonville, Florida

Date Issued: April 3, 2009

INTRODUCTION

The information in this document is intended to improve communication and clarify the CSXT criteria related to construction submissions that may involve CSXT property. All work must be performed in a manner as to not adversely impact existing CSXT operations. Please note that there are other standards associated with construction that must be adhered to including but not limited to the CSXT Special Provisions, CSXT Insurance Requirements as well as governing local, county, state and federal requirements. This document and other CSXT standards are subject to change without notice, and future revisions will be available at the CSXT website www.csx.com.

I. DEFINITIONS

- Agency The project sponsor.
- AREMA American Railway Engineering and Maintenance Association the North American railroad industry standards group.
- Construction Submission The Agency or its representative shall submit six (6) sets of plans, supporting calculations, and detailed means and methods procedures for the specific proposed activity. All plans and supporting calculations shall be signed/sealed by a Professional Engineer as defined below.
- Controlled Demolition Removal of the existing structure or subcomponents in a manner that prevents any portions from falling onto CSXT employees, equipment or property. The proposed procedures shall be detailed in the means and methods submission for CSXT review and acceptance.
- Contractor The Agency's or CSXT's representative retained to perform the project work.
- Engineer CSXT Engineering Representative or a GEC authorized to act on the behalf of CSXT.
- GEC General Engineering Consultant who has been authorized to act on the behalf of CSXT.
- Professional Engineer An engineer who is licensed in State or Commonwealth (if required by the Agency) in which the project is to occur. The drawings and calculations shall be prepared by the Professional Engineer and shall bear his seal and signature.
- Submission Review Period a minimum of 30 days in advance of start of work. Up to 30 days will be required for the initial review response. Up to an additional 30 days may be required to review any/all subsequent submissions or resubmission.
- Theoretical Railroad Live Load Influence Zone A 1½ Horizontal to 1 Vertical theoretical slope line starting 1'-6" below top of rail elevation and 12'-0" from the centerline of the nearest track.

II. DEMOLITION PROCEDURE:

The Agency or its contractor shall submit as defined above, a detailed procedure for demolition of the structure over Railroad Tracks.

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- A. The Agency or its Contractor shall submit the detailed procedure for demolition of existing structures over or adjacent to CSXT's tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with loading or disposal locations shown, with all dimensions referenced from the center line of the near track, including beam placement on ground or truck loading staging plan. The plan shall also include the location, with relevant dimensions, of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions should be shown. No crane or equipment may be set on the CSXT rails or track structure and no material may be dropped on CSXT property.
- B. Also included with this submittal the following information:
 - Computations showing weight of picks must be submitted. Computations shall be made from field verified plans of the existing structure beams being removed and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.
 - 2. If the sponsor can prove to CSXT that plans do not exist and weights must be calculated from field measurements, the field measurements are to be made under the supervision of the Professional Engineer submitting the procedure and shall include sketches and estimated weight calculations with the procedure. If possible, field measurements shall be taken with a CSXT representative present.
 - 3. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, and boom nomenclature is to be submitted.
 Safety factors that may have been "built in" to the crane charts are not to be considered when determining the 150% Factor of Safety.
 - 4. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.
 - 5. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.
 - 6. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical subtasks (i.e., torch/saw cutting various portions of the superstructure or substructure, dismantling splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to CSXT operations may be assessed and eliminated or minimized.

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- 7. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.
- 8. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track. The guardrail will be installed by CSXT forces at the expense of the Agency or its contractor.
- 9. Existing, obsolete, bridge piers shall be removed to a minimum of 3'-0" below the finished grade, final ditch line invert, or as directed by the Engineer.
- 10. A minimum quantity of 25 Tons of CSXT approved track ballast may be required to be furnished and stockpiled on site by the Contractor, or as directed by the Engineer.
- 11. CSXT's tracks, signals, structures, and other facilities shall be protected from damage during demolition of existing structure or replacement of deck slab.

NOTE: On-track or ground level debris shields such as crane mats are prohibited for use by CSXT.

- C. Overhead Demolition Debris Shield Shall be installed prior to the demolition of the bridge deck or other relevant portions of the superstructure.
 - 1. The demolition debris shield shall be erected from the underside of the bridge over the track area to catch all falling debris.
 - 2. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Controlled Demolition procedure submission.
 - 3. The demolition debris shield shall provide 23'-0" minimum vertical clearance or maintain the existing vertical clearance if the existing clearance is less than 23'-0" as approved by CSXT. Horizontal clearance to the centerline of the track should not be reduced unless approved by the Engineer.
 - 4. The vertical clearance ATR (above top of rail) is measured from the top of rail to the lowest point on the overhead shielding system measured within a distance of 6'-0" out from each side of the track centerline.
 - 5. The demolition debris shield design and supporting calculations all signed/sealed by a Professional Engineer, shall be submitted for review and acceptance.
 - 6. The demolition debris shield shall have a **minimum** design load of 50 pounds per square foot **plus** the weight of the equipment, debris, personnel, and other loads to be carried.
 - 7. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.
 - 8. The contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Engineer.
- D. Vertical Demolition Debris Shield This type of shield may be required for substructure removals in close proximity to CSXT track and other facilities, as determined by the Engineer.
 - Prior to commencing the demolition activity, the Contractor shall install a
 ballast protection system consisting of geotextile to keep the railroad
 ballast from becoming fouled with construction or demolition debris and
 fines. The geotextile ballast protection system shall be installed and
 maintained by the Contractor for the project duration in accordance with
 the attached plan, or with additional measures as directed by the
 Engineer.
 - 2. The Agency, or its Contractor, shall submit detailed plans, with detailed calculations, prepared and submitted by a Professional Engineer of the protection shield and ballast protection systems for approval prior to the start of demolition.

- 3. Blasting will not be permitted to demolish a structure over or within CSXT's right-of-way.
- E. The Controlled Demolition procedure must be approved by the **Engineer** prior to undertaking work on the project.
- F. The Contractor shall provide timely communication to the Engineer when scheduling the demolition related work so that the Engineer may be present during the entire demolition procedure.
- G. At any time during demolition activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

III. ERECTION PROCEDURE:

The Agency or its Contractor shall submit a detailed procedure for performing erection on/about CSXT property, as defined above.

- A. The Agency or its Contractor shall submit six (6) copies of the detailed procedure for erection of the proposed structures over or adjacent to CSXT's tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with staging locations shown, including beam placement on ground or truck unloading staging plan. Plan should also include the location of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions should be shown. No crane or equipment may be set on the CSXT rails or track structure.
- B. Also included with this submittal the following information:
 - As-Built Bridge Seat Elevations All as-built bridge seats and top of rail elevations shall be furnished to the Engineer for review and verification at least 30 days in advance of construction or erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.
 - Computations showing weight of picks must be submitted.
 Computations shall be made from plans of the structure beams being erected and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.
 - 3. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, and boom nomenclature is to be submitted. Safety factors that may have been "built in" to the crane

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charts are not to be considered when determining the 150% Factor of Safety.

- 4. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.
- 5. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.
- 6. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical sub tasks (i.e., performing aerial splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to CSXT operations may be assessed and eliminated or minimized.
- 7. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.
- 8. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track.
- C. The proposed Erection procedure must be approved by the Engineer prior to undertaking work on the project.
- D. The Contractor shall provide timely communication to the Engineer when scheduling the erection related work so that the Engineer may be present during the entire erection procedure.
- E. At any time during construction activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

IV. EXCAVATION AND SHORING:

The Agency or its contractor shall submit as defined above, a detailed procedure for the installing sheeting/shoring adjacent to Railroad Tracks.

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- A. Shoring protection shall be provided when excavating adjacent to an active track or railroad facility or as determined by CSXT. Shoring will be provided in accordance with AREMA *Manual for Railway Engineering* Chapter 8, part 28; except as noted below.
- B. Shoring may not be required if all of the following conditions are satisfied:
 - 1. Excavation does not encroach upon a 1½ horizontal: 1 vertical theoretical slope line starting 1'-6" below top of rail and at 12'-0" minimum from centerline of the track (live load influence zone).
 - 2. Track is on level ground or in a cut section and on stable soil.
 - 3. Excavation does not adversely impact the stability of a CSXT facility (i.e. signal bungalow, drainage facility, undergrade bridge, building, etc.).
 - 4. Shoring is not required by any governing construction code.
- C. When the track is on an embankment, excavating the toe of the embankment without shoring may affect the stability of the embankment. Therefore, excavation of the embankment toe without shoring will not be permitted.
- D. Trench Boxes are prohibited for use on CSXT within the Theoretical Railroad Live Load Influence Zone.
- E. The required protection is the cofferdam type that completely encloses the excavation. Where dictated by conditions, partial cofferdams with open sides away from the track may be used. Cofferdams shall be constructed using steel sheet piling, or when approved by the Engineer, steel soldier piles with timber lagging. Wales and struts shall be provided and designed as needed. The following shall be considered when designing cofferdams:
 - Shoring shall be designed to resist a vertical live load surcharge of 1,880 lbs. per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, 8'-6" wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in AREMA Manual for Railway Engineering, Chapter 8, Part 20.
 - 2. Allowable stresses in materials shall be in accordance with AREMA *Manual for Railway Engineering*, Chapter 7, 8, and 15.
 - 3. A construction procedure for temporary shoring shall be shown on the drawing.
 - 4. All shoring systems on or adjacent to CSXT right-of-way shall be equipped with railings or other approved fall protection.
 - 5. A minimum horizontal clearance of 10'-0" from centerline of the track to face of nearest point of shoring shall be maintained provided a 12'-0" roadbed is maintained with a temporary walkway and handrail system.

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- F. The contractor shall submit the following drawings and calculations (all shall be signed/sealed by a Professional Engineer) for CSXT's review and approval.
 - Six (6) sets of detailed drawings of the shoring systems showing sizes of all structural members, details of connections, and distances form centerline of track to face of shoring. Drawing shall show a section showing height of shoring and track elevation in relation to bottom of excavation.
 - 2. Six (6) sets of calculations of the shoring design.

The drawings and calculations shall be prepared by a Licensed Professional Engineer in the State (if required by the Agency) where the shoring is to be constructed and shall bear his seal and signature. Shoring plans shall be approved by CSXT's construction engineering and inspection representative.

- 3. For sheeting and shoring within 18'-0" of the centerline of the track, the live load influence zone, and in slopes, the contractor shall use interlocked steel sheeting (sheet pile).
- 4. Sheet pile installed in slopes or within 18'-0" of the centerline of track shall not be removed.
- 5. Sheet piles shall be cut off a minimum of 3'-0" below the finished grade, ditch line invert, or as directed by the **Engineer**. The ground shall be backfilled and compacted immediately after sheet pile is cut off.
- 6. A procedure for cutting off the sheet pile and restoring the embankment shall be submitted to the Engineer for review and acceptance.
- G. Blasting is not permitted on or adjacent to CSXT right-of-way without prior written approval from the **Engineer**. Mechanical and Chemical means of rock removal must be explored before blasting is considered. If written permission for the use of explosives is granted, the Agency or Contractor must comply with all of the following:
 - 1. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Agency or Contractor.
 - 2. Electronic detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
 - No blasting shall be done without the presence of an authorized representative of CSXT. Advance notice to the Engineer as required by the CSXT Special Provisions is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.
 - 4. Agency or Contractor must have at the project site adequate equipment, labor and materials, and allow sufficient time, to clean up debris resulting from the blasting and correct any misalignment of tracks or other

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Office of Chief Engineer Design, Construction & Capacity

Jacksonville, Florida

Date Issued: April 3, 2009

damage to CSXT property resulting from the blasting. Any corrective measures required must be performed as directed by the Engineer at the Agency's or Contractor's expense without any delay to trains. If Agency's or Contractor's actions result in the delay of any trains including passenger trains, the Agency or Contractor shall bear the entire cost thereof.

- 5. The Agency or Contractor may not store explosives on CSXT property.
- 6. At any time during blasting activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

V. TRACK MONITORING

The Agency or its Contractor shall submit for CSXT review and approval, a detailed track monitoring program to detect both horizontal and vertical movement of the CSXT track and roadbed, a minimum of 30 days in advance of start of work.

- A. For the installation of temporary or permanent shoring systems, including but not limited to soldier piles and lagging, and interlocked steel sheeting on or adjacent to CSXT's right-of-way, the contractor may be required to submit a detailed track monitoring program for CSXT's approval prior to performing any work near CSXT's right-of-way.
- B. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. CSXT reserves to the right to modify the survey locations and monitoring frequency as necessary during the project.
- C. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Engineer for analysis.
- D. If any movement has occurred as determined by the Engineer, CSXT will be immediately notified. CSXT, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled and/or determine what corrective action is required. Any corrective action required by CSXT or performed by CSXT including the monitoring of corrective action of the contractor will be at project expense.

MAHONING COUNTY
MAH-62-18.23, PID 24073
Pittsburgh Division
Youngstown Line MP YG-58.30/Lordstown Sec. MP RZ-0.07
NS File No. BR0029123 (117-34305) /
BR0028169 (117-33374)

SPECIAL CLAUSES IN THE PROPOSAL

The bidder, if awarded the contract for this improvement agrees:

- 1. To cooperate at all times with the local officials of the railroad company.
- 2. To use all reasonable care and diligence in the work in order to avoid accidents, damage or unnecessary delay to, or interference with the trains and other property of the railroad company.
- 3. To conduct his work in a manner satisfactory to the Chief Engineer of the railroad company or his authorized representative, to perform his work in such manner and at such time as not to unnecessarily interfere with the movements of trains or railroad traffic, and to hold his work at all times open to inspection of railroad company inspectors.
- 4. To cooperate with a public utility, railroad or other organizations having occasion to do work on or in connection with the improvement.
- 5. To avoid unnecessary use of railroad property without written permission of the railroad company and to leave railroad roadbed and property in a condition acceptable to the Chief Engineer of the railroad company.
- 6. To execute a bond conditioned according to Section 5525.16 of the Revised Code of Ohio, in favor of the State of Ohio, and further to carry insurance of the following kinds and amounts:

a) Railroad Protective Liability Insurance.

Railroad Protective Liability Insurance having a combined single limit of not less than \$5,000,000 each occurrence and \$10,000,000 in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site.

The above railroad protective policy of insurance shall conform to the Railroad Liability requirements prescribed by the Federal Highway Administration in Federal-Aid Policy Guide 23 CFR 646A as amended.

The standards for the Railroad Protective Liability Insurance are as follows: The insurer must be rated A- or better by A.M. Best Company, Inc.

The policy must be written using one of the following combinations of Insurance Services Office ("ISO") Railroad Protective Liability Insurance Form Numbers: CG 00 35 01 96 and CG 28 31 10 93; or CG 00 35 07 98 and CG 28 31 07 98; or CG 00 35 10 01; or CG 00 35 12 04.

The named insured shall read:

Norfolk Southern Railway Company Three Commercial Place Norfolk, Virginia 23510-2191 Attn: S.W. Dickerson, Director Risk Management

The description of operations must appear on the Declarations, must match the project description in this agreement and must include the appropriate Department project and contract identification numbers.

The job location must appear on the Declarations and must include the city, state and appropriate highway name/number. NOTE: Do not include any references to milepost on the insurance policy.

The name and address of the prime contractor must appear on the Declarations.

The name and address of the Department must be identified on the Declarations as the "Involved Governmental Authority or Other Contracting Party."

Other endorsements/forms that will be accepted are: Broad Form Nuclear Exclusion – Form IL 00 21 30-day Advance Notice of Non-renewal or cancellation Required State Cancellation Endorsement Quick Reference or Index Form CL/IL 240

Endorsements/forms that are NOT acceptable are:

Any Pollution Exclusion Endorsement except CG 28 31
Any Punitive or Exemplary Damages Exclusion
Known injury or Damage Exclusion form CG 00 59
Any Common Policy Conditions form
Any other endorsement/form not specifically authorized above.

The number of trains operating at MP YG-58.30 is estimated to be:

0 Passenger trains per day @ a maximum authorized operating speed of	miles per
hour.	

10 Freight trains per day @ a maximum authorized operating speed of 25 miles per hour.

The number of trains operating at MP RZ-0.07 is estimated to be:

_0_Passenger trains per day @ a maximum authorized operating speed of ____ miles per hour.

6 Freight trains per day @ a maximum authorized operating speed of 25 miles per hour.

(b) Commercial General Liability Insurance

Commercial General Liability Insurance having a combined single limit of not less than \$2,000,000 per occurrence for all loss, damage, cost and expense, including attorneys' fees, arising out of bodily injury liability and property damage liability during the policy period. Said policy shall include "explosion, collapse, and underground hazard" ("XCU") coverage, shall be

endorsed to name Railroad specified in subsection (a) above as the certificate holder, and as additional insured, and shall include a severability of interests provision.

(c) General Insurance Requirements

The insurance hereinbefore specified shall be with an acceptable insurance company authorized to do business in the State of Ohio, and shall be taken out before execution of the Contract by the Director and kept in effect until all work required to be performed under the terms of the contract is satisfactorily completed as evidenced by the formal acceptance by the State. Such policies shall include thirty (30) days canceling notice. The cost of insurance hereinbefore specified in subsection (a) will be a specific bid item.

Notwithstanding the Department's Construction and Material Specification No.107.12 "Evidence" as above set forth shall consist of furnishing the Director of Transportation three (3) certified copies of the railroad policy.

7. The Railroad company will assign, at the sole cost and expense of the Department, railroad flaggers or other protective services and devices as necessary to insure the safety and continuity of the work to be performed as a part of this contract. Said services and devices will be provided when necessary, as determined by the railroad company, because of any of the Contractor's operations over, under or adjacent to tracks over which trains are operating. The provision of such protective personnel and devices does not relieve the Contractor from the liability of payment for damage caused by his operations.

The Contractor shall notify the following named individual for each railroad company at least 30 days, or as directed by the authorized representative of the Railroad, in advance of starting any work which might require protection:

J.N. Carter, Jr., Chief Engineer Bridges and Structures Norfolk Southern Corporation 1200 Peachtree Street, N.E. Atlanta, GA 30309 Attn: D. Shawn Starling

Telephone: (404) 529-1436

(10.1) 020 1.100

The Contractor shall notify the railroad at least 5 working days in advance of suspending or ceasing operations that require a flagger.

The Contractor will be responsible for protective services provided at his request and not utilized due, in the opinion of the Engineer, to a change in the Contractor's construction schedule or if it is determined by the Engineer that the requested services were not necessary. The actual costs for such protective services so assessed to the Contractor will be deducted from the Contract.

The decision of the Director of Transportation shall be final in the event of controversy as to the necessity for any protection services provided and not utilized by the Contractor as described in the preceding paragraph.

- 8. To pay the railroad or owning company for any changes, requested for his convenience, to railroad property, facilities, wire, fiber optic and/or pipe lines other than shown on the plans for the project.
- 9. If at any time the contractor desires a temporary crossing of the railroad's tracks, he shall make a request for a temporary crossing from the railroad. If approved, he shall arrange with the railroad company, execute its regular form of private grade crossing agreement covering the crossing desired, paying all construction, maintenance, removal, protection and other costs.

10. Methods and procedures for performing work on property of Norfolk Southern Railway Company must be approved by: J.N. Carter, Jr. / D.Shawn Starling

AUTHORITY OF RAILROAD ENGINEER AND STATE ENGINEER

The authorized representative of the Railroad company, hereinafter referred to as the Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of railroad traffic of his company including the adequacy of the foundations and structures supporting the railroad tracks.

NOTICE OF STARTING WORK

- A. The Contractor shall not commence any work on Railroad right of way until he has complied with the following conditions:
 - Give the Railroad Engineer at least ten working day advance written notice, with copy to the Engineer, of the date he proposes to begin work on railroad right of way. Said notice shall be sent to Mr. J.N. Carter, Jr., Chief Engineer, Bridges and Structures, Norfolk Southern Corporation, 1200 Peachtree Street, N.E., Atlanta, Georgia 30309 – Attn. D. Shawn Starling
 - 2. Obtained written authorization from the Railroad Engineer to begin work on Railroad right of way.
 - Obtained written approval from the Railroad of the Railroad Protective Liability Policy of Insurance.
- B. The Railroad Engineer's written authorization to proceed shall include the names, addresses, and telephone numbers of the railroad's local representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility shall be specified.

FLAGGING SERVICE

A. WHEN REQUIRED

Under the terms of the Agreement between the Department and the Railroad, the Railroad has the sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such flagging services will be whenever the Contractor's men or equipment are, or are likely to be, working on the Railroad's right of way and is across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad track structure, railroad roadbed or the track surface and alignment of any track to such an extent that the movement of trains must be controlled. Normally the Railroad will assign one flagger to a project; but in some cases, more than one may be necessary. However, if the contractor works within distances that violate instructions given by the Railroad's local representative, or performs work that has not been scheduled with the Railroad's local representative, additional flaggers may be required full time until the project has been completed. See pg. SC-19 for additional requirements and restrictions.

B: SCHEDULING AND NOTIFICATION

The Contractor shall furnish to the Railroad's local representative and the Engineer a schedule for all work required to complete the portion of the project within the Railroad right of way and arrange for a job site meeting between the Contractor, Engineer and the Railroad's local

representative. Flagging services may not be provided until such meeting has been conducted and the contractor's work scheduled.

The Contractor shall give the Railroad's local representative, copy to the Engineer, at least 10 working days of advance written notice of work to be performed within railroad right of way. Such notices shall include sufficient details of the proposed work to enable the Railroad's local representative to determine if flagging will be required. If flagging is required no work shall be undertaken until the flaggers are present at the job site. Railroad labor agreements usually require flaggers to be assigned to a project on a continual basis and therefore cannot be called for on a spot basis. If flagging service becomes unnecessary and is suspended it may take up to thirty days to again obtain service from the Railroad. The Contractor shall give five working days notice to cease flagging service.

C: EMERGENCIES

If emergencies arise which require the flagger's presence elsewhere, the Contractor shall delay his work until such time as the flaggers are again available.

D: SUSPENSION OF WORK

If work is suspended the Contractor shall give the Railroad's local representative at least three working days notice before resumption of said work.

E. VERIFICATION

The Railroad flagman assigned to the project will be responsible for notifying the State or Contractor's on-site project representative or Contractor Superintendant upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The State or Contractor's on-site project representative will document such notification in the project records. When requested, the State or Contractor's on-site project representative will also sign the flagman's diary, timesheet or flagging report showing daily time spent and activity at the project site.

Norfolk Southern - Special Provisions for Protection of Railway Interest

AUTHORITY OF RAILROAD ENGINEER AND DEPARTMENT ENGINEER:

The authorized representative of the Railroad Company, hereinafter referred to as Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of Railroad traffic of his Company including the adequacy of the foundations and structures supporting the Railroad tracks. For Public Projects impacting Norfolk Southern, the Public Projects Engineer will serve as the Railroad Engineer.

The authorized representative of the Department, hereinafter referred to as the Department Engineer, shall have authority over all other matters as prescribed herein and in the Project Specifications.

2. NOTICE OF STARTING WORK:

- A. Department's Prime contractor shall not commence any work on railroad rights-of-way until he has complied with the following conditions:
 - Given the Railroad written notice in electronic format to the Railroad Engineer, with copy to the Department Engineer who has been designated to be in charge of the work, at least ten days in advance of the date he proposes to begin work on Railroad rights-of-way.
 - 2. Obtained written approval from the Railroad of Railroad Protective Liability Insurance coverage as required by paragraph 14 herein. It should be noted that Railroad Company does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Railroad Company must have the full original countersigned policy. Further, please note that mere receipt of the policy is not the only issue but review for compliance. Due to the number of projects system-wide, it typically takes a minimum of 30-45 days for Railroad Company to review.
 - 3. Obtained Railroad's Flagging Services as required by paragraph 7 herein.
 - 4. Obtained written authorization in electronic format from the Railroad to begin work on Railroad rights-of-way, such authorization to include an outline of specific conditions with which he must comply.
 - 5. Furnished a schedule for all work within the Railroad rights-of-way as required by paragraph 7.B.1.
- B. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

3. INTERFERENCE WITH RAILROAD OPERATIONS:

A. The Contractor shall so arrange and conduct his work that there will be no interference with Railroad operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railroad Company or to poles, wires, and other facilities of tenants on the rights-of-way of the Railroad Company. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be

submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging service or inspection service shall be deferred by the Contractor until the flagging service or inspection service required by the Railroad is available at the job site.

- B. Whenever work within Railroad rights-of-way is of such a nature that impediment to Railroad operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.
- C. Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in his absence, the Railroad's Division Engineer, such provisions is insufficient, either may require or provide such provisions as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Railroad or the Department.
- D. "One Call" Services do not locate buried railroad utilities. The contractor shall contact the railroad's representative 2 days in advance of work at those places where excavation, pile driving, or heavy loads may damage railroad underground facilities. Upon request from the contractor or agency, railroad forces will locate and paint mark or flag railroad underground facilities. The contractor shall avoid excavation or other disturbances of these facilities. If disturbance or excavation is required near a buried railroad facility, the contractor shall coordinate with the railroad to have the facility potholed manually with careful hand excavation. The facility shall be protected by the contractor during the course of the disturbance under the supervision and direction of the railroad representative.

4. TRACK CLEARANCES:

- A. The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. If temporary clearances are not shown on the project plans, the following criteria shall govern the use of falsework and formwork above or adjacent to operated tracks.
 - A minimum vertical clearance of 22'-0" above top of highest rail shall be maintained at all times.
 - 2. A minimum horizontal clearance of 13'-0" from centerline of tangent track or 14'-0" from centerline of curved track shall be maintained at all times. Additional horizontal clearance may be required in special cases to be safe for operating conditions. This additional clearance will be as determined by the Chief Engineer Bridges & Structures
 - 3. All proposed temporary clearances which are less than those listed above must be submitted to the Chief Engineer Bridges & Structures for approval prior to construction and must also be authorized by the regulatory body of the State if less than the legally prescribed clearances.
 - 4. The temporary clearance requirements noted above shall also apply to all other physical obstructions including, but not limited to: stockpiled materials, parked

- equipment, placement or driving of piles, and bracing or other construction supports.
- B. Before undertaking any work within Railroad right-of-way, and before placing any obstruction over any track, the Contractor shall:
 - Notify the Railroad's representative at least 72 hours in advance of the work.
 - Receive assurance from the Railroad's representative that arrangements have been made for flagging service as may be necessary.
 - 3. Receive permission from the Railroad's representative to proceed with the work.
 - 4. Ascertain that the Department Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

5. CONSTRUCTION PROCEDURES:

A. General:

- Construction work and operations by the Contractor on Railroad property shall be:
 - a. Subject to the inspection and approval of the Railroad or their designated Construction Engineering Representative.
 - b. In accord with the Railroad's written outline of specific conditions.
 - c. In accord with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.
 - d. In accord with these Special Provisions.

2. Submittal Requirements

- a. The contractor shall submit all construction related correspondence and submittals electronically to the Railroad Engineer.
- b. The contractor shall allow for 30 days for the Railroad's review and response.
- c. All work in the vicinity of the Railroad's property that has the potential to affect the Railroad's train operations or disturb the Railroad's Property must be submitted and approved by the Railroad prior to work being performed.
- d. All submittals and calculations must be signed and sealed by a registered engineer licensed in the state of the project work.

- e. All submittals shall first be approved by the Department Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.
- f. For all construction projects, the following submittals, but not limited to those listed below, shall be provided for review and approval when applicable:
 - i. General Means and Methods
 - ii. Roadway Protection
 - iii. Construction Excavation & Shoring
 - iv. Pipe, Culvert, & Tunnel Installations
 - v. Demolition Procedure
 - vi. Erection & Hoisting Procedure
 - vii. Debris Shielding or Containment
 - viii. Blasting
 - ix. Formwork for the bridge deck, diaphragms, overhang brackets, and protective platforms
 - x. Bent Cap Falsework. A lift plan will be required if the contractor want to move the falsework over the tracks.
- g. For Undergrade Bridges (Bridges carrying the Railroad) the following submittals in addition to those listed above shall be provided for review and approval:
 - i. Shop Drawings
 - ii. Bearing Shop Drawings and Material Certifications
 - iii. Concrete Mix Design
 - iv. Structural Steel, Rebar, and/or Strand Certifications
 - v. 28 day Cylinder Test for Concrete Strength
 - vi. Waterproofing Material Certification
 - vii. Test Reports for Fracture Critical Members
 - viii. Foundation Construction Reports

Fabrication may not begin until the Railroad has approved the required shop drawings.

h. The Contractor shall include in all submissions a detailed narrative indicating the progression of work with the anticipated timeframe to complete each task. Work will not be permitted to commence until the Contractor has provided the Railroad with a satisfactory plan that the project will be undertaken without scheduling, performance or safety related issues. Submission shall also provide a listing of the anticipated equipment to be used, the location of all equipment to be used and insure a contingency plan of action is in place should a primary piece of equipment malfunction.

B. Roadway Protection

 The Contractor shall submit the proposed roadway protection system detailing the specific filter fabric and anchorage system to be used during all construction activities. 2. The roadway protection is to extend 25' beyond the proposed limit of work, be installed at the start of the project and be continuously maintained to prevent all contaminants from entering the ballast section of all tracks for the entire duration of the project.

C. Excavation:

- The subgrade of an operated track shall be maintained with edge of berm at least 10'-0" from centerline of track and not more than 24- inches below top of rail. Contractor will not be required to make existing section meet this specification if substandard, in which case existing section will be maintained.
- 2. Additionally, the Railroad will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations of the Railroad right-of-way.

D. Excavation for Structures and Shoring Protection:

- The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material.
- 2. All plans and calculations for shoring shall be prepared and signed by a Registered Professional Engineer, licensed in the state of the proposed project, in accordance with Norfolk Southern's Guidelines for Design of Grade Separation Structures, Section I – Overhead Grade Separation Design Criteria, subsection 4.E Construction Excavation. The Registered Professional Engineer will be responsible for the accuracy for all controlling dimensions as well as the selection of soil design values which will accurately reflect the actual field conditions.
- 3. The contractor shall provide a detailed installation and removal plan of the shoring components. Any component that will be installed via the use of a crane or any other lifting device shall be subject to the guidelines outlined in section 5.G.
- 4. The contractor shall be required to survey the track(s) and railroad embankment and provide a cross section of the proposed excavation in relation to the tracks.
- 5. Calculations for the proposed shoring should include deflection calculations. The maximum deflection for excavations within 18'-0" of the centerline of the nearest track shall be 3/8". For all other cases, the max deflection shall not exceed ½".
- 6. Additionally, the Railroad will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations of the Railroad right-of-way.

E. Pipe, Culvert, & Tunnel Installations

a. Pipe, Culvert, & Tunnel Installations shall be in accordance with the "Specifications for Pipeline Occupancy of Norfolk Southern Corporation Property (NSCE-8)."

F. Demolition Procedure

1. General

- a. Demolition plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-ofway; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-of-way and within a distance of boom length plus 15'-0" from the centerline of track.
- b. Railroad tracks and other railroad property must be protected from damage during the procedure.
- c. A pre-demolition meeting shall be conducted with the Department, the Railroad Engineer or their representative, and the key contractor personnel prior to the start of the demolition procedure.
- d. The Railroad Engineer or his designated representative must be present at the site during the entire demolition procedure period.
- e. Existing, obsolete, bridge piers shall be removed to a sufficient depth below grade to enable restoration of the existing/proposed track ditch, but in co case less than 2'-0" below final grade.

2. Submittal Requirements

- In addition to the submittal requirements outlined in Section 5.A.2, the contractor shall submit the following for approval by the Railroad Engineer:
 - i. A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or disposal locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.
 - ii. Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.
 - iii. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing structure showing complete and sufficient details with supporting data for the demolition the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be

- made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.
- iv. The contractor shall provide a sketch of all rigging components from the crane's hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Department and the Railroad.
- v. A complete demolition procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
- vi. Design and supporting calculations for the temporary support of components, including but not limited to the stability of the superstructure during the temporary condition, temporary girder tie-downs and falsework.

3. Overhead Demolition Debris Shield

- a. The demolition debris shield shall be installed prior to the demolition of the bridge deck or other relevant portions of the superstructure over the track area to catch all falling debris.
- b. The demolition debris shield shall provide a minimum vertical clearance as specified in Section 4.A.1 or maintain the existing vertical clearance if the existing clearance is less than that specified in Section 4.A.1.
- c. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Demolition procedure submission.
- d. The contractor shall submit the demolition debris shield design and supporting calculations for approval by the Railroad Engineer
- e. The demolition debris shield shall have a minimum design load of 50 pounds per square foot plus the weight of the equipment, debris, personnel, and other loads to be carried.
- f. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.
- g. The contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Railroad Engineer.

4. Vertical Demolition Debris Shield

a. A vertical demolition debris shield may be required for substructure removals in close proximity to the Railroad's track and other facilities, as determined by the Railroad Engineer.

G. Erection & Hoisting Procedures

General

- a. Erection plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-ofway; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-of-way and within a distance of boom length plus 15'-0" from the centerline of track.
- b. Railroad tracks and other railroad property must be protected from damage during the erection procedure.
- c. A pre-erection meeting shall be conducted with the Department, the Railroad Engineer or their representative, and the key contractor personnel prior to the start of the erection procedure.
- d. The Railroad Engineer or his designated representative must be present at the site during the entire erection procedure period.
- e. For field splices located over Railroad property, a minimum of 50% of the holes for each connection shall be filled with bolts or pins prior to releasing the crane. A minimum of 50% of the holes filled shall be filled with bolts. All bolts must be appropriately tightened.

2. Submittal Requirements

- In addition the submittal requirements outlined in Section 5.A.2, the contractor shall submit the following for approval by the Railroad Engineer:
 - i. As-built beam seat elevations All as-built bridge seats and top of rail elevations shall be furnished to the Railroad Engineer for review and verification at least 30 days in advance of the erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.
 - ii. A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or staging locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.

- iii. Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.
- iv. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the proposed structure showing complete and sufficient details with supporting data for the erection of the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.
- v. The contractor shall provide a sketch of all rigging components from the crane's hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Department and the Railroad.
- vi. A complete erection procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
- vii. Design and supporting calculations for the temporary support of components, including but not limited to temporary girder tiedowns and falsework.

H. Blasting:

- The Contractor shall obtain advance approval of the Railroad Engineer and the Department Engineer for use of explosives on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:
 - a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.
 - b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way radios.

- c. No blasting shall be done without the presence of the Railroad Engineer or his authorized representative. At least 72 hours advance notice to the person designated in the Railroad's notice of authorization to proceed (see paragraph 5.E.2.B) will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.
- d. Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to Railroad property resulting from the blasting as directed by the Railway's authorized representative. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.
- e. The blasting contractor shall have a copy of the approved blasting plan on hand while on the site.
- Explosive materials or loaded holes shall not be left unattended at the blast site.
- g. A seismograph shall be placed on the track shoulder adjacent to each blast which will govern the peak particle velocity of two inches per second. Measurement shall also be taken on the ground adjacent to structures as designated by a qualified and independent blasting consultant. The Railroad reserves the option to direct the placement of additional seismographs at structures or other locations of concern, without regard to scaled distance.
- h. After each blast, the blasting contractor shall provide a copy of their drill log and blast report, which includes number of holes, depth of holes, number of decks, type and pounds of explosives used per deck.
- i. The Railroad may require top of rail elevations and track centers taken before, during and after the blasting and excavation operation to check for any track misalignment resulting from the Contractor's activities.

2. The Railroad representative will:

- a. Determine approximate location of trains and advise the Contractor the appropriate amount of time available for the blasting operation and clean up.
- Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these special provisions.
- 3. The Contractor must hire, at no expense to the Railroad, a qualified and independent blasting consultant to oversee the use of explosives. The blasting consultant will:
 - Review the Contractor's proposed drilling and loading patterns, and with the blasting consultant's personnel and instruments, monitor the blasting operations.

- Confirm that the minimum amounts of explosives are used to remove the rock.
- Be empowered to intercede if he concludes that the Contractor's blasting operations are endangering the Railway.
- d. Submit a letter acknowledging that he has been engaged to oversee the entire blasting operation and that he approves of the blasting plan.
- e. Furnish copies of all vibration readings to the Railroad representative immediately after each blast. The representative will sign and date the seismograph tapes after each shot to verify the readings are for that specific shot.
- f. Advise the Railroad representative as to the safety of the operation and notify him of any modifications to the blasting operation as the work progresses.
- 4. The request for permission to use explosives on the Railroad's Right-of-Way shall include a blasting proposal providing the following details:
 - A drawing which shows the proposed blasting area, location of nearest hole and distance to Railway structures, all with reference to the centerline of track.
 - b. Hole diameter.
 - c. Hole spacing and pattern.
 - d. Maximum depth of hole.
 - e. Maximum number of decks per hole.
 - f. Maximum pounds of explosives per hole.
 - g. Maximum pounds of explosives per delay.
 - h. Maximum number of holes per detonation.
 - Type of detonator and explosives to be used. (Electronic detonating devices will not be permitted). Diameter of explosives if different from hole diameter.
 - j. Approximate dates and time of day when the explosives are to be detonated.
 - k. Type of flyrock protection.
 - Type and patterns of audible warning and all clear signals to be used before and after each blast.
 - m. A copy of the blasting license and qualifications of the person directly in charge of the blasting operation, including their name, address and

telephone number.

- n. A copy of the Authority's permit granting permission to blast on the site.
- A letter from the blasting consultant acknowledging that he has been engaged to oversee the entire blasting operation and that he approves of the blasting plan.
- p. In addition to the insurance requirements outlined in Paragraph 14, A certificate of insurance from the Contractor's insurer stating the amount of coverage for XCU (Explosive Collapse and Underground Hazard) insurance and that XCU Insurance is in force for this project.
- q. A copy of the borings and Geotechnical information or report.

I. Track Monitoring

- 1. At the direction of the Railroad Engineer, any activity that has the potential to disturb the Railroad track structure may require the contractor to submit a detailed track monitoring program for approval by the Railroad Engineer.
- The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction.
 Railroad reserves the right to modify the survey locations and monitoring frequency as necessary during the project.
- 3. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Railroad Engineer for analysis.
- 4. If any movement has occurred as determined by the Railroad Engineer, the Railroad will be immediately notified. Railroad, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased and determine what corrective action is required. Any corrective action required by the Railroad or performed by the Railroad including the monitoring of corrective action of the contractor will be at project expense.

J. Maintenance of Railroad Facilities:

- The Contractor will be required to maintain all ditches and drainage structures
 free of silt or other obstructions which may result from his operations and provide
 and maintain any erosion control measures as required. The Contractor will
 promptly repair eroded areas within Railroad rights-of-way and repair any other
 damage to the property of the Railroad or its tenants.
- If, in the course of construction, it may be necessary to block a ditch, pipe or
 other drainage facility, temporary pipes, ditches or other drainage facilities shall
 be installed to maintain adequate drainage, as approved by NS. Upon
 completion of the work, the temporary facilities shall be removed and the
 permanent facilities restored.
- 3. All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

K. Storage of Materials and Equipment:

- Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights-of-way of the Railroad Company without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad Company will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.
- 2. All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.

L. Cleanup:

Upon completion of the work, the Contractor shall remove from within the limits
of the Railroad rights-of-way, all machinery, equipment, surplus materials,
falsework, rubbish or temporary buildings of the Contractor, and leave said
rights-of-way in a neat condition satisfactory to the Chief Engineer of the Railroad
or his authorized representative.

6. DAMAGES:

- A. The Contractor shall assume all liability for any and all damages to his work, employees, servants, equipment and materials caused by Railroad traffic.
- B. Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.

7. FLAGGING SERVICES:

A. Requirements:

- 1. Flagging services will not be provided until the contractor's insurance has been reviewed & approved by the Railroad.
- 2. Under the terms of the agreement between the Department and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are or are likely to be, working on the Railroad's right-of-way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging.

3. Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three (3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required full time until the project has been completed.

B. Scheduling and Notification:

- 1. The Contractor's work requiring railroad flagging should be scheduled to limit the presence of a flagman at the site to a maximum of 50 hours per week. The Contractor shall receive Railroad approval of work schedules requiring a flagman's presence in excess of 40 hours per week.
- 2. Not later than the time that approval is initially requested to begin work on Railroad right-of-way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within Railroad right-of-way and arrange for a job site meeting between the Contractor, the Department, and the Railroad's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.
- 3. The Contractor will be required to give the Railroad representative at least 10 working days of advance written notice of intent to begin work within Railroad right-of-way in accordance with this special provision. Once begun, when such work is then suspended at any time, or for any reason, the Contractor will be required to give the Railroad representative at least 3 working days of advance notice before resuming work on Railroad rightof-way. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen are present at the job site. It may take up to 30 days to obtain flagging initially from the Railroad. When flagging begins, the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the Railroad. Due to Railroad labor agreements, it is necessary to give 5 working days notice before flagging service may be discontinued and responsibility for payment stopped.
- 4. If, after the flagman is assigned to the project site, an emergency arises that requires the flagman's presence elsewhere, then the Contractor shall delay work on Railroad right-of-way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Department or Railroad.

C. Payment:

1. The Department will be responsible for paying the Railroad directly for any and all costs of flagging which may be required to accomplish the construction.

- 2. The estimated cost of flagging is current rate per day based on a 10-hour work day. This cost includes the base pay for the flagman, overhead, and includes a per diem charge for travel expenses, meals and lodging. The charge to the Department by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.
- 3. Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 and 1/2 times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 and 1/2 times the normal rate.
- 4. Railroad work involved in preparing and handling bills will also be charged to the Department. Charges to the Department by the Railroad shall be in accordance with applicable provisions of Subchapter B, Part 140, Subpart I and Subchapter G, Part 646, Subpart B of the Federal-Aid Policy Guide issued by the Federal Highway Administration on December 9, 1991, including all current amendments. Flagging costs are subject to change. The above estimates of flagging costs are provided for information only and are not binding in any way.

D. Verification:

- 1. Railroad's flagman will electronically enter flagging time via Railroad's electronic billing system. Any complaints concerning flagging must be resolved in a timely manner. If the need for flagging is questioned, please contact Railroad's System Engineer Public Improvements. All verbal complaints will be confirmed in writing by the Contractor within 5 working days with a copy to the Department's Engineer. Address all written correspondence electronically to Railroad's System Engineer Public Improvements:
- 2. The Railroad flagman assigned to the project will be responsible for notifying the Department Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Department Engineer will document such notification in the project records. When requested, the Department Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

8. HAUL ACROSS RAILROAD:

A. Where the plans show or imply that materials of any nature must be hauled across a Railroad, unless the plans clearly show that the Department has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad. The Contractor or Agency will be required to bear all costs incidental to such crossings whether services are performed by his own forces or by Railroad personnel.

B. No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad Company unless specific authority for its installation, maintenance, necessary watching and flagging thereof and removal, until a temporary private crossing agreement has been executed between the Contractor and Railroad. The approval process for an agreement normally takes 90-days.

9. WORK FOR THE BENEFIT OF THE CONTRACTOR:

- A. All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the Department and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the Department and/or the Railroad.
- B. Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railroad for same to be accomplished at the Contractor's expense.

10. COOPERATION AND DELAYS:

- A. It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.
- B. No charge or claim of the Contractor against either the Department or the Railroad Company will be allowed for hindrance or delay on account of railway traffic; any work done by the Railway Company or other delay incident to or necessary for safe maintenance of railway traffic or for any delays due to compliance with these special provisions.

11. TRAINMAN'S WALKWAYS:

A. Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 10 feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railway's protective service is provided shall be removed before the close of each work day. If there is any excavation near the walkway, a handrail, with 10'-0" minimum clearance from centerline of track, shall be placed and must conform to AREMA and/or FRA standards.

12. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHT-OF-WAY:

A. The Contractor and/or the Agency's personnel authorized to perform work on Norfolk Southern's property as specified in Section 2 above are not required to complete Norfolk Southern Roadway Worker Protection Training; However the Contractor and the Agency's personnel must be familiar with Norfolk Southern's standard operating rules and guidelines, should conduct themselves accordingly, and may be removed from the property for failure to follow these guidelines.

- B. All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate. Wearing of safety boots is strongly recommended. In the vicinity of at-grade crossings, it is strongly recommended that reflective vests be worn.
- C. No one is allowed within 25' of the centerline of track without specific authorization from the flagman.
- D. All persons working near track while train is passing are to lookout for dragging bands, chains and protruding or shifted cargo.
- E. No one is allowed to cross tracks without specific authorization from the flagman.
- F. All welders and cutting torches working within 25' of track must stop when train is passing.
- G. No steel tape or chain will be allowed to cross or touch rails without permission from the Railroad.

13. GUIDELINES FOR EQUIPMENT ON RAILROAD RIGHT-OF-WAY:

- A. No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15' of centerline of track without specific permission from railroad official and flagman.
- B. No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.
- C. All employees will stay with their machines when crane or boom equipment is pointed toward track.
- D. All cranes and boom equipment under load will stop work while train is passing (including pile driving).
- E. Swinging loads must be secured to prevent movement while train is passing.
- F. No loads will be suspended above a moving train.
- G. No equipment will be allowed within 25' of centerline of track without specific authorization of the flagman.
- H. Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman. Orange construction fencing may be required as directed.
- I. No equipment or load movement within 25' or above a standing train or railroad equipment without specific authorization of the flagman.

- J. All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.
- K. All equipment, loads and cables are prohibited from touching rails.
- L. While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.
- M. No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.
- N. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.
- O. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.
- P. Prior to performing any crane operations, the contractor shall establish a single point of contact for the Railroad flagman to remain in communication with at all times. Person must also be in direct contact with the individual(s) directing the crane operation(s).

14. INSURANCE:

- A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Prime Contractor will be required to carry insurance of the following kinds and amounts:
 - 1. Commercial General Liability Insurance having a combined single limit of not less than \$2,000,000 per occurrence for all loss, damage, cost and expense, including attorneys' fees, arising out of bodily injury liability and property damage liability during the policy period. Said policy shall include explosion, collapse, and underground hazard (XCU) coverage, shall be endorsed to name Railroad specified in item A.2.c. below both as the certificate holder and as an additional insured, and shall include a severability of interests provision.
 - 2. Railroad Protective Liability Insurance having a combined single limit of not less than \$2,000,000 each occurrence and \$6,000,000 in the aggregate applying separately to each annual period. If the project involves track over which passenger trains operate, the insurance limits required are not less than a combined single limit of \$5,000,000 each occurrence and \$10,000,000 in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site.

The standards for the Railroad Protective Liability Insurance are as follows:

a. The insurer must be rated A- or better by A.M. Best Company, Inc. NOTE: NS does not accept from insurers Chartis (AIG or Affiliated Company including Lexington Insurance Company), Hudson Group or ACE.

- b. The policy must be written using one of the following combinations of Insurance Services Office ("ISO") Railroad Protective Liability Insurance Form Numbers:
 - (1) CG 00 35 01 96 and CG 28 31 10 93; or
 - (2) CG 00 35 07 98 and CG 28 31 07 98; or
 - (3) CG 00 35 10 01; or
 - (4) CG 00 35 12 04; or
 - (5) CG 00 35 12 07.
- c. The named insured shall read:

Norfolk Southern Railway Company Three Commercial Place Norfolk, Virginia 23510-2191

Attn: S. W. Dickerson Risk Management

(NOTE: NS does not share coverage on RRPL with any other entity on this

policy)

- d. The description of operations must appear on the Declarations, must match the project description in this agreement, and must include the appropriate Department project and contract identification numbers.
- e. The job location must appear on the Declarations and must include the city, state, and appropriate highway name/number. NOTE: Do not include any references to milepost, valuation station, or mile marker on the insurance policy.
- f. The name and address of the prime contractor must appear on the Declarations.
- g. The name and address of the Department must be identified on the Declarations as the "Involved Governmental Authority or Other Contracting Party."
- h. Other endorsements/forms that will be accepted are:
 - (1) Broad Form Nuclear Exclusion Form IL 00 21
 - (2) 30-day Advance Notice of Non-renewal or cancellation
 - (3) Required State Cancellation Endorsement
 - (4) Quick Reference or Index Form CL/IL 240
- i. Endorsements/forms that are NOT acceptable are:
 - (1) Any Pollution Exclusion Endorsement except CG 28 31
 - (2) Any Punitive or Exemplary Damages Exclusion
 - (3) Known injury or Damage Exclusion form CG 00 59

- (4) Any Common Policy Conditions form
- (5) Any other endorsement/form not specifically authorized in item no. 2.h

above.

- B. If any part of the work is sublet, similar insurance, and evidence thereof as specified in A.1 above, shall be provided by or on behalf of the subcontractor to cover its operations on Railroad's right of way.
- C. Prior to entry on Railroad right-of-way, the original Railroad Protective Liability Insurance Policy shall be submitted by the Prime Contractor to the Department at the address below for its review and transmittal to the Railroad. In addition, certificates of insurance evidencing the Prime Contractor's and any subcontractors' Commercial General Liability Insurance shall be issued to the Railroad and the Department at the addresses below, and forwarded to the Department for its review and transmittal to the Railroad. The certificates of insurance shall state that the insurance coverage will not be suspended, voided, canceled, or reduced in coverage or limits without (30) days advance written notice to Railroad and the Department. No work will be permitted by Railroad on its right-of-way until it has reviewed and approved the evidence of insurance required herein.

DEPARTMENT:

Ohio Dept. of Transportation 1980 W. Broad Street Columbus, Ohio 43223

RAILROAD:

Risk Management Norfolk Southern Railway Company Three Commercial Place Norfolk, Virginia 23510-2191

- D. The insurance required herein shall in no way serve to limit the liability of Department or its Contractors under the terms of this agreement.
- E. Insurance Submission Procedures
 - Norfolk Southern will only accept initial insurance submissions via US Mail or Overnight carrier to the address noted in C above. NS will NOT accept initial insurance submissions via email or faxes.
 - 2. Norfolk Southern requires the following two (2) forms of insurance in the initial insurance submission to be submitted under a cover letter providing details of the project and contact information:
 - a. The full original or certified true countersigned copy of the railroad protective liability insurance policy in its entirely inclusive of all declarations, schedule of forms and endorsements along with the policy forms and endorsements.
 - b. The contractor's commercial general, automobile, and workers' compensation liability insurance certificate of liability insurance evidencing a combined single limit of a minimum of \$2M per occurrence of general and \$1M per occurrence of automobile liability insurance naming Norfolk Southern Railway Company, Three Commercial Place, Norfolk, VA 23510 as the certificate holder and as an additional insured on both the general and automobile liability insurance policy.

3. Norfolk Southern does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Norfolk Southern must have the full original countersigned policy. Norfolk Southern understands that this can typically take a minimum of 30-45 days to receive for review. Please also note that mere receipt is not the only issue but review for compliance, which Norfolk Southern has 10 business days from receipt to respond.

15. FAILURE TO COMPLY:

- A. In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions:
 - 1. The Railroad Engineer may require that the Contractor vacate Railroad property.
 - 2. The Engineer may withhold all monies due the Contractor on monthly statements.
- B. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

16. PAYMENT FOR COST OF COMPLIANCE:

A. No separate payment will be made for any extra cost incurred on account of compliance with these special provisions. All such costs shall be included in prices bid for other items of the work as specified in the payment items.

To the Director of the Ohio Department of Transportation: The undersigned, having full knowledge of the site, plans and specifications for the following improvement and the conditions of this proposal, hereby agrees to furnish all services, labor, materials, and equipment necessary to complete the entire project, according to the plans, specifications and completion dates, and to accept the unit prices specified below for each item as full compensation for the work in this proposal.

Date Set for Completion: 6/15/2016

Unit Price Contract

FOR IMPROVING SECTION MAH-62-18.23, US ROUTE 62 IN THE CITY OF YOUNGSTOWN, MAHONING COUNTY, OHIO, IN ACCORDANCE WITH PLANS AND SPECIFICATIONS BY GRADING, DRAINING, PAVING WITH CONCRETE PAVEMENT, UPDATING LIGHTING AND TRAFFIC CONTROL AND REHABILITATING BRIDGE NO. MAH-62-1825 BY REPLACING THE EXISTING CONCRETE DECK AND PORTIONS OF THE ABUTMENTS AND WINGWALLS. WORK INCLUDES STRUCTURAL STEEL REPAIRS, RETROFITS AND PARTIAL BRIDGE PAINTING.

Project Length: 0.52 Miles Work Length: 0.64 Miles Pavement Width: 2@24 Feet

Sectio	n 00	01 ROAD	DWAY			
Line	Alt	Item Code	Item Description	WT	Unit	Quantity
0001		202E23000	PAVEMENT REMOVED (WT: NR)	NR	SY	9,443.000
0002		202E30000	WALK REMOVED (WT: NR)	NR	SF	1,653.000
0003		202E30700	CONCRETE BARRIER REMOVED (WT: NR)	NR	FT	1,405.000
0004		202E32000	CURB REMOVED (WT: NR)	NR	FT	530.000
0005		202E35100	PIPE REMOVED, 24" AND UNDER (WT: NR)	NR	FT	20.000
0006		202E38000	GUARDRAIL REMOVED (WT: NR)	NR	FT	1,941.500
0007		202E42010	ANCHOR ASSEMBLY REMOVED, TYPE E (WT: NR)	NR	EACH	4.000
8000		202E42040	ANCHOR ASSEMBLY REMOVED, TYPE T (WT: NR)	NR	EACH	4.000
0009		202E47000	BRIDGE TERMINAL ASSEMBLY REMOVED (WT: NR)	NR	EACH	3.000
0010		202E58100	CATCH BASIN REMOVED (WT: NR)	NR	EACH	1.000
0011		202E58200	INLET REMOVED (WT: NR)	NR	EACH	3.000
0012		202E70100	SPECIAL - PIPE CLEANOUT (WT: NR)	NR	FT	200.000
0013		202E75000	FENCE REMOVED (WT: NR)	NR	FT	48.000
0014		203E10000	EXCAVATION (WT: 06)	06	CY	297.000
0015		203E20000	EMBANKMENT (WT: 06)	06	CY	1,359.000
0016		204E10000	SUBGRADE COMPACTION (WT: 06)	06	SY	8,869.000
0017		204E45000	PROOF ROLLING (WT: 06)	06	HOUR	4.000
0018		209E60501	LINEAR GRADING, AS PER PLAN (WT: 06)	06	MILE	0.200
0019		606E13000	GUARDRAIL, TYPE 5 (WT: 36)	36	FT	1,068.750
0020		606E26100	ANCHOR ASSEMBLY, TYPE E (WT: 36)	36	EACH	4.000
0021		606E26500	ANCHOR ASSEMBLY, TYPE T (WT: 36)	36	EACH	4.000
0022		606E35000	BRIDGE TERMINAL ASSEMBLY, TYPE 1 (WT: 36)	36	EACH	2.000
0023		606E35100	BRIDGE TERMINAL ASSEMBLY, TYPE 2 (WT: 36)	36	EACH	1.000
0024		607E23000	FENCE, TYPE CLT (WT: 37)	37	FT	48.000
0025		607E70000	FENCELINE SEEDING AND MULCHING (WT: 46)	46	FT	48.000
0026		608E10000	4" CONCRETE WALK (WT: 38)	38	SF	1,471.000
0027		608E52044	CURB RAMP, TYPE B3 (WT: 38)	38	SF	293.000
0028		622E10120	CONCRETE BARRIER, SINGLE SLOPE, TYPE C (WT: 38)	38	FT	538.000
0029		622E10200	BARRIER TRANSITION (WT: 38)	38	EACH	2.000
0030		622E23401	CONCRETE BARRIER, TYPE B, AS PER PLAN (WT: 38)	38	FT	351.000
0031		622E23405	CONCRETE BARRIER, TYPE B1, AS PER PLAN (WT: 38)	38	FT	10.000
0032		622E24001	CONCRETE BARRIER, TYPE D, AS PER PLAN (WT: 38)	38	FT	333.000

0033	6	623E38500	MONUMENT ASSEMBLY (WT: NR)	NR	EACH	4.000
0034	6	690E98000	SPECIAL - MISC.:VERTICAL CLEARANCE (WT: NR)	NR	EACH	9.000
0035	6	690E98400	SPECIAL - MISC.:TEMPORARY RAILROAD CROSSING AGREEMENT APPLICATION AND FEES (WT: NR)	NR	LS	1.000

Section 0002 EROSION CONTROL

Line	Alt	Item Code	Item Description	WT	Unit	Quantity
0036		601E21050	TIED CONCRETE BLOCK MAT, TYPE 1 (WT: 35)	35	SY	12.000
0037		601E21060	TIED CONCRETE BLOCK MAT, TYPE 2 (WT: 35)	35	SY	40.000
0038		601E32200	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (WT: 35)	35	CY	2.000
0039		601E38000	PAVED GUTTER, TYPE 1-4 (WT: 38)	38	FT	33.000
0040		659E00100	SOIL ANALYSIS TEST (WT: NR)	NR	EACH	2.000
0041		659E00300	TOPSOIL (WT: 46)	46	CY	623.000
0042		659E10000	SEEDING AND MULCHING (WT: 46)	46	SY	5,576.000
0043		659E14000	REPAIR SEEDING AND MULCHING (WT: 46)	46	SY	281.000
0044		659E15000	INTER-SEEDING (WT: 46)	46	SY	281.000
0045		659E20000	COMMERCIAL FERTILIZER (WT: 46)	46	TON	0.760
0046		659E31000	LIME (WT: 46)	46	ACRE	1.160
0047		659E35000	WATER (WT: 46)	46	MGAL	31.000
0048		659E40000	MOWING (WT: 46)	46	MSF	13.000
0049		832E15000	STORM WATER POLLUTION PREVENTION PLAN (WT: NR)	NR	LS	1.000
0050		832E30000	EROSION CONTROL (WT: 08)	08	EACH	45,057.000
0051		836E10000	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (WT: 46)	46	SY	245.000

Section 0003 DRAINAGE

Line	Alt	Item Code	Item Description	WT	Unit	Quantity
0052		602E20000	CONCRETE MASONRY (WT: 35)	35	CY	0.270
0053		605E11110	6" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP, 707.31 (WT: 35)	35	FT	1,842.000
0054		605E13410	6" UNCLASSIFIED PIPE UNDERDRAINS WITH FABRIC WRAP, 707.31 (WT: 35)	35	FT	559.000
0055		605E14020	6" BASE PIPE UNDERDRAINS WITH FABRIC WRAP, 707.31 (WT: 35)	35	FT	732.000
0056		611E00510	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS (WT: 35)	35	FT	295.000
0057		611E01800	8" CONDUIT, TYPE B, 748.01 (WT: 35)	35	FT	5.000
0058		611E04400	12" CONDUIT, TYPE B (WT: 35)	35	FT	52.000
0059		611E04400	12" CONDUIT, TYPE B, 706.02 (WT: 35)	35	FT	5.000

0060	611E05900	15" CONDUIT, TYPE B (WT: 35)	35	FT	68.000
0061	611E05900	15" CONDUIT, TYPE B, 707.42 (WT: 35)	35	FT	42.000
0062	611E06100	15" CONDUIT, TYPE C, 706.02 (WT: 35)	35	FT	5.000
0063	611E06700	15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21 (WT: 35)	35	FT	90.000
0064	611E98370	CATCH BASIN, NO. 6 (WT: 35)	35	EACH	2.000
0065	611E98470	CATCH BASIN, NO. 2-2B (WT: 35)	35	EACH	1.000
0066	611E98800	INLET, NO. 3B (WT: 35)	35	EACH	2.000
0067	611E98804	INLET, NO. 3B50 (WT: 35)	35	EACH	1.000
0068	611E99574	MANHOLE, NO. 3 (WT: 35)	35	EACH	1.000
0069	611E99710	PRECAST REINFORCED CONCRETE OUTLET (WT: 35)	35	EACH	6.000

Section 0004 PAVEMENT

Line	Alt	Item Code	Item Description	WT	Unit	Quantity
0070		254E01001	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (WT: 13)	13	SY	3,688.000
0071		301E46000	ASPHALT CONCRETE BASE, PG64-22 (WT: 10)	10	CY	205.000
0072		304E20001	AGGREGATE BASE, AS PER PLAN (WT: 09)	09	CY	1,612.000
0073		407E20000	SPECIAL - TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE (WT: 10)	10	GAL	435.000
0074		407E20500	SPECIAL - TACK COAT, TRACKLESS TACK (WT: 10)	10	GAL	394.000
0075		411E10000	STABILIZED CRUSHED AGGREGATE (WT: NR)	NR	CY	19.000
0076		442E20051	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (448), AS PER PLAN (WT: 10)	10	CY	192.000
0077		442E20250	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (WT: 10)	10	CY	224.000
0078		442E90000	ASPHALT CONCRETE, MISC.:VARIABLE THICKNESS ASPHALT CONCRETE LEVELING COURSE, 19MM, TYPE B (448) (WT: 10)	10	CY	15.000
0079		448E46061	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN (WT: 10)	10	CY	30.000
0080		451E15010	10" REINFORCED CONCRETE PAVEMENT, CLASS QC1 (WT: 12)	12	SY	2,432.000
0081		451E30000	SPECIAL - PRESSURE RELIEF JOINT, TYPE A (WT: 38)	38	FT	152.000
0082		452E13010	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1 (WT: 12)	12	SY	4,481.000
0083		609E12000	COMBINATION CURB AND GUTTER, TYPE 2 (WT: 38)	38	FT	201.000
0084		609E14000	CURB, TYPE 2-A (WT: 38)	38	FT	721.000
0085		609E24000	CURB, TYPE 4-A (WT: 38)	38	FT	30.000
0086		609E26000	CURB, TYPE 6 (WT: 38)	38	FT	21.000

Section 0	Section 0005 LIGHTING							
Line Alt	Item Code	Item Description	WT	Unit	Quantity			
0087	625E00450	CONNECTION, FUSED PULL APART (WT: 43) (WT: 43)	43	EACH	52.000			
0088	625E00480	CONNECTION, UNFUSED PERMANENT (WT: 43)	43	EACH	20.000			
0089	625E10490	LIGHT POLE, CONVENTIONAL, A12BB37.5 (WT: 43)	43	EACH	3.000			
0090	625E10490	LIGHT POLE, CONVENTIONAL, A15BB40 (WT: 43)	43	EACH	1.000			
0091	625E10490	LIGHT POLE, CONVENTIONAL, A8B37.5 (WT: 43)	43	EACH	20.000			
0092	625E10600	LIGHT POLE ANCHOR L-BOLTS (WT: 43)	43	EACH	20.000			
0093	625E14100	LIGHT POLE FOUNDATION, 24" X 8' DEEP (WT: 43)	43	EACH	1.000			
0094	625E14306	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP (WT: 43)	43	EACH	3.000			
0095	625E23200	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE (WT: 43) (WT: 43)	43	FT	10,670.000			
0096	625E23400	NO. 10 AWG POLE AND BRACKET CABLE (WT: 43) (WT: 43)	43	FT	2,534.000			
0097	625E24100	1-1/2" DUCT CABLE WITH TWO NO. 4 AWG 5000 VOLT CABLES (WT: 43)	43	FT	700.000			
0098	625E24350	1-1/2" DUCT CABLE WITH FOUR NO. 4 AWG 5000 VOLT CABLES (WT: 43)	43	FT	38.000			
0099	625E25400	CONDUIT, 2", 725.04 (WT: 43) (WT: 43)	43	FT	4,994.000			
0100	625E25900	CONDUIT, JACKED OR DRILLED, 3" (WT: 43)	43	FT	50.000			
0101	625E26251	LUMINAIRE, CONVENTIONAL, AS PER PLAN, TYPE II, 200W, 480V (WT: 43) (WT: 43)	43	EACH	22.000			
0102	625E26251	LUMINAIRE, CONVENTIONAL, AS PER PLAN, TYPE III, 310W, 480V (WT: 43)	43	EACH	6.000			
0103	625E27501	LUMINAIRE, UNDERPASS, AS PER PLAN, 100W, 480V (WT: 43)	43	EACH	17.000			
0104	625E29002	TRENCH, 24" DEEP (WT: 43)	43	FT	18.000			
0105	625E29920	STRUCTURE JUNCTION BOX (WT: 43)	43	EACH	22.000			
0106	625E30706	PULL BOX, 725.08, 24" (WT: 43)	43	EACH	1.000			
0107	625E32000	GROUND ROD (WT: 43)	43	EACH	1.000			
0108	625E33001	STRUCTURE GROUNDING SYSTEM, AS PER PLAN (WT: 43)	43	EACH	1.000			
0109	625E36000	PLASTIC CAUTION TAPE (WT: 43)	43	FT	18.000			
0110	625E37001	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN (WT: 43)	43	LS	1.000			
0111	625E39520	PULL BOX CLEANED (WT: 43)	43	EACH	4.000			
0112	625E40000	SPECIAL - MAINTAIN EXISTING LIGHTING (WT: 43)	43	LS	1.000			
0113	625E40010	SPECIAL - REPLACEMENT OF EXISTING LIGHTING UNIT (WT: 43)	43	EACH	2.000			
0114	625E75503	PORTION OF LIGHT POLE FOUNDATION REMOVED, AS PER PLAN (WT: NR)	NR	EACH	3.000			
0115	625E75506	LUMINAIRE REMOVED (WT: NR) (WT: NR)	NR	EACH	27.000			
0116	625E75520	LUMINAIRE SUPPORT REMOVED (WT: NR) (WT: NR)	NR	EACH	24.000			
0117	625E75522	LUMINAIRE SUPPORT FOUNDATION REMOVED (WT: NR)	NR	EACH	1.000			

0118	625E75801	DISCONNECT CIRCUIT, AS PER PLAN (WT: NR) (WT: NR)	NR	EACH	5.000
Section 0	006 TRAF	FIC CONTROL			
Line Alt	Item Code	Item Description	WT	Unit	Quantity
0119	625E32000	GROUND ROD (WT: 42)	42	EACH	3.000
0120	630E02100	GROUND MOUNTED SUPPORT, NO. 2 POST (WT: 42)	42	FT	42.000
0121	630E03100	GROUND MOUNTED SUPPORT, NO. 3 POST (WT: 42)	42	FT	113.000
0122	630E04100	GROUND MOUNTED SUPPORT, NO. 4 POST (WT: 42)	42	FT	315.000
0123	630E06400	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7 (WT: 42)	42	FT	32.000
0124	630E07600	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12 (WT: 42)	42	FT	79.000
0125	630E08100	ONE WAY SUPPORT, NO. 4 POST (WT: 42)	42	FT	34.000
0126	630E08600	SIGN POST REFLECTOR (WT: 42)	42	EACH	13.000
0127	630E09000	BREAKAWAY STRUCTURAL BEAM CONNECTION (WT: 42)	42	EACH	6.000
0128	630E20500	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 5 (WT: 42)	42	EACH	1.000
0129	630E20600	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 6 (WT: 42)	42	EACH	1.000
0130	630E21000	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 10 (WT: 42)	42	EACH	1.000
0131	630E66500	OVERHEAD SIGN SUPPORT, TYPE TC-15.115 (WT: 42)	42	EACH	1.000
0132	630E79500	SIGN SUPPORT ASSEMBLY, POLE MOUNTED (WT: 42) (WT: 42)	42	EACH	4.000
0133	630E80100	SIGN, FLAT SHEET (WT: 42) (WT: 42)	42	SF	420.000
0134	630E80100	SIGN, FLAT SHEET, 730.20 (WT: 42)	42	SF	2.000
0135	630E80200	SIGN, GROUND MOUNTED EXTRUSHEET (WT: 42)	42	SF	154.000
0136	630E80224	SIGN, OVERHEAD EXTRUSHEET (WT: 42) (WT: 42)	42	SF	1,070.000
0137	630E84500	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION (WT: 42)	42	EACH	6.000
0138	630E84510	RIGID OVERHEAD SIGN SUPPORT FOUNDATION (WT: 42)	42	EACH	3.000
0139	630E84900	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL (WT: NR) (WT: NR)	NR	EACH	23.000
0140	630E86002	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL (WT: NR) (WT: NR)	NR	EACH	23.000
0141	630E86102	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL (WT: NR)	NR	EACH	4.000
0142	630E87400	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL (WT: NR) (WT: NR)	NR	EACH	15.000
0143	630E87500	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL (WT: NR) (WT: NR)	NR	EACH	2.000
0144	630E89704	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-16.20 (WT: NR)	NR	EACH	1.000
0145	630E89706	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 (WT: NR)	NR	EACH	3.000

0146	630E89802	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 (WT: NR) (WT: NR)	NR	EACH	2.000
0147	631E97700	SIGN LIGHTING MISC.:REMOVAL OF SIGN LIGHTING AND DISPOSAL, AS PER PLAN (WT: NR) (WT: NR)	NR	EACH	4.000
0148	646E10010	EDGE LINE, 6" (WT: 45) (WT: 45)	45	MILE	3.110
0149	646E10110	LANE LINE, 6" (WT: 45) (WT: 45)	45	MILE	1.270
0150	646E10310	CHANNELIZING LINE, 12" (WT: 45) (WT: 45)	45	FT	1,943.000
0151	646E10400	STOP LINE (WT: 45)	45	FT	74.000
0152	646E10500	CROSSWALK LINE (WT: 45)	45	FT	455.000
0153	646E20300	LANE ARROW (WT: 45)	45	EACH	6.000
0154	646E20504	DOTTED LINE, 6" (WT: 45) (WT: 45)	45	FT	2,263.000
Section 0	007 TRAF	FIC SIGNALS			
Line Alt	Item Code	Item Description	WT	Unit	Quantity
0155	632E26501	DETECTOR LOOP, AS PER PLAN (WT: 44)	44	EACH	2.000
			4.4	1.0	4 000
0156	632E90300	SIGNALIZATION, MISC.:SIGNAL HEAD RELOCATIONS (WT: 44)	44	LS	1.000
0156 Section 0		SIGNALIZATION, MISC.:SIGNAL HEAD RELOCATIONS (WT: 44) TENANCE OF TRAFFIC	44	LS	1.000
			WT	Unit	Quantity
Section 0	0008 MAIN	TENANCE OF TRAFFIC			Quantity
Section 0	0008 MAIN	TENANCE OF TRAFFIC Item Description	WT	Unit	Quantity 1,450.000
Section 0 Line Alt		Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13)	WT 13	Unit SY	Quantity 1,450.000 100.000
Section 0 Line Alt 0157 0158		Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR)	WT 13 NR	Unit SY CY	Quantity 1,450.000 100.000 164.000
Section 0 Line Alt 0157 0158 0159	Item Code 254E01000 411E10000 611E04401	Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35)	WT 13 NR 35	Unit SY CY FT	Quantity 1,450.000 100.000 164.000 4.000
Section 0 Line Alt 0157 0158 0159 0160	Item Code 254E01000 411E10000 611E04401 611E98371	Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35) CATCH BASIN, NO. 6, AS PER PLAN (WT: 35)	WT 13 NR 35 35	Unit SY CY FT EACH	Quantity 1,450.000 100.000 164.000 4.000 2.000
Section 0 Line Alt 0157 0158 0159 0160 0161	Item Code 254E01000 411E10000 611E04401 611E98371 611E99155	Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35) CATCH BASIN, NO. 6, AS PER PLAN (WT: 35) INLET RECONSTRUCTED TO GRADE, AS PER PLAN (WT: 35)	WT 13 NR 35 35 35 35	Unit SY CY FT EACH EACH	Quantity 1,450.000 100.000 164.000 4.000 2.000 160.000
Section 0 Line Alt 0157 0158 0159 0160 0161 0162	Item Code 254E01000 411E10000 611E04401 611E98371 611E99155 614E11110	Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35) CATCH BASIN, NO. 6, AS PER PLAN (WT: 35) INLET RECONSTRUCTED TO GRADE, AS PER PLAN (WT: 35) LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE (WT: 39)	WT 13 NR 35 35 35 35 39	Unit SY CY FT EACH EACH HOUR	Quantity 1,450.000 100.000 164.000 4.000 2.000 160.000 24.000
Section 0 Line Alt 0157 0158 0159 0160 0161 0162 0163	Item Code 254E01000 411E10000 611E04401 611E98371 611E99155 614E11110 614E11500	Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35) CATCH BASIN, NO. 6, AS PER PLAN (WT: 35) INLET RECONSTRUCTED TO GRADE, AS PER PLAN (WT: 35) LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE (WT: 39) WORKSITE TRAFFIC SUPERVISOR (WT: 39)	WT 13 NR 35 35 35 35 39 39 39	Unit SY CY FT EACH EACH HOUR	Quantity 1,450.000 100.000 164.000 4.000 2.000 160.000 24.000 1,400.000
Section 0 Line Alt 0157 0158 0159 0160 0161 0162 0163 0164	Item Code 254E01000 411E10000 611E04401 611E98371 611E99155 614E11110 614E11500 614E11620	Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35) CATCH BASIN, NO. 6, AS PER PLAN (WT: 35) INLET RECONSTRUCTED TO GRADE, AS PER PLAN (WT: 35) LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE (WT: 39) WORKSITE TRAFFIC SUPERVISOR (WT: 39) LINEAR DELINEATION (WT: 39)	WT 13 NR 35 35 35 39 39 39 39	Unit SY CY FT EACH EACH HOUR MNTH FT	Quantity 1,450.000 100.000 164.000 2.000 160.000 24.000 1,400.000 10.000
Section 0 Line Alt 0157 0158 0159 0160 0161 0162 0163 0164 0165	Item Code 254E01000 411E10000 611E04401 611E98371 611E99155 614E11110 614E11500 614E11620 614E12336	Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35) CATCH BASIN, NO. 6, AS PER PLAN (WT: 35) INLET RECONSTRUCTED TO GRADE, AS PER PLAN (WT: 35) LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE (WT: 39) WORKSITE TRAFFIC SUPERVISOR (WT: 39) LINEAR DELINEATION (WT: 39) WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) (WT: 39)	WT 13 NR 35 35 35 39 39 39 39 39	Unit SY CY FT EACH EACH HOUR MNTH FT EACH	Quantity 1,450.000 100.000 164.000 2.000 160.000 24.000 1,400.000 10.000 6.000
Section 0 Line Alt 0157 0158 0159 0160 0161 0162 0163 0164 0165 0166	Item Code 254E01000 411E10000 611E04401 611E98371 611E99155 614E11110 614E11500 614E12336 614E12410	Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35) CATCH BASIN, NO. 6, AS PER PLAN (WT: 35) INLET RECONSTRUCTED TO GRADE, AS PER PLAN (WT: 35) LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE (WT: 39) WORKSITE TRAFFIC SUPERVISOR (WT: 39) LINEAR DELINEATION (WT: 39) WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) (WT: 39) SPEED ZONE AHEAD SYMBOL SIGN (WT: 39)	WT 13 NR 35 35 35 39 39 39 39 39 39 39	Unit SY CY FT EACH EACH HOUR MNTH FT EACH EACH	Quantity 1,450.000 100.000 164.000 4.000 2.000 160.000 24.000 1,400.000 10.000 6.000
Section 0 Line Alt 0157 0158 0159 0160 0161 0162 0163 0164 0165 0166 0167	Item Code 254E01000 411E10000 611E04401 611E98371 611E99155 614E11110 614E11500 614E12336 614E12410 614E12420	TENANCE OF TRAFFIC Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35) CATCH BASIN, NO. 6, AS PER PLAN (WT: 35) INLET RECONSTRUCTED TO GRADE, AS PER PLAN (WT: 35) LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE (WT: 39) WORKSITE TRAFFIC SUPERVISOR (WT: 39) LINEAR DELINEATION (WT: 39) WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) (WT: 39) SPEED ZONE AHEAD SYMBOL SIGN (WT: 39) DETOUR SIGNING (WT: 39)	WT 13 NR 35 35 35 39 39 39 39 39 39 39 39 39 39 39 39 39	Unit SY CY FT EACH EACH HOUR MNTH FT EACH EACH LS	Quantity 1,450.000 100.000 164.000 2.000 160.000 24.000 1,400.000 10.000 6.000 1.000
Section 0 Line Alt 0157 0158 0159 0160 0161 0162 0163 0164 0165 0166 0167 0168	Item Code 254E01000 411E10000 611E04401 611E98371 611E99155 614E11110 614E11500 614E12336 614E12410 614E12420 614E12460	Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35) CATCH BASIN, NO. 6, AS PER PLAN (WT: 35) INLET RECONSTRUCTED TO GRADE, AS PER PLAN (WT: 35) LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE (WT: 39) WORKSITE TRAFFIC SUPERVISOR (WT: 39) LINEAR DELINEATION (WT: 39) WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) (WT: 39) SPEED ZONE AHEAD SYMBOL SIGN (WT: 39) DETOUR SIGNING (WT: 39) WORK ZONE MARKING SIGN (WT: 39)	WT 13 NR 35 35 35 35 39 39 39 39 39 39 39	Unit SY CY FT EACH EACH HOUR MNTH FT EACH EACH LS EACH	Quantity 1,450.000 100.000 164.000 2.000 160.000 24.000 1,400.000 10.000 6.000 1.000 30.000 20.000
Section 0 Line Alt 0157 0158 0159 0160 0161 0162 0163 0164 0165 0166 0167 0168 0169	Item Code 254E01000 411E10000 611E04401 611E98371 611E99155 614E11110 614E11500 614E12336 614E12410 614E12420 614E12420 614E12470	Item Description PAVEMENT PLANING, ASPHALT CONCRETE (WT: 13) STABILIZED CRUSHED AGGREGATE (WT: NR) 12" CONDUIT, TYPE B, AS PER PLAN (WT: 35) CATCH BASIN, NO. 6, AS PER PLAN (WT: 35) INLET RECONSTRUCTED TO GRADE, AS PER PLAN (WT: 35) LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE (WT: 39) WORKSITE TRAFFIC SUPERVISOR (WT: 39) LINEAR DELINEATION (WT: 39) WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) (WT: 39) SPEED ZONE AHEAD SYMBOL SIGN (WT: 39) DETOUR SIGNING (WT: 39) WORK ZONE MARKING SIGN (WT: 39) WORK ZONE SPEED LIMIT SIGN (WT: 39)	WT 13 NR 35 35 35 39 39 39 39 39 39 39 39	Unit SY CY FT EACH EACH HOUR MNTH FT EACH EACH EACH EACH	

0173	614E130	0 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC (WT: 39)	39	CY	25.000
0174	614E133	0 BARRIER REFLECTOR, TYPE B (WT: NR)	NR	EACH	450.000
0175	614E133	0 OBJECT MARKER, ONE WAY (WT: NR)	NR	EACH	275.000
0176	614E133	0 OBJECT MARKER, TWO WAY (WT: NR)	NR	EACH	100.000
0177	614E186	1 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (WT: 39)	39	SNMT	20.000
0178	614E220	1 WORK ZONE EDGE LINE, CLASS I, AS PER PLAN (WT: 39)	39	MILE	6.300
0179	615E100	0 ROADS FOR MAINTAINING TRAFFIC (WT: 06)	06	LS	1.000
0180	615E200	1 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (WT: 10)	10	SY	2,000.000
0181	622E410	1 PORTABLE BARRIER, 50", AS PER PLAN (WT: 39)	39	FT	14,260.000
0182	690E984	0 SPECIAL - MISC.:CONTRACTOR ACCESS (WT: NR)	NR	LS	1.000

Section 0009 STRUCTURE REPAIR BRIDGE NO. MAH-62-1825

Line	Alt	Item Code	Item Description	WT	Unit	Quantity
0183		202E11203	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (WT: 19)	19	LS	1.000
0184		202E22900	APPROACH SLAB REMOVED (WT: NR)	NR	SY	439.000
0185		503E11101	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WT: 21)	21	LS	1.000
0186		503E21301	UNCLASSIFIED EXCAVATION, AS PER PLAN (WT: 21)	21	LS	1.000
0187		509E10001	EPOXY COATED REINFORCING STEEL, AS PER PLAN (WT: 23)	23	LB	2,641,714.000
0188		509E20001	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN (WT: 23)	23	LB	100.000
0189		510E10001	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN (WT: 21)	21	EACH	1,265.000
0190		511E34449	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN (WT: 21)	21	CY	1,071.000
0191		511E50211	CLASS QC1 CONCRETE, SUBSTRUCTURE, AS PER PLAN (WT: 21)	21	CY	338.000
0192		511E53014	CLASS QC3 CONCRETE, MISC.:OC/OA, BRIDGE DECK, AS PER PLAN (WT: 21)	21	CY	6,108.000
0193		512E10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (WT: 57)	57	SY	14,869.000
0194		512E10600	CONCRETE REPAIR BY EPOXY INJECTION (WT: 29)	29	FT	230.000
0195		512E71500	SPECIAL - URETHANE TOP COAT SEALER (WT: 57)	57	SY	679.000
0196		513E10201	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN (WT: 31)	31	LB	6,402.000
0197		513E10221	STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN (WT: 31)	31	LB	72,622.000
0198		513E17001	STRUCTURAL STEEL MEMBERS, MODULAR EXPANSION JOINT, LEVEL UF, AS PER PLAN (WT: 27)	27	FT	171.000
0199		513E20000	WELDED STUD SHEAR CONNECTORS (WT: 25)	25	EACH	50,088.000
0200		513E90000	STRUCTURAL STEEL, MISC.:REPLACEMENT OF DAMAGED CROSS FRAMES (WT: 31)	31	LB	771.000

0201	513E90000	STRUCTURAL STEEL, MISC.:STEEL BEAM REPAIRS, LEVEL 1 (WT: 31)	31	LB	5,000.000
0202	513E95000	STRUCTURAL STEEL, MISC.:CLEANING AND ULTRASONIC PEENING FILLET WELD (WT: 31)	31	FT	100.000
0203	513E95000	STRUCTURAL STEEL, MISC.:INSPECTION OF STRUCTURAL STEEL, BOX GIRDER PIER CAP (WT: 31)	31	FT	275.000
0204	513E95030	STRUCTURAL STEEL, MISC.:BACK-UP BAR DISCONTINUITY RETROFIT (WT: 31)	31	EACH	11.000
0205	513E95030	STRUCTURAL STEEL, MISC.:BACK-UP BAR WELD DISCONTINUITY RETROFIT (WT: 31)	31	EACH	18.000
0206	513E95030	STRUCTURAL STEEL, MISC.:DIAPHRAGM OR STIFFENER RETROFIT (WT: 31)	31	EACH	78.000
0207	513E95030	STRUCTURAL STEEL, MISC.:DIAPHRAGM VERTICAL STIFFENING PLATE RETROFIT (WT: 31)	31	EACH	30.000
0208	513E95030	STRUCTURAL STEEL, MISC.:DRILLING STRUCTURAL STEEL, (1" DIAMETER HOLE, GRINDING AND NDT) (WT: 31)	31	EACH	10.000
0209	513E95030	STRUCTURAL STEEL, MISC.:DRILLING STRUCTURAL STEEL, (1-1/2" DIAMETER HOLE, GRINDING AND NDT) (WT: 31)	31	EACH	10.000
0210	513E95030	STRUCTURAL STEEL, MISC.:DRILLING STRUCTURAL STEEL, (2" DIAMETER HOLE, GRINDING AND NDT) (WT: 31)	31	EACH	10.000
0211	513E95030	STRUCTURAL STEEL, MISC.:GIRDER BEARING STIFFENER RETROFIT (WT: 31)	31	EACH	6.000
0212	513E95030	STRUCTURAL STEEL, MISC.:LATERAL BRACING GUSSET PLATE RETROFIT TYPE I (WT: 31)	31	EACH	43.000
0213	513E95030	STRUCTURAL STEEL, MISC.:LATERAL BRACING GUSSET PLATE RETROFIT TYPE II (WT: 31)	31	EACH	128.000
0214	513E95030	STRUCTURAL STEEL, MISC.:LATERAL BRACING GUSSET PLATE RETROFIT TYPE III (WT: 31)	31	EACH	85.000
0215	513E95030	STRUCTURAL STEEL, MISC.:LONGITUDINAL BEARING PLATE RETROFIT (WT: 31)	31	EACH	10.000
0216	513E95030	STRUCTURAL STEEL, MISC.:LONGITUDINAL WEB STIFFENER END RETROFIT (WT: 31)	31	EACH	512.000
0217	513E95030	STRUCTURAL STEEL, MISC.:PENCIL ABRASIVE BLASTING, GRINDING AND NDT (WT: 31)	31	EACH	20.000
0218	513E95030	STRUCTURAL STEEL, MISC.:PIN AND HANGER ASSEMBLY REMOVED AND REPLACED (WT: 31)	31	EACH	35.000
0219	513E95030	STRUCTURAL STEEL, MISC.:STRINGER BEARING STIFFENER RETROFIT (WT: 31)	31	EACH	341.000
0220	513E95030	STRUCTURAL STEEL, MISC.:TIGHTENING LOOSE BOLTS AND NUTS (WT: 31)	31	EACH	20.000
0221	514E00051	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL, AS PER PLAN (WT: 26)	26	SF	72,308.000

0222	514E00057	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN (WT: 26)	26	SF	72,308.000
0223	514E00061	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN (WT: 26)	26	SF	72,308.000
0224	514E00067	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN (WT: 26)	26	SF	72,308.000
0225	514E00504	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL (WT: 26)	26	MNHR	500.000
0226	514E10000	FINAL INSPECTION REPAIR (WT: 26)	26	EACH	32.000
0227	514E27800	FIELD PAINTING, MISC.:REPAIR PAINTING (WT: 26)	26	LS	1.000
0228	516E11210	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL (WT: 27)	27	FT	456.000
0229	516E45305	REFURBISH BEARING DEVICE, AS PER PLAN (WT: 21)	21	EACH	21.000
0230	516E47001	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN (WT: 21)	21	LS	1.000
0231	518E12301	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN (WT: 21)	21	EACH	142.000
0232	518E21200	POROUS BACKFILL WITH FILTER FABRIC (WT: 21)	21	CY	211.000
0233	518E40001	6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN (WT: 21)	21	FT	344.000
0234	518E40011	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN (WT: 21)	21	FT	110.000
0235	518E62100	STRUCTURE DRAINAGE, MISC.:PIPE DOWNSPOUT, INCLUDING SPECIALS, 10" (WT: 21)	21	FT	3,627.000
0236	519E11101	PATCHING CONCRETE STRUCTURE, AS PER PLAN (WT: 29)	29	SF	300.000
0237	520E11100	PNEUMATICALLY PLACED MORTAR (WT: 29)	29	SF	996.000
0238	524E94918	DRILLED SHAFTS, 60" DIAMETER, INTO BEDROCK (WT: 28)	28	FT	54.000
0239	524E94930	DRILLED SHAFTS, 66" DIAMETER, ABOVE BEDROCK (WT: 28)	28	FT	234.000
0240	526E30001	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN (WT: 20)	20	SY	797.000
0241	530E00200	SPECIAL - STRUCTURE, MISC.:PROTECTION OF FACILITIES (WT: NR)	NR	LS	1.000
0242	530E00200	SPECIAL - STRUCTURE, MISC.:STRUCTURE CLEANING (WT: NR)	NR	LS	1.000
0243	530E00400	SPECIAL - STRUCTURE, MISC.:BOX GIRDER ACCESS DOOR AND FRAME (WT: 21)	21	EACH	7.000
0244	530E00400	SPECIAL - STRUCTURE, MISC.:BOX GIRDER FLOOR DRAIN (WT: 21)	21	EACH	8.000
0245	530E00500	SPECIAL - STRUCTURE, MISC.:GRINDING AND SMOOTHING STRUCTURAL STEEL (WT: 21)	21	HOUR	50.000
0246	530E00500	SPECIAL - STRUCTURE, MISC.:STRUCTURE INSPECTION AND MECHANIZED ACCESS (WT: 21)	21	HOUR	100.000
0247	530E00600	SPECIAL - STRUCTURE, MISC.:CARBON FIBER EPOXY RESIN COMPOSITE MATERIAL (1 LAYER) (WT: NR)	NR	SF	4,305.000

0248	530E00600	SPECIAL - STRUCTURE, MISC.:CARBON FIBER EPOXY RESIN COMPOSITE MATERIAL (2 LAYERS) (WT: NR)	NR	SF	1,273.000
0249	530E00600	SPECIAL - STRUCTURE, MISC.:CARBON FIBER EPOXY RESIN COMPOSITE MATERIAL (3 LAYERS) (WT: NR)	NR	SF	433.000
0250	530E00600	SPECIAL - STRUCTURE, MISC.:CARBON FIBER EPOXY RESIN COMPOSITE MATERIAL (4 LAYERS) (WT: NR)	NR	SF	107.000
0251	530E00600	SPECIAL - STRUCTURE, MISC.:CARBON FIBER EPOXY RESIN COMPOSITE MATERIAL (5 LAYERS) (WT: NR)	NR	SF	30.000
0252	601E11001	RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN (WT: 38)	38	SY	168.000
0253	601E34301	ROCK CHANNEL PROTECTION, TYPE D WITHOUT FILTER, AS PER PLAN (WT: 35)	35	CY	532.000
0254	869E00100	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS (WT: 21)	21	EACH	15.000

Section 0010 INCIDENTALS

Line	Alt	Item Code	Item Description	WT	Unit	Quantity
0255		100E00300	SPECIAL - PREMIUM ON RAILROADS' PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE (WT: NR)	NR	LS	1.000
0256		103E05000	PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND (WT: NR)	NR	LS	1.000
0257		108E10000	SPECIAL - CPM PROGRESS SCHEDULE (WT: NR)	NR	LS	1.000
0258		614E11000	MAINTAINING TRAFFIC (WT: 39)	39	LS	1.000
0259		619E16020	FIELD OFFICE, TYPE C (WT: NR)	NR	MNTH	27.000
0260		623E10000	CONSTRUCTION LAYOUT STAKES AND SURVEYING (WT: NR)	NR	LS	1.000
0261		624E10000	MOBILIZATION (WT: NR)	NR	LS	1.000