



Georgia Department of Transportation
Proposal

Date of Opening : March 21, 2014

Proposal ID : B14748-14-000-0

Call Order : 001

Projects : 0010394, 0010401, 0010403

Project No. : 0010394, 0010401, 0010403

Counties : Cobb, DeKalb, Fulton

DO NOT UNSTAPLE THIS BOOKLET....Enter all required information either by
hand or by stamp.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**



Proposal ID : B14748-14-000-0

DESIGN BUILD PROJECT CONSISTING OF PEDESTRIAN AND SCHOOL ZONE SAFETY IMPROVEMENTS AT VARIOUS LOCATIONS IN COBB, DEKALB AND FULTON COUNTIES. (E)

DBE Goal: 11.00% Proposal Guaranty: 5.00%

Time ID	Description	Completion Date or Number of Units	Time Type
00	COMPLETE CONTRACT	12/31/2015	DT
01	FAIL TO COMPLETE SITE NO 1 - SEE SPEC PROV SEC 108	120	CD
02	FAIL TO COMPLETE SITE NO 2 - SEE SPEC PROV SEC 108	60	CD
03	FAIL TO REOPEN LANES - SEE SPEC PROV SEC 108		AD

(*) - Indicates Cost Plus Time Site. See Schedule of Items for Cost Per Unit

NOTICE TO BIDDERS

If a DBE goal is specified, the bidder shall submit with this bid proposal a list of all proposed DBE participants. A form for this purpose is provided in this proposal. Please refer to the following specifications:

102.07 Rejection of Proposals

Disadvantaged Business Enterprise Program (Special Provision)

Bidders must enter all unit prices, make all extensions, and total the bid.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**



Proposal Schedule of Items

Proposal ID: B14748-14-000-0

Project(s): 0010394, 0010401, 0010403

SECTION: 0001 ROADWAY

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0005	999-2010 DESIGN COMPLETE - 0010394	LUMP SUM	LUMP SUM		_____.	_____
0010	999-2010 DESIGN COMPLETE - 0010401	LUMP SUM	LUMP SUM		_____.	_____
0015	999-2010 DESIGN COMPLETE - 0010403	LUMP SUM	LUMP SUM		_____.	_____
0020	999-2015 CONSTRUCTION COMPLETE - 0010394	LUMP SUM	LUMP SUM		_____.	_____
0025	999-2015 CONSTRUCTION COMPLETE - 0010401	LUMP SUM	LUMP SUM		_____.	_____
0030	999-2015 CONSTRUCTION COMPLETE - 0010403	LUMP SUM	LUMP SUM		_____.	_____
Section: 0001			Total:		_____.	_____
			Total Bid:		_____.	_____

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

DBE GOALS

VENDOR ID : _____ BIDDER'S COMPANY NAME: _____

PROJECT NO. & COUNTY: **0010394, 0010401, 0010403 Cobb**

LET NO: **001** LET DATE: **March 21, 2014** TOTAL BID: _____

THE REQUIRED DBE GOAL ON THIS CONTRACT IS : 11%

I PROPOSE TO UTILIZE THE FOLLOWING DBE'S:

LIST OF DBE PARTICIPANTS

*VENDOR NUMBER	DBE NAME/ ADDRESS (CITY, STATE)	TYPE OF WORK	RACE Neutral	Race Conscious	*WORK CODE	AMOUNT
TOTAL						

* For Departmental use only. Do not fill in Work codes.

PLEASE NOTE : Only 60% of the participation of a DBE Supplier who does not manufacture or install the product will be counted toward the goal. See below for further instructions.

INSTRUCTIONS FOR LIST OF DBE PARTICIPANTS

If a DBE Goal is indicated, you must propose to achieve a goal that is equal or greater than the percentage required. If no goal is indicated, you may propose your own goal.

The DBE Firms to be utilized as counting toward the proposed goal must be listed on this form, along with their addresses, type of work and the amount to be paid to each of the minority firms. The amount entered will not necessarily be the contract amount, but must be the actual amount that will be paid to the DBE firm. In the case of a DBE supplier, the amount paid and 60% of that amount both will be entered; and only the 60% figure should be added to the total. An example of this is shown in the example chart:

Vendor Number	Company Name And Address (City and State)	Type of Work	* Work Code	Race Neutral	Race Conscious	Amount
	ABC Oil Company Atlanta, GA	Diesel Fuel Supplier				\$80,000.00 (60% = \$48,000.00)

* For Departmental use ONLY. Do not fill in Work Codes.

The Contractor shall indicate for each DBE and Type of Work whether the DBE Participant is Race Neutral or Race Conscious by placing a checkmark in the appropriate column.

PLEASE NOTE: For 60% of the amount paid to a DBE supplier to be eligible to count toward fulfilling the DBE goal, the supplier must be an established “regular dealer” in the product involved, and not just a broker. A “regular dealer” would normally sell the product to several customers and would usually have product inventory on hand.

STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION
CONSTRUCTION CONTRACTORS
BID OPPORTUNITY LIST

FORM EEOB
PREQUALIFICATION OFFICE
Revised 05/16/11

Please complete and mail or FAX to:
Construction Bidding Administration
600 West Peachtree Street, NW
Suite 1113
Atlanta, Georgia 30308
TELEPHONE: (404) 631-1147
FAX: (404) 631-1275

This information shall be submitted in accordance with Specification Section 102.18

Prime Contractor/Consultant: _____
Address/Telephone Number: _____
Bid/Proposal Number: _____
Quote Submitted MM/YY: _____

49 CRF Part 26.11 requires the Georgia Department of Transportation to develop and maintain a "bid opportunity list". The list is intended to be a listing of all firms participating or attempting to participate, on DOT assisted contracts. The list must include all firms that bid on prime contracts, or bid or quote subcontracts and materials supplies on DOT-assisted projects, including both DBEs and non-DBEs. For consulting companies this list must include all subconsultants contacting you and expressing an interest in teaming with you on a specific DOT assisted project. Prime contractors and consultants must provide information for Nos. 1, 2, 3, and 4 and must provide information they have available on Numbers 5, 5.A.6, 7, 8 and 9 for themselves, and their subcontractors and subconsultants.

1. Federal Tax ID Number: _____
2. Firm Name: _____
3. Phone: _____
4. Address: _____

6. DBE
 Non-DBE
7. Subcontractor
8. Subconsultant
9. Supplier

5. Contact _____
5.A. Company E mail address _____

-
1. Federal Tax ID Number: _____
2. Firm Name: _____
3. Phone: _____
4. Address: _____

6. DBE
 Non-DBE
7. Subcontractor
8. Subconsultant
9. Supplier

5. Contact _____
5.A. Company E mail address _____

-
1. Federal Tax ID Number: _____
2. Firm Name: _____
3. Phone: _____
4. Address: _____

6. DBE
 Non-DBE
7. Subcontractor
8. Subconsultant
9. Supplier

5. contact _____
5.A. Company E mail address _____

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT

Contractor(s) Name: _____

Letting: _____

Call No: _____

By executing this affidavit, the undersigned person or entity verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with the Georgia Department of Transportation has registered with, is authorized to participate in, and is participating in the federal work authorization program commonly known as E-Verify,* in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91.

The undersigned person or entity further agrees that it will continue to use the federal work authorization program throughout the contract period, and it will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the undersigned with the information required by O.C.G.A. § 13-10-91(b).

The undersigned person or entity further agrees to maintain records of such compliance and provide a copy of each such verification to the Georgia Department of Transportation within five(5) business days after any subcontractor(s) is/are retained to perform such service.

E Verify™ Company Identification Number

Date of Authorization

BY: Authorized Officer or Agent
(Name of Person or Entity)

Date

Title of Authorized Officer or Agent

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE

____ DAY OF _____, 201__

[NOTARY SEAL]

Notary Public

My Commission Expires: _____

* or any subsequent replacement operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

REQUEST FOR ELIGIBILITY TO BID

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF CONSTRUCTION BIDDING ADMINISTRATION
600 West Peachtree St., N.W.
Atlanta, GA 30308

Email SalesOffice@dot.ga.gov

GDOT FAX NUMBERS: (404)631-1070 Sales Office Fax
(404)631-1275 Sales Office Alternate Fax
(404)631-1945 Main Office CBA Fax

LETTING DATE:

GDOT
VENDOR CODE:

COMPANY NAME:

CONTACT PERSON:

EMAIL ADDRESS:

*FOR OPTIMUM SERVICE, KEEP GDOT UP-TO-DATE
WITH YOUR CONTACT INFORMATION*

(Mailing Address, Phone No., Fax No., E-mail Address, Primary Contact Person, etc.

Indicate below the three digits of the Call Order Number, and your bidding status

B = Bidding Prime

(Example: 1.) 001 B 2.) 006 B 3.) 018 B etc.)

1.	<input type="text"/>	5.	<input type="text"/>	9.	<input type="text"/>	13.	<input type="text"/>
2.	<input type="text"/>	6.	<input type="text"/>	10.	<input type="text"/>	14.	<input type="text"/>
3.	<input type="text"/>	7.	<input type="text"/>	11.	<input type="text"/>	15.	<input type="text"/>
4.	<input type="text"/>	8.	<input type="text"/>	12.	<input type="text"/>	16.	<input type="text"/>

Complete this form to Request For Eligibility To Bid. The deadline to submit this form to GDOT, Office of Construction Bidding Administration is no later than 12:00 p.m. on the day preceding the letting. **** Failure to submit this document will result in ineligibility to bid.**

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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FEDERAL AID CERTIFICATION
(English Project)

First Use Date 2013 Specifications: November 22, 2013

Failure to complete appropriate certification requirements identified below or submission of a false certification shall render the bid non-responsive.

EQUAL EMPLOYMENT OPPORTUNITY

I further certify that I have ___/have not ___ participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that I have ___ / have not ___ filed with the Joint Reporting Committee, the Director of the *Office of Federal Contract Compliance*, a Federal Government contracting or administering agency, or the former *President's Committee on Equal Employment Opportunity*, all reports due under the applicable filing requirements.

I understand that if I have participated in a previous Contract or Subcontract subject to the Executive Orders above and have not filed the required reports that 41 CFR 60-1.7(b)(1) prevents the award of this Contract unless I submit a report governing 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.

Reports and notifications required under 41 CFR 604, including reporting subcontract awards in excess of \$10,000.00 should be addressed to:

Ms. Carol Gaudin
Regional Director, U. S. Department of Labor
Office of Federal Contract Compliance Programs, Region 4
Rm. 7B75
61 Forsyth St. SW
Atlanta GA 30303

EXAMINATION OF PLANS AND SPECIFICATIONS

I acknowledge that this Project will be constructed in English units.

I certify that I have carefully examined the Plans for this Project and the Standard Specifications 2013 Edition, Supplemental Specifications and Special Provisions included in and made a part of this Proposal, and have also personally examined the site of the work. On the basis of the said Specifications and Plans, I propose to furnish all necessary machinery, tools, apparatus and other means of construction, and do all the work and furnish all the materials in the manner specified.

I understand the quantities mentioned are approximate only and are subject to either increase or decrease and hereby propose to perform any increased or decreased quantities of work or extra work on the basis provided for in the Specifications.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

I also hereby agree that the State, or the Department of Transportation, would suffer damages in a sum equal to at least the amount of the enclosed Proposal Guaranty, in the event my Proposal should be accepted and a Contract tendered me thereunder and I should refuse to execute same and furnish bond as herein required, in consideration of which I hereby agree that, in the event of such failure on my part to execute said Contract and furnish bond within fifteen (15) days after the date of the letter transmitting the Contract to me, the amount of said Proposal Guaranty shall be and is hereby, forfeited to the State, or to the Department of Transportation, as liquidated damages as the result of such failure on my part.

I further propose to execute the Contract agreement described in the Specifications as soon as the work is awarded to me, and to begin and complete the work within the time limit provided. I also propose to furnish a Contract Bond, approved by the State Transportation Board, as required by the laws of the State of Georgia. This bond shall not only serve to guarantee the completion of the work on my part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted, as well as to fully comply with all the laws of the State of Georgia.

CONFLICT OF INTEREST

By signing and submitting this Contract I hereby certify that employees of this company or employee of any company supplying material or subcontracting to do work on this Contract will not engage in business ventures with employees of the Georgia Department of Transportation (GA D.O.T.) nor shall they provide gifts, gratuities, favors, entertainment, loans or other items of value to employees of this department.

Also, by signing and submitting this Contract I hereby certify that I will notify the Georgia Department of Transportation through its District Engineer of any business ventures entered into between employees of this company or employees of any company supplying material or subcontracting to do work on this Contract with a family member of GA D.O.T. employees.

DRUG FREE WORKPLACE

The undersigned certifies that the provisions of Code Sections 50-24-1 through 50-24-6 of the Official Code of Georgia Annotated, relating to the "Drug-free Workplace Act", have been complied with in full. The undersigned further certifies that:

- (1) A drug-free workplace will be provided for the Contractor's employees during the performance of the Contract; and
- (2) Each Contractor who hires a Subcontractor to work in a drug-free workplace shall secure from that Subcontractor the following written certification:

"As part of the subcontracting agreement with _____ (Contractor's name) _____, _____ (Subcontractor's name) _____ certifies to the Contractor that a drug free workplace will be provided for the Subcontractor's employees during the performance of this Contract pursuant to paragraph (7) of subsection (b) of Code Section 50-24-3."

Also, the undersigned further certifies that he will not engage in the unlawful manufacture, sale distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the Contract.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

NON-COLLUSION CERTIFICATION

I hereby certify that I have not, nor has any member of the firm(s) or corporation(s), either directly or indirectly entered into any agreement, participated in any collusion, nor otherwise taken any action in restraint of free competitive bidding in connection with this submitted bid.

It is understood and agreed that this Proposal is one of several competitive bids made to the Department of Transportation, and in consideration of mutual agreements of the bidders, similar hereto, and in consideration of the sum of One Dollar cash in hand paid, receipt whereof is hereby acknowledged, the undersigned agrees that this Proposal shall be an option, which is hereby given by the undersigned to the Department of Transportation to accept or reject this Proposal at any time within thirty (30) calendar days from the date on which this sealed proposal is opened and read, unless a longer period is specified in the Proposal or the successful bidder agrees in writing to a longer period of time for the award, and in consideration of the premises, it is expressly covenanted and agreed that this Proposal is not subject to withdrawal by the Proposer or Bidder, during the term of said option.

I hereby acknowledge receipt of the following checked amendments of the Proposal, Plans, Specifications and/or other documents pertaining to the Contract.

Amendment Nos.: 1 ___ 2 ___ 3 ___ 4 ___ 5 ___. I understand that failure to confirm the receipt of amendments is cause for rejection of bids.

Witness my hand and seal this the ___ day of _____, 20___.

The bidder(s) whose signature(s) appear on this document, having personally appeared before me, and being duly sworn, deposes and says that the above statements are true and correct.

Sworn to and subscribed before me this _____ day of _____, 20___.

(Notary Public)

My Commission expires the _____ day of _____, 20___.

(Federal ID No./IRS No.)

(Print Company Name)

By _____ (Seal)
Corporate President/Vice President or
Individual Owner or Partner (Strike
through all except the one which applies.)

Joint Bidder:

(Print Company Name)

By _____ (Seal)
Corporate President/Vice President or
Individual Owner or Partner (Strike
through all except the one which applies.)

Joint Bidder:

(Print Company Name)

By _____ (Seal)
Corporate President/Vice President or
or Individual Owner or Partner (Strike
through all except the one which applies.)

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROPOSAL INDEX

Let Date: March 21, 2014

Call Order Number: 001

Counties: Cobb DeKalb Fulton

Project No(s): 0010394

Listed below are modifications and additions to the 2013 State of Georgia Standard Specifications Construction of Transportation Systems.

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**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free “hotline” Monday through Friday, 8:00 AM to 5:00 PM, Eastern Time. Anyone with the 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.

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

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
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- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

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

I. GENERAL

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

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

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

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

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

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

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

II. NONDISCRIMINATION

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

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

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

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

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

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

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

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

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

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

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

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

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

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

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

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

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

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

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

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

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

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

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

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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

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

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

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

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

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

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

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

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

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

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

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

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

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

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

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

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

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

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

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

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

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

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

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

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

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

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

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

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

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

will notify the contracting officer within the 30-day period that additional time is necessary.

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

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

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

2. Withholding

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

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

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

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

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

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

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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

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

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

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

b. Trainees (programs of the USDOL).

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

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

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

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

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

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

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

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

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

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

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

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

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

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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

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

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

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

VI. SUBLETTING OR ASSIGNING THE CONTRACT

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

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

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

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

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

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

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

VII. SAFETY: ACCIDENT PREVENTION

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

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

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

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

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

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

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

Shall be fined under this title or imprisoned not more than 5 years or both."

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

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

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

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

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

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

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

1. Instructions for Certification – First Tier Participants:

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

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

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

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

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

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

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

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

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

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

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

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

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

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

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

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

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

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

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

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

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

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

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

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

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

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

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

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

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

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

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

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

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

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

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

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

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

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

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

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

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

SPECIAL PROVISION

Required Contract Provisions Federal-Aid Construction Contracts

1. *Subsection I.4 Selection of Labor; Delete the last sentence in the paragraph.*
2. *Subsections IV Davis Bacon and Related Act Provisions; Delete the first paragraph in its entirety and substitute the following:*

“This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts. The requirements apply to all projects located within the right-of-way of a roadway.”

APPENDIX A
NOTICE TO CONTRACTORS
COMPLIANCE WITH TITLE VI OF THE CIVIL RIGHTS ACT OF 1964
FOR
FEDERAL-AID CONTRACTS

During the performance of this Contract, the Contractor, for itself, its assignees and successors in interest (hereinafter referred to as the “Contractor”), agrees as follows:

1. Compliance with Regulations: The Contractor will comply with the Regulations of the Department of Transportation relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (Title 49, Code of Federal Regulations, Part 21, hereinafter referred to as the “Regulations”), which are herein incorporated by reference and made a part of the Contract.
2. Nondiscrimination: The Contractor, with regard to the work performed by it afterward and prior to completion of the contract work, will not discriminate on the ground of race, color, national origin, disability, sex, or age in the selection and retention of subcontracts including procurements of materials and leases of equipment. This will be done in accordance with Title VI of the Civil Rights Act of 1964 and other Non-Discrimination Authorities i.e., Section 504 of the 1973 Rehabilitation Act, the 1973 Federal-Aid Highway Act, the 1975 Age Discrimination Act, and the Americans with Disabilities Act of 1990. The Contractor will not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when contract covers a program set forth in Appendix B of the Regulations. In addition, the Contractor will not participate either directly or indirectly in discrimination prohibited by 23 CFR 710.405 (b).
3. Solicitations for subcontracts, including procurements of materials and equipment: In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor’s obligations under this Contract and the Regulations relative to nondiscrimination on the ground of race, color, national origin, disability, sex or age.

4. Information and Reports: The Contractor will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the Department of Transportation shall impose such Contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- (a) withholding of payments to the Contractors under the Contract until the Contractor complies, and/or
- (b) Cancellation, termination or suspension of the Contract, in whole or in part.

6. Incorporation of Provisions: The Contractor will include the provisions of paragraph (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, orders or instruction issued pursuant thereto. The Contractor will take such action with respect to any subcontract or procurement as the Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as result of such direction, the Contractor may request the State to enter into such litigation to protect the interests of the State, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140001 01/03/2014 GA1

State: GEORGIA

Superseded General Decision Number: GA20130001

County(ies): BARTOW, CATOOSA, CHATTOOGA, DADE, FANNIN, FLOYD, GILMER, GORDON, HARALSON, MURRAY, PAULDING, PICKENS, POLK, WALKER and WHITFIELD Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number Publication Date
0 01/03/2014

SUGA2011-001 03/07/2011

	RATES	FRINGES
CARPENTER.....	11.45	
CEMENT MASON/CONCRETE FINISHER.....	11.15	
LABORER: ASPHALT RAKER.....	11.00	
LABORER: ASPHALT SCREED PERSON.....	10.50	
LABORER: COMMON OR GENERAL.....	9.00	
LABORER: GUARDRAIL ERECTOR.....	13.50	
LABORER: MILLING MACHINE GROUND PERSON.....	10.00	
LABORER: PIPE LAYER.....	10.20	
LABORER: TRAFFIC CONTROL BARRICADE FLAGGER.....	10.00	
POWER EQUIPMENT OPERATOR: ASPHALT DISTRIBUTOR.....	14.10	
POWER EQUIPMENT OPERATOR: ASPHALT PAVER/SPREADER.....	12.00	
POWER EQUIPMENT OPERATOR: BACKHOE/EXCAVATOR.....	10.80	
POWER EQUIPMENT OPERATOR: BULLDOZER.....	11.60	
POWER EQUIPMENT OPERATOR: COMPACTOR.....	10.00	
POWER EQUIPMENT OPERATOR: CRANE/Dragline.....	17.50	
POWER EQUIPMENT OPERATOR: CRUSHER.....	14.00	
POWER EQUIPMENT OPERATOR: FRONT END LOADER.....	10.70	
POWER EQUIPMENT OPERATOR: MECHANIC.....	14.50	
POWER EQUIPMENT OPERATOR: MILLING MACHINE.....	11.50	
POWER EQUIPMENT OPERATOR: MOTORGRADER FINE GRADE.....	14.55	
POWER EQUIPMENT OPERATOR: ROLLER.....	10.00	
POWER EQUIPMENT OPERATOR: WATER TRUCK.....	11.25	
TRUCK DRIVER: 26,000 GVW & UNDER.....	10.79	
TRUCK DRIVER: 26,001 GVW & OVER.....	11.00	
WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.		

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140002 01/03/2014 GA2

Continued

State: GEORGIA

Superseded General Decision Number: GA20130002

County(ies): BANKS, DAWSON, FORSYTH, FRANKLIN, HABERSHAM, HALL, HART, LUMPKIN,
RABUN, STEPHENS, TOWNS, UNION and WHITE Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number	Publication Date
0	01/03/2014

SUGA2011-002 03/07/2011

TRUCK DRIVER: 26,001 GVW & OVER..... 16.25
WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140003 01/03/2014 GA3

State: GEORGIA

Superseded General Decision Number: GA20130003

County(ies): CHEROKEE, CLAYTON, COBB, DEKALB, DOUGLAS, FAYETTE, FULTON, GWINNETT, HENRY and ROCKDALE Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number Publication Date
0 01/03/2014

SUGA2011-003 03/07/2011

	RATES	FRINGES
CARPENTER.....	11.16	
CEMENT MASON/CONCRETE FINISHER.....	10.99	
LABORER: ASPHALT RAKER.....	11.00	
LABORER: ASPHALT SCREED PERSON.....	10.50	
LABORER: COMMON OR GENERAL.....	9.00	
LABORER: FORM SETTER.....	10.35	
LABORER: GUARDRAIL ERECTOR.....	13.50	
LABORER: MILLING MACHINE GROUND PERSON.....	10.00	
LABORER: PIPE LAYER.....	10.20	
LABORER: TRAFFIC CONTROL BARRICADE FLAGGER.....	10.00	
POWER EQUIPMENT OPERATOR: ASPHALT DISTRIBUTOR.....	14.10	
POWER EQUIPMENT OPERATOR: ASPHALT PAVER/SPREADER.....	12.28	
POWER EQUIPMENT OPERATOR: BACKHOE/EXCAVATOR.....	10.80	
POWER EQUIPMENT OPERATOR: BULLDOZER.....	11.60	
POWER EQUIPMENT OPERATOR: COMPACTOR.....	10.00	
POWER EQUIPMENT OPERATOR: CONCRETE CURB MACHINE.....	16.45	
POWER EQUIPMENT OPERATOR: CRANE/DRAGLINE.....	17.50	
POWER EQUIPMENT OPERATOR: CRUSHER.....	14.00	
POWER EQUIPMENT OPERATOR: FRONT END LOADER.....	10.70	
POWER EQUIPMENT OPERATOR: MATERIAL TRANSFER VEHICLE (SHUTTLE BUGGY).....	11.30	
POWER EQUIPMENT OPERATOR: MECHANIC.....	14.47	
POWER EQUIPMENT OPERATOR: MILLING MACHINE.....	12.37	
POWER EQUIPMENT OPERATOR: MOTORGRADER FINE GRADE.....	14.55	
POWER EQUIPMENT OPERATOR: MOTORGRADER/BLADE.....	14.39	
POWER EQUIPMENT OPERATOR: ROLLER.....	10.00	
POWER EQUIPMENT OPERATOR: SCRAPER-PAN.....	10.00	
POWER EQUIPMENT OPERATOR: SWEEPER TRUCK.....	14.21	

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140003 01/03/2014 GA3
Continued

State: GEORGIA

Superseded General Decision Number: GA20130003

County(ies): CHEROKEE, CLAYTON, COBB, DEKALB, DOUGLAS, FAYETTE, FULTON,
GWINNETT, HENRY AND ROCKDALE Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number Publication Date
0 01/03/2014

SUGA2011-003 03/07/2011

	RATES	FRINGES
POWER EQUIPMENT OPERATOR: WATER TRUCK.....	11.25	
	RATES	FRINGES
TRUCK DRIVER: 26,000 GVW & UNDER.....	10.76	
TRUCK DRIVER: 26,001 GVW & OVER.....	14.91	
WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.		

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140004 01/03/2014 GA4

State: GEORGIA

Superseded General Decision Number: GA20130004

County(ies): BUTTS, CARROLL, COWETA, HEARD, LAMAR, MERIWETHER, PIKE, SPALDING, TROUP, and UPSON Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number Publication Date
0 01/03/2014

SUGA2011-004 03/07/2011

	RATES	FRINGES
CARPENTER.....	11.45	
CEMENT MASON/CONCRETE FINISHER.....	11.22	
LABORER: ASPHALT RAKER.....	11.00	
LABORER: ASPHALT SCREED PERSON.....	10.50	
LABORER: COMMON OR GENERAL.....	9.00	
LABORER: GUARDRAIL ERECTOR.....	13.50	
LABORER: MILLING MACHINE GROUND PERSON.....	10.00	
LABORER: PIPE LAYER.....	10.20	
LABORER: TRAFFIC CONTROL BARRICADE FLAGGER.....	9.77	
POWER EQUIPMENT OPERATOR: ASPHALT DISTRIBUTOR.....	14.10	
POWER EQUIPMENT OPERATOR: ASPHALT PAVER/SPREADER... ..	12.00	
POWER EQUIPMENT OPERATOR: BACKHOE/EXCAVATOR.....	10.80	
POWER EQUIPMENT OPERATOR: BULLDOZER.....	11.60	
POWER EQUIPMENT OPERATOR: COMPACTOR.....	10.00	
POWER EQUIPMENT OPERATOR: CRANE/DRAGLINE.....	17.50	
POWER EQUIPMENT OPERATOR: CRUSHER.....	14.00	
POWER EQUIPMENT OPERATOR: FRONT END LOADER.....	10.70	
POWER EQUIPMENT OPERATOR: MATERIAL TRANSFER VEHICLE (SHUTTLE BUGGY).....	11.30	
POWER EQUIPMENT OPERATOR: MECHANIC.....	14.50	
POWER EQUIPMENT OPERATOR: MILLING MACHINE.....	11.50	
POWER EQUIPMENT OPERATOR: MOTORGRADER FINE GRADE.....	14.55	
POWER EQUIPMENT OPERATOR: MOTORGRADER/BLADE.....	14.00	
POWER EQUIPMENT OPERATOR: ROLLER.....	10.00	
POWER EQUIPMENT OPERATOR: WATER TRUCK.....	11.25	
TRUCK DRIVER: 26,000 GVW & UNDER.....	10.76	
TRUCK DRIVER: 26,001 GVW & OVER.....	12.90	
WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.		

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140005 01/03/2014 GA5

Continued

State: GEORGIA

Superseded General Decision Number: GA20130005

County(ies): BALDWIN, BIBB, CRAWFORD, HOUSTON, JONES, MONROE, PEACH, PULASKI,
PUTNAM, TWIGGS, and WILKINSON Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number	Publication Date
0	01/03/2014

TRUCK DRIVER: 26,001 GVW & OVER..... 11.88

WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140006 01/03/2014 GA6

Continued

State: GEORGIA

Superseded General Decision Number: GA20130006

County(ies): BARROW, CLARKE, ELBERT, GREENE, JACKSON, JASPER, MADISON, MORGAN,
NEWTON, OCONEE, OGLETHORPE and WALTON Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number	Publication Date
0	01/03/2014

SUGA2011-006 03/07/2011

TRUCK DRIVER: 26,000 GVW & UNDER..... 10.76

TRUCK DRIVER: 26,001 GVW & OVER..... 13.66

WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140007 01/03/2014 GA7

State: GEORGIA

Superseded General Decision Number: GA20130007

County(ies): BURKE, COLUMBIA, GLASCOCK, HANCOCK, JEFFERSON, JENKINS, LINCOLN, MCDUFFIE, RICHMOND, TALIAFERRO, WARREN, WASHINGTON and WILKES Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number	Publication Date
0	01/03/2014

SUGA2011-007 03/07/2011

	RATES	FRINGES
CARPENTER.....	11.45	
CEMENT MASON/CONCRETE FINISHER.....	11.36	
LABORER: ASPHALT RAKER.....	11.00	
LABORER: ASPHALT SCREED PERSON.....	10.50	
LABORER: COMMON OR GENERAL.....	8.93	
LABORER: FORM SETTER.....	10.35	
LABORER: GUARDRAIL ERECTOR.....	13.50	
LABORER: MILLING MACHINE GROUND PERSON.....	10.00	
LABORER: PIPE LAYER.....	10.20	
POWER EQUIPMENT OPERATOR: ASPHALT DISTRIBUTOR.....	14.10	
POWER EQUIPMENT OPERATOR: ASPHALT PAVER/SPREADER.....	12.00	
POWER EQUIPMENT OPERATOR: BACKHOE/EXCAVATOR.....	10.80	
POWER EQUIPMENT OPERATOR: BULLDOZER.....	11.60	
POWER EQUIPMENT OPERATOR: COMPACTOR.....	10.00	
POWER EQUIPMENT OPERATOR: CRANE/DRAGLINE.....	17.50	
POWER EQUIPMENT OPERATOR: FRONT END LOADER.....	10.70	
POWER EQUIPMENT OPERATOR: MATERIAL TRANSFER VEHICLE (SHUTTLE BUGGY).....	11.30	
POWER EQUIPMENT OPERATOR: MECHANIC.....	12.75	
POWER EQUIPMENT OPERATOR: MILLING MACHINE.....	11.50	
POWER EQUIPMENT OPERATOR: MOTORGRADER FINE GRADE.....	14.55	
POWER EQUIPMENT OPERATOR: MOTORGRADER/BLADE.....	16.00	
POWER EQUIPMENT OPERATOR: ROLLER.....	10.00	
POWER EQUIPMENT OPERATOR: WATER TRUCK.....	11.25	
TRUCK DRIVER: 26,000 GVW & UNDER.....	10.79	
TRUCK DRIVER: 26,001 GVW & OVER.....	12.75	
WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.		

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140008 01/03/2014 GA8

Continued

State: GEORGIA

Superseded General Decision Number: GA20130008

County(ies): CHATTAHOOCHEE, CLAY, CRISP, DOOLY, HARRIS, MACON, MARION,
MUSCOGEE, QUITMAN, RANDOLPH, SCHLEY, STEWART, SUMTER, TALBOT,
TAYLOR and WEBSTER Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number Publication Date
0 01/03/2014

SUGA2011-008 03/07/2011

	RATES	FRINGES
POWER EQUIPMENT OPERATOR: MOTORGRADER/BLADE.....	9.50	
POWER EQUIPMENT OPERATOR: ROLLER.....	10.00	
POWER EQUIPMENT OPERATOR: SCRAPER-PAN.....	13.48	
POWER EQUIPMENT OPERATOR: WATER TRUCK.....	11.25	
TRUCK DRIVER: 26,000 GVW & UNDER.....	10.76	
TRUCK DRIVER: 26,000 GVW & OVER.....	10.83	

WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140009 01/03/2014 GA9

State: GEORGIA

Superseded General Decision Number: GA20130009

County(ies): APPLING, BLECKLEY, CANDLER, DODGE, EMANUEL, EVANS, JEFF DAVIS, JOHNSON, LAURENS, MONTGOMERY, TATTNALL, TELFAIR, TOOMBS, TREUTLEN, WAYNE, WHEELER and WILCOX Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number Publication Date
0 01/03/2014

SUGA2011-009 03/07/2011

	RATES	FRINGES
CEMENT MASON/CONCRETE FINISHER.....	11.50	
LABORER: ASPHALT RAKER.....	11.00	
LABORER: ASPHALT SCREED PERSON.....	10.50	
LABORER: COMMON OR GENERAL.....	9.00	
LABORER: FORM SETTER.....	10.35	
LABORER: GUARDRAIL ERECTOR.....	13.50	
LABORER: MILLING MACHINE GROUND PERSON.....	10.00	
LABORER: TRAFFIC CONTROL BARRICADE FLAGGER.....	9.50	
POWER EQUIPMENT OPERATOR: ASPHALT DISTRIBUTOR.....	14.10	
POWER EQUIPMENT OPERATOR: ASPHALT PAVER/SPREADER.....	12.00	
POWER EQUIPMENT OPERATOR: BACKHOE/EXCAVATOR.....	10.80	
POWER EQUIPMENT OPERATOR: BULLDOZER.....	11.60	
POWER EQUIPMENT OPERATOR: COMPACTOR.....	10.00	
POWER EQUIPMENT OPERATOR: CRANE/DRAGLINE.....	17.50	
POWER EQUIPMENT OPERATOR: FRONT END LOADER.....	10.70	
POWER EQUIPMENT OPERATOR: MECHANIC.....	15.86	
POWER EQUIPMENT OPERATOR: MILLING MACHINE.....	12.26	
POWER EQUIPMENT OPERATOR: MOTORGRADER FINE GRADE.....	14.55	
POWER EQUIPMENT OPERATOR: MOTORGRADER/BLADE.....	14.00	
POWER EQUIPMENT OPERATOR: ROLLER.....	10.00	
POWER EQUIPMENT OPERATOR: WATER TRUCK.....	11.25	
TRUCK DRIVER: 26,000 GVW & UNDER.....	10.79	
TRUCK DRIVER: 26,001 GVW & OVER.....	11.37	
WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.		

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140010 01/03/2014 GA10

State: GEORGIA

Superseded General Decision Number: GA20130010

County(ies): BRYAN, BULLOCH, CAMDEN, CHATHAM, EFFINGHAM, GLYNN, LIBERTY, LONG, MCINTOSH, and SCREVEN Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number Publication Date
0 01/03/2014

SUGA2011-010 03/07/2011

	RATES	FRINGES
CARPENTER: FORM BUILDER ONLY (WOOD).....	9.21	
CEMENT MASON/CONCRETE FINISHER.....	10.98	
LABORER: ASPHALT RAKER.....	9.55	
LABORER: COMMON OR GENERAL.....	9.21	
LABORER: GUARDRAIL ERECTOR.....	13.50	
LABORER: PIPE LAYER.....	9.36	
POWER EQUIPMENT OPERATOR: ASPHALT DISTRIBUTOR.....	15.09	
POWER EQUIPMENT OPERATOR: ASPHALT PAVER/SPREADER.....	11.29	
POWER EQUIPMENT OPERATOR: BACKHOE/EXCAVATOR.....	13.14	
POWER EQUIPMENT OPERATOR: BULLDOZER.....	12.69	
POWER EQUIPMENT OPERATOR: COMPACTOR.....	11.00	
POWER EQUIPMENT OPERATOR: CRANE/DRAGLINE.....	15.00	
POWER EQUIPMENT OPERATOR: FRONT END LOADER.....	10.00	
POWER EQUIPMENT OPERATOR: MECHANIC.....	12.57	
POWER EQUIPMENT OPERATOR: MOTORGRADER FINE GRADE.....	14.12	
POWER EQUIPMENT OPERATOR: ROLLER.....	9.39	
POWER EQUIPMENT OPERATOR: WATER TRUCK.....	11.17	
TRUCK DRIVER: 26,000 GVW & UNDER.....	9.60	
TRUCK DRIVER: 26,001 GVW & OVER.....	13.72	
WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.		

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140011 01/03/2014 GA11

State: GEORGIA

Superseded General Decision Number: GA20130011

County(ies): BAKER, CALHOUN, COLQUITT, DECATUR, DOUGHERTY, EARLY, GRADY, LEE, MILLER, MITCHELL, SEMINOLE, TERRELL, THOMAS and WORTH Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number Publication Date
0 01/03/2014

SUGA2011-011 03/07/2011

	RATES	FRINGES
CEMENT MASON/CONCRETE FINISHER.....	10.98	
LABORER: ASPHALT RAKER.....	12.83	
LABORER: ASPHALT SCREED PERSON.....	9.00	
LABORER: COMMON OR GENERAL.....	8.72	
LABORER: GRADE CHECKER.....	8.72	
LABORER: GUARDRAIL ERECTOR.....	13.50	
LABORER: PIPE LAYER.....	8.72	
LABORER: SIGN INSTALLER/ERECTOR.....	11.00	
POWER EQUIPMENT OPERATOR: ASPHALT DISTRIBUTOR.....	14.55	
POWER EQUIPMENT OPERATOR: ASPHALT PAVER/SPREADER... ..	12.40	
POWER EQUIPMENT OPERATOR: BACKHOE/EXCAVATOR.....	10.50	
POWER EQUIPMENT OPERATOR: BROOM.....	10.68	
POWER EQUIPMENT OPERATOR: BULLDOZER.....	9.50	
POWER EQUIPMENT OPERATOR: FRONT END LOADER.....	10.00	
POWER EQUIPMENT OPERATOR: MECHANIC.....	8.96	
POWER EQUIPMENT OPERATOR: MILLING MACHINE.....	12.50	
POWER EQUIPMENT OPERATOR: MOTORGRADER FINE GRADE.....	18.75	
POWER EQUIPMENT OPERATOR: MOTORGRADER/BLADE.....	9.50	
POWER EQUIPMENT OPERATOR: ROLLER.....	10.20	
POWER EQUIPMENT OPERATOR: SCRAPER-PAN.....	9.30	
POWER EQUIPMENT OPERATOR: WATER TRUCK.....	11.25	
TRUCK DRIVER: 26,001 GVW & OVER.....	10.46	
WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.		

U. S. Department of Labor

GENERAL WAGE DECISION NO. GA140012 01/03/2014 GA12

State: GEORGIA

Superseded General Decision Number: GA20130012

County(ies): ATKINSON, BACON, BEN HILL, BERRIEN, BRANTLEY, BROOKS, CHARLTON, CLINCH, COFFEE, COOK, ECHOLS, IRWIN, LANIER, LOWNDES, PIERCE, TIFT, TURNER and WARE Counties in Georgia.

Construction Type: Highway

Construction

Description: HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension, and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges).

Modification Number Publication Date
0 01/03/2014

SUGA2011-012 03/07/2011

	RATES	FRINGES
CEMENT MASON/CONCRETE FINISHER.....	10.98	
LABORER: ASPHALT SCREED PERSON.....	9.00	
LABORER: COMMON OR GENERAL.....	8.52	
LABORER: GRADE CHECKER.....	9.90	
LABORER: GUARDRAIL ERECTOR.....	13.50	
LABORER: PIPE LAYER.....	8.52	
LABORER: SIGN INSTALLER/ERECTOR.....	11.00	
LABORER: TRAFFIC CONTROL BARRICADE FLAGGER.....	9.35	
POWER EQUIPMENT OPERATOR: ASPHALT DISTRIBUTOR.....	13.00	
POWER EQUIPMENT OPERATOR: ASPHALT PAVER/SPREADER.....	11.75	
POWER EQUIPMENT OPERATOR: BACKHOE/EXCAVATOR.....	10.50	
POWER EQUIPMENT OPERATOR: BROOM.....	10.68	
POWER EQUIPMENT OPERATOR: BULLDOZER.....	9.50	
POWER EQUIPMENT OPERATOR: FRONT END LOADER.....	10.00	
POWER EQUIPMENT OPERATOR: MECHANIC.....	9.26	
POWER EQUIPMENT OPERATOR: MILLING MACHINE.....	12.50	
POWER EQUIPMENT OPERATOR: MOTORGRADER FINE GRADE.....	17.95	
POWER EQUIPMENT OPERATOR: MOTORGRADER/BLADE.....	9.50	
POWER EQUIPMENT OPERATOR: ROLLER.....	9.90	
POWER EQUIPMENT OPERATOR: SCRAPER-PAN.....	9.30	
POWER EQUIPMENT OPERATOR: WATER TRUCK.....	11.25	
TRUCK DRIVER: 26,001 GVW & OVER.....	10.35	
WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.		

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION
CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246) (43 FR 14895)**

1. As used in these specifications:
 - a. “Covered area” means the geographical area described in the solicitation from which this contract resulted;
 - b. “Director” means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegated authority;
 - c. “Employer Identification Number” means the Federal Social Security number used on the Employer’s Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. “Minority” includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor’s or Subcontractor’s failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

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5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, nor the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minority and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing the notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year, and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

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- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc. prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
 - h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
 - i. Direct its recruitment efforts, both oral and written, to minority, female and community organization, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the-openings, screening procedures, and test to be used in the selection process.
 - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc. such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensue that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete

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benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

FEDERAL REGISTER / VOL. 45, NO. 194 / FRIDAY, OCTOBER 3, 1980 / NOTICES**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246) (43 FR 14895)**

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

GOALS FOR FEMALE PARTICIPATION

APPENDIX A
(43 FR 19473)

The following goals and timetables for female utilization shall be included in all Federal and federally assisted construction contracts and subcontracts in excess of \$10,000. The goals are applicable to the contractor's aggregate on-site construction workforce whether or not part of that workforce is performing work on a Federal or federally-assisted construction contract or subcontract. Area covered: Goals for Women apply nationwide.

Goals and timetables

Timetable	Goals (percent)
4-1-78 to 3-31-79	3.1
4-1-79 to 3-31-80	5.0
4-1-80 Until Further Notice	6.9

GOALS FOR
MINORITY PARTICIPATION

Appendix B-80

Until further notice, the following goals for minority utilization in each construction craft and trade shall be included in all Federal or federally assisted construction contracts and subcontracts in excess of \$10,000 to be performed in the respective geographical areas. The goals are applicable to each nonexempt contractor's total onsite construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally assisted or non-federally related project, contract or subcontract.

FEDERAL REGISTER / VOL. 45, NO. 194 / FRIDAY, OCTOBER 3, 1980 / NOTICES

Construction contractors which are participating in an approved Hometown Plan (see 41 CFR 60-4-5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the areas covered by the Hometown Plan. With regard to all their other covered construction work, such contractors are required to comply with the applicable SMSA or EA goal contained in this appendix B-80.

FEDERAL REGISTER / VOL. 45, NO. 194 / FRIDAY, OCTOBER 3, 1980 / NOTICES

State	Goal (percent)
Georgia:	
035 Augusta, GA:	
SMSA Counties:	
0600 Augusta, GA-SC	27.2
GA Columbia; GA Richmond, SC Aiken;	
Non-SMSA Counties	32.-8
GA Burke; GA Emanuel; GA Glascock; GA Jefferson;	
GA Jenkins; GA Lincoln; GA McDuffie, GA Talferro;	
GA Warren; GA Wilkes; SC Allendale; SC Bamberg;	
SC Barnwell; SC Edgefield; SC McCormick;	
036 Atlanta, GA:	
SMSA Counties:	
0520 Atlanta, GA	21.2
GA Butts; GA Cherokee; GA Clayton; GA	
Cobb; GA DeKalb; GA Douglas; GA Fayette, GA	
Forsyth; GA Fulton; GA Gwinnett; GA Henry; GA	
Newton; GA Paulding; GA Rockdale; GA Walton	
Non-SMSA Counties	19.5
GA Banks; GA Barrow; GA Bartow; GA Carroll; GA Clarke;	
GA Coweta; GA Dawson; GA Elbert; GA Fannin;	
GA Floyd; GA Franklin; GA Gilmer; GA Gordon;	
GA Greene; GA Habersham; GA Hall; GA	
Haralson; GA Hart; GA Heard; GA Jackson; GA	
Jasper; GA Lamar; GA Lampkin; GA Madison;	
GA Morgan; GA Oconee, GA Oglethorpe; GA	
Pickins, GA Pike; GA Polk; GA Rabun; GA	
Spalding; GA Stephens; GA Towns; GA; Union; GA Upson	
White	
037 Columbus, GA:	
SMSA Counties:	
1800 Columbus, GA – AL	29.6
Al Russell; GA Chattahoochee; GA Columbus	

Non-SMSA Counties	31.6
Al Chambers; AJ Lee; GA Harris; GA Marion; GA Meriwether; GA Quitman; GA Schley; GA Stewart; GA Sumter; GA Talbot; GA Troup; GA Webster	
038 Macon, GA:	
SMSA Counties:	
4680 Macon, GA	27.5
GA Bibb; GA Houston; GA Jones; GA Twiggs	
Non-SMSA Counties	31.7
GA Baldwin; GA Bleckley; Crawford; GA Crisp; GA Dodge; GA Dooly; GA Hancock; GA Johnson; GA Laurens; GA Macon; GA Monroe; GA Peach; GA Pulaski; GA Putman; GA Taylor; GA Telfair; GA Treutlan; GA Washington; GA Wheeler; GA Wilcox; GA Wilkinson	
039 Savannah, GA:	
SMSA Counties:	
7520 Savannah, GA	30.6
GA Bryan; GA Chatham; GA Effingham	
Non-SMSA Counties	29.8
GA Appling; GA Atkinson; GA Bacon, GA Bulloch; GA Candler; GA Coffee; GA Evans; GA Jeff Davis; GA Liberty; GA Long; GA McIntosh; GA Montgomery; GA Screven; GA Tattnell; GA Toombs; GA Wayne; SC Beaufort; SC Hampton; SC Jasper	
040 Albany, GA:	
SMSA Counties:	
0120 Albany, GA	32.1
GA Dougherty; GA Lee	
Non-SMSA Counties	31.1
GA Baker; GA Ben Hill; GA Berrien; GA Brooks; GA Calhoun; GA Clay; GA Clinch; GA Colquitt; GA Cook; GA Decatur; GA Early; GA Echols; GA Grady; GA Irwin; GA Lanier; GA Lowndes; GA Miller; GA Mitchell; GA Randolph; GA Seminole; GA Terrell; GA Thomas; GA Tift; GA Turner; GA Worth	
Florida:	
041 Jacksonville FL:	
Non-SMSA Counties.....	22.2
GA Brantley; GA Camden; GA Charlton; GA Glynn; GA Pierce; GA Ware	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
DISADVANTAGED BUSINESS ENTERPRISE PROGRAM
CRITERIA FOR ACCEPTABILITY

The purpose of this special provision is to establish criteria for acceptability of DBE firms for work performed on this contract. The intent is to ensure all participation counted toward fulfillment of the DBE goals is (1) real and substantial, (2) actually performed by viable, independent DBE owned firms, and (3) in accordance with the spirit of the applicable laws and regulations.

The policy of the Georgia Department of Transportation is to ensure compliance with Title VI of the Civil Rights Act of 1964, 49 Code of Federal Register, Part 26 and related statutes and regulations in all program activities.

To this end the Georgia Department of Transportation shall not discriminate on the basis of race, color, sex or national origin in the award, administration and performance of any Georgia Department of Transportation assisted contract or in the administration of its Disadvantaged Business Enterprise Program. The Georgia Department of Transportation shall take all necessary and reasonable steps to ensure nondiscrimination.

DBE payments and commitments for Federal-aid projects shall be separate and distinct and cannot be transferred or combined in any matter.

The DBE Goal specified in the contract will be a percentage representing the DBE Race Conscious Participation. The Contractor will strive to achieve an additional percentage in his/her contracts for all projects during the course of the current State Fiscal Year, in order to meet the overall Georgia Department of Transportation DBE goal.

DBE DIRECTORY: The Department has available a directory or source list to facilitate identifying DBEs with capabilities relevant to general contracting requirements and to particular solicitations. The Department will make the directory available to bidders and proposers in their efforts to meet the DBE requirements. The directory or listing includes firms which the Department has certified to be eligible DBEs in accordance with 49 CFR Part 26.

GOAL FOR PARTICIPATION: If a percentage goal for DBE participation in this contract is set forth elsewhere in this proposal, the Contractor shall complete the DBE GOALS Form included in the proposal. The Contractor is encouraged to make every effort to achieve the goal set by the Department. However, if the Contractor cannot find sufficient DBE participants to meet the goal established by the Department, the Department will consider for award a proposal with less participation than the established goal if:

- (A) The bidder can demonstrate no greater participation could be obtained. This should be well documented by demonstrating the Contractor's actions through good faith efforts.

The following is a list of types of actions which the Department will consider as part of the Contractor's good faith efforts to obtain DBE participation. This is not intended to be a mandatory checklist nor intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

- (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The Contractor must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The Contractor must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
- (2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate

DBE participation, even when the Contractor might otherwise prefer to perform these work items with its own forces.

(3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist DBEs participants in responding to a solicitation.

(4) (a) Negotiating in good faith with interested DBEs.

Contractor(s) are responsible to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

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

(5) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The

Contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. nonunion employee status) are not legitimate causes for the rejection or non solicitation of bids in the Contractor's efforts to meet the project goal.

- (6) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the contractor.
 - (7) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - (8) Effectively using the services of available minority/women community organizations; minority/women Contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE's.
- (B) The participation proposed by the low bidder is not substantially less than the participation proposed by the other bidders on the same contract.

If no percentage goal is set forth in the proposal, the contractor may enter a proposed DBE participation. This voluntary DBE participation will count as race neutral DBE participation. Prime Contractor shall report race-neutral participation in accordance with the DBE Monthly Report requirements shown in this document.

To be eligible for award of this contract,

All bidders will be required to submit the following information to the Department by the close of business on the 3rd working day following opening of the bid as a matter of bidder responsibility.

- (1) The names and addresses of DBE firms committed to participate in the Contract;
- (2) A description of the work each DBE will perform;
- (3) The dollar amount of the participation of each DBE firm participating;
- (4) Written documentation of the bidder's commitment to use a DBE subcontractor whose participation it submits to meet a contract goal;

- (5) Written confirmation from the DBE committed to participating in the contract, as provided in the prime contractor's commitment.
- (6) If the contract goal is not met, evidence of good faith efforts must be provided.

Failure by a bidder to furnish the above information may subject the bid to disqualification. Also failure by the bidder to submit satisfactory evidence of good faith efforts may subject the bid to disqualification.

Award of a contract by the Department to a Prime Contractor who has listed DBE participants with the bid may not constitute final approval by the Department of the listed DBE. The Department reserves the right to approve or disapprove a Disadvantaged firm after a review of the Disadvantaged firm's proposal participation. Payment to the Contractor under the contract may be withheld until final approval of the listed DBEs is granted by the Department.

If the Contractor desires to substitute a DBE in lieu of those listed in the proposal, a letter of concurrence shall be required from the listed DBE prior to approval of the substitution, unless this requirement is waived by the Department.

Agreements between bidder and a DBE in which promises not to provide Subcontracting quotations to other bidders are prohibited.

DEFINITION: For the purposes of this provision, the following definitions will apply:

Disadvantaged Business Enterprise or DBE means a for-profit small business concern –

- (1) Ensuring at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals; and
- (2) Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own the business.

Good Faith Efforts means efforts to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.

Joint Venture means an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

Socially and Economically Disadvantaged Individual means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is –

- (1) Any individual who the Department finds to be a socially and economically disadvantaged individual on a case-by-case basis.
- (2) Any individual in the following groups, members of which are reputedly presumed to be socially and economically disadvantaged.
 - (i) “Black Americans,” which includes persons having origins, in any of the Black racial groups of Africa;
 - (ii) “Hispanic Americans,” which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - (iii) “Native Americans,” which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;
 - (iv) “Asian-Pacific Americans,” which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;
 - (v) “Subcontinent Asian Americans,” which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;
 - (vi) Women;
 - (vii) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the

SBA designation becomes effective.

- (3) GDOT will presume that such persons are socially and economically disadvantaged only to the extent permitted by applicable federal law.

Race-conscious measure is one focused specifically on assisting only DBEs, including women-owned DBEs.

Race-neutral measure is one being, or can be, used to assist all small businesses. For the purposes of this part, race-neutral includes gender-neutrality.

DISCRIMINATION PROHIBITED: No person shall be excluded from participation in, denied the benefits of, or otherwise discriminated against in connection with the award and performance of this contract on the grounds of race, color, sex or national origin.

The following assurance becomes a part of this contract and must be included in and made a part of each subcontract the prime contractor enters into with their subcontractors (49 CFR 26.13):

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

Failure to Achieve Requirements: Periodic reviews shall be made by the Department to determine the extent of compliance with the requirements set forth in this provision. If the Contractor is found to be in noncompliance, further payments for any work performed may be withheld until corrective action is taken. If corrective action is not taken, it may result in termination of this contract.

Participation will be counted toward fulfillment of the DBE goal as follows:

- (A) When a DBE participates in a contract, the Contractor counts only the value of the work actually performed by the DBE toward DBE goals.
- (1) Count the entire amount of the portion of a construction contract (or other contract not covered by paragraph (A) (2) of this section) performed by the DBE's own forces. Include the cost of supplies and materials obtained by the DBE for the work of the contract, including supplies purchased or equipment leased by the DBE (except supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate).
 - (2) Count the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, toward DBE goals, provided the Department determines the fee is reasonable and not excessive as compared with fees customarily allowed for similar services.
 - (3) When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.
- (B) When a DBE performs as a participant in a joint venture, count a portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract the DBE performs with own forces toward DBE goals.
- (C) Count expenditures to a DBE contractor toward DBE goals only if the DBE is performing a commercially useful function on that contract.
- (1) A DBE performs a commercially useful function when responsible for execution of the work of the contract and carrying out responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible,

with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself.

- (2) A DBE does not perform a commercially useful function if their role is limited to being an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation.
 - (3) If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of their contract with their own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, the Department will presume the DBE is not performing a commercially useful function.
 - (4) When a DBE is presumed not to be performing a commercially useful function as provided in paragraph (C) (3) of this section, the DBE may present evidence to rebut this presumption.
 - (5) The Department's decisions on commercially useful function matters are subject to review by the US DOT, but are administratively appealable to the US DOT.
- (D) The following factors are to be used in determining whether a DBE trucking company is performing a commercially useful function:
- (1) The DBE must be responsible for the management and supervision of the entire trucking operation for which they are responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
 - (2) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
 - (3) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
 - (4) The 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 provided on the contract.

- (5) The DBE may also lease trucks from a non-DBE and is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. 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.
 - (6) For purposes of this paragraph (D), a lease must indicate the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, 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.
- (E) Count expenditures with DBEs for materials or supplies toward DBE goals as provided in the following:
- (1) (i) If the materials or supplies are obtained from a DBE manufacturer, count 100 percent of the cost of the materials or supplies toward DBE goals.
(ii) For purposes of this paragraph, 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) (i) If the materials or supplies are obtained from a DBE regular dealer, count 60 percent of the cost of the materials or supplies toward DBE goals.
(ii) For purposes of this section, a regular dealer is a firm owning, operating, or maintaining 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.

- (A) To be a regular dealer, the firm must be an established, regular business engaging, as its principal business and under its own name, in the purchase and sale or lease of the products in question.
 - (B) A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as provided in this paragraph **(E)(2)(ii)** if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.
 - (C) Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this paragraph **(E)(2)**.
- (3) With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, provided you determine the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. Do not count any portion of the cost of the materials and supplies themselves toward DBE goals, however.
 - (4) Do not count the participation of a DBE subcontractor toward the prime contractor's DBE achievements until the amount being counted toward the goal has been paid to the DBE.
 - (5) No participation will be counted not in compliance with Special Provision entitled "Criteria for Acceptability" which is a part of this contract or with any provisions included in 49 CFR Part 26.
 - (6) If the contract amount overruns, the contractor will not be required to increase the dollar amount of DBE participation. If the contract amount under runs, the contractor will not be allowed to under run the dollar

amount of DBE participation except when the DBE subcontracted items themselves under run.

REPORTS

A: The contractor shall submit a “DBE Participation Report” on this contract monthly which shall include the following:

1. The name of each DBE participating in the contract.
2. A description of the work to be performed, materials, supplies, and services provided by each DBE.
3. Whether each DBE is a supplier, subcontractor, owner/operator, or other.
4. The dollar value of each DBE subcontract or supply agreement.
5. The actual payment to date of each DBE participating in the contract.
6. The report shall be updated by the Prime Contractor whenever the approved DBE has performed a portion of the work that has been designated for the contract. Copies of this report should be transmitted promptly to the Engineer. Failure to submit the report within 30 calendar days following the end of the month may cause payment to the contractor to be withheld.
7. The Prime Contractor shall notify the Project Engineer at least 24 hours prior to the time the DBE commences working on the project. The DBE must furnish supervision of the DBE portion of the work, and the person responsible for this supervision must report to the Project Engineer when they begin work on the project. They must also inform the Project Engineer when their forces will be doing work on the project.

B. In order to comply with 49 CFR 26.11, the Prime Contractor shall submit documentation regarding all payments made from the Prime to all DBE subcontractors on federal aid projects in the form of copies of cancelled checks or notarized electronic documentation which validates said payments made on the DBE Monthly Participation Reports. This information shall be required monthly and submitted with the DBE Monthly Participation Report.

C. Failure to respond within the time allowed in the request will be grounds for withholding all payments on all Contracts.

SUBSTITUTION OF DBEs: The Contractor shall make reasonable efforts to replace a DBE Subcontractor unable to perform work for any reason with another DBE. The Department shall approve all substitutions of Subcontractors in order to ensure the substitute firms are eligible DBEs.

CERTIFICATION OF DBEs: To ensure the DBE Program benefits only firms owned and controlled by Disadvantaged Individuals, the Department shall certify the eligibility of DBEs and joint ventures involving DBEs named by bidders.

Questions concerning DBE Certification/Criteria should be directed to the EEO Office at (404) 631-1972.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

First Use 2001 Specifications: November 01, 2002
Revised: November 19, 2006

SPECIAL PROVISION

PROMPT PAYMENT:

Prime Contractors, who sublet a portion of their work, shall pay their subcontractors for satisfactory performance of their contracts no later than 10 calendar days from receipt of each payment made to them.

Any delay or postponement of payment among the parties may take place only for good cause with prior written approval from the Department.

If the contractor is found to be in noncompliance with these provisions, it shall constitute a breach of contract and further payments for any work performed may be withheld until corrective action is taken. If corrective action is not taken, it may result in termination of the contract.

All subcontract agreements shall contain this requirement.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

REQUIRED CONTRACT PROVISIONS FOR FEDERAL-AID CONTRACTS

BUY AMERICA

Revised: March 25, 1992

Revised: January 7, 1994

Revised: June 9, 1995

First Use 2001 Specifications: November 1, 2002

All manufacturing processes for steel and iron materials and steel and iron coatings permanently incorporated into this project must occur in the United States of America. However, pig iron and processed, pelletized, or reduced iron ore used in the production of these products may be manufactured outside the United States.

This requirement, however, does not prevent a minimal use of foreign materials and coatings, provided the cost of materials and coatings used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500.00, whichever is greater.

NOTE: Coatings include: epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of the material.

CONVICT PRODUCED MATERIALS

March 25, 1992

Revised: September 6, 1993

First Use 2001 Specifications: November 1, 2002

Materials produced by convict labor after July 1, 1991, may not be used for Federal-Aid highway construction projects unless it meets the following criteria:

1. The materials must be produced by convicts who are on parole, supervised release or probation from a prison; or,
2. If produced in a qualified prison facility, the amount of such materials produced in any 12-month period shall not exceed the amount produced in such facility for such construction during the 12-month period ending July 1, 1987. A qualified prison is defined as one producing convict made materials prior to July 1, 1987.

First Use Date: January 1, 2007
Revised: March 26, 2008
March 5, 2009
September 30, 2009
August 6, 2012

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

Utility Conflicts

Utility companies having known facilities that conflict with the construction of this project will be directed by the Department to adjust or relocate their facilities and will be notified of the contract award.

Conform to all the requirements of the Specifications as they relate to cooperation with utility owners and the protection of utility installations that exist on the project. Refer to the requirements of Section 107, Legal Regulations and Responsibility to the Public, with particular attention to Subsection 107.21.

Coordinate The Work with any work to be performed by others in any right of way clearance and arrange a schedule of operations that will allow for completion of the Project within the specified contract time. Where stage construction is required, notify the utility owner when each stage of work is completed and the site is available for utility work to proceed.

Information concerning utility facilities known to exist within the project limits, including the list of owners, is available for reference.

Under Georgia Code Section 32-6-171, utilities are required to remove or relocate their facilities. The Department is required to give the utility at least 60 days written notice directing the removal, relocation, or adjustment and the utility owner is required to begin work within the time specified in the utility's work plan or revised work plan.

Upon request, copies of all approved Work Plans submitted by utility companies having facilities on this project will be made available for examination by the Contractor at the Department's District Office. Utility Adjustment Schedules, when submitted to the Department by the utilities, will be made available to the Contractor after the Notice to Contractors has been posted by the Office of Construction Bidding Administration. The Contractor is responsible for considering in its bid all existing and proposed utility locations and the removals, relocations, and adjustments specified in the Utility's Work Plan.

For this Project, Utility Owners that are required to remove, relocate, or adjust their facility to accommodate the construction of this Project may be liable to the Contractor for damages or delay costs resulting from the Utility Owner's failure to clear conflicts

within the time specified in the approved Utility Work Plan. If the Utility Owner is unable to submit and obtain Department approval of a revised Work Plan or fails to complete the removal, relocation, or adjustment of its facilities in accordance with the approved Work Plan, the Utility Owner may be liable to the Department, or the Contractor, for damages or delay costs.

In accordance with Subsection 105.06 of the Specifications, the Department is not liable for payment of any claims due to utility delays, inconvenience or damage sustained by the Contractor due to interference of any utilities or appurtenances, or the operation of moving them.

In any case in which the Contractor believes that it will be entitled to damages or delay costs from the Utility Owner in accordance with O.C.G.A. 32-6-171, the Contractor shall provide written notice to the Utility Owner and the Department within ten (10) days from the time of the dispute or potential dispute is identified. The Contractor shall follow the Procedures for Utility Damages or Delay Costs outlined in the latest edition of The Utility Accommodation Policy and Standards Manual. Failure to follow the above will result in waiver of the Contractor's claim against the Utility Owner for damages or delay costs.

In accordance with Subsection 107.21.G delays by utilities will continue to be considered by the Department in charging Contract Time. For purposes of applying provisions of this paragraph, railroads and the Metropolitan Atlanta Rapid Transit Authority (MARTA) are considered utilities.

First Use Date: January 14, 2005

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

SECTION 102-Bidding Requirements and Conditions

The use of the Electronic Bid Bond Form in Expedite will be accepted by the Department for compliance with the Notice To Contractors requirement to utilize the "Bid Bond Form DOT 564-Rev. Dec. 13, 2004".

**GEORGIA DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

Section 102—Bidding Requirements and Conditions

Delete Subsection 102.06 and Substitute the following:

102.06 Preparation of Proposal

The Bidder shall submit its Proposal on the form furnished by the Department (GADOT). The blank spaces on the Proposal shall be filled in correctly for each Pay Item (except alternate items) and the Unit Price or a Lump Sum Price as called for in the Proposal for each Pay Item listed therein. In addition, the Bidder shall also show the products of the respective Unit Prices and quantities and the total amount of the Bid by adding the amounts of all Bid Items. In the event of a discrepancy in any of the figures, the Unit Price will govern and the Bid will be recalculated.

In the case of Alternate items, Unit Prices shall be entered for only one alternate.

The Non-Collusion Certificate on the Department's standard form included in the Proposal shall be executed.

The Certificate of Current Capacity shall be executed under oath and substantiated by the report of Status of Contracts on Hand.

The Construction Contractors Bid Opportunity List standard form shall be completed with the required information.

The Georgia Security and Immigration Compliance Act Affidavit shall be completed with the required information.

The Bidder shall notify the GADOT Office of Construction Bidding Administration by transmitting the completed Request For Eligibility To Bid Form D. O. T. RFETB for each Letting Call Order Number in which the Bidder intends to submit a bid by no later than 12:00 p.m. the day preceding the letting.

The Bidder's Proposal shall be signed by Digital Signature by the individual, by one or more members of a partnership, or by one or more of the officers of a corporation, whichever is applicable. In the event of a joint venture, the Proposal shall be signed by Digital Signature by each individual involved, by each partnership through one or more of its members, or by each corporation through one or more officers of the corporation, whichever is applicable. Proposals not properly signed may be disqualified and rejected.

All bids shall be submitted using the GADOT/AASHTO (American Association of State Highway and Transportation Officials) Electronic Bidding System (Expedite). When submitting a bid electronically, the Bidder's Proposal shall consist of the Bid pages generated by the Expedite software including the Cover page, Bid Item pages, Disadvantaged Business Enterprise (DBE) pages (if applicable), Miscellaneous Data pages and the Signature page. By submitting a bid electronically, the Bidder acknowledges all requirements included in the proposal, amendments, plans, Standard Specifications, and Supplemental Specifications are a part of the Bid and Contract.

The electronic bid shall be submitted by the following method:

A. Electronic Bid Submission via the Internet and Bid Express™.

(Note: The Bidder shall secure an account and a valid Digital Signature from Bid Express™ (www.bidx.com) in order to use this method.

Instructions for preparing and submitting bids by this method is as follows:

1. Access to the electronic bidding information is available on Bid Express™ at www.bidx.com and the GADOT Construction Bidding Administration Internet Web Site at www.dot.ga.gov/doingbusiness/contractors/pages/default.aspx.
2. When installing the Bid program the Bidder shall enter their vendor code in the following format: 2DO900. Before running the electronic bidding programs, the Bidder shall read the on-line help documentation for the Expedite software.
3. **Zero (0) is considered to be a valid bid. The Bidder shall not enter 0 in any Unit Price field unless zero is the intended bid for that item.**
4. All addenda shall be included in the electronic bid submitted.
5. **“Joint Bids” are allowed with Electronic Bid Submission via the Internet and Bid Express™**
6. The Bidder shall select **tools** and then **check bid** from the Windows Expedite menu to check the bid and assure there are no errors prior to submitting the electronic bid. The electronic bid may be changed and resubmitted electronically to Bid Express™ as many times as desired prior to the advertised cutoff time specified in the Notice To Contractors. The last bid submitted for a given Letting Call Order Number prior to the cutoff time will be the Bid.
7. The Bidder shall make no claim against the Department in the event it is unable to submit its bid to Bid Express™ and/or Bid Express™ is unable to submit the bid(s) to the Department. The Department reserves the right to postpone the public reading of bids in the event of technical difficulties.

B. Proposal Guaranty and Power of Attorney via the Internet and Bid Express™.

A fully executed Proposal Guaranty and Power of Attorney for each Letting Call Order Number bid shall be submitted by via the Internet and Bid Express™ by the time and date set in the Notice To Contractors for submission of Proposals.

The Proposal Guaranty for a “Joint Bid” shall include the names of all Joint Venture parties involved in the bid.

Office of Construction Bidding Administration

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

Section 109—Measurement and Payment

Add the following:

109.11 Price Adjustments

A. Asphalt Cement Price Adjustments will be computed on a *monthly* basis in accordance with the following:

PA = Price Adjustment.

APM= the “Monthly Asphalt Cement Price (Georgia Base Asphalt Price)” for the month the hot mix asphalt/bituminous tack/bituminous surface treatment is placed.

APL = the “Monthly Asphalt Cement Price (Georgia Base Asphalt Price)” for the month which the project was let.

TMT = Total Monthly Tonnage of asphalt cement computed by the Engineer based on the Hot Mix Asphaltic Concrete of the various types per ton (megagram)//Total Monthly Tonnage of asphalt cement used for bituminous tack coat (asphalt cement tack coat only, emulsified bituminous materials for tack coat are excluded) converted from gallons to tons (megagrams) by the Engineer//Total Monthly Tonnage of asphalt cement used for bituminous surface treatment (total gallons of asphalt emulsion used, as measured from distributors, will be multiplied by a factor of 0.65 to determine the quantity in gallons of asphalt cement used) converted from gallons to tons (megagrams) by the Engineer and certified for payment.

- a. If the asphalt cement price for the month is *greater* than the asphalt cement price for the month in which the project was let to contract, the contractor will be paid an amount calculated in accordance with the following formula:

$$PA = [((APM-APL)/APL)] \times TMT \times APL$$

- b. If the asphalt cement price for the month is *less* than the asphalt cement price for the month in which the project was let to contract, the Department will deduct an amount calculated in accordance with the following formula:

$$PA = [((APM-APL)/APL)] \times TMT \times APL$$

1. **“Monthly Asphalt Cement Price”**: The Department will determine the “Monthly Asphalt Cement Price” based on the following formulas:

Monthly Asphalt Cement Price = 100% Georgia Base Asphalt Price;

Where;

GBAP = “Georgia Base Asphalt Price”, (in dollars/ton) is based on the arithmetic average posted price of PG asphalt cement as specified in Section 820, from the Department’s monthly survey obtained from approved asphalt cement suppliers of bituminous materials to the Department projects F.O.B. the suppliers terminal. However, the highest price and the lowest price are excluded from the calculation of price, GBAP.

2. **“Asphalt Cement Quantity Calculation”**: The calculation of asphalt cement quantity for each mix type will be based on the asphalt cement content (AC %) of the approved Job Mix Formula (JMF) as specified in Subsection 400.1.03.C. The following calculation formula will be used to determine asphalt cement quantity:

Section 109—Measurement and Payment

Asphalt Cement Quantity = Hot Mix Asphaltic Concrete monthly total in tons (megagrams) per mix type certified for the payment x **AC (%)**

The Total Monthly Tonnage (TMT) of asphalt cement computed by the Engineer will be calculated as follows:

TMT = Sum of all asphalt cement quantities, including polymer modified asphalt binder and non-modified asphalt cement, based on the Hot Mix Asphaltic Concrete of the various mix types per ton (megagram)// Sum of all asphalt cement quantities used as bituminous tack coat converted from gallons to tons (megagrams)// Sum of all asphalt cement quantities used for bituminous surface treatment (total gallons of asphalt emulsion used, as measured from distributors, will be multiplied by a factor of 0.65 to determine the quantity in gallons of asphalt cement used) converted from gallons to tons (megagrams) by the Engineer certified for payment.

Asphalt Cement Price for the Month (APM) will be adjusted monthly. Price adjustments (PA) will be made monthly and all calculations for Price Adjustments shall be performed by the Engineer as specified in SOP-39 “Determination of Asphalt Cement Index and Asphalt Cement Price Adjustment”.

- B. Price Adjustment Trigger:** No price adjustment will be made on any project with less than 366 Calendar Days from the Contract Letting Date to the specified completion date. If the original Contract contains 366 Calendar Days or more, the Price Adjustment shall be made on quantities placed from the Contract Letting Date to the specified completion date.
- C. “Monthly Asphalt Cement Price”:** The Department will publish a “Monthly Asphalt Cement Price” based on the formula contained within this specification.
- D. “Other Restrictions”:**
 - 1. No asphalt cement price adjustment will be made for cut-back, and emulsified asphalt when used for bituminous tack coat with Hot Mix Asphaltic Concrete Construction.
 - 2. There is a cap of 60% above the FPL/APL for any price adjustment.
 - 3. Unless specifically provided for by Supplemental Agreement or Contract Amendment, no positive Price Adjustments Asphalt Cement that result in a payment to the Contractor will be made after the original Contract Time has expired. Irrespective of any other provisions in the Contract, for purposes of this specification, “Contract Time” does not include any time extensions or Supplemental Agreements which affect the completion of the Contract. Negative Price Adjustments for Asphalt Cement for any work placed after the original Contract Time expires resulting in a return of funds to the Department will be made and shall be computed based on the Monthly Asphalt Cement Price at the time the Contract Time has expired or the Monthly Asphalt Cement Price at the time the Contract was let, whichever is less.
- E. Final Adjustment:** If there are differences between the final audited quantities and the sum of the quantities used to determine the asphalt cement adjustment, the Engineer will make a pro-rated increase or decrease in the price adjustment.

Payment for Price Adjustment will be made under:

Item No. 109	Price Adjustment- Asphalt Cement	\$ (+/-)
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**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

Section 150—Traffic Control

150.01 GENERAL

This section as supplemented by the Plans, Specifications, and Manual on Uniform Traffic Control Devices (MUTCD) shall be considered the Temporary Traffic Control (TTC) Plan. Activities shall consist of furnishing, installing, maintaining, and removing necessary traffic signs, pedestrian signs, barricades, lights, signals, cones, pavement markings and other traffic control devices and shall include flagging and other means for guidance and protection of vehicular and pedestrian traffic through the Work Zone. This Work shall include both maintaining existing devices and installing additional devices as necessary in construction work zones.

When any provisions of this Specification or the Plans do not meet the minimum requirements of the MUTCD, the MUTCD shall control. The 2009 Edition of the MUTCD shall be in effect for the duration of the project.

The needs and control of all road users (motorists, bicyclists and pedestrians within the highway right-of-way and easements, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130) through a Temporary Traffic Control (TTC) zone shall be an essential part of highway construction, utility work, maintenance operations and management of traffic incidents.

The Worksite Traffic Control Supervisor (WTCS) shall have a copy of Part VI of the MUTCD and the Contract on the job site. Copies of the current MUTCD may be obtained from the FHWA web page at <http://mutcd.fhwa.dot.gov>.

A. WORKER SAFETY APPAREL

All workers, including emergency responders, within the right-of-way who are exposed either to traffic (vehicles using the highway for purpose of travel) or to work vehicles and construction equipment within the TTC zone shall wear high-visibility safety apparel that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107-2004 publication entitled “American National Standard for High-Visibility Safety Apparel and Headwear”, or equivalent revisions, and labeled as meeting the ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Emergency and incident responders and law enforcement personnel within the TTC zone may wear high-visibility safety apparel that meets the

performance requirements of the ANSI/ISEA 207-2006 publication entitled "American National Standard for High-Visibility Public Safety Vests", or equivalent revisions, and labeled as ANSI 207-2006, in lieu of ANSI/ISEA 107-2004 apparel. Firefighters or other emergency responders working within the right-of-way and engaged in emergency operations that directly expose them to flame, fire, heat, and/or hazardous material may wear retroreflective turn-out gear that is specified and regulated by other organizations, such as the National Fire Protection Association.

B. WORKSITE TRAFFIC CONTROL SUPERVISOR

ALL HIGHWAYS (ADDITIONAL REQUIREMENTS BELOW FOR INTERSTATES): The Contractor shall designate a qualified individual as the Worksite Traffic Control Supervisor (WTCS) who shall be responsible for selecting, installing and maintaining all traffic control devices in accordance with the Plans, Specifications, Special Provisions and the MUTCD. A written resume documenting the experience and credentials of the WTCS shall be submitted and accepted by the Engineer prior to beginning any work that involves traffic control. The WTCS shall be available on a twenty-four (24) hour basis to perform his duties. If the work requires traffic control activities to be performed during the daylight and nighttime hours it may be necessary for the Contractor to designate an alternate WTCS. An alternate WTCS must meet the same requirements and qualifications as the primary WTCS and be accepted by the Engineer prior to beginning any traffic control duties. The Worksite Traffic Control Supervisor's traffic control responsibilities shall have priority over all other assigned duties.

As the representative of the Contractor, the WTCS shall have full authority to act on behalf of the Contractor in administering the TTC Plan. The WTCS shall have appropriate training in safe traffic control practices in accordance with Part VI of the MUTCD. In addition to the WTCS all other individuals making decisions regarding traffic control shall meet the training requirements of the Part VI of the MUTCD.

The WTCS shall supervise the initial installation of traffic control devices. The Engineer prior to the beginning of construction will review the initial installation. Modifications to traffic control devices as required by sequence of operations or staged construction shall be reviewed by the WTCS.

The WTCS shall be available on a full-time basis to maintain traffic control devices with access to all personnel, materials, and equipment necessary to respond effectively to an emergency situation within forty-five (45) minutes of notification of the emergency.

The WTCS shall regularly perform inspections to ensure that traffic control is maintained. Unless modified by the special conditions or by the Engineer, routine deficiencies shall be corrected within a twenty-four (24) hour period. Failure to comply with these provisions shall be grounds for dismissal from the duties of WTCS and/or removal of the WTCS from the project. Failure of the WTCS to execute his duties shall be considered as non-performance under [Subsection 150.08](#).

The Engineer will periodically review the work for compliance with the requirements of the TTC plan.

On projects where traffic control duties will not require full time supervision, the Engineer **may allow the Contractor's Project Superintendent to serve as the WTCS as long as** satisfactory results are obtained.

CERTIFIED WORKSITE TRAFFIC CONTROL SUPERVISOR

ADDITIONAL REQUIREMENTS FOR INTERSTATE AND LIMITED ACCESS HIGHWAYS: In addition to **the requirements above, the WTCS shall have a minimum of one year's** experience directly related to work site traffic control in a supervisory or responsible capacity. The WTCS shall be currently certified by the American Traffic Safety Services Association (ATSSA) Work Site Traffic Supervisor Certification program or the National Safety Council Certification program.

Any work performed on the interstate or limited access highway right-of-way that requires traffic control shall be supervised by the Certified Worksite Traffic Control Supervisor. No work requiring traffic control shall be performed unless the certified WTCS is on the worksite. Failure to maintain a Certified Worksite Traffic Control Supervisor on the work will be considered as non-performance under **Subsection 150.08**.

The WTCS shall perform, as a minimum, weekly traffic control inspections on all interstate and limited access highways. The inspection shall be reported to the Engineer on a TC-1 report. The Engineer will furnish a blank copy of the TC-1 report to the Contractor prior to the beginning of any work on the interstate or limited access right-of-way.

C. TRAFFIC CONTROL DEVICES

All traffic control devices used during the construction of a project shall meet the Standards utilized in the MUTCD, and shall comply with the requirements of these Specifications, Project Plans, and Special Provisions. All devices shall be tested at NCHRP Test Level III. Reference is made to [Subsections 104.05](#), [107.07](#), and [107.09](#).

D. REFLECTORIZATION REQUIREMENTS

All rigid fluorescent orange construction warning signs (black on fluorescent orange) shall meet the reflectorization and color requirements of ASTM Type VII, VIII, IX or X regardless of the mounting height.

Portable signs which have flexible sign blanks shall meet the reflectorization and color requirements of ASTM Type VI.

Warning signs (W3-1a) for stop conditions that have rumble strips located in the travelway shall be reflectorized with ASTM Type IX fluorescent yellow sheeting.

All other signs shall meet the requirements of ASTM Type III or IV except for "Pass With Care" and "Do Not Pass" signs which may be ASTM Type I unless otherwise specified.

CHANNELIZATION DEVICES: Channelization devices shall meet the requirements of ASTM Type III or IV high intensity sheeting.

E. IMPLEMENTATION REQUIREMENTS

No work shall be started on any project phase until the appropriate traffic control devices have been placed in accordance with the Project requirements. Changes to traffic flow shall not commence unless all labor, materials, and equipment necessary to make the changes are available on the Project.

When any shift or change is made to the location of traffic or to the flow patterns of traffic, including pedestrian traffic, the permanent safety features shall be installed and fully operational before making the change. If staging or site conditions prevent the installation of permanent features then the equivalent interim devices shall be utilized. This work shall also include any necessary removal and reinstallation of guardrail panels to achieve the required panel lap to accommodate the appropriate shift and traffic flow including the final traffic flow configuration (The cost of performing this work shall be included in Traffic Control-Lump Sum).

Any section of the work that is on new location shall have all permanent safety features installed and fully operational before the work is opened to traffic. Safety features shall include but are not limited to the following items:

1. Guardrail including anchors and delineation with properly lapped panels
2. Impact attenuators
3. Traffic signals
4. Warning devices
5. Pavement markings including words, symbols, stop bars, and crosswalks
6. Roadway signs including regulatory, warning, and guide

Outdoor lighting shall be considered as a safety feature for welcome centers, rest areas, and weigh station projects. For typical roadway type projects new street lighting is not considered a safety feature unless specifically noted in the plans or in the special conditions.

F. MAINTENANCE OF TRAFFIC CONTROL DEVICES

Traffic control devices shall be in acceptable condition when first erected on the project and shall be maintained in accordance with [Subsection 104.05](#) throughout the construction period. All unacceptable traffic control devices shall be replaced within 24 hours. When not in use, all traffic control devices shall be removed, placed or covered so as not to be visible to traffic. All construction warning signs shall be removed within seven calendar days after time charges are stopped or pay items are complete. If traffic control devices are left in place for more than ten days after completion of the Work, the Department shall have the right to remove such devices, claim possession thereof, and deduct the cost of such removal from any monies due, or which may become due, the Contractor.

G. TRAFFIC INTERRUPTION RESTRICTIONS

The Department reserves the right to restrict construction operations when, in the opinion of the Engineer, the continuance of the Work would seriously hinder traffic flow, be needlessly disruptive or unnecessarily inconvenience the traveling public. The Contractor shall suspend and/or reschedule any work when the Engineer deems that conditions are unfavorable for continuing the Work.

Advanced notification requirements to the Contractor to suspend work will be according to the events and the time restrictions outlined below:

Incident management	No advanced notice required
Threatening/Inclement weather	24 hours
Holidays, sporting events, unfavorable conditions	Three (3) calendar days

If the work is suspended, the Contractor may submit a request for additional contract time as allowed under Section 108. The Department will review the request and may grant **additional contract time as justified by the impact to the Contractor's schedule.** Compensation for loss of productivity, rescheduling of crews, rental of equipment or delays **to the Contractor's schedule will not be considered for payment. Additional contract time** will be the only consideration granted to the Contractor.

H. SEQUENCE OF OPERATIONS

Any Sequence of Operations provided in this Contract in conjunction with any staging details which may be shown in the plans, is a suggested sequence for performing the Work. It is intended as a general staging plan for the orderly execution of the work while minimizing the impact on pedestrian facilities, mainline, cross-streets and side streets. The Contractor shall develop detailed staging and temporary traffic control plans for performing specific areas of the Work including but not limited to all traffic shifts, detours, bridge widenings, paces, or other activities that disrupt traffic or pedestrian flow. The Engineer may require detailed staging and TTC plans for lane closures or disruption to pedestrian facilities. These plans shall be submitted for approval at least two weeks prior to the scheduled date of the activity. Activities that have not been approved at least seven (7) days prior to the scheduled date shall be rescheduled.

Where traffic is permitted through the work area under stage construction, the Contractor may choose to construct, at no additional expense to the Department, temporary on-site bypasses or detours in order to expedite the work. Plans for such temporary bypasses or detours shall be submitted to the Engineer for review and approval 30 calendar days prior to the proposed construction. Such bypasses or detours shall be removed promptly when in the opinion of the Engineer; they are no longer necessary for the satisfactory progress of the Work. Bypasses and detours shall meet the minimum requirements of [Section 150.02.B.4.](#)

As an option to the Sequence of Operations in the Contract, the Contractor may submit an alternative Sequence of Operations for review and approval. Alternate Sequence of Operations for pedestrian facilities shall be in compliance with the MUTCD and ADA. Pedestrian needs identified in the preconstruction phase shall be included in the proposed alternate plan.

The Department will not pay, or in any way reimburse the Contractor for claims arising **from the Contractor's inability to perform the Work in accordance with the Sequence of Operations** provided in the Contract or from an approved Contractor alternate.

The Contractor shall **secure the Engineer's approval of the Contractor's proposed plan of operation, sequence of work and methods of providing for the safe passage of vehicular and pedestrian traffic before it is placed in operation.** The proposed plan of operation shall supplement the approved traffic control plan. Any major changes to the approved TTC plan, proposed by the Contractor, shall be submitted to the Department for approval.

Some additional traffic control details will be required prior to any major shifts or changes in traffic. The traffic control details shall include, but not be limited to, the following:

1. A detailed drawing showing traffic locations and laneage for each step of the change.
2. The location, size, and message of all signs required by the MUTCD, Plan, Special Provisions, and other signs as required to fit conditions. Any portable changeable message signs used shall be included in the details.
3. The method to be used in, and the limits of, the obliteration of conflicting lines and markings.
4. Type, location, and extent of new lines and markings.
5. Horizontal and vertical alignment and superelevation rates for detours, including cross-section and profile grades along each edge of existing pavement.
6. Drainage details for temporary and permanent alignments.
7. Location, length, and/or spacing of channelization and protective devices (temporary barrier, guardrail, barricades, etc.)
8. Starting time, duration and date of planned change.
9. For each traffic shift, a paving plan, erection plan, or work site plan, as appropriate, detailing workforce, materials, and equipment necessary to accomplish the proposed work. This will be the minimum resource allocation required in order to start the work.

A minimum of three copies of the above details shall be submitted to the Engineer for approval at least 14 days prior to the anticipated traffic shift. The Contractor shall have traffic control details for a traffic shift which has been approved by the Engineer prior to commencement of the physical shift. All preparatory work relative to the traffic shift, which does not interfere with traffic, shall be accomplished prior to the **designated starting time.** **The Engineer and the Contractor's representative will verify** that all conditions have been met prior to the Contractor obtaining materials for the actual traffic shift.

150.02 TEMPORARY TRAFFIC CONTROL (TTC) ZONES:

A. DEVICES AND MATERIALS:

In addition to the other provisions contained herein, work zone traffic control shall be accomplished using the following means and materials:

1. Portable Advance Warning Signs

Portable advance warning signs shall be utilized as per the requirements of the temporary traffic control plans. All signs shall meet the requirements of the MUTCD and shall be NCHRP 350 crashworthy compliant.

2. Arrow Panels

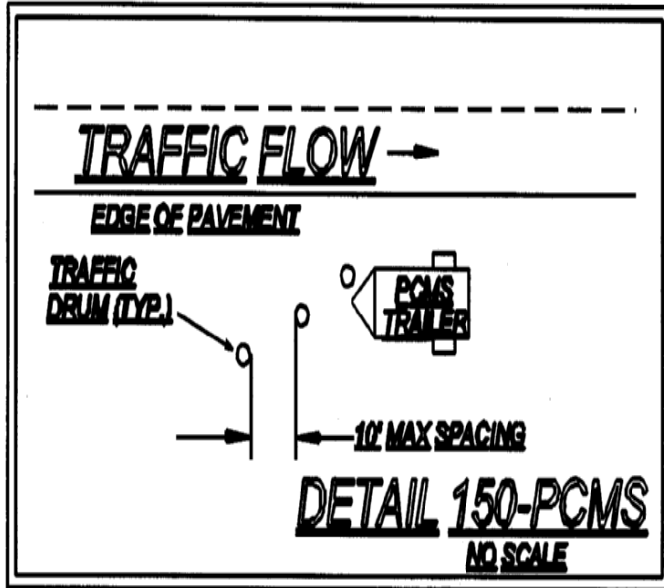
Portable sequential or flashing arrow panels as shown in the Plans or Specifications for use on Interstate or multi-lane highway lane closure only, shall be a minimum size of **48" high by 96" wide with not less than 15 lamps** used for the arrow. The arrow shall occupy virtually the entire size of the arrow panel and shall have a minimum legibility distance of one mile. The minimum legibility distance is that distance at which the arrow panel can be comprehended by an observer on a sunny day, or clear night. Arrow panels shall be equipped with automatic dimming features for use during hours of darkness. The arrow panels shall also meet the requirements for a Type C panel as shown in the MUTCD. The sequential or flashing arrow panels shall not be used for lane closure on two-lane, two-way highways when traffic is restricted to one-lane operations in which case, appropriate signing, flaggers and when required, pilot vehicles will be deemed sufficient.

The sequential or flashing arrow panels shall be placed on the shoulder at or near the point where the lane closing transition begins. The panels shall be mounted on a vehicle, trailer, or other suitable support. Vehicle mounted panels shall be provided with remote controls. Minimum mounting height shall be seven feet above the roadway to the bottom of the panel, except on vehicle mounted panels which should be as high as practical.

For emergency situations, arrow display panels that meet the MUTCD requirements for Type A or Type B panels may be used until Type C panels can be located and placed at the site. The use of Type A and Type B panels shall be held to the minimum length of time possible before having the Type C panel(s) in operation. The Engineer shall determine when conditions and circumstances are considered to be emergencies. The Contractor shall notify the Engineer, in writing, when any non-specification arrow display panel(s) is being used in the work.

3. Portable Changeable Message Signs

Portable changeable message signs meeting the requirements of [Section 632](#) and the MUTCD. Any PCMS in use that is not protected by positive barrier protection shall be delineated by a minimum of three drums that meet the requirement of Section **150.05.A.1**. **The drum spacing shall not exceed a maximum of ten (10') feet as shown in [Detail 150-PCMS](#). When the PCMS is within twenty (20') feet of the opposing traffic flow, the trailing end of the PCMS shall be delineated with a minimum of three drums spaced in the same manner as the approach side of the PCMS.**



When not in use the PCMS shall be removed from the roadway unless protected by positive barrier protection. If the PCMS is protected by positive barrier protection the sign panel shall be turned away from traffic when not in use.

4. Channelization Devices

Channelization devices shall meet the standards of the MUTCD and [Subsection 150.05](#).

5. Temporary Barrier

Temporary barrier shall meet the requirements of [Sections 622](#).

6. Temporary Traffic Signals

Temporary traffic signals shall meet the requirements of [Section 647](#) and the MUTCD.

7. Pavement Marking

Pavement marking incorporated into the work shall comply with [Subsections 150.04.A](#) and [150.04.B](#).

8. Portable Temporary Traffic Control Signals

The use of Portable Temporary Traffic Control Signals shall meet the following minimum requirements:

Only two-lane two-way roadways will be allowed to utilize Portable Temporary Traffic Control Signals.

All portable traffic control signals shall meet the physical display and operational requirements of conventional traffic signals described in the MUTCD.

Each signal face shall have at least three lenses. The lenses shall be red, yellow, or green in color and shall give a circular type of indication. All lenses shall be twelve (12") inches nominal in diameter.

A minimum of two signal faces shall face each direction of traffic. A minimum of one signal head shall be suspended over the roadway travel lane in a manner that will allow **the bottom of the signal head housing to be not less than seventeen (17') feet above and not more than nineteen (19') feet above the pavement grade at the center of the travel lane.** The second signal head may be located over the travel lane with the same height requirements or the second signal head may be located on the shoulder. When the signal head is located on the shoulder the bottom of the signal head housing shall **be at least eight (8') feet but not more than (15') feet above the pavement grade at the center of highway.**

Advance warning signage and appropriate pavement markings shall be installed as part of the temporary signal operation.

The signals shall be operated in a manner consistent with traffic requirements. The signals may be operated in timed-mode or in a vehicle-actuated mode. The signals shall be interconnected in a manner to ensure that conflicting movements can not occur. To assure that the appropriate operating pattern including timing is displayed to the traveling public, regular inspections including the use of accurate timing devices shall be made by the Worksite Traffic Control Supervisor. If at any time any part of the system fails to operate within these requirements then the use of the signal shall be suspended and the appropriate flagging operation shall begin immediately.

The Worksite Traffic Control Supervisor (WTCS) shall continuously monitor the portable traffic control signal to insure compliance with the requirements for maintenance under the MUTCD. The signal shall be maintained in a manner consistent with the intention of the MUTCD, with emphasis on cleaning of the optical system. Timing changes shall be made only by the WTCS. The WTCS shall keep a written record of all timing changes.

The portable temporary signal shall have two power sources and shall be capable of running for seven calendar days continuously.

The Contractor shall have an alternate temporary traffic control plan in the event of failure of the signal.

9. RUMBLE STRIPS

Rumble strips incorporated into the work shall meet the requirements of [Section 429](#) and the MUTCD. Existing rumble strips that are positioned in the traveled way to warn traffic of a stop condition shall be reinstalled based on the following requirements:

INTERMEDIATE SURFACES: Intermediate surfaces that will be in use for more than forty-five (45) calendar days shall have rumble strips reinstalled on the traveled way in the area of a stop condition. Non-refundable deductions in accordance with [Subsection 150.08](#) will be assessed for any intermediate surface in place for greater than 45 days without rumble strips.

FINAL SURFACES: Rumble strips shall be installed on the final surface within fourteen (14) calendar days of the placement of the final surface in the area of the stop condition. Failure to install within fourteen (14) calendar days will result in assessment of non-refundable deductions in accordance with 150.08.

Prior to the removal of any rumble strips located in the travelway, stop ahead (W3-1a) warning signs shall be double indicated ahead of the stop condition. These warning signs shall be a minimum of 48 inches by 48 inches. The reflectorization of the warning signs shall be as required by [Subsection 150.01.D](#). These warning signs shall remain in place until the rumble strips have been reinstalled on the traveled way. Any existing warning signs for the stop ahead condition shall be removed or covered while **the 48" X 48" (W3-1a)** signs are in place. When the rumble strips have been reinstalled these warning signs should be promptly removed and any existing signage placed back in service.

- 10. GUARDRAIL:** When the removal and installation of guardrail is required as a part of the work the following time restrictions shall apply unless modified by the special conditions:

MULTI-LANE HIGHWAYS: From the time that the existing guardrail or temporary positive barrier protection is removed the Contractor has fourteen (14) calendar days to install the new guardrail and anchors. During the interim, the location without guardrail **shall be protected with drums spaced at a maximum spacing of twenty (20') feet.** The maximum length of rail that can be removed at any time without being replaced with positive barrier protection is a total of 2000 linear feet of existing rail or the total length of one run of existing rail, whichever is less.

ALL OTHER HIGHWAYS: From the time that the existing guardrail is removed or from the time that temporary positive barrier protection is removed the Contractor has thirty (30) calendar days to install the new guardrail and anchors. During the interim, the location without guardrail shall be protected with drums spaced at a maximum spacing **of twenty (20') feet.** The maximum length of rail that can be removed at any time without being replaced with positive barrier protection is a total of 1000 linear feet of existing rail or the total length of one run of existing rail, whichever is less.

Based on existing field conditions, the Engineer may review the work and require that the guardrail be installed earlier than the maximum time allowed above by giving written notification to the Contractor via the TC-1 traffic control report.

ALL HIGHWAYS: The contractor shall install new guardrail such that traffic exposure to fixed objects is minimized. Within the same work day, temporary attenuators, as defined in [Subsection 150.05.B](#), **should be installed on the approach to fixed objects that can't** be protected with guardrail. Truck mounted attenuators may be used to shield exposed fixed objects for periods not to exceed forty-eight (48) hours. No separate payment will be made for truck mounted attenuators.

When the roadway is open to traffic, guardrail panels shall be lapped to comply with the directional flow of traffic. Should the staging of the work require that the lap of the guardrail be changed, this work shall be completed before the roadway is opened to traffic. The work to change the lap of any guardrail shall be included in Traffic Control-Lump Sum.

Failure to comply with the above time and quantity restrictions shall be considered as non-compliance under Section 150.08.

11. STOP SIGN REGULATED INTERSECTIONS: For intersections that utilize stop sign(s) to control the flow of traffic and to restrict the movement of vehicles, the stop sign(s) shall be maintained for the duration of the work or until such time that the stop condition is eliminated or until an interim or permanent traffic signal can be installed to provide proper traffic control. The traffic signal shall be installed and properly functioning before the removal of the existing stop sign(s) is permitted. If the existing intersection is enhanced traffic control features such as stop bars, double indicated stop signs, oversized signs, advanced warning stop ahead signs, rumble strips on the approaches or flashing beacons located overhead or on the shoulders then these features shall be maintained for the duration of the project or until the permanent traffic control plan has been implemented.

Whenever the staging of the work requires that the traveled-way be relocated or realigned the Contractor shall reinstall all enhanced traffic control features noted above on the newly constructed sections of the work. The cost of relocating the stop bars, stop signs, advanced warning signs, the rumble strips and the flashing beacons shall be included in the price bid for Lump-Sum-Traffic Control unless individual pay items are included in the contract for rumble strips and/or flashing beacons. When pay items are included in the contract for rumble strips or flashing beacons then these items will be paid per each.

When staging requires the relocation or realignment of an existing stop condition it may be necessary to consider the addition of enhanced traffic control features even though none existed at the original location. Horizontal and vertical alignment changes at a new location may have decreased or restricted sight distance or the stop condition may occur sooner than in the previous alignment. If these conditions occur then the Engineer **and/or the WTCS should consider additional measures to enhance the motorist's** awareness of the changes even though the staging plans may not address enhanced features. Stop signs should be a minimum of 36 inches for interim situations. The use of 48 inch stop signs may be warranted under project specific conditions. Flags may be **used on interim/permanent stop signs that are mounted at seven (7')** feet in height for a short duration in order to direct additional attention to a new or relocated stop sign(s). Flags should not be used for durations exceeding two weeks unless unusual or site specify conditions warrant a longer period of time. The **use of Type "A" flashing red** light(s) attached to the stop sign(s) may be appropriate during the same period that the flags are in use to increase attention.

The use of rumble strips and/or portable changeable message signs may be considered. The use of new rumble strips, where none previously existed, shall have the prior approval of District Traffic Operations before being included as part of the temporary traffic control plan. The message(s) displayed on any PCMS shall have the prior approval of the Engineer and the message(s) shall be included as part of the TTC plan for the interim staging.

The placement of any additional interim ground-mounted signs and posts or stop bars shall be considered as incidental to the price bid for Lump Sum-Traffic Control. The installation of rumble strips, flashing beacons or the use of Portable Changeable Message Signs (PCMS) shall be considered as Extra Work unless pay items are included in the contract.

B. WORK ZONE RESTRICTIONS:

1. Interstate

The Contractor shall not simultaneously perform work on both the inside shoulder and outside shoulder on either direction of traffic flow when the Work is within 12 feet of the travel-way, unless such areas are separated by at least one-half mile of distance.

2. Non-Interstate Divided Highways

The Contractor shall not simultaneously perform work on both the inside shoulder and outside shoulder on either direction of traffic flow when the Work is within 12 feet of the travel-way, unless such areas are separated by at least one-half mile distance in rural areas or at least 500 feet of distance in urban areas.

3. Non-Divided Highways

- a. The Contractor shall not simultaneously perform work on opposite sides of the roadway when the work is within 12 feet of the travel-way, unless such areas are separated by at least one-half mile of distance in rural areas or at least 500 feet of distance in urban areas.
- b. On two-lane projects where full width sections of the existing subgrade, base or surfacing are to be removed, and new base, subgrade, or surfacing are to be constructed, the Contractor shall maintain one-lane traffic through the construction area by removing and replacing the undesirable material for half the width of the existing roadway at a time. Replacement shall be made such that paving is completed to the level of the existing pavement in the adjacent lane by the end of the workday or before opening all the roadway to traffic.

4. All Highways:

- a. There shall be no reduction in the total number of available traffic lanes that existed prior to construction except as specifically allowed by the Contract and as approved by the Engineer.
- b. Travelway Clearances: All portions of the work shall maintain the following minimum requirements:

Horizontal: The combined dimensions of the paved shoulder and the roadway surface remaining outside the Work Zone shall be no less than sixteen (16) feet in width at any location.

Vertical: The overhead clearance shall not be reduced to less than fifteen (15) feet at any location.

The restrictions above apply to all shifts, lane closures, on-site detours and off site detours whether shown in the contract or proposed by the Contractor. It shall be the responsibility of the Contractor to verify that these minimum requirements have been met before proceeding with any phase of the Work.

Two-lane two-way roadways may have temporary horizontal restrictions of less than sixteen (16) feet provided a flagger operation for one-way traffic is utilized to restrict access to the work area by over-width loads. The minimum horizontal clearance shall be restored before the flagging operation is removed.

- c. Highway Work Zone: All sections or segments of the roadway under construction or reconstruction shall be signed as a Highway Work Zone except non-state highway two-lane two-way resurfacing projects. Two conditions can be applied to a Highway Work Zone. Condition 1 is when no reduction in the existing speed limit is required. Condition 2 is when worksite conditions require a reduction of the speed limit through the designated Work Zone. Properly marking a Highway Work Zone shall include the following minimum requirements:

- 1. NO REDUCTION IN THE EXISTING POSTED SPEED LIMIT IN HIGHWAY WORK ZONE:

- a) Signage ([Detail 150-HWZ-1](#)) shall be posted at the beginning point of the Highway Work Zone warning the traveling public that increased penalties for speeding violations are in effect. The [HWZ-2](#) sign shall be placed a **minimum of six hundred (600') feet in advance of** the Highway Work Zone **and shall not be placed more than one thousand (1000') feet in advance of** the Work Zone. If no speed reduction is required it is recommended that the [HWZ-2](#) be placed at 750 feet from the work area between the ROAD WORK 500 FT. and the ROAD WORK 1000 FT. signs.

[HWZ-2](#) signs shall be placed at intervals not to exceed one mile for the length of the project. [HWZ-2](#) signs should be placed on the mainline after all major intersections except State Routes. State Routes shall be signed as per the requirements for intersecting roadways below.

- b) The existing speed limit shall be posted at the beginning of the Work Zone. Existing Speed Limit signs (R2-1) shall be maintained.
- c) INTERSECTING ROADWAYS: Intersecting state routes shall be signed in advance of each intersection with the Work Zone with a [HWZ-2](#) sign to warn motorists that increased fines are in effect. All other intersecting roadways that enter into a designated Highway Work Zone may be signed in advance of each intersection with the Work Zone. When construction equipment and personnel are present in the intersection on the mainline of a multi-lane roadway, the intersecting side roads shall be signed in advance with [HWZ-2](#) signs. As soon as the work operation clears the intersection the signage may be removed.
- d) Sign [HWZ-3](#) shall be posted at the end of the Highway Work Zone indicating the end of the zone and indicating that increased penalties for speeding violations are no longer in effect.
- e) When a designated Highway Work Zone is no longer necessary all signs shall be removed immediately.

2. REDUCING THE SPEED LIMIT IN A HIGHWAY WORK ZONE:

Highway Work Zone signs shall be posted as required in Condition 1 above.

For limited access (interstate) highways and controlled access multi-lane divided highways the posted speed limit shall be reduced as required below.

Speed Limit signage (R2-1) for the reduced speed limit shall be erected at the beginning of the work zone. Additional signs shall be placed to ensure that the maximum spacing of the reduced speed limit signs shall be no greater than one (1) mile apart. Existing speed limit signs shall be covered or removed. On multi-lane divided highways the speed limit signs shall be double indicated when the reduced speed is in use.

When any one or more of the following conditions exist and the existing speed limit is 65 mph or 70 mph, the speed limit shall be reduced by 10 mph. If the existing speed limit is 60 mph, the speed limit should be reduced by 5 mph. If the existing speed limit is 55 mph or less, the Contractor can only reduce the speed limit with the prior approval of the Engineer. The reduction in the speed limit shall be no greater than 10 mph:

- a) Lane closure(s) of any type and any duration.
- b) The difference in elevation exceeds two inches adjacent to a travel lane as shown in [Subsection 150.06](#), [Detail 150-B](#), [Detail 150-C](#).
- c) Any areas where equipment or workers are within ten feet of a travel lane.
- d) Temporary portable concrete barriers located **less than two (2') feet from** the traveled way.
- e) As directed by the Engineer for conditions distinctive to this project.

When the above conditions are not present the speed limit shall be immediately returned to the existing posted speed limit. A speed reduction shall not be put in place for the entire length of the project unless conditions warranting the speed reduction are present for the entire project length. All existing speed limit signs within the temporary speed reduction zone shall be covered or removed while the temporary reduction in the speed limit is in effect. All signs shall be erected to comply with the minimum requirements of the MUTCD.

As a minimum the following records shall be kept by the WTCS:

- a) Identify the need for the reduction.
- b) Record the time of the installation and removal of the temporary reduction.
- c) Fully describe the location and limits of the reduced speed zone.
- d) Document any accident that occurs during the time of the reduction.

A copy of the weekly records for reduced speed zones shall be submitted to the Engineer.

Reduced speed zones shall, as a minimum, be signed as per [Detail 150-HWZ-1](#). Interim signs shall meet the requirements of 150.03 D. Additional signs may be necessary to adjust for actual field conditions.

When a pilot vehicle is used on a two-lane two-way roadway the speed limit should not be reduced. For special conditions specific to the work, on two-lane two-way roadways or multi-lane highways, the contractor may reduce the posted speed limit with the prior approval of the Engineer.

5. MILLED SURFACE RESTRICTIONS:

Unless modified by the special conditions, a milled surface on any asphaltic concrete surface shall not be allowed to remain open to traffic for a period of time that exceeds thirty (30) calendar days.

6. INSTALLATION/REMOVAL OF WORK AREA SIGNAGE:

No payment will be made for Traffic Control-Lump Sum until the Work has actually started on the project. The installation of traffic control signage does not qualify as the start of work. Advanced warning signs shall not be installed until the actual beginning of work activities. Any permanent mount height signs installed as the work is preparing to start shall be covered until all signs are installed unless all signs are installed within seven (7) calendar days after beginning installation.

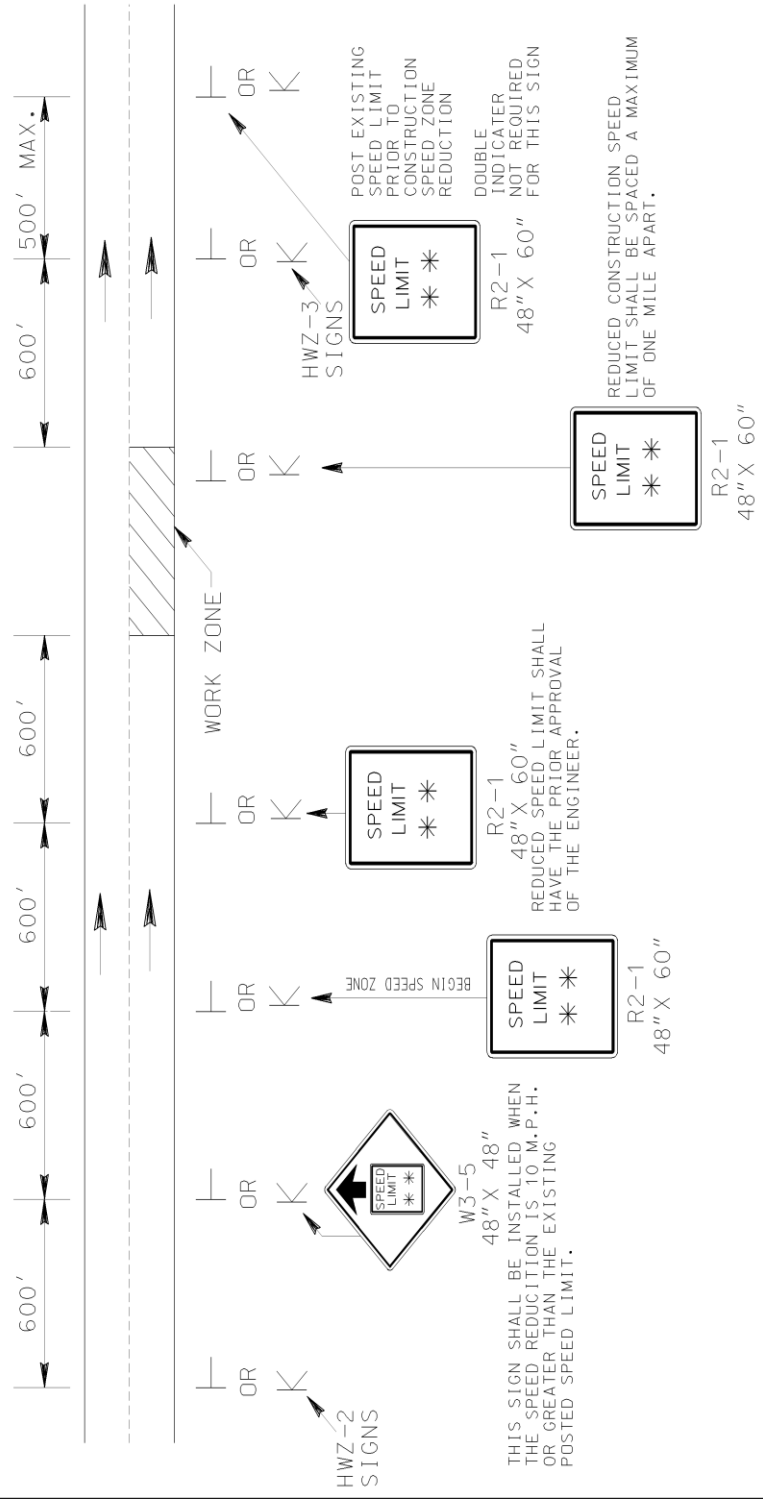
All temporary traffic control devices shall be removed as soon as practical when these devices are no longer needed. When work is suspended for short periods of time, temporary traffic control devices that are no longer appropriate shall be removed or covered.

All construction warning signs shall be removed within seven (7) calendar days after time charges are stopped or pay items are complete. If traffic control devices are left in place for more than ten (10) calendar days after completion of the Work, the Department shall have the right to remove such devices, claim possession thereof, and deduct the cost of such removal from any monies due, or which may become due, the Contractor.

PUNCHLIST WORK: Portable signs shall be utilized to accomplish the completion of all punchlist items. The portable signs shall be removed daily. All permanent mount height signs shall be removed prior to the beginning of the punchlist work except **“Low/Soft Shoulder” signs and any signs that have the prior written approval of the Engineer to remain in place while the punchlist work is in progress.**

Failure to promptly remove the construction warning signs within the seven (7) calendar days after the completion of the Work or failure to remove or cover signs when work is suspended for short periods of time shall be considered as non-performance under Section 150.08.

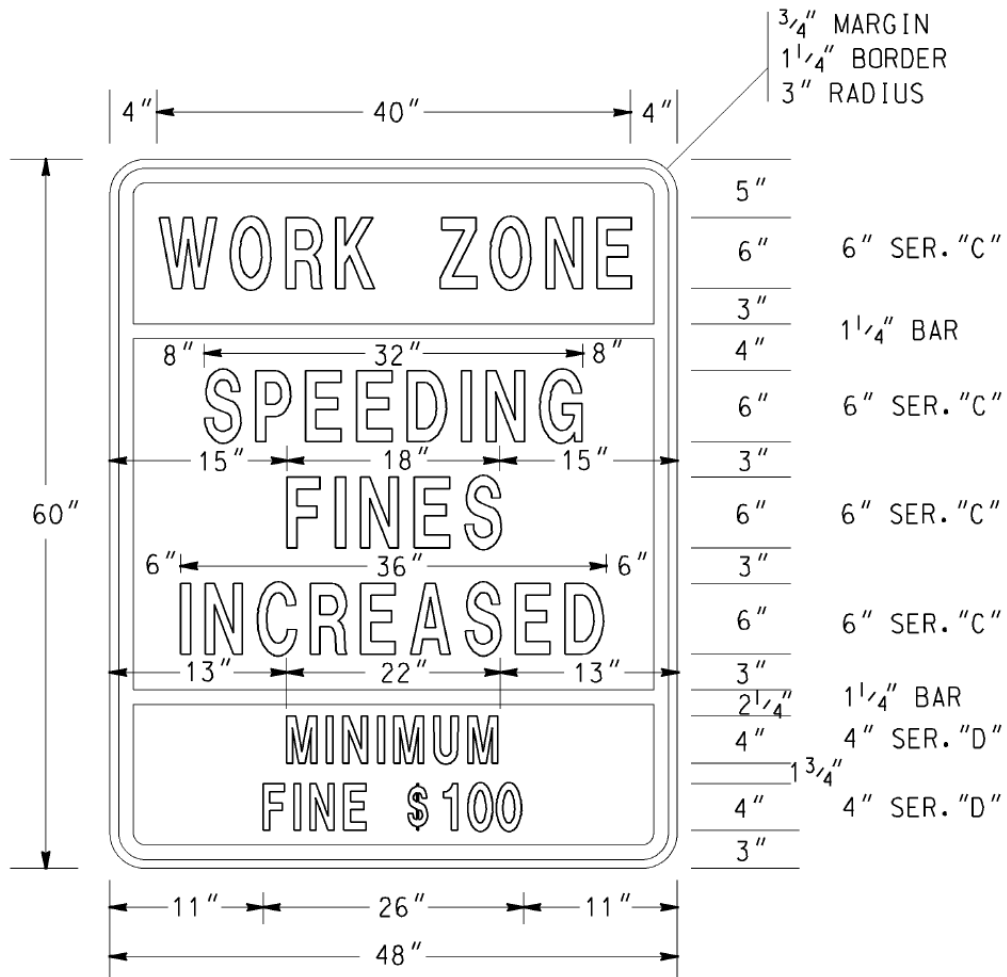
SPEED LIMIT REDUCTION FOR HIGHWAY WORK ZONE
 INTERSTATE AND MULTI-LANE DIVIDED HIGHWAY SIGNING SHALL BE
 DOUBLE INDICATED (RIGHT SHOULDER AND MEDIAN SHOULDER)



ALL INTERSECTING ROADWAYS SHALL BE SIGNED WITH A HWZ-2 SIGN TO WARN MOTORIST ENTERING THE HIGHWAY WORK ZONE.
 INTERSTATE AND MULTI-LANE HIGHWAY SIGNING SHALL BE DOUBLE INDICATED (RIGHT SHOULDER AND MEDIAN SHOULDER).

SIGN SIZES SHOWN ARE FOR INTERSTATE AND MULTI-LANE DIVIDED HIGHWAY. FOR OTHER HIGHWAYS USE STANDARD SIZE SIGNS AS PER THE M.U.T.C.D. EXCEPT HWZ-2 AND HWZ-3 SIGNS.

DETAIL I50-HWZ-1



HWZ-2

COLORS

TOP PANEL

LEGEND & BORDER - BLACK (NON-REFL)

BACKGROUND - FLUORESENT ORANGE

(ASTM TYPE VII, VIII, IX or X)

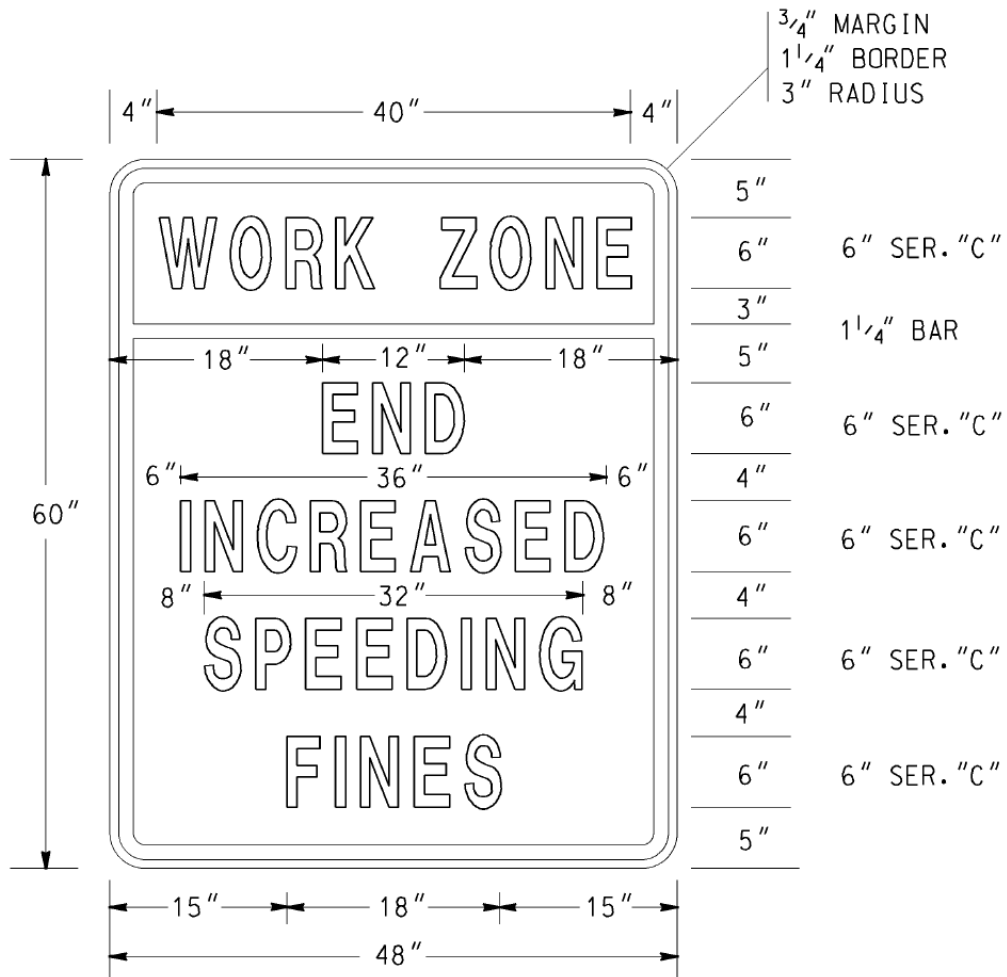
MIDDLE & BOTTOM PANELS

LEGEND & BORDER - BLACK (NON-REFL)

BACKGROUND - WHITE (ASTM TYPE III OR IV REFL SHEETING)

NOTES:

1. ALL HWZ-2 SIGN PANELS SHALL BE RIGID.
2. THE SIZE OF THE HWZ-2 SIGN SHALL NOT BE REDUCED FOR USE ON TWO-LANE ROADWAYS.



HWZ-3

COLORS

TOP PANEL

LEGEND & BORDER - BLACK (NON-REFL)

BACKGROUND - FLUORESENT ORANGE

(ASTM TYPE VII, VIII, IX or X)

BOTTOM PANEL

LEGEND & BORDER - BLACK (NON-REFL)

BACKGROUND - WHITE (ASTM TYPE III OR IV REFL SHEETING)

NOTES:

1. ALL HWZ-3 SIGN PANELS SHALL BE RIGID.
2. THE SIZE OF THE HWZ-3 SIGN SHALL NOT BE REDUCED FOR USE ON TWO-LANE ROADWAYS.

C. LANE CLOSURES:

1. Approval/Restrictions

All lane closures of any type or duration shall have the prior approval of the Engineer.

- a. The length of a lane closure shall not exceed two (2) miles in length excluding the length of the tapers unless the prior approval of the Engineer has been obtained. The Engineer may extend the length of a lane closure based upon field conditions however the length of a workzone should be held to the minimum length required to accomplish the Work. Lane closures shall not be spaced closer than one mile. The advanced warning signs for the project should not overlap with the advanced warning signs for lane shifts, lane closures, etc.
- b. Lane closures that require same direction traffic to be split around the Work Area will not be approved for roadways with posted speeds of 35 mph or greater, excluding turn lanes.
- c. For Interstate, Limited Access and Multi-lane Divided Highways, a Portable Changeable Message Sign (PCMS) shall be placed one (1) mile in advance of a lane closure with a message denoting the appropriate lane closure one mile ahead. The Portable Changeable Message Sign (PCMS) shall be placed on the outside shoulder in accordance with Detail 150-PCMS. This is in addition to the other traffic control devices required by Standard 9106.

2. Removal Of Lane Closures

To provide the greatest possible convenience to the public in accordance with [Sub-Subsection 107.07](#), the Contractor shall remove all signs, lane closure markings, and devices immediately when lane closure work is completed or temporarily suspended for any length of time or as directed by the Engineer. All portable signs and portable sign mounting devices shall be removed from the roadway to an area which will not allow the sign to be visible and will not allow the sign or sign mounting device to be impacted by traffic.

3. Exit And Entrance Ramps

On multilane highways where traffic has been shifted to the inside lanes, the exit and entrance ramps shall have channelization devices placed on both sides of the ramp. This requirement will apply to any situation where traffic is shifted to contra flows or inside staging lanes to facilitate reconstruction work in the vicinity of exit and entrance ramps. The temporary ramp taper length shall be greater than, or equal to, the existing taper length. Interim EXIT gore signs shall be placed at the ramp divergence. The "EXIT OPEN" sign shown in Figure TA-42 of the MUTCD shall be utilized. For exit ramps, channelization device spacing shall be decreased to 10 feet for 200 feet in advance of the temporary gore, and be decreased to 10 feet for the first 100 feet of the temporary gore.

4. Lane Drop/Lane Closure

The first seven (7) calendar days of any lane closure shall be signed and marked as per Standard 9106 or 9107. However, lane closures that exist for a duration longer than seven (7) calendar days may be signed and marked as per the details in Standard 9121, provided the prior approval of the Engineer is obtained. The approved lane drop

shall utilize only the signs and markings shown for the termination end of the lane drop in Standard 9121. All warning signs in the lane drop sequence shall be used. Drums may be substituted for the Type I Crystal Delineators at the same spacing.

5. Termination Area

The transition to normal or full width highway at the end of a lane closure shall be a maximum of 150 feet.

D. TRAFFIC PACING METHOD:

1. Pacing Of Traffic

With prior approval from the Engineer, traffic may be paced allowing the Contractor up to ten (10) minutes maximum to work in or above all lanes of traffic for the following purposes:

- a. Placing bridge members or other bridge work.
- b. Placing overhead sign structures.
- c. Other work items requiring interruption of traffic.

The Contractor shall provide a uniformed police officer with patrol vehicle and blue flashing light for each direction of pacing. The police officer, Engineer, and flaggers at ramps shall be provided with a radio which will provide continuous contact with the Contractor.

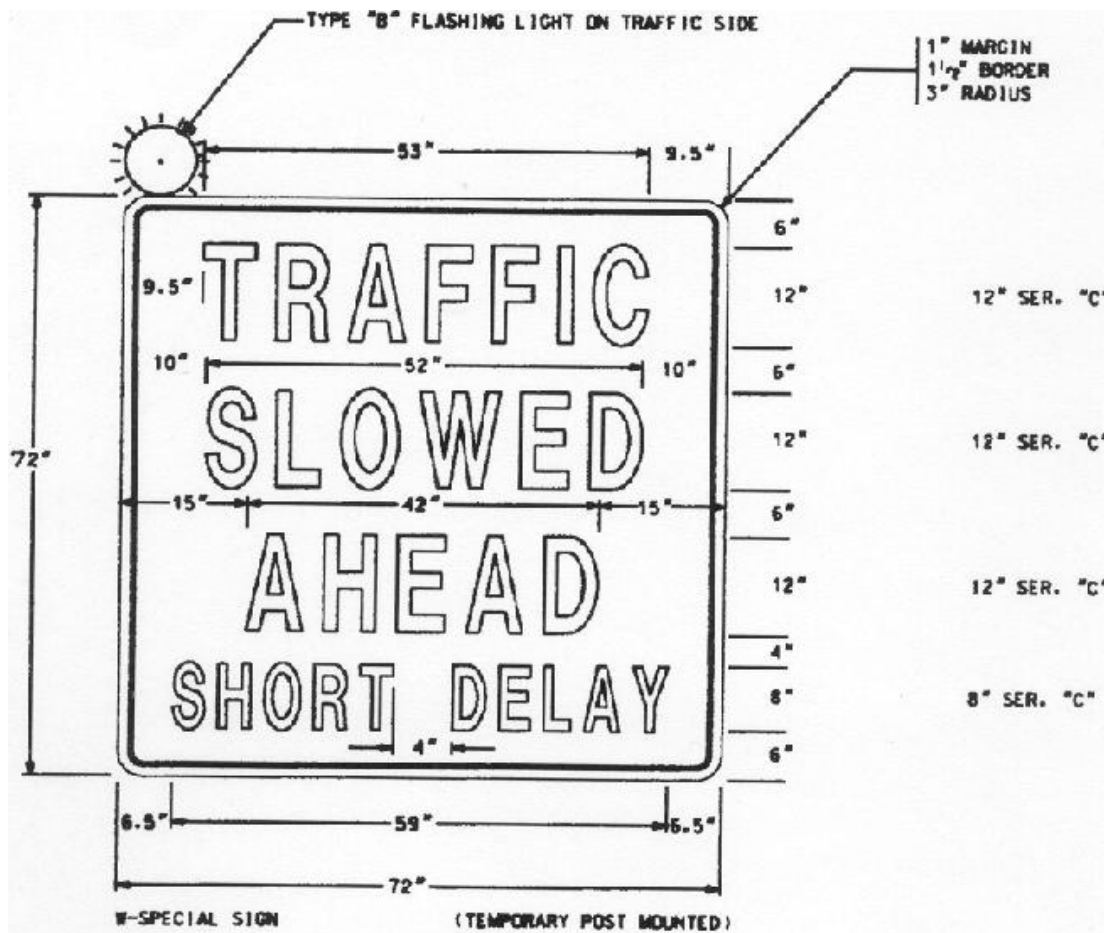
When ready to start the work activity, the police vehicle will act as a pilot vehicle slowing the traffic thereby providing a gap in traffic allowing the Contractor to perform the Work. Any on-ramps between the pace and the work area shall be blocked during pacing of traffic, with a flagger properly dressed and equipped with a Stop/Slow paddle. Each ramp should be opened after the police vehicle has passed.

Pilot vehicles shall travel at a safe pace speed, desirably not less than 20 mph interstate and 10 mph non-interstate. The Contractor shall provide a vehicle to proceed in front of the police vehicle and behind the other traffic in order to inform the **Contractor's** work force when all vehicles have cleared the area.

Traffic will not be permitted to stop during pacing except in extreme cases as approved by the Engineer.

2. Methods Of Signing For Traffic Pacing

At a point not less than 1,000 feet in advance of the beginning point of the pace, the Contractor shall erect and cover a **W-special sign (72 inch x 72 inch) with a Type "B" flashing light, with the legend "TRAFFIC SLOWED AHEAD SHORT DELAY"** (See [Detail 150-A](#)). A portable changeable message sign may be used in lieu of the W-special sign. On divided highways this sign shall be double indicated. A worker with a two-way radio shall be posted at the sign, and upon notice that the traffic is to be paced shall turn on the flashing light and reveal the sign. When traffic is not being paced, the flashing light shall be turned off and the sign covered or removed. W-special signs are reflectorized black on orange, Series "C" letter and border of the size specified.



SIGN SHALL HAVE BLACK LEGEND AND BORDER
ON ORANGE REFLECTORIZED BACKGROUND

DETAIL 150-A

E. CONSTRUCTION VEHICLE TRAFFIC

The Contractor's vehicles shall travel in the direction of normal roadway traffic and shall not reverse direction except at intersections, interchanges, or approved temporary crossings. The Contractor may submit a plan requesting that construction traffic be allowed to travel in the opposite direction of normal traffic when it would be desirable to modify traffic patterns to accommodate specific construction activities.

Prior approval of the Engineer shall be obtained before any construction traffic is allowed to travel in a reverse direction. If the Contractor's submittal is approved the construction traffic shall be separated from normal traffic by appropriate traffic control devices.

F. ENVIRONMENTAL IMPACTS TO THE TEMPORARY TRAFFIC CONTROL (TTC) PLAN

The Contractor shall ensure that dust, mud, and other debris from construction activities do not interfere with normal traffic operations or adjacent properties. All outfall ditches, special ditches, critical storm drain structures, erosion control structures, retention basins, etc. shall be constructed, where possible, prior to the beginning of grading operations so that the best possible drainage and erosion control will be in effect during the grading operations, thereby keeping the roadway areas as dry as possible.

Areas within the limits of the project which are determined by the Engineer to be disturbed or damaged due either directly or indirectly from the progress or the lack of progress of the work shall be cleaned up, redressed, and regrassed. All surplus materials shall be removed and disposed of as required. Surplus materials shall be disposed of in accordance with [Section 201](#) of the Specifications.

G. EXISTING STREET LIGHTS

Existing street lighting shall remain lighted as long as practical and until removal is approved by the Engineer.

H. NIGHTWORK

Adequate temporary lighting shall be provided at all nighttime work sites where workers will be immediately adjacent to traffic.

I. CONSTRUCTION VEHICLES IN THE WORKZONE

The parking of Contractor's and/or workers personal vehicles within the work area or adjacent to traffic is prohibited. It shall be the responsibility of the Worksite Traffic Control Supervisor to ensure that any vehicle present at the worksite is necessary for the completion of the work.

J. ENCROACHMENTS ON THE TRAVELED-WAY

The Worksite Traffic Control Supervisor (WTCS) shall monitor the work to ensure that all the rocks, boulders, construction debris, stockpiled materials, equipment, tools and other potential hazards are kept clear of the travelway. These items shall be stored in a location, in so far as practical, where they will not be subject to a vehicle running off the road and striking them.

K. PEDESTRIAN CONSIDERATIONS

All existing pedestrian facilities, including access to transit stops, shall be maintained. Where pedestrian routes are closed, alternate routes shall be provided. Closures of existing, interim and final pedestrian facilities shall have the prior written approval of the Engineer. When existing pedestrian facilities are disrupted, closed or relocated in a TTC zone, the temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility. Pedestrian facilities are considered improvements and provisions made to accommodate or encourage walking. Whenever a sidewalk is to be closed, the Engineer shall notify the maintaining agency two (2) weeks prior to the closure. Prior to closure, detectable barriers (that are detectable by a person with a visual disability traveling with the aid of a long cane), as described by the MUTCD, shall be placed across the full width of the closed sidewalk. Barriers and channelizing devices used along a temporary pedestrian route shall be in compliance with the MUTCD.

Temporary Traffic Control devices used to delineate a Temporary Traffic Control zone pedestrian walkway shall be in compliance with [Subsection 150.01.E](#). Temporary Traffic Control devices and construction material shall not intrude into the usable width of the pedestrian walkway. Signs and other devices shall be placed such that they do not narrow or restrict any pedestrian passage to less than 48 inches.

A pedestrian walkway shall not be severed or relocated for non-construction activities such as parking for construction vehicles and equipment. Movement by construction vehicles and equipment across designated pedestrian walkways should be minimized. When necessary, construction activities shall be controlled by flaggers. Pedestrian walkways shall be kept free of mud, loose gravel or other debris.

When temporary covered walkways are used, they shall be lighted during nighttime hours. When temporary traffic barrier is used to separate pedestrian and vehicular traffic, the temporary barrier shall meet NCHRP-350 Test Level Three. The barrier ends shall be protected in accordance with Georgia Standard 4960. Curbing shall not be used as a substitute for temporary traffic barriers when temporary traffic barriers are required. Tape, rope or plastic chain strung between temporary traffic control devices are not considered as detectable and shall not be used as a control for pedestrian movements.

The WTCS shall inspect the activity area daily to ensure that effective pedestrian TTC is being maintained. The inspection of TTC for pedestrian traffic shall be included as part of the TC-1 report.

1. Temporary Pedestrian Facilities

Temporary pedestrian facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. The geometry, alignment and construction of the facility should meet the **applicable requirements of the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)"**.

- a. Temporary Walkways with Detectable Edging
A smooth, continuous hard surface (firm, stable and slip resistant) shall be provided throughout the entire length of the temporary pedestrian facility. Compacted soils, sand, crushed stone or asphaltic pavement millings shall not be used as a surface course for walkways.

Temporary walkways shall include detectable edging as defined in the MUTCD. When temporary traffic barrier is included as a pay item in the contract and where locations identified on the plans for positive protection will also allow them to serve as pedestrian detectable edging, payment will be made for the temporary traffic barrier in accordance with [Section 622](#). No payment will be made for temporary walkways with Detectable Edging where existing pavements or existing edging (that meets the requirements of MUTCD) are utilized as temporary walkways. Payment for temporary detectable edging, including approved barriers and channelizing devices, installed on existing pavements shall be included in Traffic Control-Lump Sum.

Regardless of the materials used, temporary walkways shall be constructed of sufficient thickness and durability to withstand the intended use for the duration of the construction project. If concrete or asphalt is used as the surface course for the walkway, it shall be a minimum of one and one-half inches (1-1/2") thick. **Temporary walkways constructed across unimproved streets and drives shall be a minimum thickness of four inches (4") for concrete and three inches (3") for asphalt. Joints formed in concrete sidewalks shall be in accordance with [Section 441](#).** Concrete surfaces shall have a broom finish.

If plywood is used as a walkway, it must be a minimum of three quarters of **an inch (3/4") thick pressure** treated and supported with pressure treated **longitudinal joists spaced a maximum of sixteen inches (16") on center**. The plywood shall be secured to the joist with galvanized nails or galvanized deck screws. Nails and screws shall be countersunk to prevent snagging or tripping the pedestrians. A slip resistant friction course shall be applied to any plywood surface that is used as a walkway. Any slip resistant material used shall have the prior written approval of the engineer.

The contractor may propose alternate types of Temporary Walkways provided the contractor can document that the proposed walkway meets the **requirements of the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)"**. **Alternate types of Temporary Walkways shall have the prior written approval of the engineer.**

Temporary walkways shall be constructed and maintained so there are no abrupt changes in grade or terrain that could cause a tripping hazard or could be a barrier to wheelchair use. The contractor shall construct and maintain the walkway to ensure that joints in the walkway have a vertical **difference in elevation of no more than one quarter (1/4") of an inch and that the horizontal joints have gaps no greater than one half (1/2") of an inch.** The grade of the temporary walkway should parallel the grade of the existing walkway or roadway and the cross slope should be no greater than 2%.

A width of sixty (60") inches, if practical, should be provided throughout the entire length of any temporary walkway. The temporary walkway shall be a minimum width of forty eight inches (48"). When it is not possible to maintain a minimum width of sixty inches (60") throughout the entire length of temporary walkway, a sixty inch (60") by sixty inch (60") passing space should be provided at least every two hundred feet (200 Ft.), to allow individuals in wheelchairs to pass.

Temporary walkways shall be constructed on firm subgrade. Compact the subgrade according to [Section 209](#). Furnish and install any needed temporary pipes prior to constructing any walkway to ensure positive drainage away from or beneath the temporary walkway. Once the walkway is no longer required, remove any temporary materials and restore the area to the original conditions or as shown in the plans.

- b. Temporary Curb Cut Wheelchair Ramps
Temporary curb cut wheelchair ramps shall be constructed in accordance with [Section 441](#) and Detail A-3. Ramps shall also include a detectable warning surface in accordance with Detail A-4. Other types of material for the construction of the temporary curb cut wheelchair ramps, including the detectable warning surface, may be used provided the contractor can provide documentation that the material to be used meets the requirements of the **"Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)"**. When a wheelchair ramp is no longer required, remove the temporary materials and restore the area to existing conditions or as shown in the plans. For the items required to restore the area to original conditions or as shown in the plans, measures for payment shall be covered by contract pay items. If pay items are not included in the contract, then payment for these items shall be included in Traffic Control-Lump Sum.
- c. Temporary Audible Information Device
Temporary audible information devices, when shown in the plans, shall be installed in **compliance with the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)"**. The devices shall be **installed in accordance with the manufacturer's recommendations. Prior to installation, the contractor shall provide the engineer with a set of manufacturer's drawings detailing the proper installation procedures for each device.** When no longer required, the devices shall remain the property of the contractor.

L. TRAFFIC SIGNALS

If the sequence of operations, staging, or the temporary traffic control plan requires the relocation or shifting of any components of an existing traffic signal system then any work on these traffic signals will be considered as part of Lump Sum- Traffic Control. The contractor becomes responsible for the maintenance of these traffic signals from the time that the system is modified until final acceptance. The maintenance of traffic signals that are not a part of the work and are not in conflict with any portion of the work shall not be the responsibility of the contractor.

When construction operations necessitate an existing traffic signal to be out of service, the Contractor shall furnish off-duty police officers to regulate and maintain traffic control at the site. Off-duty police officers should be used to regulate and maintain traffic control at signal sites when lane closures or traffic shifts block or restrict movements causing interference with normal road user flows and will not allow the activated traffic signal to guide the traffic through the signal site.

M. REMOVAL/REINSTALLATION OF MISCELLANEOUS ITEMS

In the prosecution of the Work, if it becomes necessary to remove any existing signs, markers, guardrail, etc. not covered by specific pay item, they shall be removed, stored and reinstalled, when directed by the Engineer, to line and grade, and in the same condition as when removed.

N. Signalized Intersections

Off duty police officers shall be used to regulate and maintain traffic control at functioning signalized intersections when lane closures or traffic shifts block or restrict movements causing interference with road user flows and will not allow the activated traffic signal to guide the traffic through the signal site. This work is considered incidental and shall be included in the overall price bid for traffic control.

150.03 SIGNS:

A. SIGNING REQUIREMENTS OF THE TEMPORARY TRAFFIC CONTROL (TTC) PLAN

When existing regulatory, warning or guide signs are required for proper traffic and pedestrian control the Contractor shall maintain these signs in accordance with the temporary traffic control (TTC) plan. The Contractor shall review the status of all existing signs, interim signs added to the work, and permanent sign installations that are part of the work to eliminate any conflicting or non-applicable signage in the TTC Plan. **The Contractor's review of all signs in the TTC Plan shall establish compliance** with the requirements of the MUTCD and Section 150. Any conflicts shall be

reported to the Engineer immediately and the WTCS shall take the necessary measures to eliminate the conflict.

The Contractor shall make every effort to eliminate the use of interim signs as soon as the Work allows for the installation of permanent signs.

All existing illuminated signs shall remain lighted and be maintained by the Contractor.

Existing street name signs shall be maintained at street intersections.

B. CONFLICTING OR NON-APPLICABLE SIGNS

Any sign(s) or portions of a sign(s) that are not applicable to the TTC plan shall be covered so as not to be visible to traffic or shall be removed from the roadway when not in use. The WTCS shall review all traffic shifts and changes in the traffic patterns to ensure that all conflicting signs have been removed. The review shall confirm that the highest priority signs have been installed and that signs of lesser significance are not interfering with the visibility of the high priority signs. High priority signs include signs for road closures, shifts, detours, lane closures and curves. Any signs, such as speed zones and speed limits, passing zones, littering fines and litter pick up, that reference activities that are not applicable due to the presence of the Work shall be removed, stored and reinstalled when the Work is completed.

Failure to promptly eliminate conflicting or non-applicable signs shall be considered as non-performance under [Section 150.08](#).

C. REMOVAL OF EXISTING SIGNS AND SUPPORTS

The Contractor shall not remove any existing signs and supports without prior approval from the Engineer. All existing signs and supports which are to be removed shall be stored and protected if this material will be required later in the work as part of the TTC plan. If the signs are not to be utilized in the work then the signs will become the property of the Contractor unless otherwise specified in the contract documents.

D. INTERIM GUIDE, WARNING AND REGULATORY SIGNS

Interim guide, warning, or regulatory signs required to direct traffic and pedestrians shall be furnished, installed, reused, and maintained by the Contractor in accordance with the MUTCD, the Plans, Special Provisions, Special Conditions, or as directed by the Engineer. These signs shall remain the property of the Contractor. The bottom of all interim **signs shall be mounted at least seven (7') feet above the level of the pavement edge** when the signs are used for long-term stationary operations as defined by Section 6G.02 of the MUTCD. Special Conditions under Subsection 150.11 may modify this requirement.

Portable signs may be used when the duration of the work is less than three (3) days or as allowed by the special conditions in Subsection 150.11. Portable signs shall be used for all punchlist work. All portable signs and sign mounting devices utilized in work shall be NCHRP 350 compliant. Portable interim signs shall be mounted a **minimum of one (1') foot above the level of the pavement** edge for directional traffic of **two (2) lanes or less and a minimum of seven (7') feet for directional traffic of three (3) or more lanes**. Signs shall be mounted at the height recommended by the **manufacturer's crashworthy testing requirements**. **Portable interim signs which are mounted at less than seven (7') feet in height may have two 18 inch x 18 inch** fluorescent red-orange or orange-red warning flags mounted on each sign.

All regulatory sign blanks shall be rigid whether the sign is mounted as a portable sign, on a Type III barricade or as a permanent mount height sign.

Any permanent mount height interim sign that is designed to fold in half to cover a non-applicable message on the sign shall have reflectorized material on the folded over portion of the sign. The reflectorized material shall be orange in color with a minimum of ASTM Type I engineering grade sheeting with a minimum area of six **inches by six inches (6" x 6") facing the direction of traffic at all times when the sign is folded**.

Interim signs may be either English or metric dimensions.

E. EXISTING SPECIAL GUIDE SIGNS

Existing special guide signs on the Project shall be maintained until conditions require a change in location or legend content. When change is required, existing signs shall be modified and continued in use if the required modification can be made within existing sign borders using design requirements (legend, letter size, spacing, border, etc.) equal to that of the existing signs, or of [Subsection 150.03.E.2](#). Differing legend designs shall not be mixed in the same sign.

1. Special Guide Signs

Special guide signs are those expressway or freeway guide signs that are designed with a message content (legend) that applies to a particular roadway location. When an existing special guide sign is in conflict with work to be performed, the Contractor shall remove the conflicting sign and reset it in a new, non-conflicting location which has been approved by the Engineer.

2. Interim Special Guide Signs

When it is not possible to utilize existing signs, either in place or relocated, the Contractor shall furnish, erect, maintain, modify, relocate, and remove new interim special guide signs in accordance with the Plans or as directed by the Engineer. Interim special guide signs that may be required in addition to, or a replacement for, existing expressway and freeway (interstate) signs shall be designed and fabricated in compliance with the minimum requirements for guide **signing contained in Part 2E "Guide Signs Expressway" and Part 2F "Guide Signs Freeways" of the MUTCD, except that the minimum size of all letters and numerals in the names and places, streets and highways on all signs shall be 16 inches Series "E" initial upper-case and 12 inches lower-case**. All interstate

shields on these signs shall be 48 inches and 60 inches for two-numeral and three-numeral routes, respectively.

The road name of the exit or route shield shall be placed on the exit gore sign.

3. Interim Overhead Guide Sign Structures

Interim overhead special guide sign structures are not required to be lighted unless specifically required by the Plans. If lighting is required the sign shall be lighted as soon as erected and shall remain lighted, during the hours of darkness, until the interim sign is no longer required. The Contractor shall notify the Power Company at least thirty (30) days prior to desired connection to the power source.

4. Permanent Special Guide Signs

The installation of new permanent special guide signs and the permanent modification or resetting of existing special guide signs, when included in the contract, shall be accomplished as soon as practical to minimize the use of interim special guide signs. If lighting is required by the Plans, all new permanent overhead special guide signs shall be lighted as soon as erected.

F. MATERIALS- INTERIM SIGNS:

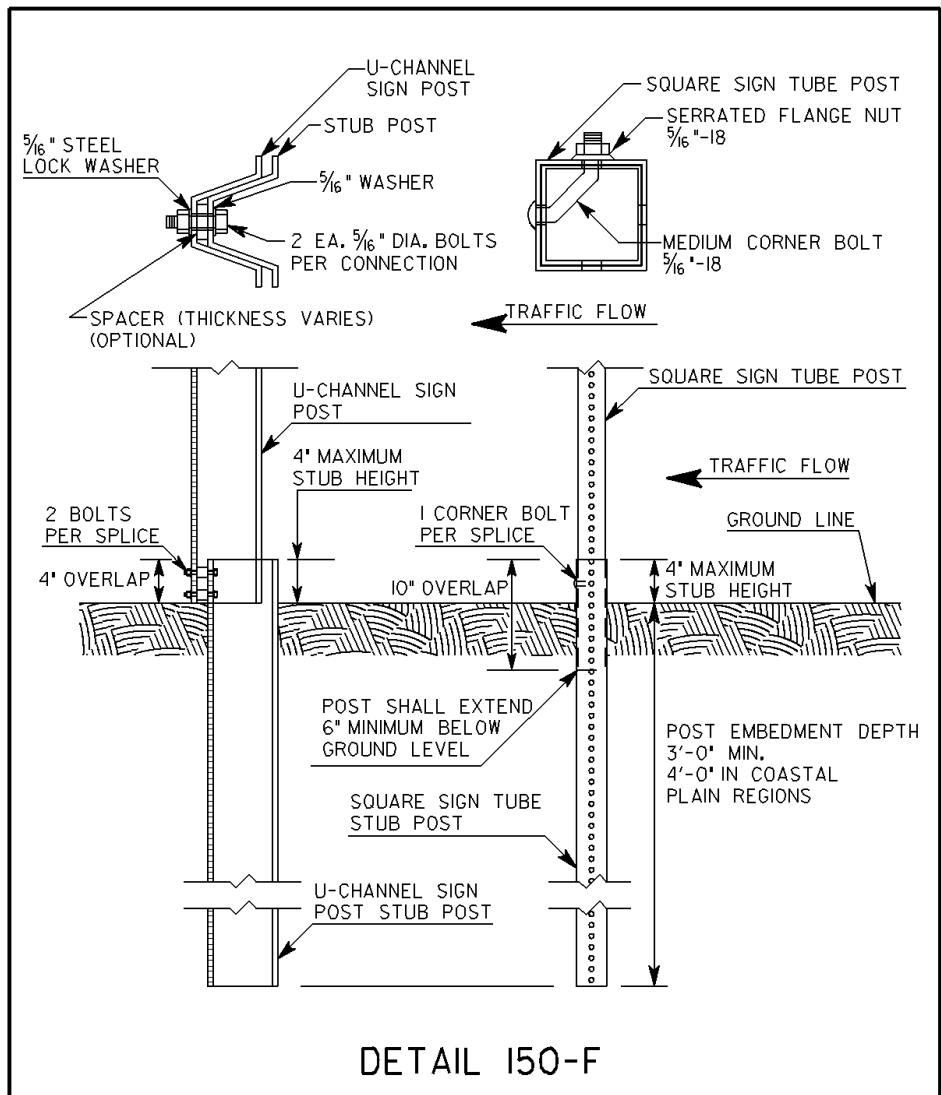
1. Posts

Permanent mounting height of seven (7') feet- Posts for all interim signs shall meet the requirements of Section 911 except that green or silver paint may be used in lieu of galvanization for steel posts or structural shape posts. Within the limits of a single project, all metal posts shall be the same color. Wood posts are not required to be pressure treated. Ground mounted sign(s) greater than nine (9) square feet shall be mounted on two posts.

Interim posts may be either metric or English in dimensions.

Posts for all interim signs shall be constructed to yield upon impact unless the posts are protected by guardrail, portable barrier, impact attenuator or other type of positive barrier protection. Unprotected posts shall meet the breakaway requirements of the "1994 AASHTO Standard Specifications for Structural Support for Highway Signs, Luminaries and Traffic Signals". Unprotected interim posts shall be spliced as shown in [Detail 150-F](#) unless full length unspliced posts are used.

Unprotected post splices will not be permitted any higher than four inches above the ground line to lessen the possibility of affecting the undercarriage of a vehicle. Installation of posts may require establishment of openings in existing pavements, islands, shoulders etc.



2. Sign Blanks And Panels- Permanent mounting height of seven (7') feet-

All sign blanks and panels shall conform to [Section 912](#) of the Specifications except that blanks and panels may be ferrous based or other metal alloys. Type 1 and Type 2 sign blanks shall have a minimum thickness of 0.08 inches regardless of the sign type used. Alternative sign blank materials (composites, poly carbonates, fiberglass reinforced plastics, recycled plastics, etc.) shall have a letter of approval from the Office of Materials and Research for use as interim construction signs before these materials are allowed to be incorporated into the work unless these rigid sign blanks are currently approved as a crashworthy sign blank material under QPL 34. The back side of sign panels shall be painted orange to prevent rust if other metals are used in lieu of aluminum. Plywood blanks or panels will not be permitted. The use of flexible signs will not be permitted for permanent mount height signs.

Interim blanks and panels may be either metric or English in dimensions.

3. Portable Sign Mounting Devices, Portable Sign Blanks-

All portable sign mounting devices and sign blanks utilized in the work shall be NCHRP 350 Test Level III compliant. All portable sign mounting devices and sign blanks shall be from the Qualified Products List. Any sign or sign mounting device shall have an identifying decal, logo, or **manufacturer's stamping that clearly identifies the device as NCHRP 350 compliant. The required decal, logo or manufacturer's stamping shall not be displayed on the message face of the sign.** The Contractor may be required to provide certification from the Manufacturer as proof of NCHRP 350 compliance. All portable signs shall be mounted according to height requirements of [Subsection 150.03.D](#).

G. SIGN VISIBILITY AND OFFSETS

All existing, interim and new permanent signs shall be installed so as to be completely visible for an advance distance in compliance with the MUTCD. Any clearing required for maintaining the line of sight to existing, interim or permanent signs shall be done as part of the requirements of the TTC plan. The clearing shall include any advance warning signs, both interim and permanent, that are installed as a part of the work including advance warning signs that are installed outside the limits of the project. Any sign installed behind W-beam or T-beam guardrail with non-breakaway posts shall be installed with the leading edge of the sign a minimum **of four feet and three inches (4'3") behind the face of the guardrail with five feet (5')** of clearance being desirable. Limbs, brush, construction equipment and materials **shall be kept clear of the driver's line of sight to all signs that are part of the TTC plan.**

H. ADVANCE WARNING SIGNS:

1. All Type Of Highways

Advance warning signs shall be placed ahead of the work area in accordance with Part VI of the MUTCD and shall include a series of at least three advance road work (W20-1) signs placed at the termini of the project. The series shall have the legend ROAD WORK (1500 FEET, 1000 FEET, AND 500 FEET).

At grade intersecting roadways and on-ramps shall be signed with a minimum of one ROAD WORK AHEAD sign.

When work terminates at a "T" intersection, a minimum of one "ROAD WORK AHEAD" sign shall be placed in advance of the intersection and one "END ROAD WORK" sign shall be placed at the termination end of the intersection. Field conditions may require the use of additional warning signage.

Advanced Warning Signs on State Routes shall be a minimum dimension of 48 inches x 48 inches. When a State Route intersects a project which consists of adding travel lanes, reconstructing an existing roadway or new location work, the State Route approaches shall have a minimum of three (W20-1) advanced warning signs (1500 ft., 1000 ft., 500 ft.). The termination end of an intersecting State Route shall have END ROAD WORK signage.

The W20-1 signs shall be placed at the termini of the project or sufficiently in advance of the termini to allow for lane shifts, lane closures and other activities which may also require advanced warning signs. The advanced warning signs for the project should not overlap with the advanced warning signs for lane shifts, lane closures, etc.

The length of a workzone should be held to the minimum length required to accomplish the work. If a project has multiple individual worksites within the overall limits of the project, each site should be signed individually if the advance warning signs for each site can be installed without overlapping an adjacent worksite. As soon as the work is completed at any individual site the warning signs shall be removed from that site. Clean-up work and punchlist work shall be performed with portable signage.

Project mileage indicated on the G20-1 sign shall be the actual project mileage rounded up to the nearest whole mile. Projects less than two (2) miles in length or individual worksites that are part of a multiple worksite project may delete this sign. **The G20-1 sign shall be 60" X 36" and the G20-2 sign shall be 48" X 24".**

2. Interstate, Limited Access And Multilane Divided Highways

In addition to the W20-1 signs required at 500 ft., 1000 ft. and 1500 ft., multi-lane divided highways shall also have additional advanced warning signs installed **with the legend "ROAD WORK (2 MILES, 1 MILE and 1/2 MILE).** All construction warning signs on divided highways shall be double indicated (i.e., on the left and right sides of the roadway.) If the use of the ½ mile, 1 mile and 2 mile advanced warning signs cause an overlap with other work or do not benefit field conditions then the Engineer may review the use of these signs and eliminate their installation. When the posted speed limit is 50 MPH or less, the ½ mile, 1 mile and 2 mile signs should be eliminated especially in urban areas.

The W20-1 advance warning signs for ROAD WORK 500 FEET; 1000 FEET; and 1500 FEET shall be temporarily covered when work involving the advanced warning signs for lane shifts and lane closures overlap these signs. The ROAD WORK ½ MILE, ROAD WORK 1 MILE, and ROAD WORK 2 MILES shall be in place when the 500, 1000 and 1500 feet signs are temporarily covered.

When the temporary traffic control zone already has advanced warning (W20-1) signs installed the W20-1 signs required for lane closures under Standard 9106 should be eliminated.

RAMP WORK ON LIMITED ACCESS HIGHWAYS: The workzone shall not be signed for the entire length of the mainline of a limited access highway when only short individual worksites, interchange or ramp work is being performed.

When work is restricted to ramp reconstruction or widening activities, the advance warning signs on the mainline section of the limited access highway shall be limited to the use of portable advance warning signs. These portable advance warning signs shall only be utilized when work activity is within the gore point of the ramp and the mainline traveled way or work is active in the accel/decel lane adjacent to the mainline traveled way. Portable advance warning signs (W20-1; 1500ft. /1000 ft. /500ft.) shall be installed on the traveled way of the limited access highway when the above conditions are present. The advance warning signs shall be installed only in one direction where work is active. All portable signs shall be double indicated. When work is not active, the ramp work shall be advanced warned by the use of a single 48 inch X 48 inch **"RAMP WORK AHEAD" sign along the right shoulder of the mainline traveled way prior to the beginning of the taper for the decel lane. The "RAMP WORK AHEAD" sign shall be mounted at seven (7') feet in height. Differences in elevation shall be in compliance with the requirements of [Subsection 150.06](#) prior to the removal of the portable (W20-1) advanced warning signs from the mainline.**

The G20-1 sign shall be eliminated on limited access highways when the work involves only ramp work, bridge reconstruction, bridge painting, bridge joint repairs, guardrail and anchor replacement or other site specific work which is confined to a short section of limited access highway.

I. PORTABLE CHANGEABLE MESSAGE SIGN

Unless specified as a paid item in the contract the use of a portable changeable message sign will not be required. When specified, a portable changeable message sign (PCMS) shall meet the minimum requirements of [Section 632](#) and the MUTCD. The maximum amount of messages allowed to be flashed on one PCMS is two phases (flashes). The language and the timing of the messages shall comply with the MUTCD and Section 632.

When used as an advanced device the PCMS should typically be placed ahead of the construction activities. If the PCMS is used as a substitute for another device then the requirements for the other device apply.

J. FLASHING BEACON

The flashing beacon assembly, when specified, shall be used in conjunction with construction warning signs, regulatory, or guide signs to inform traffic of special road conditions which require additional driver attention. The flashing beacon assembly shall be installed in accordance with the requirements of [Section 647](#).

K. RUMBLE STRIP SIGNAGE

Signage for rumble strips located in the travelway shall be as required in [Subsection 150.01.C](#) and [Subsection 150.02.A.9](#).

L. LOW/SOFT SHOULDER SIGNAGE

Low or soft shoulder signs shall be utilized in accordance with the following conditions:

CONSTRUCTION/RECONSTRUCTION PROJECTS:

"LOW/SOFT SHOULDER" signs shall be erected when a difference in elevation exceeds one (1") inch but does not exceed three (3") inches between the travelway and any type of shoulder unless the difference in elevation is four (4') feet or greater from the edge of the traveled way.

The spacing of the signs shall not exceed one (1) mile and the signs shall be placed **immediately past each crossroad intersection**. The "Low/Soft" signs shall remain in place until the difference in elevation is eliminated and the shoulder has been dressed and permanently grassed for a minimum of thirty (30) calendar days. These signs shall be furnished, installed, maintained and removed by the Contractor as part of Traffic Control-Lump Sum. These signs shall be orange with black borders and meet the reflectorization requirements of [Subsection 150.01.D](#).

"SHOULDER DROP-OFF" (W8-9a) signs shall be used when a difference in elevation, **less than four (4') feet from the traveled way, exceeds three (3") inches and is not** protected by positive barrier protection. These warning signs shall be placed in advance of the drop-off.

For a continuous drop-off condition, the W8-9a) signs shall, as a minimum, be spaced in accordance with the above requirements for "Low/soft shoulder" signs.

PROJECTS CONSISTING PRIMARILY OF ASPHALTIC CONCRETE RESURFACING ITEMS:

"LOW/SOFT SHOULDER" signs shall be erected when a difference in elevation exceeds one (1") inch but does not exceed three (3") inches between the travelway and any type of shoulder unless the difference in elevation is four (4') feet or greater from the edge of the traveled way.

SHOULDER BUILDING INCLUDED IN THE CONTRACT: "Low/Soft Shoulder" signs shall be erected as per the requirement of Standards 9102, 9106, and 9107. "Shoulder Drop-off" signs (W8-9a) shall be erected as per the requirements of the MUTCD. These signs shall be maintained until the conditions requiring their installation have been eliminated. The Contractor shall remove all interim warning signs before final acceptance.

SHOULDER BUILDING NOT INCLUDED IN THE CONTRACT: The Department will furnish the "Low/Soft Shoulder" signs, "Shoulder Drop-off" signs and the posts. The signs shall be erected to meet the minimum requirements of [Subsection 150.03](#). The Contractor shall include the cost of furnishing installation hardware (bolts, nuts, and

washers), erection and maintenance of the signs in the bid price for Traffic Control-Lump Sum. The Contractor shall maintain the signs until final acceptance. The Department will remove the signs.

LAU/LAR PROJECTS SHOULDER BUILDING NOT INCLUDED IN THE CONTRACT: The Contractor will furnish, install and maintain LOW/SOFT SHOULDER signs (yellow with black borders, ASTM Type III or IV) at the appropriate spacing, until Final Acceptance of the project by the Department. After Final Acceptance by the Department the signs will become the property and responsibility of the local government.

M. BUMP SIGNAGE:

MULTI-LANE DIVIDED HIGHWAYS: A bump sign (W8-1) shall be utilized when a transverse joint in the pavement structure has a vertical difference in elevation of **three quarters (3/4") of an inch or greater in depth with no horizontal taper to ramp** the traffic from one elevation to the other. This condition typically occurs at approach slabs during pavement milling operations and at transverse joints in asphaltic pavement lifts.

TWO-LANE TWO-WAY HIGHWAYS: A bump sign (W8-1) shall be utilized when a transverse joint in the pavement structure has a vertical difference in elevation that exceeds one and three quarters (1-3/4") inches in depth with no horizontal taper to ramp the traffic from one elevation to the other. This includes utility and storm drainage repairs that require concrete placement for patching and/or steel plating.

The (W8-1) sign shall be placed sufficiently in advance to warn the motorist of the condition.

N. PEDESTRIAN SIGNAGE:

Appropriate signs as described in the MUTCD shall be maintained to allow safe passage of pedestrian traffic or to advise pedestrians of walkway closures (Refer to MUTCD Figures TA-28 and TA-29 for guidance). Advance closure signing should be placed at intersections rather than midblock locations so that pedestrians are not confronted with midblock work sites that will induce them to attempt skirting the work site or making a midblock crossing. Signs and other devices mounted lower than seven (7) feet above the temporary pedestrian walkway shall not project more than four (4) inches into the accessible pedestrian facilities. Signs and other devices shall be placed such that they do not narrow any pedestrian passage to less than 48 inches.

150.04 PAVEMENT MARKINGS

A. GENERAL

Full pattern pavement markings in accordance with [Section 652](#) and in conformance with Section 3A and 3B, except 3B.02, of the MUTCD are required on all courses before the roadway is opened to traffic. No passing zones shall be marked to conform to [Subsection 150.04.E](#). During construction and maintenance activities on all highways open to traffic, both existing markings and markings applied under this Section shall be fully maintained until Final Acceptance. If the pavement markings are, or become, unsatisfactory in the judgement of the Engineer due to wear, weathering, or construction activities, they shall be restored immediately.

1. Resurfacing Projects

Pavement markings shall be provided on all surfaces that are placed over existing markings. Interim and final markings shall conform in type and location to the markings that existed prior to resurfacing unless changes or additions are noted in the Contract. The replacement of parking spaces will not be required unless a specific item or note has been included in the Contract. Any work to make additions to the markings that existed prior to resurfacing is to be considered as extra work.

2. Widening And Reconstruction Projects

If the lane configuration is altered from the preconstruction layout then pavement markings will be as required by the plans or the Engineer.

3. New Location Construction Projects

Pavement marking plans will be provided.

B. MATERIALS

All traffic striping applied under this Section shall be a minimum four inches in width or as shown in plans and shall conform to the requirements of [Section 652](#), except as modified herein. Raised pavement markers (RPMs) shall meet the requirements of [Section 654](#). Markings on the final surface course, which must be removed, shall be a removable type. The Contractor will be permitted to use paint, thermoplastic, or tape on pavement which is to be overlaid as part of the project, unless otherwise directed by the Engineer. Partial (skip) reflectorization (i.e. reflectorizing only a portion of a stripe) will not be allowed.

C. INSTALLATION AND REMOVAL OF PAVEMENT MARKINGS:

INSTALLATION: All pavement markings, both interim and permanent, shall be applied to a clean surface. The Contractor shall furnish the layout and preline the roadway surface for the placement of pavement markings applied as part of the temporary traffic control plan. All interim marking tape and RPM's on the final surface shall be removed prior to the placement of the final markings.

The Contractor shall sequence the work in such a manner as to allow the installation of markings in the final lane configuration at the earliest possible stage of the work.

REMOVAL: Markings no longer applicable shall be removed in accordance with [Subsection 656.3.05](#).

THE ELIMINATION OF CONFLICTING PAVEMENT MARKINGS BY OVERPAINTING WITH UNAPPROVED PAINT OR ANY TYPE OF LIQUID ASPHALT IS NOT ACCEPTABLE.

INTERMEDIATE SURFACE: Interim markings shall be removed by methods that will cause minimal damage to the pavement surface while also ensuring that traveling public will not be confused or misdirected by any residual markings remaining on the intermediate surface. The use of approved black-out tape and black-out paint (manufactured for the sole purpose of covering existing pavement markings) may be permitted on some interim surfaces, provided the results are satisfactory to the Engineer.

FINAL SURFACE: No interim paint or thermoplastic markings will be permitted on any final surface unless the interim markings are in alignment with the location of the permanent markings and the interim marking will not interfere or adversely affect placement of the permanent markings. The proposed method of removal for layout errors that require markings to be removed from the final surface shall have the prior approval of the Engineer. Any damage to the final pavement surface caused by **the pavement marking removal process shall be repaired at the Contractor's expense** by methods acceptable and approved by the Engineer. [Subsection 400.3.06.C](#) shall apply when corrective measures are required. The use of black-out tape or black-out paint will not be permitted under any circumstance to correct layout errors on any final surface.

Traffic shifts that are done on the final surface shall be accomplished using interim traffic marking tape that can be removed without any blemishing of the final surface. Interim traffic marking tape shall be used on any of the following final surfaces; asphaltic concrete, Portland cement concrete, and bridge deck surfaces. The contractor may propose alternate traffic markings and removal methods on the final surface. Submitted proposals shall include the type of material, method of removal and a cost comparison to the traffic marking tape method. Prior to any approval, the contractor shall field demonstrate to the satisfaction of the Engineer that the proposed traffic markings can be removed without any blemishing of the final surface. If the proposal is determined to be acceptable, a supplemental agreement will be executed prior to the installation of the proposed alternate traffic markings. The supplemental agreement shall denote the type of traffic marking materials, method of removal and any cost and/or time savings to the Department. The Department will not consider or participate in any cost increase that may result from implementing the proposed alternate method.

PAY FACTOR REDUCTION FOR ASPHALTIC CONCRETE FINAL SURFACES: When the correction of an error in the layout of the final pavement markings requires the final surface to be grounded, blemished, scarred, or polished the pay factor shall be reduced to 0.95 for the entire surface area of the final topping that has a blemish, polished or a scarred surface. The reduced pay factor shall not be confined to only the width and length of the stripe or the dimensions of the blemished areas, the whole roadway surface shall have the reduced pay factor applied. The area of the

reduced pay factor shall be determined by the total length and the total width of the roadway affected. If the affected area is not corrected, the reduction in pay shall be deducted from the final payment for the topping layer of asphaltic concrete. The Engineer shall make the final determination whether correction or a reduced pay factor is acceptable.

The eradication of pavement markings on intermediate and final concrete surfaces shall be accomplished by a method that does not grind, polish, or blemish the surface of the concrete. The method used for the removal of the interim markings shall not spall chip the joints in the concrete and shall not damage the sealant in the joints. Any joint or sealant repairs shall be included in the bid price for Traffic Control-Lump Sum. The proposed method of removal shall have the prior approval of the Engineer.

Failure to promptly remove conflicting or non-applicable pavement markings shall be considered as non-performance under [Subsection 150.08](#).

PREPARATION AND PLANNING FOR TRAFFIC SHIFTS: When shifting of traffic necessitates removal of centerline, lane lines, or edge lines, all such lines shall be removed prior to, during, or immediately after any change so as to present the least interference with traffic. Interim traffic marking tape shall be used as a temporary substitute for the traffic markings being removed.

Before any change in traffic lane(s) alignment, marking removal equipment shall be present on the project for immediate use. If marking removal equipment failures occur, the equipment shall be repaired or replaced (including leasing equipment if necessary), so that the removal can be accomplished without delay.

Except for the final surface, markings on asphaltic concrete may be obliterated by an overlay course, when approved by the Engineer. When an asphaltic concrete overlay is placed for the sole purpose of eliminating conflicting markings and the in place asphaltic concrete section will allow, said overlay will be eligible for payment only if designated in the Plans. Overlays to obliterate lines will be paid for only once and further traffic shifts in the same area shall be accomplished with removable markings. Only the minimum asphaltic concrete thickness required to cover lines will be allowed. Excessive build-up will not be permitted. When an overlay for the sole purpose of eliminating conflicting markings is not allowed, the markings no longer applicable shall be removed in accordance with [Subsection 656.3.05](#).

D. RAISED PAVEMENT MARKERS

Raised pavement markers (RPMs) are required as listed below for all asphaltic concrete pavements before the roadway is open to traffic. On the final surface, **RPM's shall be placed according to the timeframes specified in 150.04 E. for full pattern pavement markings except Interstate Highways where RPM's shall be placed and/or maintained when the roadway is open to traffic.** When Portland Cement Concrete is an intermediate or final surface and is open to traffic, one calendar day is allowed for cleaning and drying before the installation of RPMs is required.

Raised pavement markers are not allowed on the right edge lines under any situation.

1. Interstate Highways

Retro-reflective raised pavement markers (RPM's) shall be placed and/or maintained on intermediate pavement surfaces on all interstate highways that are open to traffic. This includes all resurfacing projects along with widening and reconstruction projects. The spacing and placement shall be as required for MULTI-LANE DIVIDED HIGHWAYS.

2. Multi-Lane Divided Highways

Retro-reflective raised pavement markers (RPMs) shall be placed and/or maintained on intermediate pavement surfaces on all multi-lane divided highways that are opened to traffic when these roadways are being widened or reconstructed. Two lane-two way roadways that are being widened to a multi-lane facility, whether divided or undivided, are included in this provision. Projects consisting primarily of asphalt resurfacing items or shoulder widening items are excluded from this requirement. The RPMs shall be placed as follows:

a. SUPPLEMENTING LANE LINES

80 foot center on skip lines with curvature less than three degrees. (Includes tangents)

40 foot centers on solid lines and all lines with curvature between three degrees and six degrees.

20 foot centers on curves over six degrees.

20 foot centers on lane transitions or shifts.

b. SUPPLEMENTING RAMP GORE LINES

20 foot centers, two each, placed side by side.

c. OTHER LINES

As shown on the plans or directed by the Engineer.

3. Other Highways

On other highways under construction RPMs shall be used and/or maintained on intermediate pavement surfaces as follows:

a. SUPPLEMENTING LANE LINES AND SOLID LINES

40 foot centers except on lane shifts. (When required in the Plans or Contract.)

20 foot centers on lane shifts. (Required in all cases.)

b. SUPPLEMENTING DOUBLE SOLID LINES

40 foot centers (one each beside each line) except on lane shifts. (When required in the Plans or Contract.)

20 foot centers on lane shifts. (Required in all cases.)

E. EXCEPTIONS FOR INTERIM MARKINGS

Some exceptions to the time of placement and pattern of markings are permitted as noted below; however, full pattern pavement markings are required for the completed project.

1. Two-Lane, Two-Way Roadways

a. SKIP LINES

All interim skip (broken) stripe shall conform to [Section 652](#) except that stripes shall be at least two feet long with a maximum gap of 38 feet. On curves greater than six degrees, a one-foot stripe with a maximum gap of 19 feet shall be used. In lane shift areas solid lines will be required. Interim skip lines shall be replaced with markings in full compliance with [Section 652](#) prior to expiration of the 14 calendar day period.

Interim raised pavement markers may be substituted for the interim skip (broken) stripes. If raised pavement markers are substituted for the two foot interim skip stripe, three markers spaced at equal intervals over a two feet distance will be required. No separate payment will be made if the interim raised pavement markers are substituted for interim skip lines.

Interim raised pavement markers shall be retro-reflective, shall be the same color as the pavement markers for which they are substituted, and shall be visible during daytime.

The type of interim marker and method of attachment to the pavement shall be approved by the Office of Materials and Research but in no case will the markers be attached by the use of nails. Flexible reflective markers, Type 14 or Type 15, may be used for a maximum of fourteen (14) calendar days as an interim marker. Any flexible reflective markers in use shall be from the qualified products list (QPL).

The interim raised pavement markers shall be maintained until the full pattern pavement markings are applied. At the time full pattern markings are applied the interim raised markers shall be removed in a manner that will not interfere with application of the full pattern pavement markings.

b. NO PASSING ZONES-TWO-LANE, TWO-WAY ROADWAYS

Passing zones shall be re-established in the locations existing prior to resurfacing. No changes to the location of passing zones shall be done without the written approval of the Engineer. For periods not to exceed three calendar days where interim skip centerlines are in place, no-passing

zones shall be identified by using post or portable mounted DO NOT PASS regulatory signs (R4-1 24" x 30") at the beginning and at intervals not to exceed ½ mile within each no-passing zone. A post or portable mounted PASS WITH CARE regulatory sign (R4-1 24" x 30") shall be placed at the end of each no-passing zone. Post mounted signs shall be placed in accordance with the MUTCD. Portable signs shall conform to the requirements of the MUTCD and shall be NCHRP 350 compliant. Portable signs shall be secured in such a manner to prevent misalignment and minimize the possibility of being blown over by weather conditions or traffic.

On new location projects and on projects where either horizontal or vertical alignments has been modified, the location of No-Passing Zones will be identified by the Engineer.

c. EDGELINES

1) Bituminous Surface Treatment Paving

Edgelines will not be required on intermediate surfaces (including asphaltic concrete leveling for bituminous surface treatment paving) that are in use for a period of less than 60 calendar days except at bridge approaches, on lane transitions, lane shifts, and in such other areas as determined by the Engineer. On the final surface, edgelines shall be placed within 30 calendar days of the time that the final surface was placed.

2) All Other Types of Pavement

Edgelines will not be required on intermediate surfaces that are in use for a period of less than 30 calendar days except at bridge approaches, on lane transitions, lane shifts, and in such other areas as determined by the Engineer. On the final surface, edgelines shall be placed within 14 calendar days of the time that the surface was placed.

2. Multi-Lane Highways – With No Paved Shoulder(S) Or Paved Shoulder(S) Four Feet Or Less

a. UNDIVIDED HIGHWAYS (INCLUDES PAVED CENTER TURN LANE)

1) Centerlines and No-Passing Barrier-Full Pattern centerlines and no-passing barriers shall be restored before opening to traffic.

2) Lanelines- Interim skip (broken) stripe as described in [Subsection 150.04E.1.a](#). may be used for periods not to exceed three calendar days. Skiplines are not permitted in lane shift areas. Solid lines shall be used.

3) Edgelines- Edgelines shall be placed on intermediate and final surfaces within three calendar days of obliteration.

b. DIVIDED HIGHWAYS (GRASS OR RAISED MEDIAN)

- 1) Lanelines- Full pattern skip stripe shall be restored before opening to traffic. Skip lines are not permitted in lane shift areas. Solid lines shall be required.
- 2) Centerline/Edgeline- Solid lines shall be placed on intermediate and final surfaces within three calendar days of obliteration.

3. Limited Access Roadways And Roadways With Paved Shoulders Greater Than Four Feet

a. Same as [Subsection 150.04.E.2](#) except as noted in (b) below.

b. EDGELINES-

- 1) Asphaltic Concrete Pavement- Edgelines shall be placed on intermediate and final surfaces prior to opening to traffic.
- 2) Portland Cement Concrete Pavement- Edgelines shall be placed on any surface open to traffic no later than one calendar day after work is completed on a section of roadway. All water and residue shall be removed prior to daily striping.

4. Ramps For Multi-Lane Divided Highways

A minimum of one solid line edge stripe shall be placed on any intermediate surface of a ramp prior to opening the ramp to traffic. The other edge stripe may be omitted for a maximum period of three (3) calendar days on an intermediate surface. Appropriate channelization devices shall be spaced at a maximum of **twenty-five (25') feet intervals until the other stripe has been installed.**

The final surface shall have both stripes placed prior to opening the ramp to traffic.

5. MISCELLANEOUS PAVEMENT MARKINGS:

FINAL SURFACE: School zones, railroads, stop bars, symbols, words and other similar markings shall be placed on final surfaces conforming to [Section 652](#) within fourteen (14) calendar days of completion of the final surface. Final markings shall conform to the type of pay item in the plans. When no pay item exists in the plans the final markings shall conform to [Section 652](#) for painted markings.

INTERMEDIATE SURFACE: Intermediate surfaces that will be in use for more than forty-five (45) calendar days shall have the miscellaneous pavement markings installed to conform to the requirement of [Section 652](#). Under Subsection 150.11, Special Conditions, or as directed by the Engineer these markings may be eliminated.

F. MOBILE OPERATIONS

When pavement markings (centerlines, lane lines, and edgelines) are applied in a continuous operation by moving vehicles and equipment, the following minimum equipment and warning devices shall be required. These devices and equipment are in addition to the minimum requirements of the MUTCD.

1. All Roadways

All vehicles shall be equipped with the official slow moving vehicle symbol sign. All vehicles shall have a minimum of two flashing or rotating beacons visible in all directions. All protection vehicles shall have an arrow panel mounted on the rear. All vehicles requiring an arrow panel shall have, as a minimum, a Type B panel. All vehicle mounted signs shall be mounted with the bottom of the sign a minimum height of **forty-eight inches (48") above the pavement. All sign legends shall be covered or removed from view when work is not in progress.**

2. Two-Lane Two-Way Roadways

a. Lead Vehicles

The lead vehicle may be a separate vehicle or the work vehicle applying the pavement markings may be used as the lead vehicle. The lead vehicle shall have an arrow panel mounted so that the panel is easily visible to oncoming (approaching) traffic. The arrow panel should typically operate in the caution mode.

b. Work Vehicles

The work vehicle(s) applying markings shall have an arrow panel mounted on the rear. The arrow panel should typically operate in the caution mode. The work vehicle placing cones shall follow directly behind the work vehicle applying the markings.

c. Protection Vehicles

A protection vehicle may follow the cone work vehicle when the cones are being placed and may follow when the cones are being removed.

3. MULTI-LANE ROADWAYS

A lead vehicle may be used but is not required. The work vehicle placing cones shall follow directly behind the work vehicle applying the markings. A protection vehicle that does not function as a work vehicle should follow the cone work vehicle when traffic cones are being placed. A protection vehicle should follow the cone work vehicle when the cones are being removed from the roadway. Protection vehicles shall display a sign on the rear of the vehicle with the legend PASS ON LEFT (RIGHT).

INTERSTATES AND LIMITED ACCESS ROADWAYS: A protection vehicle shall follow the last work vehicle at all times and shall be equipped with a truck mounted attenuator that is certified for impacts not less than 62 mph in accordance with NCHRP350 Test Level Three (3).

150.05 CHANNELIZATION

A. GENERAL

Channelization shall clearly delineate the travelway through the work zone and alert drivers and pedestrians to conditions created by work activities in or near the travelway. Channelization shall be done in accordance with the plans and specifications, the MUTCD, and the following requirements.

All Channelization Devices utilized on any project shall be NCHRP 350 compliant. Any device used on the Work shall be from the Qualified Products List. All devices **utilized on the work shall have a decal, logo, or manufacturer's stamping that clearly identifies the device as NCHRP 350 compliant.** The Contractor may be required to furnish certification from the Manufacturer for any device to prove NCHRP 350 compliance.

1. Types of Devices Permitted for Channelization in Construction Work Zones:

a. DRUMS:

- 1) DESIGN: Drums shall meet the minimum requirement of the MUTCD and shall be reflectorized as required in [Subsection 150.01.D](#). The upper edge of the top reflectorized stripe on the drum shall be located a minimum of 33 inches above the surface of the roadway. A minimum drum diameter of 18 inches shall be maintained for a minimum of 34 inches above the roadway.
- 2) APPLICATION: Drums shall be used as the required channelizing device to delineate the full length of a lane closure, shift, or encroachment, except as modified by this Subsection.
- 3) TRANSITION TAPERS FOR LANE CLOSURES: Drums shall be used on all transition tapers. The minimum length for a merging taper for a lane closure on the travelway shall be as shown in Table 150-1:

TABLE 150-1

Posted Speed Limit, MPH	Lane Width 9 Feet	Lane Width 10 Feet	Lane Width 11 Feet	Lane Width 12 Feet	Maximum Drum Spacing in Tapers, (Feet)
	Minimum Taper Length (L) in Feet				
20	60	70	75	80	20
25	95	105	115	125	25
30	135	150	165	180	30
35	185	205	225	245	35
40	240	270	295	320	40
45	405	450	495	540	45
50	450	500	550	600	50
55	495	550	605	660	55
60	540	600	660	720	60
65	585	650	715	780	65
70	630	700	770	840	70
75	675	750	825	900	75

If site conditions require a longer taper then the taper shall be lengthened to fit particular individual situations.

The length of shifting tapers should be at least ½ L.

The length of a closed lane or lanes, excluding the transition taper(s), shall be limited to a total of two (2) miles. Prior approval must be obtained from the Engineer before this length can be increased.

Night time conditions: When a merge taper exists into the night all drums **located in the taper shall have, for the length of the taper only, a six (6")** inch fluorescent orange (ASTM Type VI, VII, VIII, IX or X) reflectorized top stripe on each drum. The top six-inch stripe may be temporarily attached to the drum while in use in a taper. The Engineer may allow the **fluorescent orange reflectorized six (6") inch top stripe on each drum in a** merging taper to remain in place during daylight hours provided there is a lane closure(s) with a continuous operation that begins during one nighttime period and ends during another nighttime period. All drums that have the six-inch top stripe permanently attached shall not be used for any other conditions.

Multiple Lane Closures:

- (a) A maximum of one lane at a time shall be closed with each merge taper.
- (b) A minimum tangent length of 2 L shall be installed between each individual lane closure taper.

4) LONGITUDINAL CHANNELIZATION: Drums shall be spaced as listed below for various roadside work conditions except as modified by

[Subsection 150.06](#). Spacing shall be used for situations meeting any of the conditions listed as follows:

(a) 40 FOOT SPACING MAXIMUM

- (1) For difference in elevation exceeding two inches.
- (2) For heeled sections no steeper than 4:1 as shown in [Subsection 150.06, Detail 150-E](#).

(b) 80 FOOT SPACING MAXIMUM

- (1) For difference in elevation of two inches or less.
- (2) Flush areas where equipment or workers are within ten feet of the travel lane.

(c) 200 FOOT SPACING MAXIMUM: Where equipment or workers are more than ten feet from travel lane. Lateral offset clearance to be four feet from the travel lane.

- (1) For paved areas eight feet or greater in width that are paved flush with a standard width travel lane.
- (2) For disturbed shoulder areas not completed to typical section that are flush to the travel lane and considered a usable shoulder.

REMOVAL OF DRUMS: Drums may be removed after shoulders are completed to typical section and grassed. Guardrail and other safety devices shall be installed and appropriate signs advising of conditions such as soft or low shoulder shall be posted before the drums are removed.

b. VERTICAL PANELS

- 1) DESIGN: All vertical panels shall meet the minimum requirements of the MUTCD. All vertical panels shall have a minimum of 270 square inches of retro-reflective area facing the traffic and shall be mounted with the top **of the reflective panel a minimum of 36" above** the roadway.
- 2) APPLICATION: Lane encroachment by the drum on the travelway should permit a remaining lane width of ten feet. When encroachment reduces the travelway to less than ten feet, vertical panels shall be used to restore the travelway to ten feet or greater. No other application of vertical panels will be permitted.

c. CONES

- 1) DESIGN: All cones shall be a minimum of 28 inches in height regardless of application and shall meet the requirement of the MUTCD. Reflectorization may be deleted from all cones.

- 2) APPLICATION: For longitudinal channelizing only, cones will be permitted for daylight closures or minor shifts. (Drums are required for all tapers.) The use of cones for nighttime work will not be permitted. Cones shall not be stored or allowed to be visible on the worksite during nighttime hours.

d. BARRICADES

DESIGN: Type III barricades shall meet the minimum requirements of the MUTCD and shall be reflectorized as required in [Subsection 150.01.D](#). The Contractor has the option of choosing Type III barricades from the Qualified Products List or the Contractor may utilize generic barricades that are approved by the Federal Highway Administration (FHWA). When barricades have been specifically crash tested with signs attached, the contractor has the responsibility to attach the signs as per **the manufacturer's recommendations to ensure crashworthiness**. If signs are attached to generic barricades or to barricades from the Qualified Products List (QPL) that have not been crash tested with signs attached then the responsibility for crashworthiness and the liability for mounting these signs to the barricades are assumed by the Contractor and the Contractor shall certify that the barricades are crashworthy under FHWA workzone guidelines for NCHRP 350 crashworthy compliance. Any generic barricades used in the work shall be stamped or stenciled to show compliance with NCHRP 350. The use of Type I and Type II barricades will not be permitted.

- 1) APPLICATION: Type III barricades shall be placed as required by the plans, the Standards, and as directed by the Engineer. All signs mounted on barricades shall be mounted to comply with the requirements of the MUTCD and NCHRP 350 Test Level III. NCHRP 350 crashworthy compliance may require that rigid signs be mounted separate from the Type III barricade.

When a barricade is placed so that it is subject to side impact from a vehicle, a drum shall be placed at the side of the barricade to add target value to the barricade.

e. WARNING LIGHTS:

- 1) DESIGN: All warning lights shall meet the requirements of the MUTCD.

- 2) APPLICATION

- (a) Type A low-intensity flashing lights shall be used as shown in the Plans, the Standards, and as directed by the Engineer. Flashing lights are not required for advance warning signs in [Subsection 150.03.H](#).
- (b) Type C Steady-Burn lights shall be used as shown in the Plans, the Standards, and as directed by the Engineer. Steady-burn lights are not required on drums for merging tapers that exist into the night.

f. TEMPORARY BARRIERS

- 1) DESIGN: Temporary barriers shall meet the requirements of Sections 620.
- 2) APPLICATION: Temporary barriers shall be placed as required by the plans, standards, and as directed by the Engineer. When Temporary barrier is located 20 feet or less from a travel lane, yellow reflectors shall be fixed to the top of the barrier at intervals not greater than 40 feet in the longitudinal section and 20 feet in the taper section and shall be mounted approximately two inches above the barrier. If both lanes of a two-lane two-way roadway are within 20 feet or less of the barrier then the reflectors shall be installed for both directions of traffic.

The reflectors shall be 100 square inches (ASTM Type VII or VIII) reflective sheeting mounted on flat-sheet blanks. The reflectors shall be mounted approximately two inches above the top of the barrier. The reflectors shall be attached to the barrier with adhesive or by a drilled-in anchor type device. The reflectors shall not be attached to a post or board that is placed between the gap in the barrier sections.

Approach end of Temporary barrier shall be flared or protected by an impact attenuator (crash cushion) or other approved treatment in accordance with Construction Details/Standards and Standard Specifications.

On interstate or other controlled access highways where lane shifts or crossovers cause opposing traffic to be separated by less than 40 ft., portable barrier shall be used as a separator.

B. PORTABLE IMPACT ATTENUATORS:

1. DESCRIPTION

This work consists of the furnishing (including spare parts), installation, maintenance, relocation, reuse as required, and removal of Portable Impact Attenuator Units/Arrays.

2. MATERIALS

Materials used in the Attenuator shall meet the requirements of [Section 648](#) for Portable Impact Attenuators.

3. CONSTRUCTION

Portable Impact Attenuator Unit/Arrays installation shall conform to the requirements of [Section 648](#), **Manufacturer's recommendations and Georgia Standard 4960** and shall be installed at locations designated by the Engineer, and/or as shown on the plans.

C. TEMPORARY GUARDRAIL ANCHORAGE- Type 12:

1. DESCRIPTION

This work consists of the furnishing, installation, maintenance and removal of Temporary Guardrail Anchorage- Type 12 used for Portable Barrier or temporary guardrail end treatment.

2. MATERIALS

Materials used in the Temporary Guardrail Anchorage- Type 12 shall meet the requirements of [Subsection 641.2](#) of the Specifications and current Georgia Standards and may be new or used. Materials salvaged from the Project which meet the requirements of Standards may be utilized if available. The use of any salvaged materials will require prior approval of the Engineer.

3. CONSTRUCTION

Installation of the Temporary Guardrail Anchorage- Type 12 shall conform to the requirements of the Plans, current Georgia Standards and [Subsection 641.3](#) of the Specifications. Installation shall also include sufficient additional guardrail and appurtenances to effect the transition and connection to Temporary Concrete Barrier as required by the details in Georgia Standard 4960.

150.06 DIFFERENCES IN ELEVATION BETWEEN TRAVEL LANES AND SHOULDERS (SEE [SUBSECTION 150.06.G](#) FOR PROJECTS CONSISTING PRIMARILY OF ASPHALTIC CONCRETE RESURFACING ITEMS)

Any type of work such as paving, grinding, trenching, or excavation that creates a difference in elevation between travel lanes or between the travelway and the shoulder shall not begin until the Contractor is prepared and able to continuously place the required typical section to within two inches (2") of the existing pavement elevation. For any areas that the two inches minimum difference in elevation cannot be accomplished the section shall be healed as shown in [Detail 150-E](#). If crushed stone materials are used to provide a healed section no separate payment will be made for the material used to heal any section. The Contractor may submit a plan to utilize existing pay items for crushed stone provided the plan clearly demonstrates that the materials used to heal an area will be incorporated into the work with minimal waste. Handling and hauling of any crushed stone used to heal shall be kept to a minimum. The Engineer shall determine if the crushed stone used to heal meets the specifications for gradation and quality when the material is placed in the final location.

A maximum of sixty (60) calendar days shall be allowed for conditions to exist that require any section or segment of the roadway or ramp to continue to require a healed section as described by [Detail 150-E](#). Failure to meet this requirement shall be considered as non-performance of Work under [Subsection 150.08](#).

When trenching or excavation for minor roadway or shoulder widening is required, all operations at one site shall be completed to the level of the existing pavement in the same work day.

Any channelization devices utilized in the work shall conform to the requirements of [Subsection 150.05](#) and to the placement and spacing requirements in [Details 150-B](#), [150-C](#), [150-D](#), and [150-E](#) shown in this section.

Any construction activity that reduces the width of a travel lane shall require the use of a W-20 sign with the legend "LEFT/RIGHT LANE NARROWS". Two 24" x 24" red or red/orange flags may be mounted above the W-20 sign. The W-20 sign shall be located on the side of the travelway that has been reduced in width just off the travelway edge of pavement. The W-20 sign shall be a minimum of 500 feet in advance of any channelization devices that encroach on the surface of travelway. A portable changeable message sign may be used in lieu of the W-20 sign.

GENERAL/TIME RESTRICTIONS:

A. STONE BASES, SOIL AGGREGATE BASE AND SOIL BASES

1. All Highways

Differences in elevation of more than two inches between surfaces carrying or adjacent to traffic will not be allowed for more than a 24-hour period. A single length of excavated area that does not exceed 1000 feet in total length may be left open as a start up area for periods not to exceed 48 hours provided the Contractor can demonstrate the ability to continuously excavate and backfill in a proficient manner. Prior approval of the Engineer shall be obtained before any startup area may be allowed.

2. LIMITED ACCESS HIGHWAY RAMPS (INTERSTATES):

On projects that include ramp rehabilitation work, one ramp at a time may be excavated for the entire length of the ramp from the gore point of the ramp with the interstate mainline to the intersection with the crossing highway. This single ramp may remain excavated with a vertical difference in elevation greater than two (2") inches for a maximum of fourteen (14) calendar days with drums spaced at twenty (20') feet intervals as shown in Detail 150-B and a buffer space accepted under Section 150.06.F. After fourteen (14) calendar days the section shall be healed as required for all other highways. This area will be allowed in addition to the 1000 feet allowed for all other highways.

B. ASPHALT BASES, BINDERS AND TOPPING

1. DIFFERENCES IN ELEVATION BETWEEN THE SURFACES OF ADJACENT TRAVELWAYS

Travel lanes shall be paved with a plan that minimizes any difference in elevation between adjacent travel lanes. The following limitations will be required on all work:

- a. Differences of two inches (2") or less may remain for a maximum period of fourteen (14) calendar days.
- b. Differences of greater than two inches (2") shall be permitted for continuous operations only.

EMERGENCY SITUATIONS: Inclement weather, traffic accidents, and other events beyond the control of the Contractor may prevent the work from being completed as required above. The Contractor shall notify the Engineer in writing stating the conditions and reasons that have prevented the Contractor from complying with the time limitations. The Contractor shall also outline a plan detailing immediate steps to complete the work. Failure to correct these conditions on the first calendar day that conditions will allow corrective work shall be considered as non-performance of Work under [Subsection 150.08](#).

2. Differences in Elevation Between Asphalt Travelway and Paved Shoulders

Differences in elevation between the asphalt travelway and asphalt paved shoulders shall not be allowed to exist beyond the maximum durations outlined below for the conditions shown in [Details 150-B](#), [150-C](#), [150-D](#), and [150-E](#):

Detail 150-B conditions shall not be allowed for more than 24 hours. A single length that does not exceed 1000 feet in total length may be left open for periods not to exceed 48 hours provided the Contractor can demonstrate the ability to continuously pave in a proficient manner. Prior approval of the Engineer shall be obtained before any section is allowed to exceed 24 hours. Any other disturbed shoulder areas shall be healed as in [Detail 150-E](#).

[Detail 150-C](#) conditions will not be allowed for more than 48 hours.

[Detail 150-D](#) conditions will not be allowed for more than 30 calendar days.

[Detail 150-E](#) conditions will not be allowed for more than 60 calendar days.

Failure to meet these requirements shall be considered as non-performance of Work under [Subsection 150.08](#).

C. PORTLAND CEMENT CONCRETE

Work adjacent to a Portland Cement Concrete traveled way which involves the following types of base and shoulders shall be accomplished according to the time restrictions outlined for each type of base or shoulder. Traffic control devices shall be in accordance with [Subsection 150.05](#).

1. Cement Stabilized Base

Work adjacent to the traveled way shall be healed as per [Detail 150-E](#) within forty-eight (48) hours after the seven (7) calendar day curing period is complete for each section placed. During the placement and curing period, traffic control shall be in accordance [Detail 150-B](#).

2. Asphaltic Concrete Base

When an asphaltic concrete base is utilized in lieu of a cement stabilized base the asphaltic concrete base shall be healed as per [Detail 150-E](#) within forty-eight (48) hours after the placement of each section of asphaltic concrete base. For the first forty eight hours traffic control shall be in compliance with [Detail 150-B](#).

3. Concrete Paved Shoulders

Concrete paved shoulders shall be placed within sixty (60) calendar days after the removal of each section of existing shoulder regardless of the type of base materials being placed on the shoulders. During the placement period, traffic control devices shall be in accordance with the appropriate detail based on the depth of the change in elevation. Differences in elevation of more than two inches between the travel way and the shoulder will not be allowed for more than a 24-hour period. A single length of excavated area that does not exceed 1000 feet in total length may be left open as a start up area for periods not to exceed 48 hours provided the Contractor can demonstrate the ability to continuously excavate and backfill in a proficient manner. Prior approval of the Engineer shall be obtained before any startup area may be allowed. Any other disturbed shoulder areas shall be healed as in [Detail 150-E](#).

4. Asphaltic Concrete Shoulders

A difference in elevation that meets the requirements of [Detail 150-B](#) shall not be allowed to exist for a period greater than forty-eight (48) hours. After the removal of the existing shoulder the section or segment of travelway may be healed with stone as per [Detail 150-E](#) for a maximum of fourteen (14) calendar days. **Asphaltic concrete shoulders shall be placed within two (2") inches or less of the traveled way surface within fourteen (14) calendar days after the removal of the stone healed section or the removal of each section of the existing shoulder. The two (2") inches or less difference in elevation shall not remain in existence for a period that exceeds thirty (30) calendar days unless the paved shoulder is utilized as a detour for the traveled way.** During the placement period, traffic control shall be in accordance with the appropriate detail based on the depth of the change in elevation.

The Contractor may propose an alternate plan based on [Subsection 150.06.F](#). Failure to meet the above requirements and time restrictions shall be considered as non-performance of Work under [Subsection 150.08](#).

D. MISCELLANEOUS ELEVATION DIFFERENTIALS FOR EXCAVATIONS ADJACENT TO THE TRAVELWAY

Drainage structures, utility facilities, or any other work which results in a difference in elevation adjacent to the travelway shall be planned and coordinated to be performed in such a manner to minimize the time traffic is exposed to this condition. The excavation should be back filled to the minimum requirements of [Detail 150-E](#) as soon as practical. Stage construction such as plating or backfilling the incomplete work may be required. The difference in elevation shall not be allowed to exist for more than five (5) calendar days under

any circumstances. Failure to correct this condition shall be considered as non-performance of Work under [Subsection 150.08](#).

E. CONDUIT INSTALLATION IN PAVED AND DIRT SHOULDERS

The installation of conduit and conduit systems along the shoulders of a traveled way shall be planned and installed in a manner to minimize the length of time that traffic is exposed to a difference in elevation condition. The following restrictions and limitations shall apply:

1. Differences in Elevation of Two (2") Inches or Less

The shoulder may remain open when workers are not present. When workers are present the shoulder shall be closed and the channelization devices shall meet the requirements of [Subsection 150.05](#). The difference in elevation on the shoulder shall remain for a maximum period of fourteen (14) calendar days.

2. Differences in Elevation Greater Than Two (2") Inches

The shoulder shall be closed. The shoulder closure shall not exceed twenty-four (24) hours in duration unless the Special Conditions in Subsection 150.11 modifies this restriction or the Engineer allows the work to be considered as a continuous operation.

Failure to meet these requirements shall be considered as non-performance of Work under [Subsection 150.08](#).

F. MODIFICATIONS TO TIME RESTRICTIONS

The Contractor may propose any alternate temporary traffic control plan that utilizes **a portion of the travel lane as a "buffer space"**. This buffer space may allow for an enhanced work area that will allow for the placement of materials to proceed at a pace that could not be achieved with the time restriction requirements outlined in [Section 150.06.A](#), [150.06.B](#), and [150.06.C](#). The Contractor may propose modified time restrictions based on the use of the buffer space. Any proposed modifications in the time duration allowed for the differences in elevations to exist shall be reviewed by the Engineer as a component of the overall TTC plan. No modifications shall be made until the proposed plan is accepted by the Engineer. The Engineer shall have no obligation to consider any proposal which results in an increase in cost to the Department.

For the travel lane described in each of the [details 150-B](#), [150-C](#), [150-D](#) and [150-E](#) it is presumed that the pavement marking edgeline (yellow or white solid stripe) is located at the very edge of the travel lane surface. A buffer space (temporary paved shoulder) that utilizes a portion of the travel lane should be six (6') feet in width desirable but shall not be less than four (4') feet in width. Any remaining travel lane(s) shall not be less than ten (10') feet in width. Modifications to drum spacing shown in the details above will not be allowed.

If the proposed shifting of the traffic to obtain a buffer space and maintain a **minimum travel lane(s) of ten (10') feet requires the use of any existing paved** shoulders then the cost of maintenance and repair of the existing paved shoulder(s) shall be the responsibility of the Contractor. The Contractor is responsible for the costs of maintenance and repairs even if the existing paved shoulder(s) is to be removed in a later stage of the work. Existing shoulders that have rumble strips shall have the rumble strips removed before the shoulder can be utilized as part of the travel lane. The cost of the removal of the rumble strips shall be done at no cost to the Department even if the shoulder is to be removed in a later stage of the work.

Any modifications to the staging and time restrictions that are approved as part of the TTC plan shall be agreed to in writing. Failure to meet these modifications shall be considered as non-performance of the Work under [Subsection 150.08](#).

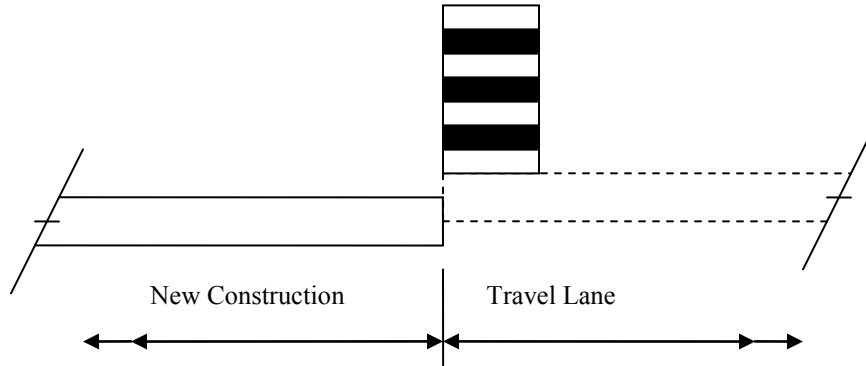
G. ASPHALTIC CONCRETE RESURFACING PROJECTS

SHOULDER CONSTRUCTION INCLUDED AS A PART OF THE CONTRACT: When the placement of asphaltic concrete materials creates a difference in elevation greater **than two (2") inches between the earth shoulder (grassed or un-grassed)** and the edge of travelway or between the earth shoulder and a paved shoulder that is **less than four (4') feet in width, the Contractor shall place and maintain drums** in accordance with the requirements of [Subsection 150.05A.1.a.4](#)). When the edge of the paved surface is tapered with a 30-45 degree wedge, drums may be spaced at 2.0 times the speed limit in MPH. Drums shall remain in place and be maintained until the difference in elevation has been eliminated by the placement of the appropriate shoulder materials.

SHOULDER CONSTRUCTION NOT INCLUDED AS A PART OF THE CONTRACT: When the placement of asphaltic concrete materials creates a difference in elevation **greater than two (2") inches between the earth shoulder (grassed or un-grassed)** and the edge of travelway or between the earth shoulder and a paved shoulder that **is less than four (4') feet in width, the Contractor shall notify** the Engineer, in writing, when the resurfacing work including all punchlist items has been completed.

See [Subsection 150.03.L](#) for the requirements for "LOW/SOFT SHOULDERS" and "SHOULDER DROP-OFF" signage.

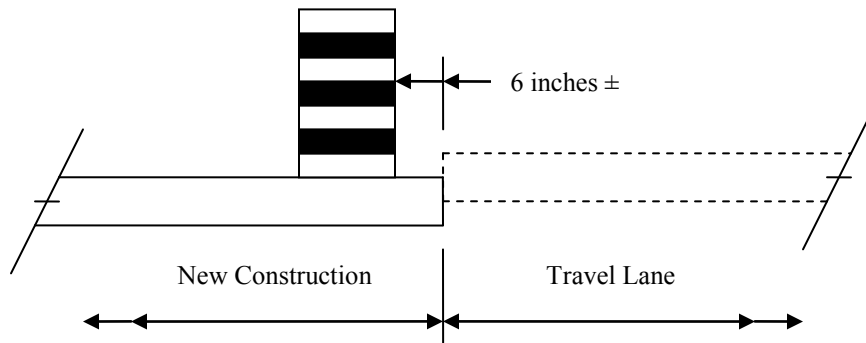
Location of drums when Elevation Difference exceeds 4 inches. Drums spaced at 20 foot intervals. Note: If the travel way width is reduced to less than 10 feet by the use of drums, vertical panels shall be used in lieu of drums.	
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ELEVATION DIFFERENCE GREATER THAN 4 INCHES

DETAIL 150-B

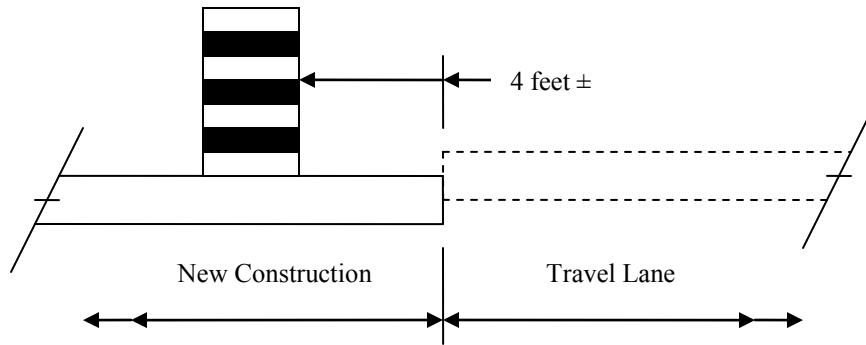
Drums spaced at 40 foot intervals.	Location of drums when Elevation Difference is 2+ inches to 4 inches.
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ELEVATION DIFFERENCE 2+ to 4 inches

DETAIL 150-C

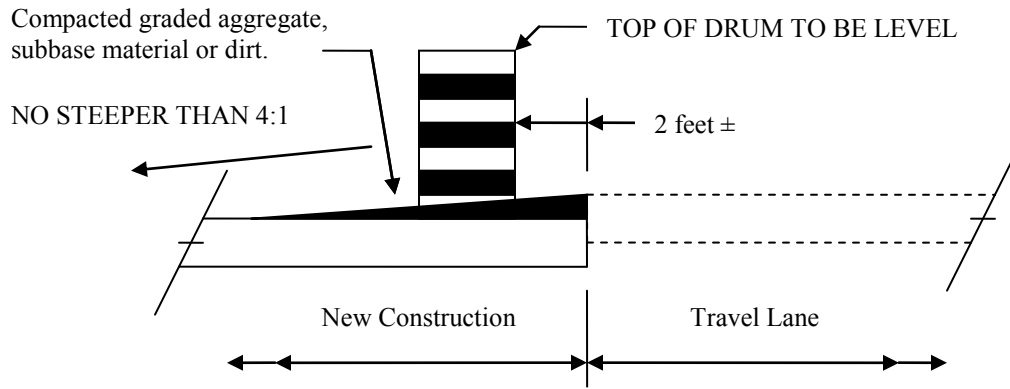
Drums spaced at 80 foot intervals.	Location of drums when Elevation Difference is 2 inches or less.
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ELEVATION DIFFERENCE OF 2 INCHES OR LESS

DETAIL 150-D

	Location of drums immediately after completion of healed sections spaced at 40 foot intervals.
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HEALED SECTION

DETAIL 150-E

150.07 FLAGGING AND PILOT CARS:

A. FLAGGERS

Flaggers shall be provided as required to handle traffic, as specified in the Plans or Special Provisions, and as required by the Engineer.

B. FLAGGER CERTIFICATION

All flaggers shall meet the requirements of the MUTCD and shall have received training and a certificate upon completion of the training from one of the following organizations:

National Safety Council
Southern Safety Services
Construction Safety Consultants
Ivey Consultants
American Traffic Safety Services Association (ATSSA)

Certifications from other agencies will be accepted only if their training program has been approved by any one of the organizations listed above.

Failure to provide certified flaggers as required above shall be reason for the Engineer suspending work involving the flagger(s) until the Contractor provides the certified flagger(s). Flaggers shall have proof of certification and valid identification (photo I.D.) available any time they are performing flagger duties.

C. FLAGGER APPEARANCE AND EQUIPMENT

Flaggers shall wear high-visibility clothing in compliance with [Subsection 150.01.A](#). The apparel background (outer) material color shall be fluorescent orange-red, fluorescent yellow-green, or a combination of the two as defined in the ANSI standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of one thousand (1000) feet. The retroreflective safety apparel shall be designed to clearly identify the wearer as a person. They shall use a Stop/Slow paddle meeting the requirements of the MUTCD for controlling traffic. The Stop/Slow paddles shall have a shaft length of seven (7) feet minimum. The Stop/Slow paddle shall be retro-reflectorized for both day and night usage. In addition to the Stop/Slow paddle, a flagger may use a flag as an additional device to attract attention. This flag shall meet the minimum requirements of the MUTCD. The flag shall, as a minimum, **be 24" inches square and red or red/orange in color.** For night work, the vest shall have reflectorized stripes which meet the requirements of the MUTCD.

D. FLAGGER WARNING SIGNS

Signs for flagger traffic control shall be placed in advance of the flagging operation in accordance with the MUTCD. In addition to the signs required by the MUTCD, signs at regular intervals, warning of the presence of the flagger shall be placed beyond

the point where traffic can reasonably be expected to stop under the most severe conditions for that day's work.

E. PILOT VEHICLE REQUIREMENTS

Pilot vehicles will be required during placement of bituminous surface treatment or asphaltic concrete on two-lane roadways unless otherwise specified. Pilot vehicles shall meet the requirements of the MUTCD.

F. PORTABLE TEMPORARY TRAFFIC CONTROL SIGNALS

The Contractor may request, in writing, the substitution of portable temporary traffic control signals for flaggers on two-lane two-way roadways provided the temporary signals meets the requirements of the MUTCD, [Section 647](#), and [Subsection 150.02.A.8](#). As a part of this request, the Contractor shall also submit an alternate temporary traffic control plan in the event of a failure of the signals. Any alternate plan that requires the use of flaggers shall include the use of certified flaggers. The Contractor shall obtain the approval of the Engineer before the use of any portable temporary traffic control signals will be permitted.

150.08 ENFORCEMENT

The safe passage of pedestrians and traffic through and around the temporary traffic control zone, while minimizing confusion and disruption to traffic flow, shall have priority over all other Contractor activities. Continued failure of the Contractor to comply with the requirements of Section 150 (TRAFFIC CONTROL) will result in non-refundable deductions of monies from the Contract as shown in this Subsection for non-performance of Work.

Failure of the Contractor to comply with this Specification shall be reason for the Engineer suspending all other work on the Project, except erosion control and traffic control, taking corrective action as specified in [Subsection 105.15](#), and/or withholding payment of monies due to the Contractor for any work on the Project until traffic control deficiencies are corrected. These other actions shall be in addition to the deductions for non-performance of traffic control.

SCHEDULE OF DEDUCTIONS FOR EACH CALENDAR DAY OF DEFICIENCIES OF TRAFFIC CONTROL INSTALLATION AND/OR MAINTENANCE		
ORIGINAL TOTAL CONTRACT AMOUNT		
From More Than	To and Including	Daily Charge
\$0	\$100,000	\$200
\$100,000	\$1,000,000	\$500
\$1,000,000	\$5,000,000	\$1,000
\$5,000,000	\$20,000,000	\$1,500
\$20,000,000	\$40,000,000	\$2,000
\$40,000,000	\$-----	\$3,000

150.09 MEASUREMENT

A. TRAFFIC CONTROL

When listed as a pay item in the Proposal, payment will be made at the Lump Sum price bid, which will include all traffic control not paid for separately, and will be paid as follows:

When the first Construction Report is submitted, a payment of 25 (twenty-five) percent of the Lump Sum price will be made. For each progress payment thereafter, the total of the Project percent complete shown on the last pay statement plus 25 (twenty-five) percent will be paid (less previous payments), not to exceed one hundred (100) percent.

When no payment item for *Traffic Control-Lump Sum* is shown in the Proposal, all of the requirements of Section 150 and the Temporary Traffic Control Plan shall be in full force and effect. The cost of complying with these requirements will not be paid for separately, but shall be included in the overall bid submittal.

B. SIGNS

When shown as a pay item in the contract, interim special guide signs will be paid for as listed below. All other regulatory, warning, and guide signs, as required by the Contract, will be paid for under Traffic Control Lump Sum or included in the overall bid submitted.

1. Interim ground mounted or interim overhead special guide signs will be measured for payment by the square foot. This payment shall be full compensation for furnishing the signs, including supports as required, erecting,

illuminating overhead signs, maintaining, removing, re-erecting, and final removal from the Project. Payment will be made only one time regardless of the number of moves required.

2. Remove and reset existing special guide signs, ground mount or overhead, complete, in place, will be measured for payment per each. Payment will be made only one time regardless of the number of moves required.
3. Modify special guide signs, ground mount or overhead, will be measured for payment by the square foot. The area measured shall include only that portion of the sign modified. Payment shall include materials, removal from posts or supports when necessary, and remounting as required.

C. TEMPORARY BARRIER

Temporary Barrier shall be measured as specified in [Sections 622](#).

D. CHANGEABLE MESSAGE SIGN, PORTABLE

Changeable Message Sign, Portable will be measured as specified in [Section 632](#).

E. TEMPORARY GUARDRAIL ANCHORAGE, Type 12

Temporary Guardrail Anchorage- Type 12 will be measured by each assembly, complete in place and accepted according to the details shown in the plans, which shall also include the additional guardrail and appurtenances necessary for transition and connection to Temporary Concrete Barrier. Payment shall include all necessary materials, equipment, labor, site preparation, maintenance and removal.

F. TRAFFIC SIGNAL INSTALLATION- TEMPORARY

Traffic Signal Installation- Temporary will be measured as specified in [Section 647](#).

G. FLASHING BEACON ASSEMBLY

Flashing Beacon Assemblies will be measured as specified in [Section 647](#).

H. PORTABLE IMPACT ATTENUATORS

Each Portable Impact Attenuator will be measured by the unit/array which shall include all material components, hardware, incidentals, labor, site preparation, and maintenance, including spare parts recommended by the manufacturer for repairing accident damage. Each unit will be measured only once regardless of the number of locations installed, moves required, or number of repairs necessary because of traffic damage. Upon completion of the project, the units shall be removed and retained by the Contractor.

I. PAVEMENT MARKINGS

Pavement markings will be measured as specified in Section 150.

J. TEMPORARY WALKWAYS WITH DETECTABLE EDGING

Temporary walkways with detectable edging will be measured in linear feet (meters), complete in place and accepted, which shall include all necessary materials, equipment, labor, site preparation, temporary pipes, passing spaces, maintenance and removal. Excavation and backfill are not measured separately for payment. No payment will be made for temporary walkways where existing pavements or existing edging (that meets the requirements of MUTCD) are utilized for the temporary walkway. Payment for temporary detectable edging, including approved barriers and channelizing devices, installed on existing pavement shall be included in Traffic Control-Lump Sum.

K. TEMPORARY CURB CUT WHEELCHAIR RAMPS

Temporary curb cut wheelchair ramps are measured as the actual number formed and poured, complete and accepted, which shall include all necessary materials, equipment, labor, site preparation, maintenance and removal. No additional payment will be made for sawing existing sidewalk and removal and disposal of removed material for temporary wheelchair ramp construction. No additional payment will be made for constructing the detectable warning surface.

L. TEMPORARY AUDIBLE INFORMATION DEVICE

Temporary audible information devices are measured as the actual number furnished and installed in accordance with the manufacturer's recommendations, which shall include all necessary materials, equipment, labor, site preparation, maintenance and removal. Each temporary audible information device will be paid for only one time regardless of the number of times it's reused during the duration of The Work. These devices shall remain the property of the Contractor.

150.10 PAYMENT:

When shown in the Schedule of Items in the Proposal, the following items will be paid for separately.

Item No. 150. Traffic Control	Lump Sum
Item No. 150. Traffic Control, Solid Traffic Stripe _ Inch, (Color)....	per Linear Mile
Item No. 150. Traffic Control, Skip Traffic Stripe _ Inch, (Color)	per Linear mile
Item No. 150. Traffic Control, Solid Traffic Stripe, Thermoplastic ____ Inch, (Color)	per Linear Mile
Item No. 150. Traffic Control, Skip Traffic Stripe, Thermoplastic _____ Inch, (Color)	per Linear Mile
Item No. 150. Traffic Control, Pavement Arrow with Raised Reflectors	per Each
Item No. 150. Traffic Control, Raised Pavement Markers-All Types.	per Each

Item No. 150. Interim Ground Mounted Special Guide Signs	per Square
Foot	
Item No. 150. Interim Overhead Special Guide Signs	per Square
Foot	
Item No. 150. Remove & Reset Existing Special Guide Signs, Ground Mount, Complete in Place	per Each
Item No. 150. Remove & Reset, Existing Special Guide Signs, Overhead, Complete in Place	per Each
Item No. 150. Traffic Control, Portable Impact Attenuator	per Each
Item No. 150. Traffic Control, Pavement Markers, Words and Symbols	per Square
Foot	
Item No. 150. Traffic Control, Pavement Arrow (Painted) with Raised Reflectors	per Each
Item No. 150. Traffic Control, Workzone Law Enforcement	per Hour
Item No. 150. Modify Special Guide Sign, Ground Mount	per Square
Foot	
Item No. 150. Modify Special Guide Sign, Overhead	per Square
Foot	
Item No. 150. Temporary Walkways With Detectable Edging	per Linear foot
Item No. 150. Temporary Curb Cut Wheelchair Ramps	per Each
Item No. 150. Temporary Audible Information Device	per Each
Item No. 620. Temporary Barrier	per Linear Foot
Item No. 632. Changeable Message Sign, Portable	per Each
Item No. 641. Temporary Guardrail Anchorage, Type 12	per Each
Item No. 647. Traffic Signal Installation, Temp	Lump Sum
Item No. 647. Flashing Beacon Assembly, Structure Mounted	per Each
Item No. 647. Flashing Beacon Assembly, Cable Supported	per Each

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

Section 161—Control of Soil Erosion and Sedimentation

Add the following:

161.1 General Description

This Work includes using control measures shown on the Plans, ordered by the Engineer, or as required during the life of the Contract to control soil erosion and sedimentation through the use of any of the devices or methods referred to in this Section.

161.1.01 Definitions

Certified Personnel— certified personnel are defined as persons who have successfully completed the Level IA certification course approved by the Georgia Soil and Water Conservation Commission. For Department projects the certified person must also have successfully completed the Department's WECS certification course.

Design Professional as defined in the current GAR100002 NPDES permit.

161.1.02 Related References

A. Standard Specifications

[Section 105—Control of Work](#)

[Section 106—Control of Materials](#)

[Section 107—Legal Regulations and Responsibility to the Public](#)

[Section 109—Measurement and Payment](#)

[Section 160—Reclamation of Material Pits and Waste Areas](#)

[Section 162—Erosion Control Check Dams](#)

[Section 163—Miscellaneous Erosion Control Items](#)

[Section 166—Restoration or Alteration of Lakes and Ponds](#)

[Section 170—Silt Retention Barrier](#)

[Section 171—Temporary Silt Fence](#)

[Section 205—Roadway Excavation](#)

[Section 434—Sand Asphalt Paved Ditches](#)

[Section 441—Miscellaneous Concrete](#)

[Section 603—Rip Rap](#)

[Section 700—Grassing](#)

[Section 710—Permanent Soil Reinforcing Mat](#)

[Section 715—Bituminous Treated Roving](#)

[Section 716—Erosion Control Mats \(Blankets\)](#)

Erosion control measures contained in the Specifications include:

Erosion Control Measure	Section
Temporary Check Dams	163.3.05.J
Bituminous Treated Mulch	700.3.05.G
Concrete Paved Ditches	441
Bituminous Treated Roving	715
Erosion Control Mats (Blankets)	716
Erosion Control Check Dams	162
Grassing	700
Maintenance of Temporary Erosion Control Devices	165
Permanent Soil Reinforcing Mat	710
Reclamation of Material Pits and Waste Areas	160
Rip Rap	603
Restoration or Alteration of Lakes and Ponds	166
Sand-Asphalt Ditch Paving	434
Sediment Basin	163.3.05.C
Silt Control Gate	163.3.05.A
Silt Retention Barrier	170
Sod	700.3.05.H & 700.3.05.I
Mulch	163
Temporary Grassing	163.3.05.F
Temporary Silt Fence	171
Temporary Slope Drains	163.3.05.B
Triangular Sediment Barrier	720
Silt Filter Bag	719
Organic & Synthetic Material Fiber Blanket	713

B. Referenced Documents

Erosion and Sedimentation Pollution Control Plans (ESPCP)

161.1.03 Submittals

A. Status of Erosion Control Devices

The Worksite Erosion Control Supervisor (WECS) or certified personnel will inspect the installation and maintenance of the Erosion Control Devices according to [Subsection 167.3.05.B](#) and the ESPCP.

1. Submit all reports to the Engineer within 24 hours of the inspection. Refer to [Subsection 167.3.05.C](#) for report requirements.

2. The Engineer will review the reports and inspect the Project for compliance and concurrence with the submitted reports.
3. The Engineer will notify the WECS or certified personnel of any additional items that should be added to the reports.
4. Items listed in the report requiring maintenance or correction shall be completed within 72 hours.

B. Erosion and Sedimentation Pollution Control Plan

1. Project Plans

An erosion and sedimentation pollution control plan (ESPCP) for the construction of the project will be provided by the Department. The ESPCP will be prepared for the various stages of construction necessary to complete the project.

If the Contractor elects to alter the stage construction from that shown in the plans, it will be the responsibility of the Contractor to have the plans revised and prepared in accordance with the current GAR100002 NPDES permit by a Design Professional to reflect all changes in Staging. This will also include any revisions to erosion and sedimentation control item quantities. If the changes affect the Comprehensive Monitoring Program (CMP), the Contractor will be responsible for any revisions to the CMP as well. Submit revised plans and quantities to the Engineer for review prior to land disturbing activities.

2. Haul Roads, Borrow Pits, Excess Material Pits, etc.

The Contractor is responsible for preparing erosion and sedimentation control plans for construction access roads and or haul roads borrow pits, excess material pits, etc (inside the Right of Way). Prepare these plans for all stages of construction and include the appropriate items and quantities. Submit these plans to the Engineer for review prior to land disturbing activities. These plans are to be prepared by a Design Professional.

If construction of access roads, haul roads, borrow pits, excess material pits, etc., (inside the Right of Way) encroach within the 25 foot (7.6 m) buffer along the banks of all state waters or within the 50 ft. (15 m) buffer along the banks of any state waters classified as a "trout stream", a state water buffer variance must be obtained by the Contractor prior to beginning any land disturbing activity in the stream buffer.

3. Erosion Control for Borrow and Excess Material Pits Outside the Right-of-Way

Erosion control for borrow pits and excess material pits outside the right of way is the responsibility of the Contractor. If borrow or excess material pits require coverage under the National Pollutant Discharge Elimination System permit (NPDES) or other permits or variances are required, submit a copy of all documentation required by the permitting agency to the Engineer. All costs associated with complying with local, state, and federal laws and regulations are the responsibility of the Contractor.

4. Culverts and Pipes

The ESPCP does not contain approved methods to construct a stream diversion or stream diversion channel. The Contractor shall prepare a diversion plan utilizing a Design Professional as defined in the current NPDES permit. See 161.3.05 G for additional information.

5. Temporary Asphalt or Concrete Batch Plants

In addition to the requirements of any applicable specifications, if the Department authorizes the temporary installation and use of any asphalt, concrete or similar batch plants within its right of way, the contractor shall submit an NOI to the Georgia Environmental Protection Division for coverage under the following NPDES permits; The Infrastructure permit for the construction of the plant, and the Industrial permit for the operation of, such a plant. The contractor shall submit the NOIs as both the Owner and the Operator.

161.2 Materials

General Provisions 101 through 150.

161.2.01 Delivery, Storage, and Handling

General Provisions 101 through 150.

161.3 Construction Requirements

161.3.01 Personnel

A. Duties of the Worksite Erosion Control Supervisor

Before beginning Work, designate a Worksite Erosion Control Supervisor (WECS) to initiate, install, maintain, inspect, and report the condition of all erosion control devices as described in Sections 160 through 171 or in the Contract and ESPCP documents. The designee shall submit their qualifications on the Department provided resume form for consideration and approval. The contractor may utilize additional persons having WECS qualifications to facilitate compliance however, only one WECS shall be designated at a time.

The WECS and alternates shall:

- Be an employee of the Prime Contractor.
- Have at least one year of experience in erosion and sediment control, including the installation, inspection, maintenance and reporting of BMPs.
- Successfully completed the Georgia Soil and Water Conservation Commission Certification Course Level IA and the Department's WECS Certification Course.
- Provide phone numbers where the WECS can be located 24 hours a day.

The WECS' duties include the following:

1. Be available or have an approved representative available 24 hours a day and have access to the equipment, personnel, and materials needed to maintain erosion control and flooding control.
2. Inform the Engineer in writing whenever the alternate WECS assumes project responsibilities.
3. Ensure that erosion control deficiencies are corrected within seventy two (72) hours or immediately during emergencies. Deficiencies that interfere with traffic flow, safety or downstream turbidity are to be corrected immediately.
4. During heavy rain, have the construction area patrolled day or night, any day of the week to quickly detect and correct erosion or flooding problems before they interfere with traffic flow, safety, or downstream turbidity.
5. Be on the site within three (3) hours after receiving notification of an emergency prepared to positively respond to the conditions encountered. The Department may handle emergencies without notifying the Contractor. The Department will recover costs for emergency maintenance work according to [Subsection 105.15, "Failure to Maintain Roadway or Structures."](#)
6. Maintain and submit for project record, "As-built" Erosion and Sedimentation Control Plans that supplement and graphically depict EC-1 reported additions and deletions of BMPs. The As-Built plans are to be accessed and retained at a Department facility at all times.
7. Ensure that both the WECS and the alternate meet the criteria of this Subsection.
8. The WECS shall maintain a current certification card for the duration of the project. Recertification of the WECS will be required prior to the expiration date shown on the Certification card in order to remain as Certified Personnel and the WECS for the project.

Failure of the WECS or alternate to perform the duties specified in the Contract, or whose performance, has resulted in a citation being received from a State or Federal Regulatory Agency, e.g. the Georgia Environmental Protection Division, shall result in one or more of the following;

- Suspension of the WECS' certification for a period of not less than 30 days
- Removal of the Contractor's project superintendent in accordance with Sections 105.05 and 108.05 for a period not less than 14 days
- Department wide revocation of the WECS certification for a period of 12 months
- Removal of the Contractor's project superintendent in accordance with Sections 105.05 and 108.05

161.3.02 Equipment

General Provisions 101 through 150.

161.3.03 Preparation

General Provisions 101 through 150.

161.3.04 Fabrication

General Provisions 101 through 150.

161.3.05 Construction

Coordinate the temporary and permanent erosion control provisions in this Specification with the permanent erosion control provisions in the Contract to ensure economical, effective, and continuous erosion control throughout the construction and post-construction periods.

At all times that land disturbing activity is underway, a person meeting the requirements of, "certified person" by the GSWCC (Level IA) must be on the project.

A. Control Dust Pollution

The contractor shall keep dust pollution to a minimum during any of the activities performed on the project. It may be necessary to apply water or other BMPs to roadways or other areas reduce pollution.

B. Perform Permanent or Temporary Grassing

Perform permanent grassing, temporary grassing, or mulching on cut and fill slopes weekly (unless a shorter period is required by Subsection 107.23) during grading operations. When conditions warrant, the Engineer may require more frequent intervals.

Under no circumstances shall the grading (height of cut) exceed the height operating range of the grassing equipment. It is extremely important to obtain a cover, whether it is mulch, temporary grass or permanent grass. Adequate mulch is a must.

When grading operations or other soil disturbing activities have stopped, perform grassing or erosion control as shown in the Plans, as shown in an approved Plan submitted by the Contractor, or as directed by the Engineer.

C. Seed and Mulch

Refer to Subsection [161.3.05.B, "Perform Permanent or Temporary Grassing"](#).

D. Implement Permanent or Temporary Erosion Control

1. Silt fence shown along the perimeter, e.g. right of way, and sediment containment devices, e.g. sediment basins, shall be installed prior to or concurrently with clearing and grubbing operations.
2. Incorporate permanent erosion control features into the Project at the earliest practicable time, e.g. velocity dissipation, permanent ditch protection.
3. Use temporary erosion control measures to address conditions that develop during construction but were unforeseen during the design stage.
4. Use temporary erosion control measures when installation of permanent erosion control features cannot be accomplished.

The Engineer has the authority to:

- Limit the surface area of erodible earth material exposed by clearing and grubbing.
- Limit the surface area of erodible earth material exposed by excavation and borrow and fill operations.
- Limit the area of excavation, and embankment operations in progress to correspond with the Contractor’s ability to keep the finish grading, mulching, seeding, and other permanent erosion control measures current.
- Direct the Contractor to provide immediate permanent or temporary erosion control to prevent contamination of adjacent streams or water courses, lakes, ponds, or other areas of water impoundment.

Such Work may include constructing items listed in the table in [Subsection 161.1.02.A, “Related References”](#) or other control devices or methods to control erosion.

E. Erodible Area

NOTE: Never allow the surface area of erodible earth material exposed at one time to exceed 17 acres (7 ha) except as approved by the State Construction Engineer.

The maximum of 17 acres (7 ha) of exposed erodible earth applies to the entire Project and to all of its combined operations as a whole, not to the exposed erodible earth of each individual operation.

Upon receipt of a written request from the contractor the State Construction Engineer, or his designee, will review; the request, any justifications and the Project conditions for waiver of the 17 acres (7 ha) limitation.

If the 17 acre limitation is increased by the State Construction Engineer, the WECS shall not be assigned to another project in that capacity and should remain on site each work day that the exposed acreage exceeds 17 acres.

After installing temporary erosion control devices, e.g., grassing, mulching, stabilizing an area, and having it approved by the Engineer, that area will be released from the 17 acres (7 ha) limit.

F. Perform Grading Operations

Perform the following grading operations:

1. Complete each roadway cut and embankment continuously, unless otherwise specified in the Contract or ordered by the Engineer.
2. Maintain the top of the earthwork in roadway sections throughout the construction stages to allow water to run off to the outer edges. .
3. Provide temporary slope drain facilities with inlets and velocity dissipaters (straw bales, silt fence, aprons, etc.) to carry the runoff water to the bottom of the slopes. Place drains at intervals to handle the accumulated water.
4. Continue temporary erosion control measures until permanent drainage facilities have been constructed, pavement placed, and the grass on planted slopes stabilized to deter erosion.

G. Perform Construction in Rivers and Streams

Perform construction in river and stream beds as follows:

1. Unless otherwise agreed to in writing by the Engineer, restrict construction operations in rivers, streams, and impoundments to:
 - Areas where channel changes or access for construction are shown on the Plans to construct temporary or permanent structures.
2. If channel changes or diversions are not shown on the Plans, the Contractor shall develop diversion plans prepared in accordance with the current GAR100002 NPDES Infrastructure Construction permit utilizing a design professional as defined within the permit. The Engineer will review prepared diversion plans for content only and accepts no responsibility for design errors or omissions. Amendments will be made part of the project plans by attachment. Include any associated costs in the price bid for the overall contract. Any contract time associated with the submittal or its review and subsequent response will not be considered for an extension of Contract time. All time associated with this subsection shall be considered incidental.
3. If additional access for construction or removal of work bridges, temporary roads/access or work platforms is necessary, and will require additional encroachment upon river or stream banks and bottoms, the contractor shall prepare a plan in accordance with the current GAR100002 NPDES Infrastructure Construction permit utilizing a design professional as defined within the permit. Plans should be submitted at least 12 weeks prior to the date the associated work is expected to begin. If necessary, the plan will be provided to the appropriate regulating authority, e.g. United States Army Corps of Engineers by the Department for consideration and approval. No work that impacts areas beyond what has been shown in the approved plans will be allowed to begin until written approval of the submitted plan has been provided by the Department. Approved plan amendments will be made part of the project plans by attachment. Include any associated costs in the price bid for the overall contract. Any contract time associated with the submittal or its review and subsequent response will not be considered for an extension of Contract time. All time associated with this subsection shall be considered incidental.
4. Clear rivers, streams, and impoundments of the following as soon as conditions permit:
 - Falsework
 - Piling that is to be removed
 - Debris
 - Other obstructions placed or caused by construction operations
5. Do not ford live streams with construction equipment.
6. Use temporary bridges or other structures that are adequate for a 25-year storm for stream crossings. Include costs in the price bid for the overall contract.
7. Do not operate mechanized equipment in live streams except to construct channel changes or temporary or permanent structures, and to remove temporary structures, unless otherwise approved in writing by the Engineer.

H. State Water Buffers and Environmental Restrictions

1. The WECS shall review the plans and contract documents for environmental restrictions, Environmentally Sensitive Areas (ESA), e.g. buffers, etc prior to performing land disturbing activities.
2. The WECS shall ensure all parties performing land disturbing activities within the project limits are aware of all environmental restrictions.
3. Buffer delineation shall be performed prior to clearing, or any other land disturbing activities. Site conditions may require temporary delineation measures are implemented prior to the installation of orange barrier/safety fencing. The means of temporary delineation shall have the Engineer's prior approval.
4. The WECS shall allow the Engineer to review the buffer delineation prior to performing any land disturbing activities, including but not limited to clearing, grubbing and thinning of vegetation. Any removal and relocation of buffer delineation based upon the Engineer's review will not be measured for separate payment.
5. The WECS shall advise the Engineer of any surface water(s) encountered that are not shown in the plans. The WECS shall prevent land disturbing activities from occurring within surface water buffers until the Engineer provides approval to proceed.

I. General Requirements

Projects that consist of asphalt resurfacing, shoulder reconstruction and/or shoulder widening; schedule and perform the construction of the project to comply with the following:

After temporary and permanent erosion control devices are installed and the area permanently stabilized (temporary or permanent) and approved by the Engineer, the area may be released from the 1 acre (0.4 ha) limit.

The maximum of 1 acre (0.4 ha) of erodible earth applies to the entire project and to all combined operations, including borrow and excess material operations that are within the right of way, not 1 acre (0.4 ha) of exposed erodible earth for each operation.

NOTE: Never allow the surface area of erodible earth material exposed at one time to exceed 1 acre (0.4 ha).

1. Do not allow the disturbed exposed erodible area to exceed 1 acres (0.4 ha). This 1 acre (0.4 ha) limit includes all disturbed areas relating to the construction of the project including but not limited to slope and shoulder construction.
2. At the end of each working day, permanently stabilize all of the area disturbed by slope and shoulder reconstruction to prevent any contamination of adjacent streams or other watercourses, lakes, ponds or other areas of water impoundment. For purposes of this Specification, the end of the working day is defined as when the construction operations cease. For example, 6:00 a.m. is the end of the working day on a project that allows work only between 9:00 p.m. and 6:00 a.m.)
3. Stabilize the cut and fill slopes and shoulder with permanent or temporary grassing and a Wood Fiber Blanket ([Section 713](#), Type II). Mulching is not allowed. Borrow pits, soil disposal sites and haul roads will not require daily applications of wood fiber blanket. The application rate for the Wood Fiber Blanket on shoulder reconstruction is the rate specified for Shoulders. For shoulder reconstruction, the ground preparation requirements of [Subsection 700.3.05.A.1](#) are waived. Preparation consists of scarifying the existing shoulders 4 to 6 in (100 to 150 mm) deep and leaving the area in a smooth uniform condition free from stones, lumps, roots or other material.

4. If a sudden rain event occurs that would not allow the Contractor to apply the Type II Wood Fiber Blanket per [Section 713](#), install Wood Fiber Blanket Type I per [Section 713](#) if directed by the Engineer. Wood Fiber Blanket Type I application is for emergency use only.

Install temporary grass or permanent grass according to seasonal limitations and Specifications. When temporary grass is used, use the overseeding method ([Subsection 700.3.05.E.4](#)) when planting permanent grass.

3. Remove and dispose of all material excavated for the trench widening operation at an approved soil disposal site by the end of each working day. When shoulder reconstruction is required, this material may be used to reconstruct the graded shoulder after all asphaltic concrete pavement has been placed.

4. Provide immediate permanent and/or temporary erosion control measures for borrow pits, soil disposal sites and haul roads to prevent any contamination of adjacent streams or other watercourses, lakes, ponds or other areas of water impoundment.

5. Place asphalt in the trench the same day as the excavation occurs. Place asphalt or concrete in driveways and side roads being re-graded the same day as the excavation occurs. Stabilize any disturbed or exposed soil that is not covered with asphalt with a Wood Fiber Blanket (and grass seed). Payment will be made for the Wood Fiber Blanket and grass seed only if the shoulder has been constructed to final dimensions and grade and no further grading will be required.

6. Do not allow the grading (height of cut or fill) to exceed the operating range of the grassing equipment.

7. When grading operations or other soil disturbing activities are suspended, regardless of the reason, promptly perform all necessary permanent stabilization and/or erosion control work.

8. Use temporary erosion control measures to:

To correct conditions that develop during construction but were unforeseen during the design stage.

To use as needed before installing permanent erosion control features.

To temporarily control erosion that develops during normal construction practices but are not associated with permanent control features on the Project.

9. When conditions warrant, such as unfavorable weather (rain event), the Engineer may require more frequent intervals for this work.

161.3.06 Quality Acceptance

Before Final Acceptance of the Work, clean drainage structures within the project limits, both existing and newly constructed, and ensure that they are functioning properly. Costs to accomplish this work are incidental and shall be included in the overall bid for the Contract.

161.3.07 Contractor Warranty and Maintenance

Maintain the erosion control features installed to:

- Contain erosion within the limits of the right-of-way
- Control storm water discharges from disturbed areas

Effectively install and maintain the erosion control features. Ensure these features contain the erosion and sediment within the limits of the rights of way and control the discharges of storm-water from disturbed areas to meet all local, state, and federal requirements on water quality.

If a construction Project has separate contractors, the Prime Contractor shall maintain the erosion control features at grading sites as acceptable to the Engineer until the Contract is accepted. If any erosion control devices are damaged by any contractor either by neglect, by construction methods, or any other reasons, including acts of nature, they shall be repaired within 24 hours by the Prime Contractor at no cost to the Department.

161.4 Measurement

Control of soil erosion and sedimentation is not measured separately for payment.

161.4.01 Limits

General Provisions 101 through 150.

161.5 Payment

When no pay item is shown in the Contract, the requirements of this Specification and the Erosion Control Plan shall be in full effect. The cost of complying with these requirements will not be paid for separately, but shall be included in the overall bid submitted with the exception of inspections performed by qualified personnel which will be included in Section 167.

When listed as a pay item in the Contract, payment will be made at the unit price bid for each particular item.

No payment will be made for erosion control outside the Right-of-Way or construction easements except as provided for by the Plans.

161.5.01 Enforcement and Adjustments

A. Failure to Provide a WECS

If a designated WECS is not maintained or if the Contractor does not comply with this Specification, cease activities except traffic control and erosion control work. Monies that are due or that may become due also may be withheld according to the Specifications

B. Failure to submit reports

A non-refundable deduction will be taken from the schedule below whenever the WECS fails to submit completed reports required by [Subsection 167.3.05.C](#) in accordance with the provisions of this specification.

C. Failure to Comply with Specifications

If the Contractor fails to comply with any of the requirements of this Specification, all activities shall cease immediately except traffic control and erosion control related work.

Monies that are currently due or that may become due shall be withheld according to the specifications. In addition, nonrefundable monies shall be deducted from the contract as shown in the Schedule of Deductions table below. These deductions are in addition to any actions taken in the above subsections. Deductions assessed for uncorrected deficiencies shall continue until all corrections are completed to the satisfaction of the Engineer.

D. Receipt of a Consent Order or Notice of Violation, etc

Regulatory enforcement actions will be resolved including at a minimum the following steps;

- The Department will perform an internal review of the alleged violations
- The Department will then meet with the Contractor to review and further determine responsibilities for the alleged violations
- The Department will then arrange to collectively meet with the regulatory agencies to negotiate resolutions and/or settlements.

The Department does not waive any rights of the Contractor to resolve such matters however, in the event that regulatory agency communication is addressed jointly to the Department and to the contractor, the Department reserves the right to coordinate all communications, e.g., written correspondence, and to schedule jointly attended meetings with Regulatory agencies such that timely and accurate responses are known to the Department.

Such Orders or Notices may result in the assessment of Deductions from the table below for each day the condition remains non-compliant following an agreed remedy.

Monetary penalties for which the contractor is obligated for as a result of regulatory enforcement may be withheld from future monies due the contractor.

Schedule of Deductions for Each Calendar Day of Erosion Control Deficiencies Initial Occurrence* Original Total Contract Amount		
From More Than	To and Including	Daily Charge
0	\$100,000	\$750
\$100,000	\$1,000,000	\$1125
\$1,000,000	\$5,000,000	\$2000
\$5,000,000	\$15,000,000	\$3000
\$15,000,000	-	\$5000

*Continued non-compliance with the requirements of this specification may result in the doubling of the above tabulated Daily Charge.

Upon written request from the Contractor, the Engineer may allow, limited activities to concurrently proceed once significant portions of the corrective work have been completed. This authorization may be similarly rescinded if in the opinion of the Engineer corrective work is not being diligently pursued.

Section 163—Miscellaneous Erosion Control Items

163.1 General Description

This work includes constructing and removing:

- Silt control gates
- Temporary erosion control slope drains shown on the Plans or as directed
- Sediment basins
- Baled straw sediment barrier and check dams
- Rock filter dams
- Stone filter berms
- Stone filter rings
- Other temporary erosion control structures shown on the Plans or directed by the Engineer

This work also includes applying mulch (straw or hay, erosion control compost), and temporary grass.

163.1.01 Related References

A. Standard Specifications

Section 109—Measurement and Payment

Section 161—Control of Soil Erosion and Sedimentation

Section 171—Temporary Silt Fence

Section 500—Concrete Structures

Section 603—Rip Rap

Section 700—Grassing

Section 715—Bituminous Treated Roving

Section 720 – Triangular Silt Barrier

Section 800—Coarse Aggregate

Section 801—Fabrics

Section 822—Emulsified Asphalt

Section 860—Lumber and Timber

Section 863—Preservative Treatment of Timber Products

Section 890—Seed and Sod

Section 893—Miscellaneous Planting Materials

B. Referenced Documents

AASHTO M252

AASHTO M294

163.1.02 Submittals

Provide written documentation to the Engineer as to the average weight of the bales of mulch.

Delete Subsection 163.2 and substitute the following:

163.2 Materials

Provide materials shown on the Plans, such as pipe, spillways, wood baffles, and other accessories including an anti-seep collar, when necessary. The materials shall remain the Contractor's property after removal, unless otherwise shown on the Plans.

Materials may be new or used; however, the Engineer shall approve previously used materials before use.

Materials shall meet the requirements of the following Specifications:

Material	Section
Mulch	893.2.02
Temporary Silt Fence	171
Concrete Aprons and Footings shall be Class A	500
Riprap	603
Temporary Grass	700
Triangular Silt Barrier	720
Lumber and Timber	860.2.01
Preservative Treatment of Timber Products	863.1
Corrugated Polyethylene Temporary Slope Drain Pipe	AASHTO M252 or M294

163.2.01 Delivery, Storage, and Handling

General Provisions 101 through 150.

163.3 Construction Requirements

163.3.01 Personnel

General Provisions 101 through 150.

163.3.02 Equipment

General Provisions 101 through 150.

163.3.03 Preparation

General Provisions 101 through 150.

163.3.04 Fabrication

General Provisions 101 through 150.

163.3.05 Construction

A. Silt Control Gates

If silt control gates are required or are directed by the Engineer, follow these guidelines to construct them:

1. Clear and grade only that portion of the roadway within the affected drainage area where the drainage structure will be constructed.
2. Construct or install the drainage structure and backfill as required for stability.
3. Install the silt control gate at the inlet of the structure. Use the type indicated on the Plans.
4. Vary the height of the gate as required or as shown on the Plans.
5. Finish grading the roadway in the affected drainage area. Grass and mulch slopes and ditches that will not be paved. Construct the ditch paving required in the affected area.
6. Keep the gate in place until the work in the affected drainage area is complete and the erodible area is stabilized.
7. Remove the Type 1 silt gate assembly by sawing off the wood posts flush with the concrete apron. Leave the concrete apron between the gate and the structure inlet in place. The gate shall remain the property of the Contractor.

B. Temporary Slope Drains

If temporary slope drains are required, conduct the roadway grading operation according to Section 161 and follow these guidelines:

1. Place temporary pipe slope drains with inlets and velocity dissipaters (straw bales, silt fence, or aprons) according to the Plans.
2. Securely anchor the inlet into the slope to provide a watertight connection to the earth berm. Ensure that all connections in the pipe are leak proof.
3. Place temporary slope drains at a spacing of 350 ft (105 m) maximum on a 0% to 2% grade and at a spacing of 200 ft (60m) maximum on steeper grades, or more frequently as directed by the Engineer. Keep the slope drains in place until the permanent grass has grown enough to control erosion.
4. Remove the slope drains and grass the disturbed area with permanent grass. However, the temporary slope drains may remain in place to help establish permanent grass if approved by the Engineer.

C. Sediment Basins

Construct sediment basins according to the Plans at the required location, or as modified by the Engineer.

1. Construct the unit complete as shown, including:
 - Grading
 - Drainage
 - Rip rap
 - Spillways
 - Anti-seep collar
 - Temporary mulching and grassing on internal and external slopes
 - Accessories to complete the basin
2. When the sediment basin is no longer needed, remove and dispose of the remaining sediment.
3. Remove the sediment basin. Grade to drain and restore the area to blend with the adjacent landscape.
4. Mulch and permanently grass the disturbed areas according to [Section 700](#).

D. Sediment Barrier (baled straw)

Construct sediment barrier (baled straw) according to the Plan details. Use rectangular, standard size baled straw in mechanically produced bales.

The following items may be substituted for sediment barrier (baled straw)

1. Type B Silt Fence.
2. Triangular Silt Barrier.
3. Synthetic Fiber: Use synthetic fiber bales of circular cross section at least 18 in (450 mm) in diameter. Use synthetic bales of 3 ft or 6 ft (0.9 m or 1.8 m) in length that are capable of being linked together to form a continuous roll of the desired total length. Use bales that are enclosed in a geotextile fabric and that contain a pre-made stake hole for anchoring.
4. Coir: Use coir fiber bales of circular cross section at least 16" (400mm) in diameter. Use coir bales of 10 ft, 15 ft, or 20 ft (3 m, 4.5 m, or 6 m) in length. Use coir baled with coir twine netting with 2 in X 2 in (50 mm X 50 mm) openings. Use coir bales with a dry density of at least 7 lb/ft³ (112 kg/m³). Anchor in place with 2 in X 4 in (50 mm X 100 mm) wooden wedges with a 6 in (150 mm) nail at the top. Place wedges no more than 36 in (900 mm) apart.
5. Excelsior: Use curled aspen excelsior fiber with barbed edges in circular bales of at least 18 in (450 mm) in diameter and nominally 10 ft (3 m) in length. Use excelsior baled with polyester netting with 1 in X 1 in (25 mm by 25 mm) triangular openings. Use excelsior bales with a dry density of at least 1.4 lb/ft³ (22 kg/m³). Anchor in place with 1 in (25 mm) diameter wooden stakes driven through the netting at intervals of no more than 2 ft (600 mm).
6. Compost Filter Sock: Use general use compost (see Subsection 893.2.02.A.5.b) in circular bales at least 18 in diameter. Use compost baled with photo-degradable plastic mesh 3 mils thick with a maximum 0.25 in X 0.25 in (6 mm X 6 mm) openings. Anchor in place with 1 in (25 mm) diameter wooden stakes driven through the netting at intervals of no more than 2 ft (600 mm). The sock shall be dispersed on site when no longer required, as determined by the Engineer. Do not use Compost Filter Socks in areas where the use of fertilizer is restricted.

7. Compost Filter Berm: Use erosion control compost (see Subsection 893.2.02) to construct an uncompacted 1.5 ft to 2 ft (450 mm to 600 mm) high trapezoidal berm which is approximately 2 ft to 3 ft (600 mm to 1 m) wide at the top and minimum 4 ft (1.2 m) wide at the base. Do not use Compost Filter Berms in areas where the use of fertilizer is restricted.

The construction of the compost filter berm includes the following:

- a. Keeping the berm in a functional condition.
- b. Installing additional berm material when necessary.
- c. Removing the berm when no longer required, as determined by the Engineer. At the Engineer's discretion, berm material may be left to decompose naturally, or distributed over the adjacent area.

E. Other Temporary Structures

When special conditions occur during the design stage, the Plans may show other temporary structures for erosion control with required materials and construction methods.

F. Temporary Grass

Use a quick growing species of temporary grass such as rye grass, millet, or a cereal grass suitable to the area and season.

Use temporary grass in the following situations:

- When required by the Specifications or directed by the Engineer to control erosion where permanent grassing cannot be planted.
- To protect an area for longer than mulch is expected to last (60 calendar days).

Plant temporary grass as follows:

1. Use seeds that conform to Subsection 890.2.01, "Seed." Perform seeding according to Section 700; except use the minimum ground preparation necessary to provide a seed bed if further grading is required.
2. Prepare areas that require no further grading according to Subsection 700.3.05.A, "Ground Preparation." Omit the lime unless the area will be planted with permanent grass without further grading. In this case, apply the lime according to Section 700.
3. Apply mixed grade fertilizer at 400 lbs/acre (450 kg/ha). Omit the nitrogen. Mulch (with straw or hay) temporary grass according to Section 700. (Erosion control compost Mulch will not be allowed with grassing.)
4. Before planting permanent grass, thoroughly plow and prepare areas where temporary grass has been planted according to Subsection 700.3.05.A, "Ground Preparation".
5. Apply Polyacrylamide (PAM) to all areas that receive temporary grassing.
6. Apply Pam (powder) before grassing or PAM (emulsion) to the hydroseeding operation.
7. Apply PAM according to manufacturer specifications.
8. Use only anionic PAM.

For projects that consist of shoulder reconstruction and/or shoulder widening, refer to Section 161.3.05H for Wood Fiber Blanket requirements.

G. Mulch

When stage construction or other conditions prevent completing a roadway section continuously, apply mulch (straw or hay or erosion control compost) to control erosion. Mulch may be used without temporary grassing for 60 calendar days or less. Areas stabilized with only mulch (straw/hay) shall be planted with temporary grass after 60 calendar days.

Apply mulch as follows:

1. Mulch (Hay or Straw) - Without Grass Seed
 - a. Uniformly spread the mulch over the designated areas from 2 in to 4 in (50 mm to 100 mm) thick.
 - b. After spreading the mulch, walk in the mulch by using a tracked vehicle (preferred method), empty sheep foot roller, light disking, or other means that preserves the finished cross section of the prepared areas. The Engineer will approve of the method.
 - c. Place temporary mulch on slopes as steep as 2:1 by using a tracked vehicle to imbed the mulch into the slope.
 - d. When grassing operations begin, leave the mulch in place and plow the mulch into the soil during seed bed preparation. The mulch will become beneficial plant food for the newly planted grass.

2. Erosion control compost - Without Grass Seed
 - a. Uniformly spread the mulch (erosion control compost) over the designated areas 2 in (50 mm) thick.
 - b. When rolling is necessary, or directed by the Engineer, use a light corrugated drum roller.
 - c. When grassing operations begin, leave the mulch in place and plow the mulch into the soil during seed bed preparation. The mulch will become beneficial plant food for the newly planted grass.
 - d. Plant temporary grass on area stabilized with mulch (erosion control compost) after 60 calendar days.
 - e. Do not use Erosion Control Compost in areas where the use of fertilizer is restricted.

H. Miscellaneous Erosion Control Not Shown on the Plans

When conditions develop during construction that were unforeseen in the design stage, the Engineer may direct the Contractor to construct temporary devices such as but not limited to:

- Bulkheads
- Sump holes
- Half round pipe for use as ditch liners
- U-V resistant plastic sheets to cover critical cut slopes

The Engineer and the Contractor will determine the placement to ensure erosion control in the affected area.

I. Diversion Channels

When constructing a culvert or other drainage structure in a live stream that requires diverting a stream, construct a diversion channel.

J. Temporary Check Dams

Temporary check dams are constructed of the following materials;

- Stone plain rip rap according to Section 603 or of sand bags as in Section 603 without Portland cement. (Place plastic filter fabric on ditch section before placing rip rap.)
- Fabric (Type C silt fence)
- Hay Bales

Temporary check dams shall be constructed according to plan details and shall remain in place until the permanent ditch protection is in place or being installed and the removal is approved by the Engineer.

K. Construction Exits

Locate construction exits at any point where vehicles will be leaving the project onto a public roadway. Install construction exits at the locations shown in the plans and in accordance with plan details.

L. Retrofit

Add the retrofit device to the permanent outlet structure as shown on the Plan details.

When all land disturbing activities that would contribute sediment-laden runoff to the basin are complete, clean the basin of sediment and stabilize the basin area with vegetation.

When the basin is stabilized, remove the retrofit device from the permanent outlet structure of the detention pond.

M. Inlet Sediment Trap

Inlet sediment traps consist of a temporary device placed around a storm drain inlet to trap sediment. An excavated area adjacent to the sediment trap will provide additional sediment storage.

Inlet sediment traps may be constructed of Type C silt fence, plastic frame and filter, hay bales, baffle box, or other filtering materials approved by the Engineer.

Construct inlet sediment traps according to the appropriate specification for the material selected for the trap.

Place inlet sediment traps as shown on the Plans or as directed by the Engineer.

N. Rock Filter Dams

Construct rock filter dams of the material selected as shown in the approved erosion and sediment control plan. Construct and place this item in accordance with the approved erosion control construction detail(s) and Standard Specification Section 603.

Rock filter dams shall remain in place until the permanent ditch protection is in place or is being installed and their removal is approved by the Engineer.

O. Stone Filter Berms

Construct stone filter berms of the material selected as shown in the approved erosion and sediment control plan. Construct and place this item in accordance with the approved erosion control construction detail(s) and Standard Specification Section 603.

Stone filter berms shall remain in place until the permanent slope protection is in place or is being installed and their removal is approved by the Engineer.

P. Stone Filter Rings

Construct stone filter rings of the material selected as shown in the approved erosion and sediment control plan. Construct and place this item in accordance with the approved erosion control construction detail(s) and Standard Specification [Section 603](#).

A stone filter ring shall remain in place until final stabilization of the area which drains toward it is achieved and its removal is approved by the Engineer.

163.3.06 Quality Acceptance

General Provisions 101 through 150.

163.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

163.4 Measurement

A. Silt Control Gates

Silt control gates are measured for payment by the entire structure constructed at each location complete in place and accepted. Silt control gates constructed at the inlet of multiple lines of drainage structures are measured for payment as a single unit.

B. Temporary Slope Drains

Temporary slope drains are measured for payment by the linear foot (meter) of pipe placed. When required, the inlet spillway and outlet apron and/or other dissipation devices are incidental and not measured separately.

C. Sediment Basins

Sediment basins are measured for payment by the entire structure complete, including construction, maintenance, and removal. Measurement also includes:

- Earthwork
- Drainage
- Spillways
- Baffles
- Rip rap
- Final cleaning to remove the basin

Permanent and temporary grassing for sediment basins is measured separately for payment.

D. Diversion Channels

Diversion channels are not measured for payment. Costs for the entire structure complete, including materials, construction (including earthwork), and removal is included in the price bid for the drainage structure or for other Contract items.

E. Temporary Grass

Temporary grass is measured for payment by the acre (hectare). Lime, when required, is measured by the ton (megagram). Mulch and fertilizer are measured separately for payment.

F. Mulch

Mulch (straw or hay, or erosion control compost) is measured for payment by the ton (megagram).

G. Baled Straw Sediment Barrier, Baled Straw Check Dam and Fabric Check Dams

Baled straw sediment barrier, baled straw check dams, and fabric check dams are measured by the linear foot (meter). When the Contractor substitutes a product allowed in [Subsection 163.3.05.D](#) for baled straw sediment barrier or when the Engineer directs this substitution, the product will be measured by the linear foot (meter).

H. Rip Rap Check Dams

Rip Rap Check Dams are measured per each which will include all work necessary to construct the check dam including plastic filter fabric placed beneath the rip rap or sand bags.

I. Construction Exits

Construction exits are measured per each which will include all work necessary to construct the exit including the required geotextile fabric placed beneath the aggregate.

J. Retrofit

Retrofit will be measured for payment per each. The construction of the detention pond and permanent outlet structure will be measured separately under the appropriate items.

K. Inlet Sediment Trap

Inlet sediment traps, regardless of the material selected, are measured per each which includes all work necessary to construct the trap including any incidentals and providing the excavated area for sediment storage.

L. Rock Filter Dams

Rock filter dams are measured for payment per each required. This includes the entire structure at each location and all the work necessary for construction.

Delete Subsection 163.4.M. and substitute the following:

M. Stone Filter Berms

Stone filter berms are measured for payment per linear foot (meter) required. This includes the entire structure at each location and all the work necessary for construction.

N. Stone Filter Rings

Stone filter rings are measured for payment per each required. This includes the entire structure at each location and all the work necessary for construction.

163.4.01 Limits

General Provisions 101 through 150.

163.5 Payment

A. Silt Control Gates

The specified silt control gates are paid for at the Contract Unit Price per each. Payment is full compensation for:

- Furnishing the material and labor
- Constructing the concrete apron as shown on the Plans
- Excavating and backfilling to place the apron
- Removing the gate

B. Temporary Slope Drains

Temporary slope drains are paid for by the linear foot (meter). Payment is full compensation for materials, construction, removal (if required), inlet spillways, velocity dissipaters, and outlet aprons.

When temporary drain inlets and pipe slope drains are removed, they remain the Contractor's property and may be reused or removed from the Project as the Contractor desires. Reused pipe or inlets are paid for the same as new pipe or inlets.

C. Sediment Basin

Sediment basins, measured according to [Subsection 163.4.C “Measurement,”](#) are paid for by the unit, per each, for the type specified on the Plans. Price and payment are full compensation for work and supervision to construct, and remove the sediment basin, including final clean-up.

D. Diversion Channel

Diversion channels are not paid for separately; they are included in the price bid for the drainage structure or for other Contract Items.

E. Temporary Grass

Temporary grass is paid for by the acre (hectare). Payment is full compensation for all equipment, labor, ground preparation, materials, wood fiber mulch, polyacrylamide, and other incidentals. Lime (when required) is paid for by the ton (megagram). Mulch and fertilizer are paid for separately.

F. Mulch

Mulch is paid for by the ton. Payment is full compensation for all materials, labor, maintenance, equipment and other incidentals.

The weight for payment of straw or hay mulch will be the product of the number of bales used and the average weight per bale as determined on certified scales provided by the contractor or state certified scales. Provide written documentation to the Engineer stating the average weight of the bales.

The weight of erosion control compost mulch will be determined by weighing each loaded vehicle on the required motor truck scale as the material is hauled to the roadway, or by using recorded weights if a digital recording device is used. The contractor may propose other methods of providing the weight of the mulch to Engineer for approval.

G. Baled Straw Sediment barrier, Baled Straw Check Dams and Fabric Check Dams (Type C Silt Fence)

Baled straw sediment barrier, baled straw check dams and fabric check dams (type C silt fence), complete in place and accepted are paid for at the Contract Unit Price bid per linear foot (meter). Payment is full compensation for constructing, and removing (when directed) the baled straw sediment barrier or either check dam.

When the Contractor substitutes any product allowed in [Subsection 163.3.05.D](#) for baled straw sediment barrier or when the Engineer directs this substitution, payment is made at the bid price per linear foot (meter) for baled straw sediment barrier.

H. Rip Rap Check Dams

Rip Rap Check Dams are paid for per each. Payment is full compensation for all materials, construction, and removal. Reused stone plain rip rap or sandbags are paid for on the same basis as new items. Filter fabric required under rip rap check dams is included in the price bid for each check dam.

I. Construction Exits

Construction exits are paid for per each. Payment is full compensation for all materials including the required geotextile, construction, and removal.

J. Retrofit

This item is paid for at the Contract Unit Price per each. Payment is full compensation for all work, supervision, materials (including the stone filter), labor and equipment necessary to construct and remove the retrofit device from an existing or proposed detention pond outlet structure.

K. Inlet Sediment Trap

Inlet sediment traps are paid for per each. Payment is full compensation for all materials, construction, and removal.

L. Rock Filter Dams

Rock filter dams are paid for per each. Payment is full compensation for all materials, construction, and removal for each. Clean reused stone Type 3 riprap and #57 stone are paid for on the same basis as new items. Plastic woven filter fabric is required under rock filter dams and is included in the price bid for each.

Delete Subsection 163.5.M. and substitute the following:

M. Stone Filter Berms

Stone filter berms are paid for per linear foot (meter). Payment is full compensation for all materials, construction, and removal for each. Clean stone Type 3 riprap and #3 stone are paid for on the same basis as new items. Plastic woven filter fabric is required under rock filter berms and is included in the price bid for linear foot (meter).

N. Stone Filter Rings

Stone filter rings are paid for per each. Payment is full compensation for all materials, construction, and removal for each. Clean reused stone Type 3 riprap and #57 stone are paid for on the same basis as new items. Plastic woven filter fabric is required under stone filter rings and is included in the price bid for each.

The Items in this Section (except temporary grass and mulch) are made as partial payments as follows:

- When the item is installed and put into operation the Contractor will be paid 75 percent of the Contract price.
- When the Engineer instructs the Contractor that the Item is no longer required and is to remain in place or is removed, whichever applies, the remaining 25 percent will be paid.

Temporary devices may be left in place at the Engineer’s discretion at no change in cost. Payment for temporary grass will be made based on the number of acres (hectares) grassed. Mulch will be based on the number of tons (megagrams) used.

Payment is made under:

Item No. 163	Construct and remove silt control gate, type__	Per each
Item No. 163	Construct and remove temporary pipe slope drains	Per linear foot (meter)
Item No. 163	Construct and remove temporary sediment barrier or baled straw check dam	Per linear foot (meter)
Item No. 163	Construct and remove sediment basin type__, Sta. No.____	Per each
Item No. 163	Construct and remove Fabric Check Dam - type C silt fence	Per linear foot (meter)
Item No. 163	Construct and remove Rip Rap Check Dams ,Stone Plain Rip Rap/Sand Bags	Per Each
Item No. 163	Construction exit	Per each
Item No. 163	Construct and remove retrofit, Sta. No.____	Per each
Item No. 163	Construct and remove rock filter dam	Per each
Item No. 163	Construct and remove stone filter berm	Per linear foot (meter)
Item No. 163	Construct and remove stone filter ring	Per each
Item No. 163	Construct and remove inlet sediment trap	Per each
Item No. 163	Temporary grass	Per acre (hectare)
Item No. 163	Mulch	Per ton (megagram)

163.5.01 Adjustments

General Provisions 101 through 150.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

Section 167—Water Quality Monitoring

Delete Section 167 and Substitute the following:

167.1 General Description

This Specification establishes the Contractor's responsibility to meet the requirements of the National Pollutant Discharge Elimination System (NPDES) Infrastructure Permit No. GAR 100002 as it pertains to Part IV. Erosion, Sedimentation and Pollution Control Plan.

167.1.01 Definitions

Certified Personnel— certified personnel are defined as persons who have successfully completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission. For Department projects the certified person must also have successfully completed the Department's WECS certification course.

167.1.02 Related References

A. Standard Specifications

[Section 161—Control of Soil Erosion and Sedimentation](#)

B. Referenced Documents

NPDES Infrastructure Permit No. GAR 100002, Part IV

GDOT WECS seminar.

Environmental Protection Divisions Rules and Regulations (Chapter 391-3-26)

Georgia Soil and Water Conservation Commission Certification Level IA course.

OCGA 12-7

167.1.03 Submittals

General Provisions 101 through 150

167.2 Materials

General Provisions 101 through 150.

167.2.01 Delivery, Storage, and Handling

General Provisions 101 through 150.

167.3 Construction Requirements

167.3.01 Personnel

Use certified personnel to perform all monitoring, sampling, inspections, and rainfall data collection.

Use the Contractor designated WECS or select a prequalified consultant from the Qualified Consultant List (QCL) to perform water quality monitoring.

Ensure monitoring consultants' employees who perform monitoring, sampling, inspections, and rainfall data collection are GASWCC Certified.

167.3.02 Equipment

Provide equipment necessary to complete the Work or as directed.

167.3.03 Preparation

General Provisions 101 through 150.

167.3.04 Fabrication

General Provisions 101 through 150.

167.3.05 Construction

A. General

Perform inspections, rainfall data collection, testing of samples, and reporting the test results on the project according to the requirements in Part IV of the NPDES Infrastructure permit and this Specification.

Take samples manually or with the use of automatic samplers, according to the permit. Analyze all according to the permit, regardless of the method used to collect the samples.

If samples are analyzed in the field using portable turbidimeters, the monitoring results shall state they are being used and a digital readout of NTUs is what is provided.

Submit bench sheets, work sheets, etc., when using portable turbidimeters. There are no exceptions to this requirement.

Perform required inspections and submit all reports required by this Specification within the time frames specified.

Failure to perform the inspections within the time specified will result in the cessation of all construction activities with the exception of traffic control and erosion control. Failure to submit the required reports within the times specified will result in non-refundable deductions as specified in [Subsection 161.5.01.B](#).

B. Inspections

The Department will provide one copy of required inspection forms for use and duplication. Inspection forms may change during the contract to reflect regulatory agency needs or the need of the Department. Any costs associated with the change of inspection forms shall be considered incidental. Alternate formats of the provided forms may be created, used and submitted by the Contractor provided the required content and/or data fields and verbatim certification statements from the Department's current forms are included.

The Engineer shall inspect the installation and condition of each erosion control device required by the erosion control plan within seven days after initial installation. This inspection is performed for each stage of construction when new devices are installed. The WECS shall ensure all installation deficiencies reported by the Engineer are corrected within two business days.

Ensure the inspections of the areas listed below are conducted by certified personnel and at the frequencies listed. Document all inspections on the appropriate form provided by the Department.

1. Daily:

- a. Petroleum product storage, usage and handling areas
- b. All locations where vehicles enter/exit the site

Continue these inspections until all entry and exit sites are stabilized and fuel is not stored or transferred on the site. Utilize the Daily inspection form.

2. Weekly and after Rainfall Events:

Conduct inspections on these areas every seven calendar days and within twenty-four hours after the end of a rainfall event is 0.5 in (13 mm) or greater:

- a. Disturbed areas not permanently stabilized
- b. Material storage areas
- c. Structural control measures, Best Management Practices (BMPs)
- d. Water quality monitoring locations and equipment

Continue these inspections until all BMPs have been removed. Utilize the EC-1 Form.

3. Monthly:

Once per month, inspect all areas where final stabilization has been completed. Look for evidence of sediments or pollutants entering the drainage system and or receiving waters. Inspect all permanent erosion control devices remaining in place to verify the maintenance status and the devices are functioning properly.

Continue these inspections until the Notice of Termination is submitted. Utilize the Monthly inspection form.

C. Reports:

1. Inspection Reports:

Summarize the results of inspections noted above in writing on the appropriate Daily, Weekly, Monthly or EC-1 form provided by the Department. Include the following information:

- Date(s) of inspection

- Name of personnel performing inspection
- Status of devices
- Observations
- Action taken
- Signature of personnel performing the inspection
- Any incidents of non-compliance

The inspection form certification sheet shall be signed by the project WECS and the inspector performing inspections on behalf of the WECS (if not the same person).

Submit all inspection reports to the Engineer within twenty-four hours of the inspection.

The Engineer will review the submitted reports and inspect the project to determine their accuracy.

The Engineer will notify the certified personnel of any additional items that should need to be added to the inspection report.

Correct any items listed in the inspection report requiring routine maintenance within 72 (seventy –two) hours of notification.

Assume responsibility for all costs associated with additional sampling as specified in Part IV.D.6.d.3.(c) of the NPDES GAR 100002 permit if either of these conditions arise:

- BMPs shown in the Plans are not properly installed and maintained, or
- BMPs designed by the Contractor are not properly designed, installed and maintained.

2. Monitoring Reports

a. Report Requirements

Include in all reports, the following certification statement, signed by the WECS or consultant providing monitoring on the project:

“I certify under penalty of law that this document and all attachments were prepared under my direct supervision in accordance with a system designed to assure that certified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

When a rainfall event requires a sample to be taken, submit a report of the monitoring results to the Engineer within seven working days of the date the sample was obtained. Include the following information:

- 1) Date of sampling
- 2) Rainfall amount on sample date (sample date only)
- 3) NTU of sample & analysis method
- 4) Location where sample was taken (station number, etc.)
- 5) Receiving water or outfall sample
- 6) Project number and county
- 7) Whether the sample was taken by automatic sampler or manually (grab sample)

b. Report Requirements with No Qualifying Rainfall Events

In the event a qualifying rainfall event does not occur prior to the submittal of the NOT (Notice of Termination), submit a report stating “No qualifying rainfall event occurred and no samples were taken.”

c. Test Results

Provide monitoring test results to the Engineer within 48 hours of the samples being analyzed. This notification may be verbal or written. This notification does not replace the requirement to submit the formal monitoring summary to the Engineer within 7 working days of the samples being collected.

3. Rainfall Data Reports

Record the measurement of rainfall once each twenty-four hour period. Measure rainfall data at the active phase of construction on the site.

Project rain gauges and those used to trigger the automatic samplers are to be emptied after every rainfall event. This will prevent a cumulative effect and prevent automatic samplers from taking samples even though the rainfall event was not a qualifying event.

The daily rainfall data supplied by the WECS to the Engineer will be the official rainfall data for the project.

167.3.06 Quality Acceptance

General Provisions 101 through 150.

167.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

167.4 Measurement

Water Quality Inspections in accordance with the inspection and reports sub-sections will be measured for payment by the month up to the time the Contract Time expires. Required inspections and reports after Contract Time has expired will not be measured for payment.

Water Quality Monitoring and Sampling are measured per each. Each means each sampling event, not each sample. When the monitoring location is a receiving water, the upstream and downstream samples are taken for comparison of NTU values. When the monitoring location is an outfall, a single sample is taken to be analyzed for its absolute NTU value.

167.4.01 Limits

General Provisions 101 through 150. Submit the monitoring summary report to the Engineer within 7 working days

167.5 Payment

Payment for Water Quality Monitoring and Sampling will be made as follows:

Water Quality Monitoring and Sampling per each is full compensation for meeting the requirements of the monitoring sections of the NPDES permit and this Specification, obtaining samples, analyzing samples, any and all necessary incidentals, and providing results of turbidity tests to the Engineer, within the time frame required by the NPDES Infrastructure permit, and this Specification.

This item is based on the rainfall events requiring sampling as described in Part IV.D.5 of the permit.

The Department will not pay for samples taken and analyzed for rainfall events that are not qualifying events as compared to the daily rainfall data supplied by the WECS.

Water Quality Inspections will be paid at the Contract Price per month. This is full compensation for performing the requirements of the inspection section of the NPDES permit and this Specification, any and all necessary incidentals, and providing results of inspections to the Engineer, within the time frame required by the NPDES Infrastructure permit, and this Specification.

Payment will be made under:

Item No. 167	Water quality inspections	Per month
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Water Quality Monitoring and Sampling will be paid per each.

Payment will be made under:

Item No. 167	Water quality monitoring and sampling	Per each
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167.5.01 Adjustments

General Provisions 101 through 150.

Office of Design Policy and Support

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

Section 171—Silt Fence

Delete Section 171 and substitute the following:

171.1 General Description

This work includes furnishing, installing, and removing a water permeable filter fabric fence to remove suspended particles from drainage water.

171.1.01 Definitions

General Provisions 101 through 150.

171.1.02 Related References

A. Standard Specifications

[Section 163—Miscellaneous Erosion Control Items](#)

[Section 700—Grassing](#)

[Section 862—Wood Posts and Bracing](#)

[Section 881—Fabrics](#)

[Section 894—Fencing](#)

B. Referenced Documents

ASTM D 3786

ASTM D 4355

ASTM D 4632

ASTM D 4751

[GDT 87](#)

[QPL 36](#)

171.1.03 Submittals

General Provisions 101 through 150.

171.2 Materials

Materials shall meet the requirements of the following Specifications:

Material	Section
Filter Fabrics	881
Fencing	894
Wood Posts and Bracing	862

Conditions during Project construction will affect the quantity of the silt fence to be installed.

The Engineer may increase, decrease, or eliminate the quantity at his or her direction. Variations in quantity are not changes in details of construction or in the character of the work.

For Type A, B, and C fences, use fabric as specified in [Subsection 881.2.07, "Silt Fence Filter Fabric."](#)

171.2.01 Delivery, Storage, and Handling

During shipment and storage, wrap the fabric in a heavy-duty covering protecting the cloth from sunlight, mud, dust, dirt, and debris. Do not expose the fabric to temperatures greater than 140 °F (60 °C).

When installed, the Engineer will reject the fabric if it has defects, rips, holes, flaws, deterioration, or damage incurred during manufacture, transportation, or storage.

171.3 Construction Requirements

171.3.01 Personnel

General Provisions 101 through 150.

171.3.02 Equipment

General Provisions 101 through 150.

171.3.03 Preparation

General Provisions 101 through 150.

171.3.04 Fabrication

General Provisions 101 through 150.

171.3.05 Construction

Install the silt fence according to this Specification, as shown on the Plans, or as directed by the Engineer

A. Install Silt Fence

1. Install silt fence by either of the following methods:
 - a. Excavated Trench Method
Excavate a trench 4 to 6 in (100 to 150 mm) deep using equipment such as a trenching machine or motor grader. If equipment cannot be operated on the site, excavate the trench by hand.
 - b. Soil Slicing Method
Create a mechanical slice in the soil 8 to 12 in (200 to 300 mm) deep to receive the silt fence. Ensure the width of the slice is not more than 3 in (75 mm). Mechanically insert the silt fence fabric into the slice in a simultaneous operation with the slicing ensuring consistent depth and placement.
2. Install the first post at the center of the low point (if applicable). Space the remaining posts a maximum of 6 ft (1.8 m) apart for Types A and B fence and 4 ft (1.2 m) apart for Type C fence.
3. Bury the posts at least 18 in (450 mm) into the ground. If this depth cannot be attained, secure the posts enough to prevent the fence from overturning from sediment loading.
4. Attach the filter fabric to the post using wire, cord, staples, nails, pockets, or other acceptable means.
 - a. Staples and Nails (Wood Posts): Evenly space staples or nails with at least five per post for Type A fence and four per post for Type B fence.
 - b. Pockets: If using pockets and they are not closed at the top, attach the fabric to a wood post using at least one additional staple or nail, or to a steel post using wire. Ensure the additional attachment is within the top 6 in (150 mm) of the fabric.
 - c. Install the filter fabric so 6 to 8 in (150 to 200 mm) of fabric is left at the bottom to be buried. Provide a minimum overlap of 18 in (450 mm) at all splice joints.
 - d. For Type C fence:
 - 1) Woven Wire Supported
 - Steel Post: Use wire to attach the fabric to the top of the woven wire support fence at the midpoint between posts. Also, use wire to attach the fabric to the post.
 - 2) Polypropylene Mesh Supported
 - Wood Post: Use at least six staples per post. Use two staples in a crisscross or parallel pattern to secure the top portion of the fence. Evenly space the remaining staples down the post.
 - Steel Post: Use wire to attach the fabric and polypropylene mesh to the post.

5. Install the fabric in the trench so 4 to 6 in (100 to 150 mm) of fabric is against the side of the trench with 2 to 4 in (50 to 100 mm) of fabric across the bottom in the upstream direction.
6. Backfill and compact the trench to ensure flow cannot pass under the barrier. When the slice method is used, compact the soil disturbed by the slice on the upstream side of the silt fence first, and then compact the downstream side.
7. When installing a silt fence across a waterway producing significant runoff, place a settling basin in front of the fence to handle the sediment load, if required. Construct a suitable sump hole or storage area according to [Section 163](#).

B. Remove the Silt Fence

1. Keep all silt fence in place unless or until the Engineer directs it to be removed. A removed silt fence may be used at other locations if the Engineer approves of its condition.
2. After removing the silt fence, dress the area to natural ground, grass and mulch the area according to [Section 700](#).
3. The silt fence shall remain until the Project is accepted or until the fence is removed. Also, remove and dispose of the silt accumulations at the silt fence.
4. Remove and replace any deteriorated filter fabric reducing the effectiveness of the silt fence.
5. Repair or replace any undermined silt fence at no additional cost to the Department.

171.3.06 Quality Acceptance

Approved silt fence is listed in [QPL 36](#). Approved fabrics must consistently exceed the minimum requirements of this Specification as verified by the Office of Materials and Research. The Office of Materials and Research will remove fabric failing to meet the minimum requirements of this specification from the QPL until the products' acceptability has been reestablished to the Department's satisfaction.

At the time of installation, the Engineer will reject the fabric if it has defects, rips, holes, flaws, deterioration, or damage incurred during manufacture, transportation, or storage.

171.3.07 Contractor Warranty

The silt fence shall remain until the Project is accepted or until the fence is removed. Also, remove and dispose of the silt accumulations at the silt fence.

Remove and replace any deteriorated filter fabric that reduces the effectiveness of the silt fence.

Repair or replace any undermined silt fence at no additional cost to the Department.

171.4 Measurement

The quantity of silt fence to be paid for is the actual number of linear feet (meters) of silt fence, measured in place from end post to end post of each separate installation. The silt fence must be complete and accepted.

171.4.01 Limits

General Provisions 101 through 150.

171.5 Payment

Silt fence Type A, B, or C measured as defined in [Subsection 171.4, "Measurement,"](#) is paid for at the Contract Unit Price bid per linear foot (meter).

Payment is full compensation for the following:

- Furnishing materials
- Erecting the fence
- Dressing and grassing, when required
- Removing the fence, when required

Payment for this Item is made as follows:

- Seventy-five percent of the Contract Price bid per linear foot (meter) is paid when each fence is complete in place.
- Twenty-five percent is paid at removal or acceptance.

If the silt fence must be repaired or removed, as the result of neglect or damage, perform the work at no additional cost to the Department.

Payment will be made under:

Item No. 171	Silt fence, type__	Per linear foot (meter)
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171.5.01 Adjustments

General Provisions 101 through 150.

Office of Design Policy and Support

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SUPPLEMENTAL SPECIFICATION

Section 201 – Clearing and Grubbing Right of Way

Delete Subsection 201.3.05.E.3 and substitute the following:

3. Solid Waste Material

a. Nonregulated Material

1) Common fill is defined as soil, rock, brick, concrete without reinforcement, concrete with reinforcement where the reinforcement has been removed flush with the surface of the concrete and cured asphalt, provided that such material does not contain hazardous waste constituents above background levels and the material results from Department funded construction contracts. Such fill is not subject to the Georgia Comprehensive Solid Waste Management Act of 1990 and the Solid Waste Management Rules when used as fill material on Department funded construction contracts or Department property or when used as fill material on property not owned by the Department when all requirements of this specification are fully met. Common fill meeting this definition may be placed as follows:

a. At a permitted municipal, construction and demolition materials or inert landfill fully meeting all requirements of the Solid Waste Rules and Act and any other applicable laws or ordinances.

b. At an off-site engineered fill location in accordance with the following requirements;

- Place the material in uniform layers 3 ft thick or less and distributed to avoid the formation of large voids or pockets.
- Fill voids with finer material.
- Cover the last layer of fill with at least 2 ft of soil.
- Construct the fill according to Section 208, except compact it to at least 90 percent of the maximum laboratory dry density.
- A Georgia registered professional engineer shall document, certify and submit the following information on behalf of the Contractor to the Department; compaction rates, waste description including average particle size, and the depth of clean earthen fill lying above the engineered fill.

c. On site as compacted fill if prior written approval has been granted by the Engineer and in accordance with the following requirements:

- As compacted fill incorporated into embankment only. No area shall be excavated for the sole purpose of disposing of common fill.
- Place the material in uniform layers 3 ft thick or less and distributed to avoid the formation of large voids or pockets.
- Fill voids with finer material.
- Cover the last layer of fill with at least 2 ft of soil.
- Construct the fill according to Section 208, except compact it to at least 90 percent of the maximum laboratory dry density.
- Records of the exact location by station and offsets, amount disposed per location in cubic yards, waste description including average particle size, compaction rates and depth of clean earthen fill lying above the composite materials shall be kept by the Engineer.

d. Materials that may be recycled or reused such as asphaltic concrete, Portland cement concrete, plastic, metal and materials that qualify under EPD regulations for sale or use may be reclaimed by the Contractor.

b. Regulated Material

- 1) Inert waste is defined as organic debris such as stumps, limbs and leaves, cured asphalt and any of the aforementioned common fill items that do not meet the compaction requirements when placed in an excess materials pit. An inert waste landfill permit shall be obtained in accordance with GDNR/EPD Rules to properly record the disposal of inert waste when compaction requirements are not met at an excess materials pit. If disposed of at a landfill, inert waste may only be disposed at a permitted municipal, construction and demolition materials or inert landfill fully meeting all requirements of the Solid Waste Rules and Act and any other applicable laws or ordinances.
- 2) Construction and demolition waste is defined as construction forms, barrels, scrap metal, and other such by-products of construction not specifically listed above as either common fill or inert waste. Construction and or demolition waste must be disposed of at a permitted municipal, construction and demolition materials, or inert landfill fully meeting all requirements of the Solid Waste Rules and Act and any other applicable laws or ordinances.
- 3) Dispose of oils, solvents, fuels, untreated lead paint residue, and other solid hazardous waste through a properly licensed hazardous waste disposal facility.

- 4) Remove municipal solid waste discovered during construction or shown on the Plans according to Section 215.

c. Solid Waste Handling and Disposal Documentation Requirements:

- 1) Waste disposed at a permitted municipal or construction and demolition landfill – all tipping receipts generated by the receiving landfill shall be provided to the Engineer.
- 2) Waste disposed at inert landfill – a copy of the landfill's Permit By Rule notification, and for landfills exceeding one acre, a copy of the landfill's NPDES General Storm water Permit Notice of Intent (NOI) and any local jurisdiction Land Disturbing Activity Permit, if applicable, shall be provided to the Engineer.
- 3) Any necessary documentation regarding a disposal site's permit status must be obtained by the Contractor and verified by the Department before any common fill, inert waste, or other solid waste is allowed to leave the site.
- 4) The documentation listed herein shall be maintained on-site in the project files and at any other location the Department deems necessary until a valid NPDES Notice of Termination is filed.

Recyclable materials must be separated from all waste materials and shall be properly stored in containers when practicable.

Excluding the above allowances, all types of waste shall be handled in full compliance with the following:

- The Georgia Solid Waste Management Rules, as amended (391-3-4)
- Georgia Comprehensive Solid Waste Management Act of 1990, as amended (O.C.G.A. 12-8-20)
- The Georgia Erosion & Sedimentation Act as amended (O.C.G.A. 12-7-1) and any applicable Local and State requirements as well as the General Permits of the Georgia Water Quality Control Act
- Any other applicable Federal, State, or Local rules or laws

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

SUPPLEMENTAL SPECIFICATION

Section 407—Asphalt-Rubber Joint and Crack Seal

Delete Section 407 and substitute the following:

407.1 General Description

This work includes filling (Type M) or sealing (Type S) joints and cracks in existing pavements with rubber asphalt mixtures. A polymer-modified asphalt rubber (PMAR) blend may be used in lieu of both Type M and Type S.

407.1.01 Definitions

Type M: Used to fill joints and cracks in Portland cement concrete or asphaltic concrete pavements when required by the Plans before placing an overlay.

Type S: Used to seal joints and cracks in Portland cement concrete and asphaltic concrete pavements and shoulders when not placing an overlay.

407.1.02 Related References

A. Standard Specifications

[Section 820—Asphalt Cement](#)

B. Referenced Documents

AASHTO T51

ASTM D 4

ASTM D 36

ASTM D 5329

ASTM D 7173

GDT-2

SOP 22

QPL 92

407.1.03 Submittals

Provide a Certificate of Analysis certifying each lot of premixed material meets the requirements of this Specification and submit the test results of each lot for each Project. Ensure each sealant lot is delivered in containers with the manufacturer's name or trademark and lot number plainly marked.

When instructed by the Engineer, furnish premixed samples and samples of the individual components of premixed material as follows:

- At least 20 lbs (10 kg) of rubber representative of each lot

Section 407—Asphalt-Rubber Joint and Crack Seal

- At least 5 gal (18 L) of asphalt containing additives as proportioned
- Proportional quantities of mixing aids or additives not included above
- Packaged premixed sealant material weighing no more than 30 lbs (14 kg)

407.2 Materials

Ensure the sealant material is a premixed, asphalt-rubber sealant mixture evaluated in accordance with SOP 22 and listed on QPLs 92-A, 92-B and/or 92-C . Ensure the mixture is a blend of asphalt cement, aromatic extender oil(s), and recycled or reclaimed tire crumb rubber with rubber contents meeting the requirements specified in Table 2. The blending will be conducted in a closely controlled manufacturing process as detailed in the manufacturer’s submitted Quality Control Plan. Produce a mixture with the following properties:

A. Workability

The mixture pours readily and penetrates a 1/4 in (6 mm) pavement joint or crack to a depth of at least 1 in (25 mm) when the application temperature of the fully reacted mixture is 350 °F (177 °C) and the air temperature is 35 °F (2 °C) or higher.

The mixture, when placed in conventional field installation equipment, readily melts to a pumping consistency after being heated to 400 °F (204 °C) for 2 hours maximum. The mixture remains in a pumping consistency when the temperature of the field installation equipment is reduced to the normal operating temperature range of 300 °F to 350 °F (149 °C to 177 °C).

B. Curing

The mixture contains no water or volatile solvents and cures immediately when cooled to a sufficient viscosity to prevent tracking caused by traffic.

C. Softening Point, Flexibility and Rubber Content.

When a fully reacted mixture sample of asphalt-rubber has been heated at 350 °F (177 °C) for one hour, or when a PMAR blend has been heated at 380 °F (194 °C) for one hour, ensure it passes the following laboratory tests:

1. Softening Point

The minimum softening point by ring and ball described in ASTM D 36 is as follows:

Table 1 – Minimum Softening Point

PMAR	185 °F (85 °C)
Type S	135 °F (57 °C)
Type M	150 °F (65 °C)

2. Flexibility

Bend a 1/8 in (3 mm) thick x 1 in (25 mm) wide x 6 in (150 mm) long mixture specimen after conditioning to 10 °F (-12 °C) at a minimum bending rate of 9 degrees per second(10 seconds maximum for a 90° bend) over a 1 in (25 mm) diameter mandrel without cracking.

3. Rubber Content %

Type M and Type S minimum rubber content % .

Table 2 – Type S and Type M Minimum Rubber Content

Type S	15% minimum
Type M	15% minimum

D. Separation

Test the PMAR blend for phase separation by pouring two representative samples of the mixture into aluminum tubes measuring 1 in (25 mm) in diameter and 5-1/2 in (140 mm) long as described in ASTM D 7173. Cure the samples at 325 °F (163 °C) for 48 hours. Take samples from the top and bottom of each tube and determine softening point as described in ASTM D 36. Average the test results from the top and bottom samples. If there is 4% or more difference between the average test result and either of the top or bottom test results, reject the mixture due to separation.

E. Adhesion

When cooled, the mixture bonds strongly to both asphalt and concrete pavement surfaces. The mixture contains no materials chemically reactive with these surfaces to reduce the short-term and long-term adhesion bonds.

F. Acceptable Recycled or Reclaimed Tire Crumb Rubber

Before the rubber is added, ensure the asphalt cement used in the mixture conforms to the requirements of [Section 820.2.01](#), PG 58-22 or PG 64-22.

Ensure the recycled, reclaimed tire crumb rubber used in the mixture meets the following requirements:

- Obtained from used pneumatic tires (such as automobile, truck, bus, etc.)—not solid tires and non-tire rubber sources
- Produced from an ambient or cryogenic grinding process (crushes, tears, fractures or grinds, the used rubber tires and produces rubber particles with a ragged, sponge-like surface). Tire buffings are prohibited.
- Contains recycled, vulcanized crumb rubber and/or reclaimed (devulcanized) rubber
- Contains at least 25 percent natural rubber by weight of the total rubber portion of the mixture
- Contains no more than 0.1 percent fabric
- Free of wire and other contaminating materials, except up to four percent calcium carbonate or talc to prevent rubber particles from sticking
- Contains no rubber particles greater than 1/4 in (6 mm) long
- Meets the following gradation requirements:

Table 3 – Recycled or Reclaimed Tire Crumb Rubber Gradation

Sieve Size	Percent Passing
No. 10 (2.0 mm)	100%
No. 16 (1.18 mm)	95 to 100%
No. 30 (600 µm)	40 to 80%
No. 80 (180 µm)	0 to 5%

G. Polymer-modified Asphalt Rubber

If a PMAR blend is used, ensure it meets the following additional requirements:

Table 4 – Polymer-modified Asphalt Rubber Properties (PMAR)

PROPERTY	SPECIFICATION LIMITS
Cone Penetration, 77 °F (25 °C) (ASTM D 5329)	30 - 60 dmm
Resilience, 77 °F (25 °C), % Recovery (ASTM D 5329)	30% minimum

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Ductility, 77 °F (25 °C), 50 mm/minute (ASSHTO T-51)	300 mm minimum
Asphalt Compatibility (ASTM D 5329)	Pass
Bitumen Content (ASTM D 4)	60 – 70 %
Tensile Adhesion (ASTM D 5329)	350 % minimum
Rotational Viscosity (Brookfield), No. 5 spindle, 20 RPM, 400 °F (205 °C)	3,000 – 15,000 cp
Rubber Content % (GDT-2)	12% minimum

407.2.01 Delivery, Storage, and Handling

Package the premixed sealant material in units weighing no more than 30 lbs (14 kg) with a maximum of two 30 lb (14 kg) units per shipping container. Ensure the plastic film used to package the units melts at normal application temperatures when placed in the installation equipment.

407.3 Construction Requirements

407.3.01 Personnel

General Provisions [101](#) through [150](#).

407.3.02 Equipment

A. Field Installation Equipment

Use field installation equipment that produces or maintains specified temperatures, even if filled to capacity.

Ensure the equipment produces or maintains a homogenous mixture of asphalt and rubber at a uniform temperature without hot or cool spots or rubber and asphalt segregation in the mixture.

B. Crack Filling Equipment

Ensure the equipment for filling the joints and cracks directs the sealant into the crack. Seal large cracks from the bottom up. Provide squeegees as necessary.

C. Air Compressor(s)

Ensure the air compressors are satisfactory to the Engineer.

407.3.03 Preparation

A. Joint and Crack Preparation

Use compressed air to thoroughly clean the joints and cracks to be sealed.

Clean the pavement surface and check the joints and cracks to ensure they are free of vegetation, dirt, dust, moisture, and other foreign material.

407.3.04 Fabrication

General Provisions [101](#) through [150](#).

407.3.05 Construction

A. Restrictions

Do not seal joints and cracks if:

- The joint or crack surface to be treated is not thoroughly dry.
- Rain is imminent.

Section 407—Asphalt-Rubber Joint and Crack Seal

- The air temperature is below 35 °F (2 °C).

B. Procedure

Follow this procedure to seal joints and cracks:

1. Place the prepackaged sealant mixture in the field installation equipment.
2. Heat the sealant mixture for the proper time and temperature to provide a full reaction between the asphalt and rubber.
3. Apply the mixture at the specified application temperature according to the manufacturer’s recommendations or the laboratory’s approval.
4. Carefully fill the joint or cracks, slightly overfull. Strike off the excess with a V-shaped squeegee to feather the sealant out to a width of approximately 2 in (50 mm).

407.3.06 Quality Acceptance

If the packaged units are bonded or stuck together or to the shipping container, or if packaging staples or fasteners cause sealant contamination, the material may be rejected as determined by the Engineer.

The manufacturer must meet the requirements of this Specification and furnish evidence of successful field installation and performance under similar environmental and project conditions.

407.3.07 Contractor Warranty and Maintenance

General Provisions [101](#) through [150](#).

407.4 Measurement

Joints and cracks will be measured by the linear foot (meter) by surface measure.

407.4.01 Limits

General Provisions [101](#) through [150](#).

407.5 Payment

Joints and cracks sealed according to the Plans and this Specification will be paid for at the Contract Unit Price bid.

Payment is full compensation for furnishing all materials and performing the work.

Payment will be made under:

Item No. 407	Polymer-modified asphalt–rubber joint and crack seal	Per linear foot (meter)
Item No. 407	Asphalt-rubber joint and crack seal, type “S”	Per linear foot (meter)
Item No. 407	Asphalt-rubber joint and crack seal, type “M”	Per linear foot (meter)

407.5.01 Adjustments

General Provisions [101](#) through [150](#).

Office of Materials and Testing

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SUPPLEMENTAL SPECIFICATION

Add the following:

Section 572—Slope Underdrains

572.1 General Description

This Work consists of the construction of slope underdrains, including placement of Geogrid reinforcement, Geocomposite wall drains, plastic filter fabric and other materials in slope excavations or fills where encountering high groundwater. Perform this Work in accordance with the Specifications and details, lines and grades shown on the Plans, or as directed by the Engineer.

572.1.01 Definitions

General Provisions 101 through 150.

572.1.02 Related References

A. Standard Specifications

General Provisions 101 through 150.

[Section 500—Concrete Structures](#)

[Section 603—Sand-cement Bag Rip Rap](#)

[Section 806—Aggregate for Drainage](#)

[Section 809—Geogrid Materials](#)

[Section 839—Corrugated Polyethylene Underdrain Pipe](#)

[Section 853—Reinforcement and Tensioning Steel](#)

[Section 881—Fabrics](#)

B. Referenced Documents

[QPL 28](#)

[QPL 47](#)

572.2 Materials

Ensure that materials meet the requirements of the following Specifications:

Material	Section
Concrete	500
Sand-cement Bag Rip Rap	603
Coarse Aggregate for Underdrains	806.2.01
Geogrid	809

Material	Section
Corrugated Polyethylene Underdrain Pipe	839
Reinforcing Steel	853
Woven Plastic Filter Fabric	881.2.05

Use approved geocomposite wall drain listed on QPL 47.

See QPL 28 for acceptable woven fabrics that meet the requirements of this Specification.

572.3 Construction Requirements

572.3.01 Personnel

General Provisions 101 through 150.

572.3.02 Equipment

General Provisions 101 through 150.

572.3.03 Preparation

General Provisions 101 through 150.

572.3.04 Fabrication

General Provisions 101 through 150.

572.3.05 Construction

Arrange the work schedule so that the slope underdrain installations will coincide with other operations on the Project in a manner that will prevent damage to completed work or may cause and/or allow soil contamination of materials.

A. Excavation

Excavate in accordance with the details and elevations shown on the Plans or to an additional depth as directed by the Engineer to intercept the water-bearing strata encountered during construction. Begin the excavations with the topmost bench and proceed to the bottom of the slope. Excavate as necessary to provide continuous slope underdrain coverage from the top of the water-bearing strata to the bottom of the slope. When encountering unstable conditions in the bottom of the excavation, remove unstable material as directed by the Engineer and replace with approved granular material and compact so as to provide a stable foundation for the excavation and placement of pipes.

B. Placement of Geocomposite Wall Drains

Place the Geocomposite wall drains the full height and width of the vertical bench cuts and secure the drains with metal staples or wooden stakes. Do not allow any horizontal joints or splices to remain in the drains. Abut adjoining drain strips to make vertical joints between drain strips.

C. Placement of Plastic Filter Fabric

Place plastic filter fabric of sufficient length to cover the drainage aggregate at the bottom of the bench excavation adjacent to the geocomposite wall drain. Overlap the fabric with a minimum of 3 feet (914 mm) of material. Sewing of the fabric will not be required. The fabric may be cut at the locations of the solid underdrain pipe to allow for wrapping around the drainage aggregate.

D. Placement of Pipe and Aggregate

Place perforated pipe continuous with the bench excavation adjacent to the Geocomposite wall drain in accordance with the details shown on the Plans. Place solid pipe at 200-foot (61-meter) intervals with a minimum of 2 solid pipes at each bench excavation, joined to perforated pipe with "T" connections. Connect all joints securely. Place drainage aggregate to a level of 6 inches (152 mm) above the pipes without disturbing the pipe alignment. Wrap the plastic filter fabric over the drainage aggregate prior to backfilling with soil.

E. Backfilling and Placement of Geogrid Reinforcement

Place soil to be used as backfill material with the same lift and compaction requirements as normal embankment construction. Do not disturb the pipe alignment. Place layers of Type B geogrid reinforcement 4 feet (1.22 m) long beginning at a level 2 feet (600 mm) above the bottom of each bench, and at 1-foot (300 mm) intervals thereafter as each bench excavation is backfilled.

F. Markers

Mark each outlet end of the drainage pipe in accordance with Plan details.

G. Protection from Contamination

Protect all materials from contamination by foreign matter. In the event that the drainage aggregates, plastic filter fabric or Geocomposite wall drains become contaminated, remove the contaminated portion and replace with clean material at no additional cost to the Department. Placement of soil backfill over the fabric is incidental to the Work and is not considered to be contamination.

H. Type B Concrete Flume

After the slope is backfilled, construct a Type B concrete flume at each solid drain location as indicated on the Plans. Extend each flume from the topmost solid drain pipe to the bottom of the slope.

572.4 Measurement

Slope underdrains will be measured for payment by the linear foot (meter) of accepted perforated underdrain in place at each bench excavation. No separate measurement will be made for bench excavation, drainage aggregate, Geocomposite wall drain, solid drain pipe, connections, geogrid, plastic filter fabric, or backfill required by the Plan Details.

Additional depth bench excavation required beyond the limits of the Plan details and directed by the Engineer will be measured according to Subsection 205.4 of the Specifications.

No separate measurement will be made for disposing of any unsuitable material encountered. Replacement material will not be measured separately.

When the contract includes Item 210-Grading Complete, additional depth bench excavation required beyond the limits of the Plan details, and as directed by the Engineer, will be measured according to Subsection 210.4.C. of the Specifications. No separate measurement will be made for backfilling the additional depth bench excavation.

572.5 Payment

Slope underdrains will be paid for at the Contract Price per linear foot (meter), complete and in place. Payment is full compensation for excavation, furnishing all materials, including drainage aggregate, Geocomposite wall drain, solid drain pipe, perforated drain pipe, connections, geogrid and plastic filter fabric, backfill, placing all materials and for all labor, equipment, tools and incidentals necessary to perform the Work.

Payment for concrete flumes will be according to the Plans.

Additional depth bench excavation required beyond the limits of the Plan details, and as directed by the Engineer, will be paid for at the Contract Price per cubic yard for Unclassified Excavation.

When the contract includes Item 210-Grading Complete, additional depth bench excavation will be paid for according to Subsection 210.5.C, "Undercut Excavation".

Payment will be made under:

Item No. 572	Slope Underdrains	Per linear foot (meter)
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572.5.01 Adjustments

General Provisions 101 through 150.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

**Section 627—Mechanically Stabilized Embankment Retaining Wall-
Contractor Design**

Delete Subsection 627.2 and substitute the following:

627.2 Materials

Meet the requirements of [Subsection 626.2, “Materials”](#) of the Specifications.

Delete Subsection 627.3.03.B and substitute the following:

B. Wall Design

Use the following design criteria for a Contractor designed wall:

1. Provide one of the following wall systems:
 - ARES (Tensar Earth Technologies)
 - Reinforced Earth Wall (The Reinforced Earth Company)
 - Sine Wall MSE Panel Systems (Sine Wall)
 - Stabilized Earth Wall (Vistawall Systems)
 - Tricon Retained Soil Wall (Tricon Precast)
2. Design the MSE Wall according to the current AASHTO Standard Specifications for Highway Bridges including interims. (Mechanically Stabilized Earth Wall Design – Section 5.8)
3. Design the MSE wall to account for all live load, dead load and wind load from all traffic barrier, lights, overhead signs, sound barriers and other appurtenances located on top and adjacent to the wall. Design MSE walls to account for all external forces. Also, design abutment walls for all horizontal and vertical loads applied by the bridge.
4. Assume responsibility for all temporary shoring that may be necessary for wall construction. Design the shoring using sound engineering principles.
5. Use permanent concrete wall facing panels that are at least 7 in (175 mm) thick.
6. Provide a minimum length of soil reinforcement of 10 feet (3 m) or seven-tenths (0.7) of the wall height, whichever is greater.
7. Ensure that the special wall backfill extends a minimum of 12 in (300 mm) past the end of the soil reinforcement.
8. Use the Architectural treatment of facing panels as indicated on the Department’s drawings.
9. Provide internal walls to allow for future widening if shown on the wall envelope. Ensure the internal walls have galvanized wire or concrete facing. Ensure as a minimum that the facing of the internal walls extend to the back limit of the MSE Wall Backfill for the permanent wall.
10. Ensure the maximum panel area does not exceed 35 square feet (3.25 square meters).

11. Design the barrier for a 500 lbs. per linear foot (744 kilograms per linear meter) loading applied horizontally along the top of the barrier. The barrier shall be continuous or have a counterweight slab continuous over not less than four panels.
12. A Foundation Investigation Report may be available from the Geotechnical Engineering Bureau of the Department. The information contained in this report may be used by the Contractor to assist in evaluating existing conditions for design as well as construction. However, the accuracy of the information is not guaranteed and no requests for additional monies or time extensions will be considered as a result of the Contractor relying on the information in this report.
13. Ensure the following requirements are met:
 - The gutterline grade on the proposed top of wall submitted matches the gutter elevations required by the plans.
 - The top of coping is at or above the top of coping shown on the envelope.
 - The leveling pad is at or below the elevation shown on the wall envelope.
 - Any changes in wall pay quantities due to changes in the wall envelope are noted in the contractor's plans
 - All changes in quantities due to the proposed walls being outside the wall envelope (step locations, ending wall at full panel, etc.) are shown as separate quantities.
14. Ensure the minimum embedment of the wall (top of leveling pad) is at least 2 feet (600 mm). If the soil slopes away from the bottom of the wall, lower the bottom of the wall to provide a minimum horizontal distance of 10 ft (3 m) to the slope. [i.e. a 2:1 slope in front of the wall requires 5 ft (1.5 m) of embedment; a 4:1 slope in front of the wall requires 2.5 ft (750 mm) of embedment]
15. If the Department's review of the submitted plans and calculations results in more than two submittals to the Department by the Contractor, the Contractor will be assessed for all reviews in excess of two submittals. The assessment for these additional reviews will be at the rate of \$60.00 per hour of engineering time expended.

Delete Subsection 627.3.04 and substitute the following:

627.3.04 Fabrication

Meet the requirements of [Subsection 626.3.04](#) of the Specifications.

Delete Subsection 627.3.05 and substitute the following:

627.3.05 Construction

Meet the requirements of [Subsection 626.3.05](#) of the Specifications.

Office of Bridge Design

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SUPPLEMENTAL SPECIFICATION

Add the following:

Section 661—Standard and Wet Weather Epoxy Traffic Stripe

661.1 General Description

This work includes furnishing and applying reflectorized standard and wet weather epoxy traffic stripe according to the Plans and these Specifications.

This Item also includes applying words and symbols according to Plan details, Specifications, and the current Manual on Uniform Traffic Control Devices.

661.1.01 Definitions

Painted Stripes: Solid or broken (skip) lines. The location and color are designated on the Plans.

Skip Traffic Stripes: Painted segments between unpainted gaps on a designated sequence with a ratio of 1:3 [10 ft (3 m) segment and 30 ft (9 m) gap] as specified on the Plans. The location and color are designated on the Plans.

661.1.02 Related References

A. Standard Specifications

General Provisions 101 through 150.

[Section 656—Removal of Pavement Markings](#)

B. Referenced Documents

[QPL 46](#)

[QPL 71](#)

AASHTO M 247

ACI Method 503

ASTM			
D 476	D 711	D 6628	E 303
E 1710	E 2177	G 53-77	

Federal Standard No. 595A-17778

SOP 39

US EPA Method 3052

US EPA Method 6010

661.2 Materials

A. General Requirements

- Use epoxy material that has been evaluated (2 year field evaluation) by the National Transportation Product Evaluation Panel (NTPEP) test facility or other approved test facility.

- Use epoxy material produced from an approved source listed on [QPL 46](#).
- Use an epoxy composition that is specifically formulated for use as a durable pavement marking material.
- Ensure the liquid markings consist of a two-component (Part A and Part B), 100% solids epoxy film formulated and designed to provide a simple volumetric mixing ratio as recommended by the manufacturer.
- Use white or yellow films for the markings, and use colors for bike lanes as required on the Plans. Ensure that these films are manufactured without the use of lead chromate pigments or other similar, lead-containing chemicals.
- Ensure that the mixed white epoxy contains not less than 13% by weight ASTM D 476 rutile titanium dioxide pigment to insure adequate opacity, hiding power, and reflective properties.

B. Glass Spheres and Reflective Composite Optics

Use glass spheres and/or reflective composite optics for the reflective media system that ensures the epoxy pavement markings meet the reflectance performance requirements in Subsection 661.3.04. Do not use beads and/or optics containing greater than 200 ppm total arsenic, 200 ppm total antimony, or 200 ppm total lead when tested according to the most recent US EPA Methods 3052 and 6010, or other approved methods.

Ensure glass spheres meet the requirements of AASHTO M 247. Use glass spheres produced from an approved source listed on QPL 71. Glass spheres conforming to an alternative gradation may be used provided all other requirements of AASHTO M 247 and this specification are met.

C. Finished Product Requirements:

1. Composition

Ensure that the retroreflective pavement markings consist of a mixture of high-quality resins, curing agent and pigments, with a reflective layer bonded to the top surface consisting of glass spheres and/or reflective composite optics.

2. Color

Meet these color requirements:

- White markings are pure white and free from dirt or tint.
- Yellow markings are “Federal Yellow” in color.
- Colors for bike lanes match the colors as shown on the Plans.
- The material does not change its color and brightness characteristics after prolonged exposure to sunlight.

3. Skid Resistance

Ensure the surface of the retroreflective marking provides an initial average skid resistance value of 45 BPN when tested according to ASTM E 303.

4. Color and Weathering Resistance

Ensure that the mixed epoxy compound, both white and yellow, when applied to 3 in (75 mm) x 6 in (150 mm) aluminum panels at 15 ± 1 mils ($0.381 \text{ mm} \pm 0.025 \text{ mm}$) thick without glass beads and exposed in a Q.U.V. Environmental Testing Chamber, as described in ASTM G 53-77, conforms to the following minimum requirements:

- The color of the white epoxy compound is not darker than Federal Standard No. 595A-17778, as measured by the Luminance factor Y according to ASTM D 6628.
- The color of the yellow epoxy compound meets the requirements of the “Federal Yellow” color chart.

5. Drying Time (Laboratory)

When tested in accordance with ASTM D 711 the epoxy marking material shall reach a no-pick-up condition in 30 minutes or less. Perform this test with AASHTO M247 Type 1 beads applied at a rate of 0.099 pounds per square foot (0.483 kg/m^2). Ensure that the drying time does not increase substantially with decreasing temperature.

6. Drying Time (Field)

When installed at 77 °F (25 °C), at a thickness of 25 ± 2 mils ($0.635 \text{ mm} \pm 0.051 \text{ mm}$) above the surface of the pavement on open graded asphalt concrete friction courses and 20 ± 2 mils ($0.508 \text{ mm} \pm 0.051 \text{ mm}$) on all other pavement types, and reflectorized with glass spheres and/or reflective composite optics, ensure that the epoxy markings reach a no-track condition in less than 30 minutes. Dry to “no-tracking” will be

considered as the condition where no visual deposition of the epoxy marking to the pavement surface is observed when viewed from a distance of 50 feet (15 m), after a traveling vehicle's tires have passed over the marking.

7. Adhesion to Concrete

Ensure that the epoxy pavement marking materials, when tested according to ACI Method 503, have such a high degree of adhesion to the specified concrete surface that there is a 100% concrete failure in the performance of this test. Condition the prepared specimens at room temperature $75 \pm 2 \text{ }^\circ\text{F}$ ($24 \text{ }^\circ\text{C}$) for a minimum of 24 hours and maximum of 72 hours prior to the performance of this test.

8. Adhesion to Asphalt

Ensure that the epoxy pavement marking materials, when tested according to ACI Method 503, have such a high degree of adhesion to the specified asphalt surface that there is a 100% asphalt failure in the performance of this test. Condition the prepared specimens at room temperature $75 \pm 2 \text{ }^\circ\text{F}$ ($24 \text{ }^\circ\text{C}$) for a minimum of 24 hours and maximum of 72 hours prior to the performance of this test.

661.3 Construction Requirements

661.3.01 Equipment

A. Traveling Traffic Striping Machine

To apply the traffic marking material, use a mobile, truck mounted and self contained pavement marking machine, specifically designed to apply two-component liquid materials, and glass beads, in a continuous and skip-line pattern.

Apply the two-component liquid materials through airless impingement mixing guns or static mix tubes. The guns must accommodate a plural component material system at the manufacturer's recommended volumetric mixing ratio. The guns must have the capacity to deliver materials from approximately 1.5 gal (5.7 L) to 3 gal (11.4 L) per minute to compensate for a typical range of application speeds of 3 mph (5 km/h) to 6 mph (10 km/h). Ensure that the machine travels at a uniform rate of speed both uphill and downhill.

Select the necessary accessories such as spray tip, mix chamber or static tube, and rod diameter to ensure proper mixing.

Ensure that the machine meets the following:

- The machine is capable of applying three separate stripes, either solid or skip, in any specified pattern by utilizing two adjacent spray nozzles at the same time.
- Each nozzle is equipped with satisfactory cutoff valves that will apply skip lines automatically.
- The application equipment is maneuverable to the extent that straight lines can be followed and normal curves can be made in a true arc.
- The truck-mounted unit is provided with accessories to allow for the marking of symbols and legends.

Ensure that the mobile applicator also includes the following features:

- The mobile applicator provides individual material reservoirs for the storage of Part A and Part B of the resin composition.
- The applicator is equipped with glass spheres dispensing equipment and capable of applying the glass spheres at a uniform rate.
- The application equipment is equipped with metering devices or pressure gauges on the proportioning pumps as well as stroke counters to monitor volumetric usage. Ensure that the metering devices or pressure gauges and stroke counters are visible.
- The applicator is equipped with all the necessary spray equipment, mixers, compressors, and other appurtenances to allow for the placement of reflectorized pavement markings in a simultaneous sequence of operations.

B. Hand Equipment

Use hand equipment for projects with small quantities of bike lanes, lane lines, edge lines, and center lines, or for conditions that require the equipment. Use hand equipment approved by the Engineer.

C. Cleaning Equipment

Use brushes, brooms, scrapers, grinders, high-pressure water jets, or air blasters to remove dirt, dust, grease, oil, and other foreign matter without damaging the underlying pavement.

661.3.02 Preparation

Notify the Engineer prior to the placement of the epoxy materials. Furnish the Engineer with the manufacturer's name and batch numbers of the epoxy materials and glass spheres to be used. Ensure that the approved batch numbers appear on the epoxy materials and glass spheres packages.

Before striping, thoroughly clean pavement surfaces of dust, dirt, grease, oil, and all other foreign matter.

Remove concrete curing compounds on new Portland cement concrete surfaces and existing pavement markings on both concrete and asphalt surfaces.

661.3.03 Construction

A. Atmospheric Conditions

1. Apply pavement markings only during conditions of dry weather and subsequently dry pavement surfaces. Ensure that the pavement surface temperature and the ambient temperature at the time of installation are both greater than 40 °F (4 °C) and that the relative humidity is not greater than 85%.

2. Moisture

Do not apply when the surface is moist. When directed by the Engineer, perform a moisture test on the Portland cement concrete pavement surface. Perform the test as follows:

- a. Place approximately 1 yd² (1m²) of roofing felt on the pavement surface.
- b. Pour approximately 1/2 gallon (2 L) of mixed epoxy onto the roofing felt.
- c. After 2 minutes, lift the roofing felt and inspect to see if moisture is present on the pavement surface or underside of the roofing felt.
- d. If moisture is present, do not proceed with the striping operation until the surface has dried sufficiently to be moisture free.

B. Alignment

Ensure that the traffic stripe is the specified length, width, and placement. On sections where no previously applied markings are present, ensure accurate stripe location by establishing control points at spaced intervals. The Engineer will approve control points.

C. Application

Apply the pavement markings as follows:

1. Apply the liquid marking material by spray method and according to the manufacturer's installation instructions.
2. Ensure marking configurations are in accordance with the "Manual on Uniform Traffic Control Devices."
3. Place the reflectorized pavement markings only on properly prepared surfaces and at the widths and patterns designated on the Plans. Do not begin marking operations until applicable surface preparation work is completed and approved by the Engineer.
4. Air-blast the surface first, to remove any dirt and residues from the pavement. Then apply the pavement markings as a continuous operation.
5. Ensure that mixing of the two components occurs in a static tube or impingement chamber prior to reaching the application spray nozzle.
6. Spray the mixed resin onto the pavement at a rate to obtain a minimum uniform dry thickness of 25 mils ± 2 mils (0.635 mm ± 0.051 mm) above the surface of the pavement on open graded asphalt concrete friction courses and 20 mils ± 2 mils (0.508 mm ± 0.051 mm) above the surface of the pavement on all other pavement types .

7. Glass Spheres and Reflective Composite Optics

- a. Apply glass spheres and/or reflective composite optics to installed stripe surface above the minimum rate recommended by the epoxy material manufacturer to produce the required retroreflectivity value in accordance with Subsection 661.3.04.
- b. Apply the glass sphere and/or reflective composite optics top-coating with a pressure-type gun specifically designed for applying glass spheres and/or reflective composite optics that will embed at least one-half of the sphere's and optic's diameter into the epoxy immediately after the material has been applied to the pavement.
- c. Do not apply glass spheres or reflective composite optics to bike lanes.

Following an application of glass spheres and/or reflective composite optics, and upon curing, ensure that the resulting marking is an adherent reflectorized stripe of the specified thickness and width that is capable of resisting deformation by traffic.

D. Protective Measures

Protect newly applied striping as follows:

1. Traffic

Control and protect traffic with warning and directional signs during application. Set up warning signs before beginning each operation and place signs well ahead of the equipment. When necessary, use a pilot car to protect both the traffic and the striping operation.

2. Fresh Striping

Protect the freshly applied stripe using cones or other satisfactory devices. Repair stripe damage or pavement smudges caused by traffic according to Subsection 661.3.04.

E. Appearance and Tolerance of Variance

Continually deviating from stated dimensions is cause for stopping the work and removing the nonconforming stripe. (See [Section 656.](#)) Adhere to the following measurements:

1. Width

Do not lay stripe less than the specified width. Do not lay stripe more than 1/2 in (13 mm) over the specified width.

2. Length

Ensure that the 10 ft (3 m) skip stripe and the 30 ft (10 m) gap between skip segments vary no more than ± 1 ft (300 mm) each.

3. Alignment

- a. Ensure that the stripe does not deviate from the intended alignment by more than 1 in (25 mm) on straight lines or curves of 1 degree or less.
- b. Ensure that the stripe does not deviate by more than 2 in (50 mm) on curves exceeding 1 degree.

661.3.04 Quality Acceptance

A. General

For a minimum of 30 days from the time of placement, ensure the epoxy traffic pavement marking material shows no signs of failure due to blistering, excessive cracking, chipping, bleeding, staining, discoloration, oil content of the pavement materials, smearing or spreading under heat, deterioration due to contact with grease deposits, oil, diesel fuel, or gasoline drippings, spilling, poor adhesion to the pavement material, vehicular damage, and normal wear. In the event that failures mentioned above occur, ensure corrective work is completed at no additional cost to the Department.

Ensure that stripes and segments of stripes are clean-cut and uniform. Markings that do not appear uniform or satisfactory, either during the day or night, or do not meet Specifications or become marred or damaged by traffic or from other causes, will be corrected at the Contractor's expense.

Obtain pavement marking retroreflectivity values with a 30 meter geometry retroreflectometer.

1. Correction of Alignment

When correcting a deviation that exceeds the permissible tolerance in alignment, do the following:

- a. Remove the affected portion of stripe, plus an additional 25 ft (8 m) in each direction in accordance with [Section 656](#).
- b. Apply a new stripe according to these Specifications.

2. Removal of Excess Marking Material

Remove misted, dripped, or spattered markings to the Engineer’s satisfaction. Do not damage the underlying pavement during removal.

Refer to the applicable portions of [Section 656](#).

B. Initial Retroreflectivity

1. Longitudinal Lines

Within 30 days of installation, ensure the in-place markings meet the following minimum reflectance values:

a. Standard Epoxy Traffic Material

	White	Yellow
Dry (ASTM E 1710)	400 mcd/lux/m ²	300 mcd/lux/m ²

b. Wet Weather Epoxy Traffic Material

	White	Yellow
Dry (ASTM E 1710)	400 mcd/lux/m ²	300 mcd/lux/m ²
Wet recovery (ASTM E 2177)	150 mcd/lux/m ²	125 mcd/lux/m ²

For each center line, edge line, and skip line, measure retroreflectivity 9 times for each mile; 3 times within the first 500 ft (152 m), 3 times in the middle, and 3 times within the last 500 ft (152 m). For projects less than one mile in length, measure retroreflectivity 9 times as above.

Record all retroreflectivity measurements on the form OMR CVP 66 in SOP 39.

2. Messages, Symbols, Transverse Lines, and Bike Lanes

Within 30 days of installation, ensure the in-place markings when tested according to ASTM E 1710 meet the following minimum reflectance value of 275 mcd/lux/m².

Perform at a minimum, one retroreflectivity measurement at one message, one symbol and one transverse line per intersection. Take one measurement per mile for locations other than intersections (i.e. school messages, railroad messages, etc.) Do not measure retroreflectivity of bike lanes.

C. Six Month Retroreflectivity (Longitudinal Lines)

Maintain the following minimum reflectance values for 180 days after installation:

1. Standard Epoxy Traffic Material

	White	Yellow
Dry (ASTM E 1710)	400 mcd/lux/m ²	300 mcd/lux/m ²

2. Wet Weather Epoxy Traffic Material

	White	Yellow
Dry (ASTM E 1710)	400 mcd/lux/m ²	300 mcd/lux/m ²
Wet recovery (ASTM E 2177)	150 mcd/lux/m ²	125 mcd/lux/m ²

Retest the in-place markings 180 days after installation to ensure these minimum retroreflectance values are maintained.

Note: The Contractor is responsible for retroreflectivity testing. Furnish initial test results to the Engineer within 30 days of application. Furnish 6 month test results to the Engineer within 180 days of application or prior to final acceptance, whichever comes first.

D. Thickness

Check the thicknesses on all skip lines, edge lines and center lines by placing durable tape, film, or metal plate of known and uniform thickness on an area to be striped. After the striper has passed over, remove the sample and measure the thickness with calipers or a micrometer.

For each center line, edge line, and skip line, measure thickness above the pavement 3 times for each mile; once within the first 500 ft (152 m), once in the middle, and once within the last 500 ft (152 m). For projects less than one mile in length, measure the thickness above the pavement 3 times.

Record thickness measurements on the form OMR CVP 66 in SOP 39.

Submit results to Engineer.

E. Corrective Work

For each mile section, if epoxy traffic stripe fails to meet Plan details or Specifications or deviates from stated dimensions, correct it at no additional cost to the Department. If removal of pavement markings is necessary, remove it according to Section 656 and replace it according to this Specification. No additional payment will be made for removal and replacement of unsatisfactory striping. Ensure corrective work is completed at no additional cost to the Department. Perform testing according to this Specification. Any retest due to failures will be performed at no additional cost to the Department. Furnish all test reports to the Department.

Retroreflectivity and Thickness Longitudinal Line Deficiency: A deficiency will ensue when two or more Location Average results as recorded on form OMR CVP 66 within a One-Mile Section do not meet the performance criteria herein. The entire line within this one mile section will be determined to be deficient. If the evaluated section is less than 1.0 mile, a single Location Average result not meeting the performance criteria herein will result in the entire line to be determined to be deficient.

Retroreflectivity Transverse Markings and Symbol Deficiency: A single Location Average result on the marking or symbol not meeting the performance criteria herein will result in the marking or symbol to be determined to be deficient.

661.3.05 Verification

See SOP 39.

661.4 Measurement

When traffic stripe is paid for by the square yard (meter), the number of square yards (meters) striped is measured and the space between stripes is included in the overall measurement.

Linear measurements are made on the striped surface by an electronic measuring device attached to a vehicle. On curves, chord measurements, not exceeding 100 linear feet (30 linear meters), are used.

Traffic stripe and markings, complete in place, are measured and accepted for payment as follows:

A. Solid Traffic Stripe

Solid traffic stripe is measured by the linear foot (meter), linear mile (kilometer), or square yard (meter). Breaks or omissions in solid lines or stripes at street or road intersections are not measured.

B. Skip Traffic Stripe

Skip traffic stripe is measured by the gross linear foot (meter) or gross linear mile (kilometer). Unstriped spaces between the skips are included in the overall measurements if the Plan ratio of 1 to 3 remains uninterrupted. Measurement begins and ends on a skip.

C. Pavement Markings

Pavement markings, words and symbols completed according to Plan dimensions are measured by the unit.

661.5 Payment

Payment will be full compensation for the work under this Section, including the following:

Cleaning and preparing surfaces

Furnishing materials, including epoxy, beads, and thinners

Applying, curing, and protecting epoxy

Protecting traffic, including providing and placing necessary warning signs

Furnishing tools, machines, and other equipment necessary to complete the Item

Payment will be made under:

Item No. 661	Standard solid epoxy traffic stripe, _____ in (mm), (color)	Per linear mile (kilometer)
Item No. 661	Standard skip epoxy traffic stripe, _____ in (mm), (color)	Per gross linear mile (kilometer)
Item No. 661	Standard solid epoxy traffic stripe, _____ in (mm), (color)	Per linear foot (meter)
Item No. 661	Standard skip epoxy traffic stripe, _____ in (mm), (color)	Per gross linear foot (meter)
Item No. 661	Standard epoxy pavement markings, words, and symbols, (color)	Per each
Item No. 661	Standard epoxy traffic stripe, _____ in (mm), (color)	Per square yard (meter)
Item No. 661	Wet weather solid epoxy traffic stripe, _____ in (mm), (color)	Per linear mile (kilometer)
Item No. 661	Wet weather skip epoxy traffic stripe, _____ in (mm), (color)	Per gross linear mile (kilometer)
Item No. 661	Wet weather solid epoxy traffic stripe, _____ in (mm), (color)	Per linear foot (meter)
Item No. 661	Wet weather skip epoxy traffic stripe, _____ in (mm), (color)	Per gross linear foot (meter)
Item No. 661	Wet weather epoxy pavement markings, words, and symbols, (color)	Per each
Item No. 661	Wet weather epoxy traffic stripe, _____ in (mm), (color)	Per square yard (meter)

Office of Materials & Testing

**DEPARTMENT OF TRANSPORTATION
 STATE OF GEORGIA**

SUPPLEMENTAL SPECIFICATION

Section 801—Fine Aggregate

Delete Subsection 801.2.02.A.7 and substitute the following:

7. Grades

Grade fine aggregates for Portland cement concrete and mortar as follows:

Size No.	Description	Total Percent by Weight Passing Each Sieve					
		3/ 8 in (9.5 mm)	No. 4 (4.75 mm)	No. 16 (1.18 mm)	No. 50 (300 µm)	No. 100 (150 µm)	No. 200 (75 µm)
10 NS	Natural concrete sand	100	95-100	45-95	5-30	0-10	0-3
20 NS	Natural mortar sand	100	100	90-100	15-50	0-15	0-5
10 SM	Standard manufactured concrete sand	100	95-100	45-95	8-30	1-10	0-4
10 FM	Fine manufactured concrete sand	100	95-100	45-95	15-42	6-22	0-9

Office of Materials and Testing

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

SECTION 805 – RIPRAP AND CURBING STONE

Add Sub-Section 805.2.01.A.4

STONE PLAIN RIPRAP FOR STREAM DETAILS

Stone Plain Riprap for Stream Details shall be clean and essentially free of rock dust and fines. Stone shall be relatively flat on either side in the same dimension, preferably the long dimension. The material shall be processed such that 90 % of the particles within the size class shall have all dimensions within the ranges stated in the size classifications listed below:

TYPE A: Stone in this size class shall meet the following gradation requirements:

<u>SIZE</u>	<u>PERCENT BY WEIGHT</u>
Passing 12" Sieve	100
Passing 4" Sieve	0-25
Passing No.4 Sieve (4.75 mm)	0-10

Test: Method of Test shall be in accordance with the following:

Sieve Analysis	AASHTO: T 27
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For use as fill for upstream fill portions of Cross Vanes, Rock Vanes, J-Hook Vanes, and in other structures and areas as indicated on the Plans and Details, as directed and approved by the Engineer.

TYPE B: Generally 2-4 cubic feet and weighing 0.16-0.33 tons. Maximum weight for this size class can be 0.52 ton. The dimensions of these stones shall be 2' x 1' x 1' to 2' x 2' x 1'. Variability is allowed, however, with 1 foot being the smallest dimension and 2.5 foot being the largest dimension along any axis to be accepted within this size class. For use in Root Wad structures, Rock Vanes, Cross Vanes, J-Hook Vanes, and in other in-stream structures as indicated on the Plans and Details, as directed and approved by the Engineer.

TYPE C: Generally 4-8 cubic feet and weighing 0.33-0.66 tons. Maximum weight for this size class can be 1 ton. The dimensions of these stones shall be 2' x 2' x 1' to 2' x 2' x 2'. Variability is allowed, however, with 1 foot being the smallest dimension and 2.5 feet being the largest dimension along any axis to be accepted within this size class. For use in Root Wad structures, Rock Vanes, Cross Vanes, J-Hook Vanes, and in other in-stream structures as indicated on the Plans and Details, as directed and approved by the Engineer.

TYPE D: Generally 12-18 cubic feet and weighing 1.0-1.5 Tons. Weight range can vary between 1 ton up to 2 tons. The dimensions of these stones shall be 3' x 2' x 2' to 3' x 3' x 2'. Variability is allowed, however, with the smallest dimension being 2 feet and 3.5 feet being the largest dimension along any axis to be accepted within this size class. For use in in-stream structures such as Cross Vanes, J-Hook Vanes, Rock Vanes and in other structures and areas as indicated on the Plans and Details, as directed and approved by the Engineer.

TYPE E: Generally 24-72 cubic feet and weighing 2.0-6.0 tons. Weight range can vary between 2 tons up to and exceeding 6 tons with approval by the Engineer. The dimensions of this size class shall be to 6' x 4' x 3'. However, variability is allowed in that dimensions for this size class shall fall between the smaller 4' x 3' x 2' and a maximum as determined by the Engineer. For use in large in-stream structures such as Cross Vanes, J-Hook Vanes, Rock Vanes, Step Pools, and in other structures and in areas indicated on the Plans and Details, as directed and approved by the Engineer.

Delete 805.2.01.C and Substitute the following:

C. Acceptance:

**SECTION 805 – RIPRAP AND CURBING STONE
SPECIAL PROVISION**

Test as follows:

Test	Method
Percent Wear	AASHTO: T96
Petrographic Analysis	ASTM: C295
Riprap Size	ASTM D5519-07
Soundness (Magnesium Sulfate)	AASHTO T 104

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
SPECIAL PROVISION

Section 812—Backfill Materials

Delete Section 812 and substitute the following:

812.1 General Description

This section includes the requirements for four types of material used as backfill: foundation backfill, Types I and II, imperfect trench backfill, Type III, and mechanically stabilized wall backfill.

812.1.01 Related References

A. Standard Specifications

[Section 810—Roadway Materials](#)

B. Referenced Documents

AASHTO T 11

AASHTO T 27

AASHTO T 96

AASHTO T 104

[GDT 4](#)

[GDT 6](#)

[GDT 7](#)

[GDT 24a](#)

[GDT 24b](#)

[GDT 67](#)

[GDT 75](#)

[GDT 98](#)

[SOP 1](#)

812.2 Materials

812.2.01 Foundation Backfill, Type I

A. Requirements

1. Use natural or artificial mixtures of materials consisting of hard, durable particles of sand or stone, mixed with silt, clay and/or humus material for Type I backfill.

2. Have the final blend of material meet the requirements of Class I or II soils in [Subsection 810.2.01](#).

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Test as follows:

Test	Method
Soil gradation	GDT 4
Volume change	GDT 6
Maximum density	GDT 7 or GDT 67

D. Materials Warranty

General Provisions 101 through 150.

812.2.02 Foundation Backfill, Type II

A. Requirements

1. Type

Use material meeting the requirements of [Section 800](#), Class A or B aggregate, and [SOP 1](#). Crushed concrete may be used provided it meets the requirements of [Section 800](#) that are applicable to Group 2 Aggregates.

Do not use backfill aggregate containing soil or decomposed rock.

2. Gradation

Use material meeting the following gradation requirements:

Sieve Size	% Passing by Weight
1-1/2 in (37.5 mm)	100
1 in (25 mm)	80-100
No. 8 (2.36 mm)	0-5

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Test as follows:

Test	Method
Sieve analysis	AASHTO T 27

D. Materials Warranty

General Provisions 101 through 150.

812.2.03 Imperfect Trench Backfill, Type III

A. Requirements

1. Type

Use material made from either of the following for Type III backfill:

- A natural soil with a density of less than 95 lb/ft³ (1520 kg/m³) when tested with [GDT 7](#)
- An artificial mixture of soil and organic material, such as hay, leaves, or straw

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

The laboratory will:

1. Test the soil density with [GDT 7](#).
2. Review the mixture and the percentages of each material, and approve a mixture suitable for the Project.

D. Materials Warranty

General Provisions 101 through 150.

812.2.04 Mechanically Stabilized Embankment Backfill

A. Requirements

Use material comprised of crushed stone, natural sand, or a blend of crushed stone and natural sand free of soils, organic or any other deleterious substances meeting the following additional requirements:

1. Crushed Stone

Use a material manufactured from Class A or B stone that is free of soil overburden, has a soundness loss of not more than 15 percent, and conforms to the requirements of [SOP 1](#).

2. Natural Sand

May be used in conjunction with an approved, non-corrodible, extensible reinforcement. Use non-plastic material consisting of strong, hard, durable particles having a durability index of at least 70.

3. Gradation

Sieve Size	% Passing by Weight
4 in (100 mm)	100
2 in (50 mm)	80 -100
No. 10 (2 mm)	20 - 90*
No 200 (75 μm)	0 - 12
* Natural Sand may be 20 - 100	

4. Chemical

Ensure the material meets the following chemical requirements:

Test Method	Requirement
pH	*5.0 – 9.5
Resistivity	>3000 ohms/cm
Chlorides	<100 ppm
Sulfates	<200 ppm
Note: These chemical requirements are not applicable to MSE walls stabilized with an approved, non-corrodible, extensible reinforcement.	

*Sources of select backfill material having a pH between 4.5 and 5.0 may be used provided the interior face of the MSE wall panels have 3 inches of concrete cover over the reinforcement and the concrete used in the panels contains the following ingredients and proportions:

Material	% by Weight	
	Minimum	Maximum
Cement	30	--
Type F Fly Ash	10	20
Slag	50	60
Type F Fly Ash and Slag	--	70

5. Maximum Dry Density

Use backfill material with a maximum dry density equal to or greater than the design unit weight shown on the plans. If no maximum dry density of the backfill material is shown, use a weight of 125 lb/ft³ (2000 kg/m³).

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Test the material as follows:

Test Method	Requirement
Percent Wear	AASHTO T96 ("A" Grading)
Sieve Analysis	AASHTO T 27
Material Passing No. 200 (75 μm) Sieve	AASHTO T 11
Durability Index	GDT 75
Maximum Dry Density	GDT 7 or GDT 24a, GDT 24b
Soundness (Magnesium Sulfate)	AASHTO T 104
pH	GDT 98
Resistivity	GDT 98
Chlorides	GDT 98
Sulfates	GDT 98

D. Materials Warranty

General Provisions 101 through 150.

Office of Materials and Testing

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Special Provision

Section 828—Hot Mix Asphaltic Concrete Mixtures

Delete Section 828 and substitute the following:

828.1 General Description

This specification includes the requirements for hot mix asphaltic concrete mixtures, including:

- Open-graded surface mixtures (OGFC and PEM)
- Stone Matrix Asphalt mixtures (SMA)
- Superpave mixtures
- Fine-graded (4.75 mm) mixtures

828.1.01 Definitions

The Nominal Maximum Sieve Size is one standard sieve size larger than the first sieve to retain more than ten percent of the aggregate, per AASHTO R35. Mixture types in this section are identified according to Nominal Maximum Sieve Size.

828.1.02 Related References

A. Standard Specifications

[Section 400—Hot Mix Asphaltic Concrete Construction](#)

[Section 800—Coarse Aggregate](#)

[Section 802—Aggregates for Asphaltic Concrete](#)

[Section 819—Fiber Stabilizing Additives](#)

[Section 820—Asphalt Cement](#)

[Section 831—Admixtures](#)

[Section 882—Lime](#)

[Section 883—Mineral Filler](#)

B. Referenced Documents

AASHTO R30

AASHTO R35

AASHTO T 321

AASHTO T 112

AASHTO T 209

AASHTO T 305

AASHTO T 312

AASHTO T 245

AASHTO T 340

[SOP-36](#)

[SOP-2](#)

[GDT 1](#)

[GDT 56](#)

[GDT 63](#)

[GDT 66](#)

[GDT 114](#)

[GDT 115](#)

[GDT 123](#)

[QPL 1](#)

[QPL 2](#)

[QPL 7](#)

[QPL 26](#)

[QPL 41](#)

[QPL 77](#)

[QPL 81](#)

828.2 Materials

A. Requirements

Use approved hot mix asphalt concrete mixtures that meet the following requirements:

1. Produce each asphalt mixture according to a Department approved Job Mix Formula and Asphalt Mix Design, see [Subsection 400.1](#) for submittal and approval of Job Mix Formulas.
2. Ensure individual acceptance test results meet the Mixture Control Tolerances specified in the appropriate table below, [Subsections 828.2.01](#) through [828.2.04](#).
3. Ensure the Engineer approves all materials used to prepare and place the mixtures before incorporating them into the Work. Use only the ingredients listed in the approved Asphalt Mix Design and Job Mix Formula. For virgin aggregates use sources meeting the requirements of [Section 802](#) and are listed in [QPL 1](#) or [QPL 2](#); for mixes in which local sand is permitted, use the approved sand source identified in the mix design. For mixtures containing Reclaimed Asphalt Pavement (RAP), use only RAP from the approved stockpile identified in the mix design. Use asphalt cement meeting the requirements of [Section 820](#), from a source listed in [QPL 7](#).
4. Obtain approved SMA mix designs, Superpave mix designs and 4.75 mm mix designs from a mix design laboratory certified by the Department. Obtain approved mix designs for types PEM and OGFC mixtures from the Department's Office of Materials, which produces and furnishes these mix designs.
5. Ensure all SMA mix designs are designed in accordance with GDT-123 ("Determining the Design Proportions of Stone Matrix Asphalt Mixtures"). Ensure SMA mix designs are verified and approved by the Department prior to use. Ensure Superpave and 4.75 mm mix designs are designed in accordance with [SOP-2 \("Control of Superpave Bituminous Mixture Designs"\)](#) and are approved by the Department as provided therein. Ensure these mixes are designed by a laboratory and technician certified in accordance with [SOP-36, \("Certification of Laboratories and Personnel for Design of SMA and Superpave Asphalt Mixtures"\)](#).
6. Use only mixtures composed of the aggregate groups and blends indicated in the Proposal and Plans by their pay item designations, defined as follows:

Pay Item Designation	Allowable Aggregate Groups
Group I or II	Group I, Group II, or Blend I
Group II only	Group II only
Blend I	Either 100% Group II material or a blend of Group I and Group II. Do not use Group I material for more than 60%, by weight, of the total aggregate nor

more than 50%, by weight, of the coarse aggregate fraction.

7. For patching or leveling use Group I, Group II, or Blend I. Mix types for patching and leveling are specified in [Subsection 400.3.03.B](#).
8. Include lime (hydrated lime) from an approved source and meeting the requirements of [Section 882](#) in all paving courses except as otherwise provided in the Contract. For a list of approved sources of lime, see [QPL 41](#).
 - a. Add lime to each mixture at the rate prescribed in the approved mix design.
 - b. Ensure mix designs using only virgin aggregate include lime at a minimum rate of 1.00 % of the total dry aggregate weight. Ensure mix designs using RAP include lime at a minimum rate equal to 1.00 % of the virgin aggregate fraction plus 0.50 % of the aggregate in the RAP fraction.
 - c. Add more lime or add lime plus an approved Heat-Stable Anti-Stripping Additive meeting the requirements of [Section 831](#), if necessary to meet requirements for mixture properties, and pursuant to an approved mix design. However, the Department will not make additional payment for these materials. For a list of sources of Heat-Stable Anti-Stripping Additives, see [QPL 26](#).
 - d. Where specifically allowed in the contract on LARP, airport, and parking lot projects, an approved Heat-Stable Anti-Stripping Additive meeting the requirements of [Section 831](#) may be substituted for hydrated lime. Ensure the mix gradation is adjusted to replace the lime with an equivalent volume of fines passing the 0.075 mm sieve. Add Heat-Stable Anti-stripping Additive at a minimum rate of 0.5 percent of the asphalt cement portion.
9. Use performance grade PG 64-22 or PG 67-22 asphalt cement in all mix designs and mixtures except as follows:
 - a. The State Materials Engineer will determine the performance grade to be used, based on Table 2 – Binders Selection Guideline for Reclaimed Asphalt Pavement (RAP) Mixtures, AASHTO M323 and laboratory testing results as required in [Section 828.2.B](#) for mixtures containing $\geq 25\%$ equivalent binder replacement for RAP/RAS mixtures.
 - b. Use only grade PG 76-22, excluding shoulder construction in the following mixes: all SMA, 12.5 mm PEM, 9.5 mm and 12.5 mm OGFC, 12.5 mm Superpave, on projects with ADT greater than 25,000; and in all mixtures for which polymer-modified asphalt is specified in the pay item.
10. Use of local sand is restricted as follows:
 - a. Do not place mixtures containing local sand on the traveled way of the mainline or ramps of the Interstate System. Mixtures with local sand may be used for shoulder construction on these facilities.
 - b. Ensure local sand will not constitute more than 20 % of the total aggregate weight of any mix design or production mix.
 - c. Subject to the above limits, 19 mm, 12.5 mm, and 9.5 mm Superpave mix designs and 4.75 mm mix designs containing local sand may be used on projects with a current ADT not exceeding 2,000.
 - d. 25 mm Superpave mix designs containing not more than 20 % local sand may be used on all facilities except the main line and ramps of the Interstate System.
 - e. Obtain local sand for use in asphalt mixtures from a source approved by the Department.
 - f. Approval of local sand sources: The Department will sample, test, and approve sources of local sand. Ensure local sand contains no more than 7.0 % clay by weight and is free of foreign substances, roots, twigs, and other organic matter. Ensure sand is free of clay lumps, as determined by AASHTO T 112, and has a sand equivalent value exceeding 25%, as determined by [GDT 63](#).

B. Fabrication

1. Design procedures: For all Superpave and 4.75 mm mixes, ensure conformance with the Superpave System for Volumetric Design (AASHTO T 312 and AASHTO R30), as adapted in SOP-2. Ensure Superpave mixes are designed at a design gyration number (N_{des}) of 65 gyrations and initial gyration number (N_{ini}) of 6 gyrations. Ensure 4.75 mm mixes, (N_{des}) are designed at 50 gyrations, and (N_{ini}) at 6 gyrations. Open-graded mix designs will be designed by the Department in accordance with [GDT 114](#). In all cases, the procedure for measuring Maximum Specific Gravity (G_{mm}) is AASHTO T 209. In addition to gradation and volumetric analysis, ensure mix designs include the following performance tests, as applicable.
2. Performance Test:
 - a. Permeability test: Ensure Superpave and Stone Matrix mix designs include testing according to [GDT-1 Measurement of Water Permeability of Compacted Asphalt Paving Mixtures](#). Ensure specimen air voids for this test are $6.0 \pm 1.0\%$. The average permeability of three specimens may not exceed 3.60 ft per day (125×10^{-5} cm per sec).

- b. Moisture susceptibility test: Ensure mix designs of all types except open-graded surface mixes include testing for moisture susceptibility according to [GDT 66](#). Ensure specimen air voids for this test are $7.0 \pm 1.0\%$ for all mixes excluding Stone Matrix mixes. Ensure specimen air voids for this test are $6.0 \pm 1.0\%$ for Stone Matrix mixes. The minimum tensile splitting ratio is 0.80, except a tensile splitting ratio of no less than 0.70 may be acceptable if all individual strength values exceed 100 psi (690 kPa). Ensure average splitting strength of the three conditioned and three controlled samples are not less than 60 psi (415 kPa) for either group. Ensure retention of coating as determined by [GDT 56](#) is not less than 95%.
- c. Rutting susceptibility test: Ensure mix designs of all types except Open-graded Surface Mixes (OGFC and PEM), and mixtures designed exclusively for trench widening include testing according to [GDT 115](#) or AASHTO T 340. Design limits for this test are as follows: Ensure specimen air voids for this test are $5.0 \pm 1.0\%$ for all mix types incorporating ≥ 15 percent RAP, excluding SMA mixtures. Ensure specimen air voids for this test are $6.0 \pm 1.0\%$ for all mix types incorporating < 15 percent RAP, excluding SMA mixtures. Ensure specimen air voids for this test are $6.0 \pm 1\%$ for all SMA mixtures. Ensure testing temperature is 64°C (147°F) for all mix types except 19 mm and 25 mm Superpave mixes, which are to be tested at 49°C (120°F). Ensure maximum deformation is 5.0 mm for all mixes except 4.75 mm mix, 9.5 mm Types I and II Superpave mixes. Ensure maximum deformation for the 9.5 mm Type II Superpave mix is 6.0 mm at 64°C (147°F) and 8.0 mm at 64°C (147°F) for the 4.75 mm and 9.5 mm Type I Superpave mix.
- d. Fatigue testing: The Department may verify dense-graded mix designs by fatigue testing according to AASHTO T 321 or other procedure approved by the Department.
- e. Hamburg Wheel-Tracking Test: The Department may verify Warm Mix Asphalt dense-graded mix designs or mix designs incorporating Polyphosphoric Acid (PPA) modified binders by Hamburg Wheel-tracking testing according to AASHTO T 324.

C. Acceptance

See [Subsection 106.03](#) and [Section 400](#). Ensure individual test results meet the Mixture Control Tolerances listed in [Subsections 828.2](#), [828.2.01](#), [828.2.02](#), [828.2.03](#), or [828.2.04](#), whichever applies with the following exception. Ensure field verification results for rutting susceptibility tests performed on laboratory fabricated and/or roadway cores obtained from asphalt plant produced mixtures meet specified requirements with a tolerance of $+2.0$ mm.

D. Materials Warranty

See General Provisions 101 through 150.

828.2.01 Open-Graded Surface Mixtures

A. Requirements

Produce the mixture according to an approved mix design and Job Mix Formula. Ensure Open-Graded Surface Mixtures meet the following mixture control tolerances and mix design criteria:

Sieve Size	Mixture Control Tolerance, %	Design Gradation Limits, % Passing		
		9.5 mm OGFC	12.5 mm OGFC	12.5 mm PEM
3/4 in (19 mm) sieve	± 0.0		100*	100*
1/2 in (12.5 mm) sieve	± 6.1	100*	85-100	80-100
3/8 in (9.5 mm) sieve	± 5.6	85-100	55-75	35-60
No. 4 (4.75 mm) sieve	± 5.7	20-40	15-25	10-25
No. 8 (2.36 mm) sieve	± 4.6	5-10	5-10	5-10
No. 200 (75 μm) sieve	± 2.0	2-4	2-4	1-4
Range for % AC	± 0.4	6.0-7.25	5.75-7.25	5.5-7.0
Class of stone (Section 800)		"A" only	"A" only	"A" only
Drain-down (AASHTO T305), %		< 0.3	< 0.3	< 0.3

* Mixture control tolerance is not applicable to this sieve for this mix.

1. In 12.5 mm and 9.5 mm OGFC and 12.5 mm PEM mixes, use only PG 76-22 asphalt cement (specified in [Section 820](#)).

2. Ensure all OGFC and PEM mixes include a stabilizing fiber of the type (cellulose or mineral) specified in the mix design and meeting the requirements of [Section 819](#). Ensure the dosage rate is as specified in the mix design and sufficient to prevent drain-down exceeding the above tolerance.

B. Fabrication

See Section 400.

828.2.02 Stone Matrix Asphalt Mixtures

A. Requirements

Produce the mixture according to an approved mix design and Job Mix Formula. Ensure Stone Matrix Asphalt mixtures meet the following mixture control tolerances and mix design criteria:

Sieve Size	Mixture Control Tolerance	Design Gradation Limits, Percent Passing		
		9.5 mm SMA	12.5 mm SMA	19 mm SMA
1- in (25 mm) sieve	±0.0			100*
3/4 in (19 mm) sieve	±7.0	100*	100*	90-100
1/2 in (12.5 mm) sieve	±6.1	98-100**	85-100	44-70
3/8 in (9.5 mm) sieve	±5.6	70-100	50-75	25-60
No. 4 (4.75 mm) sieve	±5.7	28-50	20-28	20-28
No. 8 (2.36) mm sieve	±4.6	15-30	16-24	15-22
No. 50 (300 µm) sieve	±3.8	10-17	10-20	10-20
No. 200 (75 µm) sieve	±2.0	8-13	8-12	8-12
Range for % AC (Note 1)	±0.4 (Note 2)	6.0-7.5	5.8-7.5	5.5-7.5
Design optimum air voids (%)		3.5 ±0.5	3.5 ±0.5	3.5 ±0.5
% aggregate voids filled with AC (VFA)		70-90	70-90	70-90
Tensile splitting ratio after freeze-thaw cycle GDT-66		80%	80%	80%
Drain-down (AASHTO T305), %		<0.3	<0.3	<0.3

*Mixture control tolerance is not applicable to this sieve for this mix.

**Mixture control tolerance is ± 2.0% for this sieve for 9.5 mm SMA mixes placed at spread rates greater than 135 lb/yd². For 9.5 mm SMA mixes placed at spread rates of 135 lb/yd² or less, 100 % passing is required on this sieve.

Note 1: Range for % AC is Original Optimum AC (OOAC) at 35 gyrations (Gyratory compactor) or 50 blows (Marshall compactor) prior to Corrected Optimum AC (COAC) calculation detailed in GDT 123 (Appendix A)

Note 2: Quality Acceptance Test Results for AC content that deviate > ± 0.3% from the approved Job Mix Formula (JMF) consistently over three lots may subject the mix to a revised AC content on project JMF at the discretion of the State Materials Engineer based on statistical trend.

1. Ensure SMA mixtures are compacted at 35 gyrations with the Superpave Gyratory compactor or 50 blows with the Marshall compactor.
2. Ensure SMA mixtures contain mineral filler and fiber stabilizing additives and meet the following requirements:
 - a. Asphalt cement grade PG-76-22 (specified in [Section 820](#)) is required in all SMA mixtures.
 - b. Aggregates for SMA meet the requirements of [Subsection 802.2.02.A.3](#).
 - c. Use the approved mineral filler specified in the mix design and meeting the requirements of [Section 883](#). Approved sources of mineral filler are listed in [QPL 81](#).

Use the approved Fiber Stabilizing Additive of the type (cellulose or mineral) specified in the mix design and meeting the requirements of [Section 819](#). Approved sources of Fiber Stabilizing Additive are listed in [OPL 77](#). The dosage rate will be as specified in the mix design and sufficient to prevent drain-down exceeding the above tolerance.

B. Fabrication

See [Section 400](#).

828.2.03 Superpave Asphalt Concrete Mixtures

A. Requirements for Superpave Mixtures (except Parking Lot Mixtures)

Produce the mixture according to an approved mix design and Job Mix Formula. Ensure Superpave Asphalt Concrete mixtures meet the following mixture control tolerances and mix design limits:

1. Gradation limits for Superpave mixtures are as follows:

Sieve Size	Mixture Control Tolerance	Design Gradation Limits, Percent Passing				
		9.5 mm Superpave Type I	9.5 mm Superpave Type II	12.5 mm Superpave (Note 1)	19 mm Superpave	25 mm Superpave
1½ in (37.5 mm)						100*
1- in (25.0 mm)	± 8.0			100*	100*	90-100
¾ in (19.0 mm)	±8.0**	100*	100*	98-100****	90-100	55-89**
½ in (12.5 mm)	±6.0***	98-100****	98-100****	90-100	60-89***	50-70
¾ in (9.5 mm)	±5.6	90-100	90-100	70-89	55-75	
No. 4 (4.75 mm) s	±5.6	65-85	55-75			
No. 8 (2.36 mm)	±4.6	48-55	42-47	38-46	32-36	30-36
No. 200 (75 µm)	±2.0	5.0-7.0	5.0-7.0	4.5-7.0	4.0-6.0	3.5-6.0
Range for % AC (Note 3)	± 0.4 (Note 2)	5.50-7.25	5.25-7.00	5.00-6.25	4.25-5.50	4.00-5.25

* Mixture control tolerance is not applicable to this sieve for this mix.

** Ensure mixture control tolerance is within ± 10.0% for this sieve for 25 mm Superpave.

***Ensure mixture control tolerance is within ± 8.0% for this sieve for 19 mm Superpave.

****Ensure mixture control tolerance is within ± 2.0% for this sieve for 12.5 mm and 9.5 mm mixes.

Note 1: Use PG 76-22 in 12.5 mm Superpave, excluding shoulder construction, on all projects with ADT greater than 25,000 as detailed in the Contract Pay Item.

Note 2: Quality Acceptance Test Results for AC content deviating > ± 0.3 % from the approved Job Mix Formula (JMF) consistently over three Lots may subject the mix to a revised AC content on the project JMF at the discretion of the State Materials Engineer based on statistical trend.

Note 3: Range for % AC is Original Optimum AC (OOAC) at 65 gyrations prior to the Corrected Optimum AC (COAC) calculation detailed in SOP 2 (Appendix D).

2. Volumetric limits are as follows:

Design Parameter	Mix Type	Limits
% of Max. Specific Gravity (Gmm) at design gyrations, (Ndes)	All	96%
% Gmm at the initial number of gyrations, Ni	All	91.5% maximum
% voids filled with asphalt (VFA) at Ndes	9.5 mm Type I	Min. 72; Max. 80
	9.5 Type II and 12.5 mm	Min. 72; Max. 76
	19 mm	Min. 71; Max 76
	25 mm	Min. 69; Max 76
Fines to effective asphalt binder ratio (F/Pbe)	9.5 mm Type I	0.6 to 1.4
	All other types	0.8 to 1.6
Minimum Film Thickness (microns)*	All	> 7.00
Minimum % Voids in Mineral Aggregate (VMA) Note: VMA shall be calculated using the effective specific gravity of the aggregate (Gse). See SOP-2SP.	25 mm	13.0
	19 mm	14.0
	12.5 mm	15.0
	9.5 Type I	16.0
	9.5 Type II	16.0

*Superpave Mixtures approved prior to January 31, 2012, may be adjusted to meet Minimum Film Thickness requirements by the State Materials Engineer.

B. Requirements for Superpave Parking Lot Mixes (NOT FOR STANDARD HIGHWAY/STREET PAVING)

1. Surface Layers for parking facilities:

Sieve Size	Mixture Control Tolerance	Design Gradation Limits, Percent Passing		
		4.75 mm Mix	9.5 mm Superpave Type I	9.5 mm Superpave Type II
1- in (25.0 mm) sieve	± 8.0			
3/4 in (19.0 mm) sieve	±8.0**		100*	100*
1/2 in (12.5 mm) sieve	±6.0	100*	98-100****	98-100****
3/8 in (9.5 mm) sieve	±5.6	90-100	90-100	90-100
No. 4 (4.75 mm) sieve	±5.6	75-95	65-85	55-75
No. 8 (2.36 mm) sieve	±4.6	60-65	48-55	42-47
No. 50 (300 µm) sieve	+3.8	20-50		
No. 200 (75 µm) sieve	±2.0	4-12	5.0-7.0	5.0-7.0
Range for Total AC	+ 0.4	6.00 - 7.50	5.50 - 7.25	5.25 - 7.00

* Mixture control tolerance is not applicable to this sieve for this mix.

****Ensure mixture control tolerance is within ± 2.0% for this sieve for 12.5 mm and 9.5 mm mixes.

2. Subsurface Layers for parking facilities:

Sieve Size	Mixture Control	Design Gradation Limits, Percent Passing
------------	-----------------	--

	Tolerance	12.5 mm Superpave	19 mm Superpave	25 mm Superpave
				100*
1- in (25.0 mm) sieve	± 8.0	100*	100*	90-100
3/4 in (19.0 mm) sieve	±8.0**	98-100****	90-100	55-89**
1/2 in (12.5 mm) sieve	±6.0***	90-100	60-89***	50-70
3/8 in (9.5 mm) sieve	±5.6	70-89	55-75	
No. 8 (2.36 mm) sieve	±4.6	38-46	32-36	30-36
No. 200 (75 µm) sieve	±2.0	4.5-7.0	4.0-6.0	3.5-6.0
Range for Total AC	+ 0.4	5.00 - 6.25	4.25 - 5.50	4.00 - 5.25

*Mixture control tolerance is not applicable to this sieve for this mix.

**Ensure mixture control tolerance is within ±10.0% for this sieve for 25 mm Superpave mixes.

*** Ensure mixture control tolerance is within ±8.0% for this sieve for 19 mm Superpave mixes.

****Ensure mixture control tolerance is within ±2.0% for this sieve for 12.5 mm and 9.5 mm Superpave mixes.

3. Volumetric limits for parking facilities are as follows:

Design Parameter	Mix Type	Limits
% of Max. Specific Gravity (Gmm) at design gyrations, Ndes)	All	96%
% Gmm at the initial number of gyrations, Ni	All	91.5 % maximum
% voids filled with asphalt (VFA) at Ndes	9.5 mm Type I	Min. 72; Max. 80
	9.5 Type II and 12.5 mm	Min. 72; Max. 78
	19 and 25 mm	Min. 71; Max 76
Fines to effective asphalt binder ration (F/Pbe)	9.5 mm Type I	0.6 to 1.4
	All other types	0.8 to 1.6
Minimum Film Thickness (microns)*	4.75 mm	> 6.00
	All other types	> 7.00
Minimum % Voids in Mineral Aggregate (VMA) Note: VMA shall be calculated using the effective specific gravity of the aggregate (Gse). See SOP-2	25 mm	13.0
	19 mm	14.0
	12.5 mm	15.0
	9.5 mm Types I, II	16.0

* Mixtures approved prior to January 31, 2012, may be adjusted to meet Minimum Film Thickness requirements by the State Materials Engineer.

C. Fabrication

See [Section 400](#).

828.2.04 Fine-Graded Mixtures

A. Requirements

Produce the mixture according to an approved mix design and Job Mix Formula. Ensure that fine-graded mixtures meet the following mixture control tolerances and design limits:

ASPHALTIC CONCRETE - 4.75 mm Mix

Sieve Size	Mixture Control Tolerance	Design Gradation Limits, % passing
1/2 in (12.5 mm) sieve*	±0.0	100*
3/8 in (9.5 mm) sieve	±5.6	90-100
No. 4 (4.75 mm) sieve	±5.7	75-95
No. 8 (2.36 mm) sieve	±4.6	60-65
No. 50 (300 µm) sieve	±3.8	20-50
No. 200 (75 µm) sieve	±2.0	4-12
Range for % AC	±0.4	6.00 – 7.50
Design optimum air voids (%)		4.0 – 7.0
% Aggregate voids filled with AC		60 - 80
Minimum Film Thickness (microns)**		> 6.00

* Mixture control tolerance is not applicable to this sieve for this mix.

** 4.75 mm Mixtures approved prior to January 31, 2012, may be adjusted to meet Minimum Film Thickness requirements by the State Materials Engineer.

B. Fabrication

See [Section 400](#).

C. Acceptance

See [Subsection 106.3](#) and [Section 400](#). Ensure individual test results meet the Mixture Control Tolerances listed in Subsections [828.2](#), [828.2.01](#), [828.2.02](#), [828.2.03](#), [828.2.04](#), whichever applies.

D. Materials Warranty

See General Provisions 101 through 150.

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
AGL (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4” thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights (“Prior Rights”) at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER’S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

- Type of facility or facilities of OWNER:
- Domestic water mains and distribution lines and associated appurtenances
 - Sanitary Sewer facilities and/or Storm Drainage System
 - Electrical Distribution (overhead and underground) wires, poles, etc.
 - Electrical Transmission (overhead and underground) wires, poles, etc.
 - Natural Gas Distribution Facilities (underground)
 - Natural Gas Transmission Facilities (underground)
 - Petroleum Pipeline (underground)
 - Telecommunications facilities and equipment
 - Cable TV facilities
 - Street Lighting
 - Internet Data Service
 - Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____

Construction _____

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
AT&T (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT’S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT’S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT’S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT’s cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT’S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT’S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

C. OWNER, at the DEPARTMENT’S cost wishes to allow the DEPARTMENT’S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT’S CONTRACTOR CAN PERFORM:

Design _____
Construction _____ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

D. OWNER, at OWNER’S cost, will provide the following services (check to signify):

Design _____
Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of “no conflict” to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Cobb County EMC (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4” thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights (“Prior Rights”) at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER’S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

- Type of facility or facilities of OWNER:
- _____ Domestic water mains and distribution lines and associated appurtenances
 - _____ Sanitary Sewer facilities and/or Storm Drainage System
 - _____ Electrical Distribution (overhead and underground) wires, poles, etc.
 - _____ Electrical Transmission (overhead and underground) wires, poles, etc.
 - _____ Natural Gas Distribution Facilities (underground)
 - _____ Natural Gas Transmission Facilities (underground)
 - _____ Petroleum Pipeline (underground)
 - _____ Telecommunications facilities and equipment
 - _____ Cable TV facilities
 - _____ Street Lighting
 - _____ Internet Data Service
 - _____ Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT’S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT’S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT’S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT’s cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT’S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT’S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____

Construction _____

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

**DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING**

between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Cobb County Water & Sewer (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT’S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT’S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT’S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT’s cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT’S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT’S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

C. OWNER, at the DEPARTMENT’S cost wishes to allow the DEPARTMENT’S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT’S CONTRACTOR CAN PERFORM:

Design _____
Construction _____ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

D. OWNER, at OWNER’S cost, will provide the following services (check to signify):

Design _____
Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of “no conflict” to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Comcast (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4” thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights (“Prior Rights”) at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER’S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

- Type of facility or facilities of OWNER:
- _____ Domestic water mains and distribution lines and associated appurtenances
 - _____ Sanitary Sewer facilities and/or Storm Drainage System
 - _____ Electrical Distribution (overhead and underground) wires, poles, etc.
 - _____ Electrical Transmission (overhead and underground) wires, poles, etc.
 - _____ Natural Gas Distribution Facilities (underground)
 - _____ Natural Gas Transmission Facilities (underground)
 - _____ Petroleum Pipeline (underground)
 - _____ Telecommunications facilities and equipment
 - _____ Cable TV facilities
 - _____ Street Lighting
 - _____ Internet Data Service
 - _____ Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT’S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT’S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT’S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT’s cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT’S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT’S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

C. OWNER, at the DEPARTMENT’S cost wishes to allow the DEPARTMENT’S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT’S CONTRACTOR CAN PERFORM:

Design _____

Construction _____ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

D. OWNER, at OWNER’S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of “no conflict” to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
DeKalb County Watershed Management (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4” thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights (“Prior Rights”) at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER’S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT’S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT’S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT’S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT’s cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT’S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT’S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

C. OWNER, at the DEPARTMENT’S cost wishes to allow the DEPARTMENT’S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT’S CONTRACTOR CAN PERFORM:

Design _____
Construction _____ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

D. OWNER, at OWNER’S cost, will provide the following services (check to signify):

Design _____
Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of “no conflict” to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Fulton County Sewer (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4” thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights (“Prior Rights”) at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER’S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

- Type of facility or facilities of OWNER:
- _____ Domestic water mains and distribution lines and associated appurtenances
 - _____ Sanitary Sewer facilities and/or Storm Drainage System
 - _____ Electrical Distribution (overhead and underground) wires, poles, etc.
 - _____ Electrical Transmission (overhead and underground) wires, poles, etc.
 - _____ Natural Gas Distribution Facilities (underground)
 - _____ Natural Gas Transmission Facilities (underground)
 - _____ Petroleum Pipeline (underground)
 - _____ Telecommunications facilities and equipment
 - _____ Cable TV facilities
 - _____ Street Lighting
 - _____ Internet Data Service
 - _____ Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT’S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT’S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT’S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT’s cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT’S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT’S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

C. OWNER, at the DEPARTMENT’S cost wishes to allow the DEPARTMENT’S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT’S CONTRACTOR CAN PERFORM:

Design _____
Construction _____ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

D. OWNER, at OWNER’S cost, will provide the following services (check to signify):

Design _____
Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of “no conflict” to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Georgia Power Distribution (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4” thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights (“Prior Rights”) at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER’S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT’S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT’S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT’S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT’s cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT’S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT’S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

C. OWNER, at the DEPARTMENT’S cost wishes to allow the DEPARTMENT’S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT’S CONTRACTOR CAN PERFORM:

Design _____
Construction _____ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

D. OWNER, at OWNER’S cost, will provide the following services (check to signify):

Design _____
Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of “no conflict” to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Georgia Power Transmission (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4” thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights (“Prior Rights”) at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER’S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

- Type of facility or facilities of OWNER:
- _____ Domestic water mains and distribution lines and associated appurtenances
 - _____ Sanitary Sewer facilities and/or Storm Drainage System
 - _____ Electrical Distribution (overhead and underground) wires, poles, etc.
 - _____ Electrical Transmission (overhead and underground) wires, poles, etc.
 - _____ Natural Gas Distribution Facilities (underground)
 - _____ Natural Gas Transmission Facilities (underground)
 - _____ Petroleum Pipeline (underground)
 - _____ Telecommunications facilities and equipment
 - _____ Cable TV facilities
 - _____ Street Lighting
 - _____ Internet Data Service
 - _____ Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT’S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT’S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT’S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT’s cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT’S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT’S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

C. OWNER, at the DEPARTMENT’S cost wishes to allow the DEPARTMENT’S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT’S CONTRACTOR CAN PERFORM:

Design _____
Construction _____ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

D. OWNER, at OWNER’S cost, will provide the following services (check to signify):

Design _____
Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of “no conflict” to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Sunesys Fiber Optic Communications (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4” thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights (“Prior Rights”) at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER’S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- _____ Domestic water mains and distribution lines and associated appurtenances
- _____ Sanitary Sewer facilities and/or Storm Drainage System
- _____ Electrical Distribution (overhead and underground) wires, poles, etc.
- _____ Electrical Transmission (overhead and underground) wires, poles, etc.
- _____ Natural Gas Distribution Facilities (underground)
- _____ Natural Gas Transmission Facilities (underground)
- _____ Petroleum Pipeline (underground)
- _____ Telecommunications facilities and equipment
- _____ Cable TV facilities
- _____ Street Lighting
- _____ Internet Data Service
- _____ Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT’S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT’S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT’S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT’s cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT’S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT’S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____

Construction _____

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Zayo Fiber Solutions (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

C. OWNER, at the DEPARTMENT’S cost wishes to allow the DEPARTMENT’S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT’S CONTRACTOR CAN PERFORM:

Design _____
Construction _____ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

D. OWNER, at OWNER’S cost, will provide the following services (check to signify):

Design _____
Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of “no conflict” to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL PROVISION

COBB, DEKALB, AND FULTON COUNTIES
P. I. NO. 0010394, 0010401, & 0010403

Section 105 - Control of Work

Delete Section 105.04 and Substitute the following:

105.04 Coordination of Plans, Specifications, Supplemental Specifications, and Special Provisions

The *Standard Specifications*, the Supplemental Specifications, the Plans, Special Provisions, and all supplementary documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work.

In cases of discrepancy, the governing descending order will be as follows:

1. Special Provision Section 999 - Design-Build
2. Special Provisions
3. Project Plans including Special Plan Details
4. Supplemental Specifications
5. Standard Plans including Standard Construction Details
6. Standard Specifications

Calculated dimensions will govern over scaled dimensions.

The Contractor shall take no advantage of any apparent error or omission in the Plans or Specifications. In the event the Contractor discovers such an error or omission, he shall immediately notify the Engineer. The Engineer will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the Plans and Specifications.

A. Specifications of Other Organizations

When work is specified to be done or when materials are to be furnished according to the published specifications of organizations other than the Department, the latest specifications published by those organizations at the time bids are received shall apply unless otherwise specified.

AASHTO Interim Specifications and ASTM Tentative Specifications will be considered effective on date of issue.

B. Item Numbers

The first three digits of any Item Number in the itemized Proposal designates the Specification section under which the Item shall be constructed.

Office of Construction Bidding Administration

**Georgia Department of Transportation
State of Georgia
Special Provision**

**P.I. NO. 0010394, 0010401, 0010403
County: Cobb, DeKalb, Fulton**

Section 105 - Control of Work

Add the following to Sub-Section 105.06:

105.06 Cooperation with Utilities

A. Practice Statement:

The Contractor will designate the route(s) and/or area(s) to be excavated using white pre-marking, White Lining, prior to the arrival of the locator. The definition of excavation shall be in accordance with O.C.G.A. 25-9-1.

B. Practice Description:

The route(s) and/or area(s) of the excavation shall be marked with white paint, flags, stakes, or a combination of these to outline the excavation site prior to notifying the One Call Center, 811 Center, and before the locator arrives on the job.

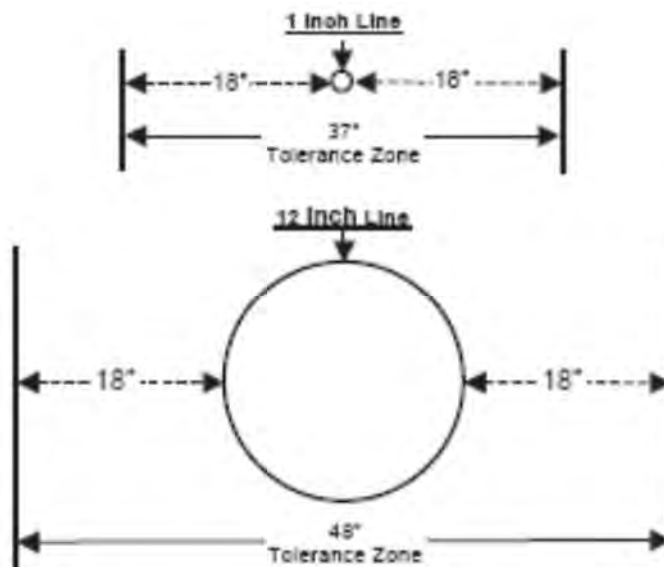
C. Uniform Color Code

The Contractor will mark excavation sites with the following uniform color code:

White	Proposed Excavation
-------	---------------------

D. Tolerance Zone

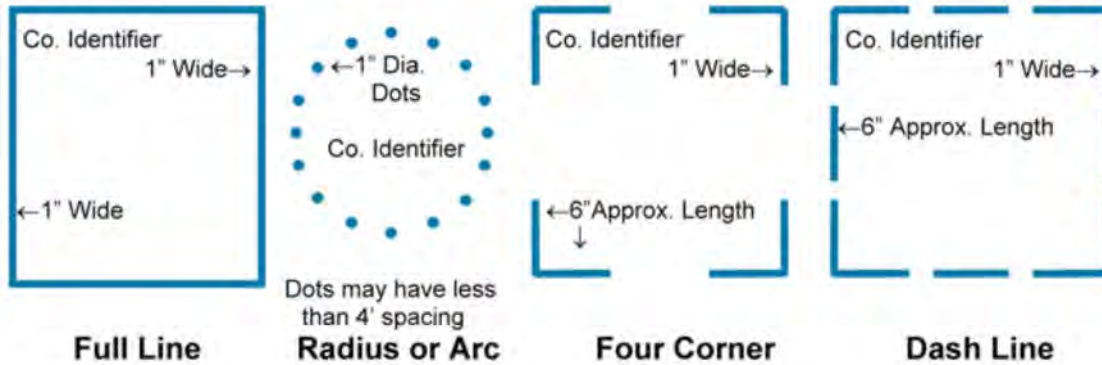
The Contractor shall observe a tolerance zone which is comprised of the width of the facility plus 18" on either side of the outside edge of the underground facility on a horizontal plane. The following examples are of tolerance zones for a 1 inch and a 12 inch line.



E. Guidelines for Excavation Delineation

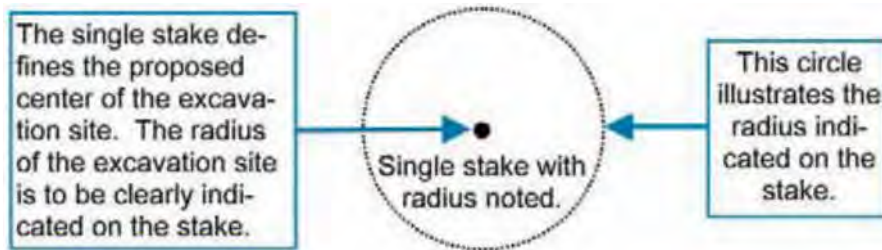
Contractors shall mark their area of proposed excavation using Full Line, Radius or Arc, Four Corner, or Dash Line approach. The use of white marking products (e.g. paint, flags, stakes, whiskers or a combination of these) will be used to identify the excavation site.

1. Single Point Excavations Markings



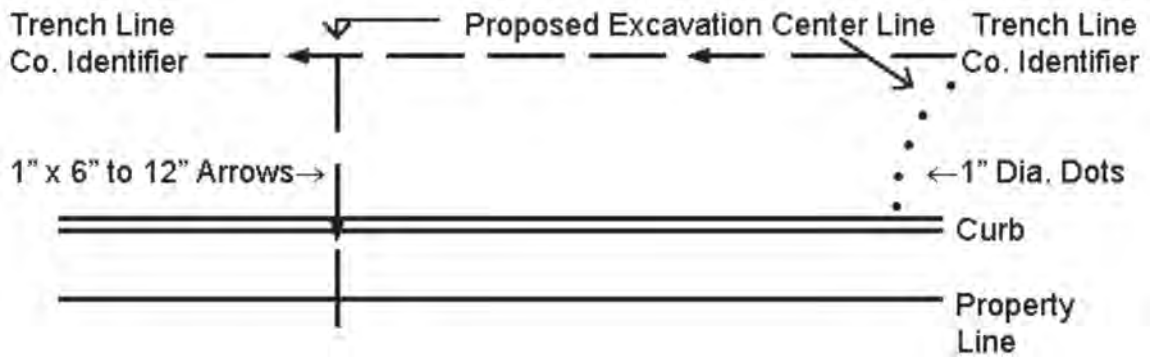
Delineate in white paint the proposed area of excavation through the use of: a continuous line, dots marking the radius or arcs, dashes marking the four corners of the project or dashes outlining the excavation project. Limit the size of each dash to approximately 6” to 12” in length and 1” in width with interval spacing approximately 4’ to 50’ apart. The maximum separation of excavation marks is to be reduced to a length that can be reasonably seen by the operator’s locators when the terrain or excavation site conditions warrant it. Dots of approximately 1” diameter are typically used to define arcs or radii and may be placed at closer intervals in lieu of dashes.

2. Single Stake Marking Center Point of Excavation Site



When an excavation site is contained within a 50’ maximum radius, or less, it can be delineated with a single stake that is positioned at the proposed center of the excavation. If the Contractor chooses this type of delineation they must convey that they have delineated the excavation site with a single stake at the center of the excavation and include the radius of the site in the notification to the One Call Center. This single stake is to be white in color with the following information: Contractor’s company identifier (name, abbreviations, or initials) and the radius of the excavation site in black letters on the stake or with a notice attached to the stake.

3. Trenching, Boring, or Other Continuous Type Excavations Continuous Excavation Marking



Mark in white paint the proposed centerline of planned excavation 6" to 12" x 1" arrows, approximately 4' to 50' apart to show direction of excavation. The maximum separation of excavation marks is to be reduced to a length that can be reasonably seen by the operator's locators when the terrain at an excavation site warrants it. Mark lateral excavations with occasional arrows showing excavation direction from centerline with marks at curb or property line if crossed. Dots may be used for curves and closer interval marking.

4. Stakes, Flags or Whiskers Excavation Markers



Delineate the proposed area of excavation through the use of: stakes, flags or whiskers to mark radius or arcs, the four corners of the project or outlining the excavation project instead of using spray paint. Limit the interval spacing to approximately 4' to 50'. The maximum separation of excavation marks is to be reduced to a length that can be reasonably seen by the operator's locators when the terrain at an excavation site warrants it. Stakes, flags or whiskers provided to illustrate arcs or radii may be placed at closer intervals in order to define the arc or radius. Stakes, flags or whiskers are white in color with the Contractor's company identifier (name, abbreviations, or initials) provided on the stake, flag or whisker.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
SPECIAL PROVISION

COBB COUNTY, PI NO. 0010401
Section 107 – Legal Regulations and Responsibility to the Public

Add the following to Subsection 107.23:

G. Protection of Federally Protected Environmentally Sensitive Species

The following conditions are intended as a minimum to protect these species and their habitat during any activities that are in close proximity to the known location(s) of this species. The specific activity that these conditions apply to is pedestrian and bicycle enhancements at four Baldwin County Schools.

1. The Contractor shall advise all project personnel employed to work on this project about the potential presence and appearance of federally protected Eastern phoebes (*Sayornis phoebe*), cliff swallows (*Petrochelidon pyrrhonota*) or barn swallows (*Hirundo rustica*) and that there are civil and criminal penalties for harming, harassing, or killing these species, which are protected under the Migratory Bird Treaty Act of 1918. Pictures and habitat information will be provided to the Contractor at the preconstruction conference.
2. Work on the Irwin Road bridge over Noses Creek shall take place outside of the breeding and nesting season of eastern phoebe, barn swallow and cliff swallow, which begins April 1st and extends through August 31st, unless exclusionary barriers are put in place to prevent nesting on the bridge. Exclusionary barriers, constructed of netting, made of plastic, canvas or other materials proposed by the contractor may be installed on the bridge prior to March 1st or after August 31st, but in no time between this period. Exclusionary barriers are not a guaranteed method of preventing migratory birds from nesting under bridges and work schedules shall take into account the possibility that barriers will not be successful. If exclusionary barriers are to be used, these steps shall be followed:
 - a. The project ecologist shall be notified by phone (404-631-1100) of the decision to install exclusionary devices under the existing bridge and the date of the proposed installation, prior to the installation of any exclusionary barriers.
 - b. The underside of the bridge shall be checked for nests prior to the placement of exclusionary barriers. If nests are present, they shall be inspected to ensure that eggs or birds are not present. If the nests are found to be occupied, construction activities associated with the existing bridge shall be postponed until after August 31st when the breeding season is complete.
 - c. Exclusionary barriers shall be placed along the full length of the bridge to prevent the birds from accessing any existing nesting habitat. Barriers shall be installed prior to March 1st and left in place until August 31st or until the demolition work is complete, whichever occurs first. If the exclusionary barrier fails to prevent nesting (i.e., birds are able to bypass barriers and build nests), construction activities associated with the bridge shall be postponed until after August 31st.
 - d. During construction activities, exclusionary barriers shall be inspected daily for holes or other defects that impair its ability to exclude migratory birds from nesting beneath the bridge. Any holes or defects shall be repaired immediately.
3. In the event any incident occurs that causes harm to Eastern phoebes, cliff swallows or barn swallows along the project corridor, the Contractor shall report the incident immediately to the Project Engineer who in turn will notify: State Environmental Administrator, Georgia Department of transportation, Office of Environmental Services at (404) 631-1101. All work shall cease pending consultation by the Department with the United States Fish and Wildlife Service and the Georgia Department of Natural Resources.

4. The contractor shall keep a log detailing any injury to barn swallows, cliff swallows, or eastern phoebes in or adjacent to the project until time that Final Acceptance is made. Entanglement of barn swallows, cliff swallows, and eastern phoebes in exclusionary netting constitutes harm to migratory birds. Following project completion, the log and a report summarizing any incidents involving the above mentioned species shall be submitted by the contractor to the:
 - a. Project Engineer;
 - b. State Environmental Administrator, Georgia Department of Transportation, Office of Environmental Services, 600 West Peachtree Street NW, Atlanta, GA 30308.
5. All costs pertaining to any requirement contained herein shall be included in the overall bid submitted unless such requirement is designated as a separate Pay Item in the Proposal.

PROTECTED SPECIES ON THE PROJECT



Adult Barn Swallow



Barn Swallow nest under a bridge.

Barn Swallow

Description

- 6 $\frac{3}{4}$ inches in length
- Long, deeply forked tail
- Upperside iridescent blue, underparts either cinnamon or white, throat reddish-brown
- Nests in pairs or small colonies



Barn Swallow nest under a bridge.



Immature Barn Swallows in nest.

There are civil and criminal penalties for harming or killing this animal and its nest or eggs.

See Special Provision 107.23 G.

PROTECTED SPECIES ON THE PROJECT



Cliff Swallow in flight.



Cliff Swallows at nests.

Cliff Swallow

Description

- Body length is 5.5 inches; wingspan is 12 inches
- Pale orange rump and forehead; square tail tip
- Dark blue cap and upperparts; dark brown throat
- Often nest under bridges; distinctively shaped mud nests



Cliff Swallows at nests.



Cliff Swallows drinking from a puddle.

There are civil and criminal penalties for harming or killing this animal and its nest or eggs.

See Special Provision 107.23 G.

Protected species on the Project

Eastern phoebe *Sayornis phoebe*

Description

- Approximately 6-7 inches in length
- Dark head with grayish-olive upperparts
- Frequently wags tail
- Often builds nest under bridges, in large culverts, or around buildings near water
- Nest is mud and grass lined with moss and hair; contains up to 5 white eggs
- Song is a clear “fee-bee” or “fee-bit-it” often repeated



Adult Eastern phoebe



Eastern phoebe nest under a bridge

**There are civil and criminal penalties for harming or killing this animal
and its nest or eggs. See Special Provisions 107.23G**

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

**Section 108—Prosecution and Progress
(Federal Aid Projects)**

Delete Subsection 108.06 and substitute the following:

The Engineer has the authority to suspend the Work wholly or in part, for as long as he may deem necessary, because of unsuitable weather, or other conditions considered unfavorable for continuing the Work, or for as long as he may deem necessary by reason of failure of the Contractor to carry out orders given, or to comply with any provisions of the Contract. If the performance of all or any portion of the Work is suspended or delayed by the Engineer, in writing, for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer, in writing, a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the Contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of, and not the fault of, the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the Contract in writing accordingly. The Engineer will notify the Contractor of his/her determination whether or not an adjustment of the Contract is warranted.

No contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time prescribed.

No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of this Contract.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

**SPECIAL PROVISION
Project No. 0010394, 0010401, 0010403
Cobb, DeKalb, Fulton Counties**

Section 108 – Prosecution and Progress

Add the following to Subsection 108.08:

For this project, an overall completion date has been established. In order to minimize the disruption of normal traffic flow, separate completion times are specified for those portions of the work requiring closing of lanes or detours as specified in Subsection 150.11.

1. Intermediate Site Completion – 120 Day

The following schools shall be completed within 120 calendar days upon issuance of Notice to Proceed 3 (NTP 3) for that particular school site.

- A. Cheatham Hill Elementary School
- B. Kincaid Elementary School
- C. Bethune Elementary School
- D. Evansdale Elementary School

Failure to complete within 120 calendar days upon issuance of NTP 3 will result in the assessment of Liquidated Damages of \$500.00 per day or any part thereof.

2. Intermediate Site Completion – 60 Day

The following schools shall be completed within 60 calendar days upon issuance of Notice to Proceed 3 (NTP 3) for that particular school site.

- A. Briarlake Elementary School
- B. Fairington Elementary School
- C. Hawthorne Elementary School
- D. Oak Grove Elementary School

Failure to complete within 60 calendar days upon issuance of NTP 3 will result in the assessment of Liquidated Damages of \$500.00 per day or any part thereof.

3. Lane Closures

Failure to reopen lanes as specified in Section 150.11 will result in the assessment of Liquidated Damages at a rate of \$500.00 per hour or any part thereof.

These rates are cumulative and in addition to Liquidated Damages that may be assessed in accordance with Subsection 108.08 for failure to complete the overall project.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

**P.I. No.: 0010394, 0010401, & 0010403
Cobb, DeKalb, and Fulton Counties**

Section 150 – Traffic Control

Add the following to Section 150:

150.11 Special Conditions

A. P.I. No. 0010394 (DeKalb County)

1. Briarlake Elementary School

- a. Lane Closures
 - i. Single lane closures will not be permitted Monday thru Friday
 - ii. Double lane closures will not be permitted
- b. Roadway detours will not be permitted
- c. Work Hours
 - i. Nighttime work from the hours of 8 PM to 7 AM will not be permitted

2. Evensdale Elementary School

- a. Lane Closures
 - i. Single lane closures will not be permitted from 1 hour prior and up to the beginning of class
 - ii. Single lane closures will not be permitted from 1 hour prior to the end of class and to 7 PM
 - iii. Double lane closures will not be permitted
- b. Roadway detours will not be permitted
- c. Work Hours
 - i. Nighttime work from the hours of 8 PM to 7 AM will not be permitted

3. Fairington Elementary School

- a. Lane Closures
 - i. Single lane closures will not be permitted from 1 hour prior and up to the beginning of class
 - ii. Single lane closures will not be permitted from 1 hour prior to the end of class and to 7 PM
 - iii. Double lane closures will not be permitted
- b. Roadway detours will not be permitted
- c. Work Hours

- i. Nighttime work from the hours of 8 PM to 7 AM will not be permitted

4. Hawthorne Elementary School

- a. Lane Closures
 - i. Single lane closures will not be permitted from 1 hour prior and up to the beginning of class
 - ii. Single lane closures will not be permitted from 1 hour prior to the end of class and to 7 PM
 - iii. Double lane closures will not be permitted
- b. Roadway detours will not be permitted
- c. Work Hours
 - i. Nighttime work from the hours of 8 PM to 7 AM will not be permitted

5. Oak Grove Elementary School

- a. Lane Closures
 - i. Single lane closures will not be permitted from 1 hour prior and up to the beginning of class
 - ii. Single lane closures will not be permitted from 1 hour prior to the end of class and to 7 PM
 - iii. Double lane closures will not be permitted
- b. Roadway detours will not be permitted
- c. Work Hours
 - i. Nighttime work from the hours of 8 PM to 7 AM will not be permitted
 - ii. The Contractor will be permitted to work on the school property while school is not in session

B. P.I. No. 0010401 (Cobb County)

1. Cheatham Hill Elementary School

- a. Lane Closures
 - i. Single lane closures will not be permitted from 1 hour prior and up to the beginning of class
 - ii. Single lane closures will not be permitted from 1 hour prior and to 1 hour after the end of class
 - iii. Double lane closures will not be permitted
- b. Roadway detours will not be permitted
- c. Work Hours
 - i. Nighttime work from the hours of 8 PM to 7 AM will not be permitted

2. Kincaid Elementary School

- a. Lane Closures
 - i. Single lane closures will not be permitted from 1 hour prior and up to the beginning of class
 - ii. Single lane closures will not be permitted from 1 hour prior and to 1 hour after the end of class
 - iii. Double lane closures will not be permitted
- b. Roadway detours will not be permitted
- c. Work Hours
 - i. Nighttime work from the hours of 8 PM to 7 AM will not be permitted

C. P.I. No. 0010403 (Fulton County)

1. Bethune Elementary School

- a. Lane Closures
 - i. Single lane closures will not be permitted from 1 hour prior and up to the beginning of class

- ii. Single lane closures will not be permitted from 1 hour prior and to 1 hour after the end of class
 - iii. Double lane closures will not be permitted
- b. Roadway detours will not be permitted
- c. Work Hours
 - i. Nighttime work from the hours of 8 PM to 7 AM will not be permitted
 - ii. The Contractor will be permitted to work on the school property while school is not in session

Failure in maintaining work hours within the time specified will result in the assessment of Liquidated Damages as specified in Special Provision 108.08

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

**COBB, DEKALB, AND FULTON COUNTIES
P. I. NO. 0010394, 0010401, & 0010403**

Add the following:

Section 630 – Modular Block Retaining Wall System

630.1 General Description

This Specification covers the required materials, fabrication, construction, measurement, and payment for a Contractor designed modular block retaining wall system.

The scope of work of wall erection includes:

- Grading for wall construction
- Compacting the wall foundation
- General and local dewatering as necessary
- Constructing leveling pads
- Erecting segmental concrete units
- Placing backfill soil reinforcing devices
- Placing and compacting special embankment backfill within the reinforced volume
- Furnishing and placing precast or cast-in-place concrete coping on top of the wall if shown on the Plans.

Ensure that items used to construct the modular block retaining walls but not mentioned in this Specification conform to the applicable Sections of the Georgia D.O.T. Specifications.

630.1.01 Definitions

Keystone – KeySystem I retaining wall system by CONTECH Construction Products, Inc.

MESA – Mesa retaining wall system by Tensar International, Inc.

(MBRW) – An acronym for Modular Block MSE Retaining Wall

Wall foundation – The area underlying the leveling pad and the reinforced volume.

630.1.02 Related References

A. Standard Specifications

- Section 106 – Control of Materials
- Section 208 – Embankments
- Section 500 – Concrete Structures
- Section 511 – Reinforcement Steel
- Section 514 – Epoxy Coated Steel Reinforcement
- Section 535 – Painting Structures
- Section 626 – Mechanically Stabilized Embankment Retaining Walls
- Section 645 – Repair of Galvanized Coatings
- Section 812 – Backfill Materials
- Section 848 – Pipe Appurtenances
- Section 865 – Manufacture of Prestressed Concrete Bridge Members
- Section 870 – Paint
- Section 834 – Masonry Materials

B. Referenced Documents

- AASHTO M 243
- AASHTO T 22
- ASTM A 82
- ASTM A 123/A 123M
- ASTM A 185
- ASTM D 2240
- GDT 7
- GDT 24a
- GDT 24b
- GDT 35
- GDT 75
- QPL 9
- QPL 58

Standard Operating procedure 3, Precast/Prestressed Concrete Bridge Members

AASHTO Standards:

Standard Specifications for Highway Bridges, Division I, Section 5, “Retaining Walls” and Division II, Section 7, “Earth Retaining Structures”, Latest Edition, including Interim Editions

ASTM Standards:

- C90 Specification for Loadbearing Concrete Masonry Units
- C140 Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
- C150 Specification for Portland Cement
- C331 Specification for Lightweight Aggregates for Concrete Masonry Units

Section 630—Modular Block Retaining Wall System

C618	Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Concrete
C989	Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
C1372	Specification for Segmental Retaining Wall Units
D698	Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort

630.1.03 Submittals

Submit construction drawings and design notes to the Engineer for review and approval. The submission shall be prepared and stamped by the Design Engineer who shall be registered as a Professional Engineer in the State of Georgia.

Include in the submission, design notes and reproducible drawings concerning the following:

- A. Details, dimensions, and schedules of all reinforcing steel, including dowels and/or studs for attaching the facing to the backfill reinforcement.
- B. Details of backfill stabilizing devices including the length, spacing and size and type material.
- C. Use Cast-in-place Coping B whenever noise walls, light standards, or any other appurtenance is mounted on top of the barrier or coping.
Use Cast-in-place Coping A when no appurtenance is used on top of the barrier or coping.
- D. Ensure that Plans match GDOT plans in size, format, borders, title block, etc.
- E. Prepare the Plans in “microstation.dgn” format.
- F. Itemize the wall quantities as follows:
 1. Wall Envelope quantities in the Plans.
 2. Changed quantities based on the survey verification of the Wall Envelope (Adjusted Wall Envelope).

The time required for preparation and review of plans and calculations will be charged to the allowable contract time. The final plans and calculations for a wall shall be approved prior to beginning construction on the wall.

The Department will be allowed 45 days to review the plans and calculations and provide either approval or review comments to the contractor. The 45-day review time will begin when the Department has received all of the calculations and drawings concerning the structure. Each new submittal from the Contractor as a result of corrections resulting from the Department's review or changes that are made by the contractor to expedite construction or to correct for field errors will have a 45 day review time.

The Department will be the sole judge of the adequacy of the information submitted. The review and acceptance of the final plans and methods of construction by the Department will not in any way relieve the Contractor of responsibility for the successful completion of the work. Contractor delays due to untimely submissions and insufficient information will not be considered as justification for time extensions.

Within 30 days of receiving Department approval of the plans, submit “stamped” reproducible mylar originals for inclusion in the project plans. Also, submit Electronic files of the final plans. For any changes made during construction of the wall, submit “as built” reproducible mylar originals and “as built” electronic files.

630.2 Materials

- A. **MESA** – For Mesa Retaining Wall by Tensar, see Section 626.2 “Materials” and Section 809 of the Specifications except as noted herein.
- B. **Backfill Stabilizing Devices - Keystone**
 1. Use backfill stabilizing device shop fabricated of cold drawn steel wire conforming to the minimum requirements of ASTM A 82 and welded into the finished strip in accordance with ASTM A 185. After fabrication, apply galvanization in accordance with ASTM A 123.
 2. Repair damage to the galvanized coating to the Engineer's satisfaction at no additional cost to the department.

Section 630—Modular Block Retaining Wall System

C. Connector and Alignment Pins - Keystone

Provide 9/16 inch (14 mm) diameter galvanized steel connector pins conforming to ASTM A 82 and galvanized in accordance with ASTM A 123 to positively connect the keystrip reinforcement to the segmental concrete facing units. Provide ½ inch (12 mm) diameter fiberglass alignment pins to positively connect the segmental facing units to each other. Alignment pins are used in all units except where keystrips attach to the facing units.

D. Concrete - MBRW

1. Use Class A concrete for leveling pads.
2. In concrete facing units, except as indicated in the approved mix design, admixtures will not be allowed. Furnish segmental concrete facing units with a minimum compressive strength after 28 days of 4,000 psi (27.6 MPa) and with a maximum absorption rate of 5 percent by weight manufactured and tested in accordance with ASTM C 1372.

E. Separator Geotextile - MBRW

Furnish nonwoven plastic filter fabric that has a minimum unit weight of 6 oz. per square yard (2.0 N per square meter) listed on the QPL for Work in this Specification.

F. Special Embankment Backfill - MBRW

1. Unit fill – Furnish 1" (27mm) crushed stone or crushed gravel to fill annulus of segmental facing units meeting the following gradation requirements:

<u>Sieve Size</u>	<u>% Passing by Weight</u>
1 inch (27mm)	100%
¾ inch (19mm)	75-100%
No. 4	0-10%
No. 5	0-5%

2. MBRW Backfill Material – Use material that conforms to the requirements of Subsection 812.2.04.

G. Certification - MBRW

The Department will use certified test reports as specified in Subsection 106.05, "Materials Certification" and perform routine tests as a basis for material acceptance furnished for the Work.

630.2.01 Delivery, Storage, and Handling

A. Soil Reinforcing Devices, Connector Pins, Alignment Pins and Geosynthetic Drainage Composite

1. Check the polymeric materials upon delivery to ensure that the proper material has been received.
2. Storage of polymeric materials:
 - Above -20°F (-29°C)
 - Avoid contact with mud, wet concrete, epoxy and like materials
 - Lay flat or stand on end

B. Segmental Concrete Facing Units

1. Check the segmental concrete facing units upon delivery to ensure that proper materials have been received.
2. Storage of segmental concrete facing units:
 - Avoid contact with mud, wet cement, epoxy and like materials
 - Protect from damage (i.e. cracks, chips and spalls)
 - Evaluate damaged units for usage according to ASTM C 90 and ASTM C 1372.

630.3 Construction Requirements

630.3.01 Personnel

Meet the following personnel requirements:

Section 630—Modular Block Retaining Wall System

A. Design

Use a Design Engineer with the following qualifications to design the wall and prepare and submit plans for approval:

- Is registered as a Professional Engineer in the State of Georgia.
- Has knowledge and experience with the design and construction of Modular Block MSE retaining walls.
- Is available at any time during the life of the Contract to discuss the design of the walls directly with the Department.

B. Construction

The Contractor or Subcontractor shall meet the following requirements:

- Be experienced in the construction of Mechanically Stabilized Embankment Walls.
- Include on staff, a supervising engineer for the Project with at least five years of experience in the construction of Mechanically Stabilized Embankment Walls.

Submit the following proof, whenever requested by the Department, of the ability to design and/or construct Mechanically Stabilized Embankment Walls.

- Evidence of the successful completion of at least five Projects similar in concept and scope to the proposed wall.
- Resumes of the supervising engineer and foremen to be employed on this Project showing the type and number of Mechanically Stabilized Embankment Walls each worked on within the past five (5) years.

The Department will be the sole judge of the acceptability of the qualifications of the design engineer, supervising engineer and foreman.

630.3.02 Equipment

General Provisions 101 through 150.

630.3.03 Preparation

A. General Requirements – Designing and Detailing

The Department's plans will include a Wall Envelope. The Wall Envelope will show:

- The existing and proposed ground line,
- The maximum elevation of the top of the leveling pad
- The proposed top of coping or the proposed gutterline elevations where the barrier is attached to the wall
- The soil parameters for the wall design
- The location of any internal walls required
- The location of other appurtenances including but not limited to:
 - Light standards
 - Sound barriers
 - Sign supports
- Other obstructions in the wall backfill including but not limited to:
 - Drainage structures and pipes
- Details of any proposed ditches at the top of the wall
- Proposed pay quantities

Ensure that the wall design is compatible with all horizontal and vertical criteria and backfill loading conditions.

Verify the wall location according to [Subsection 149.1.03.E](#) and Subsection [149.3.03.D](#) before the final wall design is submitted. Include in the verification:

- The top and bottom of the wall envelope
- Backfill design conditions
- Depth of wall embedment

Section 630—Modular Block Retaining Wall System

- Location of drainage structures and other obstructions in the wall backfill
- Other appurtenances located on the wall.

If any changes to the wall envelope are required by the field survey, submit plan sheets to the Engineer for approval showing the wall envelope as detailed in the plans with the required changes noted.

B. Wall Design

Use the following design criteria for a Contractor designed wall:

1. Provide one of the following wall systems:
 - KeySystem I (Keystone by CONTECH Construction Products)
 - MESA (Mesa Retaining wall System by Tensar International)
2. Design the MBRW according to the current AASHTO Standard Specifications for Highway Bridges including interims. (Mechanically Stabilized Earth Wall Design – Section 5.8)
3. Design the MBRW to account for all live load, dead load and wind load from all traffic barrier, lights, overhead signs, sound barriers and other appurtenances located on top and adjacent to the wall. Design MBRW to account for all external forces.
4. Assume responsibility for all temporary shoring that may be necessary for wall construction. Design the shoring using sound engineering principles.
5. Provide a minimum length of soil reinforcement of 10 feet (3 m) or seven-tenths (0.7) of the wall height, whichever is greater.
6. Ensure that the special wall backfill extends a minimum of 12 in (300 mm) past the end of the soil reinforcement.
7. Provide internal walls to allow for future widening if shown on the wall envelope. Ensure the internal walls have galvanized wire or concrete facing. Ensure as a minimum, that the facing of the internal walls extend to the back limit of the MBRW Backfill for the permanent wall.
8. Design the barrier for a 500 lbs. per linear foot (744 kilograms per linear meter) loading applied horizontally along the top of the barrier. The barrier shall be continuous or have a counterweight slab continuous over not less than twenty feet.
9. A Foundation Investigation Report may be available from the Geotechnical Engineering Bureau of the Department. The information contained in this report may be used by the Contractor to assist in evaluating existing conditions for design as well as construction. However, the accuracy of the information is not guaranteed and no requests for additional monies or time extensions will be considered as a result of the Contractor relying on the information in this report.
10. Ensure the following requirements are met:
 - The gutterline grade on the proposed top of wall submitted matches the gutter elevations required by the plans.
 - The top of coping is at or above the top of coping shown on the envelope.
 - The leveling pad is at or below the elevation shown on the wall envelope.
 - Any changes in wall pay quantities due to changes in the wall envelope are noted in the contractor's plans
 - All changes in quantities due to the proposed walls being outside the wall envelope (step locations, ending wall at full block, etc.) are shown as separate quantities.
11. Ensure the minimum embedment of the wall (top of leveling pad) is at least 2 feet (600 mm). If the soil slopes away from the bottom of the wall, lower the bottom of the wall to provide a minimum horizontal distance of 10 ft (3 m) to the slope. [i.e. a 2:1 slope in front of the wall requires 5 ft (1.5 m) of embedment; a 4:1 slope in front of the wall requires 2.5 ft (750 mm) of embedment]
12. If the Department's review of the submitted plans and calculations results in more than two submittals to the Department by the Contractor, the Contractor will be assessed for all reviews in excess of two submittals. The assessment for these additional reviews will be at the rate of \$60.00 per hour of engineering time expended.

C. Prepare the Foundation

Before beginning construction, prepare the foundation as follows:

1. Grade the foundation for the modular block retaining wall level to a width equal to or exceeding the width of the reinforced volume and leveling pad.

Use the top of the leveling pad as the grade elevation.

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2. Before beginning the wall and leveling pad construction, compact the foundation to at least 95 percent of maximum laboratory dry density as determined by GDT 7.
3. If excavating below the leveling pad elevation, reconstruct the area as embankment.
4. Remove and replace foundation soils that are incapable of sustaining the required compaction as directed by the Office of Materials and Research.
5. At each segmental unit foundation level, provide a non-reinforced concrete leveling pad as shown on the Plans.
 - a. Place leveling pads so they are level within $\frac{1}{8}$ in (3 mm) per pad or per 10 ft (3 m), whichever length is greater.
 - b. Repair or replace leveling pads that do not meet this requirement as directed by the Engineer at the Contractor's expense.
 - c. Use non-degradable synthetic rope with a diameter $\leq \frac{1}{4}$ in (6 mm) or 1 in (25 mm) wide continuous strips of fiberglass shingles to level the segmental units. Do not use more than $\frac{3}{8}$ in (10 mm) thickness of shims.
 - d. If more leveling is required, take other corrective action, such as replacing the leveling pad.
6. Embed the wall at least 2 ft (600 mm) into an embankment, when shown on the Plans. Construct the embankment before constructing the leveling pad and placing backfill for the wall.

For details on leveling pads, see plans and construction details.

630.3.04 Fabrication

See Subsection 626.3.04 of the Specifications.

630.3.05 Construction

A. Wall Erection

Segmental Concrete Facing Unit Installation

1. Place the leveling pad consisting of unreinforced concrete at the elevation(s) and to the dimension(s) shown on the plans.
2. Place the first course of segmental concrete facing units on top of and in full contact with the leveling pad.
3. Check the segmental concrete facing units for proper elevation and alignment.
4. Use non-degradable synthetic rope with a diameter $\leq \frac{1}{4}$ in (6 mm) or 1 in (25 mm) wide continuous strips of fiberglass shingles to level the segmental units. Do not use more than $\frac{3}{8}$ in (10 mm) thickness of shims on any single course.
5. Place segmental concrete facing units side by side for the full length of the wall.
6. Use a string line or offset from baseline to maintain proper alignment.
7. Install alignment or connector pins as indicated in the shop drawings.
8. Sweep all excess material from the top of the segmental concrete facing units prior to installing the next course.
9. Lay segmental concrete facing units to create the minimum radius possible, or as otherwise shown on the construction drawings.
10. Install segmental concrete facing units such that only the front face of the units shall be visible.
11. Wall facing vertical tolerances and horizontal alignment shall not exceed $\frac{3}{4}$ in (19 mm) when measured with a 10 ft (3 m) straight edge. During construction the maximum allowable offset in any joint shall be $\frac{3}{4}$ in (19 mm). The overall vertical tolerance of the wall (top to bottom) shall not exceed $\frac{3}{4}$ in per 10 feet (19 mm per 3 m) of wall height.

B. Backfill Soil Reinforcing Device Installation

1. Verify soil reinforcement is of the proper size and length.
2. Place soil reinforcement at the elevation(s) and to the length(s) shown on the construction drawings or as directed by the Engineer.
3. Place soil reinforcement at 90 degrees to the face of the wall unless otherwise indicated on the Plans or directed by the Engineer.
4. Connect soil reinforcement to segmental concrete facing units by placing them over the connector device as shown on the construction plans.
5. Lay the soil reinforcement horizontally on compacted backfill.

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6. Place the next course of segmental concrete facing units over soil reinforcement.
7. Pull the soil reinforcement taut prior to backfill placement.

C. Special Embankment Backfill

1. Place backfill shortly after erecting each concrete facing unit. Follow these guidelines:
 - a. Place backfill lift to a uniform thickness and place it from the back face of the wall to 1 ft (300 mm) beyond the end of the soil-reinforcing devices. Fill and compact segmental facing units.
 - b. At each soil reinforcement level, compact the backfill to the full length of reinforcing and slope it at 1% (max.) to drain away from the wall before placing and attaching the next layer of reinforcing.
 - c. Repair or replace damaged soil reinforcement or segmental units before attaching and backfilling the reinforcing devices.
 - d. Ensure that the maximum lift thickness is 8 in (200 mm) (loose) and closely follows segmental unit erection. Decrease this lift thickness to obtain the specified density, if required.
 - e. Compact the embankment backfill material to at least 100 percent of maximum laboratory dry density as determined by [GDT 7](#) or [GDT 24a](#), [GDT 24b](#) Method A or B, for full depth of the material.
 - f. Compact the embankment backfill material without disturbing or displacing the reinforcing and segmental units.
 - g. Compact from the area nearest the wall face to the back of the reinforcing except for a strip 3 ft (1 m) wide adjacent to the backside of the wall facing units.
 - h. After compacting the remainder of the layer, compact this 3 ft (1 m) strip with light mechanical tampers without causing the segmental units to move outward.
 - i. Whenever a compaction test fails on a special embankment backfill lift, do not place additional material over that area until the lift is re-compacted and obtains a passing compaction test.

D. Geotextile

Place geotextile against the back of the facing units as shown on the plans.

E. Storm Drains

Provide precast segments that have the appropriate storm drain openings into segments at the elevation and locations indicated on drainage profiles.

Place catch basins so that pipes will enter perpendicular (plan view) to the segments or below the leveling pads as shown on the Plans. Coordinate the catch basin construction and the storm drain placement with the wall construction.

F. Dewatering

Furnish, install, operate, and maintain satisfactory dewatering systems to maintain the site in a dry and workable condition to permit grading, compacting the wall foundation, and erecting and backfilling the wall. Furnish dewatering system equipment and materials and continue the system as long as necessary.

G. Catch Basins and Longitudinal Pipes

When catch basins are located behind the wall, use the details and methods outlined in the plans.

When longitudinal pipes are located behind the wall, adjust soil reinforcement in accordance with the details provided in the shop drawings.

630.3.06 Quality Acceptance

General Provisions 101 through 150.

630.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

630.4 Measurement

A. Excavation and Shoring

Excavation, including removing unstable material and shoring for construction of the MBRW, will not be measured and paid for separately.

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B. Segmental Concrete Facing Units

The area of wall face, complete in place and accepted, will be designated for payment by the square foot (meter). The area of drains through the wall will not be deducted.

The wall area (wall envelope) measured for payment will be the area from the proposed top of coping or the proposed gutterline or top of sidewalk elevations to the maximum elevation of the top of the leveling pad.

Any area of cast-in-place facing around drainage structures within the approved wall envelope will not be measured separately. Payment will include all costs for concrete, reinforcing steel in the cast-in-place areas.

C. Backfill Soil Reinforcement Devices

The backfill soil reinforcement devices will not be measured separately. Include this cost in the unit price bid for Segmental concrete facing units.

D. Backfill

The MBRW backfill material used in the MBRW volume will not be measured separately except as noted below. When not paid for separately, include the cost in the unit price bid for Segmental concrete facing units.

Exceptions:

- Any additional MBRW backfill required as a result of an undercut ordered by the Engineer and requiring the MBRW backfill material to provide stability, as determined by the Engineer, will be paid as additional MBRW backfill.
- If no quantities for this item are included in the proposal, a price of \$25 per cubic yard (\$33.00 per cubic meter) will be paid.

Backfill of undercut areas not requiring materials of grades higher than common excavation soils will not be paid for separately. Include the cost in the overall bid price submitted.

Any backfill material required by construction procedures to extend outside the MBRW volume is considered incidental. Include this cost in the price bid for contract items.

E. Concrete Leveling Pads

Concrete leveling pads will not be measured separately. Include this cost in the unit price bid for Segmental concrete facing units.

F. Cast-in-place Coping A, Cast-in-place Coping B and Precast Coping mounted atop the MSE Wall

These units, complete in place and accepted, will be designated on the Plans and measured at the Contract Unit Price bid per linear foot (meter) for each type unit.

G. Dewatering

No separate measurement or payment will be made for dewatering. Include the cost of dewatering in the price bid for MBRW backfill material.

630.4.01 Limits

General Provisions 101 through 150.

630.5 Payment

The pay quantities will be the Wall Envelope quantities shown in the Plans unless the Engineer approves an adjusted wall envelope. In this case, the pay quantities will be the adjusted wall envelope quantities.

No additional compensation will be made for any additional material, equipment, design, or other items found necessary to comply with the project Specifications as a result of the Department's review except for changes made necessary by the survey verification required by [Subsection 149.1.03.E](#) and [Subsection 149.3.03.D](#), or other changes approved by the Engineer.

Include in the unit bid prices all costs necessary to comply with the requirements of this specification. No payment will be made for wall area outside of the adjusted wall envelope.

A. Excavation and Shoring

Excavation, including removing unstable material and shoring for construction of the mechanically stabilized embankment retaining wall, will not be paid for separately.

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B. Segmental Concrete Facing Units

The area of wall face, complete in place and accepted, will be paid for by the square foot (meter) for each height. The area of drains through the wall will not be deducted.

Any area of cast-in-place facing around drainage structures within the approved wall envelope will be paid as wall face. Payment will include all costs for concrete, reinforcing steel in the cast-in-place areas.

No separate payment will be made for architectural treatment.

No separate payment will be made for internal wall facing, internal wall backfill stabilizing devices or additional MBRW backfill necessitated by the internal wall.

C. Backfill Stabilizing Devices

The backfill stabilizing devices will not be paid for separately. Include this cost in the unit price bid for Segmental concrete facing units.

D. Backfill

The MBRW backfill material used in the MBRW volume will not be paid for separately except as noted below. When not paid for separately, include the cost in the unit price bid for Segmental concrete facing units.

Exceptions:

- Any additional MSE backfill required as a result of an undercut ordered by the Engineer and requiring the MBRW backfill material to provide stability, as determined by the Engineer, will be paid as additional MBRW backfill.
- If no quantities for this item are included in the proposal, a price of \$25 per cubic yard (\$33.00 per cubic meter) will be paid.

Backfill of undercut areas not requiring materials of grades higher than common excavation soils will not be paid for separately. Include the cost in the overall bid price submitted.

Any backfill material required by construction procedures to extend outside the MBRW volume is considered incidental. Include this cost in the price bid for contract items.

E. Concrete Leveling Pads

Concrete leveling pads, including steps shown in the Plans will not be paid for separately.

F. Cast-in-place Coping A, Cast-in-place Coping B and Precast Coping mounted atop the MSE Wall

These units, complete in place and accepted, will be designated on the Plans and paid for at the Contract Unit Price bid per linear foot (meter) for each type unit.

G. Dewatering

No separate payment will be made for dewatering. Include the cost of dewatering in the price bid for special embankment backfill.

Payment will be made under:

Item No. 630	Segmental concrete facing units -	Per square foot (meter)
Item No. 630	Modular Block Retaining Wall Backfill Material	Per cubic yard (meter)
Item No. 630	Modular Block Retaining Wall Cast-in-place coping, A	Per linear foot (meter)
Item No. 630	Modular Block Retaining Wall Cast-in-place coping, B	Per linear foot (meter)
Item No. 630	Modular Block Retaining Wall Precast coping	Per linear foot (meter)

630.5.01 Adjustments

General Provisions 101 through 150.

Submitted: December 13, 2013
(DESIGN BUILD)

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

**COBB, DEKALB, AND FULTON COUNTIES
P. I. NO. 0010394, 0010401, & 0010403**

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999.1 GENERAL DESCRIPTION

- A. Project Location:** The locations of the construction work included in this Project are shown in the Costing Plans Package. The proposed Project includes 4 different PI's located in Fulton, DeKalb, and Cobb Counties.
- B. Design-Build Concept:** The Contractor and a design consultant (or design consultant team) will work together to design and build the Project. The design consultant will either be acting as a sub-consultant to the Contractor or as a joint-venture member with whom this agreement has been executed. In this document (Section 999), the words "design consultant" or "design consultant team" will refer to the consultant firm or consultant team acting as a subcontractor or joint-venture team member to the Contractor. The design consultant or design consultant team will not be required to fill out Department subcontractor forms for Department use. The term structural design consultant will refer to a member of the design consultant team who is the Engineer of Record responsible for all structural design related elements for the project.

Notice to Proceed (NTP) 1 is the Department's issuance of NTP for preliminary design activities. Title 23, CFR, Section 636.103 (23 CFR Section 636.103) defines preliminary design to include, but is not limited to preliminary engineering and other activities and analyses, such as topographic surveys, metes and bounds surveys, geotechnical investigations, hydrologic analysis, hydraulic analysis, utility engineering, traffic studies, financial plans, revenue estimates, hazardous materials assessments, general estimates of the types and quantities of materials, and other work needed to establish the parameters for the final design. Prior to completion of the National Environmental Protection Act (NEPA) review process, any such preliminary engineering and other activities and analyses must not materially affect the objective consideration of alternatives in the NEPA review process.

NTP 2 is the Department's issuance of NTP for final design activities. NTP 2 will not be issued prior to the NEPA approval. Title 23, CFR, Section 636.103 (23 CFR Section 636.103) defines final design as any design activities following preliminary design and expressly includes the preparation of final construction plans and detailed specifications for the performance of construction work.

NTP 3 is the Department's issuance of NTP for land disturbing activities. NTP 3 may be issued by the Department for the entire Project or for any portion(s) of the Project. If the Contractor intends to construct the Project in phases, the Contractor shall submit a detailed work plan to the Department for approval.

Ensure no land disturbing activities until the following have been accepted by the Department for the entire Project or for any portion(s) of the Project:

- 1. Basis of Design**
- 2. QC/QA Plan**
- 3. Environmental re-evaluation, permits and certification (as applicable)**
- 4. Notification from EPD that states the ES&PC plan and supporting documents are compliant with the NPDES Permit**
- 5. Released for Construction plans**
- 6. Traffic Control Plan**
- 7. Utility Agreements, Utility Encroachment Permits, Utility Relocation Plans, and/or Contractor Certification of "No-Conflict"**

After the Department has issued NTP 3, it shall be the Contractor's responsibility to continue to properly coordinate the Work during the land disturbing phase(s) of the Project. Any additional Project costs involving subsequent utility relocations that are determined to be no fault of the Utility shall be at the Contractor's cost with no additional cost to the Department.

Any additional Project costs associated with additional right of way or environmental impacts shall be at the Contractor's cost with no additional cost to the Department.

Any proposed changes to the team must be approved by the Department. All Work must be performed by entities which are prequalified by the Department.

C. Project Scope: Provide design, permitting, utility relocation and/or utility coordination, construction and any other related services necessary to build the Project.

The Project includes the construction of 4" thick sidewalks, 8" thick sidewalks for wheelchair ramps, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools. Each P.I. and subsequent school locations are provided below with detailed general scope items for each.

1. Design and construct the Project in general conformance with the Costing Plans Package.
 - a. P.I. No. 0010394 (DeKalb County)
 - i. Briarlake Elementary School
 1. Install two (2) radar speed signs (See Appendix A) on Lavista Road East and West of Briarlake Road as located in the Costing Plans Package.
 2. Upgrade wheelchair ramps and pedestrian signal heads and push buttons at the intersections of Lavista Road & Fair Oaks Road and Lavista Road & Frazier Road.
 - ii. Evansdale Elementary School
 1. Construct a 6' wide sidewalk along the south side of Evans Dale Drive from Townley Circle to Evans Woods Drive and along the north side of Evans Dale Road from Evans Woods Drive to Whitby Drive. Install sidewalk as per the typical found in the Costing Plans Package.
 2. Construct a 6' wide sidewalk along the west side of Northbrook Drive from Evans Road to Gladney Drive. Install sidewalk as per the typical found in the Costing Plans Package.
 3. Construct wheelchair ramps at all intersections to connect sidewalks within the project limits.
 4. Avoid all impacts to the stream and stream buffer on Evans Dale Drive.
 5. Avoid all impacts to the stream and stream buffer on Northbrook Drive.
 - iii. Fairington Elementary School
 1. Upgrade wheelchair ramps at the intersection of Fairington Parkway & Phillip Bradley Drive. Provide access across existing medians that meets ADA requirements.
 2. Upgrade wheelchair ramps at the intersection of Ottawa Trail & Phillip Bradley Drive.
 - iv. Hawthorne Elementary School
 1. Install one (1) radar speed sign for eastbound Foster Ridge Road between Brookcliff Way and Brookdale Drive.
 - v. Oak Grove Elementary School

1. Install two (2) raised crosswalks in the school carpool drop off area as per MUTCD figure 3B-30. Raised Crosswalks shall provide a continuous ADA compliant walking surface that connect sidewalks and include crosswalk striping.
 2. Install two (2) Rectangular Rapid Flash Beacons for the crosswalk on Oak Grove Road at the intersection of Oak Grove Road & Greenglade Road.
 3. Install two (2) Rectangular Rapid Flashing Beacons (See Appendix B) for the crosswalk at the intersection of Fair Oaks Road & Akin Drive.
 4. Install two (2) radar speed signs on Oak Grove Road in both directions near the school entrances.
- b. P.I. No. 0010401 (Cobb County)
- i. Cheatham Hill Elementary School
 1. Construct a 5' wide sidewalk connecting existing intermittent sidewalk along the South side of Irwin Road between Wilkes Way and Irwin Lake Overlook SW.
 2. Construct a 5' wide sidewalk along the North side of Irwin Road beginning at Irwin Lake Overlook SW and connect to the existing sidewalk approximately 300 feet northwest of Bondford Pass/Bonshaw Trail.
 3. Widen existing Irwin Road Bridge over Noses Creek accommodate a 5 foot sidewalk. Do not disturb the stream banks of Noses Creek due to the bridge widening.
 4. Avoid all impacts to the wetland located west of Noses Creek. The typical section width may be shortened by removing the 2' grass strip and utilizing a 4' wide sidewalk for a length no greater than 400 LF for impact avoidance pertaining only to the wetland. The Design-Build team shall provide documentation that a reduced typical is required and submit to the Department for acceptance.
 - ii. Kincaid Elementary School
 1. Construct a 5' wide sidewalk along the south side of Kincaid Road beginning at Mirrabeau Court and ending at Sandy Plains Road.
 2. Install a raised crosswalk (as per MUTCD figure 3B-30) west of Ridgewood Court, and install two (2) Rectangular Rapid Flashing Beacon sign assemblies. Raised Crosswalks shall provide a continuous ADA compliant walking surface that connect sidewalks and include crosswalk striping.
- c. P.I. No. 0010403 (Fulton County)
- i. Bethune Elementary School
 1. Construct a 5' wide sidewalk with a 2' grass buffer along existing curb & gutter as shown in the Costing Plans Package.
 2. Replace existing sidewalk with a 5' wide sidewalk as shown in the Costing Plans Package.
 3. Construct wheelchair ramps at the following intersections to connect sidewalk:
 - a. Old Spanish Trail & Old Carriage Drive
 - b. Old Carriage Drive & School Entrance

- c. Middleburg Drive & Carriage Lane
 - d. Ocean Valley Drive & Carriage Lane
 - e. Old Carriage Drive & Carriage Lane
 - f. Hillandale Drive & Carriage Lane
 - g. Carriage Court & Carriage Lane
 - h. Guilford Lane & Carriage Lane
4. Install all required signs, pavement markings, and school flashers for a school zone as per the MUTCD.
 5. Install four (4) speed tables on Carriage Lane as per MUTCD figure 3B-30.
 6. Install one (1) speed table along on Old Carriage Drive as per MUTCD figure 3B-30.
 7. Restripe all stop bars as shown in the Costing Plans Package.
 8. Replace and install all signs as shown in the Costing Plans Package.
 9. Avoid all impacts to the stream crossing on Ocean Valley Drive and Old Carriage Drive. Pipe extensions and impacts to the stream will not be permitted.
 10. Remove the existing gate on Ocean Valley Drive and replace with a new gate in kind that will allow access for the new sidewalk and existing roadway when open.
 11. Install two (2) radar speed signs along Old Carriage Drive as shown in the Costing Plans Package.
2. All wheelchair ramps shall include new crosswalk striping on existing pavement.
 3. All wheelchair ramps and pedestrian signals shall be ADA compliant and meet current GDOT standards and details.
 4. All Wheelchair Ramps and sidewalk within the Radii shall be 8 inch Concrete.
 5. Install railing along the extent of the grade drop when a vertical drop is more than 30 inches, exceeds a down slope grade of 1:2 and is located less than 4 feet from the edge of the trail, walkway, or sidewalk.
 6. Adjust all impacted utilities and facilities to grade which include but are not limited to hand holes, valves, meters, and fire hydrants.
 7. Reset or remove & replace all impacted mailboxes and fencing.
 8. The typical sections as found in the Costing Plans Package shall be considered minimum unless otherwise noted.
 9. Coordinate with GDOT to conduct a 2-hour public meeting for each school to discuss the proposed project with the locals. Provide 2 roll plots (36"x48" minimum) for each meeting that displays the proposed project.
 10. There is no suitable place to bury existing construction debris within the project's limits. The Contractor shall provide an environmentally approved site to dispose of existing construction debris at no additional cost to the Department.
 11. Provide an Engineering Recommendation Report to the Department for each school site which includes but is not limited to improvements not listed in the general scope for safety, ADA requirements, standards and details, AASHTO guidelines, etc.

12. Roadway

- a. All lane widths shown in the Costing Plans Package shall be considered minimum.
- b. All borrow and waste sites for the Project shall be environmentally approved prior to construction activities. All common fill or excess material disposed outside the Project Right of Way shall be placed in either a permitted solid waste facility, a permitted inert waste landfill, or in an engineered fill.
- c. Refer to the approved Costing Plans Package for speed design.
- d. Ensure existing pavement inside the construction limits no longer being used is obliterated, graded to drain and grassed.
- e. Provide Portable Changeable Message Signs as necessary for temporary traffic control. Refer to Special Provision 632. Submit for approval a traffic control plan.
- f. Conduct geotechnical investigations including but not limited to Wall Foundation Investigations (WFI) as needed.

13. Drainage

- a. Design and construct all storm drainage systems required for the Project.
- b. Ensure all installed storm drain pipe is a minimum of 18 inches in diameter.
- c. Verify the condition of any existing drainage system is adequate for those existing systems to be retained within the Project limits, and where the Contractor proposes to connect a new drainage system.
- d. Repair all damaged drainage structures within the project limits.
- e. Clean out and remove debris from all drainage structures within the Project limits to the drainage system outfall, and maintain all drainage structures throughout the duration of construction.
- f. All drainage structures located within radius returns shall be constructed or converted to Georgia standard 1019.
- g. All drainage outfalls including flumes shall be placed and directed in defined channels.

14. NPDES and MS4

- a. Design and construct a system which meets the requirements of GDOT's or the local authorities National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit.
- b. The following are not permitted on this project:
 - i. Underground filtration system.
 - ii. Multi-barrel culvert system for the purpose of complying with MS4 requirements.
 - iii. Proprietary structures designated for MS4 compliance.
- c. The use of an oversized in-line pipe culvert for the purpose of complying with MS4 requirements is permitted provided obstructions are not used. GDOT preferred Structural BMPs include grass channels, dry enhanced swales, infiltration trenches, stormwater ponds, detention ponds, and filter strips. The use of wet swales or stormwater wetlands may be used adjacent to streams and wetlands.

- d. Mark all proposed storm drains within the construction and right of way limits of the Project with a GDOT approved medallion educating the public to the destination of the storm drain contents.
- e. Contractor shall assume, for the purposes of bidding the Work, that all other outfall locations are feasible and shall comply with the MS4 permit requirements. Provide an infeasibility report to the Department within 90 days of NTP1 for each outfall location which meets the infeasibility requirements of the MS4 permit.

15. Structures

- a. The bridge widening on Irwin Road should be widened in-kind. A bridge hydraulic study is not required for widening up to but not exceeding the width specified in the flood study as provided in the Costing Plans Package.
- b. There is no suitable place to bury the existing bridge debris within the limits of the project.

16. Driveways

- a. Obtain the approval of the Engineer prior to making any revisions such as to location, width and/or number of driveways to be constructed.
- b. Apply for Design Variances on all driveways with sidewalk crossings that do not meet ADA requirements.
- c. All drives that are to be reconstructed shall be replaced in kind i.e. asphalt for asphalt, concrete for concrete, and gravel or dirt drives are to be reconstructed with asphalt to the limits of roadway construction or right of way whichever is greater. Where required, drives shall be constructed as follows, unless otherwise noted on the driveway summary:

<u>Material</u>	<u>Spread Rate</u>
Residential Asphaltic Concrete Driveways	
RECYCLED ASPH CONC 12.5 mm SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	165 lb/sy
GRADED AGGREGATE BASE COURSE – 6 INCH DEPTH INCL MATL	N/A
Commercial Asphaltic Concrete Driveways	
RECYCLED ASPH CONC 12.5 mm SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	165 lb/sy
RECYCLED ASPH CONC 19 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	220 lb/sy
GRADED AGGREGATE BASE COURSE – 6 INCH DEPTH INCL MATL	N/A
Residential Concrete Driveways	
PORTLAND CEMENT CONCRETE – 4”	N/A
Commercial Concrete Driveways	
PORTLAND CEMENT CONCRETE – 8”	N/A

17. Signing and Marking

- a. Ensure use of preformed material with contrast on bridges and all other concrete surfaces.
 - b. All signing and marking impacted by the project shall be replaced with new signing and marking that meets current MUTCD and GDOT Signing and Marking Guidelines.
 - c. Ensure all school area, pedestrian, and bicycling signing and marking within project area meets current MUTCD and GDOT Signing and Marking Guidelines and replace or install as needed.
 - d. The removal of existing pavement markings should be in accordance with Standard Specification 656.
- D. Right of Way:** Ensure designing and constructing the Project occurs within the existing Right of Way. Field establish the limits of Right of Way by staking at a minimum spacing of 100 feet prior to construction and ensure no encroachments will occur as a result of construction.
- E. Environmental:** Ensure adherence to and provide all material, labor, equipment, and other incidentals required to adhere to the “Commitments/Requirements” applying to the Contractor, design or construction of the Project. Key words such as “construction,” “contractor,” “work,” etc., point to the areas for which the Contractor is responsible.
1. The Department is responsible for preparation and obtaining approval of the NEPA document and any Environmental Re-evaluations from the Federal Highway Administration (FHWA) since the Contractor is prohibited from being involved with the decision making responsibilities related to the NEPA process (23 CFR Ch 1, Section 636.109(b)(6)). In addition, the Contractor may make recommendations to the Department for consideration. The Department anticipates the NEPA document will be approved prior to award of the Design-Build Contract.
 2. The Contractor may only proceed with preliminary design after issuance of NTP 1 and will not begin final design activities, purchase construction materials or rolling stock, or begin construction until after the NEPA document has been approved and issuance of NTP 2.
 3. Until the NEPA document is approved, the alternative is not “selected”; therefore, the “No-Build” option is still a viable alternative for the Project.

If the “No-Build” alternative is selected, the Project will be terminated according to Section 109.09 of the Contract. In this case, the Contractor will be eligible for compensation on only those specific design-related activities performed up to the time of termination as per the Terms and Conditions of the post-award non-ground breaking Notice-to-Proceed.
 4. The NEPA document includes an Environmental Commitments Table. The Environmental Commitments listed in this “999” are draft, included for bidding purposes only, and will be superseded by the Environmental Commitments Table from the approved NEPA document. The Contractor will adhere to all commitments included in the Environmental Commitments Table from the approved NEPA document. In the event that the Environmental Commitments Table for the approved NEPA document is different from the draft Commitments provided in Section 999.1.E.18, the Department will consider this a changed condition and therefore the Contractor (or the Department) will be entitled to an appropriate adjustment in contract price.
 5. The NEPA document and Special/Technical Studies are valid until Project changes occur which would invalidate the original findings. Any and all design changes made by the Contractor, which are outside of the parameters of the approved Environmental

documentation, may require one or more of the Special/Technical Studies (Air, Archaeology, Ecology, History, and Noise) to be updated. Please note, revising Special/Technical Studies may require review/approval coordination with the various agencies be reopened. Project changes would also require an Environmental Reevaluation of the NEPA document. Updates to the Special/Technical Studies and the Environmental Reevaluation will be completed by the Department. The Environmental Timeframe Matrix provides approximate timeframes for environmental approvals to assist the Contractor in scheduling.

The Contractor shall facilitate a meeting with GDOT within 45 days of NTP1 in which the Contractor will present areas which may be outside of the parameters of the approved Environmental Documentation. In addition, the permitting strategy, schedule, and opportunities to phase construction activities shall be discussed.

6. Provide to the Department Project change information, revised/final plan sheets, and any additional work product that may need to be considered in the NEPA analysis, in order to update Special/Technical Studies and complete the Environmental Reevaluation.
7. To proceed to Construction, the Special/Technical Studies and the NEPA document must have addressed all Project changes affecting environmental resources or limits of construction.
8. Once it has been determined the environmental documentation is accurate and all NEPA related tasks (such as approval of an Environmental Reevaluation, all Preconstruction Environmental Commitments, including, but not limited to receipt of all permits, variances, and the purchase of mitigation credits) have been completed, the Department will issue an Environmental Certification which will be provided to the Contractor. **No land disturbing activities will take place until this certification or conditional certification is issued.**
9. Provide the proposed impacts to streams and wetlands, open waters, and any associated state-protected vegetative buffers which include impacts resulting from utility relocations, and temporary and/or permanent impacts, resulting from construction of the Project.
10. If the proposed design impacts waters of the US then an application for the Section 404 Nationwide (NWP) or Regional (RP) Permit application to the US Army Corps of Engineers will be completed by the Contractor. The Section 404 NWP or RP will cover the entire project area. Prepare the Section 404 NWP or RP application to the Department's satisfaction. Allow (2) 30 day Department review periods for the Section 404 NWP or RP. The Department will transmit the Section 404 NWP or RP to the US Army Corps of Engineers. The Contractor will satisfactorily address any US Army Corps of Engineer's comments within 14 calendar days of receipt.
11. It is anticipated that approximately 90 days will be required from the time the Department transmits an acceptable Section 404 NWP or RP application to receipt of agency approval. If any additional impacts result from the Contractor's proposed design versus those in the most recent ecology addendum, then the Department will perform special studies which will require 90 additional days prior to the Department's submittal of permit documentation to the appropriate agency and will require the Department to complete a reevaluation. Once the Department receives an approved Section 404 NWP or RP from the US Army Corps of Engineers, the Department will issue written notification to the Contractor that the Contractor shall then acquire all mitigation credits in the name of the Department as required under the approved permit. All mitigation credits obtained by the Contractor and applied to the Project shall be approved by the US Army Corps of

Engineers. Upon satisfactory receipt of the Contractor's credit purchase, the Department will provide written authorization to work in jurisdictional Waters of the US in accordance with the permit conditions.

12. Verify the need for any Georgia Buffer Variances on this Project. Ensure the necessary design and construction needed to avoid or mitigate for the buffer(s) impact. If a Buffer Variance is identified then the Contractor is responsible for notifying the Department no later than the time of the preliminary plans submittal to the Department. Prepare the Buffer Variance application to the Department's satisfaction. The Department will be listed as the applicant. Allow (2) 30-day review periods for the Buffer Variance. The Department will transmit the Buffer Variance application to Georgia's Department of Natural Resources, Environmental Protection Division. The Department anticipates approximately 150 days will be required from the time the Department transmits an acceptable Buffer Variance application to receipt of agency approval. The Contractor will satisfactorily address the Georgia Environmental Protection Division's comments within 14 calendar days of receipt. The Buffer Variance cannot be granted without the submission of the Section 404 NWP or RP application, if the application is under Criterion 2(H).
13. One Buffer Variance per NOI is required, if applicable.
Buffer encroachments located within multiple Notice of Intent (NOIs) areas will require multiple Buffer Variances
14. Erect orange barrier fencing within the Project area to establish and protect any Environmentally Sensitive Areas (ESA) within the Project to prevent any encroachment upon said area during construction activities. Within ESA buffers for which a variance was obtained, install orange barrier fence within the buffer at the limits of the construction for which the variance was obtained.
15. Prepare a report by an environmental professional that meets ASTM E-1527-05, Standard Practice for Environmental Site Assessments. The Department will provide the Phase I reports for the six proposed parcels. Prepare a Phase I assessment for any additional ROW parcels. If it is determined that there is a potential environmental risk based on the Phase I report then a Phase II investigation shall be performed. Prepare timely written notification to the Department of any environmental or other concerns associated with the ROW or additional properties to be acquired that could require environmental remediation or other special attention or which would cause a report to be prepared.
16. The following Environmental Commitments/Requirements are currently anticipated in the DRAFT NEPA document. Actual impacts requirements may change per the final design:
 - a. Place and label historic boundaries ESA on Project plans.
 - b. Place and label Waters of the US ESA on Project plans.
 - c. Place and label stream buffers ESA on plans.
 - d. Include the following note on all plan sheets with resources delineated as ESAs: "See Environmental Resources Impact Table in the General Notes for Construction Restrictions."
 - e. Delineate all ESAs with orange barrier fencing.
 - f. Obtain stream Buffer Variances.

- g. Obtain all applicable permit(s), included but not limited to, Section 404 NWP or RP and NPDES permit. The permit(s) shall be acquired by the Contractor following the award of the contract, but prior to the start of construction.
- h. Ensure per SP 107.23 G for Protection of Federally and State Protected Species.

Environmental Timeframe Matrix

Document/ Permit/ Authorization	Coordinating Agency	Materials Needed	Approval Time*	Additional Information	Expiration of Document/Permit/ Authorization
Special/Technical Studies and NEPA Environmental Reevaluation	State Historic Preservation Officer (SHPO), United States Fish and Wildlife Service (USFWS), and the Federal Highway Administration (FHWA)	<ol style="list-style-type: none"> The Contractor shall be required to provide to the Department Project change information, revised/final plans, and any additional work product that may need to be considered in the NEPA analysis that are outside of the original parameters of the Special/Technical Studies and the NEPA document for updating of those documents. Approved Special/Technical Study Addendums provided to the Contractor by the Department, which have been updated with regard to any Project changes or change in Project impacts due to more detailed design plans. 	<ol style="list-style-type: none"> FHWA: to initiate Section 7 coordination w/ USFWS; USFWS: 30 days for Section 7; GDOT: 90 days for each draft Special/Technical Studies and 90 days for an Environmental Reevaluation; SHPO/USFWS: 45 days to review Special Studies FHWA: 30 days to review Environmental Reevaluation and an additional 21 days if they provided comments to GDOT on the Reevaluation. GDOT: 30 days per review to update draft Special/Technical Studies and/or the draft Environmental Reevaluation based on comments received from FHWA or any agency reviewing documentation such as USFWS, or the SHPO. 	<ol style="list-style-type: none"> Section 7 concurrence from FHWA/USFWS will be required before the reevaluation can be submitted to FHWA. All preconstruction commitments on the green sheet will need to be completed or on track to be completed for the Environmental Reevaluation to be submitted to FHWA for review. The Project cannot be Environmentally Certified for construction until <u>ALL</u> preconstruction commitments have been completed. 	<p>The Environmental Reevaluation is valid until Project changes are made that could invalidate the document or affect any of the commitments included in the Environmental Reevaluation.</p> <p>Should changes occur during construction, Special/Technical Studies may need to be updated and a new Environmental Reevaluation would need to be approved.</p>
Section 404 (NWP)/(RP)	US Army Corp of Engineers (USACE)	PCN, 8½" X 11" plans (includes cover sheet and construction plan sheets that show the impacted resource), Jurisdictional Determination request, and signed NEPA document.	90 days	Mitigation for the impacts to waters of the US requires approval from the USACE before work can begin. Required compensatory mitigation must be purchased prior to work within the waters of the US beginning.	NWP; In general, 2 years from date of letter unless under construction and then there is 12 additional months to complete the authorized activities. RP; 5 years from date of letter unless under construction.
Buffer Variance	Georgia Environmental Protection Division (EPD)	Application, 11" X 17" plans (includes cover sheet and the individual E&S plans for the area(s) of the Project requiring the variance, legal ad for newspaper.	150 days	Every NOI that contain buffer encroachment will require stream buffer variance. For the roadway buffer impacts, the design must follow the mitigation guidelines found on EPD's website. If the variance is being applied for under criterion "H", then the Section 404 permit is required before variance can be issued.	None unless there are changes in the plans that result in additional buffer impacts. At that time a revision to the existing variance would be needed.
State Waters Determination	EPD	Plan sheets	30 days	Required if any resources will have non-exempted buffer impacts and buffer status is unclear	None unless conditions change.

999.2 PLANS

- A. General:** The Costing Plans Package prepared on behalf of the Department includes multiple resources. The Department, in making this information available to Contractors, assumes no responsibility for its accuracy. No claim will be considered if the Contractor relies on this data in its bidding or in its construction operations and finds that it is inaccurate.

In addition, the Contractor shall be aware “existing conditions” found in the Costing Plans Package may have changed since the field survey work and associated design efforts were completed. Verify all existing conditions. No claims will be considered due to decisions/assumptions made by the Contractor based on “existing conditions” reflected in the Costing Plans Package.

To download the Costing Plans Package:

1. Enter <http://mydocs.dot.ga.gov/info/designbuild/default.aspx>

Check this site daily for possible updates.

A “Read Me First” file is included which contains documentation identifying when new files are added or modified.

A Question and Answer (Q&A) spreadsheet is also included. All questions submitted to the Department will be posted. The Department will provide a response to each question. The responses provided by the Department shall be considered for information only.

Refer to the Department’s Notice to Contractors for instructions to submit questions:

<http://www.dot.ga.gov/doingbusiness/contractors/Pages/default.aspx>

Note: All questions are to be submitted in writing to the GDOT Office of Construction Bidding Administration, please contact Monica Flournoy at:

Email: mflournoy@dot.ga.gov
Phone: 404-631-1147

999.3 DESIGN

A. General:

1. **Measuring Units:** Ensure the Project is designed in **English** units of measurement.
2. **Design Software:** Design using MicroStation in conjunction with InRoads in accordance with Department's Electronic Data Guidelines (EDG), most current version, found at: <http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/software/Pages/default.aspx>.
3. **Design Scope of Services:** Prepare Plans in accordance with Chapter 11.4 of the Georgia Department of Transportation's Design Policy Manual and format as contained in this Special Provision and in accordance with, but not limited to the reference materials listed in Section 999.3.B.1.b.

Current Department design manuals and guidelines may be found at: <http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/Pages/default.aspx>. Ensure Project designers consider all elements of the design, including but not limited to roadway geometry, drainage requirements, traffic control during construction, erosion control, structural design, utility conflicts, signing and marking, and future maintenance requirements.

4. **Design Reviews:** Prepare the design under the direct supervision of licensed design professionals. A Professional Engineer licensed to practice engineering in the State of Georgia on the design team must seal the final plans. The seal on the drawing represents certification the design meets all applicable codes and is of good engineering practice and standards. Check and certify the design.

The Department will establish dates and times for cursory reviews and will comment on design work, but will not require hold points on the design, review periods, or comment responses, except as noted otherwise. If at any time the Department determines the design work is not in conformance with the Department's standards, details, specifications, or good engineering practice, the Department reserves the right to stop work, at the Contractor's expense until a resolution of the issue(s) has occurred.

Submit construction documents (plans and specifications) shown in Table 4-1, Table 4-2 and Appendix 14 to the Department for review and acceptance. Acceptance, disapprovals, or comments made by the Department will be provided in writing to the Contractor within the appropriate timeframes shown in Table 4-1, Table 4-2 and Appendix 14.

No construction is to begin on any phase of the Work prior to the Department authorizing the various component(s) of the plans as Released for Construction. Other items shall be submitted to the Department by the Contractor, if requested. After the Department has accepted the plans and has authorized them as Released for Construction, any requests for any subsequent plan/design changes and include necessary documentation which supports the reasoning behind the change request must be submitted to the Department. The Department must approve the requested change with written notice prior to its implementation as a plan revision and subsequent construction activity.

Facilitate monthly progress meetings at a venue and time determined convenient to the Department. The general purpose of these meetings are to update the Department staff on the status of design, current activities, issues, activities that the Department is currently performing, and other related matters that impact scope, schedule and budget. Provide the Engineer an agenda of items one week in advance of the meeting in order the Engineer may arrange for the various GDOT Office reviewer(s) to attend, if necessary. Other attendees include the Contractor, design consultant, the Department's Project Engineer and Project Manager. Provide a call in number and conferencing capabilities to

allow others to participate at the Department's discretion. Publish meeting notes of those discussions within two weeks of their occurrence and sent to all attendees and others indicated by GDOT. Ensure the first of these monthly meetings occur at the conclusion of the Post Award Meeting.

ABBREVIATIONS FOR TABLE 4-1

AR	As Required
ANC	As necessary for submittal compliance with RFP package
FS	Full-size paper – meets GDOT Plan Presentation Guide
HC	Hard Copy – 8 ½ x 11 unless otherwise noted
HS	Half-size paper – meets GDOT Plan Presentation Guide
MS	MicroStation File – Electronic
NTP	Notice to Proceed
PAS	Per Approved Schedule
PDF	Adobe PDF – One complete file and individual plan sheet files meets GDOT Electronic Plans Process

TABLE 4-1: REVIEWS

Submittal Description	Format	Quantity	Delivery Date	Review Period	Review Type	Comment
Basis of Design	HC, PDF	3, 1	NTP(1)+7	14	Accepted by Engineer	<p>The Basis of Design narrative will constitute the Contractor's ownership of or modifications to the documents provided "for information only" (See 999.2.A), as well as a discussion of how this information will be utilized to develop the final design. Ensure submission of any proposed changes in the design including the justification for the changes.</p> <p>If the project is proposed to be designed and constructed in phases then the Basis of Design must include the plan for project phasing. Each phase of the project must include at a minimum Preliminary, Final, backcheck, and Released for Construction Plans.</p>
Schedule of Values	HC, PDF	3, 1	NTP(1)+14	14	Accepted by Engineer	
Critical Path Method (CPM) Schedule	HC, PDF	3, 1	NTP(1)+14 for Baseline Other CPM submittals, refer to Section 108.03.C	14	Accepted by Engineer	Refer to Section 108.03
QC/QA Plan	HC, PDF	3, 1	NTP(1)+14	21	Accepted by Engineer	Refer to section 999.3.A.6
Construction Plans (Non ITS, ROW or Structural) <ul style="list-style-type: none"> • Final Plans • Backcheck 	FS, HS, PDF	<ul style="list-style-type: none"> • 2, 22, 1 • 0, 2, 1 	PAS	<ul style="list-style-type: none"> • 30 • 7 	Accepted by Engineer	<p>Submittal shall include features/plan sheets as described in GDOT's PPG and other resources.</p> <p>Plan submittals that do not meet the requirements of GDOT Guidelines and Manuals will be rejected.</p>
Released for Construction Plans	FS, HS, PDF	3, 6, 1	PAS	NA	NA	Department will then issue Released for Construction authorization when the backcheck plans are accepted or notify the Contractor that Final Construction Plan comments were not adequately addressed.
Notice of Intent (NOI) Package <ul style="list-style-type: none"> • Completed and signed NOI • Progress schedule chart • Final/Signed ESPCP 	<ul style="list-style-type: none"> • HC, PDF • HC, PDF • HS, PDF 	<ul style="list-style-type: none"> • 1, 1 • 1, 1 • 3, 1 	PAS	NA	EPD letter stating plans do not contain deficiencies.	<p>The Contractor will submit the NOI package and final/signed ESPCP to EPD for review. The Contractor will address any plan changes required by EPD.</p> <p>For phased NOI and ESPCP, submit complete plan sets for each phase. Each phase should be independent and should not identify erosion</p>

						and sediment control measures from other phases.
Preliminary Structures • Bridge Plans • Retaining Wall Layouts	FS,HS,PDF	2, 3, 1	PAS	30	Accepted by Engineer	
100% Structures • Bridge Plans • Wall Plans	FS,HS, PDF	2, 3, 1	PAS	30	Accepted by Engineer	Bridge/Wall plan reviews will not begin until after the BFI/WFI is accepted. 30 day review will apply to individual bridge or wall submittals.
Geotechnical Reports	HC, PDF	2, 1	PAS	30	Accepted by Engineer	
Worksite Utility Control Supervisor Qualifications	HC, PDF	3, 1	PAS	14	Accepted by Engineer	Department must accept prior to Contractor performing land disturbing activities.
Worksite Erosion Control Supervisor Qualifications	HC, PDF	3, 1	PAS	14	Accepted by Engineer	Department must accept prior to Contractor performing land disturbing activities.
Worksite Traffic Control Supervisor Qualifications	HC, PDF	3, 1	PAS	14	Accepted by Engineer	Department must accept prior to Contractor performing land disturbing activities.
Construction Traffic Control Plan	FS,HS, PDF	3, 3, 1	PAS	21	See Specification 150	
Shop Drawings	FS	6	PAS	30	Accepted by Engineer	
Plan Revisions (after issue of NTP3)	FS, HS, PDF	3, 4, 1	Per occurrence	14	Accepted by Engineer	Contractor shall include clear and concise description of revision along with documentation justifying reason for proposed revision.
MS4 Infeasibility Recommendations	HC,PDF	3,1	NTP(1)+45	90	Accepted by Engineer	Refer to Section 4.2.5.1.(b) of MS4 Permit.

All days are “Calendar Days.”, as defined in section 101, Standard specifications

Transmit all submittals to the Engineer. The Engineer will provide submittals to the applicable GDOT Office Reviewer and/or other applicable entities unless otherwise noted or discussed with the Contractor. **Hand-deliver submittals.** In the event concurrent submittals are required, the “receipt” date shall be the date the last recipient receives the submittal and shall be the contractual begin date for the review. Unless a different review time is specified elsewhere in the contract, a period of **thirty (30) calendar days** from receipt to release of the submittal by the Department shall be allowed for the Department’s review. Engineer’s (Department’s) acceptance as to completeness is required for all reviews. All Contractors’ schedules shall reflect the review times contained within the specifications and contract. Engineer’s receipt of submittals will mark the beginning of the review period. Provide up to date half-size sets of plans with the most current design and construction plans at any time during the Project when requested by the Engineer. Errors and omissions are the responsibility of the Contractor to correct and shall be at the Contractor’s expense.

Do not submit more than 10 submittals within a twenty-one (21) calendar day period.

All submittals shall include a cover letter describing the submittal, review period and the due date for any Department response.

All submittals shall include the Contractor's QC/QA certification statement (in addition to the design consultant’s QC/QA certification statement for all design related submittals). **The Department will reject any submittal if the QC/QA certification statement is not included.**

Any submittal received by the Engineer after 12 PM (noon) will be considered as being received the following business day.

5. **Field Surveys:** Verify all provided survey data and update to current Electronic Data Guidelines (InRoads). Provide terrain and drainage cross sections, pavement elevations, and drainage structure information for this Project. Provide all survey data noted in English units. All supplemental field survey information is to be completed in accordance to the *GDOT Automated Survey Manual*.
6. **Quality Control/Quality Assurance:** The Department, except where noted otherwise, will have oversight responsibilities only and will not perform detailed reviews and approvals of design work. The Department will not take any approval or formal review actions on design issues except as noted herein or for deviations from the intended scope of the Project.

Employ only persons duly registered in Georgia in the appropriate category in responsible charge of supervision and design of the work; and further, employ only qualified, State of Georgia registered land surveyors in responsible charge of any survey work.

Use only a consultant design team prequalified by the Department in all applicable area classes as described in the SOQ. Should a member of the design consultant team need to be replaced, the Department must approve of the change prior to the Project letting. Failure to secure approval of the replacements prior to letting may result in the disqualification of the Contractor's bid.

Endorse all final reports, contract plans and survey data. These endorsements shall be made by a person(s) duly registered in the appropriate category by the Georgia State Board of Registration for Professional Engineers and Land Surveyors, being in the full employ of the Contractor and responsible for the work prescribed in the contract.

Authorized representatives of the Department and Federal Highway Administration (FHWA) may review and inspect the Project activities and data collected at all times. All reports, drawings, studies, specifications, estimates, maps and computations prepared by or for the Contractor shall be available to authorized representatives of both the Department and FHWA for inspection and review. The Department's review comments are to be incorporated into the plans by the Contractor or as agreed. These changes shall not result in an increase in cost.

Before the start of the contracted design effort, develop and acquire the Department's approval for a QC/QA Plan to ensure all design documents are prepared in accordance with the Department's Plan Presentation Guide (PPG) for MicroStation using good, prudent and generally accepted design and engineering practice. Also see the Department's Manual of Quality Standards for Consultant Services.

- a. Ensure the QC/QA Plan includes the following, which shall be considered minimum requirements:
 - 1) Quality control and quality assurance procedures for design documents specify measures to be taken by the Contractor to (A) ensure appropriate quality standards are specified and included in the design documents and to control deviations from such standards, being understood and agreed no deviations from such standards be made unless they have been previously accepted by the Department, and (B) for the selection of suitable materials and elements of the Work included in the Project.
 - 2) Quality control and quality assurance procedures for preparing and checking all plans, calculations, drawings and other items submitted to ensure they are independently checked and back-checked in accordance with generally accepted engineering practices, by experienced engineers. Identify the originator, checker and back-checker on the cover of all submittals. Ensure the Plans, reports and other documents are stamped, signed and dated by the responsible Georgia Registered Engineer where required under the contract

documents, generally accepted engineering practices or by applicable laws. The Contractor will submit a certified statement to ensure all reviews have been made.

- 3) Procedures for coordinating work performed by different persons within the same area, in an adjacent area or in related tasks shall ensure that conflicts, omissions or misalignments do not occur between drawings or between the drawing and specifications. These procedures allow for the coordination of the review, approval, release, distribution and revision of documents involving such persons.
- 4) All the persons proposed to be responsible for Quality Control and Quality Assurance procedures are to be listed as follows: Discipline, Name, Qualifications, Duties, Responsibilities and Authorities.
- 5) Designate all key personnel performing Quality Control and Quality Assurance functions as such and will not be assigned to perform conflicting duties.

All plan related documents produced during the contract period are to be maintained by the Contractor for the duration of the Contract organized, indexed and delivered to the Department (1) upon Final Acceptance of the Project or (2) even if incomplete, within seven (7) days of receipt of request from the Department. These documents include, but not limited to, the following items: design criteria, reports and notes, calculations, drawings, schematics, supporting materials, statement regarding accomplishment of reviews and others.

7. **Released for Construction:** Upon the Contractor's satisfactory completion of the items listed in 999.1.B, and upon written authorization from the Department the plans are Released for Construction, stamp each plan sheet with "Released for Construction" and include the authorization date. The Released for Construction plans are the official plans used for construction of the Project.
8. **As-Built Plans:** Upon completion of the Project construction, provide a complete As-Built set of plans to the Department in the following formats:
 - a. Two (2) CD-ROMs or DVDs containing:
 - 1) all electronic design files, electronic calculations, etc.
 - 2) .pdf of each plan sheet – one sheet per file
 - 3) .pdf containing the entire plan set
 - b. One (1) hard copy of the design data book, and drainage calculations
 - c. Two (2) full-size set of bond prints
 - d. Two (2) half-size set of bond prints
 - e. GIS database containing the existing and proposed drainage structures and ditches within the construction and right of way limits.
 - 1) Ensure GIS data complies with Section 999.3.G.
 - f. Provide a revised estimated summary of quantities and detailed estimate in the final As-Built plans

Ensure all production and delivery of materials needed for Department review. Both a member of the design team, who is a Professional Engineer, and a member who is a Registered Surveyor, licensed to practice engineering in the State of Georgia shall seal the As-Built plans.

9. **Ownership of Documents:** The Contractor agrees all reports, drawings, studies, specifications, survey notes, estimates, maps, computations, computer files and other data, prepared by or for the Project under the terms of this Agreement and delivered to

the Department become and remain the property of the Department. The Department will have the right to use this information without restriction or limitation and without compensation to the Contractor other than provided for in this agreement.

Any use of these documents by the Department on any Project other than this one will be done without warranty by the Contractor/Design Consultant Team.

10. Insurance: In addition to the insurance requirements covered elsewhere, provide insurance coverage of the following types and amounts:

- a. Valuable Papers: Insurance in an amount sufficient to assure the restoration of any plans, drawings, field notes or other similar data relating to the work covered by the Project is required. Insurance is to be maintained in full force and effect during the life of this Agreement.
- b. Professional Liability (Errors and Omissions): Insurance in an amount not less than one million dollars (\$1,000,000) per claim (with a maximum of \$250,000 deductible per claim) during the agreement term and for a period of at least five (5) years after this Agreement is closed is required. Such a policy is to cover all of the Contractor's professional liabilities, whether occasioned by the Contractor, his employees, subcontractors or other agents, arising out of services performed under or in accordance with this Agreement.
- c. This form should be submitted to the Department along with the Contract at the Post Award meeting.

11. Publication and Publicity: Articles, papers, bulletins, reports or other materials reporting the plans, progress, analyses or results and findings of the work conducted under this Agreement shall not be presented publicly or published without prior approval in writing from the Department. All releases of information, findings and recommendations shall include a disclaimer provision to be included in all published reports on the cover and title page in the following form:

"The opinions, findings and conclusions in the publication are those of the author(s) and not necessarily those of the Department of Transportation, State of Georgia or the Federal Highway Administration."

Any information concerning the Project, including conduct, results or data gathered or processed, released by the Contractor without prior approval from the Department will constitute grounds for termination without indemnity to the Contractor. Information released by the Department or by the Contractor with prior written approval is to be regarded as public information and no longer subject to the restrictions of this Agreement. Information required to be released by the Department under the Georgia Open Records Act, Section 50-18-70, et seq., O.C.G.A., the restrictions and penalties mentioned set forth herein shall not apply. Any request for information directed to the Contractor, pursuant to the Georgia Open Records Act, is to be redirected to the Department for further action.

12. Copyrighting: The Contractor and the Department agree any papers, interim reports, forms and other material which are a part of work under this Agreement are to be deemed a "work made for hire", as such term is defined in the Copyright Laws of the United States. As a "work made for hire", all copyright interests in said works shall vest in the Department upon creation of the copyrightable work. If any papers, interim reports, forms or other material which are a part of work under the Agreement are deemed by law not to be a "work made for hire", any copyright interests of the Contractor are hereby assigned completely and solely to the Department. Publication rights to any works produced under this Agreement are reserved by the Department.

13. Patent Rights: If patentable discoveries or inventions result from work described herein, all rights accruing from such discoveries or inventions are the sole property of the

Contractor. However, the Contractor agrees to and does hereby grant to the Department, an irrevocable, non-exclusive, non-transferable and royalty-free license to practice each invention in the manufacture, use and disposition according to law of any article or material and in use of any method that may be developed as a part of the work under this Agreement.

B. Roadway

1. Preparation of Construction Plans

- a. General Criteria: Ensure and use the most current design criteria at the time of advertisement, as determined by the Department, American Association of State Highway and Transportation Officials (AASHTO) Design Manuals for Arterial Streets, Rural, Urban and Interstate Highways, including those standards adopted by AASHTO and approved by the Secretary of Commerce, as provided by Title 23, United States Code, Section 109 (b), with the Department's Standards, Procedures, Plans, Specifications and Methods, with Federal Highway Administration procedures relating to plan review and approval, and shall produce plans in accordance therewith.
- b. Design Specifications and Guidelines: Design for roadways and intersections shall be in accordance with the current edition of AASHTO Design Specifications; AASHTO Roadside Design Guide; and the Department of Transportation Standard Specifications for Construction of Roads and Bridges, 2013 edition, and any Supplemental Specifications. Plan and specifications shall conform to the requirements of the Highway Capacity Manual.

Design for work to conform to AASHTO design standards for the appropriate classification and speed design.

Utilize the following references (**current at time of advertisement**) as a minimum in the development of this Project in addition to the references listed above.

- 1) Electronic Data Guidelines (EDG)
- 2) Plan Presentation Guide (PPG)
- 3) GDOT Design Policy Manual
- 4) GDOT Design Policy Manual Chapter 9 "Complete Streets Design Policy" for the pedestrian, bicycle, and transit design: <http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/DesignPolicy/GDOT-DPM-Chap09.pdf>
- 5) Manual on Uniform Traffic Control Devices (MUTCD) by the U.S. Department of Transportation, Federal Highway Administration "FHWA" and all Interim Approval Memos.
- 6) AASHTO Geometric Design of Highway and Streets
- 7) Municipal Separate Storm Sewer System (MS4) Permit, GAR041000
- 8) Guidelines for Processing Design Data in InRoads Design Guidelines (<http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/software/Pages/INROADS.aspx>)
- 9) GDOT Construction Standards and Details
- 10) Pay Item Index by the GDOT State Transportation Office Engineer
- 11) Utility Accommodation Policy and Standards Manual
- 12) GDOT Signing and Marking Design Guidelines
- 13) GDOT Traffic Signal Design Guidelines
- 14) GDOT Driveway and Encroachment Manual
- 15) GDOT Bridge Design Memos and the Bridges and Structural Design Manual revised May 2013

- 16) GDOT Drainage Manual
- 17) 2009 AASHTO Standard Specifications for Structural Support for Highway Signs, Luminaires and Traffic Signals Other manuals of guidance which are standard procedures of the Department, (signal design, signing and markings, etc.)
- 18) AASHTO A Guide for Achieving Flexibility in Highway Design
- 19) AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
- 20) AASHTO Guide for the Development of Bicycle Facilities

The above list is not intended to be all-inclusive. Any current editions written in metric units ensure “soft converted” to U.S. Standards Units. Any rounding shall be to the dimension that shall increase safety.

- c. Erosion and Sediment Control Sheets: No land disturbing activities until the Control of Soil Erosion and Sedimentation Plan has been accepted by EPD; the NOI has been successfully submitted to EPD by the Contractor; EPD has issued a letter to the Contractor indicating the plan “does meet” current NPDES requirements; and the required waiting period of 14 days is observed.

Prepare the Erosion Sedimentation and Pollution Control Plans (ESPCP) in general conformance with current Department practice, and in accordance with the requirements set forth in the NPDES General Permit No. GAR100002. NPDES General Permit Guidance is found at: <http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/Pages/default.aspx>.

In addition, design the plans in accordance with the current version of Georgia Soil and Water Conservation Commission’s Manual for Erosion and Sediment Control in Georgia (Green Book).

Erosion and Sediment Control Plans detail the erosion control devices to be used. These devices include, but are not limited to, sediment traps, floating silt retention barriers, check dams, silt fence (types A, B & C), brush barriers and slope drains. Additional plan sheets are required for each stage of construction. Additional plan sheets are also required to illustrate phased installation of erosion measures. All required sediment and erosion control items, including but not limited to installation and maintenance, shall be paid for under CONSTRUCTION COMPLETE.

As contained within the Department’s standard ESPCP General Notes (June 7, 2012 or more current), remove all references to the following statement: “The Erosion Sedimentation and Pollution Control Plan (ESPCP) is provided by the Department.”

C. Bridges and Structures

1. Design Specifications and Guidelines:
 - a. Design bridges in accordance with the AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002.
 - b. Design retaining walls in accordance with the AASHTO Design Standard Specifications for Highway Bridges, 17th Edition, 2002.
 - c. Use the Bridge & Structural Design Manual available on the R-O-A-D-S website: <http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/Pages/DesignPolicies.aspx>.
 - d. Use "Basic Drawings" where possible. Basic drawings and cells can be downloaded at the following internet address:
<http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/software/Pages/BridgeEngineeringPrograms.aspx>.
 - e. Use MicroStation/J to prepare plans in accordance with the Office of Bridge and Structural Design's MicroStation Customization. These files include a folder structure that is required to be on C:\Drive along with the "Bentley" folder. Access the Bridge MicroStation Customization files at the internet address: <http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/software/Pages/MicroStation.aspx>.
2. Foundation Investigations: The Contractor shall perform bridge and wall foundation investigations for all proposed walls and bridges to be constructed on this Project. Previously approved reports provided by the Department are for informational purposes only. The investigation and reporting shall be prepared in accordance with the following:
 - a. General:
 - 1) Perform field and laboratory testing and analysis, and prepare a report with foundation recommendations for the bridges and walls. Work is to be performed by qualified and experienced firms that are pre-qualified with the Department in Area Class 6.02.
 - 2) Perform work in general conformance with the Department's Geotechnical Engineering Bureau Foundation Drilling and Sampling Guidelines. Comply with all applicable Federal and State requirements.
 - b. Field Investigation:
 - 1) Drill a minimum of one boring at each bent line and at each wall. Drill additional borings as necessary. Perform the following, as applicable:
 - (a) Notify property owners prior to accessing their properties.
 - (b) Obtain locations and clearance for all utilities within the area of the borings.
 - (c) Provide traffic control and lane closures in accordance with the Department's Specifications.
 - (d) Clearing and preparation of the boring site.
 - (e) Obtaining and transporting water to the site.
 - (f) Foundation drilling and sampling of soil and rock.
 - (g) Obtaining accurate survey elevations.
 - (h) Site cleanup, erosion control, and restoration.

- 2) Fill portions of all drill holes with drill cuttings after completion of drilling that are not subject to excavation for construction. Top off all drill holes through pavements with cold mix asphalt (unless subject to excavation) to the same depth as the existing pavement. Remove all drill cuttings, muddy water, slurry, and other debris deposited on pavements, paved shoulders, and other travel ways immediately when the areas shall be subject to traffic after the completion of drilling. Calculate elevations to an accuracy of one tenth (0.1) of a foot.
 - 3) Do not provide copies of boring logs, plans, or field test reports to property owners or other parties without the permission of the Department.
- c. Laboratory Testing:
- 1) Perform laboratory testing on samples obtained from the field in accordance with applicable methods of AASHTO, ASTM, or GDT test procedures. Use a laboratory that possesses current AASHTO certification.
 - 2) Furnish laboratory results as part of the Final Report.
- d. Final Analysis and Report:
- 1) Perform a geotechnical analysis for this Project and prepare geotechnical recommendations in the form of a final report to the Department for review, prior to foundation construction. Base the final report on the information collected from the field investigation, the plans, specifications, results of laboratory tests, and the analysis of all other available information.
 - 2) Stamp and sign the final reports by a Professional Engineer registered in the State of Georgia. Provide two copies of the final report to the Department.
 - 3) Prepare the reports in general conformance to the Department's Geotechnical Engineering Bureau Report Preparation Guidelines, Department's Specifications, and in conformance with good engineering practice. Incorporate the following recommendations and additional recommendations as applicable
 - (a) Foundation types including factored and service design loads.
 - (b) Spread Footing elevations.
 - (c) Pile minimum, estimated tip elevations, and Driving Resistance
 - (d) Driving Analysis.
 - (e) Drilled caisson tip elevations.
 - (f) Foundation installations in rock.
 - (g) Embankment construction, settlement, and slope angles.
 - (h) Treatment of groundwater conditions.
 - (i) Treatment of poor soil conditions.
 - (j) Construction effects on adjacent utility structures and remedies for any potential problems.
 - (k) Locations of Utilities for the purpose of identifying conflicts with retaining walls.
 - (l) Bottom of wall elevations.
 - (m) Soil parameters for the design of proposed walls.
 - 4) In the Final Report, include (as applicable) copies of boring logs, field notes, laboratory and field test results or summaries, photographs, special provisions, details and drawings, and other related information. Correct final reports with

errors and omissions, as determined by the Department. Resubmit the corrected report at no additional cost to the Department.

- 5) Acceptance of the work by the Department will not relieve the Contractor of the responsibility for subsequent correction of errors or for the costs associated with work caused by negligent errors or omissions from work performed by the Contractor.

3. Construction Plan Submittals and Reviews

Refer to Schedule of Deliverables (Table 4-1) for the format, quantity, review type and review period for each submittal scheduled.

- a. Preliminary Plans: Preliminary Bridge Layout and Preliminary Wall Plans
 - 1) Preliminary plans must be accepted by the Department prior to starting final design of the bridge.
- b. Final Construction Plans: Submit complete bridge plans and complete wall plans. Plans will be reviewed and accepted by the Department.
- c. Shop Drawings.
- d. Released for Construction Drawings: Issued once reviews are completed and all corrections have been addressed.
- e. Submit one (1) hardcopy and one (1) electronic (.PDF) of the final design calculations along with the Final Bridge and Wall Construction Plans at the time of submittal.
- f. Resubmit one (1) hardcopy and one (1) electronic (.PDF) of the revised corrected calculations with the Released for Construction Bridge and Wall Plan submittal.

4. Preliminary Bridge and Wall Plans

a. Preliminary Bridge Plans

The following information is to be used in the development of the final plans:

- 1) The Contractor shall prepare a Preliminary Layout for the Department's review and acceptance in accordance with the following guidelines for the bridge to be widened :
 - (a) The Contractor shall verify all dimensions and elevations in the field prior to preparing plans.
 - (b) Do not increase stresses on existing bridge elements during staging.
 - (c) Design the widened substructure end bents using concrete caps, supported on either driven piles or spread footings. Tops of footings shall be a minimum of three feet below existing grade and possible roadway grades.
 - (d) Provide a typical section which indicates the following information:
 - The widened bridge deck section showing both the new and existing beams, widened deck,.
 - The center to center spacing of the new beam or beams and the distance from the centerline of the new beam to the proposed deck cutline on the existing deck.
 - The center to center spacing of existing beams of the well as the center to center spacing of the adjacent existing beams
 - Cross slope of the deck.

- Deck thickness between girders and deck thickness at the centerline of girder measured from the top surface of deck to top of the flange.
- Barrier location, height and width.
- Gutter to gutter and out-to-out dimensions.
- Location of the profile grade.

(e) In addition to the requirements above, provide the following:

- A plan view of the proposed structure indicating beginning and end bridge stations, construction centerline, profile grade line, bent skew angles, joint locations, station and skew of roadways crossing under the structure, , direction of water flow, gutter to gutter width of the bridge, out to out width of the bridge, distance from gutter to outside edge of deck, sidewalk widths and taper control stations. Stations and elevations along the centerline of construction at the intersection of the centerline of construction and the back face paving rest and centerline of bents. Provide profile grade elevations corresponding to the above stations.
- An elevation view of the proposed structure indicating the span length, location of fixed and expansion joints, , water surface elevations indicating 50 & 100 year floodstages, , and existing ground profile.
- All horizontal and vertical curve data for the roadway on the bridge. The location and elevation of the nearest bench mark. The nearest benchmark shall be within 300 feet of the bridge.
- A brief description of the proposed structure indicating span lengths, beam type(s), type of end bents, and type of intermediate bents, as applicable.
- A drawing and narrative description of the proposed construction scheme to indicate how the bridge is to be built, including, traffic handling sketches and temporary barrier locations.

b. Preliminary Wall Plans

Prepare Preliminary Wall Plans in accordance with the following guidelines:

- 1) The wall types are as follows:
 - (a) MSE (Mechanically Stabilized Earth)
 - (b) Alternate wall types, including cast-in place walls, are permissible as accepted by the Department. Soil-nail type walls and modular block type walls will not be allowed along roadways. Soil-nail type walls and modular block type walls will not be allowed along fill sections supporting roadways. Modular block walls with a maximum height of 12' may be permissible on cut or fill slopes that do not support roadway.
- 2) An elevation view or wall envelope of the proposed wall drawn to a horizontal and vertical scale of 1:10 and indicating the following data:
 - (a) Beginning and end wall stations.
 - (b) Elevations on top of wall coping or gutterline elevation at traffic barrier at the beginning and end of wall, at profile break points, and at least every 50 feet along the wall.
 - (c) Bottom of wall (top of footing) elevation necessary to maintain minimum berm requirements.

- (d) Original ground profile.
- (e) Proposed ground profile.
- (f) Stations and offsets to ends of walls and locations where wall changes direction
- (g) Stations and elevations along top and bottom of wall
- 3) All walls shall have a smooth plain concrete finish. All walls shall have a graffiti proof coating.
- 4) Roadway cross-sections in the vicinity of the wall that will indicate the existing and final slope behind the wall.
- 5) Typical sections for MSE walls shall include:
 - (a) Limit of special backfill (1'-0" beyond end of reinforcement)
 - (b) Reinforcement
 - (c) Facing
 - (d) Coping and/or barrier
 - (e) Back-slope and fore-slope
 - (f) Leveling Pad
 - (g) Bridge abutment
 - (h) Additional select backfill behind bridge abutment
 - (i) Concrete ditches
- 6) Project Plan and Profile sheets which indicate the following:
 - (a) Limits of right-of-way.
 - (b) Superelevation data.
 - (c) Horizontal and vertical alignment data.
 - (d) Horizontal offsets to face of retaining wall.
 - (e) Location and type of overhead signs which may be near retaining walls.
 - (f) Location of roadway lighting which may be near or attached to the retaining wall.
 - (g) Location and size of any drainage structures which will affect the retaining walls.
- 7) Any construction sequence requirements that will affect the construction of the walls and which will have to be accounted for in the preparation of retaining wall plans.

5. Final Bridge and Wall Plans

a. Additional Bridge Design Criteria

- 1) The Contractor's design professionals, in designing the bridge in this Project, shall utilize the Department Bridge Geometric and Design Software to the maximum extent possible. Upon prior written approval by the Department, the Contractor's design professionals may be authorized to utilize its computer capabilities. The contractor's design professionals are required to verify results to obtain final design accuracy.
- 2) Use ASTM A 615 Grade 60 reinforcement.

- 3) Use Class AA Concrete with a minimum 28-day concrete strength of 3,500 psi for superstructure concrete.
 - 4) Use Class A Concrete, with a minimum 28-day concrete strength of 3,000 psi, for substructure caps, columns, caissons, and footings.
 - 5) Include 30 pounds per square foot in the design loads to allow for future paving.
 - 6) Use steel h-piles (for pile end bents), pile footings (steel H piles) or spread footings in the foundation design and construction. Selected foundation types shall be utilized in accordance with the accepted Bridge Foundation Investigation (BFI). Previously approved reports provided by the Department are for informational purposes only.
 - (a) For spread footings – provide the allowable bearing and footing embedment in accordance with the accepted BFI. Previously approved reports provided by the Department are for informational purposes only.
 - (b) For pile foundations - provide the allowable bearing and minimum tip elevations in accordance with the accepted BFI. Previously approved reports provided by the Department are for informational purposes only.
 - 7) For prestressed box beams, meet the following criteria:
 - (a) Design prestressed concrete beams using conventional strength concrete with a maximum 28 day compressive strength less than 9,000 psi.
 - (b) Design prestressed beams as simple spans.
 - (c) In calculation of prestressed girder section properties, do not utilize transformed area of bonded reinforcement.
 - (d) Use neoprene bearing pads at each end of the prestressed beams. Design the pads to account for transverse and longitudinal expansion and contraction.
 - (e) Use anchorage beds set for horizontal and vertical strand patterns of two inches center to center. Detail all straight and draped strands utilizing two inch spacing.
 - (f) Provide the minimum amount of reinforcing steel at beam ends as required by AASHTO specifications, Article 9.22.
 - (g) Detail beam lengths to 1/16 inch increments.
 - (h) Do not include elastic gains in calculating prestress losses.
- b. Additional Wall Design Criteria
- 1) MSE Walls are to be constructed in accordance with Section 627 of the GDOT Specifications.
 - 2) Concrete Retaining Walls are to be constructed in accordance with Section 500 of the GDOT Specifications.
- c. Bridge and Wall Construction Plans
- The Contractor shall arrange a meeting with the Department to specifically discuss how the plans will be prepared prior to beginning plan preparation on the Project.
- 1) Prepare construction plans with all dimensions, notes and details necessary to construct the structure. As a minimum, include the following sheets:
 - (a) Plan and Elevation sheets that include:
 - Plan view of the bridge,

- Elevation view of the bridge,
- Beginning and ending stations,
- North arrow,
- Location of fixed and expansion bearings,
- Existing Bridge Serial No., Existing Bridge ID No., Project No. Project PI No., and construction ID No. supplied by the Department.

(b) General Notes sheets that include:

- Notes for the following; Specifications, Reinforcing Steel, Chamfer, Existing Bridge Plans, Welding, Salvage Material, and others as necessary,
- Bridge Design Data,
- A summary of Bridge Consists Of,
- A summary of Traffic Data,
- A summary of Quantities (for information only)
- A list of Existing Utilities (if applicable),
- A list of Utilities

(c) Deck Plan sheets,

(d) Deck Cross-Section sheets,

(e) Bearing assembly sheets,

(f) Beam sheets,

(g) Miscellaneous sheets,

(h) Framing Plan and Substructure Layout sheets,

(i) End Bent/Abutment sheets,

(j) As Built Foundation sheets, and

(k) Bar Reinforcing Detail sheets.

Additional sheets may be necessary to show the details required for construction. Provide additional sheets at no additional cost when deemed necessary by the Department.

2) Provide the following details:

- On deck section sheets, provide one full-width section across the structure which indicates, at least, all the horizontal dimensions necessary to construct the bridge. Provide sufficient deck cross-sections to indicate the staging, location of the existing structure and location of any temporary barriers on the structure.
- Show as many sections as are necessary to detail the placement of reinforcing in the deck and barrier. Also, draw deck sections indicating , back walls. Cut sections radially across the structure.
- Detail deck plan sheets with all longitudinal and transverse dimensions necessary to construct the bridge, expansion joint widths or back wall locations, location of construction and expansion joints, and any other items that are necessary to construct the structure.

- (d) All views, sections and details, except those in GDOT's standard bridge cell library, are to be drawn to scale. Draw deck cross-sections and intermediate bent sheets "Looking Ahead". If the end bents or abutments are drawn separately, draw bent/abutment one "Looking Back", and draw the other end bent/abutment "Looking Ahead".
 - (e) All details on the Plans shall be clear and legible. The Department will have the final say as to how a Project is to be drawn and will have the right to require additional drawings at no increase in Contract cost. Fully check the plans for completeness of content and accuracy before submittal to the Department for review.
- 3) Maintain and protect all utilities supported and in the area of the bridge during construction. Consider the installation of utilities in staging the construction of the bridge.
 - 4) Groove the bridge deck in accordance with Section 500 of the Georgia Specifications.

6. Shop Drawings

Provide shop drawings in accordance with Department's Specifications. The Contractor's engineer shall review and stamp approved all shop drawings as the Engineer of Record. After being stamped by the Contractor's design engineer, the Department will review the shop drawings for conformance with the plans and specifications. Allow the Department a **30 day review period** upon receipt of the shop drawings for each submittal.

7. Construction Engineering Activities

During the construction phase, ensure the structural design consultant reviews and approves all structural drawings and calculations including, but not limited to redesigns, shoring, erection drawings, falsework, and survey/geometry control. Ensure submittals requiring the Department's review include documentation of the structural design consultant's review and approval.

8. Bridge Removal

The Contractor is responsible for the removal and disposal of the existing bridge. There is no suitable location within the project limits for the disposal of the existing bridge. The Contractor shall be responsible for location and obtaining a suitable location for the disposal of the existing bridge. The Contractor shall be responsible for obtaining all necessary permits associated with the disposal. Remove bridge in accordance with Georgia DOT specifications for Construction of Transportation Systems.

D. Traffic Signal Plans

1. **GDOT requires that all** traffic and intersection control devices (stop and go traffic signals, flashing beacons, school flashers) on the State Highway system be permitted. The Project Manager shall ensure that all proposed traffic control devices have approved permits issued by the State Operations Engineer and Chief Engineer, prior to the devices being included as a contract item in the plans. The following locations, as shown in the plans, will require permitting and/or permit revisions:

Existing Signalization

Lavista Road & Fair Oaks Road

Lavista Road & Frazier Road

Proposed Signalization

Lavista Road (SR 236) – Radar Speed Signs (2x)

a. General:

- 1) All traffic signal work, materials and installation shall conform to the Department's Specification sections 647, 925, 935, 938 and the MUTCD. Type 3 pull box to be installed at base of each pole where intersection controller is located; pedestrian push button signs are to be 9" by 15".
- 2) All traffic signal materials proposed for use on this project will be submitted to the District Signal Section for review and approval as required by contract specification. No traffic signal materials or work may begin until all materials have been reviewed and approved by the District Signal Section. The Department's project manager will coordinate payment of materials and inspection of the traffic signal installation with the District Signal Section.
- 3) Traffic signal installations on this project shall be capable of remote communications and diagnostics over communications networks. The contractor will be responsible for all fees and permits necessary for establishing power and communications, including DSL communications, to the project traffic signal installation. The contractor will be responsible for all fees associated with modifying existing and establishing new power and communications services for traffic signals, video detection systems and or CCTV cameras on this project. The Contractor will be responsible for all monthly power and communications service to the traffic signal installation and support devices, until the new traffic signal installation has satisfactorily completed a test period of uninterrupted operation, for 30 days.
- 4) For joint use pole applications, The Prime Contractor shall supply attachments heights, pole clearances, and other clearances as required to ensure signal installation will not interfere with utilities. This information shall be supplied to the utility company before any utility adjustment or joint use pole installation.
- 5) The Contractor is responsible for coordination of modification to existing or new power service and communication services (utilities) with the project's prime contractor and utilities involved within this project. The Prime Contractor and Signal Contractor are responsible for ensuring proper pole clearances are met when attaching to joint use poles before attachment.
- 6)
- 7) The Contractor is responsible for ensuring proper utility clearances for signal span and helper span attachments to utility poles and maintaining clear zone requirements for signal equipment and strain pole location and edge of pavement.

- 8) All pull boxes for set-back detection loop lead in cable to controller shall be type 2 pull boxes. Pull box spacing for set-back loop lead in cable shall be 200' maximum between pull boxes. Install type 3 pull box at controller foundation unless otherwise noted on plans. All fiber optic communications conduit shall include pull boxes and be type 5. All unused conduit shall contain detectable mule tape for future use in pulling cable into conduit.
- 9) Upon activation of the traffic signal, the Contractor will be responsible for responding to all reports of traffic signal "trouble" or malfunction until the traffic signal equipment and operation has successfully completed an operating test period of a minimum of 30 days. If District Seven forces must respond to reports of signal trouble or malfunction, after attempts to contact the contractor have failed, or the contractor does not respond, all costs associated with District Traffic Signal response will be the responsibility of the Contractor and may be withheld from final contract payment
- 10) The Contractor will be responsible for adjustments to existing traffic signal indications as required by construction for lane shifts and traffic control, at no cost to the Department.
- 11) The contractor will contact the district signal office at least 14 days prior to requesting inspection activities for traffic signal installations. The contractor will contact the district signal shop 14 days prior to requesting activation of the traffic signal so signal timing can be developed and installed in control equipment.
- 12) The Contractor will advise the Department a minimum 3 working days prior to any traffic signal work beginning.

E. Utilities

1. Coordination Responsibilities: The Contractor shall have the responsibility of coordinating the Project construction with all utilities that may be affected. Coordinating responsibilities shall include but not be limited to the following:
 - a. The Contractor shall initiate early coordination with all Utility Owners located within the Project limits. All Utility Coordination shall be performed to GDOT standards by a prequalified firm in Area Class 3.10 - Utility Coordination. Refer to the following website for a list of current prequalified firms:

<http://www.dot.ga.gov/doingbusiness/consultants/Pages/default.aspx>

The Contractor shall be responsible for the cost of Utility Coordination. Coordination shall include, but shall not be limited to, contacting each Utility Owner to advise of the proposed Project; supplemental verification of the locations of existing utility facilities (including the employment of additional Overhead/Underground Subsurface Utility Engineering investigations (SUE) as described in section 999.3.D.3.c of this specification); and determining requirements for the relocation or adjustment of facilities.

- b. The Department has executed and provided a Memorandum of Understanding (MOU) between the Department and each Utility Owner. If a utility is impacted by the project and the impact requires a relocation of the utility, refer to the executed MOU for the party responsible for the cost of the relocations.
- c. The Contractor shall endeavor to design the Project to avoid conflicts with utilities when feasible, and minimize impacts where conflicts cannot be avoided (See Section 999.3.D.2.c). The Contractor shall submit to the Department a SUE Utility Impact Analysis (UIA) in the Department's prescribed format as specified in TABLE 4-2: REVIEWS.

ABBREVIATIONS FOR TABLE 4-2

AR	As Required
FS	Full-size paper – meets GDOT Plan Presentation Guide
HC	Hard Copy – 8 ½ x 11 unless otherwise noted
HS	Half-size paper – meets GDOT Plan Presentation Guide
MS	MicroStation File – Electronic
NTP	Notice to Proceed
PAS	Per Approved Schedule
PDF	Adobe PDF – One complete file and individual plan sheet files meets GDOT Electronic Plans Process

TABLE 4-2: REVIEWS

Utility Submittal Description	Format	Quantity	Delivery Date*	Review Period*	Review Type	Comment
Supplemental verification of Overhead/Subsurface Utility Engineering (SUE) Investigations - QL-B <ul style="list-style-type: none"> Electronic SUE files, mapping files and proposed design files Certified half-size PDF PDF of the certified SUE deliverables checklist 	AR, MS PDF	1	NTP (1) + 45 Calendar Days (Or as Determined by State Subsurface Utilities Engineer)	NA	Submitted to the State Subsurface Utilities Engineer for information	Only certify SUE work actually completed
SUE Utility Impact Analysis "UIA" <ul style="list-style-type: none"> Excel spreadsheet of conflict matrix Certified color PDF (11x17) of conflict matrix PDF showing the conflict locations on the utility plans PDF of the certified SUE deliverables checklist 	AR, PDF	1	NTP 1 + 120 Calendar Days (Or as Determined by State Subsurface Utilities Engineer)	NA	Submitted to the State Subsurface Utilities Engineer for information	Only certify SUE work actually completed
Overhead/Subsurface Utility Engineering (SUE) Investigations - QL-A <ul style="list-style-type: none"> Electronic SUE files, mapping files (if not already provided) and updated proposed design files PDF of the certified test hole forms PDF of the certified SUE deliverables checklist 	AR,MS,PDF	1	UIA + 45 Calendar Days	NA	Submitted to the State Subsurface Utilities Engineer for information	Only certify SUE work actually completed
Overhead/Subsurface Utilities Engineering (SUE) Information to Utilities for Review (URPN Letter 1a - SUE Submit to Utility Companies Revise)	FS,HS,PDF, MS	Plans: 2 for each Utility Owner +3 for Dept. and MicroStation files	NTP 1 + 5 Calendar Days (Or as Determined by District Utilities Engineer)	5 days for Dept. + 30 days for each Utility Owner	Reviewed by District Utilities Office (DUO) SUE Verification by Utility Owner (According to the details contained in the MOUs)	
Relocated Utility Plans (URPN Letter 2 - 2nd Submission Letter (Existing and Proposed))	FS,HS,PDF, MS	Plans: 2 for each Utility Owner +3 for Dept. and MicroStation files	Concurrently w/ Accepted SUE Verification by Utility Owner	5 days for Dept. + 90 days for each Utility Owner	Reviewed by District Utilities Office (DUO) and Accepted by Engineer Proposed Relocation by Utility Owner (According to the details contained in the MOUs)	
Preliminary Utility Status Report (URPN Letter 6 - Notice to Proceed with Permit)	HC, PDF	3, 1	Concurrently w/ Accepted Relocated Utility Plans	10- days + 5 days	Reviewed by District Utilities Office (DUO) and Accepted by Engineer Accepted by State Utilities Preconstruction Engineer	

Utility Plans/Agreements (Utility NTP Letter)	Plans/ Agreements HS,PDF,MS	Agreements: 3 hard copy, 1 electronic pdf Plans: 2 for each Utility Owner + 3 for Dept. and MicroStation files		Agreements: 30 days for Dept. + 60 days for each Utility Owner Plans: 30 days	Relocation Plans and Agreements reviewed by Department Utilities Office. Agreements also reviewed by Utility Owner.(According to the details contained in the MOUs)	
Utility As-Built Plans	FS, HS, PDF, MS	1, 3, 1, 1	Concurrently w/Accepted Construction As-Built Plans	Plans: 30 days Department 30 days for Utility Owners	Reviewed and accepted by the Engineer. All utility relocations included in the contract must have the as-builts reviewed and approved by the utility owners.	Provide respective Utility Owners whose work was included in the contract a copy of their as-builts for review and acceptance.

*All days are "Calendar Days.", as defined in section 101, Standard specifications

All Submittals shall be made directly to the Engineer. The Engineer shall provide submittals to the applicable GDOT Office Reviewer and/or other applicable entities as directed by the Engineer, unless otherwise noted or discussed with the Contractor. As accepted by the Engineer the Contractor may provide submittals to applicable offices for a concurrent review. **Hand-deliver submittals, track and regularly update the Engineer on review status.** In the event concurrent submittals are required, the "receipt" date shall be the date the last recipient receives the submittal and shall be the contractual begin date for the review. Unless a different review time is specified elsewhere in the contract, a period of **thirty (30) calendar days** from receipt to release of the submittal by the Department shall be allowed for the Department's review. Engineer's (Department's) acceptance as to completeness is required for all reviews. All Contractors' schedules shall reflect the review times contained within the specifications and contract. Engineer's receipt of submittals will mark the beginning of the review period. All submittals by the Contractor shall be required to contain a statement certifying that no unapproved design-exceptions have been incorporated in the submittal. Errors and omissions are the responsibility of the Contractor to correct and shall be at the Contractor's expense.

Any submittal received by the Engineer after 12 PM (noon) shall be considered as being received the following business day.

Monthly utility coordination meetings will be held at a location as determined by the Contractor and the Engineer. Ensure participation from all affected utility owners.

- d. The Contractor shall coordinate and conduct a preliminary review meeting with the Utility Owners to assess and explain the impact of the Project. The Department's Project Manager, District Construction Engineer (or designee), ITS Manager and District Utilities Engineer (or designee) shall be included in this meeting. Knowledge of the Project environmental "Commitments/ Requirements" (Green Sheets) is essential for Utility Owners during their design phase. The Contractor shall provide the Environmental Commitments table, and any re-evaluation with all Utility Owners. Also, during the preliminary review meeting Utility Owners are particularly interested in the status of Right of Way acquisition and its direct effect on their relocation design. The Contractor shall develop a status report of the Right of Way acquisition process, for Utility Owners use in planning for relocations. The Contractor shall record the minutes for this meeting and distribute to all attendees for their review and concurrence.
- e. The Contractor shall research and verify any prior right claimed in the MOU that would result in reimbursement to the utility owner for performing utility relocation design, construction or material cost. If the Utility Owner includes Design and Construction in the Design-Build Contract, no research and verification of prior rights will be required. If there is a dispute over property interests with a Utility Owner, the Contractor shall be responsible for resolving the dispute. The Contractor shall meet with the Department's District Utilities Engineer (or designee) and ITS Manager to present the property interests information gathered. This information must be sufficient for the District Utilities Engineer (or designee) to certify the extent of the Utility Owner's property interests. The Department shall have final approval authority as to the Contractor's determination of whether the Utility Owner has property interests. The contractor will be responsible for all Design, Construction and Material costs when the design and construction are included in the Design-Build Contract.
- f. The Contractor shall prepare and submit to the Department a Preliminary Utility Status Report Concurrently with Accepted Relocated Utility Plans within 180 days after Notice to Proceed 1 has been given for the contract (see TABLE 4-2: REVIEWS). This report shall include a listing of all Utility Owners located within the Project limits and a recommendation as to the extent of each Utility Owner's property interests. This report shall include copies of easements, plans, or other supporting documentation that substantiates any property interests of the Utility Owners. The report shall also include a preliminary assessment of the impact to each Utility Owner.
- g. Depending on the provisions stipulated in the Memorandum of Understanding (MOU – See Attached) between the Department and each Utility Owner the Contractor shall be responsible for one of the following Design Activities:
 - 1) The Contractor shall provide Utility Owners with design plans and Preliminary Utility Plans as soon as the plans have reached a level of completeness adequate to allow them to fully understand the Project impacts. The Utility Owner will use the Contractor's design plan for preparing Utility Relocation Plans, cost estimates, and respective Utility Adjustment Schedules (UAS). If a party other than the Utility Owner prepares Utility Relocation Plans, there shall be a concurrence box on the plans where the Utility Owner signs and accepts the Utility Relocation Plans as shown.
 - 2) The Contractor shall prepare all engineering design, plans, technical specifications, cost estimates, and utility adjustment schedules required to perform the necessary utility relocations. The Contractor shall certify to the

Department that the design package listed above has been reviewed and accepted by the each respective Utility Owner.

- h. The Contractor shall be responsible for collecting the following from each Utility Owner that is located within the Project limits: Certified Utility Relocation Plans including a letter of "no cost" where the Utility Owner does not have a prior right; Utility Agreements, certificates of eligibility, including cost estimate and Utility Relocation plans where the Utility Owner has a property interest; Letters of "no conflict" where the Utility Owner's facilities will not be impacted by the Project. The Contractor shall prepare and submit to the Department a Utility Retention Request for any utility which is to remain under the roadway within the construction limits.
- i. The Contractor shall be responsible for determining if the Department has agreed to pay for in-kind relocations according to any approved Utility-Aid assistance package for publicly (government) owned utilities found within the Project's limits See the Department's Policies & Procedures (formerly known as TOPPS Policy #6863-11) for additional information regarding Utility-Aid. If the Department has approved Utility-Aid; it is the Contractor's responsibility to assemble the necessary information including any Utility Agreements in a final and complete form and in such a manner that the Department may approve the submittals with minimal review. Failure to submit such required Utility Agreements prior to the beginning of construction shall fully transfer the utility owner's obligations, as stated in the subject Utility-Aid assistance package, to the Contractor. Deductions to reimburse the Department for such obligations may be made from any current partial payment of the Lump Sum price.
- j. The Contractor shall review all Utility Relocation Plans and Utility Agreements, Utility Estimates and certificates of eligibility to ensure that relocations comply with the Departments "Utility Accommodation Policy and Standards Manual". The Contractor shall review the utility plans to identify that there are no conflicts with the proposed highway improvements, and ensure that there are no conflicts between each of the Utility Owner's relocation plans. The Contractor shall show all existing and proposed utilities on the cross sections and drainage profiles.
- k. The Contractor shall compile, and submit to the Department all SUE deliverables, Utility Relocation Plans, SUE Utility Impact Analysis, Utility Adjustment Schedules, Utility Agreements, Utility Estimates (if estimates are provided by the utility owners), and Letters of "no conflict," as set forth above for the Project. The Contractor is expected to assemble the information included in the Utility Agreements and Utility Relocation Plans in a final and complete form and in such a manner that the Department may accept the submittals with minimal review. The Utility Owners shall not begin their Utility Relocation work until authorized in writing by the Department.
- l. Each Utility Agreement and Utility Relocation Plan submitted shall be accompanied by a certification from the Contractor stating that the proposed relocation will not conflict with the proposed highway improvement and will not conflict with another Utility Owner's relocation plan.
- m. Depending on the provisions stipulated in the Memorandum of Understanding (MOU – See Attached) between the Department and each Utility Owner the Contractor shall be responsible for one of the following construction activities:
 - 1) The Contractor shall be responsible for coordinating the work of its subcontractors and the various Utility Owners. The resolution of any conflicts between Utilities and the construction of the Project shall be the responsibility of the Contractor. No additional compensation will be allowed for any delays, inconveniences, or damage sustained by the Contractor or its subcontractors due to interference from utilities or the operation of relocating utilities.

- 2) The Contractor shall be responsible for performing all utility removal, relocation, and adjustments required to accommodate the proposed Project. This shall include any required inspection, permitting, testing and monitoring to ensure that the work is properly performed to the certified design package. The resolution of any conflicts between Utilities and the construction of the Project shall be the responsibility of the Contractor. No additional compensation will be allowed for any delays, inconveniences, or damage sustained by the Contractor or its subcontractors due to interference from utilities or the operation of relocating utilities.
- n. During the construction of the Project, the Contractor shall designate, prior to beginning any work, a Worksite Utility Coordination Supervisor (WUCS) who shall be responsible for initiating and conducting utility coordination meetings and accurately recording and reporting the progress of utility relocations and adjustment work. Also, the WUCS shall prepare an Emergency Response Plan for the purpose of planning, training, and communicating among the agencies responding to the emergency. The WUCS shall be the primary point of contact between all of the Utility companies, the Contractor and the Department. The WUCS shall recommend the rate of reoccurrence for utility coordination meetings and the Engineer will have the final decision on the regularity for utility coordination meetings. In no case will utility coordination meetings occur less than monthly until controlling items of utility relocations and adjustment milestones are completed. The WUCS shall contact each of the utility companies for the purpose of obtaining information including, but not limited to, a Utility Adjustment Schedule for the controlling items of utility relocations and adjustments. The WUCS shall notify the appropriate utility company and/or utility subcontractors and the Department of the status of controlling items of relocations and adjustment milestones as they are completed. The WUCS shall furnish the Engineer, for approval, a Progress Schedule Chart, prior to beginning Construction unless otherwise specified, which includes the utility companies controlling items of work and other information in accordance with Section 108.03 or elsewhere in the Contract documents. Duties and Responsibility of the Worksite Utility Coordination Supervisor, (WUCS):

- 1) Qualifications: The WUCS shall be an employee of the Prime Contractor, shall have at least one year experience directly related to highway and utility construction in a supervisory capacity and have a complete understanding of the Georgia Utilities Protection Center operations, and shall be knowledgeable of the High-voltage Safety Act and shall be trained on the Georgia Utility Facility Protection Act (GUFPA). The Department does not provide any training on GUFPA but will maintain a list of the Georgia Public Service Commission certified training programs developed by other agencies. Currently the following companies offer approved GUFPA training programs:

Associated Damage Consultants
Phone: 706.234.8218 or 706.853.1362

Georgia Utility Contractors Association
Phone: 404.362.9995

Georgia Utilities Protection Center
Phone: 678.291.0631 or 404.375.6209

H B Training & Consulting
Phone: 706.619.1669 or 877.442.4282 (Toll Free)

The Prime Contractor is responsible for obtaining the GUFPA training for their employees.

Questions concerning the Georgia Public Service Commission GUFPA training program shall be directed to:

Georgia Public Service Commission
244 Washington St. SW
Atlanta, GA 30334-5701
404.463.9784

- 2) Ticket Status: During the utility coordination meetings the WUCS shall collect and maintain the Ticket Status information to determine the status of all locate requests within the Project limits. This information will be used to assure those planning to use mechanized equipment to excavate or to work within the Project limits are prepared to begin work when they have reported or estimated beginning work. At points where the Contractor's or utility company's operations are adjacent to or conflict with overhead or underground utility facilities, or are adjacent to other property, damage to which might result in considerable expense, loss, or inconvenience, work shall not commence until all arrangements necessary for the protection thereof have been made.
- 3) Notice: The names of known utility companies and the location of known utility facilities will be shown on the Plans, or listed in the Overhead/Subsurface Utility Engineering Investigation if performed or in the Special Provisions; and the WUCS shall give 24-hour notice to such utility companies before commencing work adjacent to said utility facilities which may result in damage thereto. The WUCS shall further notify utility companies of any changes in the Contractor's work schedules affecting required action by the utility company to protect or adjust their facilities. Notice to the utility companies by the Department of the Award of Contract, under Subsection 105.06, shall not be deemed to satisfy the notice required by this paragraph. Furthermore, this 24-hour notice shall not satisfy or fulfill the requirements of the Contractor as stated in Chapter 9 of Title 25 of the Official Code of Georgia Annotated, known as the "Georgia Utility Facility Protection Act".
- 4) Agenda: The WUCS shall cooperate with the companies of any underground or overhead utility facilities in their removal and relocations or adjustment work in order that these operations may progress in a reasonable manner, that duplication of their removal and relocations or adjustment work may be reduced to a minimum, and services rendered by those parties will not be unnecessarily interrupted. To promote this effort the WUCS shall prepare an agenda for the utility coordination meetings and circulate same in advance of the meeting to encourage input and participation from all of the utility companies. The agenda will be prepared by an examination of the Project site and may include photographs of potential/actual utility conflicts.
- 5) Emergency Response Plan: The WUCS shall prepare and submit to the Department an Emergency Response Plan no later than 30 days prior to beginning construction. The WUCS shall clearly mark and highlight the gas, water and other pressurized pipeline shut-off valves and other utility services including overhead switch locations on the utility plans; and prepare a chart to indicate the location of each site (Street address or intersections), the utility company or operator of the facility with emergency contact information and the working condition of the device to facilitate prompt shut-off. The WUCS shall post the Emergency Response Plan in an area readily accessible to the Department. In the event of interruption to gas, water or other utility services as

a result of accidental breakage or as a result of being exposed or unsupported, the WUCS shall promptly notify the appropriate emergency officials, the Georgia Utilities Protection Center and the appropriate utility facility company or operator, if known. Until such time as the damage has been repaired, no person shall engage in excavating or blasting activities that may cause further damage to the utility facility.

- 6) Submission: Provisions for reporting all utility coordination meetings, the progress of utility relocation and adjustment work milestones and ticket status information shall be reported on a form developed by the WUCS and will be distributed by the WUCS to all of the utility companies as milestones are met and shall be included as part of the Project records. These reports shall be delivered to the Engineer for review, on a monthly basis. The WUCS shall immediately report to the Engineer any delay between the utility relocation and adjustment work, the existing Utility Adjustment Schedule, or the proposed Utility Adjustment Schedule so that these differences can be reconciled.
 - 7) Utility Adjustment Schedule: The purpose of the Utility Adjustment Schedule is to provide the Contractor with the pertinent information, including any utility staging required, dependent activities, or joint-use coordination that is required for the creation of a progress schedule chart that is feasible. Include the estimated duration for each of the applicable following tasks; Preliminary Engineering, Right-of-Way Acquisition, Construction Engineering, Material Procurement, Clearing and Trimming, Construction, Splicing or Tie-in work, Service Considerations and Temporary Work. A suitable Utility Adjustment Schedule form is available from the Department for the WUCS to circulate to utility companies for any proposed Project construction staging. Ensure the WUCS submits the Progress Schedule Chart in accordance with Section 108.03 and the proposed Utility Adjustment Schedules from all utility companies to the Engineer for review and approval.
 - o. At the time the Contractor notifies the Department the Contractor deems the Project to have reached Final Completion, the Contractor shall certify to the Department that all Utilities have been identified and that those Utility Owners with property interests or other claims related to relocation or coordination with the Project have been relocated or their claims otherwise satisfied or shall be satisfied by the Contractor.
 - q. In addition to the above, the Contractor shall comply with all provisions set forth under subsection 107.21 of the Georgia Department of Transportation's Specifications, Construction of Transportation Systems, current edition.
 - r. The Contractor shall be responsible for determining if the Department has agreed to a Project Framework Agreement (PFA) with Local Government or, additional Specific Activity Agreements (SAA) within the Project's limits (See the Department's Policies & Procedures (formerly known as TOPPS Policy #7120-3) for additional information. If the Department has approved a PFA or SAA; it is the Contractor's responsibility to assemble the necessary information including any Utility Agreements in a final and complete form and in such manner that the Department may approve the submittals with minimal review. Failure to submit such required Utility Agreements prior to the beginning of construction shall fully transfer the obligations, as stated in the subject PFA or SAA package, to the Contractor. Deductions to reimburse the Department for such obligations may be made from any current partial payment of the Lump Sum price.
2. General
- a. By Georgia Statutes, utilities whether public or privately owned, aerial or underground, are permitted by the Department and local governments to be accommodated within

the public right of way. To this end, the Contractor needs to make every effort to design/build a Project that will accommodate (and minimize impacts to) all existing utilities and new utilities to be constructed concurrently with the Project. The selection of typical section features, horizontal alignment, and location of storm sewer lines are design elements that can sometimes be varied without violating safety standards, and accepted design principles. Design/construction techniques that minimize or avoid utility conflicts may involve increased upfront costs; however, those costs are offset by savings during construction, in addition to the total cost savings for the Project (the Department or local government) and the respective utility owners.

- b. Additional guidance for accommodating utilities within the right of way are given in the AASHTO publications: A Guide for Accommodating Utilities within Highway Right of Way, A Policy on Geometric Design of Highways and Streets; the TRB publication: Policies for Accommodation of Utilities on Highway Rights-of-Way; and in GDOT's Utility Accommodation Policy and Standards, current edition.
 - c. The Utility Plans are used as the primary tool to identify and resolve utility related conflicts/issues prior to beginning the construction of a Project. Also, when these plans are properly prepared as indicated in this Special Provision; they will support the vital coordination required between the Contractor and the Utility Owner during construction. Existing utility information shown on the utility Plans for this Project have been obtained from an Overhead / Subsurface Utility Engineering (SUE) Investigation (please refer to 999.3.E.3.c. for more information on SUE). This existing utility information has been provided by the Department for the Contractor's use in the design and construction of this Project. However, the Contractor shall be responsible for supplementing this utility information for utilities that have been installed after the Overhead / Subsurface Utility Engineering (SUE) Investigation was performed. Known utilities and contacts are shown in the Costing Plans Package. This information shall be verified by the Contractor.
 - d. Utility plan sheets are comprised of completed roadway plan sheets but shall contain more detailed information featuring existing and proposed utility facilities. Specific requirements for Utility Plans are detailed below.
3. Required Information
- a. Preliminary Utility Plans
 - 1) Preliminary Utility Plan sheets are typically comprised of preliminary roadway plan sheets with the inclusion of all existing utility facility locations (overhead & underground) found within a Project's limits. Determining the location of the existing utilities shall be accomplished through an Overhead/Subsurface Utility Engineering Investigation. The "degree of effort" exerted on the part of the Department and the Utility Owner varies with the type and location of the utility. The Department has classified these "degrees of effort" into different Quality Levels of information. Refer to 999.3.E.3.c. for definitions of these Quality Levels.
 - 2) Preliminary Utility Plans shall be produced and used by the Contractor in the utility coordination/relocation design activities outlined here and under Section 999.1. The following minimum information shall be shown on the Preliminary Utility Plans:
 - (a) Construction centerlines with Project stations and begin/end Project limits.
 - (b) Curb and gutter or edge of pavement (proposed and existing)
 - (c) Road and street names

- (d) Existing and Required Right of Way limits, property lines, environmentally sensitive area limits, and property owners.
 - (e) All proposed and existing easements (including existing utility easements)
 - (f) Proposed and existing drainage structures/features (excluding drainage text)
 - (g) Proposed construction limits (C/F lines)
 - (h) Topographical planimetrics (i.e. existing buildings/structures, existing tree/vegetation limits)
 - (i) All proposed bridges, walls, other structures and landscape hardscapes.
 - (j) All proposed and existing strain poles (signal, sign, lighting)
 - (k) Utilities Legend
 - (l) Miscellaneous General Notes
 - (m) Existing overhead and underground utilities found within the Project's limits, Including size and material if known.
 - (n) Sanitary sewer manhole top, and invert elevations. Sanitary Sewer pipe flow directions
 - (o) Railroad mainline and spur tracks with their respective property/easement limits
 - (p) Project Survey control point locations
 - (q) SUE specific General Notes
 - (r) Utility Pole Data Table
 - (s) SUE investigation Limit of study
 - (t) SUE Quality Level A information
 - (u) GEORGIA811 Logo
- b. Final Utility Plans
- 1) Final Utility Plans consist of all the elements provided for in the Preliminary Utility Plans, but also show all proposed utility adjustments required to accommodate the Project.
 - 2) The proposed utility information shall either be provided to the Contractor by each of the respective Utility Owners, Refer to Section 999.3.E to determine how proposed utility relocation design information is to be provided. In either case, The Contractor shall compile and incorporate this information into the Project's Final Utility Plans.
 - 3) The proposed utility work for this Project shall either be performed by the Utility Owner or their designated contractor, or included as part of the Project's construction contract. Refer to Section 999.1.C or to the Memorandum of Understanding (MOU) to determine who is responsible for the proposed utility relocation work for this Project.
 - 4) In either case, the Final Utility Plans shall clearly show all existing, proposed, temporary, and relocated utilities on the plans and clearly indicate the disposition of all existing utilities: for example, "To be removed", "To be Adjusted", "To be Abandoned", "To Remain", "To be Relocated", etc. The plans shall also clearly define utility work as to which is to be done by the Contractor and which is to be done by others. Utilities to be relocated (or removed, or installed) prior to

construction shall be labeled on the plans as "To be relocated (or removed or installed) by others prior to Project construction".

- 5) When proposed utility work is included as part of the Project's contract, it is necessary for a Summary of Quantities to be included within the Final Utility Plans. The Summary of Quantities shown in the Final Utility plans shall be prepared in the same basic format as indicated in Section 999.3.B.
- 6) Where extensive or complex utility work is proposed to be performed, separate Utility Relocation Plan Sheets for that specific utility may be required to ensure plan legibility/constructability. The Contractor shall determine whether separate Utility Relocation Plans are needed. However, after review of the plans, the Engineer may require these additional sheets or drawing inserts to be included in the Project plan package.
- 7) In addition to the information required for the Preliminary Utility Plans, the Final Utility Plans shall include the following:
 - (a) All proposed and temporary utility facilities with annotation describing nature of work.
 - (b) Miscellaneous General Notes required for coordination of utility facilities with roadway construction.
 - (c) Proposed water and sanitary sewer plan/profiles.
 - (d) Summary of Quantities for contract items (if applicable).
 - (e) Any proposed utility easements.
 - (f) Any miscellaneous proposed utility details.

c. Overhead/Subsurface Utility Engineering (SUE) Investigations

Employ an established engineering technology that can provide precise horizontal and vertical locations of underground and overhead utilities to produce an accurate picture of the underground and overhead utility infrastructure. The existing utility information provided in these investigations includes a description of what "degree of confidence" there is in its accuracy. The Department has classified these "degrees of confidence" into different Quality Levels of information:

- 1) Quality Level "D" Information - Information obtained solely from a review of utility records and field verification. The comprehensiveness and accuracy of such information is highly limited. Even when existing information for a utility in a particular area is accurate, there are often other underground systems that are not shown on any records. Quality Level "D" may be appropriately used early in the development of a Project to determine the presence of utilities.
- 2) Quality Level "C" Information - Information obtained to augment Quality Level "D" information. This involves topographic surveying of visible, above-ground utility features (e.g., poles, hydrants, valve boxes, circuit breakers, etc.) and entering the topographic data into the CADD system. Since aerial utility lines are not surveyed, information provided for these facilities is considered Quality Level "C" also. Quality Level "C" may be appropriately used early in the development of a Project and shall provide better data than Quality Level "D" information alone. Designers shall be very cautious when working on Projects using information for underground utilities that is based only on Quality Levels "D" and "C" locates.
- 3) Quality Level "B" Information - Information obtained through the use of designating technologies (e.g., geophysical prospecting technologies). This is an application using scanning technologies, most of which have very specific capabilities. Applying a variety of techniques is essential to the process of

preparing a comprehensive horizontal map of utilities and other underground structures on the site. Designating technologies are capable of providing good horizontal information.

- 4) Quality Level "A" (Test Hole) Information - Provides the highest level of accuracy of utility locations in three dimensions. This level may apply manual, mechanical or nondestructive (e.g., vacuum excavation) methods to physically expose utilities for measurement and data recording. Quality Levels "B", "C", and "D" locates are incorporated in Quality Level "A" locates.
- 5) The Contractor shall identify all utility conflict points where verified existing utility information is necessary to avoid/minimize/identify the respective utility conflict. The Contractor shall obtain Quality Level "A" locates at these Project/utility conflict points, and shall coordinate with the Utility Owners and make every effort to avoid existing utility facilities and thereby reduce utility relocations.
- 6) All Overhead/Subsurface Utility Engineering (SUE) shall be performed to GDOT standards by a prequalified firm in Area Class 5.08. Refer to the following website for a list of current prequalified firms:

<http://www.dot.ga.gov/doingbusiness/consultants/Pages/default.aspx>

4. Sheet Layout

- a. The Contractor needs to ensure that any information and graphic data that is not necessary to depict the disposition of utilities found within the Project's limits is removed by turning off the appropriate CADD levels(s) on which the data is stored. This will help ensure that information pertinent to utility facilities can be clearly seen in the Utility Plan sheets. Examples of extraneous information would be items such as horizontal curve data, superelevation data, roadway dimensions, misc. text, etc. All background information such as pavement limits, existing structures, etc. shall be screened back. Also, the Contractor shall ensure all text, line work, details, and symbols are clear and legible when plans are reduced to ½ size.
- b. In order to maintain plan clarity all applicable general notes, tables, and the Utility Legend shall be placed separately from the Utility Plan sheets. A Utility Plan "Cover Sheet" shall be provided for both preliminary and final Utility Plans. A recommended example utility sheet schedule is provided below:
 - 1) Utility Sheet 1 (Cover Sheet) – Utility General Notes, Utility Legend, Miscellaneous Details
 - 2) Utility Sheet 2 (required as needed) – Additional Miscellaneous Details, Pole Data Table
 - 3) Utility Plan Sheets – Utilities shown in plan view with respect to Project.
 - 4) Utility Profile and Cross Sections Sheets - Proposed Utility facility profiles and cross sections (as required)
 - 5) Miscellaneous Utilities Sheets – Miscellaneous proposed utility details (as required).

The above sheet schedule shall also be generally followed for all separate utility relocation plans (i.e. water & sewer plans) included in the Project plans.

5. Miscellaneous Notes and Other Information

- a. Note on the Utility Plans whose responsibility it is for utility adjustment. For bridge plans required, the Contractor is to make sure the plans have made accommodations for utility crossings and attachments, if applicable. Any new utility crossings requests shall include the size, weight, and type of utility. In addition, the method of

attachment to the bridge shall be fully detailed. Such requests shall be reviewed by the Contractor to ensure adequacy and constructability and final approval shall be obtained by the Contractor from the Department. The Contractor shall follow the approval process within this specification. The Contractor is responsible to ensure that all proposed and existing utilities are coordinated with the respective Project's Construction Staging Plans and Erosion Control Plans.

- b. Upon completion of the Utility Relocation Plans, the Contractor needs to ensure that any additional environmental impacts due to utilities are addressed in the Project's environmental document/permit.
6. Utility As-Built Standard
- a. It shall be the responsibility of the Contractor's 3.10 Utility Coordination Consultant to manage and ensure accurate completion and delivery of all items within this section.
 - b. Utility as-builts must be completed after utility relocations are completed and prior to project closeout.
 - c. Provide Utility as-built plans in the Department's current CADD Software format to include each individual utility owner within the project limits.
 - d. Provide one (1) final full size, three (3) half size, and one (1) pdf set of as-built utility plans to the Department to include all utilities present, abandoned or relocated within the project limits. Provide respective Utility Owners whose work was included in the contract a copy of their as-builts for review and acceptance.
 - e. Ensure as-built utility plans for projects contain the following:
 1. Name
 2. Address
 3. Telephone number of the firm preparing the drawing
 4. Date the as-built plan data is collected via the revision block
 5. Surveyor's/Engineer's statement certifying that as-built plans reflect the true conditions in the field
 6. Contractors' statement (with an original signature and Project Number on the cover sheet and transmittal letter) verifying that all construction specifications and product qualities have been met
 7. Label "AS-BUILT DRAWING" or "RECORD DRAWING" on each sheet
 8. Label all Street names
 9. Label all easements and right-of-ways
 10. Identify and label the location and elevation of the benchmark referenced (If the referenced benchmark is not within the project limits, then a complete description of its location will be provided to assist in future locating).
 11. Label any changes in details of design and/or additional supporting information such as approved placement details, pipe sizes, material changes, geo-coded photos, etc.
 - f. Ensure the as-built plans provide detailed and accurate information, in a useful format. Discretion must be employed by the draftsman regarding the functional quality of the plans. If too much information is included on one sheet as to make their use impractical, a second, or third, drawing sheet may be necessary.
 - g. Survey all underground utilities that were excavated or relocated, to include abandoned lines discovered during excavation within the project limits to determine

the exact location and position of the utility line. This should include, but not limited to outside diameter of pipe or width of duct banks and configuration of non-encased multi-conduit systems, utility structure material compositions and condition; as well as identification of benchmarks used to determine elevations. Ensure elevations have an accuracy of +/- 0.05-ft and certified accurate to the benchmarks used to determine elevations. Horizontal data accurate to within +/- 0.2 ft or applicable survey standards, whichever is more precise. Record and label the average depth below the surface of each run, all change of direction points, and all surface or underground components such as valves, manholes, drop inlets, clean outs, meters, etc.

- h. For relocated aerial facilities:
 - 1. Record the following information to including but not be limited to the pole owner, age, pole size, pole height, pole number, the material type, the general condition of the utility.
 - 2. Record the horizontal location of existing poles for aerial utility facilities. Ensure horizontal surveying of existing poles for overhead utility facilities is surveyed to the same accuracies and precision as is required for the topographic data.
 - 3. Determine the aerial utility owners (in addition to the pole owner) attached to the pole and correctly show the horizontal connectivity of the utilities between the poles, including major service drops (substations or industrial facilities).
 - 4. Aerial utilities along with pole locations and appurtenances shall be returned to the DEPARTMENT in digital and reproducible certified plan sheet format.
- i. Submit completed electronic files and reproducible as-built utility plan sheets to the Engineer for review and comments. Revise and make changes or adjustments to the utility related data as necessary. Work will not be considered complete until the Contractor has responded to the comments from this review to the satisfaction of the Engineer.
- j. Assemble and present as-built plans in a format compatible with the DEPARTMENT'S current CADD systems (MicroStation and InRoads) for use by the DEPARTMENT'S staff and ensure the MicroStation and InRoads files are developed in accordance with the DEPARTMENT'S current *Electronic Utility File Guidelines*.
- k. For each utility facility/owner, prepare and deliver one copy of the "as-built" or "record" plan to the DEPARTMENT. There shall be an "as-built" or "record" for each utility on the project, whether the utility work is included in the contract price, or the utility work is performed by the utility owner or the utility's contractor.

7. Buy America

- a. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
- b. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe.

Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- c. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit B." Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- d. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

F. Municipal Separate Storm Sewer System Compliance

1. General Provisions

- a. Locate and evaluate the various structures and pipelines comprising the targeted stormwater system and make recommendations to the Department for repair and maintenance. Provide stormwater system and drainage infrastructure description and location information in a format suitable for entry into the Department's existing Geographical Information System (GIS).
- b. Ensure all work conforms to standards and guidelines as described in Federal Highway Administration (FHWA), National Association of Sewer Service Companies (NASSCO), Water Research Centre (WRC), and American Society of Civil Engineers (ASCE) publications, and as provided by the Department. Ensure that all known storm sewer systems and BMPs are assessed, reported, and formatted for use in the Department's Enterprise GIS. These services will be accomplished fully by the Contractor so that it will be unnecessary for the Department to supplement any of them with its own personnel, except as noted hereinafter.
- c. Coordinate with the appropriate governmental jurisdictions and other entities in researching the location(s) of existing stormwater facilities. Secure all "as built" plans, plats, and other necessary data as supplied by the various entities. While obtaining the information from the governmental jurisdictions or other entities; ensure following information will include but not be limited to the age, the size, the material type, the general condition of the stormwater system and the approximate cost to rehabilitate, if necessary.
- d. Comply with any and all Utilities Protection Center (UPC) of Georgia and State Law requirements for notification prior to excavation.
- e. Provide all necessary equipment and support personnel, including GPS, GIS and surveying capabilities, to secure the stormwater data.
- f. Clean the existing system sufficiently enough to allow for the proper detailed inspection of the system.
- g. Determine the actual location and physical attributes of stormwater system structures and pipelines using appropriate surveying and data collecting techniques. Ensure survey accuracies are to survey grade.
- h. Determine the actual location and physical attributes of the drainage infrastructure using appropriate surveying and data collection techniques. Ensure survey accuracies are to survey grade.
- i. Translate any data (See 999.3.E.5) for direct incorporation of information into the Department's required format(s). Clearly delineate GIS stormwater and drainage information via Department approved geodatabase schema and attribute domains. Ensure all GIS data conforms to GDOT Publications 8085-1 Geospatial Data Policy and Standards, 8075-5 Metadata Registry, 13-6 IT Development Procedures, and 8075-1 Database Design and Modeling Standard. Ensure all CADD drawings conform to the Department's current Electronic Data Guidelines (EDG) and the Plans Preparation Guide (PPG).

2. Hydrological system evaluation – Phase 1

- a. Submit a report letter detailing the hydrological evaluation of the system and recommendations. Reports must contain sufficient descriptive text, written in a coherent, professional technical style, to adequately explain the existing site conditions and to adequately support any computations, tables, or graphics. The English Engineering System of units will be used for all physical quantities; and, except for dimensionless numbers, the units of all numbers will be clearly expressed.

All maps and plans will have a scale, a north arrow, and a title. All reports will be stamped/sealed, signed and dated by a professional engineer registered in Georgia.

- b. Ensure report letter includes all essential information as required by Special Provision Section 999.3.E. Department. In general, letter reports are to be written on the Contractor's official letterhead and are to contain an introduction, findings, conclusions, and recommendations. Ensure reports contain any drawings, figures, data tables, maps, etc. necessary to support the findings and conclusions. Neat sketches in electronic format when warranted are acceptable for inclusion into a letter report. Ensure the letter report includes professional recommendations of further investigation required to fulfill the requirements set forth in Phase 2 referenced in 999.3.E.3 below.
 - c. Collect, review, and analyze available information about the existing stormwater system serving the programmed roadway segment, including, but not limited to, property plats, existing Department plans, USGS maps, Department GIS files, and county public works records and GIS files.
 - d. Determine the actual location and physical attributes of the stormwater system structures, pipelines, and BMPs using appropriate surveying and data collecting techniques;
 - e. Evaluate and record the physical condition and operational integrity of each stormwater structure, conveyance line, and BMP;
 - f. Make a photographic record of each structure. (If cleaning is required, produce before-and-after shots for verification of payment, note the location and milepost to the nearest tenth of a mile, and date the photo. Ensure photos are geocoded with the longitude and latitude information in decimal degrees WGS 1984 within the photo header information.
 - g. Submit a File GeoDatabase in a compressed Zip file of stormwater and drainage features, metadata, and associated media files to the Department.
3. GeoDatabase and Media Files - Phase 2
- a. Provide location, physical attribute information, drainage area and outfall location for each structure in the existing stormwater system to the Department's GIS in a compatible format as specified in 999.3.G.5.
 - b. Specific items to be addressed during any field evaluation include, but are not limited to:
 - 1) Each stormwater system that is wholly or partially located within the project area will be studied from the upstream point where it enters the project area to the downstream point where it exits.
 - 2) Structures to be studied include, but are not limited to:
 - (a) Detention Facilities/Ponds
 - (b) Permanent Water Quality BMP's
 - (c) Drop inlets
 - (d) Catch basins
 - (e) Hooded grated inlets
 - (f) Junction boxes
 - (g) Headwalls
 - (h) Flared end sections

- (i) Pipe ends
 - (j) Outlet structures
 - (k) Culverts
 - (l) Pipelines
 - (m) Paved ditches
 - (n) Unpaved ditches
 - (o) Nonstandard structures
- 3) Physical attributes to be determined include, as applicable:
- (a) Identification number
 - (b) Invert elevations
 - (c) Material(s)
 - (d) Sizes
 - (e) Standard GDOT types
 - (f) Pipelines entering and exiting structures
 - (g) Upstream and/or downstream structures
 - (h) Horizontal and vertical location
 - (i) Profiles and sections
 - (j) Receiving body of water
 - (k) Blockage
- 4) Other data required to completely describe the system
4. Final Deliverable
- a. Prepare a final GeoDatabase and an updated map of the existing stormwater system within the deliverable corridor in accordance with all applicable requirements in this document, and ensure references to media files are valid, uniform, and compatible with the final storage location on the GDOT IT server.
 - b. Work with the Highway Maintenance Management System (HMMS) to populate an HMMS reference ID within the conveyances feature class.
 - c. Submit the final updated GeoDatabase to the Department for incorporation into the Department's Enterprise GIS.
5. GIS Services
- a. Assemble and present information gathered in a format compatible with the Department's Enterprise GIS and CADD systems (MicroStation) for use by the Department's staff.
 - b. Develop the GIS and MicroStation files in accordance with the Department's GIS conventions and EDG, current edition (unless otherwise indicated by the Engineer).
 - c. Submit completed electronic files to the Engineer for review and comments.
 - d. Work will not be considered complete until the Contractor has addressed all comments from all reviews to the satisfaction of the Engineer.
 - e. Collect all applicable field data on stormwater structures, pipes, conveyances, and outfalls by means of GIS or survey-grade GPS receivers and/or traditional surveying

methods and by direct inspection, and/or geophysical sensing methods. The Department will provide the Contractor with access to base maps via published data services and Enterprise GIS File Geodatabase exports by request. Upon completion of data collection, submit a File Geodatabase containing the relevant feature classes with metadata in a compressed Zip file. Include required associated media files such as storm structure pictures. Ensure all GIS project files are submitted in a format compatible in Esri ArcGIS versions specified in 13-6 IT Development Procedures and is approved by the Engineer.

- f. As part of the QA/QC program, report the name, model, and manufacturer of the equipment used for surveying. . Include Positional Dilution of Precision (PDOP), Horizontal Dilution of Precision (HDOP), and Vertical Dilution of Precision (VDOP) measures associated with GPS features collected. Include date and time stamps. Include flags indicating method of post processing or differential correction. Document the procedures and settings used to ensure the specified accuracy is obtained, including the use of offsets, instrument calibration, and spot-checking survey data accuracy. As part of the field procedures, spot-check observational data including, but not limited to, conveyance type, material, and condition; structure type, material, and condition; sizes; shapes; and lengths. Document accuracy as per National Standard for Spatial Data Accuracy (FGDC-STD-007.3-1998) specification or National Map Accuracy standards for map accuracy and scale specifications of the Geodatabase feature classes.
- g. Ensure conformance with the current schema provided by the Department at the time of issuance of the task order. The Data Dictionary contains the XML schema with stylesheet for display. The Data Dictionary shows the minimum required stormwater and drainage infrastructure data unless otherwise noted. Include at a minimum the items specified in the Department's current SSAP/MS4 Deliverable Checklist. Ensure conformance with the current SSAP/MS4 Condition Grading System Code Matrix for the stormwater and drainage infrastructure.

6. Certification

- a. For the purpose of this agreement, "Certification" or "certified" means to professionally seal the completed work product. Certify all completed services by a responsible registered professional in the State of Georgia, in the full employ of the Contractor on the plans. Ensure the accuracy of all information presented to the Department complies with the requirements of Special Provision Section 999.3.E.

999.4 CONSTRUCTION

Ensure the Project is constructed as per the Project scope and as per the accepted Released for Construction plans in accordance with the Specifications. No construction will begin on any phase of the work prior to the Department providing written authorization to the Contractor to begin land disturbing activities. Deliver two (2) full size and four (4) half size sets of the Released for Construction plans to the Department's Area Office at least 1 (one) week prior to the Contractor performing initial land disturbing activities. Deliver all subsequent Released for Construction plans at least 24 (twenty four) hours before commencing land disturbing activities. All plans submitted to the Area Office for use on construction shall include all applicable Standards and Details required in the Work.

Construction includes, but is not limited to, the following:

- A. All clearing and grubbing and grading required in accordance with Sections 201, 202, 205, 206, 208 and 209. All necessary grading and drainage to construct the subgrades, including the removal and replacement of unsuitable material, shoulders and incidental work to include furnishing borrow pits, waste disposal areas and hauling borrow and waste materials as required. Ensure the removal and replacement of unsuitable material.
- B. All necessary culvert extensions include removal and replacement of headwalls, aprons and rip-rap. Ensure existing culverts are analyzed for structural sufficiency for new fills. Where the existing culvert is not structurally sufficient, remove the deficient portion of the culvert and replace utilizing appropriate excavation and shoring as needed. Alternate methods of construction may be submitted to the Department for approval.
- C. All necessary base construction, milling, leveling, asphalt paving and concrete paving to construct the pavement structure.
- D. Removal of all curbs, drainage structures, pavements, bases and sub-bases, or other obstructions within the rights of way as necessary to construct the roadway section.
- E. All signing, interstate signage including sign structures, signalization, pavement marking, raised pavement markers, and guardrail.
- F. Ensure storing of any equipment and materials on the Project outside of the active clear zone.
- G. Errors and omissions are the responsibility of the Contractor to correct and at the expense of the Contractor.
- H. No existing materials removed from the Project shall be reused. Coordinate the removal and disposal of all Signing and ATMS items with the Department. All remaining material shall be disposed of properly by the Contractor in accordance with all Local, State and Federal laws.
- I. Preparation of As-Built Construction Plans.

999.5 MEASUREMENT AND PAYMENT

The Work required under this Specification will not be measured separately for payment unless otherwise specified. Payment for the items listed below, complete and accepted, will be made at the Lump Sum price bid. Payment shall be full compensation for furnishing all materials, labor, tools, equipment, superintendence, mailing charges, removal and replacement of unsuitable material and other incidentals. It shall also be made for performing all work specified, including but not limited to, designing, detailing, producing construction plans (preliminary and final, electronic and hard copy), meeting with the Department, processing the NOI and complete construction.

For all asphaltic concrete, when materials or construction are not within the tolerances specified in Sections 400 and 402, deductions shall be made in accordance with the applicable requirements of Sections 106, 400 and 402. The deduction will be determined by the following formula:

$$\text{Deduction (per ton)} = (1 - \text{Pay Factor}) \times \text{Assumed Unit Price/Ton}$$

(See Chart Below)

<u>Material</u>	<u>Assumed Unit Price/Ton</u>
Asphaltic Concrete 9.5 mm Superpave, Type II	\$76.04
Asphaltic Concrete 12.5 mm Superpave	\$72.47
Asphaltic Concrete 19 mm Superpave	\$66.84
Asphaltic Concrete 25 mm Superpave	\$63.22
Asphaltic Concrete 12.5 mm SMA	\$129.17
Asphaltic Concrete 12.5 mm PEM	\$106.21

Provide a detailed estimate with the Release for Construction plans. Partial payments of the Lump Sum price will be made on monthly statements based on an accepted schedule of values and detailed estimate. Develop a schedule of values with sufficient breakdown for each of the following items:

- DESIGN COMPLETE
- CONSTRUCTION COMPLETE

Include the schedule for values a rational basis for partial payments of the Lump Sum bid based on the completed portion of the item and definitive activities. Submit the schedule for values to the Engineer. No payments will be made until the schedule of values is accepted.

No payment for mobilization will be made until the Department issues written authorization that plans are released for construction. Payment for mobilization shall not exceed 2.5% of the overall bid price for Construction Complete. The Contractor shall submit a detailed breakdown of mobilization in the proposed schedule of values for acceptance.

Contractor shall work with the Engineer to establish estimated earthwork, asphalt, and concrete quantities, as this will determine the frequency of required testing by the Department.

No later than the 25th day of each month, provide the Department with a certification showing the percent complete for each item of work. Include a breakdown and supporting documentation, to include the Design Consultant’s monthly invoice, in sufficient detail to substantiate the percent complete certified.

Payment shall be made under:

Item 999-2010 - DESIGN COMPLETE	per Lump Sum
Item 999-2015 - CONSTRUCTION COMPLETE	per Lump Sum

999.6 QUALIFICATIONS PACKAGE

As part of the qualifications package, the Design-Build firm must be prequalified in the area class(es) identified below. The **Lead Design Consultant MUST** be prequalified by GDOT in the area class(es) indicated with an "X".

"X"	Number	Area Class
	1.06(a)	NEPA Documentation
	1.06(e)	Ecology
X	3.02	Two-Lane or Multi-lane Urban Roadway Design
	3.07	Traffic Operations Design
	3.10	Utility Coordination
	3.12	Hydraulic and Hydrological Studies (Roadway)
	3.13	Bicycle and Pedestrian Facility Design
	4.01	Minor Bridge Design
	4.04	Hydraulic and Hydrological Studies (Bridges)
	5.01	Land Surveying
	5.02	Engineering Surveying
	5.08	Subsurface Utility Engineering
	6.02	Bridge Foundation Studies
	9.01	Erosion, Sedimentation, and Pollution Control and Plan Preparation
	9.03	Field Inspections for Compliance of Erosion and Sedimentation Control Devices Installation

Submit to the Department three (3) copies of the "Notice to Professional Consultant Qualifications" for the Lead Design Consultant and all sub-consultants or joint-venture of consultants on the team in a sealed envelope so marked as to identify its contents without being opened.

If the "Qualifications Package" is not received by the GADOT Office of Construction Bidding Administration, Room 1113, by no later than 12:00 p.m. on the day prior to the Bid Opening, the Bid will be subject to rejection.

APPENDIX A

Appendix A – Speed Indicating Feedback Sign

A.1 General Description

This work includes furnishing, installing, and making operational a pole mounted Speed Indicating Feedback Sign.

The Speed Indicating Feedback Sign will provide drivers with their actual speed versus the posted speed by detecting their velocity with microwave (radar) speed detection. The sign will display measured speed in miles per hour on an integrated LED display.

Provide Speed Indicating Feedback Signs at quantities and locations indicated in the Plans.

Provide all equipment, materials, and work in accordance with all manufacturers' recommendations, including but not limited to all mounting, wiring and cabling, power supply, surge suppression, communications equipment and materials.

A.1.01 Definitions

Speed Indicating Feedback Sign: a solar powered sign assembly utilizing an integrated microwave speed detecting radar and a speed indicating LED sign for informing drivers of their actual speed versus the posted speed.

A.1.02 Related References

A. Georgia Department of Transportation Specifications

- Section 150 – Traffic Control
- Section 911 – Sign Posts
- Section 922 – Electrical Wire and Cable
- Section 925 – Traffic Signal Equipment
- Section 939 – Communications and Electronics Equipment

B. Referenced Documents

- American National Standards Institute (ANSI)
- Federal Communications Commission (FCC) regulations
- National Electric Code (NEC)
- Underwriters' Laboratories Inc. (UL)
- National Electrical Manufacturer Association (NEMA)
- Institute of Electrical and Electronic Engineers (IEEE)
- American Society of Testing and Materials (ASTM)
- American National Standards Institute (ANSI)
- Lightning Protection Institute (LPI)
- National Electrical Safety Code (NESC)
- Occupational, Safety, and Health Act (OSHA)
- Federal Highway Administration (FHWA)
- Nation Fire Protection Association (NFPA)
- National Cooperative Highway Research Program (NCHRP)
- Manual on Uniform Traffic Control Devices, current edition (MUTCD)
- American Association of State Highway Transportation Officials (AASHTO) Roadside Design Guide

Obtain approval by the Engineer for all materials, equipment, accessories and components that are not in accordance with the specific standards and requirements. Ensure conflicts between referenced industry specifications and this specification are addressed by the Engineer.

Use the latest version of referenced industry specifications, standards, and practices in force and in existence as of this project’s advertisement date unless otherwise noted.

Acquire and use all applicable manuals, guidelines, and standards and practices applying to the design, construction, and testing activities required to complete this project.

A.1.03 Submittals

This chart is to be used as a guide and does not relieve the Contractor from submitting additional information to form a complete submittal package.

Section A Submittal Requirements									
Material	Specification Reference	Catalog Cuts	Mfg. Spec.	Materials Cert.	Lab Test	Install. Proced.	Test Plan	Training Plan Maint. Proced.	Submittal Due Date (Cal. Days after NTP)
Speed Indicating Feedback Sign	A.2	X	X				X	X	30 Days
Mounting Pole and Foundation	A.2	X	X						30 Days

Provide six (6) copies of complete and thorough submittal data for all components required for this item. Furnish the submittal data to the Engineer.

Include in submittal data complete technical and performance specifications on all hardware, materials, training to be performed under this contract. Provide technical schematics clearly showing how the proposed equipment works and is connected and configured.

Organize each package of submittal data and separate by hardware item. Include an index of all submittal data documents contained within the package. Provide neat, legible, and orderly submittal data. Organize each package of submittal data and separate by hardware item.

Use the “Materials Certification Package Index and Transmittal Form”, contained in Section 105.02 of the Specifications, for each pay item to document and list all material and components included in the submittal package.

Any submittal data submitted without the Index/Transmittal form or is incomplete or not clear will be rejected.

A. Speed Indicating Feedback Sign Assembly

1. Speed Indicating Feedback Sign

Submit complete physical, performance, and operational materials submittal data for the speed indicating feedback sign and all associated components.

2. Mounting Pole and Foundation

Submit complete physical, performance, and operational materials submittal data for the mounting pole and foundation.

3. Solar Panel Subsystem

Submit complete physical, performance, and operational materials submittal data for the solar panel and associated components.

B. Acceptance Testing

Develop and submit detailed and thorough test procedures with full test plan descriptions and test results data sheets.

C. Warranties and Guarantees

Submit materials submittal data providing complete example documentation on all manufacturers' warranties or guarantees on all Speed Indicating Feedback Signs, mounting poles and foundations, as required in Subsection A.3.07.

D. Training

Submit a Training Plan including, at a minimum, a detailed description of course contents, a training course outline, resumes and references of the instructor(s), and the training notebook that students will use during training. Submit a Training Plan within 30 calendar days of Contract Notice-to-Proceed. Obtain approval of the Plan from the Engineer.

Submit a written training date schedule a minimum of thirty (30) Calendar days in advance of the desired training date(s). Do not submit request to schedule the training prior to receiving the Engineer's approval of the Training Plan. Allow the Engineer to adjust the proposed training schedule by up to seven (7) calendar days, at no cost to the Department.

E. As-Built Documentation

Provide as-built/delivered documentation of the Speed Indicating Feedback Sign within thirty (30) Calendar days of the completion of the Field Tests.

A.2 Materials

A. Speed Indicating Feedback Sign Assembly

Ensure the individual components and assemblies of the Speed Indicating Feedback Sign conform to the requirements specified herein.

Ensure all equipment, materials, components and assemblies of the Speed Indicating Feedback Sign conform to manufacturer's requirements and recommendations.

Construct the system with all electronic components of solid-state design and modular construction and designed for the environment in which they will be installed.

Deliver the Speed Indicating Feedback Sign with connectors, fasteners, etc. preventing reversed assembly or installation or where possible malfunction or personnel hazards might occur.

Deliver and install the Speed Indicating Feedback Sign with any other equipment or components needed for safe and reliable operation.

Ensure the Speed Indicating Feedback Sign is the same type shown in the example in detail drawing A.3.

Ensure the Speed Indicating Feedback Sign consists of but is not limited to the following components and materials:

- Speed Indicating Feedback Sign
- Solar cell/battery power source
- Mounting Hardware
- Configuration and data collection software
- Installation and testing

Provide the Speed Indicating Feedback Sign meeting the performance requirements listed below:

- Provides a minimum speed detection range of 500 feet.
- Provides a display of the detected speed on a bright amber colored LED sign matrix.
- Powered by solar cells and batteries with automatic battery charging and power control.
- Managed, configured and controlled through a wireless interface from a properly equipped computer.
- Allows configuration of all adjustable parameters via the wireless interface.
- Sign controller, batteries and wireless system are internal to the Speed Indicating Sign housing and do not require an external cabinet.
- Mounted and installed.

B. System Equipment And Hardware

Provide system equipment and software for the Speed Indicating Feedback Sign meeting the following minimum specifications:

1. Sign Control Electronics

- Operational On/Off Timer Options: 4 timers per day and by day of week.
- Display On/Off: Allows traffic data collection to continue even when display is off.
- Display Brightness Control: Manual setting option and auto adjusts to light conditions, up to 100 levels.
- Set up and configuration: Software configuration no mechanical switches to operate.
- Maximum Speed Cutoff: prevents display of speeds above a selected maximum speed. Display can be configured as flashing matrix, or display cutoff.
- Date/Time Control: Battery backed real-time clock / calendar
- Violation Alert: Display to flash slow or fast depending on configuration setting.
- Data storage: Mini SD data card
- Ensure software is COTS vendor software specific to the manufacturer and accepted by the Engineer. Ensure software includes companion laptop software and interfaces directly with a standard laptop operating on a Windows based platform.

2. Display Sign Specifications

- Sign Dimensions : Maximum 26" high x 24" wide x 6" deep
- Sign Housing Color: Reflective Yellow or Reflective White
- LED Display Characters: 2 digits, 12" high amber LED matrix

- d. LED Color: Amber
 - e. LED Life span: 95,000 hours minimum
 - f. Weight: Maximum 35 lbs.
 - g. Electrical Protection: Circuit breakers
 - h. Sign Housing Construction: .1875" to .25" Aluminum with white powder coat finish, NEMA 4R
 - i. Operating Environment : -5° F to +130° F, maximum humidity; 100%
 - j. Display Cover: .25" thick polycarbonate
 - k. Component protection: Armor or shielding to protect LED's and internal components from vandalism.
 - l. Pole Mounting Hardware: For Mounting on the supplied mounting pole.
3. Solar Panel and Batteries
- a. Solar Panel Output: Minimum power , 40 watt, Minimum Pmax current = 2.30 Amps
 - b. Batteries: Two AGM batteries 12V 18 amp hour
 - c. Solar Controller: automatic over/under charge protection
 - d. Solar Panel Mount: pole mount with 45° angle bracket
 - e. Remote Battery Status: Wireless, provides battery charge status and solar charging current.
4. Communications
- Wireless Communication: RF communication port for remote configuration and data collection.
5. Speed Radar
- a. Speed Radar Type: K Band, (24.125 GHz, +/-50 MHz 24.125 GHz, +/-50 MHz) single direction
 - b. Doppler radar, FCC part 15 compliant
 - c. Speed Radar Sensor Range: Sensor range up to 500'
 - d. Speed Radar Beam Width: No more than 15 degrees, +/-3 degrees
 - e. Speed Radar Accuracy: +/-1.5 mph
 - f. Speed Detection Range: 10 to 125 mph
 - g. Sign Housing Construction: .1875" to .25" Aluminum with white powder coat finish, NEMA 4R
 - h. Operating Environment : -5° F to +130° F, maximum humidity; 100%
 - i. Display Cover: .25" thick polycarbonate
 - j. Warranty: 1 year parts and labor for all supplied components.

C. Mounting Pole and Foundation

Provide a mounting pole and foundation designed to support the Speed Indicating Sign and the associated solar panel, batteries and all equipment required to supply a complete Speed Indicating Sign Assembly. Ensure the supplied pole meets the following minimum requirements:

- Consists of a square steel tube pole sized 4” minimum with breakaway base.
- Pole, base and associated items are painted with a green color that is approved by the Engineer.

Determine pole foundation dimensions based on the local conditions at the locations indicated in the Plans. Ensure the pole foundation provides a safe and secure mounting of the complete Speed Indicating Feedback Sign.

Provide the Engineer with plans and drawings illustrating the mounting structure and the installed Speed Indicating Feedback Sign.

A.2.01 Delivery, Storage and Handling

A. Speed Indicating Feedback Sign

Provide all materials in protective packaging suitable for shipping and storage. Label all boxes with contents, including manufacturer name, model, serial numbers, and project number. Deliver assemblies to the Engineer. Maintain responsibility for all equipment prior to installation and acceptance.

A.3 Construction Requirements

Ensure all construction for the equipment, materials, components and assemblies of the Speed Indicating Feedback Sign conform to manufacturer’s requirements and recommendations.

Install signs at locations indicated on the Plans. Coordinate installation activities with other utilities along the project corridor and the Engineer.

Supply mounting hardware, poles and foundations adequate for the loads and in compliance with local, state and federal building codes.

A.3.01 Personnel

General Provisions 101 through 150

A.3.02 Equipment

General Provisions 101 through 150

A.3.03 Preparation

General Provisions 101 through 150

A.3.04 Fabrication

General Provisions 101 through 150

A.3.05 Construction

A. Installation

Install sign assembly on contractor supplied square steel tube with a breakaway base. Follow manufacturer's installation directions and comply with all local, state and national regulations regarding placement and installation of traffic control devices.

B. As-Built Drawings

For each installation site; furnish three (3) sets of as-built drawings, schematics, parts lists and manuals of the delivered Speed Indicating Feedback Sign and submit all copies to the Engineer.

A.3.06 Quality Acceptance

A. General

Perform acceptance testing for all equipment, hardware and work provided under this Contract at each Speed Indicating Feedback Sign field installation assembly.

Obtain Engineer's approval for all test procedures prior to beginning acceptance testing.

Notify the Engineer of a desired acceptance test schedule no less than fourteen calendar days prior to beginning testing.

Complete all work prior to the beginning of any acceptance testing at a given Speed Indicating Feedback Sign system site.

Complete all configuration and documentation described in Subsection A.2.B. prior to the beginning of any acceptance testing at a given Speed Indicating Feedback Sign system site. Be prepared to demonstrate such work.

Perform all testing in the presence of the Engineer.

Have a complete copy of all materials and equipment submissions and all documentary items on hand at all acceptance testing sessions.

Demonstrate that the Speed Indicating Feedback Sign system equipment, hardware and work meet all requirements of the Contract including, but not limited to, all design, construction, materials, equipment, assembly, documentation of manufacturer's certification of assembly and configuration, environmental, performance, communications, video and data communications signal strength and clarity and documentary requirements of the Contract.

Perform acceptance testing of the Speed Indicating Feedback Sign in two phases:

- field installation testing
- burn-in period

B. Field Installation Test

Perform the Field Installation Test as an onsite test of the complete field installation including wireless configuration testing.

Use a Laptop PC system and Speed Indicating Feedback Sign control and configuration software.

Demonstrate operation of wireless configuration and data downloading, sign visibility and speed accuracy.

C. Burn-in Period

1. General Requirements

Provide a 30-day burn-in period for all work and equipment included in the Contract. The burn-in period consists of the field operation of the Speed Indicating Feedback Sign system in full accordance with the Speed Indicating Feedback Sign system requirements of the Plans and Specifications. An acceptance test procedure is not required for the system burn-in.

Conduct only one (1) burn-in period on the entire Contract. Commence with the burn-in period only after meeting all of the following requirements:

- All work required in all Contract documents for Speed Indicating Feedback Sign Assemblies has been completed and inspected by the Engineer.
- The Engineer has accepted Field Installation Tests for all Speed Indicating Feedback Signs.
- The Engineer has provided written authorization to commence with burn-in period.

Terminate the burn-in period 30 consecutive days thereafter unless an equipment malfunction occurs. Stop the burn-in period for the length of time any equipment is defective. After repairing equipment so it functions properly, resume burn-in period at point it was stopped.

Successful completion and acceptance of the burn-in period will be granted on the 30th day unless any equipment has malfunctioned during the 15th through 30th day of the burn-in period. If any equipment has failed during the 15th through 30th day, final acceptance will be withheld until all the equipment is functioning properly for 15 days after repair.

When a specific piece of equipment has malfunctioned more than three times during the 30 day burn-in period, replace that equipment with a new unit and repeat the 30 day burn-in period.

2. Contractor Responsibilities

- Maintain all work under this Contract in accordance with the Specifications.
- Restore any failing or malfunctioning work or equipment to proper operating condition within 12 hours after notification.
- Pay any costs incurred as a result of emergency actions taken by the Department in accordance with Subsection A.3.06.C.3
- Maintain any guaranties or warranties or other obligations set forth in the Contract regardless of emergency actions taken by the Department in accordance with Subsection A.3.06.C.3.
- Maintain the complete Speed Indicating Feedback Sign system after burn-in period acceptance in accordance with the requirements of Subsection A.3.07 until Final Acceptance of the entire Contract.

3. Department Responsibilities

- Provide expeditious notification of Contractor upon failure or malfunction of equipment.
- Take emergency action as deemed necessary in the interest of public safety to provide for adequate traffic control in the event that the Contractor does not provide the services enumerated in the Specifications.

4. Burn-In Period Acceptance

The Department will make burn-in period acceptance after satisfactory completion of the required burn-in period and on the basis of a comprehensive field inspection of the complete Speed Indicating Feedback Sign system in accordance with the Specifications.

D. Bench Acceptance Test

Not Applicable

A.3.07 Contractor Warranty and Maintenance

A. Warranty

Provide a manufacturer's support (usual and customary warranties) period for all equipment and materials furnished and installed as part of the Speed Indicating Feedback Sign system equipment and materials.

Transfer Manufacturer's and Contractor's warranties and guarantees to the Department. Make these warranties and guarantees continuous throughout their duration. Ensure warranties and guarantees specify they are subject to such transfer. Transfer warranties and guarantees upon Contract Final Acceptance.

B. Support

Provide phone consultations as needed during the warranty period at no cost for any operating and maintenance questions or problems.

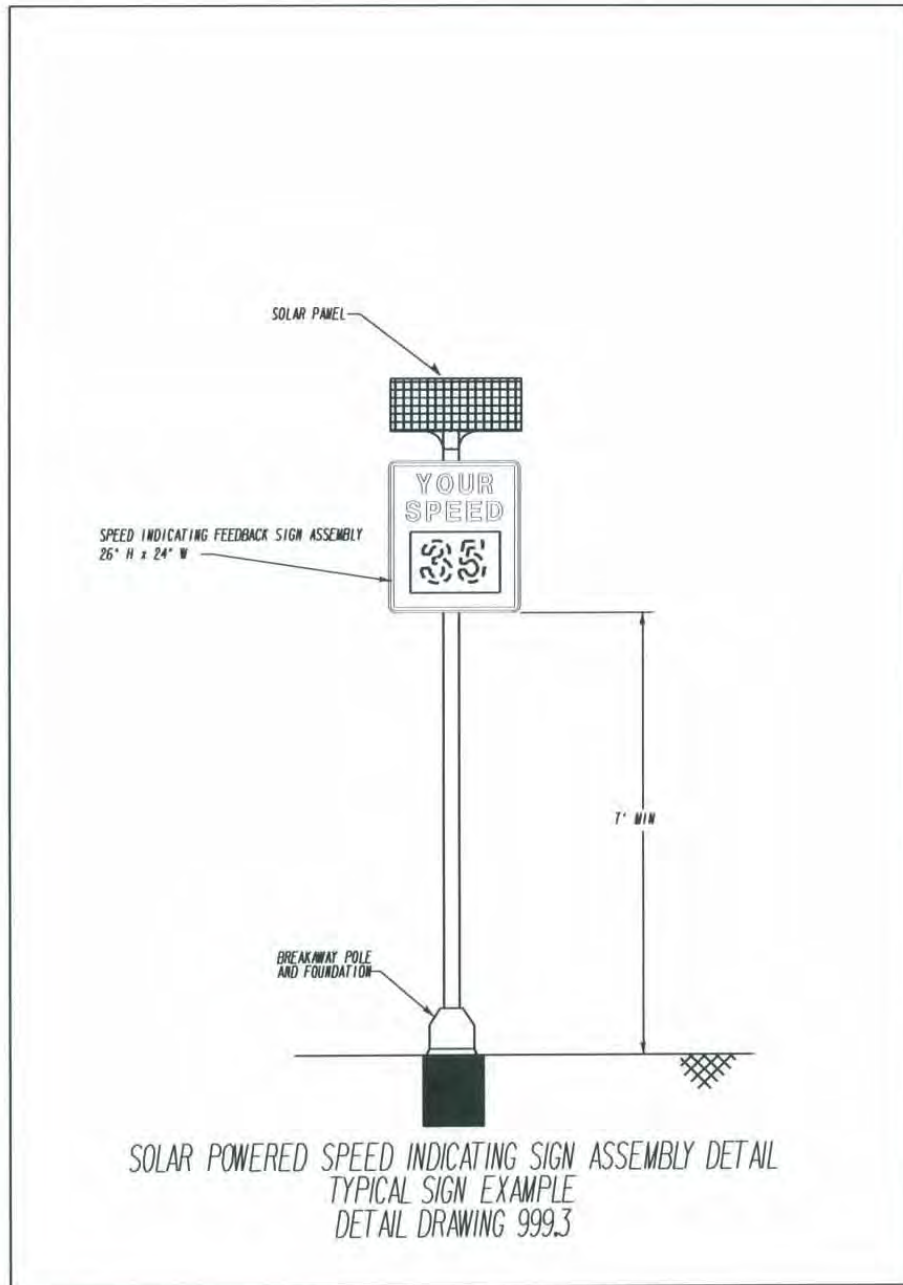
A.3.08 Training

Provide training as required herein. Include with training all supplies, equipment, materials, handouts, travel, and subsistence necessary to conduct the training. Furnish a training notebook in a labeled 3-ring binder to each trainee. Include in the cost of training all supplies, equipment, materials, handouts, travel, and subsistence necessary to conduct the training. Provide operations and maintenance training on the equipment location. Personnel trained by the equipment manufacturers and authorized by said manufacturer shall perform the training. Training for each piece of equipment listed below shall consist of at least six (6) clock hours of training for each participant. Provide a training course for the following equipment:

A. Speed Indicating Feedback Sign

Ensure minimum course content includes:

- Theory of operation
- Unit set-up and configuration
- Trouble shooting
- Diagnostics and maintenance



APPENDIX B

Appendix B – Rectangular Rapid Flashing Beacon Assembly

B.1 General Description

This work includes furnishing, installing, and making operational a pole mounted rectangular rapid flashing beacon assembly.

The Rectangular Rapid Flashing Beacon Assembly will alert motorists to the presence of a pedestrian in a marked crosswalk. The Rectangular Rapid Flashing Beacon Assembly will be push-button activated with irregular flashing yellow LEDs mounted with standard S1-1 and W16-7p crosswalk signs.

Provide Rectangular Rapid Flashing Beacon Assemblies in the quantities and locations indicated in the Plans.

Provide all equipment, materials, and work in accordance with all manufacturers' recommendations, including but not limited to all mounting, wiring and cabling, power supply, surge suppression, and communications equipment and materials.

Ensure all provisions of the MUTCD applicable to Warning Beacons are met except as otherwise provided in this Specification.

B.1.01 Definitions

Rectangular Rapid Flashing Beacon Assembly: a solar-powered beacon assembly with two pulsing yellow LED light sources, push button activation system, signs, solar power subsystem, wireless subsystem, cabinet, battery (s), pole, foundation, and all necessary wiring.

B.1.02 Related References

A. Georgia Department of Transportation Specifications

- Section 105 – Control of Work
- Section 150 – Traffic Control
- Section 636 – Highway Signs
- Section 647 – Traffic Signal Installation
- Section 850 – Aluminum Alloy Metals (Aluminum Pedestrian Pedestal Posts)
- Section 911 – Sign Posts
- Section 922 – Electrical Wire and Cable
- Section 925 – Traffic Signal Equipment
- Section 939 – Communications and Electronics Equipment

B. Referenced Documents

- American National Standards Institute (ANSI)
- Federal Communications Commission (FCC) regulations
- National Electric Code (NEC)
- Underwriters' Laboratories Inc. (UL)
- National Electrical Manufacturer Association (NEMA)
- Institute of Electrical and Electronic Engineers (IEEE)
- American Society of Testing and Materials (ASTM)
- American National Standards Institute (ANSI)
- Lightning Protection Institute (LPI)
- National Electrical Safety Code (NESC)
- Occupational, Safety, and Health Act (OSHA)

- Federal Highway Works Administration (FHWA)
- Nation Fire Protection Association (NFPA)
- National Cooperative Highway Research Program (NCHRP)
- Manual on Uniform Traffic Control Devices, 2009 ed. (MUTCD)
- American Association of State Highway Transportation Officials (AASHTO) Roadside Design Guide
- Society of Automotive Engineers (SAE) Std. J595

Obtain approval by the Engineer for all materials, equipment, accessories and components that are not in accordance with the specific standards and requirements. Ensure conflicts between referenced industry specifications and this specification are addressed by the Engineer.

Use the latest version of referenced industry specifications, standards, and practices in force and in existence as of this project’s advertisement date unless otherwise noted.

Acquire and use all applicable manuals, guidelines, standards and practices applying to the design, construction, and testing activities required to complete this project.

B.1.03 Submittals

This chart is to be used as a guide and does not relieve the Contractor from submitting additional information to form a complete submittal package.

Section B Submittal Requirements									
Material	Specification Reference	Catalog Cuts	Mfg. Spec.	Materials Cert.	Lab Test	Install. Proced.	Test Plan	Training Plan Maint. Proced.	Submittal Due Date (Cal. Days after NTP)
Rectangular Rapid Flashing Beacon Assembly	B.2	X	X				X	X	30 Days

Provide six (6) copies of complete and thorough submittal data for all components required for this item. Furnish the submittal data to the Engineer.

Include in the submittal data complete technical and performance specifications on all hardware, materials and training to be performed under this contract. Provide technical schematics clearly showing how the proposed equipment works and is connected and configured.

Organize each package of submittal data and separate by hardware item. Include an index of all submittal data documents contained within the package. Provide neat, legible, and orderly submittal data. Organize each package of submittal data and separate by hardware item.

Use the “Materials Certification Package Index and Transmittal Form”, contained in Section 105.02 of the Special Provisions, to document and list all material and components included in the submittal package.

Any submittal data submitted without the Index/Transmittal form or is incomplete or not clear will be rejected.

A. Rectangular Rapid Flashing Beacon Assembly

1. Rectangular Rapid Flashing Beacon

Submit complete physical, performance, and operational materials submittal data for the Rectangular Rapid Flashing Beacon sign and all associated components.

2. Mounting Pole and Foundation

- Submit complete physical, performance, and operational materials submittal data for the mounting pole and foundation.
- Submit details of pole construction including foundation, base, pole, mounting height for all equipment and signs, and all necessary dimensions.

3. Wireless Subsystem

- Submit complete physical, performance, and operational materials submittal data for the wireless subsystem and associated components.
- Submit results of wireless configuration testing.

4. Solar Panel Subsystem

Submit complete physical, performance, and operational materials submittal data for the solar panel and associated components.

B. Acceptance Testing

- Submit manufacturer's acceptance testing results for rectangular rapid flashing beacon and solar panel.
- Develop and submit detailed and thorough test procedures with full test plan descriptions and test results data sheets.

C. Warranties and Guarantees

Submit materials submittal data providing complete example documentation on all manufacturers' warranties or guarantees on all Rectangular Rapid Flashing Beacons, as required in Subsection B.3.07.

D. Training

Submit a Training Plan including, at a minimum, a detailed description of course contents, a training course outline, resumes and references of the instructor(s), and the training notebook that the students will use during training. Submit a Training Plan within 30 calendar days of Contract Notice-to-Proceed. Obtain approval of the Plan from the Engineer.

Submit a written training date schedule a minimum of thirty (30) Calendar days in advance of the desired training date(s). Do not submit request to schedule the training prior to receiving the Engineer's approval of the Training Plan. Allow the Engineer to adjust the proposed training schedule of the by up to seven (7) Calendar days, at no cost to the Department.

E. As-Built Documentation

Provide as-built/delivered documentation of the Rectangular Rapid Flashing Beacon Assembly within thirty (30) Calendar days of the completion of the Field Tests.

B.2 Materials

A. Rectangular Rapid Flashing Beacon Assembly

Ensure that the individual components and assemblies of the Rectangular Rapid Flashing Beacon Assembly conform to the requirements specified herein.

Ensure that all equipment, materials, components and assemblies of the Rectangular Rapid Flashing Beacon Assembly conform to manufacturer's requirements and recommendations.

Construct the system with all electronic components of solid-state design and modular construction and designed for the environment in which they will be installed.

Deliver the Rectangular Rapid Flashing Beacon Assembly with connectors, fasteners, etc. preventing reversed assembly or installation or where possible malfunction or personnel hazards might occur.

Deliver and install the Rectangular Rapid Flashing Beacon Assembly with any other equipment or components needed for safe and reliable operation.

Ensure the Rectangular Rapid Flashing Beacon Assembly is the same type shown in the example in detail drawing B.3.

Ensure the Rectangular Rapid Flashing Beacon Assembly consists of but is not limited to the following components and materials:

- Rectangular Rapid Flashing Beacon Assembly
- Solar cell/battery power source
- Signs
- Wireless subsystem
- Push button activation system
- Mounting Hardware
- Configuration and data collection software
- Installation and testing

Ensure Rectangular Rapid Flashing Beacon Assembly meets the performance requirements listed below:

B. Beacon Dimensions and Placement in Sign Assembly

- Contains two rectangular-shaped yellow indications, each with an LED-array based light source. Each indication is a minimum of 5 inches wide by 2 inches high. LEDs face oncoming traffic when installed.
- The longer dimensions of the Rectangular Rapid Flashing Beacon indications are aligned horizontally.
- The minimum space between the two indications is 7 inches measured from inside edge of one indication to inside edge of the other indication.
- The outside edges of Rectangular Rapid Flashing Beacon indications, including any housing, do not project beyond the edges of the S1-1 sign.
- The Rectangular Rapid Flashing Beacon indications are located between the bottom of the crosswalk warning (S1-1) sign and the top of the supplemental downward diagonal arrow (W16-7p) sign.

C. Beacon Flashing Requirements

- The two yellow indications in each Rectangular Rapid Flashing Beacon flash in a rapidly alternating "wig-wag" flashing sequence (left light on, then right light on) when activated.
- Beacon flash rate is 70 to 80 periods of flashing per minute for each indication with alternating but approximately equal periods of rapid pulsing light emissions and dark operation.
- During each of its 70 to 80 flashing periods per minute, the yellow indications on the left side of the RRFB shall emit two slow pulses of light after which the yellow indications on the right side of the RRFB shall emit four rapid pulses of light followed by a long pulse.
- The flash rate of each individual yellow indication, as applied over the full on-off sequence of a flashing period of the indication, is not between 5 and 30 flashes per second, to avoid frequencies that might cause seizures.

- The light intensity of the yellow indications meets minimum specifications of Society of Automotive Engineers (SAE) standard J595 (Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) dated January 2005.

D. Beacon Operation

- The Rectangular Rapid Flashing Beacon stays normally dark and initiates operation only when actuated by a pedestrian.
- The Rectangular Rapid Flashing Beacon ceases operation at a predetermined time after pedestrian actuation and by passive detection, after the pedestrian clears the crosswalk.
- All Rectangular Rapid Flashing Beacons associated with a given crosswalk (including those with an advance crossing sign, if used) simultaneously commence operation of their alternating rapid flashing indications when activated and cease operation simultaneously.
- Uses pedestrian pushbuttons to actuate the Rectangular Rapid Flashing Beacons.
- Includes a pedestrian instruction sign with the legend PUSH BUTTON TO TURN ON WARNING LIGHTS mounted adjacent to or integral with each pedestrian pushbutton.
- The duration of a predetermined period of operation of the Rectangular Rapid Flashing Beacons following each actuation is based on the MUTCD procedures for timing of pedestrian clearance times for pedestrian signals.
- Includes a small light directed at and visible to pedestrians in the crosswalk installed integral to the Rectangular Rapid Flashing Beacon or push button to give confirmation that the Rectangular Rapid Flashing Beacon is in operation.
- Powered by solar cells and batteries with automatic battery charging and power control.
- Uses wireless communication to avoid trenching.
- The Rectangular Rapid Flashing Beacon is visible a minimum distance of 1000 feet during daytime and nighttime.

E. Wireless Subsystem

- Frequency in the 900 MHz FHSS range
- Range: 1 mile minimum, 3 mile maximum

F. Solar Panel Subsystem and Batteries

- Solar Panel Output: Minimum power, 14 watt or as required by the manufacturer
- Batteries: NiMH type batteries with a lifespan of 4 years minimum
- Cabinet: NEMA 4 rated fiberglass cabinet with locking clasps or approved equivalent
- Cabinet is mounted on pole behind the S1-1 sign
- Solar Panel Mount: pole mount with 45° angle bracket

G. Mounting Pole and Foundation

Provide a mounting pole and foundation designed to support the Rectangular Rapid Flashing Beacon and the associated solar panel, batteries and all equipment required to supply a complete Rectangular Rapid Flashing Beacon. Ensure the supplied pole meets the following minimum requirements:

- Install sign assembly on square steel tube pole sized 4" minimum with breakaway base.
- Pole, base and associated items are painted with a green color that is approved by the Engineer.

Determine pole foundation dimensions based on the local conditions at the locations indicated in the Plans. Ensure the pole foundation provides a safe and secure mounting of the solar powered Rectangular Rapid Flashing Beacon Assembly.

H. Pedestrian Push Button

- Pedestrian push buttons are located perpendicular to signal indication and as required by field conditions.
- Pedestrian push buttons are placed with the button facing the pedestrian crossing.
- Pedestrian push buttons are located 3.5' (1.05m) above sidewalk or ground level.

Provide the Engineer with plans and drawings illustrating the mounting structure and the installed Rectangular Rapid Flashing Beacon.

B.2.01 Delivery, Storage and Handling

A. Rectangular Rapid Flashing Beacon

Provide all materials in protective packaging suitable for shipping and storage. Label all boxes with contents, including manufacturer name, model, serial numbers, and project number. Deliver assemblies to the Engineer. Maintain responsibility for all equipment prior to installation and through final acceptance.

B.3 Construction Requirements

Ensure that all construction for the equipment, materials, components and assemblies of the Rectangular Rapid Flashing Beacon Assembly conform to the manufacturer's requirements and recommendations.

Install Rectangular Rapid Flashing Beacon Assemblies at the locations indicated on the Plans. Coordinate Contractor installation activities with other utilities along the project corridor and the Engineer.

Supply mounting hardware, poles and foundations adequate for the loads and in compliance with local, state and federal building codes.

Ensure pole and all equipment are grounded in accordance with Department specifications.

B.3.01 Personnel

General Provisions 101 through 150

B.3.02 Equipment

General Provisions 101 through 150

B.3.03 Preparation

General Provisions 101 through 150

B.3.04 Fabrication

General Provisions 101 through 150

999.3.05 Construction

A. General Requirements

Install sign assembly on contractor supplied square steel tube with a breakaway base. Follow manufacturer's installation directions and comply with all local, state and federal regulations regarding the placement and installation of traffic control devices.

B. As-Built Drawings

For each installation site; furnish three (3) sets of as-built drawings, schematics, parts lists and manuals of the delivered Rectangular Rapid Flashing Beacon Assembly and submit all copies to the Engineer.

B.3.06 Quality Acceptance

A. General

Perform acceptance testing for all equipment, hardware and work provided under this Contract at each Rectangular Rapid Flashing Beacon Assembly field installation.

Obtain Engineer's approval for all test procedures prior to beginning acceptance testing.

Notify the Engineer of a desired acceptance test schedule no less than fourteen Calendar days prior to beginning testing.

Complete all work prior to the beginning of any acceptance testing at a given Rectangular Rapid Flashing Beacon Assembly site.

Complete all configuration and documentation described in Subsection B.2 prior to the beginning of any acceptance testing at a given Rectangular Rapid Flashing Beacon Assembly site. Be prepared to demonstrate such work.

Perform all testing in the presence of the Engineer.

Have a complete copy of all materials and equipment submissions and all documentary items on hand at all acceptance testing sessions.

Demonstrate that the Rectangular Rapid Flashing Beacon Assembly equipment, hardware and work meet all requirements of the Contract including, but not limited to, all design, construction, materials, equipment, assembly, documentation of manufacturer's certification of assembly and configuration, environmental, performance, communications, video and data communications signal strength and clarity and documentary requirements of the Contract.

Perform acceptance testing of the Rectangular Rapid Flashing Beacon Assembly in two phases:

- field installation testing
- burn-in period

B. Field Installation Test

Perform the Field Installation Test as an onsite test of the complete field installation including wireless configuration testing.

Use a Laptop PC system and Rectangular Rapid Flashing Beacon control and configuration software.

Demonstrate operation of wireless configuration and sign visibility.

C. Burn-in Period

1. General Requirements

Provide a 30-day burn-in period for all work and equipment included in the Contract. The burn-in period consists of the field operation of the Rectangular Rapid Flashing Beacon Assembly in full accordance

with the Rectangular Rapid Flashing Beacon Assembly requirements of the Plans and Specifications. An acceptance test procedure is not required for the system burn-in.

Conduct only one (1) burn-in period on the entire Contract. Commence with the burn-in period only after meeting all of the following requirements:

- Complete all work required in Contract documents for Rectangular Rapid Flashing Beacon Assemblies
- Verify all work has been inspected by the Engineer.
- Obtain Engineer's acceptance of Field Installation Tests for all Rectangular Rapid Flashing Beacon Assemblies
- Obtain written authorization from the Engineer to commence with burn-in period.

Terminate the burn-in period 30 consecutive days thereafter unless an equipment malfunction occurs. Stop the burn-in period for the length of time any equipment is defective. After repairing equipment so it functions properly, resume burn-in period at point it was stopped.

Successful completion and acceptance of the burn-in period will be granted on the 30th day unless any equipment has malfunctioned during the 15th through 30th day of the burn-in period. If any equipment has failed during the 15th through 30th day, final acceptance will be withheld until all the equipment is functioning properly for 15 days after repair.

When a specific piece of equipment has malfunctioned more than three times during the 30 day burn-in period, replace that equipment with a new unit and repeat the 30 day burn-in period.

2. Contractor Responsibilities

- Maintain all work under this Contract in accordance with the Specifications.
- Restore any failing or malfunctioning work or equipment to proper operating condition within 12 hours after notification.
- Pay any costs incurred as a result of emergency actions taken by the Department in accordance with Subsection B.3.06.C.3
- Maintain any guaranties or warranties or other obligations set forth in the Contract regardless of emergency actions taken by the Department in accordance with Subsection B.3.06.C.3
- Maintain the complete Rectangular Rapid Flashing Beacon Assembly after burn-in period acceptance in accordance with the requirements of Subsection B.3.07 until Final Acceptance of the entire Contract.

3. Department Responsibilities

- Provide expeditious notification of Contractor upon failure or malfunction of equipment.
- Take emergency action as deemed necessary in the interest of public safety to provide for adequate traffic control in the event that the Contractor does not provide the services enumerated in the Specifications.

4. Burn-In Period Acceptance

The Department will make burn-in period acceptance after satisfactory completion of the required burn-in period and on the basis of a comprehensive field inspection of the complete Rectangular Rapid Flashing Beacon Assembly in accordance with the Specifications.

D. Bench Acceptance Test

Not Applicable

B.3.07 Contractor Warranty and Maintenance

A. Warranty

Provide a manufacturer's support (usual and customary warranties) period for all equipment and materials furnished and installed as part of the Rectangular Rapid Flashing Beacon Assembly equipment and materials.

Transfer Manufacturer's and Contractor's warranties and guarantees to the Department. Make these warranties and guarantees continuous throughout their duration. Ensure warranties and guarantees specify they are subject to such transfer. Transfer warranties and guarantees upon Contract Final Acceptance.

B. Support

Provide phone consultations as needed during the warranty period at no cost for any operating and maintenance questions or problems.

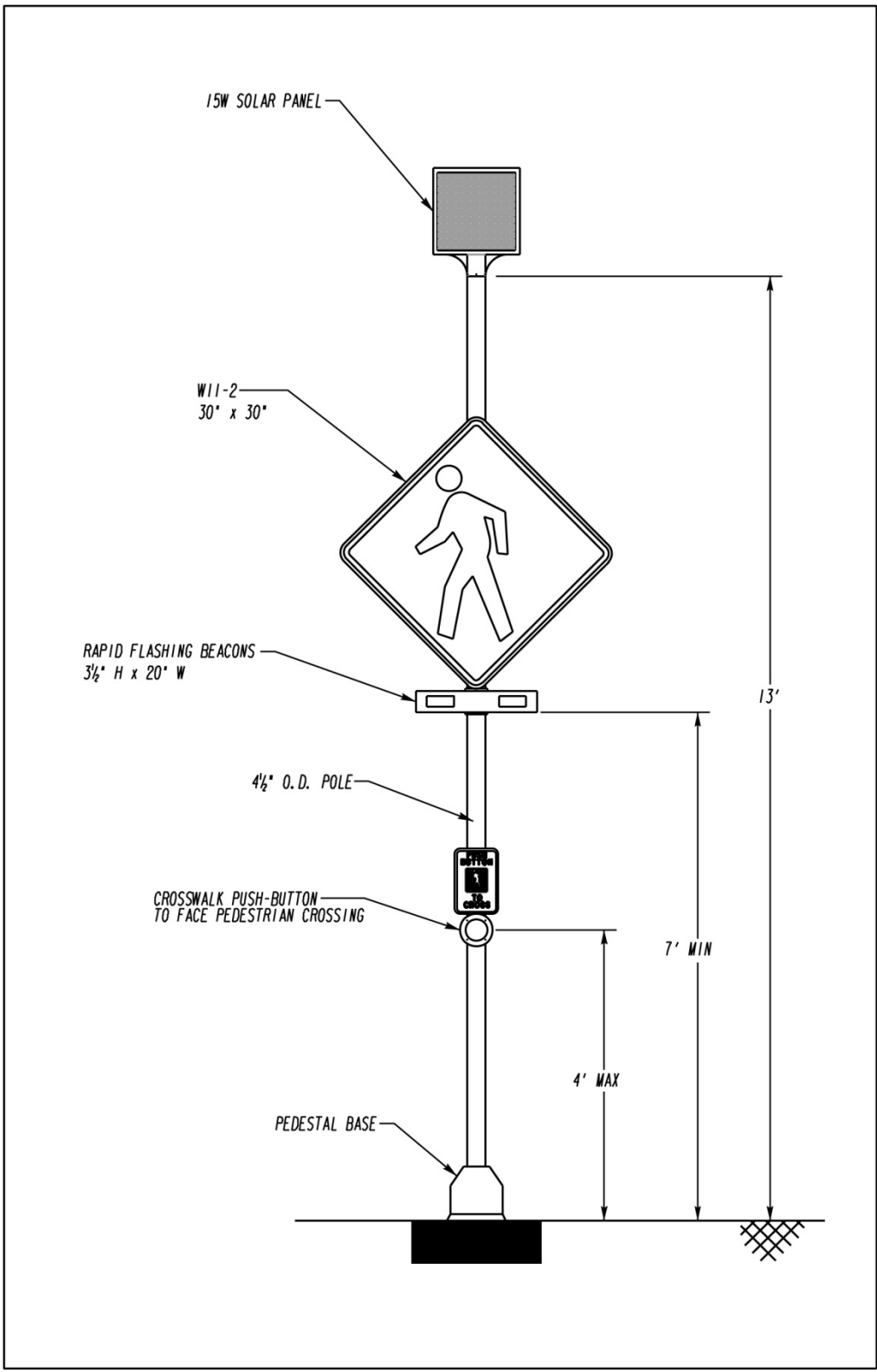
B.3.08 Training

Provide training as required herein. Include with training all supplies, equipment, materials, handouts, travel, and subsistence necessary to conduct the training. Furnish a training notebook in a labeled 3-ring binder to each trainee. Include in the cost of training all supplies, equipment, materials, handouts, travel, and subsistence necessary to conduct the training. Provide operations and maintenance training on the equipment location. Personnel trained by the equipment manufacturers and authorized by said manufacturer shall perform the training. Training for each piece of equipment listed below shall consist of at least six (6) clock hours of training for each participant. Provide a training course for the following equipment:

A. Rectangular Rapid Flashing Beacon

Course content to include at a minimum:

- Theory of operation
- Unit set-up and configuration
- Trouble shooting
- Diagnostics and maintenance



March 4, 2014

AMENDMENT TO ADVERTISED CONTRACT

CONTRACT I.D. NUMBER: B14748-14-000-0
GEORGIA PROJECT NUMBER: 0010394, 0010401, 0010403
PCN: 0010394, 0010401, 0010403
COUNTY: COBB, DEKALB, FULTON
AMENDMENT NUMBER: 1
LETTING DATE: MARCH 21, 2014
LETTING NUMBER: 001

THE FOLLOWING CHANGES ARE HEREBY MADE TO THIS CONTRACT. THE BIDDER IS RESPONSIBLE FOR MAKING ANY NECESSARY CHANGES IN INK IN THE PROPOSAL. BIDDER SHALL ACKNOWLEDGE THIS AMENDMENT BY CHECKING THE APPROPRIATE SPACE ON THE PROPOSAL SIGNATURE PAGE.

1. Proposal Page 7, DBE GOALS; **Revise** the DBE Goal specified **From** "11%" **To** "13%".
2. **Delete** Proposal Pages 216 through 221, 234 through 239, 246 through 257, and, 270 through 275 from the proposal.
3. **Add** the following attached executed "Memorandum of Understanding" for the following utilities to the proposal:
 - A. AT&T, 7 pages.
 - B. Comcast, 6 pages.
 - C. Fulton County Sewer, 7 pages.
 - D. Georgia Power, 7 pages.
 - E. Zayo Fiber Solutions, 6 pages.
 - F. City of Atlanta Department of Watershed Management, 6 pages.
4. **Delete** Special Provision Section 107-Legal Regulations and Responsibility to the Public, dated November 20, 2013, from the proposal, **and substitute** the attached Special Provision Section 107-Legal Regulations and Responsibility to the Public, 2 pages, dated February 7, 2014, in the proposal.

AMENDMENT TO ADVERTISED CONTRACT (continued):

5. Proposal Page 305, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.C.1.a.ii.1 to read as follows:

"Construct a 5' wide sidewalk along the south side of Evans Dale Drive from Townley Circle to Evans Woods Drive and along the north side of Evans Dale Road from Evans Woods Drive to Whitby Drive. Install a 2 foot wide grass utility strip in lieu of the 1.5 foot stamped concrete as shown in the typical sections found in the Costing Plans Package."

6. Proposal Page 305, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.C.1.a.ii.2 to read as follows:

"Construct a 5' wide sidewalk along the west side of Northbrook Drive from Evans Road to Gladney Drive. Install a 2 foot wide grass utility strip in lieu of the 1.5 foot stamped concrete as shown in the typical sections found in the Costing Plans Package."

7. Proposal Page 306, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.C.1.a.v.1. to read as follows:

"Install one (1) raised crosswalk in the school carpool drop off area as per MUTCD figure 3B-30. Raised Crosswalks shall provide a continuous ADA compliant walking surface that connect sidewalks and include crosswalk striping."

8. Proposal Page 306, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.C.1.b.ii.1. to read as follows:

"Upgrade and construct wheelchair ramps at the following intersections:
a. West entrance to Kincaid Elementary School
b. Mirrabeau Court & Kincaid Road
c. Northfield Court & Kincaid Road
d. Ridgewood Court & Kincaid Road
e. Bungalow Park Drive & Kincaid Road"

9. Proposal Page 306, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.C.1.c.i.2. to read as follows:

"Remove and replace the existing southernmost sidewalk at the South school entrance that runs in an East and West direction with a 5' wide sidewalk as shown in the Costing Plans Package. All other sidewalk is to remain in place."

10. Proposal Page 308, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.C.13.d. to read as follows:

"Replace all existing drainage structure lids that are cracked or in disrepair within the project limits."

AMENDMENT TO ADVERTISED CONTRACT (continued):

11. Proposal Page 308, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.C.14.a. to read as follows:

"Design and construct a system which meets the requirements of GDOT's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit."
12. Proposal Page 309, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.C.14.e. to read as follows:

"Provide an infeasibility report to the Department for each outfall location which meets the infeasibility requirements of the MS4 permit."
13. Proposal Page 309, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.C.16.b. to read as follows:

"The Design-Build Team shall be responsible for acquiring and applying for Design Variances on proposed driveways with sidewalk crossings that cannot meet ADA requirements. Driveway limits shall not extend beyond the existing Right-of-Way."
14. Proposal Page 310, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.E.4. to read as follows:

"The NEPA document includes an Environmental Commitments Table. The Environmental Commitments listed in this "999" are draft, included for bidding purposes only, and will be superseded by the Environmental Commitments Table from the approved NEPA document. The Contractor will adhere to all commitments included in the Environmental Commitments Table from the approved NEPA document. In the event that the Environmental Commitments Table for the approved NEPA document after letting is different from the draft Commitments provided in Section 999.1.E.16, the Department will consider this a changed condition and therefore the Contractor (or the Department) will be entitled to an appropriate adjustment in contract price."
15. Proposal Page 312, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.1.E.15. to read as follows:

"Reserved"
16. Proposal Page 326, Special Provision Section 999-Design-Build Project;
Revise Subsection 999.3.C.2. to read as follows:

"Foundation Investigations: The Contractor shall perform bridge foundation investigation for all proposed bridges to be constructed on this project. The Contractor shall perform wall foundation investigations for all proposed walls other than GDOT Standard walls and GDOT Detail PW-1 (Parapet Retaining

AMENDMENT TO ADVERTISED CONTRACT (continued):

Wall) to be constructed on this Project. Previously approved reports provided by the Department are for informational purposes only. The investigation and reporting shall be prepared in accordance with the following:"

17. Proposal Page 357, Special Provision Section 999-Design-Build Project; **Revise** Subsection 999.6. to read as follows:

"As part of the "Qualifications Package," the Design-Build firm must be prequalified in the area class(es) identified below.

The **Lead Design Consultant** **MUST** be prequalified by GDOT in the area classes listed below:

Number	Area Class
3.02	Two-Lane or Multi-lane Urban Roadway Design

The **Design Team** (either the Lead Design Consultant and/or one or more of their subconsultant team members) **MUST** be prequalified by GDOT in the area classes listed below:

Number	Area Class
1.06(a)	NEPA Documentation
1.06(e)	Ecology
3.07	Traffic Operations Design
3.10	Utility Coordination
3.12	Hydraulic and Hydrological Studies (Roadway)
3.13	Bicycle and Pedestrian Facility Design
4.01	Minor Bridge Design
4.04	Hydraulic and Hydrological Studies (Bridges)
5.01	Land Surveying
5.02	Engineering Surveying
5.08	Subsurface Utility Engineering
6.02	Bridge Foundation Studies
9.01	Erosion, Sedimentation, and Pollution Control and Plan
9.03	Field Inspections for Compliance of Erosion and Sedimentation

The "Qualifications Package" shall include the following:

- A cover letter listing the Prime Contractor and Consultant(s) who meet the required area class(es)
- A copy of the "Notice to Professional Consultant Qualifications" for Consultant(s) who meet the required area class(es)

Submit the "Qualifications Package" via email to mflournoy@dot.ga.gov or hard copies can be submitted to the GADOT Office of Construction Bidding

AMENDMENT TO ADVERTISED CONTRACT (continued):

Administration Room 1113. The "Qualifications Package" shall be received no later than 12:00 p.m. on the day prior to the Bid Opening will be subject to rejection."

MONICA L. FLOURNOY, P.E.
STATE TRANSPORTATION OFFICE ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I.0010401 Cheatham Hill & Kincaid Elementary Schools

**DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING**

between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and

Bellsouth Telecommunications LC d/b/a AT&T Georgia (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service

_____ Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

None _____

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____

Design _____
Construction X

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____
Construction X **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None:

Excluded Items: Any placement of aerial cables or aerial work. Any splicing and cable placement subgrade.

Comments: Contractor can place conduit and do lowering of existing cables

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design X
Construction X

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate

resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

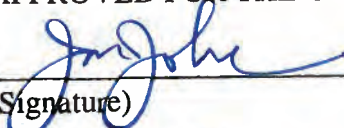
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled **“Buy America Certificate of Compliance”** is attached to this agreement as **“Exhibit B.”** Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.


- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:


(Signature)

12/3/2013
(Date)


(Title)

APPROVED FOR THE DEPARTMENT BY:


(Signature)

1-31-14
(Date)

STATE UTILITIES ENGINEER

APPROVED CONSTRUCTION CONTRACTORS

ANSCO **

Ansco & Associates, LLC
George Summers
404-508-5700 Work
404-262-1945 Mobile
george.simmers@anscolic.com
736 Park North Blvd.
Suite 100
Clarkston, GA 30021

DANELIA

Danelia Construction, Inc
Joseph W. Hemple
321-253-6136 Work
321-403-0273 Mobile
JHemple@danelia.com
581 Washburn Rd
Melbourne, FL 32934

FISHEL

The fishel Company
Steve Hinton
770-482-7550 800-829-4540 x1100
404-202-9749 Mobile
CSHinton@teamfishel.com
1810 Arlington Lane
Columbus, OH 43228

HENKELS **

Henkels & McCoy, Inc.
Barry Webb
386-963-3413 Work
386-288-8080 Mobile
bwebb@henkelsandmccoy.com
985 Jolly Road
Blue Bell, PA 19422

LEE

Lee Engineering & Construction Company
G. C Lee
912-487-5307 Work
leeng@windstream.net
P.O. Box 69
DuPont, GA 31630

SDT

Southern Diversified Technologies, Inc.
James Ezell
601-823-9440 Work
601-320-6479 Mobile
jezell@sdt-1.com
130 North Second Street
Brookhaven, MS 39601

TRAWICK

Trawick Construction Company, Inc
Matt Trawick
850-638-0429 Work
matt.trawick@trawickconstruction.com
1555 South Blvd
Chipley, FL 32428

PRESIDENT JERRY SUMMER

Triple S Communications, Inc.
President
229-985-3090 Work
229-873-1311 Mobile
triplescomm@windstream.net
2043 Sylvester, Hwy
Moultrie, GA 31768

WORLD **

World Fiber Technologies, Inc.
Bob Bebee
770-619-0118 ext. 101 Work
Bbebee@worldfiber.com
4070 Nine McFarland Drive
Alpharetta, GA 30004

** Good contractor for bridge conduit

JMJ 05/18/2011

AT&T Proprietary (Internal Use Only)

Not for use or disclosure outside the AT&T companies
except under written agreement

Georgia DOT Project:
GDOT P.I. 0010394
P.I. 0010401
P.I. 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING

between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and

____ Comcast Cable of Georgia, Inc. _____ (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct Safe Routes to Schools in Cobb County, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting

____ Internet Data Service
____ Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

____ N/A _____

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction X

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signifies below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____
Construction _____ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____
Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the

subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

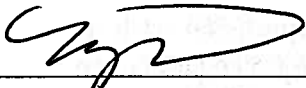
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "**Buy America Certificate of Compliance**" is attached to this agreement as "**Exhibit B.**" Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:



(Signature)


1-14-14

(Date)

Construction Manager

(Title)

APPROVED FOR THE DEPARTMENT BY:



(Signature)

1-21-14

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010395, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING

between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
FULTON COUNTY (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System, PI # 0010403
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Irregardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design X

Construction X

C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signifies below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design X

Construction X

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None X

Excluded Items _____

D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However, the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

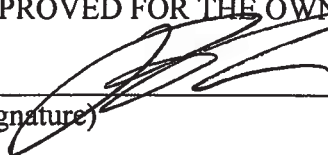
4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER's prequalified Contractors:
6. For Utility work included in the PROJECT's contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.
 - b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of

Compliance" is attached to this agreement as "Exhibit A." Records to be maintained by the Developer for this certification shall include a signed mill test report and a signed certification by each supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:



(Signature)

11/21/13

(Date)

Deputy Director - Tech. Services

(Title)

APPROVED FOR THE DEPARTMENT BY:



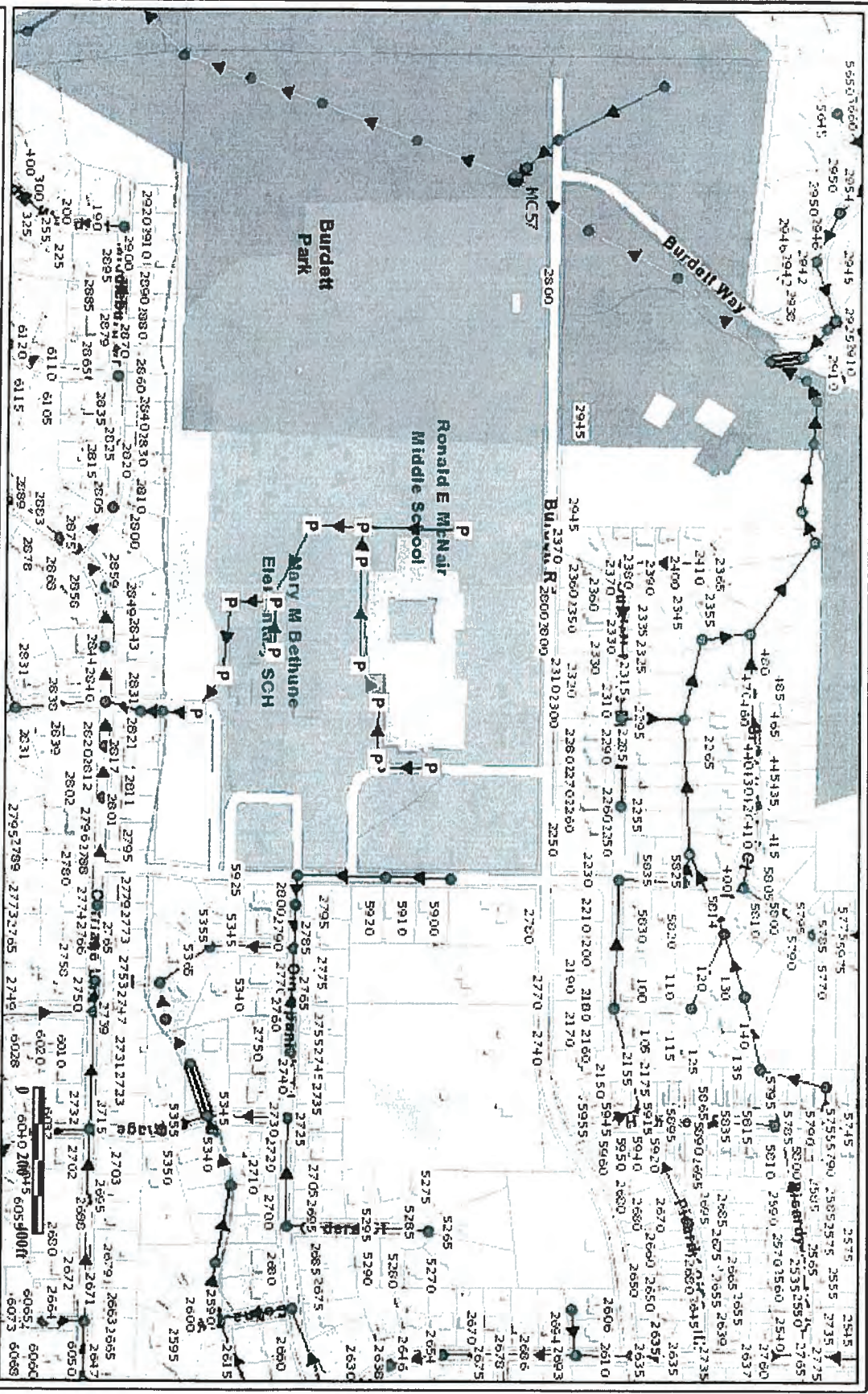
(Signature)

1-31-14

(Date)

STATE UTILITIES ENGINEER

PI # 0010403



Water Resources Map
Fulton County, Georgia
11-21-2013

Fulton County provides the data on this map for your personal use as is. The data are not guaranteed to be correct, complete, or accurate. The feature locations depicted on this map are approximate and are not necessarily accurate to survey standards. Fulton County assumes no responsibility for losses resulting from the use of these data, even if Fulton County is advised of the possibility of such losses.



Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010395, 0010401, 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Georgia Power Company (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design x
Construction

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design
Construction x

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____

Construction x

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: The Contractor may pull poles that have had all attachments removed following notice to the GPC Project Engineer. Note: Pulling a pole is a ground disturbing activity and work must be done in accordance with the "Dig Law".

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER's prequalified Contractors:
6. For Utility work included in the PROJECT's contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled **“Buy America Certificate of Compliance”** is attached to this agreement as **“Exhibit B.”** Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.

- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

Mark Tilden
(Signature)

November 21, 2013
(Date)

Project Manager

(Title)

APPROVED FOR THE DEPARTMENT BY:

Michael J. Boldt
(Signature)

1-31-14
(Date)

STATE UTILITIES ENGINEER

NAME	ADDRESS	CITY	ST	ZIP	CONTACT	EMAIL	TYPE
ASSOCIATED DIVERSIFIED SERVICES INC	2910 HWY 31 NW	HARTSELLE	AL	35640	Don McCurdy (256-351-8622)	dmccurdy@wearediversified.com	OH/UD
CORBETT ELECTRICAL CONSTRUCTION INC	137 CORBETT LN	LAKE PARK	GA	31636	Kim Corbett (229-559-4784)	corbettelectrical@att.net	UD
HIGHER GROUND ELECTRIC CO	1600 JONES ST	LITTLE ROCK	AR	72202	Charles Thomas (678-226-2961)	cthomas@hgenet.com	UD
MASTEC NORTH AMERICA INC	5380 CAPITAL CIRCLE NW	TALLAHASSEE	FL	32303	Copper Nelson (850-519-0064)	copper.nelson@mastec.com	OH
PIKE ELECTRIC CORP	100 PIKE WAY	MOUNT AIRY	NC	27030-8147	Darryl Harrison (770-601-2363)	dharrison@pike.com	OH/UD
PRO LINE CONTRACTORS INC	2984 BERRY RD	LOGANVILLE	GA	30052	Jody Sewell(770-598-3464)	NA	UD
SERVICE ELECTRIC CO	1631 E 25TH ST	CHATTANOOGA	TN	37404-5714	Brian Imsand (423-894-4336)	bimsand@serviceelectricco.com	OH/UD
SUMTER UTILITIES INC	1890 MILFORD ST	CHARLESTON	SC	29405	Mikell Murray (843-725-9521)	www.sumter-utilities.com	OH/UD
U TEC CONSTRUCTION INC	926 RIDGEDALE DR	LAWRENCEVILLE	GA	30043-3227	Ernest Morrison (404-915-6559)	emorrison@utec-inc.com	UD
UTILICON SERVICES INC	13275 HWY 231,	DAVISBORO	GA	31018	Stanley Comeau (478-972-8155)	stanleycomeau45@yahoo.com	OH
UTILITY LINES CONSTRUCTION SERVICES INC	4455 COMMERCE DR STE 103	BUFORD	GA	30518-0000	Jim Marsh (404-973-0307)	jmarsh@asplundh.com	OH/UD

All Pre-Approved Contractors/Consultants listed above must be Registered/Prequalified with the Department – Contractors must fill out one original DOT Form 478 and provide three reference letters. Send all documents to the: Georgia Department of Transportation, Office of Transportation Services – Contractor Prequalification, 600 West Peachtree Street, NW, 19th Floor, Atlanta, GA 30308

Please refer to the Department's website @ (<http://www.dot.ga.gov/doingbusiness/prequalification>) and follow instructions for contractor Registration/Prequalification

Original 5/17/2013
Revised 7/26/2013

Exhibit B

GEORGIA
DEPARTMENT OF TRANSPORTATION
BUY AMERICA
CERTIFICATE OF COMPLIANCE

Date _____, 2013

WE, Georgia Power Company

(UTILITY/RAILROAD OWNER)

Address: 241 Ralph McGill Blvd., NE, Atlanta, Georgia 30308

Hereby certify that we are in compliance with the "Buy America" requirements of the Federal regulations 23 U.S.C. 313 and 23 CFR 635.410 of this project.

(Insert Project P.I. No. and Description Here)

As required, we will maintain all records and documents pertinent to the Buy America requirement, at the address given above, for not less than 3 years from the date of project completion and acceptance, if we do not provide the records and documents during invoicing. If all records and documents pertinent to the Buy America requirement are delivered during invoicing, then we will maintain all records and documents pertinent to the Buy America requirement for not less than three (3) years from the date conditional final payment has been received by the COMPANY. These files will be available for inspection and verification by the Department and/or FHWA.

We further certify that the total value of foreign steel as described in the Buy America requirements for this project does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

Signed by _____
(Officer of Organization)

Title Project Manager – DOT

Subscribed and sworn to before me this _____ day of _____, _____.

Notary Public/Justice of the Peace

My Commission Expires: _____

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394, 0010395, 0010401, 0010403

**DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING**

between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
ZAVO FIBER SOLUTIONS (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design X
Construction X

C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____

Construction _____ **If both are checked, please leave page 6 blank.**

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT's plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER's facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER's prequalified Contractors:
6. For Utility work included in the PROJECT's contract, the OWNER or the OWNER's Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "Buy America Certificate of Compliance" is attached to this agreement as "Exhibit B." Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:



(Signature)

11/20/13

(Date)

TODD SWAFFORD CONST. MANAGER

(Title)

APPROVED FOR THE DEPARTMENT BY:



(Signature)

1-31-14

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to Schools at Various Locations
GDOT P.I. 0010394. 0010395. 0010401. 0010403

**DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING**

between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
City of Atlanta Department of Watershed Management (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacon signs, solar powered radar speed signs, bike paths, and various improvements for safe routes to schools, Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service
- Other Facilities (Description) _____

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT.
Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design X
Construction X

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design X

Construction X

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None X

Excluded Items _____

Comments: _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled "**Buy America Certificate of Compliance**" is attached to this agreement as "**Exhibit B.**" Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

ESA Maclema
(Signature)

(Date)

COMMISSIONER

APPROVED TO FORM BY:

Ruth W. R.
(Signature)

12/16/13
(Date)

SR. ASST. CITY ATTORNEY

APPROVED FOR THE DEPARTMENT BY:

Michael J. Bolden
(Signature)

1-31-14
(Date)

STATE UTILITIES ENGINEER

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
SPECIAL PROVISION

COBB COUNTY, PI NO. 0010401
Section 107 – Legal Regulations and Responsibility to the Public

Add the following to Subsection 107.23:

G. Protection of Federally Protected Environmentally Sensitive Species

The following conditions are intended as a minimum to protect these species and their habitat during any activities that are in close proximity to the known location(s) of this species.

1. The Contractor shall advise all project personnel employed to work on this project about the potential presence and appearance of federally protected Eastern phoebes (*Sayornis phoebe*), cliff swallows (*Petrochelidon pyrrhonota*) or barn swallows (*Hirundo rustica*) and that there are civil and criminal penalties for harming, harassing, or killing these species, which are protected under the Migratory Bird Treaty Act of 1918. Pictures and habitat information will be provided to the Contractor at the preconstruction conference.
2. Work on the Irwin Road bridge over Noses Creek shall take place outside of the breeding and nesting season of eastern phoebe, barn swallow and cliff swallow, which begins April 1st and extends through August 31st, unless exclusionary barriers are put in place to prevent nesting on the bridge. Exclusionary barriers, constructed of netting, made of plastic, canvas or other materials proposed by the contractor may be installed on the bridge prior to March 1st or after August 31st, but in no time between this period. Exclusionary barriers are not a guaranteed method of preventing migratory birds from nesting under bridges and work schedules shall take into account the possibility that barriers will not be successful. If exclusionary barriers are to be used, these steps shall be followed:
 - a. The project ecologist shall be notified by phone (404-631-1100) of the decision to install exclusionary devices under the existing bridge and the date of the proposed installation, prior to the installation of any exclusionary barriers.
 - b. The underside of the bridge shall be checked for nests prior to the placement of exclusionary barriers. If nests are present, they shall be inspected to ensure that eggs or birds are not present. If the nests are found to be occupied, construction activities associated with the existing bridge shall be postponed until after August 31st when the breeding season is complete.
 - c. Exclusionary barriers shall be placed along the full length of the bridge to prevent the birds from accessing any existing nesting habitat. Barriers shall be installed prior to March 1st and left in place until August 31st or until the demolition work is complete, whichever occurs first. If the exclusionary barrier fails to prevent nesting (i.e., birds are able to bypass barriers and build nests), construction activities associated with the bridge shall be postponed until after August 31st.
 - d. During construction activities, exclusionary barriers shall be inspected daily for holes or other defects that impair its ability to exclude migratory birds from nesting beneath the bridge. Any holes or defects shall be repaired immediately.
3. In the event any incident occurs that causes harm to Eastern phoebes, cliff swallows or barn swallows along the project corridor, the Contractor shall report the incident immediately to the Project Engineer who in turn will notify: State Environmental Administrator, Georgia Department of transportation, Office of Environmental Services at (404) 631-1101. All work shall cease pending consultation by the Department with the United States Fish and Wildlife Service and the Georgia Department of Natural Resources.

-
4. The contractor shall keep a log detailing any injury to barn swallows, cliff swallows, or eastern phoebes in or adjacent to the project until time that Final Acceptance is made. Entanglement of barn swallows, cliff swallows, and eastern phoebes in exclusionary netting constitutes harm to migratory birds. Following project completion, the log and a report summarizing any incidents involving the above mentioned species shall be submitted by the contractor to the:
 - a. Project Engineer;
 - b. State Environmental Administrator, Georgia Department of Transportation, Office of Environmental Services, 600 West Peachtree Street NW, Atlanta, GA 30308.
 5. All costs pertaining to any requirement contained herein shall be included in the overall bid submitted unless such requirement is designated as a separate Pay Item in the Proposal.

March 7, 2014

AMENDMENT TO ADVERTISED CONTRACT

CONTRACT I.D. NUMBER: B14748-14-000-0
GEORGIA PROJECT NUMBER: 0010394, 0010401, 0010403
PCN: 0010394, 0010401, 0010403
COUNTY: COBB, DEKALB, FULTON
AMENDMENT NUMBER: 2
LETTING DATE: MARCH 21, 2014
LETTING NUMBER: 001

THE FOLLOWING CHANGES ARE HEREBY MADE TO THIS CONTRACT. THE BIDDER IS RESPONSIBLE FOR MAKING ANY NECESSARY CHANGES IN INK IN THE PROPOSAL. BIDDER SHALL ACKNOWLEDGE THIS AMENDMENT BY CHECKING THE APPROPRIATE SPACE ON THE PROPOSAL SIGNATURE PAGE.

1. **Delete** Proposal Pages 210 through 215, 222 through 233, 240 through 245, and, 258 through 269 from the proposal.
2. **Add** the following attached "Memorandum of Understanding" for the following utilities to the proposal:
 - A. AGL, 6 pages.
 - B. Cobb County EMC, 6 pages.
 - C. Cobb County Sewer and Water, 6 pages.
 - D. DeKalb County Watershed-Water and Sewer, 6 pages.
 - E. Georgia Power Transmission, 6 pages.
 - F. Sunsys, 6 pages.

MONICA L. FLOURNOY, P.E.
STATE TRANSPORTATION OFFICE ENGINEER

Georgia DOT Project: Safe Routes to School
GDOT P.I. 0010394, 0010401 and 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
AGL (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as a PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacons signs, solar powered radar speed signs, bike paths, and various improvements for Safe Routes to Schools in several counties in Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service

Other Facilities (Description)

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____

Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design X

Construction X

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____

Construction _____

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to School
GDOT P.I. 0010394, 0010401 and 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Cobb County EMC (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as a PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacons signs, solar powered radar speed signs, bike paths, and various improvements for Safe Routes to Schools in several counties in Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service

Other Facilities (Description)

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction X

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____

Construction _____

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to School
GDOT P.I. 0010394, 0010401 and 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Cobb County Water and Sewer (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as a PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacons signs, solar powered radar speed signs, bike paths, and various improvements for Safe Routes to Schools in several counties in Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service

Other Facilities (Description)

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design X

Construction X

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to School
GDOT P.I. 0010394, 0010401 and 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
DeKalb County Watershed –Water & Sewer (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as a PROJECT to construct 4” thick sidewalks, crosswalks, pavement markings, solar powered flashing beacons signs, solar powered radar speed signs, bike paths, and various improvements for Safe Routes to Schools in several counties in Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights (“Prior Rights”) at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER’S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service

Other Facilities (Description)

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____
Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design _____
Construction _____

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design X

Construction X

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to School
GDOT P.I. 0010394, 0010401 and 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Georgia Power Transmission (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as a PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacons signs, solar powered radar speed signs, bike paths, and various improvements for Safe Routes to Schools in several counties in Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service

Other Facilities (Description)

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____

Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design X

Construction X

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____

Construction _____

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

Georgia DOT Project: Safe Routes to School
GDOT P.I. 0010394, 0010401 and 0010403

DESIGN-BUILD
MEMORANDUM OF UNDERSTANDING
between the
Georgia Department of Transportation (hereafter the DEPARTMENT)
and
Sunsys (hereafter the OWNER)

Whereas the DEPARTMENT proposes to undertake a design-build project hereafter referred to as a PROJECT to construct 4" thick sidewalks, crosswalks, pavement markings, solar powered flashing beacons signs, solar powered radar speed signs, bike paths, and various improvements for Safe Routes to Schools in several counties in Georgia by contract through competitive bidding procedures; and,

Whereas the DEPARTMENT will accomplish the PROJECT through a Design Consultant, Design Consultant Team and/or Contractor hereafter referred to as CONTRACTOR; and,

Whereas, where OWNER has property rights ("Prior Rights") at the location of the PROJECT, OWNER will provide written evidence as to said prior rights within the area and will provide written documentation of prior rights relating to any individual crossing or Utility Facility, at the location of the PROJECT; and

Whereas, OWNER acknowledges that, generally, absent a showing of prior rights, the costs of relocation, protection, removal, or adjustment performed by OWNER shall be borne by OWNER; and

Whereas, pursuant to O.C.G.A. § 32-6-170(b), DEPARTMENT is authorized to pay or participate in the payment of the costs of relocation, protection, or adjustment of OWNER'S facilities where DEPARTMENT has made the determination that (i) such payments are in the best interest of the public and necessary in order to expedite the staging of the design-build project; and (ii) the costs of the removal, relocation, protection, or adjustment of such facilities are included as part of the Contract between the Department and the Department's roadway contractor for the design-build project; and

1. Type of Utility

OWNER has the following utility facilities which may need to be adjusted or relocated as a result of the proposed PROJECT:

Type of facility or facilities of OWNER:

- Domestic water mains and distribution lines and associated appurtenances
- Sanitary Sewer facilities and/or Storm Drainage System
- Electrical Distribution (overhead and underground) wires, poles, etc.
- Electrical Transmission (overhead and underground) wires, poles, etc.
- Natural Gas Distribution Facilities (underground)
- Natural Gas Transmission Facilities (underground)
- Petroleum Pipeline (underground)
- Telecommunications facilities and equipment
- Cable TV facilities
- Street Lighting
- Internet Data Service

Other Facilities (Description)

2. New Utility Facilities Proposed (Betterment)

OWNER desires the following to be installed as new additional facilities within the PROJECT. Insert here or attach a detailed description of proposed new additional utility installations:

3. Assignment of Responsibilities for Design and Construction

This MEMORANDUM OF UNDERSTANDING and the following shall serve as a *basis* for assignment of responsibilities and costs for the DEPARTMENT to enter into a Standard Utility Agreement (SUA) or Contract Item Agreement (CIA), if necessary, with OWNER once the PROJECT is awarded to the CONTRACTOR. For a PROJECT implementation, GDOT will not have in its possession exact costing plans to be utilized to determine exact locations of the removal, relocation, protection, or adjustment. However, Overhead/Subsurface Utility Engineering (SUE) investigations plans exist providing the best information and signifying the layout of known existing facilities. Please use these plans for developing the final determination of services as indicated below. The CONTRACTOR developed plans will be provided to the OWNER after the design build project is awarded by GDOT which shall be used by the CONTRACTOR as the final basis for the SUA or CIA.

OWNER hereby intends to:

- A. OWNER, at the DEPARTMENT'S cost, will provide the following services for the properties for which it has established prior rights (check to signify):

Design _____

Construction _____

- B. OWNER, at the DEPARTMENT'S cost, for any removal, relocation, protection, adjustment and/or design (Regardless of Prior Rights) will allow their facilities to be placed into the DEPARTMENT'S contract for the following services pursuant to O.C.G.A. § 32-6-170(b). The DEPARTMENT will add the removal, relocation, protection, adjustment and/or design cost to the overall PROJECT's cost. (Check to signify):

Check Design and/or Construction if you want to have the Design and/or Construction to be added to the DEPARTMENT'S contract.

If Design and/or Construction are checked in Section B and the OWNER wants the work to be performed by their pre-approved Contractors and/or Design Consultants, the OWNER must provide at a minimum, three pre-approved contractors and/or three Design Consultants on page 6.

(Water and Sewer will automatically be accomplished by the DEPARTMENT'S CONTRACTOR and the design will have to be approved by the OWNER)

Design X

Construction X

- C. OWNER, at the DEPARTMENT'S cost wishes to allow the DEPARTMENT'S CONTRACTOR to perform the removal, relocation, protection, adjustment and/or design work, please signify below:

DEPARTMENT'S CONTRACTOR CAN PERFORM:

Design _____

Construction _____

If both are checked, please leave page 6 blank.

As per this section, all work necessary for the removal, relocation, protection, or adjustment of the described utilities in accordance with the plans when approved shall be included in the project contract and accomplished by the CONTRACTOR except as follows (check none or list any work items to be performed by the OWNER)

None _____

Excluded Items _____

Comments: _____

- D. OWNER, at OWNER'S cost, will provide the following services (check to signify):

Design _____

Construction _____

The following is hereby mutually agreed to and understood by both parties:

1. The identification of existing facilities including preparation of Overhead/Subsurface Utility Engineering (SUE) investigations plans will be accomplished by the DEPARTMENT prior to award of the PROJECT and thereafter supplemented by the CONTRACTOR.
2. The CONTRACTOR shall coordinate reviews of the utility relocation information and obtain acceptance from the OWNER and DEPARTMENT when required. However; the OWNER shall apply for and obtain any required permits from the DEPARTMENT and perform any final design or proprietary design needed to administer its own relocation work if the work will not be included in the PROJECT (list any work not included in the PROJECT in space provided above). If the preliminary plans indicate that no conflict exists, and the OWNER concurs with this information, the OWNER shall provide a letter of "no conflict" to the CONTRACTOR.
3. After award of the project, the CONTRACTOR will research the property interest of each OWNER and present the findings to the DEPARTMENT and OWNER for approval. The CONTRACTOR will coordinate resolution of any disputed items. The plans and estimate for the utility work shall be subject to approval of both the DEPARTMENT and the OWNER prior to construction. If the OWNER chooses to include the subject utility work in the PROJECT and the research indicates that no property interest exists, the OWNER

did not indicate Section 3B above, and the OWNER cannot refute this finding with evidence that would substantiate the property interest in legal proceedings, the OWNER shall provide confirmation in writing that OWNER will reimburse the DEPARTMENT for any adjustment or relocations necessary; and an agreement will be prepared and executed in accordance with the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual". If the OWNER chooses to perform its own relocations and the OWNER holds no property interest as stated above; the OWNER shall confirm in writing that the OWNER will relocate its own facilities at no cost to the DEPARTMENT and the CONTRACTOR.

4. All construction engineering and contract supervision shall be the responsibility of the DEPARTMENT and the CONTRACTOR to ensure that all utility work included in the PROJECT is accomplished in accordance with the PROJECT'S plans and specifications. The CONTRACTOR will consult with the OWNER before authorizing any changes or deviations which affect the OWNER'S facility.
5. For Utility work included in the PROJECT, the CONTRACTOR shall ensure that the construction and installation of the OWNER'S facilities is performed by a contractor prequalified/registered with both the DEPARTMENT and the OWNER. The CONTRACTOR shall contact the OWNER to obtain the current list of the OWNER'S prequalified Contractors:
6. For Utility work included in the PROJECT'S contract, the OWNER or the OWNER'S Consultant shall have the right to visit and inspect the work at any time and advise the CONTRACTOR and the DEPARTMENT'S Engineer of any observed discrepancies or potential issues. The DEPARTMENT agrees to notify the OWNER when all utility work is completed and ready for final inspection by the OWNER.
7. Upon Maintenance Acceptance or Final Acceptance of the utility work included in the contract and upon certification by the DEPARTMENT'S Engineer and the OWNER, that the work has been completed in accordance with the plans and specifications, the OWNER will accept the adjusted, relocated, and additional facilities and will thereafter operate and maintain said facilities located within the PROJECT right of way subject to the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect without further cost to the DEPARTMENT or its CONTRACTOR.
8. For the purpose of utility coordination, relocation and reimbursement matters, the OWNER shall cooperate with the CONTRACTOR in the same manner as if coordinating directly with the DEPARTMENT in accordance with the laws of the State of Georgia, the DEPARTMENT'S "Utility Accommodation Policy and Standards Manual, current edition" and any agreements in effect between the DEPARTMENT and OWNER. The OWNER agrees to cooperate in good faith with the CONTRACTOR and to respond to all requests for information or meetings required to reach a resolution of any disputed items.
9. In accordance with the BUY AMERICA requirements of the Federal regulations (23 U.S.C. 313 and 23 CFR 635.410) all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
 - a. Products of steel include, but are not limited to, such products as structural steel piles, reinforcing steel, structural plate, steel culverts, guardrail, steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not limited to this clause, only the application process.

- b. A Certificate of Compliance shall be furnished for steel and iron products as part of the backup information with the billing. The form for this certification entitled “**Buy America Certificate of Compliance**” is attached to this agreement as “**Exhibit B.**” Records to be maintained by the RAILROAD/UTILITIES and the Department for this certification shall include a signed mill test report and/or a signed certification by a supplier, distributor, fabricator, or manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or nonpayment of the work.
- c. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.

The Memorandum of Understanding will be incorporated into the project contract by reference or Exhibit.

APPROVED FOR THE OWNER BY:

(Signature)

(Date)

(Title)

APPROVED FOR THE DEPARTMENT BY:

(Signature)

(Date)

STATE UTILITIES ENGINEER

March 17, 2014

AMENDMENT TO ADVERTISED CONTRACT

CONTRACT I.D. NUMBER: B14748-14-000-0
GEORGIA PROJECT NUMBER: 0010394, 0010401, 0010403
PCN: 0010394, 0010401, 0010403
COUNTY: COBB, DEKALB, FULTON
AMENDMENT NUMBER: 3
LETTING DATE: MARCH 21, 2014
LETTING NUMBER: 001

THE FOLLOWING CHANGES ARE HEREBY MADE TO THIS CONTRACT. THE BIDDER IS RESPONSIBLE FOR MAKING ANY NECESSARY CHANGES IN INK IN THE PROPOSAL. BIDDER SHALL ACKNOWLEDGE THIS AMENDMENT BY CHECKING THE APPROPRIATE SPACE ON THE PROPOSAL SIGNATURE PAGE.

1. Proposal Page 310, Special Provision Section 999-Design-Build Project; **Add** the following Subsection 999.1.C.18. to the page:

"The typical section may be modified to avoid utility impacts and where the limits of construction do not extend beyond the right-of-way. The Contractor shall provide documentation that a modified typical is required to avoid utility impacts and submit to the Department for acceptance."

MONICA L. FLOURNOY, P.E.
STATE TRANSPORTATION OFFICE ENGINEER

March 20, 2014

AMENDMENT TO ADVERTISED CONTRACT

CONTRACT I.D. NUMBER: B14748-14-000-0
GEORGIA PROJECT NUMBER: 0010394, 0010401, 0010403
PCN: 0010394, 0010401, 0010403
COUNTY: COBB, DEKALB, FULTON
AMENDMENT NUMBER: 4
LETTING DATE: MARCH 21, 2014
LETTING NUMBER: 001

THE FOLLOWING CHANGES ARE HEREBY MADE TO THIS CONTRACT. THE BIDDER IS RESPONSIBLE FOR MAKING ANY NECESSARY CHANGES IN INK IN THE PROPOSAL. BIDDER SHALL ACKNOWLEDGE THIS AMENDMENT BY CHECKING THE APPROPRIATE SPACE ON THE PROPOSAL SIGNATURE PAGE.

1. Proposal Page 357, Special Provision Design-Build Project; **Remove** the following paragraph:

"Submit the "Qualifications Package" via email to mflournoy@dot.ga.gov or hard copies can be submitted to the GADOT Office of Construction Bidding Administration Room 1113. The "Qualifications Package" shall be received no later than 12:00 p.m. on the day prior to the Bid Opening will be subject to rejection."

and Substitute the following:

"Submit the "Qualifications Package" via email to mflournoy@dot.ga.gov or hard copies can be submitted to the GADOT Office of Construction Bidding Administration Room 1113. **The "Qualifications Package" shall be received no later than 11:00 a.m. on the day of Bid Opening or the bid will be subject to rejection.**"

MONICA L. FLOURNOY, P.E.
STATE TRANSPORTATION OFFICE ENGINEER