

ROCKDALE COUNTY, GEORGIA

2017 SPLOST CONSTRUCTION PROGRAM
ITB # 19-26

CR 57/Klondike Road @ CR 62/McDaniel Mill Road/Hurst Road

CSSTP-0006-00(9832) P.I. No. 0006932

BIDDING DOCUMENTS

For



Rockdale County Department of Transportation

August 2019

INVITATION TO BID**CR 57/Klondike Road @ CR 62/McDaniel Mill Road/Hurst Road****CSSTP-0006-00(932)****P.I. No. 0006932****ROCKDALE COUNTY, GEORGIA**

The Rockdale County Board of Commissioners is soliciting sealed bids for furnishing all labor, materials and equipment for the intersection reconstruction of Klondike Road/McDaniel Mill Road/Hurst Road, in Rockdale County. The project will relocate Klondike Road to a new intersection approximately 500 feet south of the existing intersection. Approximately 2500 feet of Klondike Road will be relocated as part of this project on both sides of the new intersection. The relocated intersection will be constructed as a single-lane roundabout. The existing intersection along McDaniel Mill Road will remain and serve as the eastern terminus of Hurst Road, but the fifth leg of the existing intersection will be removed. The McDaniel Mill Road profile will be lowered by several feet immediately north of the existing intersection in order to improve intersection sight distance. The proposed typical section will include 12-foot lanes and a 10' rural shoulder, except for the roundabout approaches and McDaniel Mill north of the roundabout, which will have curb and gutter and a 5-foot sidewalk. The total length of the project is 0.81 miles. This project is located in unincorporated Rockdale County, approximately 3 miles east of the City of Conyers. Bids will be accepted until the bid opening date and time on **Thursday, November 14, 2019 at 2:00 p.m.**, local time in the Department of Finance, Procurement Division, 958 Milstead Avenue, Conyers, Georgia 30012. There will be a **Mandatory** Pre-Bid meeting on **Monday, October 28, 2019 at 10:00 a.m.** at the Rockdale County Department of Transportation, 2570 Old Covington Hwy, Conyers, Georgia 30012. Bidders are required to be pre-qualified by the Georgia Department of Transportation and must possess a Utility Contractors License. Submit questions and/or requests for clarifications regarding this bid no later than **Thursday, November 7, 2019 by 2:00 pm EST**. Written responses will be issued in an addendum. Any questions and/or misunderstandings that may arise from this BID must be submitted in writing and forwarded to the Department of Finance at the above address or by email. It shall be the Bidders responsibility to seek clarification as early as possible prior to the due date and time. A 5% Bid Bond will be required. A Payment and Performance Bond in the amount of 100% of the contract amount and a payment bond of 100% of the contract amount will be required from the awarded vendor.

The County of Rockdale in accordance with Title VI of the Civil Rights Act of 1964 and 78 Stat. 252, 42 USC 2000d—42 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of Secretary, part 21, Nondiscrimination in federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, or national origin in consideration for an award.

If the contract is awarded, it will be awarded to the lowest reliable bidder whose proposal shall have met all the prescribed requirements.

The low bid will be determined based on the sum of the base bid and any alternatives selected by the County.

The contractor shall use suppliers on the appropriate GDOT Qualified Products list.

All testing is to meet the requirements outlined in GDOT sampling, Testing and Inspection Guide.

The contractor will attend a preconstruction conference with at a minimum the following attendees: Sponsor, contractor, selected DBE firms, GDOT Area Engineer, and the GDOT Project Manager.

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.

NOTICE TO CONTRACTORS

Sealed Bids will be received by the Rockdale County Board of Commissioners until the bid opening date and time on **Thursday, November 14, 2019 at 2:00 p.m.** in the Department of Finance, Purchasing Division, 958 Milstead Avenue, Conyers, Georgia 30012. There will be a Mandatory Pre-Bid meeting on **Monday, October 28, 2019 at 10:00 a.m.** at the Rockdale County Department of Transportation, 2570 Old Covington Hwy, Conyers, Georgia 30012. Bidders are required to be pre-qualified by the Georgia Department of Transportation and possess a Utility Contractors License. Submit questions and/or requests for clarifications regarding this bid no later than **Thursday, November 7, 2019 by 2:00 pm EST**. Written responses will be issued in an addendum. Any questions and/or misunderstandings that may arise from this BID must be submitted in writing and forwarded to the Department of Finance at the above address or by email. It shall be the Bidders responsibility to seek clarification as early as possible prior to the due date and time. A 5% Bid Bond will be required. A Payment and Performance Bond in the amount of 100% of the contract amount and a payment bond of 100% of the contract amount.

The **Work** to be done consists of the following:

Furnish all labor, materials and equipment for the intersection reconstruction of the Klondike Road/McDaniel Mill Road/Hurst Road intersection to a roundabout in Rockdale County. The project will relocate Klondike Road to a new intersection approximately 500 feet south of the existing intersection. Approximately 2500 feet of Klondike Road will be relocated as part of this project on both sides of the new intersection. The relocated intersection will be constructed as a single-lane roundabout. The existing intersection along McDaniel Mill Road will remain and serve as the eastern terminus of Hurst Road, but the fifth leg of the existing intersection will be removed. The McDaniel Mill Road profile will be lowered by several feet immediately north of the existing intersection in order to improve intersection sight distance. The proposed typical section will include 12-foot lanes and a 10' rural shoulder, except for the roundabout approaches and McDaniel Mill north of the roundabout, which will have curb and gutter and a 5-foot sidewalk. The total length of the project is 0.81 miles. This project is located in unincorporated Rockdale County, approximately 3 miles east of the City of Conyers.

The **Bidder** is required to submit the **Bid Proposal** with each part signed accordingly and the following IN THE ORDER PRESENTED BELOW:

1. Completed **Bid** Proposal Form Page
2. **Bid** Bond or Certified Check
3. Certification by Contractor Regarding Non-Segregated Facilities
4. DBE Goals List
5. Non-collusion Affidavit of Prime **Bidder**
6. Non-collusion Affidavit of Subcontractor
7. Affidavit Verifying Status for County Public Benefit Application
8. Certifications
9. Lower Tier Contractor Certification Regarding Debarment, Suspension And Other Responsibility Matters
10. Contractor Affidavit under O.C.G.A. §13-10-91(b)(1)
11. Subcontractor Affidavit under O.C.G.A. §13-10-91(b)(3)
12. Subcontractor Affidavit under O.C.G.A. §13-10-91(b)(4)
13. Certification/Drug Free Work Place

14. Federal Aid Certification
15. Utility Contractor's License Certification
16. Questionnaire
17. Subcontractors Notification List
18. Completed **Bid** Schedule of Items

Four (4) hard copies, One (1) original and One (1) Flash Drive containing the Bid in Adobe PDF format will be required for review purposes.

All **Work** performed for this project will be in accordance with the Georgia Department of Transportation (GDOT) Standard Specifications for Construction of Transportation Systems, 2013 Edition, and any applicable special provisions and supplemental specifications in the **Bid** or Contract documents.

The **Bidder** shall be responsible for performing with his own organization at least Fifty percent (50%) of the **Work** in this contract. The **Bidder** shall not subcontract, transfer, assign, or otherwise dispose of the contract or any portion thereof, without the written consent of the County.

The **Bidder** shall possess a current pre-qualification with the Georgia Department of Transportation.

The **Bidder** shall possess a current Utility Contractors License with the Georgia Secretary of State.

The **Bidder** shall list ALL proposed Subcontractors on the Subcontractor Notification List on page BD.34 and shall submit this form with the Bid Proposal. All Subcontractors must be approved by Rockdale County.

The successful **Bidder** shall secure and pay for necessary approvals, permits, assessments, and changes required for the construction and installation of this project as required by local, state, and federal regulations.

Bidders must comply with Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act, the Contract Work Hour Standard Act, and the National Occupational Safety and Health Act of 1970.

Bidders and their subcontractors, material suppliers, vendors and other participants must complete the Lower Tier Contractor Certification Regarding Debarment, Suspension And Other Responsibility Matters form contained herein.

Bidders must certify that they do not and will not maintain or provide for their employees any facilities that are segregated on a basis of race, color, creed, or national origin.

The Rockdale County Board of Commissioners reserves the right to reject all **Bids** and to waive formalities. Any claims for cost incurred by any **Bidder** in preparation of any part of or total package for this project will not be considered for reimbursement by Rockdale County.

Bidders must complete the DBE Goals List in order to comply with the goal to provide a minimum of 15% Disadvantage Business Enterprise (DBE) participation on this project. A DBE Subcontractor must have a current DBE certification by GDOT in order to be considered as part of the 15% DBE goal. This is a goal and not a requirement, but an explanation stating reasons for not complying with the goal must be submitted.

The Construction Documents consist of the following, including all addenda issued therewith and forms referenced therein:

Bidding Documents
Sample Contract Agreement
General Conditions

Special Provisions Appendices

As part of the **Construction Documents**, Appendices are provided for the **Bidder's** use, which consist of roadway plans and water line specifications. The plans and specifications are specific to this project and are intended to describe the extent of the Work to be completed.

All questions concerning this invitation and all questions arising subsequent to award are to be addressed to the Buyer at the following address:

Rockdale County Finance Department
Purchasing Division
Attn: Meagan Porch
958 Milstead Avenue
Conyers, GA 30012
Phone: (770) 278-7557, Fax (770) 278-8910
E-mail: meagan.porch@rockdalecountyga.gov

TORT IMMUNITY:

No officer, employee, or agent of the County acting within the scope of his/her employment or function shall be held personally liable in tort or named as a defendant in any action for injury or damage suffered because of any act, event, or failure to act.

SILENCE OF SPECIFICATIONS

The apparent silence of these specifications and any supplemental specifications as to any details, or the omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail and that only materials of first quality and correct type, size and design are to be used. All workmanship is to be first quality. All interpretations of this specification shall be made upon the basis of this statement, with County interpretation to prevail.

OPTION TO AUDIT

Successful bidder will be required to maintain complete records during the life of the contract and for a period of one year after completion of the contract. Such records are to be made available to the County if officially requested, to be audited by a designated County auditing staff. In such audits reveal overcharges and/or undercharges, such will be adjusted and compensation made by either party to correct charges.

LOCAL VENDOR PREFERENCE POLICY

The Rockdale County Board of Commissioners adopted a Local Vendor Preference Policy on March 26, 2013. The policy will apply to all qualified Invitations to Bids and Request for Proposals after May 1, 2013. The Local Vendor Preference Policy allows Rockdale County vendors to get an extra 5 points on the evaluation criteria scoring for Request for Proposal. The Policy will give the local bidder the opportunity to match the price of a non-local vendor's bid price if they are low and within 5% of the low bidder's price on Invitation to Bids. A copy of the Policy may be downloaded from the County website at www.rockdalecountga.gov, Under Finance/Purchasing.

The Local Vendor Preference Policy will not apply to this ITB.

BID PROPOSAL, page 1 of 3

Proposal of _____ (hereinafter called "**Bidder**"), a contractor organized and existing under the laws of the State of Georgia, *an individual, a corporation, a partnership doing business as: _____.

TO: Rockdale County
(Hereinafter called "**County**")

Gentlemen:

The **Bidder** in compliance with your Notice to Contractors and all Bidding Documents for the following work:

Furnish all labor, materials and equipment for the reconstruction of the Klondike Road/McDaniel Mill Road/Hurst Road intersection to a roundabout in Rockdale County. The project will relocate Klondike Road to a new intersection approximately 500 feet south of the existing intersection. Approximately 2500 feet of Klondike Road will be relocated as part of this project on both sides of the new intersection. The relocated intersection will be constructed as a single-lane roundabout. The existing intersection along McDaniel Mill Road will remain and serve as the eastern terminus of Hurst Road, but the fifth leg of the existing intersection will be removed. The McDaniel Mill Road profile will be lowered by several feet immediately north of the existing intersection in order to improve intersection sight distance. The proposed typical section will include 12-foot lanes and a 10' rural shoulder, except for the roundabout approaches and McDaniel Mill north of the roundabout, which will have curb and gutter and a 5-foot sidewalk. The total length of the project is 0.81 miles. This project is located in unincorporated Rockdale County, approximately 3 miles east of the City of Conyers.

Having examined the plans and specifications with related documents and the site of the proposed **Work**, and being familiar with all of the conditions surrounding the construction of the proposed projects, including the availability of materials and supplies to construct the projects in accordance with the contract documents, within the time set forth herein, and at the prices stated below, proposes to enter into a Contract with Rockdale County to provide the necessary machinery, tools, apparatus, all materials and labor, and other means of construction necessary to complete the **Work**. The undersigned proposes to furnish and construct the items listed in the attached Schedule of Items for the unit prices stated.

Bidder agrees that the cost of any **Work** performed, materials furnished, services provided or expenses incurred, which are not specifically delineated in the Contract Documents, but which are incidental to the scope, intent, and completion of the Contract, shall be deemed to have been included in the prices **Bid** for the various items scheduled.

Bidder further proposes and agrees hereby to promptly commence the **Work** with adequate force and equipment within ten (10) calendar days from receipt of Notice to Proceed, or as may be specified by Special Provision, and to complete the **Work** by **548 DAYS from Notice to Proceed Date**, or as may be specified by Special Provisions.

BID PROPOSAL, page 2 of 3

Bidder assumes the responsibility to download all addenda published on the Rockdale County website prior to submittal of his **Bid**, and accepts that failure to acknowledge receipt of each and every addendum individually is grounds for finding the **Bid** non-responsive. **Bidder** hereby acknowledges receipt of the following addenda:

The undersigned further agrees that in case of failure on his part to execute said contract and bond, or provide satisfactory proof of carriage of the insurance required, within ten (10) calendar days after the award thereof, the **Bid Bond** or certified check accompanying his **Bid** and the money payable thereon shall be forfeited to the **County** as liquidated damages; otherwise, the check or Bond accompanying this proposal shall be returned to the **Bidder**.

The **Bidder** declares that he understands that the quantities shown on the proposal are subject to adjustment by either increase or decrease, and that should the quantities of any of the items of **Work** be increased, the undersigned proposes to do the additional **Work** at the unit prices stated herein; and should the quantities be decreased, he also understands that payment will be made on actual quantities at the unit price **Bid** and will make no claim for anticipated profits for any decrease in the quantities, and that actual completed, final quantities will be determined upon completion of **Work** and acceptance by the **County**, at which time adjustment will be made to the Contract amount by direct increase or decrease.

Attached hereto is a **Bid** bond or certified check on the (Bank) _____ in the amount of _____, (Five percent (5%) of Total Amount **Bid**).

The full name and residence of persons or parties interested in the foregoing **Bid** as contractors are named as follows:

BID PROPOSAL, page 3 of 3

Rockdale County, Georgia

Signed, sealed, and dated this ____ day of _____, 20__.

Bidder: _____

(Company Name)

By: _____

Title: _____

Mailing Address:

BID BOND, page 1 of 2Five Percent (5%) of **Bid**

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned

_____, as **Contractor**, and_____, as **Surety**, arehereby held and firmly bound unto ROCKDALE COUNTY, GEORGIA, as **County**, in the penal sum of _____ Dollars

(\$ _____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

Signed this _____ day of _____, 20_____.

The condition of the above obligation is such that whereas the **Contractor** has submitted to ROCKDALE COUNTY, GEORGIA a certain **Bid** attached hereto and hereby made a part hereof to enter into a contract in writing for the following work:

Furnish all labor, materials and equipment for the reconstruction of the Klondike Road/McDaniel Mill Road/Hurst Road intersection to a roundabout in Rockdale County. The project will relocate Klondike Road to a new intersection approximately 500 feet south of the existing intersection. Approximately 2500 feet of Klondike Road will be relocated as part of this project on both sides of the new intersection. The relocated intersection will be constructed as a single-lane roundabout. The existing intersection along McDaniel Mill Road will remain and serve as the eastern terminus of Hurst Road, but the fifth leg of the existing intersection will be removed. The McDaniel Mill Road profile will be lowered by several feet immediately north of the existing intersection in order to improve intersection sight distance. The proposed typical section will include 12-foot lanes and a 10' rural shoulder, except for the roundabout approaches and McDaniel Mill north of the roundabout, which will have curb and gutter and a 5-foot sidewalk. The total length of the project is 0.81 miles. This project is located in unincorporated Rockdale County, approximately 3 miles east of the City of Conyers.

NOW, THEREFORE,

- (a) If said **Bid** shall be rejected or in the alternate,
- (b) If said **Bid** shall be accepted and the **Contractor** shall execute and deliver a Contract in the Form of Contract attached hereto (properly complete in accordance with said **Bid**) and shall furnish a bond for his faithful performance of said Contract and for the payment of all persons performing labor or furnishing material in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said **Bid**, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the **Surety** for

any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The **Surety**, for value received, hereby stipulates and agrees that the obligations of said **Surety** and its bond shall be in no way impaired or affected by any extension of the time within which the **County** may accept such **Bids**, and said **Surety** does hereby waive notice of any such extension.

BID BOND, page 2 of 2

IN WITNESS WHEREOF, the **Contractor** and the **Surety** have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Contractor (SEAL)

By: _____

Surety (SEAL)

By: _____
Georgia Representative

CERTIFICATION BY CONTRACTOR
Regarding
NON-SEGREGATED FACILITIES

The **Bidder** certifies that he does not, and will not, provide and maintain segregated facilities for his employees at his establishments and, further that he does not, and will not, permit his employees to perform their services at those locations, under his control, where segregated facilities are provided and maintained. Segregated facilities include, but are not necessarily limited to, drinking fountains, transportation, parking, entertainment, recreation, and housing facilities; waiting, rest, wash, dressing, and locker rooms, and time clock, **Work**, storage, restaurant, and other eating areas which are set apart in fact, or by explicit directive, habit, local custom, or otherwise, on the basis of color, creed, national origin, and race. The **Bidder** agrees that, except where he has obtained identical certifications from proposed subcontractors for specific time periods, he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his files.

The **Bidder** agrees that a breach of this certification is a violation of the Equal Opportunity clause in this Contract. The penalty for making false statements is prescribed in 18 U.S.C. 1001.

Bidder (Print)

(Signature)

Name of Signer (Print)

Title of Signer

Date

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.

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____)

County of _____)

_____, being first duly sworn, deposes and says that:

1. He is _____ (Owner, Partner, Officer, Representative, or Agent) of the **Bidder** that has submitted the attached **Bid**;
2. He is fully informed respecting the preparation and contents of the attached **Bid** and of all pertinent circumstances respecting such **Bid**;
3. Such **Bid** is genuine and is not a collusive or sham **Bid**;
4. Neither the said **Bidder** nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other **Bidder**, firm or person to submit a collusive or sham **Bid** in connection with the Contract for which the attached **Bid** has been submitted to or refrain from bidding in connection with such Contract, or has in any collusion or communication or conference with any other **Bidder**, firm or person to fix the price or prices in the attached **Bid** or of any other **Bidder**, or to fix any overhead, profit or cost element of the **Bid** price or the **Bid** price of any other **Bidder**, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Rockdale County or any person interested in the proposed Contract; and,
5. The price or prices quoted in the attached **Bid** are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the **Bidder** or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

Name _____ (Print)

Title _____ (Print)

Subscribed and Sworn to before me
this _____ day of _____ 20____.

(SEAL)

Title

NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR

State of _____)

County of _____)

_____, being first duly sworn, deposes and says that:

1. He is _____ (Owner, Partner, Officer, Representative, or Agent) of the **Bidder** that has submitted the attached **Bid**;
2. He is fully informed respecting the preparation and contents of the attached **Bid** and of all pertinent circumstances respecting such **Bid**;
3. Such **Bid** is genuine and is not a collusive or sham **Bid**;
4. Neither the said **Bidder** nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other **Bidder**, firm or person to submit a collusive or sham **Bid** in connection with the Contract for which the attached **Bid** has been submitted to or refrain from bidding in connection with such Contract, or has in any collusion or communication or conference with any other **Bidder**, firm or person to fix the price or prices in the attached **Bid** or of any other **Bidder**, or to fix any overhead, profit or cost element of the **Bid** price or the **Bid** price of any other **Bidder**, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Rockdale County or any person interested in the proposed Contract; and,
5. The price or prices quoted in the attached **Bid** are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the **Bidder** or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

Name _____ (Print)

Title _____ (Print)

Subscribed and Sworn to before me this _____ day of _____ 20____.

(SEAL)

Title

**Affidavit Verifying Status
for County Public Benefit Application**

By executing this affidavit under oath, as an applicant for the award of a contract with Rockdale, County Georgia, I _____. [Name of natural person applying on behalf of individual, business, corporation, partnership, or other private entity] am stating the following as required by O.C.G.A. Section 50-36-1:

1) _____ I am a United States citizen

OR

2) _____ I am a legal permanent resident 18 years of age or older or I am an otherwise qualified alien or non-immigrant under the Federal Immigration and Nationality Act 18 years of age or older and lawfully present in the United States.*

In making the above representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious, or fraudulent statement or representation in an affidavit shall be guilty of a violation of Code Section 16-10-20 of the Official Code of Georgia.

_____ Date

Signature of Applicant:

Printed Name:

* _____
Alien Registration number for non-citizens

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
_____ DAY OF _____, 20__.

Notary Public
My commission Expires:

*Note: O.C.G.A. § 50-36-1(e)(2) requires that aliens under the federal Immigration and Nationality Act, Title 8 U.S.C., as amended, provide their registration number. Because legal permanent residents are included in the federal definition of "alien", legal permanent residents must also provide their alien registration number. Qualified aliens that do not have an alien registration number may supply another identifying number below.

CERTIFICATIONS
Page 1 of 2

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

EXAMINATION OF PLANS AND SPECIFICATIONS

I certify that I have carefully examined the Construction Documents for this project and the Georgia Department of Transportation Standard Specifications, 2013 Edition, and the Supplemental Specifications and Special Provisions included in and made a part of this Proposal and have also personally examined the sites of the **Work**. On the basis of the said Specifications and Documents, I proposed to furnish all necessary labor, machinery, tools, apparatus and other means of construction, and do all the **Work** and furnish all the materials in the manner specified.

I understand that any quantities mentioned or provided 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.

I also hereby agree that Rockdale County 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 ten (10) 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 Rockdale County 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 Rockdale County Board of Commissioners as required by the laws of the State of Georgia. This bond shall not only service 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.

CERTIFICATIONS
page 2 of 2

CONFLICT OF INTEREST

By signing and submitting this Contract I hereby certify that employees of this company or employees of any company supplying material or subcontracting to do **Work** on this Contract will not engage in business ventures with employees of Rockdale County or Consulting Engineers 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 Rockdale County through its Director of Transportation 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 Rockdale County employees.

Contractor

(Signature)

Name of Signer

Title of Signer

Date

**LOWER TIER CONTRACTOR CERTIFICATION REGARDING DEBARMENT,
SUSPENSION AND OTHER RESPONSIBILITY MATTERS**

I hereby certify that I am the _____ and duly authorized representative of the firm of _____, whose address is _____, and I certify that I have read and understand the attached instructions and that to the best of my knowledge and belief the firm and its representatives:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by the Georgia Department of Transportation and by any Federal department or agency;
- (b) I acknowledge that this certification is provided pursuant to Executive Order 12549 and 49 CFR Part 29 and that this firm agrees to abide by the rules and conditions set forth therein for any misrepresentation that would render this certification erroneous, including termination of this Agreement and other remedies available to the Georgia Department of Transportation and Federal Government.
- (c) I further acknowledge that this certificate is to be furnished to the Georgia Department of Transportation, in connection with the Prime Contractor Agreement involving participation of Federal-Aid Highway Funds, and is subject to applicable State and Federal laws, both criminal and civil.

Date _____ (Seal)

INSTRUCTIONS

Instructions for Debarment Certification

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

This certification applies to all subcontractors, material suppliers, vendors and other lower tier participants and shall be completed by them and included in the **Bid** Proposal.

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out in Debarment Certificate above.
2. The certification, Debarment, 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.
3. The prospective lower tier participant shall provide immediate written notice to the person to whom the proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction", "debarred", "suspended", "ineligible", "lower tier covered transaction", "participant", "person", "primary covered transaction", "principal", "proposal", and "voluntarily excluded", as used in these instructions and the certification, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal/contract that should the proposed covered transaction be entered into, it shall not knowingly enter into a lower tier covered transaction with a person/firm 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.
6. The prospective lower tier participant further agrees by submitting this proposal/contract that it will include the 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.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Non-procurement List.
8. 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 a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if the 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 pursue available remedies, including suspension and/or debarment.

Contractor Affidavit under O.C.G.A. §13-10-91(b)(1)

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. §13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of (name of public employer) has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. §13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A. §13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

Name of Project

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ____, 201__ in _____(city), _____(state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 201__.

NOTARY PUBLIC
My Commission Expires:

Subcontractor Affidavit under O.C.G.A. § 13-10-91(b)(3)

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with (name of contractor) on behalf of (name of public employer) has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the subcontractor with the information required by O.C.G.A. § 13-10-91(b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor to the contractor within five business days of receipt. If the undersigned subcontractor receives notice that a sub-subcontractor has received an affidavit from any other contracted sub-subcontractor, the undersigned subcontractor must forward, within five business days of receipt, a copy of the notice to the contractor. Subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Subcontractor

Name of Project

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ____, 201__ in _____(city), _____(state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 201__.

NOTARY PUBLIC
My Commission Expires:

Sub-subcontractor Affidavit under O.C.G.A. §13-10-91(b)(4)

By executing this affidavit, the undersigned sub-subcontractor verifies its compliance with O.C.G.A. §13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract for (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract) and (name of contractor) on behalf of (name of public employer) has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. §13-10-91. Furthermore, the undersigned sub-subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned sub-subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the sub-subcontractor with the information required by O.C.G.A. §13-10-91(b). The undersigned sub-subcontractor shall submit, at the time of such contract, this affidavit to (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract). Additionally, the undersigned sub-subcontractor will forward notice of the receipt of any affidavit from a sub-subcontractor to (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract). Sub-subcontractors hereby attest that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Sub-Subcontractor

Name of Project

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ____, 201__ in _____ (city), _____ (state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 201__.

NOTARY PUBLIC
My Commission Expires: _____

CERTIFICATION OF SPONSOR**DRUG-FREE WORKPLACE**

I hereby certify that I am a principle and duly authorized representative or _____
 whose address is _____
 and it is also that:

1. The provisions of Section 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; and,
2. A drug-free workplace will be provided for the sponsor's employees during the performance or the contract; and,
3. Each subcontractor hired by the SPONSOR shall be required to ensure that the subcontractor's employees are provided a drug-free workplace. The SPONSOR shall secure from that subcontractor the following written certification: "As part of the subcontracting agreement with _____, _____ certifies to the SPONSOR 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 the Official Code of Georgia Annotated Section 50-24-3; and,
4. It is certified that the undersigned will not engage in unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the contract.

Date: _____

Signature: _____

UTILITY CONTRACTOR'S LICENSE CERTIFICATION

(If a subcontractor will be performing the utility work, the subcontractor must possess a utility contractor's license. Please include both the Prime and Subcontractor information below if work will be performed by both parties.)

Prime Contractor

Utility Contractor's Name: _____

Utility Contractor's License Number: _____

License Classification: _____

Expiration Date of License: _____

Subcontractor

Utility Contractor's Name: _____

Utility Contractor's License Number: _____

License Classification: _____

Expiration Date of License: _____

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: _____

Date: _____

QUESTIONNAIRE

Project Name: CR 57/Klondike Road@CR 62/McDaniel Mill Road/Hurst Road

Date: _____
(PLEASE ATTACH SEPARATE SHEETS AS NECESSARY)

*****ALL QUESTIONS MUST BE ANSWERED THOROUGHLY BY THE BIDDER. DO NOT LEAVE ANY QUESTION BLANK. MARK N/A IF NOT APPLICABLE. FAILURE TO THOROUGHLY ANSWER ALL QUESTIONS MAY RESULT IN DELAY OF CONTRACT OR DISQUALIFICATION OF THE BIDDER.*****

A. GENERAL INFORMATION

1. How many years has your organization been in business as a Contractor performing roadway construction? _____
2. State the true and exact, correct, and complete name under which you do business.

3. How many years has your organization been in business under its present name? _____
4. Under what other or former names has your organization operated? _____

5. State the true and exact, correct, and complete address of facility where service will be provided from. _____

B. EXPERIENCE

1. Briefly describe the nature and contract value of projects typically executed by your organization.

2. On a separate sheet, list a minimum of three projects that you have completed similar in type, size, and nature as the one proposed. Preference should be given to county/state/federal projects. Provide the following information for each project:
 - Name of Project
 - Owner
 - Contact and Phone Number
 - Address
 - Engineer
 - Contact and Phone Number
 - Address
 - Date Started
 - Date Completed
 - Project Superintendent
 - Value of Contract
 - Description of Project

3. Attach qualifications and experience for proposed key personnel who will be assigned to the project if awarded, including: Project Managers, Superintendents, Foreman, Technicians, and Engineers, etc.
4. Describe the typical organization of staff assigned to a project executed by your firm (including the number/level of supervisory staff per number of workers).
5. What equipment do you own that you will use for this Work? Attach a detailed list. Include make, model and year of manufacture of each piece of equipment.
6. What equipment will be leased or rented for use on this Project? Attach a detailed list.
7. Attach a description of your firm's training program in Health and Safety for employees over the past year. Note dates, instructions, location and overall content of program.
8. Provide information on your organization's safety record for the past three years.
9. Provide at least three (3) references familiar with roadway construction projects you have completed in the past five (5) years. Preference should be given to county/state/federal projects. References should not be a current employee or subcontractor that will be utilized by your firm.

Reference #1

- a. Organization Name: _____
- b. Description of Project: _____
- c. Contract Period: _____
- d. Contact Person/Title: _____
- e. Phone Number: _____

Reference #2

- a. Organization Name: _____
- b. Description of Project: _____
- c. Contract Period: _____
- d. Contact Person/Title: _____
- e. Phone Number: _____

Reference #3

- a. Organization Name: _____
- b. Description of Project: _____
- c. Contract Period: _____
- d. Contact Person/Title: _____
- e. Phone Number: _____

C. PERFORMANCE AND COMMITMENTS

1. Has your organization ever failed to complete work awarded to you? If so, where, when, and why?

2. Has your organization filed a construction claim against the Owner on any work awarded to you within the last five years? If so, where, when, and why?

3. Has your organization filed a construction claim against the Engineer on any work awarded to you within the last five years? If so, where, when, and why?

4. Has your organization had to pay liquidated damages on any work awarded to you within the last five years? If so, where, when, and why?

5. Have you ever been involved in litigation regarding work awarded to you as a prime Contractor or Subcontractor?

6. On a separate sheet, list major projects your organization has in progress, giving the name of the project, owner, architect/engineer, contract amount, percent complete, and scheduled completion date.

D. FINANCIAL INFORMATION

1. If a private company, the Offeror shall provide a copy of their (2) two most recent year's internal financial statements, and a letter from their financial institution, on the financial institutions letterhead, stating the Offeror's financial stability.
2. If a public company, the Offeror shall provide a copy of their last (2) two years audited financial statements.

D. OTHER INFORMATION

Provide other information to illustrate your qualifications to do the Work (Include attachments as applicable).

The undersigned all statements and answers contained herein are true, complete, and accurate to the best of your knowledge.

Date Questionnaire Submitted: _____

Name of Organization _____

Authorized Signature _____

Name & Title of Signer (Printed) _____

Business Address _____

Phone Number _____ Fax Number _____

END QUESTIONNAIRE

SUBCONTRACTORS NOTIFICATION LIST

ALL PROPOSED SUBCONTRACTORS MUST BE LISTED BELOW. Attach additional sheets if necessary.

All Subcontractors must be approved by Rockdale County.

Please list any Subcontractors, the address, Business License number, scope of work, and percent of work assigned for each Subcontractor who may be doing work in the County.

General Contractor: _____

License Number: _____

Subcontractor: _____

License Number: _____

Scope of Work: _____

Percent of Work: _____

Subcontractor: _____

License Number: _____

Scope of Work: _____

Percent of Work: _____

Subcontractor: _____

License Number: _____

Scope of Work: _____

Percent of Work: _____

Subcontractor: _____

License Number: _____

Scope of Work: _____

Percent of Work: _____

Subcontractor: _____

License Number: _____

Scope of Work: _____

Percent of Work: _____

Subcontractor: _____

License Number: _____

Scope of Work: _____

Percent of Work: _____

cc: Rockdale County Department of Transportation
Rockdale County Department of Finance

CR 57/Klondike Road @ CR 62/McDaniel Mill Road/Hurst Road**CSSTP-0006-00(932) P.I. # 0006932****BID SCHEDULE OF ITEMS**

Contract Scope:

Furnish all labor, materials and equipment for the reconstruction of the Klondike Road/McDaniel Mill Road/Hurst Road intersection to a roundabout in Rockdale County. The project will relocate Klondike Road to a new intersection approximately 500 feet south of the existing intersection. Approximately 2500 feet of Klondike Road will be relocated as part of this project on both sides of the new intersection. The relocated intersection will be constructed as a single-lane roundabout. The existing intersection along McDaniel Mill Road will remain and serve as the eastern terminus of Hurst Road, but the fifth leg of the existing intersection will be removed. The McDaniel Mill Road profile will be lowered by several feet immediately north of the existing intersection in order to improve intersection sight distance. The proposed typical section will include 12-foot lanes and a 10' rural shoulder, except for the roundabout approaches and McDaniel Mill north of the roundabout, which will have curb and gutter and a 5-foot sidewalk. The total length of the project is 0.81 miles. This project is located in unincorporated Rockdale County, approximately 3 miles east of the City of Conyers.

No.	Pay Item No.	Item	Approx. Quantity	Unit	Unit Price	Amount
LUMP ITEMS						
1	150-1000	TRAFFIC CONTROL – CSSTP-0006-00(932)	1.00	LS		
2	210-0100	GRADING COMPLETE – CSSTP-0006-00(932)	1.00	LS		
3	154-1000	CONSTRUCTION VIBRATION MONITORING	1.00	LS		
4	153-1300	FIELD ENGINEERS OFFICE TP 3	1.00	EA		
GUARDRAIL						
5	641-1200	GUARDRAIL, TP W	420.00	LF		
6	641-5001	GUARDRAIL ANCHORAGE, TP 1	1	EA		
7	641-5015	GUARDRAIL ANCHOR, TP 12A, 31 IN, TANG, E/A	1	EA		
BASE AND PAVING						
8	205-0210	EXCAVATION – ROCK	900.00	CY		
9	310-1101	GR AGGR BASE CRS, INCL MATL	9760.00	TN		
10	402-1812	RECYCLED ASPH CONC LEVELING, INC BM & HL	470.00	TN		
11	402-3103	RECYL AC 9.5 MM SP, TP II, GP 2, INCL BM & HL	1176.00	TN		
12	402-3121	RECYL AC 25MM SP, CP 1 / 2, BM&HL	2630.00	TN		
13	402-3190	RECYL AC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	1516.00	TN		
14	413-0750	BITUM TACK COAT	2976.00	GAL		
15	439-0022	PLN PC CONC PVMT CL3 TO THK	480.00	SY		
17	432-5010	MILL ASPH CONC PVMT, VARB DEPTH	500.00	SY		
18	441-0016	DRIVEWAY CONCRETE, 6 IN THICK	486.00	SY		
19	441-0108	CONCRETE SIDEWALK, 8 IN THICK	1410.00	SY		
20	441-0748	CONCRETE MEDIAN, 6 IN THICK	1055.00	SY		
21	441-5008	CONC HEADER CURB, 6 IN, TP 7	285.00	LF		
22	441-5025	CONCRETE HEADER CURB, 4, TP 9	370.00	LF		
23	441-4020	CONC VALLEY GUTTER, 6 IN	70.00	SY		
24	441-6222	CONC CURB & GUTTER/ 8X30 TP 2	2880.00	LF		
25	446-1100	PVMT REF FAB STRIPS, TP 2, 18 INCH WIDTH	1812.00	LF		
26	500-9999	CL B CONC, BASE OR PVMT WIDEN	55.00	CY		
27	634-1200	RIGHT OF WAY MARKERS	48.00	EA		

DRAINAGE ITEMS						
28	441-0050	CONC SLOPE DRAIN	10.00	SY		
29	441-0303	CONC SPILLWAY, TP 3	1.00	EA		
30	500-3800	CL A CONC, INCL REINF STEEL	24.11	CY		
31	550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	1333.00	LF		
32	550-1300	STORM DRAIN PIPE, 30 IN, H 1-10	300.00	LF		
33	550-1360	STM DR PIPE 36, H 1-10	124.00	LF		
34	550-1420	STM DR PIPE 42, H 1-10	95.00	LF		
35	550-2180	SIDE DRAIN PIPE, 18 IN, H 1-10	57.00	LF		
36	550-3318	SAFETY END SECTION 18, STD, 4:1	8.00	EA		
37	550-3418	SAFETY END SECTION 18, SD 4:1	4.00	EA		
38	550-3330	SAFETY END SECTION 30, STD, 4:1	1.00	EA		
39	550-4218	FLARED END SECTION, 18 IN, ST DR	2.00	EA		
40	573-1006	UNDDR PIPE ONLY, 6 IN	70.00	LF		
41	603-2181	STN DUMPED RIP RAP, TP 3, 18	1700.00	SY		
42	603-7000	PLASTIC FILTER FABRIC	1700.00	SY		
43	668-1100	CATCH BASIN, GP 1	9.00	EA		
44	668-2100	DROP INLET, GP 1	18.00	EA		
45	668-4300	STORM SEWER MANHOLE, TP 1	3.00	EA		
46	668-6000	SPRING BOX	1.00	EA		
EROSION CONTROL						
47	163-0300	CONSTRUCTION EXIT	3.00	EA		
48	163-0527	CNST/REM RIP RAP CKDM.STN P RIPRAP/SN BG	150.00	EA		
49	163-0541	CONSTR & REM ROCK FILTER DAMS	5.00	EA		
50	163-0550	CONS & REM INLET SEDIMENT TRAP	27.00	EA		
51	165-0030	MAINT OF TEMP SILT FENCE, TP C	1675.00	LF		
52	165-0041	MAINT OF CHECK DAMS – ALL TYPES	1990.00	LF		
53	165-0101	MAINT OF CONST EXIT	3.00	EA		
54	165-0105	MAINT OF INLET SEDIMENT TRAP	27.00	EA		
55	165-0110	MAINT OF ROCK FILTER DAM	5.00	EA		
56	167-1000	WATER QUALITY MONITORING AND SAMPLING	4.00	EA		
57	167-1500	WATER QUALITY INSPECTIONS	18.00	MO		
58	171-0030	TEMPORARY SILT FENCE, TYPE C	3350.00	LF		
59	716-2000	EROSION CONTROL MATS, SLOPES	6750.00	SY		
60	643-8200	BARRIER FENCE (ORANGE), 4FT	600.00	LF		

GRASSING

61	163-0232	TEMPORARY GRASSING	3.00	AC		
62	163-0240	MULCH	111.00	TN		
63	700-6910	PERMANENT GRASSING	6.00	AC		
64	700-7000	AGRICULTURAL LIME	9.00	TN		
65	700-8000	FERTILIZER MIXED GRADE	5.00	TN		
66	700-8100	FERTILIZER NITROGEN CONTENT	450.00	LB		

SIGNING & MARKING

67	636-1033	HWY SIGN, TP 1 MATL, REFL SHEETING, TP 9	98.30	SF		
68	636-1036	HWY SIGN, TP 1 MATL, REFL SHEETING, TP 11	345.20	SF		
69	636-1041	HWY SIGN, TP 2 MATL, REFL SHEETING, TP 9	159.50	SF		
70	636-2070	GALV STEEL POSTS, TP 7	1,001.00	LF		
71	653-1501	THERMOPLASTIC SOLID TRAFFIC STRIPE, 5 IN, WHITE	8293.00	LF		
72	653-1502	THERMOPLASTIC SOLID TRAFFIC STRIPE, 5 IN, YELLOW	9344.00	LF		
73	653-1704	THERMOPLASTIC SOLID TRAFFIC STRIPE, 24 IN, WHITE	34.00	LF		
74	653-1804	THERMOPLASTIC SOLID TRAFFIC STRIPE, 8 IN, WHITE	1804.00	LF		
75	653-4830	THER SKIP TRAF ST, 18 IN, WHT	120.00	GLF		
76	653-0296	THERMO PVMT MARKING, WORD, TP 15	4.00	EA		
77	653-6006	THERM TRAF STRIPING, YELLOW	208.00	SY		
78	653-6004	THERM TRAF STRIPING, WHITE	67.00	SY		
79	654-1001	RAISED PVMY MARKERS TP 1	166.00	EA		
80	632-0003	CHANGEABLE MESS SIGN, PORT, TP 3	4.00	EA		

LIGHTING

81	682-1403	CABLE, TP XHHW, AWG NO 12	800.00	LF		
82	682-1404	CABLE, TP XHHW, AWG NO 10	2800.00	LF		
83	682-1405	CABLE, TP XHHW, AWG NO 8	200.00	LF		
84	682-1414	CABLE, TP XHHW, AWG NO 3/0	30.00	LF		
85	500-3900	CL B CONC, INCL REINF STEEL	30.00	CY		
86	682-6219	CONDUIT, NONMETL, TP 2, 1 IN	1800.00	LF		
87	682-9950	DIRECTIONAL BORE, - 2 IN	400.00	LF		
88	205-0001	UNCLASS EXCAV FOR ROUNDABOUT LIGHTING	666.60	CY		
89	207-0203	FOUND BK FILL MATL, TP II	666.00	CY		
90	682-6108	CONDUIT, RIGID, 3 / 4 IN	350.00	LF		
91	682-9020	ELEC JCT BOX	14.00	EA		
92	682-8525	ELEC PWR SVC ASSBLY (UNDERG SERV POINT)	1.00	EA		
93	682-8995	POWER SERVICE CABINET	1.00	EA		
94	682-9000	MAIN SVC PICK UP POINT	1.00	LS		

95	682-6222	CONDUIT, NONMETL, TP 2, 2 IN	100.00	LF		
96	682-6236	CONDUIT, NONMETL, TP2-POWER SERVICE, 2 IN	100.00	LF		
97	681-4300	LT STD, 30' MH, 6' ARM	12.00	EA		
98	681-5255	LUMIN BRACKET ARM, 6 FT ARM	12.00	EA		
99	681-6600	LUMINAIRE, TP A LED	12.00	EA		
ROUNDBOUT LANDSCAPING						
100	700-9300	SOD	1200.00	SY		
101	702-0212	CRATAEGUS VIRIDIS – 3 IN CALIPER	3.00	EA		
102	702-0470	ILEX VOMITORIA NAN – 3 GAL	100.00	EA		
103	702-9005	SPRING APPLICATION FERTILIZER	200.00	LB		
104	702-9025	LANDSCAPE MULCH	400.00	SY		
				Roadway Subtotal:		
WATER SYSTEM						
105	670-1080	WATER MAIN, 8 IN	2780.00	LF		
106	670-1060	WATER MAIN, 6 IN	20.00	LF		
107	670-4000	FIRE HYDRANT	3.00	EA		
108	670-2080	GATE VALVE, 8 IN	3.00	EA		
109	670-3087	TAP SLEEVE/VAL ASSY. 8" X 8"	4.00	EA		
110	670-7215	INSERTION VALVE, 6 IN	1.00	EA		
112	670-9710	RELOCATE EXIST FIRE HYDRANT	1.00	EA		
113	670-1600	CUT & PLUG EXIST WATER MAIN	4.00	EA		
114	670-4510	CONC THRUST COLLAR, 8" PIPE	5.00	EA		
115	670-2002	VALVE MARKER	9.00	EA		
116	670-0800	WATER METER – 8 IN	3.00	EA		
117	670-5000	WATE SERVICE LINE – 8 IN	80.00	LF		
118	670-9450	ROCK EXCAVATION FOR WATER LINE RELOCATION	900.00	CY		
119	165-0030	MAINT OF TEMP SILT FENCE, TP C FOR WATE LINE RELOCATION	1350.00	LF		
120	171-0030	TEMPORARY SILT FENCE, TYPE C FOR WATER LINE RELOCATION	2700.00	LF		
121	163-0240	MULCH FOR WATER LINE RELOCATION	2.00	TN		
122	163-0232	TEMPORARY GRASSING FOR WATER LINE RELOCATION	0.40	AC		
				Water System Subtotal:		

ROADWAY SUBTOTAL:	
WATER SYSTEM SUBTOTAL:	
BID TOTAL:	

General Decision Number: GA190284 01/04/2019 GA284

Superseded General Decision Number: GA20180296

State: Georgia

Construction Type: Highway

Counties: Lamar, Meriwether, Pickens, Pike and Rockdale
Counties in Georgia.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date
0 01/04/2019

SUGA2014-118 10/03/2016

	Rates	Fringes
CARPENTER, Excludes Form Work....	\$ 15.54	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 14.70	0.00
FENCE ERECTOR.....	\$ 16.54	0.00
FORM WORKER.....	\$ 15.26	2.08
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine)....	\$ 12.37	1.95
INSTALLER - GUARDRAIL.....	\$ 15.65	0.00
INSTALLER - SIGN.....	\$ 13.03	0.00

IRONWORKER, REINFORCING.....	\$ 14.64	0.00
IRONWORKER, STRUCTURAL.....	\$ 15.12	0.00
LABORER: Concrete Paving Joint Sealer.....	\$ 17.66	0.00
LABORER: Grade Checker.....	\$ 11.45	0.00
LABORER: Mason Tender - Brick...	\$ 11.61	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 11.44	0.00
LABORER: Pipelayer.....	\$ 12.45	0.00
LABORER: Asphalt (Includes Distributor, Raker, Screed, Shoveler, and Spreader).....	\$ 13.15	0.00
LABORER: Common or General, Includes Erosion Control.....	\$ 11.13	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 16.69	2.41
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 13.38	0.00
OPERATOR: Broom/Sweeper.....	\$ 14.83	1.38
OPERATOR: Bulldozer.....	\$ 16.07	1.81
OPERATOR: Compactor.....	\$ 14.64	0.00
OPERATOR: Concrete Saw.....	\$ 18.94	0.00
OPERATOR: Crane.....	\$ 21.06	4.24
OPERATOR: Distributor.....	\$ 17.00	1.93
OPERATOR: Grader/Blade.....	\$ 18.42	5.04
OPERATOR: Hydroseeder.....	\$ 15.20	0.00
OPERATOR: Loader.....	\$ 14.27	1.49
OPERATOR: Mechanic.....	\$ 19.54	0.00
OPERATOR: Milling Machine Groundsman.....	\$ 13.43	1.24
OPERATOR: Milling Machine.....	\$ 16.00	1.31
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.50	2.93
OPERATOR: Piledriver.....	\$ 16.70	0.00
OPERATOR: Roller.....	\$ 13.86	1.35
OPERATOR: Scraper.....	\$ 12.64	0.00
OPERATOR: Screed.....	\$ 14.67	1.86

OPERATOR: Shuttle Buggy.....	\$ 14.06	1.98
PAINTER: Spray.....	\$ 23.30	0.00
TRAFFIC CONTROL: Flagger.....	\$ 11.70	1.01
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 12.60	0.00
TRAFFIC SIGNALIZATION: Laborer.....	\$ 13.75	1.14
TRAFFIC SIGNALIZATION: Electrician.....	\$ 23.41	4.26
TRUCK DRIVER: Dump Truck.....	\$ 15.00	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 14.91	1.07
TRUCK DRIVER: Hydroseeder Truck.....	\$ 16.74	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 18.98	0.00
TRUCK DRIVER: Off the Road Truck.....	\$ 12.38	0.00
TRUCK DRIVER: Pickup Truck.....	\$ 13.29	0.00
TRUCK DRIVER: Water Truck.....	\$ 13.19	1.46
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 16.26	0.00

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

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

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

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

Union Rate Identifiers

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

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

Survey Rate Identifiers

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

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

Union Average Rate Identifiers

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

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

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

FEDERAL AID CERTIFICATION
(English Project)

First Use Date 2013 Specifications: November 22, 2013
Revised: June 8, 2016

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.

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

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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.

BOYCOTT OF ISRAEL

By signing and submitting this Contract and Pursuant to O.C.G.A. Sec. 50-5-85, CONTRACTOR hereby certifies that it is not currently engaged in, and agrees that for the duration of this contract, it will not engage in a boycott of Israel.

**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
Individual Owner or Partner (Strike
through all except the one which applies.)

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

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

ATTACHMENTS

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

I. GENERAL

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

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

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

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

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

**GEORGIA DEPARTMENT OF TRANSPORTATION
REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION**

EFFECTIVE FEBRUARY 5, 2016

The Cargo Preference Act (CPA) establishes certain requirements for the use of privately owned United States-flag commercial vessels in transporting equipment, materials, and commodities by ocean vessel. Contractors are required to comply with the CPA requirements and 46 CFR 381 and are required to insert the substance of these provisions into any subcontracts issued pursuant to this contract.

Cargo Preference Act Requirements

All Federal-aid projects shall comply with 46 CFR 381.7 (a)-(b) as follows:

(a) *Agreement Clauses.* Use of United States-flag vessels:

(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(b) *Contractor and Subcontractor Clauses.* Use of United States-flag vessels: The contractor agrees—

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the Gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

The CPA requirements would be appropriate for oceanic shipments of materials or equipment that is intended for use on a specific Federal-aid project, such as a precast concrete structural members, fabricated structural steel, tunnel boring machines, or large-capacity cranes.

The CPA requirements are not applicable for goods or materials that come into inventories independent of an FHWA funded-contract. For example, the requirements would not apply to shipments of Portland cement, asphalt cement, or aggregates, as industry suppliers and contractors use these materials to replenish existing inventories. In general, most of the materials used for highway construction originate from existing inventories and are not acquired solely for a specific Federal-aid project.

A test for whether CPA requirements apply or do not apply to shipped goods or materials would be if the goods or materials are what one would consider to be common inventory supplies for highway construction contractor, then CPA would **not apply**. If the materials or goods are considered to be supplies one would consider to be not common supplies of a highway construction contractor then CPA would **apply**.

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.

**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.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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 ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are 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.

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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:	27.5
4680 Macon, GA	
GA Bibb; GA Houston; GA Jones; GA Twiggs	31.7
Non-SMSA Counties	
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:	30.6
7520 Savannah, GA	
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 Tattnall; GA Toombs; GA Wayne; SC Beaufort; SC Hampton; SC Jasper	
040 Albany, GA:	
SMSA Counties:	32.1
0120 Albany, GA	
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	

Revised: December 7, 2009
Revised: October 21, 2013
Revised: November 3, 2014

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 Regulations, 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.

- i. The names and addresses of DBE firms committed to participate in the Contract;
- ii. A description of the work each DBE will perform; The Contractor shall provide information with their bid showing that each DBE listed by the Contractor is certified in the NAICS code(s) for the kind of work the DBE will be performing.
- iii. The dollar amount of participation for each DBE firm participating; Written documentation of the bidder's commitment to use a DBE subcontractor whose participation it submits to meet a contract goal;
- iv. Written confirmation from the DBE committed to participating in the contract, as provided in the prime contractor's commitment.
- v. 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. During the life of the contract, the contractor will be expected to demonstrate good faith efforts at goal attainment as provided by 49 CFR 26.

The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains the Department’s written consent to substitute and, unless the Department’s consent is provided the contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

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 not 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) You must determine the amount of credit awarded to a firm for the provision of materials and supplies (e.g., whether a firm is acting as a regular dealer or a transaction expeditor) on a contract-by-contract basis. 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.

When a DBE subcontractor is terminated, or fails to complete its work on the contract for any reason, the prime contractor must make good faith efforts to find another DBE subcontractor to substitute for the original DBE. These good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, to the extent needed to meet the contract goal. The good faith efforts shall be documented by the contractor. If the recipient requests documentation under this provision, the contractor shall submit the documentation within 7 days, which may be extended for an additional 7 days if necessary at the request of the contractor, and the recipient shall provide a written determination to the contractor stating whether or not good faith efforts have been demonstrated.

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 2013 Specifications: November 01, 2013

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

First Use 2013 Specifications: November 1, 2013

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

First Use 2013 Specifications: November 1, 2013

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.

Office of Utilities

**DEPARTMENT OF
TRANSPORTATION STATE OF
GEORGIA
SUPPLEMENTAL SPECIFICATION**

**Section 107 – Legal Regulations and Responsibility to the
Public**

Delete Section 107 and Substitute the following:

107.01 Laws to Be Observed

The Contractor shall keep fully informed of all Federal and State laws, all local laws, ordinances, codes, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on The Work, or which in any way affect the conduct of The Work. The Contractor shall at all times observe and comply with all such laws, ordinances, codes, regulations, orders, decrees, and permits; and shall protect and indemnify the Department and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, code, regulation, order, decrees, and permits, whether by himself, his employees, subcontractors, or agents.

107.02 Permits and Licenses

The Contractor shall procure all permits and licenses, pay all charges, taxes, and fees, and give all notices necessary and incidental to the due and lawful prosecution of The Work.

107.03 Patented Devices

If the Contractor employs any design, device, material, or process covered by letters of patent or copyright, he shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and the Surety shall indemnify and save harmless the Department from any and all claims for infringement by reason of the use of any such patented design, device, material, or process, or any trademark or copyright, and shall indemnify the Department for any costs, expenses, and damages which it may be obliged to pay by reason of any infringement, at any time during the prosecution or after the completion of The Work.

107.04 Restoration of Surfaces Opened By Permit

The right to construct or reconstruct any utility service in the highway or street and to grant permits for the same at any time, is expressly reserved by the Department for the proper authorities of the municipality or county in which The Work is done and the Contractor shall not be entitled to any damages either for the digging up of the street or highway, or for any delay occasioned thereby.

Any individual, firm, or corporation wishing to make an opening in the street or highway must secure a permit from the Department. The Contractor shall allow parties bearing such permits, and only those parties, to make openings in the street or highway. When ordered by the Engineer, the Contractor shall make in an acceptable manner all necessary repairs due to such openings and such necessary work will be paid for as Extra Work, or as provided in the Specifications, and will be subject to the same conditions as original work performed.

107.05 Federal-Aid Provisions

When the United States Government pays all or any part of the cost of a project, the Federal laws and the rules and regulations made pursuant to such laws must be observed by the Contractor, and The Work shall be subject to the

inspection of the appropriate Federal agency. Such inspection shall in no sense make the Federal Government a party to this Contract and will in no way interfere with the rights of either party hereunder.

107.06 Sanitary Provisions

The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his employees as may be necessary to comply with the requirements of the State Department of Health and other authorities having jurisdiction, and shall permit no public nuisance.

107.07 Public Convenience and Safety

The Contractor shall at all times so conduct The Work as to assure the least possible obstruction of traffic. The safety and convenience of the general public and the residents along the highway and the protection of persons and property shall be provided for by the Contractor as specified under Subsection 104.05, Subsection 107.09, Section 150, the Project Plans, and Special Provisions.

Traffic whose origin and destination is within the limits of the Project shall be provided ingress and egress at all times unless otherwise specified in the Plans or Special Provisions. The ingress and egress includes entrance and exit via driveways at the various properties, and access to the intersecting roads and streets. The Contractor shall maintain sufficient personnel and equipment on the project at all times, particularly during inclement weather, to ensure that ingress and egress are provided when and where needed.

Two-way traffic shall be maintained at all times unless otherwise specified or approved. The Contractor shall not stop traffic without permission granted by the Engineer.

All equipment used on The Work shall come equipped with factory-installed mufflers, or manufacturer's recommended equivalent, in good condition. These mufflers shall be maintained in good condition throughout the construction period.

107.08 Railroad-Highway Provisions

All work to be performed by the Contractor on a railroad company's right-of-way or property shall be done in a manner satisfactory to the chief engineer of the railroad company, or his authorized representative, and shall be performed at such times and in such manner as not to unnecessarily interfere with the movement of trains or traffic upon the track of the railroad company. The Contractor shall use all reasonable care and precaution in order to avoid accidents, damage, or unnecessary delay or interference with the railroad company's trains or other property, or property of tenants of railroad company.

The Contractor shall notify the railroad company and obtain its approval before commencing work on the railroad company's right-of-way or property.

The Contractor shall determine what measures are required by the railroad company to protect its operations and right-of-way or property during construction. Such protection may include the use of a flagger or flaggers provided by the railroad company. The Contractor shall be responsible for ensuring that the required protection is provided and shall pay the railroad company directly for any and all such services which may be required to accomplish the construction unless otherwise specified.

Any temporary grade crossings or other means needed during construction by the Contractor for transporting materials of any nature and/or equipment across the railroad tracks will be the responsibility of the Contractor to handle directly with the railroad company and bear all costs incidental to such crossings including flagging services provided by the railroad company.

A "Special Provisions for the Protection of Railroad Interests" may be included in the proposal to stipulate insurance and other requirements of the railroad company.

107.09 Barricades and Danger, Warning, and Detour Signs

The Contractor shall furnish, install, and maintain all necessary and required barricades, signs, and other traffic control devices in accordance with these Specifications, Project Plans, Special Provisions, and the MUTCD, and take all necessary precautions for the protection of the work and safety of the public.

Unless otherwise specified, all traffic control devices furnished by the Contractor shall remain the property of the Contractor.

107.10 Forest Protection

In carrying out work within or adjacent to State or National Forests, or any other forests, parks, or other public or private lands, the Contractor shall obtain necessary permits and comply with all of the regulations of the appropriate authorities having jurisdiction over such forest, park, or lands. The Contractor shall keep the areas in an orderly condition, dispose of all refuse, obtain permits for the construction and maintenance of all construction camps, stores, warehouses, residences, latrines, cesspools, septic tanks, and other structures in accordance with the requirements of the appropriate authority.

The Contractor shall take all reasonable precautions to prevent and suppress forest fires and shall require his employees and subcontractors, both independently and at the request of forest officials, to do all reasonably within their power to prevent and suppress and to assist in preventing and suppressing forest fires; to notify a forest official at the earliest possible moment of the location and extent of any fire seen by them; and to extinguish or aid in extinguishing nearby fires.

107.11 Construction Over or Adjacent to Navigable Waters

A. Navigation to Be Protected

Since navigable waterways are under the jurisdiction of the United States Coast Guard and/or the United States Army Corps of Engineers, all work done in, over, on or adjacent to such waters shall comply with their requirements. Free navigation shall not be impeded, and navigable depths shall be maintained.

The Contractor shall comply with permits issued by the United States Coast Guard and/or the United States Army Corps of Engineers, and the Contractor shall obtain and comply with other permits in accordance with the requirements of Subsection 107.02.

Special Provisions for environmental protection may be included in the proposal to stipulate environmental commitments and other requirements.

B. Obstructions to be Removed

When the construction has progressed enough to permit removal, all falsework, piling and other obstructions shall be removed to the satisfaction of the Federal agency having jurisdiction. In all cases such clearing must be done thoroughly before The Work will be accepted by the Department.

107.12 Use of Explosives

When the use of explosives is necessary for the prosecution of The Work, the Contractor shall exercise the utmost care not to endanger life or property, and shall obey all State, Federal and other Governmental regulations applying to transportation, storage, use, and control of such explosives. The Contractor shall be completely responsible for any and all damage resulting from the transportation, storage, use, and control of explosives in the prosecution of The Work by the Contractor, the Contractor's agents, or employees; and shall hold the Department harmless from all claims of damages resulting in any manner therefrom.

The Contractor shall notify each public utility owner having structures or other installations, above or below ground, near the site of The Work of his intention to use explosives. Such notice shall be given sufficiently in advance to enable the utility owners to take such steps as they may deem necessary to protect their property from injury. Such notice shall not relieve the Contractor of responsibility for all damages resulting from his blasting operations.

All explosives shall be stored securely in compliance with all laws and ordinances, and all such storage places shall be clearly marked DANGEROUS EXPLOSIVES. Explosives and detonators shall be stored in separate storage facilities in separate areas. Where no laws or ordinances apply, locked storage shall be provided satisfactory to the Engineer, never closer than 1,000 ft (300 m) from any travel-road, building, or camping area.

In all cases where the transport, storage, or use of explosives is undertaken, such activities shall be controlled and directed by fully qualified representatives of the Contractor.

Whenever electric detonators are used, all radio transmitters shall be turned off within a radius of 500 ft (150 m). No blasting supplies shall be transported in vehicles with two-way radio unless the transmitter is turned off, or extra shielding precautions are taken. Appropriate signs shall be placed so as to give ample warning to anyone driving a vehicle equipped with two-way radio. Electrical detonators will not be used within 500 ft (150 m) of a railroad.

Submit a blasting plan to the Engineer a minimum of five working days prior to use of explosives that provides details of the proposed blasting plan, including, but not limited to, the type and amount of explosives, the shot sequence, the description of and distance to the closest inhabitable structure, and other information as requested by the Engineer. Submission of blasting plan does not relieve the contractor of the responsibility for the adequate and safe performance of the blasting.

107.13 Protection and Restoration of Property and Landscape

A. General Provisions

The Contractor shall be responsible for the preservation of all public and private property, crops, fish ponds, trees, monuments, highway signs and markers, fences, grassed and sodded areas, etc. along and adjacent to the highway, and shall use every precaution necessary to prevent damage or injury thereto, unless the removal, alteration, or destruction of such property is provided for under the Contract. The Contractor shall use suitable precaution to prevent damage to all underground structures, whether shown on the Plans or not, and shall protect carefully from disturbance or damage, all land monuments and property marks until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed. The Contractor shall not willfully or maliciously injure or destroy trees or shrubs, and he shall not remove or cut them without proper authority.

The Contractor shall be responsible for all sheet piling, shoring, underpinning, etc., as may be required for the protection of abutting property, nearby buildings, streets, and the like.

The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of The Work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing The Work, or at any time due to defective work or materials, and said responsibility will not be released until the Project shall have been completed and accepted.

When the Contractor's excavating operations encounter remains of prehistoric people's dwelling sites or artifacts of historical or archeological significance, the operations shall be temporarily discontinued. The Engineer will contact archeological authorities and the Office of Environmental Services to determine the disposition thereof. When directed by the Engineer, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and shall remove them for delivery to the custody of the proper authorities. Such excavation will be considered and paid for as Extra Work.

When the Contractor's normal operations are delayed by such stoppage or extra work, an appropriate time extension will be granted.

The Contractor shall plan, coordinate, and prosecute the work so that disruption to personal property and business is held to a practical minimum.

No resident or business shall be denied vehicular access to their property for any length of time other than as determined by the Engineer is absolutely necessary. Where two or more existing driveways are present for a business, only one existing driveway shall be closed at any time. All construction areas abutting lawns and yards of residential or commercial property shall be restored promptly. Backfilling of each drainage structure or section of curb and gutter, sidewalk, or driveway shall be accomplished as soon as adequate strength is obtained. Finishing, dressing, and grassing shall be accomplished immediately thereafter as a continuous operation within each area being constructed with emphasis placed on completing each individual yard or business frontage. Care shall be taken to provide positive drainage to avoid ponding or concentration of runoff.

Handwork, including raking and smoothing, shall be required to ensure that roots, sticks, rocks, and other debris are removed in order to provide a neat and pleasing appearance. Grassing, when in season, shall immediately follow in order to establish permanent cover at the earliest date. If grassing is not in season, proper erosion control shall be installed and maintained.

The work described above shall be in addition to that required by Subsection 104.07, "Final Cleaning Up" and Subsection 105.16, "Final Inspection and Acceptance".

B. Erosion and Siltation Control

The Contractor shall take all necessary measures throughout the life of the Project to control erosion and silting of rivers, streams, and impoundments (lakes, reservoirs, etc.). Construction of drainage facilities as well as performance of other Contract work which will contribute to the control of erosion and siltation shall be carried out in conjunction with clearing and grubbing, and earthwork operations as stipulated in Section 161.

C. Pollution

The Contractor shall exercise every reasonable precaution throughout the life of the Contract to prevent pollution of rivers, streams or impoundments. Pollutants such as chemicals, fuels, lubricants, bitumens, raw sewage and other harmful waste shall not be discharged into or alongside rivers, streams, and impoundments, or into natural or manmade channels leading thereto. The Contractor shall also comply with the applicable regulations of other State and Federal departments and to all governmental statues relating to the prevention and abatement of pollution.

D. Insect Control Regulations

The Plant Pest Control Division of the U.S. Department of Agriculture and the Georgia State Department of Agriculture restrict the movement of certain items from areas infested with Japanese Beetles or Imported Fire Ants so as to prevent the sprcad of these pests to non-infested areas. Where insect infested areas are shown on the Plans, Contractors will control their operations in such a manner as to comply fully with the requirements of Section 155.

E. Reclamation of Material Pits and Waste Disposal Areas

Whenever or wherever the Contractor obtains material from a source or wastes material on an area other than within the Right-of-Way, regardless of the fashion, manner or circumstances for which the source or area is obtained, it shall be reclaimed in accordance with the requirements of Section 160.

F. Mailboxes

The property owner shall have the responsibility for removing and relocating the mailbox to an area outside construction limits.

The Engineer will mark a point for the relocation of the box. The stake should be set so that the location of the box will be convenient to both the mail carrier and the patron, yet not interfering with the proposed work. It may be necessary for the Engineer to confer with the Post Office serving the area.

The Contractor shall notify each affected owner, in writing, that their mailbox is in conflict with the proposed construction, that they have ten days to relocate the box and that, after the expiration of the 10 days' notice, if the owner has not relocated the box, it shall be removed by the Contractor and laid upon the owner's property, clear of the Right-of-Way.

Any cost to the Contractor for removing the mailboxes as stated above shall be included in the price bid for other items.

G. Failure to Comply

Failure of the Contractor to comply with any of the above provisions or to install erosion prevention items included in the Contract at the time specified, will be evidence of omission and neglect, and the Contractor will be liable for damages as outlined in Subsection 107.13.H below. Furthermore, the Engineer shall withhold payment on all Contract Items until such time as the Contractor complies in full with all of the aforesaid provisions.

H. Payment for Damages

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the Work, or in consequence of the nonexecution thereof by the Contractor, the Contractor shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding or otherwise restoring as may be directed, or shall make good such damage or injury in an acceptable manner.

I. Compensation

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.

107.14 Load Restrictions

It is hereby agreed between the Department and the Contractor that in the performance of The Work under the Contract, the following load restrictions and stipulations shall be in full force and effect during the life of the Contract:

A. Parties Affected

The load restrictions and stipulations contained herein shall be applicable to the equipment of the Contractor; each agent or subcontractor employed by the Contractor; and each person or persons, firm, partnership, corporation or any combination thereof, hauling materials, supplies or equipment to or on the Project, by or for the Contractor.

B. Within Project Limits

No hauling equipment which is loaded beyond those limits provided by State Law shall be permitted on any portion of the new or existing pavement structure except that such loads will be permitted on nonstabilized bases and subbases prior to placing roadway paving subject to the provisions of Subsection 107.17.

Axle loads and gross weight limits will be evaluated in accordance with current Georgia Law.

All damage caused by any equipment to any permanent installation or portion of The Work shall be promptly repaired by the Contractor at his expense. When it becomes necessary to cross existing pavement with excessive loads, the Contractor shall provide and remove, at his own expense, proper cushioning by means of earth blanket or otherwise as directed.

C. Outside Project Limits

All equipment users included in Subsection 107.14.A, above, operating equipment on roads outside the Project limits shall be governed by the following regulations:

1. No vehicle shall carry any load in excess of that specified by Georgia Law.
2. On County System roads the maximum total gross weight shall not exceed 56,000 lbs. (25,400 kg) unless a vehicle is making a pickup or delivery on such roads.
3. For a specific individual trip the above weight limitations may be exceeded provided a special permit is obtained from the Department for each such movement. A special permit will not relieve the Contractor of liability for damage that may result from such a movement. Refer to O.C.G.A §32-6-26 Weight of Vehicle and Load, SB54 (2011) for compliance with weight limitations and exceptions.
4. Authorized personnel of the Department of Public Safety shall be permitted to weigh each truck hauling material to the Project whenever the Department so desires. The owner of each truck shall instruct his operators to cooperate with and assist the truck weighers in every way possible.
5. A Certified Public Weigher operating under the provisions of Standard Operating Procedure 15 shall not dispatch any vehicle loaded with material to be incorporated into the Project when the gross vehicle weight exceeds the limit established by law.
6. Ready Mix Concrete trucks shall comply with load restrictions as specified in Laboratory Standard Operating Procedure 10, "Quality Assurance for Ready-Mixed Concrete Plants in Georgia."

D. Responsibilities

It will be the responsibility of the Contractor to advise his personnel, and all equipment users included in Subsection 107.14.A, as to the load restrictions and stipulations contained herein.

E. Excess Loads and Violations

If multiple violations assignable to a given Certified Public Weigher are occurring, that Certified Public Weigher may be suspended from weighing materials dispatched to Department of Transportation projects.

107.15 Responsibility for Damage Claims

The Contractor shall indemnify and save harmless the Department, its officers and employees, from all suits, actions, or claims of any character brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the said Contractor; or on account of or in consequence of any neglect in safe-guarding The Work; or through use of unacceptable materials in constructing The Work; or because of any act of omission, neglect or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the Workmen's Compensation Act, or any other law, ordinance, order, or decree; and so much of the money due the said Contractor under and by virtue of his Contract as may be considered necessary by the Department for such purpose may be withheld for the use of the State; or, in case no money is due, his surety may be held until such suit or suits, action or actions, claim or claims for injuries or damages as aforesaid shall have been settled and suitable evidence to that effect furnished to the Department; except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he is adequately protected by public liability and property damage insurance.

107.16 Opening Sections of Project to Traffic

Whenever any bridge or section of roadway is in acceptable condition for travel, the Engineer may direct that it be opened to traffic, whether or not the opening was originally provided for, and such opening shall not be held to be in any way an acceptance of the bridge or roadway, or any part thereof, or as a waiver of any of the provisions of the Contract. Necessary repairs or renewals made on any section of the roadway or bridge thus opened to traffic under instructions from the Engineer, due to defective material or work, or to any cause other than ordinary wear and tear, pending completion and acceptance of the roadway, bridge, or other work, shall be done by the Contractor, without additional compensation. Also, the Contractor shall not receive additional compensation for completing the Work except as specified in Subsection 104.03.

If the Contractor is dilatory in completing shoulders, drainage structures, or other features of work, the Engineer may so notify him in writing and establish therein a reasonable period of time in which the Work should be completed. If the Contractor is dilatory, or fails to make a reasonable effort toward completion in this period of time, the Engineer may then order all or a portion of the Project opened to traffic. On such sections which are so ordered to be opened, the Contractor shall conduct the remainder of his construction operations so as to cause the least obstruction to traffic and shall not receive any added compensation due to the added cost of the Work by reason of opening such section to traffic.

On any section opened to traffic under any of the above conditions, whether stated in the Special Provisions or opened by necessity of Contractor's operations, or unforeseen necessity, any damage to the highway not attributable to traffic which might occur on such section (except slides) shall be repaired by the Contractor at his expense. The removal of slides shall be done by the Contractor on a basis agreed to prior to the removal of such slides.

107.17 Contractor's Responsibility for the Work

From the first day the Contractor begins work, or from the date Contract Time commences, whichever occurs first, until written final acceptance of the project by the Engineer, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of The Work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of The Work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except that the Department may, in its discretion, reimburse the Contractor for the repair of damage to The Work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, of the public enemy or of governmental authorities. The Contractor's responsibility for damages and injuries is defined in Subsection 104.05.A.

In case of suspension of work from any cause whatsoever, the Contractor shall be responsible for the Project and shall take such precautions as may be necessary to prevent damage to the Project, provide for normal drainage and shall erect any necessary temporary structures, signs, or other facilities at his expense.

107.18 Acquisition of Right-of-Way

Rights of Way for the project will be obtained by the Department, in coordination with local governments and others. However, the Contractor's access to the portions of the right-of-way may be restricted. Where such

restrictions are known in advance to the Department they will be listed in the bid proposal. Delays to the progress of the Work may be encountered because of restricted access to portions of the right-of-way. When such delays occur, whether caused by restrictions listed in the bid proposal or restrictions that develop after the Contract is signed, the parties agree in executing the Contract that such delays do not constitute breach of the Contract. Delays in availability of right-of-way beyond those listed in the bid proposal, or that develop after the Contract has been signed, that impact the controlling Item or Items of the Work will not be charged against the Contract Time. Additional compensation for such delays shall not be paid, except as provided in Subsection 105.13, "Claims for Adjustments and Disputes," or Subsection 109.09, "Termination Clause." In the event the Department is unable to acquire right-of-way needed for the project, resulting in delay to or termination of the project, such situation will also be controlled by this Section, and will not constitute a breach of the Contract by the Department.

107.19 Personal Liability of Public Officials

In carrying out any of the provisions of the Contract or in exercising any power or authority granted to the Board, Commissioner, Chief Engineer, their agents and employees, by the Contract, there shall be no liability, either personally or as officials or representatives of the Department, it being understood that in all such matters they act solely as agents and representatives of the Department.

107.20 No Waiver of Legal Rights

Upon completion of The Work, the Department will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance, however, shall not preclude or estop the Department from correcting any measurement, estimate, or certificate made before or after completion of The Work, nor shall the Department be precluded or estopped from recovering from the Contractor or his Surety, or both, such over-payment as it may sustain, or by failure on the part of the Contractor to fulfill his obligations under the Contract. A waiver on the part of the Department of any breach of any part of the Contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the Contract, shall be liable to the Department for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Department's rights under any warranty or guaranty.

107.21 General Description

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, immediately following the receipt of the Notice to Proceed 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.

A. 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 should be directed to:

Georgia Public Service Commission
244 Washington St. SW
Atlanta, GA 30334-5701
404.463.9784

B. 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 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.

C. Notice

The names of known utility companies and the location of known utility facilities will be shown on the Plans, or listed in the 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".

D. 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.

E. Emergency Response Plan

The WUCS shall prepare an Emergency Utility Response Plan (EURP) within 30 days following the receipt of the Notice to Proceed. The EURP shall indicate the project location (which includes street address and or major intersections / major highway route, if possible with a land mark) that would be reported in case of an emergency, WUCS, Emergency Utility Coordinator (EUC), utility company name, utility company emergency contact information to include but not limited to emergency phone number, response time for emergency, working condition of devices needed to facilitate prompt shut off, and primary point of contact name and phone number for the project.

Emergency Utility Coordinator (EUC) shall be an employee of the Prime Contractor and shall notify the appropriate utility company and/or utility subcontractors in case of an emergency. EURP must include the contact details of the EUC, if WUCS is not the primary emergency utility coordinator for this project.

The plan will also include a means of reporting emergencies and the Utility Emergency Response Information for each company. The WUCS/EUC shall post the EURP in an area readily accessible to the Department and project personnel. Also, WUCS shall distribute the copies of EURP by e-mail and hard copy to GA DOT Area Engineer, GA DOT Construction Project Engineer, Contractor's project manager, superintendent, and all approved subcontractors whose work can be in conflict with utilities facilities, personnel of the each facility/owner/ operator who has facilities within the project limits and keep a copy in close proximity to active construction.

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/EUC 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.

In order to keep up with the latest / most updated EURP contact information (name and phone numbers); WUCS shall include an item in the agenda of Utility Coordination meeting about the updates / changes in the EURP plan.

The Emergency Utility Response Plan and Emergency Utility Response Information template can be found at the State of Georgia, Office of Utilities Webpage.

F. Submission

Provisions for reporting all utility coordination meetings, the progress of utility relocation and adjustment work milestones and ticket status information will 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.

G. Delays

Delays and interruptions to the controlling Item or Items of The Work caused by the adjustment or repair of water, gas, or other utility appurtenances and property may be considered for an extension of Contract Time as provided in Subsection 108.07.E unless such delays are due to the negligence of the Contractor.

H. Facilities Supported on Bridges

If the utility facilities are to be supported on bridges, the following provisions shall apply:

1. The Plans will show the location of the facility and the auxiliary items necessary to support the facility.
2. The Contractor constructing the bridge shall install anchor bolts, thimbles, inserts, or other auxiliary items attached to the bridge as a part of the support for the utility facility. The Utility Company shall furnish these auxiliary items, unless the Contract indicates these items are to be furnished by the Contractor as a part of the bridge construction.
3. The Utility or its subcontractor constructing the utility facility shall install hanger rods, pipe rollers, and other attachments necessary for the support of the utility facility as indicated on the Plans. The Utility Company shall furnish these attachments at no cost to the Department or the prime contractor unless otherwise specified. This work shall also include:
 - a. Caulking the openings around the utility where it passes through endwalls to prevent the passage of undesirable materials.
 - b. Painting the exposed portions of utility supports unless such supports are corrosion resistant. Painting shall be done in accordance with the applicable portions of Section 535, unless otherwise specified.
4. The sequence of bridge construction work may be set forth in the Plans and/or the Special Provisions and will show at what stage of the Work a utility company will be allowed to make the utility installation. Further, all or any portion of The Work under Subsection 107.21.H.3 may be included in the bridge Contract by the Plans and/or the Special Provisions.

5. Any damage to the bridge structure caused by the utility installation shall be repaired to the satisfaction of the Engineer at the expense of the Utility or its subcontractor installing the utility facility.

I. Clearances

The Plans provide for at least minimum clearance of utilities as required by the National Electrical Safety Code, U.S. Department of Commerce, and National Bureau of Standards. Any additional clearance the Contractor may desire or require in performing The Work shall be arranged by the Contractor with the utility company. The Department will pay no extra compensation for such additional clearances.

J. Utility Relocation Progress 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 feasible progress schedule. 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 or should a utility company not duly file a Utility Adjustment Schedule to the Department during the preconstruction phase of the project. The WUCS shall submit a Utility Relocation Progress Schedule showing together the Progress Schedule Chart referenced in Section 108.03 and the proposed Utility Adjustment Schedules from all utility companies to the Engineer for review and approval. Copies of existing Utility Adjustment Schedules with utility companies having facilities on this project will be made available at the Georgia Department of Transportation, Office of Construction Bidding Administration, located at One Georgia Center, 600 West Peachtree Street, NW, Atlanta, GA 30308, for examination by the Contractor. The Utility Adjustment Schedules are available on-line at: www.dot.ga.gov/partner_smart/contractors/bidding_letting/bidx/default.aspx

K. Compensation

There will be no separate measurement or payment for this Work. The cost associated with this Work shall be included in the overall Bid submitted.

107.22 Hazardous and/or Toxic Waste

When the Contractor's operations encounter or expose any abnormal condition which may indicate the presence of a hazardous and/or toxic waste, such operations shall be discontinued in the vicinity of the abnormal condition and the Engineer shall be notified immediately. The presence of barrels, discolored earth, metal, wood, or visible fumes, abnormal odors, excessively hot earth, smoke, or anything else which appears abnormal may be indicators of hazardous and/or toxic wastes and shall be treated with extraordinary caution as they are evidence of abnormal conditions.

The Contractor's operations shall not resume until so directed by the Engineer.

Disposition of the hazardous and/or toxic waste will be made in accordance with the requirements and regulations of the Department of Human Resources and the Department of Natural Resources. Where the Contractor performs work necessary to dispose of hazardous and/or toxic waste, payment will be made at the unit prices for pay items included in the contract which are applicable to such work or, where the contract does not include such pay items, payment will be as provided in Subsection 109.05, "Extra Work."

107.23 Environmental Considerations

A. Construction

Erosion control measures shall be installed, to the greatest practical extent, prior to clearing and grubbing. Particular care shall be exercised along stream buffers, wetlands, open waters and other sensitive areas to ensure that these areas are not adversely affected.

Construction equipment shall not cross streams, rivers, or other waterways except at temporary stream crossing structures shown on the plans or as allowed by permit.

Construction activities within wetland areas are prohibited except for those within the construction limits as shown on the Plans and as specified in Subsection 107.23.E.

All sediment control devices (except sediment basins) installed on a project shall, as a minimum, be cleaned of sediment when one half the capacity, by height, depth or volume, has been reached. Sediment basins shall be cleaned of sediment when one-third the capacity by volume has been reached.

B. Bridge Construction Over Waterways

Construction waste or debris, from bridge construction or demolition, shall be prevented from being allowed to fall or be placed into wetlands, streams, rivers or lakes.

Excavation, dewatering, and cleaning of cofferdams shall be performed in such a manner as to prevent siltation. Pumping from cofferdams to a settling basin or a containment unit will be required if deemed necessary by the Engineer.

Operations required within rivers or streams, i.e. jetting or spudding, shall be performed within silt containment areas, cofferdams, silt fence, sediment barriers or other devices to minimize migration of silt off the project.

C. Environmental Clearance of Local Material or Disposal Sites

Specific written environmental approval from the Engineer will be required for any local material or disposal sites not included in the Plans. No work shall be started at any potential local material or waste site not shown on the plans prior to receiving said environmental approval from the Engineer. Local material sites are defined as borrow pits, common borrow, base, embankment, sand clay base, topsoil base, soil cement base, granular embankment, asphalt sand, maintenance pits, or stockpiled borrow sources. Disposal sites, as defined in Standard Specification 201.3.05.E.3, may be defined as excess material, common fill, or inert waste.

The Contractor may obtain environmental approval on a site with one of two methods: 1) GDOT provided environmental surveys or 2) environmental surveys obtained by the Contractor at no cost to the Department. The Contractor must choose one method for review and approvals, which will apply to all sites required for a given project, and submit an Environmental Review Notification indicating their chosen method.

1. If the Contractor chooses to obtain their own environmental surveys, they shall be conducted by a consultant(s) prequalified to work with the Department in the following area classes: 1.06(b) – History; 1.06(e) – Ecology; and 1.06(f) – Archaeology. Background research and field methods shall be conducted in accordance with the Office of Environmental Services Environmental Procedures Manual, with documentation in an Environmental Survey Results Memorandum (template available from the Office of Environmental Services).
2. If the Contractor requests that GDOT conduct required environmental surveys, an Environmental Survey Request shall be submitted for each site (template available from the Office of Environmental Services).

Upon receipt of an Environmental Survey Request, the Office of Environmental Services shall provide environmental approval or denial within thirty (30) business days. Upon receipt of an Environmental Survey Results Memorandum, the Office of Environmental Services shall provide environmental approval or denial within ten (10) business days. The Department will not accept requests for review of sites before a Notice to Proceed is issued. Incomplete Survey Requests, surveys that are not conducted by a GDOT prequalified consultant, or surveys that do not meet the required level of field effort or documentation, will be denied by GDOT OES and may require resubmittal.

The Engineer will inform the Contractor in writing as to the approval or denial of environmental clearance. Approvals may be provided upon condition that an Environmentally Sensitive Area (ESA) be designated within or adjacent to the site prior to use. All ESA stipulations shall be adhered to in accordance with Standard Specification 107.23.F. If a site is denied, the Contractor may, at no expense to the Department, seek to obtain permits or pursue other remedies that might otherwise render the site(s) acceptable, if available. Any and all changes to proposed sites or their associated haul roads that are not included within the original Environmental Survey Request or Environmental Survey Results Memorandum, including expansion,

utilization for purposes other than those indicated in the original submittal, etc. must be submitted for further environmental review and approval prior to use.

Sites included in the Plans have environmental clearance and shall be used only for the purpose(s) specified in the Plans or other contract documents. Should the Contractor wish to expand or utilize said sites for any purpose other than that provided for in the Plans or other contract documents, specific written environmental clearance as noted above shall be obtained.

D. Control of Pollutants

Pollutants or potentially hazardous materials, such as fuels, lubricants, lead paint, chemicals or batteries, shall be transported, stored, and used in a manner to prevent leakage or spillage into the environment. The Contractor shall also be responsible for proper and legal disposal of all such materials.

Equipment, especially concrete or asphalt trucks, shall not be washed or cleaned-out on the Project except in areas where unused product contaminants can be prevented from entering waterways.

E. Temporary Work in Wetlands Outside of the Construction Limits within the Right-of-Way and Easement Areas

Temporary work in wetlands (that are not delineated with orange barrier fence) will be subject to the following requirements:

1. Temporary work in wetlands shall be accomplished by using temporary structures, timber, concrete, soil with geotextile fabric, or other suitable matting. The area shall not be grubbed.
2. Soil matting shall be protected from erosion in accordance with the Specifications.
3. Whenever temporary work is required in Saltwater Marsh Wetlands, all temporary structures and/or matting shall be removed in their entirety prior to Final Acceptance of the Project. Matted and compressed soils shall be backfilled to their original ground elevation with material meeting the requirements of Section 212 – Granular Embankment.
4. Whenever temporary work is required in Freshwater Wetlands, all temporary structures and/or matting (exclusive of soil matting to be retained in the final roadway section) shall be removed in their entirety prior to Final Acceptance of the Project.
Once the temporary materials have been removed, the area shall be covered by Excelsior or Straw blankets according to Section 713 of the Specifications. The grassing and ground preparation referenced in Subsection 713.3.03, "Preparation", will not be applicable to this Work.
5. The Engineer shall be notified so that a field inspection may be conducted to certify that the temporary materials were properly removed and that the area was properly restored. The Contractor shall be responsible for any corrective action required to complete this Work.
6. There will be no separate measurement or payment for this Work. The cost associated with this work shall be included in the overall Bid submitted.

F. Environmentally Sensitive Areas

Some archaeological sites, historic sites, wetlands, streams, stream and pond buffers, open waters and protected animal and plant species habitat within the existing/required Right-of-Way and easement areas may be designated as ENVIRONMENTALLY SENSITIVE AREAS (ESAs). These areas are shown on the applicable Plan sheets and labeled "ESA" (e.g. ESA – Historical Boundary, ESA – Wetland Boundary). The Department may require that some ESAs or portions thereof be delineated with orange barrier fence. The Contractor shall install, maintain, and replace as necessary orange barrier fence at ESAs as delineated in the Plan sheets.

The Contractor shall not enter, disturb, or perform any construction related activities, other than those shown on the approved plan sheets within areas designated as ESAs including ESAs or portions thereof not delineated with orange barrier fence. This includes but is not limited to the following construction activities: clearing and grubbing; borrowing; wasting; grading; filling; staging/stockpiling; vehicular use and parking;

sediment basin placement; trailer placement; and equipment cleaning and storage. Also, all archaeological sites, historic sites, wetlands, streams, stream and pond buffers, open waters, and protected animal and plant species habitat that extend beyond the limits of existing/required Right-of-Way and easement areas shall be considered ESAs and the Contractor shall not perform any construction related activities (such as those listed above) within these areas or make agreements with property owners to occupy these areas for construction related activities (such as those listed above). The Contractor shall make all construction employees aware of the location(s) of each ESA and the requirement to not enter or otherwise disturb these areas.

If the Contractor is found to have entered an ESA, either within or outside the project area, for any purpose not specifically shown on the approved plan sheets, the Department may, at its discretion, issue a stop work order for all activities on the project except erosion control and traffic control until such time as all equipment and other items are removed and the ESA is restored to its original condition.

However, should damage to an ESA occur as a result of the Contractor's action in violation of this section, and notwithstanding any subsequent correction by the Contractor, the Contractor shall be liable for any cost arising from such action, including but not limited to, the cost of repair, remediation of any fines, or mitigation fees assessed against the Department by another government entity.

G. Protection of Migratory Birds and Bats

The following conditions are intended as a minimum to protect migratory birds and bats during construction activities.

1. Project personnel shall be advised about the potential presence and appearance of federally protected migratory birds, including the barn swallow (*Hirundo rustica*), cliff swallow (*Petrochelidon pyrrhonota*), and eastern phoebe (*Sayornis phoebe*), and that there are civil and criminal penalties for harassing, harming, pursuing, hunting, shooting, wounding, killing, capturing, or collecting these species in violation of the Migratory Bird Treaty Act of 1918. The law protects adults, fledglings, nestlings, eggs, and active nests. All bats are protected under Georgia state law (Official Code of Georgia § 27-1-28), with some species protected under the federal Endangered Species Act of 1973. Pictures and habitat information shall be posted in a conspicuous location in the Project field office until such time that construction has been completed and time charges have stopped.
2. The demolition of existing bridge and culvert, the extension of existing culvert, and bridge maintenance activities on the underside of the bridge deck shall take place outside of the breeding and nesting season of phoebes, swallows and other migratory birds, which begins April 1 and extends through August 31, unless exclusionary barriers are put in place to prevent birds from nesting. For bridges, exclusionary barriers may be made of plastic, canvas or other materials proposed by the Contractor and approved by the State Environmental Administrator prior to installation. For box culverts, exclusionary barriers may be overlapping strips of flexible plastic (also called "PVC Strip Doors" or "Strip Curtains") or an alternate material proposed by the Contractor and approved by the State Environmental Administrator prior to installation. Exclusionary barriers must be installed on the bridge(s) and/or box culvert(s) prior to March 1 or after August 31, but in no time in between this period. Exclusionary barriers are not a guaranteed method of preventing migratory birds from nesting beneath 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 barriers and the date of the proposed installation prior to the installation of any exclusionary devices.
 - b. The structure(s) 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 bridge shall be postponed until after August 31 when the breeding season is complete.

- c. For any box culvert(s) being replaced, exclusionary barriers shall be installed on both the inlet and outlet openings. For any box culvert(s) being extended, exclusionary barriers shall be placed on the opening(s) (inlet and/or outlet) where work is taking place. For bridge(s) being removed, barriers shall be installed along the full length of the bridge(s). In all cases, barriers shall be installed prior to March 1 and left in place until August 31 or until the culvert removal, culvert extension, or bridge demolition is complete. If the exclusionary barriers fail 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 31.
 - 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.
 - e. Entanglement and/or entrapment of barn swallows, cliff swallows, and eastern phoebes in exclusionary netting constitutes harm to migratory birds. Any entanglement and/or entrapment of migratory birds shall be reported immediately to the Project Engineer, who in turn will notify the State Environmental Administrator, Georgia Department of Transportation, Office of Environmental Services at (404) 631-1101.
3. Migratory birds may nest in other structures or natural features that will be impacted by construction activities. If active nests containing eggs are encountered within the footprint of construction activities, the finding shall be reported immediately to the Project Engineer, who in turn shall notify the State Environmental Administrator, Georgia Department of Transportation, Office of Environmental Services at (404) 631-1101. All activity within 50 feet of active nests shall cease pending consultation by the Department with the U. S. Fish and Wildlife Service and the lead Federal Agency.
4. When working on bridges and culverts, sightings of bat species shall be reported immediately to the Project Engineer who in turn will notify the State Environmental Administrator, Georgia Department of Transportation, Office of Environmental Services at (404) 631-1101. All construction activity on the structure shall cease pending consultation by the Department with the U. S. Fish and Wildlife Service and/or the Georgia Department of Natural Resources and/or the lead Federal Agency. The Department will inform the Contractor of any changes to the project.
5. In the event any incident occurs that causes harm or injury to migratory birds during construction activities, the incident shall be reported immediately to the Project Engineer who in turn shall notify the State Environmental Administrator, Georgia Department of Transportation, Office of Environmental Services at (404) 631-1101. All activity shall cease pending consultation by the Department with the U. S. Fish and Wildlife Service and the lead Federal Agency.
6. Within 30 days of the completion of construction and the stopping of time charges, a report shall be provided to the State Environmental Administrator, Georgia Department of Transportation, Office of Environmental Services, 600 West Peachtree Street NW, Atlanta, Georgia 30308. GDOT in turn will provide copies of the report to the U.S. Fish and Wildlife Service, the Georgia Department of Natural Resources Wildlife Resources Division, and the lead Federal Agency. The following information will be included in the report:
 - a. Contractor name and address.
 - b. Name and title of report preparer.
 - c. GDOT Project Identification (PI) number.
 - d. County(s) in which project is located.
 - e. Project description.

- f. Construction start and end dates.
 - g. Date GDOT was notified of intent to install barrier(s) per # 107.23G.2.a.
 - h. Number and type(s) of structures on which exclusion barriers were installed.
 - i. Type(s) of exclusion material used on each structure.
 - j. Start and end date(s) of installation of exclusionary barrier on each structure.
 - k. Start and end date(s) of removal of exclusionary barrier from each structure.
 - l. Photographs of each structure before and after exclusionary barrier installation.
 - m. Statement regarding whether the exclusionary barrier was effective in deterring bird use of the structure during construction.
 - n. Description of any incidents causing harm or injury to migratory birds during construction. This should include incidents that were reported as required under 107.23G.5.
 - o. Description of any sightings of bat species when working on bridges and culverts. This should include incidents that were reported as required under 107.23G.4.
7. 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.

107.24 Closing of Roadways without On-Site Detours

When existing roadways are to be closed to through traffic and on-site detours are not provided, the Contractor shall submit a written notice to the Engineer for approval 14 days prior to the closure of the existing roadways.

After receiving approval from the Engineer for the closure, the Contractor shall install signs at each closure site, in accordance with the MUTCD, to inform the traveling public of the proposed closure, including the date of closure. The sign shall be placed 5 days prior to the closure, at the direction of the Engineer.

Prior to the closure, the Area Engineer will inform local government officials and agencies, local news media, and the DOT Public Information Office of the proposed closure of the roadways.

107.25 Disruption to Residential and Commercial Property

The Contractor shall plan, coordinate, and prosecute the work such that disruption to personal property and business is held to a practical minimum.

All construction areas abutting lawns and yards of residential or commercial property shall be restored promptly. Backfilling of each drainage structure or section of curb and gutter, sidewalk, or driveway shall be accomplished as soon as adequate strength is obtained. Finishing, dressing and grassing shall be accomplished immediately thereafter as a continuous operation within each area being constructed with emphasis placed on completing each individual yard or business frontage. Care shall be taken to provide positive drainage to avoid ponding or concentration of runoff.

Handwork, including raking and smoothing, shall be required to ensure that roots, sticks, rocks, and other debris is removed in order to provide a neat and pleasing appearance. Grassing, when in season, shall immediately follow in order to establish permanent cover at the earliest date. If grassing is not in season, proper erosion control shall be installed and maintained.

The work described herein shall be in addition to that required by Subsection 104.07 "Final Cleaning Up" and Subsection 105.16 "Final Inspection and Acceptance."

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
SUPPLEMENTAL SPECIFICATION**

Section 109—Measurement and Payment

Delete Subsection 109 and Substitute the following:

109.01 Measurement and Quantities

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the Contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made along the surface, and no deductions will be made for individual fixtures having an area of 9 ft² (1 m²) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the Plans or ordered in writing by the Engineer.

Where payment is to be made by the square yard (square meter) for a specified thickness, the length will be measured on the surface along the centerline and the pay width shall be that width specified on the plans for the Final surface of the completed section. Intermediate courses shall be placed at a width sufficient to support successive courses with no detriment to the stability of the successive courses. The width of material required beyond the pay width will not be eligible for payment and shall be considered incidental to the work.

Structures will be measured according to neat lines shown on the Plans or as altered to fit field conditions.

All items which are measured by the linear foot (linear meter), such as pipe culverts, guard rail, underdrains, etc., will be measured parallel to the base or foundation upon which such structures are placed, unless otherwise shown on the Plans.

In computing volumes of excavation, the average end area method or other acceptable methods will be used.

The term "gage," when used in connection with the measurement of steel plates, will mean the U.S. Standard Gage.

When the term "gage" refers to the measurement of electrical wire it will mean the wire gage specified in the National Electrical Code.

The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois. The term "megagram" will mean one metric ton, equivalent to 1,000 kg. Any commodity paid for by weight shall be weighed on scales that have been approved as specified below and which are furnished at the expense of the Contractor or Supplier. Weighing and measuring systems including remote controls shall be subject to type-approval by the Department of Transportation. The manufacture, installation, performance, and operation of such devices located in Georgia shall conform to, and be governed by, the Official Code of Georgia, Annotated, Section 10-2-5 of the Georgia Weights and Measures Act, the Georgia Weights and Measures Regulations, as amended and adopted, the current edition of the National Bureau of Standards Handbook 44, and these Specifications. Weighing and measuring systems located outside Georgia which are utilized for weighing materials to be used in Department work shall be manufactured, installed, approved, and operated in accordance with applicable laws and regulations for the state in which the scales are located.

All weighing, measuring, and metering devices used to measure quantities for payment shall be suitable for the purpose intended and will be considered to be "commercial devices." Commodity scales located in Georgia shall be certified before use for accuracy, condition, etc., by the Weights and Measures Division of the Georgia Department of Agriculture, or its authorized representative. Scales located outside Georgia shall be certified in accordance with applicable laws and regulations for the state in which the scales are located. This certification shall have been made within a period of not more than one year prior to date of use for weighing commodity.

All equipment and all mechanisms and devices attached thereto or used in connection therewith shall be constructed, assembled, and installed for use so that they do not facilitate the perpetration of fraud. Any scale component or mechanism, which if manipulated would alter true scale values (including manual zero setting mechanisms) shall not be accessible to the

scale operator. Such components and mechanisms that would otherwise be accessible to the scale operator shall be enclosed. Provisions shall be made for security seals where appropriate on equipment and accessories. A security seal shall be affixed to any adjustment mechanism designed to be sealed. Scale or accessory devices shall not be used if security seals have been broken or removed.

Any certified scale or scale component which has been repaired, dismantled, or moved to another location shall again be tested and certified before it is eligible for weighing.

Whenever materials that are paid for based on weight are from a source within the State, the scales shall be operated by and the weights attested to by signature and seal of a duly authorized Certified Public Weigher in accordance with Standard Operating Procedure 15 and the Official Code of Georgia, Annotated, Section 10-2-5 of the Georgia Weights and Measures Act as amended and adopted. When such materials originate from another state that has a certified or licensed weigher program, the scales shall be operated by a weigher who is certified by that state in accordance with applicable laws, and weight ticket recordation shall be in accordance with Standard Operating Procedure 15.

When materials are paid for based on weight and originate from another state which has no program for certifying or licensing weighers, the materials shall be weighed on scales located in the State of Georgia by a Certified Public Weigher in accordance with Standard Operating Procedure 15 and the Official Code of Georgia, Annotated, Section 10-2-5 of the Georgia Weights and Measures Act as amended and adopted.

No scale shall be used to measure weights greater than the scale manufacturer's rated capacity. A digital recorder shall be installed as part of any commodity scale. The recorder shall produce a printed digital record on a ticket with the gross, tare, and net weights of the delivery trucks, along with the date and time printed for each ticket. Provisions shall be made so that the scales or recorders may not be manually manipulated during the printing process. The system shall be so interlocked as to allow printing only when the scale has come to rest. Either the gross or net weight shall be a direct scale reading. Printing and recording systems that are capable of accepting keyboard entries shall clearly and automatically differentiate a direct scale weight value from any other weight values printed on the load ticket.

All scales used to determine pay quantities shall be provided to attain a zero balance indication with no load on the load receiving element by the use of semi-automatic zero (push-button zero) or automatic zero maintenance.

Vehicle scales shall have a platform of sufficient size to accommodate the entire length of any vehicle weighed and shall have sufficient capacity to weigh the largest load. Adequate drainage shall be provided to prevent saturation of the ground under the scale foundation.

The Engineer, at his discretion, may require the platform scales to be checked for accuracy. For this purpose the Contractor shall load a truck with material of his choosing, weigh the loaded truck on his scales, and then weigh it on another set of certified vehicle scales. When the difference exceeds 0.4 percent of load, the scales shall be corrected and certified by a registered scale serviceman registered in the appropriate class as outlined in the Georgia Weights and Measures Regulations or in accordance with applicable requirements of the state in which the scales are located. A test report shall be submitted to the appropriate representative of the Department of Agriculture.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to their water level capacity as determined by the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined.

Cement and lime will be measured by the ton (megagram). Whenever cement or lime is delivered to the Project in tank trucks, a certified weight shall be made at the shipping point by an authorized Certified Public Weigher who is not an employee of the Department. Whenever cement and lime are from a source within the State, the scales shall be operated by the weights attested to by signature and seal of a duly authorized Certified Public Weigher in accordance with Standard Operating Procedure 15 and the Official Code of Georgia, Annotated, Section 10-2-5 of the Georgia Weights and Measures Act as amended and adopted. When such materials originate from another state that has a certified or licensed weigher program, the scales shall be operated by a weigher who is certified by that state in accordance with applicable laws, and the weight ticket recordation shall be in accordance with Standard Operating Procedure 15. When cement and lime originate from another state that has no program for certifying or licensing weighers, the materials shall be weighed on scales located in the State of Georgia by a Certified Public Weigher in accordance with Standard Operating Procedure 15 and the Official Code of Georgia, Annotated, Section 10-2-5 of the Georgia Weights and Measures Act as amended and adopted.

The shipping invoice shall contain the certified weights and the signature and seal of the Certified Public Weigher. A security seal shall also be affixed to the discharge pipe cap on the tank truck before leaving the shipping point. The number on the security seal shall also be recorded on the shipping invoice. The shipping invoice for quicklime shall also contain a certified lime purity percentage. Unsealed tank trucks will require reweighing by a Certified Public Weigher.

Timber will be measured by the thousand feet board measure (MFBM) (cubic meter) actually incorporated in the structure. Measurements will be based on nominal widths and thickness and the actual length in place. No additional measurement will be made for splices except as noted for overlaps as shown on the Plans.

The term "Lump Sum" when used as an item of payment will mean complete payment for The Work described in the Contract.

When a complete structure or structural unit (in effect, "Lump Sum" work) is specified as the unit of the measurement, the unit will be construed to include all necessary fittings and accessories.

Rental of equipment will be measured as defined in Subsection 109.05.B.4.

When standard manufactured items are specified as fence, wire, plates, rolled shapes, pipe conduits, etc., and these items are identified by gage, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerance in cited Specifications, manufacturing tolerances established by the industries involved will be accepted.

109.02 Measurement of Bituminous Materials

A. By Weighing the Material

The Department prefers this method whenever it is practicable. This method will be considered acceptable under the following conditions:

1. **Weighed On Project:** If the weights of the bituminous materials delivered by tank trucks are to be determined on the Project, weights shall be determined on scales that have been previously checked by the Department with standard weights for accuracy. The scale platform shall be large enough to accommodate the entire vehicle at one time. Under no conditions will truck scales be used to measure weights greater than their rated capacity. All weights not determined in the presence of an authorized representative of the Department shall be made by a Certified Public Weigher who is not an employee of the Department of Transportation and who is in good standing with the Georgia Department of Agriculture. The weight tickets shall carry both the signature and seal of the Certified Public Weigher.
2. **Weighed At Shipping Point:** A certified weight made at the shipping point by an authorized Certified Public Weigher who is not an employee of the Department of Transportation and who is registered with the Georgia Department of Agriculture, will be acceptable provided all openings in the tank have been sealed by the producer and when, upon inspection on the Project, there is no evidence of any leakage. The shipping ticket in this case must carry the signature and seal of the Certified Public Weigher. If the tank is not completely emptied the amount of material remaining in the tank truck will be measured by either weight or volume and the amount so determined, as verified by the Engineer, will be deducted from the certified weight.
3. **By Extraction Analysis:** The weight of bituminous material used will be determined by extraction tests made by the field laboratory. The average asphalt content for each Lot will be used to compute the weight of the Asphalt Cement to be paid for in accordance with the following formula:

English:

$$P = \% AC \times T$$

Where:

P

=Pay Tons of Asphalt Cement

% AC

=Lot average of % Asphalt Cement by weight of total mix as determined by extraction

T

=Actual accepted tons of mixture as weighed

Metric:

$$P = \% AC \times T$$

Where:

P

=Pay megagrams of Asphalt Cement

% AC

=Lot average of % Asphalt Cement by weight of total mix as determined by extraction

T

=Actual accepted megagrams of mixture as weighed

4. **By Digital Recording Device:** The amount of bituminous material as shown on the printed tickets will be the Pay Quantity.

B. By Volume

The volume will be measured and corrected for the difference between actual temperature and 60 °F (15 °C). Containers shall be level when measured, and one of the following methods shall be used, whichever is best suited to the circumstances:

1. **Tank Car Measurement:** If the material is shipped to the Project in railroad tank cars, the Contractor shall furnish the Engineer a certified chart showing the dimensions and volume for each inch (25 mm) of depth for each tank. The Engineer will make outage and temperature measurements before unloading is begun and after it is finished. The measurements will be taken when the bituminous material is at a uniform temperature and free from air bubbles. The Contractor shall not remove any bituminous material from any tank until necessary measurements have been made nor shall he release the car until final outage has been measured. The total number of gallons (liters) allowed for any tank car shall not be more than the U.S. Interstate Commerce Commission rating for that car, converted to gallons at 60 °F (15 °C).
2. **Truck Measurement:** If bituminous materials are delivered to the Project in tank trucks, distributor tanks, or drums, the Contractor shall not remove any bituminous material from the transporting vehicle or container until necessary measurements have been made, nor shall the transporting vehicle or container be released until final outage has been measured. If weighing is not convenient, the Contractor shall furnish the Engineer with a certified chart showing the dimensions and volume of each container together with a gauge or calibrated measuring rod which will permit the volume of the material to be determined by vertical measurement.
3. **Metering:** The volume may be determined by metering, in which case the metering device used and the method of using it shall be subject to the approval of the Engineer.
4. **Time of Deliveries:** The arrival and departure of vehicles delivering bituminous materials to the Project site shall be so scheduled that the Engineer is afforded proper time for the measurements of delivered volume and final outage. The Engineer will make the necessary measurements only during the Contractor's normal daily working hours.

C. Production for Multiple Projects

When a Contractor is producing Asphaltic Concrete from one plant, which is being placed on two or more jobs, public or private, the amount of bituminous material used may be determined by extraction tests in accordance with Subsection 109.02.A.3 or digital recording device in accordance with Subsection 109.02.A.4.

D. Tack Coat

When the same storage facility is utilized for Bituminous Materials to be used in Hot Mix Asphaltic Concrete, Bituminous Tack Coat, and/or Surface Treatment, the quantity used for Tack Coat shall be converted to tons (megagrams) and deducted from the quantities for the Bituminous Material used in the Hot Mix Asphaltic Concrete and Surface Treatment.

E. Corrections

When the volume and temperature have been determined as defined above, the volume will be corrected by the use of the following formula:

$$V_{\text{English}} = \frac{V_I}{K(t-60) + 1} \qquad V_{\text{metric}} = \frac{V_I}{K(t-15) + 1}$$

Where:

V = Volume of bituminous material at 60 °F (15 °C)

V_I = Volume of hot bituminous material

t = Temperature of hot bituminous material in degrees Fahrenheit (Celsius)

K = Coefficient of Expansion of bituminous material (correction factor)

The correction factors K for various materials are given below:

- 0.00035 (0.00063) per °F (°C) for petroleum oils having a specific gravity of 60 °F/60 °F (15 °C/15 °C) above 0.966
- 0.00040 (0.00072) per °F (°C) for petroleum oils having a specific gravity of 60 °F/60 °F (15 °C/15 °C) between 0.850-0.966
- 0.00030 (0.00054) per °F (°C) for Tar
- 0.00025 (0.00045) per °F (°C) for Emulsified Asphalt
- 0.00040 (0.00072) per °F (°C) for Creosote Oil

109.03 Scope of Payment

The Contractor shall receive and accept the compensation provided for in the Contract as full payment for furnishing all materials, labor, tools, equipment, superintendence and incidentals, and for performing all work contemplated and embraced under the Contract in a complete and acceptable manner, for any infringement of patent, trademark or copyright, for all loss or damage arising from the nature of The Work, or from the action of the elements, for all expenses incurred by or in consequence of the suspension or discontinuance of The Work, or from any unforeseen difficulties which may be encountered during the prosecution of The Work and for all risks of every description connected with the prosecution of The Work until its Final Acceptance by the Engineer, except as provided in Subsection 107.16.

The payment of any partial estimate prior to Final Acceptance of the Project as provided in Subsection 105.16 shall in no way affect the obligation of the Contractor to repair or renew any defective parts of the construction or to be responsible for all damages due to such defects.

109.04 Payment and Compensation for Altered Quantities

When alteration in Plans or quantities of work not requiring Supplemental Agreements as herein before provided for are ordered and performed, the Contractor shall accept payment in full at the Contract Unit Bid Prices for the actual quantities of work done, and no allowance will be made for increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor, resulting either directly from such alterations, or indirectly from unbalanced allocation among the Contract Items of overhead expense on the part of the Bidder and subsequent loss of expected reimbursement therefore, or from any other cause.

Compensation for alterations in Plans or quantities of work requiring Supplemental Agreements shall be as stipulated in such agreement, except that when the Contractor proceeds with The Work without change of price being agreed upon, he shall be paid for such increased or decreased quantities at the Contract Unit Prices Bid in the Proposal for the Items of The Work.

109.05 Extra Work

Extra work, as defined in Subsection 101.27, when ordered in accordance with Subsection 104.04, will be authorized in writing by the Engineer. The authorization will be in the form of a Supplemental Agreement or a Force Account.

A. Supplemental Agreement

In the case of a Supplemental Agreement, the work to be done will be stipulated and agreed upon by both parties prior to any extra work being performed.

Payment based on Supplemental Agreements shall constitute full payment and settlement of all additional costs and expenses including delay and impact damages caused by, arising from or associated with The Work performed.

B. Force Account

When no agreement is reached for Extra Work to be done at Lump Sum or Unit Prices, such work may be authorized by the Department to be done on a Force Account basis. A Force Account estimate that identifies all anticipated costs shall be prepared by the Contractor on forms provided by the Engineer. Work shall not begin until the Force Account is approved. Payment for Force Account work will be in accordance with the following:

- 1. Labor:** For all labor, equipment operators and supervisors, excluding superintendents, in direct charge of the specific operations, the Contractor shall receive the rate of wage agreed upon in writing before beginning work for each and every hour that said labor, equipment operators and supervisors are actually engaged in such work.
The Contractor shall receive the actual costs paid to, or in behalf of, workers by reason of subsistence and travel allowances, health and welfare benefits, pension fund benefits, or other benefits, when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on The Work.
An amount equal to 15% of the sum of the above items will also be paid the Contractor.
- 2. Bond, Insurance, and Tax:** For property damage, liability, and worker's compensation insurance premiums, unemployment insurance contributions, and Social Security taxes on the Force Account work, the Contractor shall receive the actual cost, to which cost no percentage will be added. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond, insurance, and tax.
- 3. Materials:** For materials accepted by the Engineer and used, the Contractor shall receive the actual cost of such material incorporated into The Work, including Contractor paid transportation charges (exclusive of machinery rentals as hereinafter set forth), to which cost 10% will be added.
- 4. Equipment:** For any machinery or special equipment (other than small tools) including fuel and lubricant, plus transportation costs, the use of which has been authorized by the Engineer, the Contractor shall receive the rental

rates indicated below for the actual time that such equipment is in operation on The Work or the time, as indicated below, the equipment is directed to stand by.

Equipment rates shall be based on the latest edition of the *Rental Rate Blue Book for Construction Equipment* or *Rental Rate Blue Book for Older Construction Equipment*, whichever applies, as published by EquipmentWatch using all instructions and adjustments contained therein and as modified below.

Allowable Equipment Rates shall be established as defined below:

- Allowable Hourly Equipment Rate = Monthly Rate/176 x Adjustment Factors.
- Allowable Hourly Operating Cost = Hourly Operating Cost.
- Allowable Rate Per Hour = Allowable Hourly Equipment Rate + Allowable Hourly Operating Cost.
- Standby Rate = Allowable Hourly Equipment Rate x 35%

NOTE: The monthly rate is the basic machine plus any attachments.

Standby rates shall apply when equipment is not in operation and is directed by the Engineer to standby for later use. In general, Standby rates shall apply when equipment is not in use, but will be needed again to complete The Work and the cost of moving the equipment will exceed the accumulated standby cost. Payment for standby time will not be made on any day the equipment operates for 8 or more hours. For equipment accumulating less than 8 hours operating time on any normal workday, standby payment will be limited to only that number of hours which, when added to the operating time for that day equals 8 hours. Standby payment will not be made on days that are not normally considered workdays.

The Department will not approve any rates in excess of the rates as outlined above unless such excess rates are supported by an acceptable breakdown of cost.

Payable time periods will not include:

- Time elapsed while equipment is broken down
- Time spent in repairing equipment, or
- Time elapsed after the Engineer has advised the Contractor the equipment is no longer needed

If a piece of equipment is needed which is not included in the above *Blue Book* rental rates, reasonable rates shall be agreed upon in writing before the equipment is used. All equipment charges by persons or firms other than the Contractor shall be supported by invoices.

Transportation charges for each piece of equipment to and from the site of The Work will be paid provided:

- The equipment is obtained from the nearest approved source
 - The return charges do not exceed the delivery charges
 - Haul rates do not exceed the established rates of licensed haulers, and
 - Such charges are restricted to those units of equipment not already available and not on or near the Project
- No additional compensation will be made for equipment repair.

5. **Miscellaneous:** No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
6. **Compensation:** The Contractor's representative and the Engineer shall compare records and agree on the cost of work done as ordered on a Force Account basis at the end of each day on forms provided by the Department.
7. **Subcontract Force Account Work:** For work performed by an approved Subcontractor or Second-tier Subcontractor, all provisions of this Section (109.05) that apply to the Prime Contractor in respect to labor, materials and equipment shall govern. The prime Contractor shall coordinate the work of his Subcontractor. The prime Contractor will be allowed an amount to cover administrative cost equal to 5% of the Subcontractor's amount earned but not to exceed \$5,000.00 per Subcontractor. Markup for Second-tier Subcontract work will not be allowed.
Should it become necessary for the Contractor or Subcontractor to hire a firm to perform a specialized type of work or service which the prime Contractor or Subcontractor is not qualified to perform, payment will be made at reasonable invoice cost. To each invoice cost a markup to cover administrative cost equal to 5% of the total invoice but not to exceed \$5,000.00 will be allowed the Contractor or Subcontractor but not both.
8. **Statements:** No payment will be made for work performed on a Force Account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such Force Account work detailed as follows:

- a. Name, classification, date, daily hours, total hours, rate, and extension for each laborer, equipment operator, and supervisor, excluding superintendents.
- b. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
- c. Quantities of materials, prices, and extensions.
- d. Transportation of materials.
- e. Cost of property damage, liability, and worker's compensation insurance premiums, unemployment insurance contributions, and Social Security tax.

Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the Force Account work are not purchased specifically for such work but are taken from the Contractor's stock, then, in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

Payment based on Force Account records shall constitute full payment and settlement of all additional costs and expenses including delay and impact damages caused by, arising from or associated with The Work performed.

109.06 Eliminated Items

Should any Items contained in the Proposal be found unnecessary for the proper completion of The Work, the Engineer may, upon written order to the Contractor, eliminate such Items from the Contract, and such action shall in no way invalidate the Contract. When a Contractor is notified of the elimination of Items, he will be reimbursed for actual work done and all costs incurred, including mobilization of materials prior to said notifications.

109.07 Partial Payments

A. General

At the end of each calendar month, the total value of Items complete in place will be estimated by the Engineer and certified for payment. Such estimate is approximate only and may not necessarily be based on detailed measurements. Value will be computed on the basis of Contract Item Unit Prices or on percentage of completion of Lump Sum Items.

When so requested by the Contractor and approved by the Engineer, Gross Earnings of \$500,000.00 or more for work completed within the first 15 days of any month will be certified for payment on a semi-monthly basis subject to the conditions and provisions of Subsection 109.07.A, Subsection 109.07.B.6, Subsection 109.07.C, Subsection 109.07.D, Subsection 109.07.E, and Subsection 109.07.F.

B. Materials Allowance

Payments will be made on delivered costs, or percentage of bid price if otherwise noted, with copies of paid invoices provided to the Department for the materials listed below which are to be incorporated into the Project provided the materials:

- Conform to all Specification requirements.
- Are stored on the Project Right-of-Way or, upon written request by the Contractor and written approval of the Engineer, they may be stored off the Right-of-Way, but local to the Project, provided such storage is necessary due to lack of storage area on the Right-of-Way, need for security, or need for protection from weather.

As a further exception to on-Project storage, upon written request by the Contractor, the Engineer may approve off-the-Project storage items uniquely fabricated or precast for a specific Project, such as structural steel and precast concrete, which will be properly marked with the Project number and stored at the fabrication or precast facility.

The Engineer may approve out-of-state storage for structural steel and prestressed concrete beams uniquely fabricated for a specific Project stored at the fabrication facility.

1. Paid invoices should accompany the materials allowance request, but in no case be submitted to the Project Engineer later than 30 calendar days following the date of the progress payment report on which the materials allowance was paid.
In case such paid invoices are not furnished within the established time, the materials allowance payment will be removed from the next progress statement and no further materials allowance will be made for that item on that Project.
2. Materials allowances will be paid for those items which are not readily available, and which can be easily identified and secured for a specific project and for which lengthy stockpiling periods would not be detrimental. Some exclusions are as follows:

- a. No payments will be made on living or perishable plant materials until planted.
 - b. No payments will be made on Portland Cement, Liquid Asphalt, or Grassing Materials.
 - c. No payment will be made for aggregate stockpiled in a quarry. Payment for stockpiled aggregate will be made only if the aggregate is stockpiled on or in the immediate vicinity of the project and is held for the exclusive use on that project. The aggregate must be properly secured. If the aggregate stockpiled is to be paid for per-ton (megagram) it must be reweighed on approved scales at the time it is incorporated into the Project.
 - d. No payments will be made on minor material items, hardware, etc.
3. No materials allowance will be made for materials when it is anticipated that those materials will be incorporated into The Work within 30 calendar days.
 4. No materials allowance will be made for a material when the requested allowance for such material is less than \$25,000.
 5. Where a storage area is used for more than one project, material for each project shall be segregated from material for other projects, identified, and secured. Adequate access for auditing shall be provided. All units shall be stored in a manner so that they are clearly visible for counting and/or inspection of the individual units.
 6. Materials allowance for prestressed concrete and structural steel bridge members may be processed for uncast or unfabricated members upon the Engineer's receipt of a true copy of the binding order for the members required by the plan. Such copy shall be sealed and notarized by both the contractor placing the order and the supplier therein identified to cast or fabricate said members. All orders shall demonstrate conformance to the approved plans and specifications regarding beam type, size, length, material quantities and shall not exceed the approved plan quantity. The materials allowance applied to uncast prestressed concrete members will be made in amount equal to 40% of the invoice for the respective member(s) to the contractor. The materials allowance applied to unfabricated structural steel bridge members will be made in amount equal to 55% of the invoice for the respective member(s) to the contractor. An additional material allowance may be requested separately upon completion of the casting or fabricating for a maximum 90% of the invoice for the member(s) provided there is adherence to all other provisions of this specification.
 7. The Commissioner may, at his discretion, grant waiver to the requirements of this Section when, in his opinion, such waiver would be in the public interest.

Subsequently, in the event the material is not on-hand and in the quantities for which the materials allowance was granted, the materials allowance payment will be removed from the next progress statement and no further materials allowance will be made for those items on that Project. If sufficient earnings are not available on the next progress statement, the Contractor agrees to allow the Department to recover the monies from any other Contract he may have with the Department, or to otherwise reimburse the Department.

Excluding item 6 above, payments for materials on hand shall not exceed the invoice price or 75 percent of the bid prices for the pay items into which the materials are to be incorporated, whichever is less.

C. Minimum Payment

No partial payment will be made unless the amount of payment is at least \$1000.00.

D. Liquidated Damages

Accrued liquidated damages will be deducted in accordance with Subsection 108.08.

E. Other Deductions

In addition to the deductions provided for above, the Department has the right to withhold any payments due the Contractor for items unpaid by the Contractor for which the Department is directly responsible, including, but not limited to, royalties (see Section 106).

F. Amount of Payment

The balance remaining after all deductions provided for herein have been made will be paid to the Contractor. Partial estimates are approximate and are subject to correction on subsequent progress statements. If sufficient earnings are not available on the subsequent progress statement, the Contractor agrees to allow the Department to recover the monies from any other Contract he may have with the Department, or to otherwise reimburse the Department. The Engineer is responsible for computing the amounts of all deductions herein specified, for determining the progress of the Work and for the items and amounts due to the Contractor during the progress of the Work and for the final statement when all Work has been completed.

G. Interest

Under no circumstances will any interest accrue or be payable on any sums withheld or deducted by the Department as authorized by Subsection 109.07.A, Subsection 109.07.B.6, Subsection 109.07.C, Subsection 109.07.D, Subsection 109.07.E, and Subsection 109.07.F.

II. Insert the Following in Each Subcontract

The Contractor shall insert the following in each Subcontract entered into for work under this Contract:

"The Contractor shall not withhold any retainage on Subcontractors. The Contractor shall pay the Subcontractor 100% percent of the gross value of the Completed Work by the Subcontractor as indicated by the current estimate certified by the Engineer for payment."

Neither the inclusion of this Specification in the Contract between the Department and the Prime Contractor nor the inclusion of the provisions of this Specification in any Contract between the Prime Contractor and any of his Subcontractors nor any other Specification or Provision in the Contract between the Department and the Prime Contractor shall create, or be deemed to create, any relationship, contractual or otherwise, between the Department and any Subcontractor.

109.08 Final Payment

When Final Inspection and Final Acceptance have been made by the Engineer as provided in Subsection 105.16, the Engineer will prepare the Final Statement of the quantities of the various classes of work performed. All prior partial estimates and payments shall be subject to correction in the Final Statement. The District Engineer will transmit a copy of the Statement to the Contractor by Registered or Certified Mail. The Contractor will be afforded 35 days in which to review the Final Statement in the District Office before it is certified for payment by the Engineer. Any adjustments will be resolved by the District Engineer or in case of a dispute referred to the Chief Engineer whose decision shall be final and conclusive. After approval of the Final Statement by the Contractor, or after the expiration of the 35 days, or after a final ruling on disputed items by the Chief Engineer, the Final Statement shall be certified to the Treasurer by the Chief Engineer stating the Project has been accepted and that the quantities and amounts of money shown thereon are correct, due and payable.

The Treasurer, upon receipt of the Engineer's certification, shall in turn furnish the Contractor with the Department's Standard Release Form to be executed in duplicate. The aforesaid Release Form, showing the total amount of money due the Contractor, shall be sent to the Contractor by Registered or Certified Mail, to be delivered to such Contractor upon the signing of a return receipt card, to be returned to the Department in accordance with the provision of Federal law in respect to such matters and such return receipt card shall be conclusive evidence of a tender of said sum of money to the Contractor. Upon receipt of the properly executed Standard Release Form, the Treasurer shall make final payment jointly to the Contractor and his Surety. The aforesaid certification, executed release form, and final payment shall be evidence that the Commissioner, the Engineer, and the Department have fulfilled the terms of the Contract, and that the Contractor has fulfilled the terms of the Contract except as set forth in his Contract Bond.

The Standard Release Form is to be executed by the Contractor within 45 days after delivery thereof, as evidenced by the Registered or Certified Mail Return Receipt. Should the Contractor fail to execute the Standard Release Form because he disputes the Final Payment as offered, or because he believes he has a claim for damages or additional compensation under the Contract, the Contractor shall, within 45 days after delivery to the Contractor of the Standard Release Form, as evidenced by the Registered or Certified Mail Return Receipt, enter suit in the proper court for adjudication of his claim. Should the Contractor fail to enter suit within the aforesaid 45 days, then by agreement hereby stipulated, he is forever barred and stopped from any recovery or claim whatsoever under the terms of this Contract.

Should the Contractor fail to execute the Standard Release Form or file suit within 45 days after delivery thereof, then the Surety on the Contractor's Bond is hereby constituted the attorney-in-fact of the Contractor for the purpose of executing such final releases as may be required by the Department, including but not limited to the Standard Release Form, and for the purpose of receiving the Final Payment under this Contract.

The Department reserves the right as defined in Subsection 107.20, should an error be discovered in any estimates, to claim and recover from the Contractor or his Surety, or both, such sums as may be sufficient to correct any error of overpayment. Such overpayment may be recovered from payments due on current active Projects or from any future State work done by the Contractor.

The foregoing provisions of this Section shall be applicable both to the Contractor and the Surety on his Bond; and, in this respect, the Surety shall be bound by the provisions of Subsection 108.09 of these Specifications in the same way and manner as the Contractor.

A. Interest

In the event the Contractor fails to execute the *Standard Release Form* as prepared by the Treasurer because he disputes the amount of the final payment as stated therein, the amount due the Contractor shall be deemed by the Contractor and the Department to be an unliquidated sum and no interest shall accrue or be payable on the sum finally determined to be due to the Contractor for any period prior to final determination of such sum, whether such determination be by agreement of the Contractor and the Department or by final judgement of the proper court in the event of litigation between the Department and the Contractor. The Contractor specifically waives and renounces any and all rights it may have under Section 13-6-13 of the Official Code of Georgia and agrees that in the event suit is brought by the Contractor against the Department for any sum claimed by the Contractor under the Contract, for delay damages resulting from a breach of contract, for any breach of contract or for any extra or additional work, no interest shall be awarded on any sum found to be due from the Department to the Contractor in the final judgement entered in such suit. All final judgements shall draw interest at the legal rate, as specified by law. Also, the Contractor agrees that notwithstanding any provision or provisions of Chapter 11 of Title 13 of the Official Code of Georgia that the provisions of this contract control as to when and how the Contractor shall be paid for The Work. Further, the Contractor waives and renounces any and all rights it may have under Chapter 11 of Title 13 of the Official Code of Georgia.

B. Termination of Department's Liability

Final payment will be in the amount determined by the statement as due and unpaid. The acceptance of the final payment or execution of the *Standard Release Form* or failure of the Contractor to act within 120 days as provided herein after tender of payment, or final payment to the Contractor's Surety in accordance with the provisions stipulated herein, shall operate as and be a release to the Department, the Commissioner, and the Engineer from all claims of liability under this contract and for any act or neglect of the Department, the Commissioner, or the Engineer.

109.09 Termination Clause

A. General

The Department may, by written notice, terminate the Contract or a portion thereof for the Department's convenience when the Department determines that the termination is in the State's best interest, or when the Contractor is prevented from proceeding with the Contract as a direct result of one of the following conditions:

1. An Executive Order of the President of the United States with respect to the prosecution of war or in the interest of national defense.
2. The Engineer and Contractor each make a determination, that, due to a shortage of critical materials required to complete the Work which is caused by allocation of these materials to work of a higher priority by the Federal Government or any agency thereof, it will be impossible to obtain these materials within a practical time limit and that it would be in the public interest to discontinue construction.
3. An injunction is imposed by a court of competent jurisdiction which stops the Contractor from proceeding with the Work and causes a delay of such duration that it is in the public interest to terminate the Contract and the Contractor was not at fault in creating the condition which led to the court's injunction.

The decision of the Engineer as to what is in the public interest and as to the Contractor's fault, for the purpose of Termination, shall be final.

4. Orders from duly constituted authority relating to energy conservation.

B. Implementation

When, under any of the conditions set out in Subsection A of this Section, the Contract, or any portion thereof, is terminated before completion of all Items of Work in the Contract, the Contractor shall be eligible to receive some or all of the following items of payment:

1. For the actual number of units of Items of Work completed, payment will be made at the Contract Unit Price.
2. Reimbursement for organization of the Work and moving equipment to and from the job will be considered where the volume of work completed is too small to compensate the Contractor for these expenses under the Contract Unit Prices. However, the Engineer's decision as whether or not to reimburse for organization of the Work and moving equipment to and from the job, and in what amount, shall be final.
3. Acceptable materials, obtained by the Contractor for the Work, that have been inspected, tested, and accepted by the Engineer, and that are not incorporated in the Work will, at the request of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the Engineer. This will include any materials that have been delivered to the project site or that have been specifically fabricated for the project and are not readily usable on other projects. It will not include materials

that may have been ordered, but not delivered to the project site and that are readily usable on other projects (e.g., guard rail, stone, lumber, etc.).

4. For Items of Work partially completed, payment adjustments including payments to afford the Contractor a reasonable profit on work performed, may be made as determined by the Engineer based upon a consideration of costs actually incurred by the Contractor in attempting to perform the Contract.
5. No payment will be made, and the Department will have no liability, for lost profits on Work not performed. In particular, the Department will not be liable to the Contractor for all profits the Contractor expected to realize had the Project been completed, nor for any loss of business opportunities, nor for any other consequential damages.
6. In order that the Department may make a determination of what sums are payable hereunder, the Contractor agrees that, upon termination of the Contract, it will make all of its books and records available for inspection and auditing by the Department.

To be eligible for payment, costs must have been actually incurred, and must have been recorded and accounted for according to generally accepted accounting principles, and must be items properly payable under Department policies. Where actual equipment costs cannot be established by the auditors, payment for unreimbursed equipment costs will be made in the same manner as is provided in Subsection 109.05 for Force Account Work. Idle time for equipment shall be reimbursed at standby rates. In no case will the Contractor be reimbursed for idle equipment after the Engineer has advised the Contractor the equipment is no longer needed on the job. Refusal of the Contractor to allow the Department to inspect and audit all of the Contractor's books and records shall conclusively establish that the Department has no liability to the Contractor for any payment under this provision, and shall constitute a waiver by the Contractor of any claim for damages allegedly caused by breach or termination of the Contract. The amount payable under this provision, if any, is to be determined by the Engineer, whose determination will be final and binding.

7. The sums payable under this Subsection shall be the Contractor's sole and exclusive remedy for termination of the Contract.

C. Termination of a Contract

Termination of a Contract or a portion thereof shall not relieve the Contractor of his responsibilities for any completed portion of the Work, nor shall it relieve his Surety of its obligation for and concerning any just claims arising out of the Work performed.

109.10 Interest

In the event any lawsuit is filed against the Department alleging the Contractor is due additional money because of claims or for any breach of contract, the Contractor hereby waives and renounces any right it may have under O.C.G.A. Section 13-6-13 to prejudgment interest. Also, the Contractor agrees that notwithstanding any provision or provisions of Chapter 11 of Title 13 of the Official Code of Georgia that the provisions of this contract control as to when and how the Contractor shall be paid for The Work. Further, the Contractor waives and renounces any and all rights it may have under Chapter 11 of Title 13 of the Official Code of Georgia.

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 Asphalt 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:

$$\text{Monthly Asphalt Cement Price} = 100\% \text{ Georgia Base Asphalt Price;}$$

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 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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Office of Construction Bidding Administration

**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	<u>700.3.05.G</u>
Concrete Paved Ditches	<u>441</u>
Bituminous Treated Roving	<u>715</u>
Erosion Control Mats (Blankets)	<u>716</u>
Erosion Control Check Dams	<u>162</u>
Grassing	<u>700</u>
Maintenance of Temporary Erosion Control Devices	<u>165</u>
Permanent Soil Reinforcing Mat	<u>710</u>
Reclamation of Material Pits and Waste Areas	<u>160</u>
Rip Rap	<u>603</u>
Restoration or Alteration of Lakes and Ponds	<u>166</u>
Sand-Asphalt Ditch Paving	<u>434</u>
Sediment Basin	<u>163.3.05.C</u>
Silt Control Gate	<u>163.3.05.A</u>
Silt Retention Barrier	<u>170</u>
Sod	<u>700.3.05.H & 700.3.05.I</u>
Mulch	<u>163</u>
Temporary Grassing	<u>163.3.05.F</u>
Temporary Silt Fence	<u>171</u>
Temporary Slope Drains	<u>163.3.05.B</u>
Triangular Sediment Barrier	<u>720</u>
Silt Filter Bag	<u>719</u>
Organic & Synthetic Material Fiber Blanket	<u>713</u>

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.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SUPPLEMENTAL SPECIFICATION

Section 163—Miscellaneous Erosion Control Items

Delete Section 163 and substitute the following:

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
 - Temporary sediment basins
 - Sediment barriers and check dams
 - Rock filter dams
 - Stone filter berms
 - Stone filter rings
 - Temporary sediment traps
 - Other temporary erosion control structures shown on the Plans or directed by the Engineer
- This work also includes applying mulch (e.g., straw, 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—Riprap

Section 700—Grassing

Section 711—Turf Reinforcement Matting

Section 716—Erosion Control Mats (Slopes)

Section 720—Triangular Silt Barrier

Section 800—Coarse Aggregate

Section 801—Fine Aggregate

Section 822—Emulsified Asphalt

Section 860—Lumber and Timber

Section 863—Preservative Treatment of Timber Products

Section 881—Fabrics

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.

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	<u>893.2.02</u>
Temporary Silt Fence	<u>171</u>
Concrete Aprons and Footings shall be Class A	<u>500</u>
Riprap	<u>603</u>
Temporary Grass	<u>700</u>
Triangular Silt Barrier	<u>720</u>
Lumber and Timber	<u>860.2.01</u>
Preservative Treatment of Timber Products	<u>863.1</u>
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. Temporary Sediment Basins

Construct temporary sediment basins according to the Plans at the required locations, or as modified by the Engineer.

1. Construct the unit complete as shown, including:
 - Grading
 - Drainage
 - Riprap
 - 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 Barriers

Construct sediment barriers according to the Plan details.

The following items may be used for sediment barriers

1. Type A Silt Fence.
2. Type C Silt Fence.
3. Rectangular, mechanically produced and standard-sized baled wheat straw.
4. Triangular Silt Barrier.
5. 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.
6. 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.
7. 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).

8. 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.
9. Compost Filter Berm: Use erosion control compost (see Subsection 893.2.02) to construct a noncompacted 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 staged 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 Items 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. Check Dams

Check dams are constructed of the following materials;

- Stone plain riprap according to Section 603 (Place woven plastic filter fabric on ditch section before placing riprap.)
- Sand bags as in Section 603 without Portland cement
- Baled wheat straw
- Compost filter socks
- Fabric (Type C silt fence)

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. Retrofits

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 Traps

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.

Q. Temporary Sediment Traps

Construct temporary sediment traps 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 temporary sediment trap 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. Temporary Sediment Basins

Temporary sediment basins are measured for payment by the entire structure complete, including construction, maintenance, and removal. Temporary grassing for sediment basins is measured separately for payment. Measurement also includes:

- Earthwork
- Drainage
- Spillways
- Baffles
- Riprap
- Final cleaning to remove the basin

D. Sediment Barriers

Sediment barriers are measured by the linear foot (meter).

E. Other Temporary Structures

Other temporary structures 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.

F. 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.

G. Mulch

Mulch (straw or hay, or erosion control compost) is measured for payment by the ton (megagram).

H. Miscellaneous Erosion Control Items Not Shown on the Plans

These items are not measured for payment. The cost for construction, materials, and removal is included in the price bid for other contract items.

I. Diversion Channels

Diversion channels are not measured for payment. The cost 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.

J. Check Dams

Stone, sand bags, baled wheat straw, and compost filter sock check dams are measured per each, which includes all work necessary to construct the check dam including woven plastic filter fabric placed beneath stone check dams. Fabric check dams are measured per linear foot.

K. 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.

L. Retrofits

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.

M. Inlet Sediment Traps

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.

N. 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.

O. 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.

P. 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.

Q. Temporary Sediment Traps

Temporary sediment traps 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. Temporary Sediment Basins

Temporary 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. Sediment Barriers

Sediment barriers are paid by the linear foot (meter). Price and payment are full compensation for work and supervision to construct, and remove the sediment barrier, including final clean-up.

E. Other Temporary Structures

Other temporary structures 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.

F. 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.

G. 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.

H. Miscellaneous Erosion Control Items Not Shown on the Plans

These items are not paid for separately. They are included in the price bid for other contract items.

I. Diversion Channel

Diversion channels are not paid for separately. They are included in the price bid for other contract items.

J. Check Dams

Payment is full compensation for all materials, construction, and removal. Stone plain riprap, sand bag, baled wheat straw, or compost filter socks check dams are paid for per each. The required woven filter fabric required under each stone check dams is included in the bid price. Fabric check dams are paid for per linear foot.

K. Construction Exits

Construction exits are paid for per each. Payment is full compensation for all materials including the required geotextile, construction, and removal.

L. Retrofits

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.

M. Inlet Sediment Traps

Inlet sediment traps are paid for per each. Payment is full compensation for all materials, construction, and removal.

N. 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.

O. 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 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 berms and is included in the price bid for linear foot (meter).

P. 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.

Q. Temporary Sediment Traps

Temporary sediment traps are paid for payment per each required. This includes the entire structure at each location and all the work necessary for construction.

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 gates	Per each
Item No. 163	Construct and remove temporary pipe slope drains	Per linear foot (meter)
Item No. 163	Construct and remove temporary sediment barriers	Per linear foot (meter)
Item No. 163	Construct and remove sediment basins	Per each
Item No. 163	Construct and remove check dams except fabric dams	Per each
Item No. 163	Construct and remove fabric check dams	Per linear foot (meter)
Item No. 163	Construct and remove construction exits	Per each
Item No. 163	Construct and remove retrofits	Per each
Item No. 163	Construct and remove rock filter dams	Per each
Item No. 163	Construct and remove stone filter berms	Per linear foot (meter)
Item No. 163	Construct and remove stone filter rings	Per each
Item No. 163	Construct and remove inlet sediment traps	Per each
Item No. 163	Construct and remove temporary sediment traps	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
SUPPLEMENTAL SPECIFICATION
Section 167—Water Quality Monitoring**

Delete 167 and substitute the following:

167.1 General Description

This Specification establishes the Contractor's responsibility to meet the requirements of Part IV of the National Pollutant Discharge Elimination System (NPDES) Infrastructure Permit No. GAR100002. In the case of differing requirements between this specification and the Permit, whichever is the more stringent requirement shall be adhered to.

167.1.01 Definitions

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.

Water Quality Monitoring as used within this specification, the term "monitoring" shall be inclusive of the acts of detecting, noting, discerning, observing, etc. for the purpose of gauging compliance with the GAR100002.

Qualifying Rainfall Sampling Event means that which is defined in the current GAR1000002, Part IV.D.6.d(3).

167.1.02 Related References

A. Standard Specifications

Section 161—Control of Soil Erosion and Sedimentation

B. Referenced Documents

NPDES Infrastructure Permit No. GAR100002

GDOT WECS Seminar

EPD Rule Chapter 391-3-7

GSWCC Certification Level IA Course

OCGA 12-7-1

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 GSWCC level IA certified and WECS certified personnel to perform all 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 sampling, inspections, and rainfall data collection.

The Contractor is responsible for having a copy of the GAR100002 Permit onsite at all times.

167.3.02 Equipment

Provide equipment necessary to complete the Work or as directed by the Engineer.

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 GAR100002 and this Specification.

Take samples manually or use automatic samplers, according to the GAR100002. Note that GAR100002 requires the use of manual sampling or rising stage sampling for qualifying events that occur after the first instance of the automatic sampler not being activated during a qualifying event. Analyze all samples according to the Permit, regardless of the method used to collect the samples.

If samples are analyzed in the field using portable turbidimeters, the sampling 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. Water Quality Inspections

The Department will provide one copy of the 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 and shall be borne by the Contractor. 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 (when any work is occurring):

Conduct inspections on the following areas:

- a. Petroleum product storage, usage, and handling areas for spills or leaks from vehicles or equipment
- b. All locations where vehicles enter/exit the site for evidence of off-site sediment tracking

Continue these inspections until a Notice of Termination (NOT) is submitted, and use the daily inspection forms.

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 that is 0.5 in (13 mm) or greater (unless such storm ends after 5:00 PM on any Friday or any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first):

- a. Disturbed areas not permanently stabilized
- b. Material storage areas that are exposed to precipitation
- c. Structural control measures, Best Management Practices (BMPs) to ensure they are operating correctly
- d. Water quality sampling locations and equipment
- e. Discharge locations or points, e.g., outfalls and drainage structures that are accessible to determine if erosion control measures are effective in preventing significant impacts to receiving waters

Continue these inspections until all temporary BMPs are removed and a NOT is submitted. Use the EC-1 Form.

3. Monthly:

Once per month, inspect all areas of the site that have undergone final stabilization or have established a crop of annual vegetation and a seeding of target perennials appropriate for the region. 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 that the devices are functioning properly. Inspect discharge locations or points, e.g. outfalls, drainage structures, that are accessible to determine if erosion control measures are effective in preventing significant impacts to receiving waters.

Continue these inspections until the Notice of Termination is submitted and use the monthly inspection form.

C. Water Quality Sampling

When the sampling location is a receiving water, the upstream and downstream samples are taken for comparison of NTU values. When the sampling location is an outfall, a single sample is taken to be analyzed for its absolute NTU value.

D. 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 and includes the following information:

- Date(s) of inspection
- Name of certified personnel performing inspection
- Construction phase
- Status of devices
- Observations
- Action taken in accordance with Part IV.D.4.a.(5) of the GAR100002 Permit
- Signature of personnel performing the inspection
- Any instance of non-compliance

When the report does not identify any non-compliance instances, the inspection report shall contain a statement that the best management practices are in compliance with the Erosion, Sedimentation, and Pollution Control Plan. (See the EC-1 form.)

The reports shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction project that has been phased has undergone final stabilization and a Notice of Termination is submitted to the Georgia Department of Natural Resources Environmental Protection Division (GAEPD). Such reports shall be readily available by the end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. 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 to determine their accuracy. The Engineer will notify the certified personnel of any additional items that should be added to the inspection report.

Correct any items listed in the inspection report requiring routine maintenance within seventy-two (72) hours of notification or immediately during perimeter BMP failure emergencies. Deficiencies that interfere with traffic flow, safety, or downstream turbidity are to be corrected as soon as practical but in no case later than seven (7) calendar days following the inspection.

Assume responsibility for all costs associated with additional sampling as specified in Part IV.D.6.d.3.(c) of the GAR100002 if either of these conditions arises:

- 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. Sampling Reports

- a. All sampling shall be performed in accordance with the requirements of the GAR100002 Permit for the locations identified in the ESPCP approved by the Department.
- b. Report Requirements
Include in all reports, the following certification statement, signed by the WECS or consultant providing sampling on the project:

"I certify under penalty of law that this report 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 sampling results to the Engineer within seven working days of the date the sample was obtained. Include the following information in each report:

- 1) Date and time of sampling
- 2) Name of certified person(s) who performed the sampling and analyses.
- 3) Date the analyses were performed
- 4) Time the analyses were initiated
- 5) Rainfall amount on the sampling date (sampling date only)
- 6) NTU of each sample & analytical method
- 7) Location where each sample was taken (station number and left or right offset)
- 8) Identification of whether a sample is a receiving-water sample or an outfall sample
- 9) Project number and county
- 10) References and written procedures, whenever available, for the analytical techniques or methods used: whether the samples were taken by automatic sampler, rising-stage sampler, or manually (grab sample)
- 11) The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results
- 12) A clear note if a sample exceeds 1000 NTUs by writing "exceeds 1000 NTUs" prominently upon the report.

c. Report Requirements with No Qualifying Rainfall Events

In the event a qualifying rainfall event does not produce a discharge to sample, or sampling is "impossible", as defined in the GAR1000002 Permit, a written justification must be included in the report as required at Part IV.D.4.a.(6) of the GAR100002 Permit.

d. Sampling Results

Provide sampling results to the Project 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 summary to the Engineer within 7 working days of the samples being collected. The Engineer will ensure submission of the sampling report to GAEPD by the 15th of the month following the sampling results as per the GAR100002 Permit. The WECS will be held accountable for delayed delivery to the Department which results in late submissions to EPD resulting in enforcement actions.

3. Rainfall Data Reports:

Record the measurement of rainfall once each twenty-four hour period, except for non-working Saturdays, non-working Sundays and non-working Federal Holidays until a Notice of Termination is submitted. 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 is 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 unless a time extension is granted by the Department.

Water Quality Sampling is measured per each. "Each" means each qualifying rainfall sampling event, not each sampled site.

When the sampling location is a receiving water, the upstream and downstream samples constitute one sample for comparison. When the sampling location is an outfall, a single outfall sample constitutes the entire sample.

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 Inspections and Water Quality Sampling will be made as follows:

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 GAR100002 and this Specification, any and all necessary incidentals, and providing results of inspections to the Engineer, within the time frame required by the GAR100002 and this Specification.

Water Quality Sampling per each qualifying rainfall sampling event is full compensation for meeting the requirements of the sampling sections of the GAR100002 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 GAR100002 and this Specification. This item is based on the rainfall events requiring sampling as described in Part IV.D. 6 of the GAR100002. 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.

Payment will be made under:

Item No. 167	Water quality inspections	Per month
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Water Quality Sampling will be paid per each qualifying rainfall sampling event.

Payment will be made under:

Item No. 167	Water quality 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	<u>881</u>
Fencing	<u>894</u>
Wood Posts and Bracing	<u>862</u>

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

Office of Construction

Date: May 30, 2018

Department of Transportation
State of Georgia

SPECIAL PROVISION

Project No CSSTP-0006-00(932)
ROCKDALE COUNTY
P.I. NO. 0006932

Section 108—Prosecution and Progress

Retain Sub-Section 108.08 and add the following:

C: Intermediate Completion

An overall Completion Date is established for this Project.

For this project, the following item of work and corresponding intermediate time is required:

McDaniel Mill Road

1. McDaniel Mill Road traffic may be detoured for a maximum of 90 Calendar Days. Time charges begin the day traffic is shifted to the detour and continued until traffic is placed in the final plan location.

Failure to Failure to reopen the roadway in accordance with the above will result in the assessment of Liquidated Damages at the rate of \$300.00 per Calendar Day.

D: Restrictive Work Hours

1. Failure to reopen travel lanes as specified in Special Provision Section 150.6.B will result in the assessment of liquidated damages in the amount of \$1,000 per hour or portion thereof.

The above rates are cumulative and are in addition to any Liquidated Damages which may be assessed for failure to complete the overall project.

Date: May 30, 2018

**Department of Transportation
State of Georgia**

SPECIAL PROVISION

**Project No: CSSTP-0006-00(932).
ROCKDALE COUNTY
P.I. No. 0006932**

Section-150 - TRAFFIC CONTROL

Add the following to Section 150.

150.6 SPECIAL CONDITIONS

- A: The Contractor may close McDaniel Mill Road for a maximum of 90 calendar days. Rockdale County shall be notified not less than 30 calendar days ahead of the beginning of the time period when McDaniel Mill Road will be closed. It shall be the responsibility of the Contractor to provide and maintain directional signing for the detour for its duration.
- B: The Contractor shall install lane closers, pace traffic or move equipment or materials that interferes with traffic between the hours of 6:00 AM to 9:00 AM and 4:00 PM and 7:00 PM, Monday through Friday.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

PROJECT: CSSTP-0006-00(932), Rockdale County

PI No. 0006932

Section 154 — Construction Vibration Monitoring

Add the following:

154.1 General Description

This Work consists of performing preconstruction crack surveys, seismograph and other monitoring of construction vibrations, and post construction crack surveys of the buildings located on Parcel 4 (Tax ID #011001008A / 1095 McDaniel Mill Road SW), Parcel 21 (Tax ID# 0250020014 / 2555 Klondike Road SW), Tax ID #025A01010153 (2599 Klondike Road SW), Tax ID #025A010155 (1078 McDaniel Mill Road SW) and Tax ID#0250020012 (2589 Klondike Road SW), adjacent to the proposed project construction on McDaniel Mill Road and Klondike Road by procuring the services of a prequalified subcontractor specializing in this work.

154.1.01 Definitions

General Provisions 101 through 150.

154.1.02 Related References

A. Standard Specifications

General Provisions 101 through 150.

B. Referenced Documents

General Provisions 101 through 150.

154.1.03 Submittals

A. Prequalification of Subcontractor

Submit the following documentation for the Engineer's review and approval a minimum of thirty days prior to beginning construction activities on the project:

Evidence of the subcontractor's successful completion of at least five projects similar in concept and scope to the proposed crack survey and vibration monitoring. Include names, addresses and telephone numbers of the owners' representatives for verification.

Résumés of employees performing this work. Provide evidence showing each employee possesses experience and knowledge similar in concept and scope of this work for performing crack surveys and installing and reading seismographs. Provide evidence that the reports will be reviewed and signed by a

Georgia Licensed Professional Engineer or Georgia Licensed Professional Geologist. The Department will be sole judge of determining if employees are qualified to perform the work on this project.

A detailed survey plan, monitoring plan, and sequence of work that describes all materials, methods and equipment to be used to complete the crack survey and vibration monitoring.

B. Construction Monitoring

Submit the following documentation during construction monitoring:

Preconstruction Crack Survey Report documenting existing conditions of buildings prior to construction activities in accordance with subsection 154.3.03.B.

Monthly Seismograph Data and Data Summary Report and Activity Log of all construction activities within 500 feet (152 meters) of the seismograph in accordance with subsection 154.3.03.A.1.

Reports of building conditions regarding cracks or any other damage potentially caused by construction activities as complaints are received in accordance with subsection 154.3.03.C.

C. Post Construction

Submit a Post Construction Crack Survey Report in accordance with subsection 154.3.03.D documenting post construction condition of cracks or damage identified in the pre-construction survey and cracks or any other damage potentially caused by construction activities.

154.2 Materials

General Provision 101 through 150.

154.3 Construction Requirements

154.3.01 Personnel

Ensure all employees performing this work have been approved by the Engineer in accordance with subsection 154.1.03.A.

154.3.02 Equipment

A. Seismograph

Use a seismograph(s) that is weather proof and capable of continuously recording particle velocity in three perpendicular components with a flat response of 2-250 HZ over a range of at least 0.01 to 5.0 inches per second (0.254 to 127 mm per second). Provide a seismograph(s) that employs an internal dynamic calibration during each recording sequence and that has been shake table tested within the previous 24 months verifying an accuracy of +/- 5% over the frequency range of 4 to 125 Hertz. Provide a recorder/ software system that is capable of digitally storing and reproducing vibration levels in tabular or histogram (bar graph) form at no greater than six minute intervals.

B. Crack Gauges

Use crack gauges specifically designed for use on this type of work. Utilize a minimum of 8 crack gauges and a maximum of 12 to monitor significant cracks on the interior or exterior of buildings located closest to the construction activities. Submit the proposed locations of crack gauges to the Engineer for review and approval prior to installation. Use crack gauges that do not damage or stain existing surfaces. Replace missing or damaged gauges at no additional cost to the Department. Repair and restore surfaces back to the pre- installation state.

154.3.03 Construction

Obtain Engineer's written approval of the Prequalification documents submitted in accordance with Subsection 154.1.03.A prior to beginning this work.

Perform the preconstruction crack survey prior to starting construction activities on the project.

Install and begin seismograph monitoring prior to starting excavation, shoring and backfilling construction activities on the project.

Maintain seismograph and crack monitoring until excavation, shoring and backfilling, compaction of subgrade, base and pavement construction activities on the project are complete.

A. Seismograph Installation and Monitoring

Monitor vibrations at building(s) using seismograph(s) when construction activities including, but not limited to, excavation, shoring installation, backfilling, and compaction of subgrade, base and pavement are within 75 feet (23 meters) of the building(s), or otherwise have the potential to result in vibrations that may cause damage or complaints. Relocate seismograph(s) as needed. Protect the seismograph from weather and vandalism. Replace missing or damaged equipment at no cost to the Department. Document the following information at the time that the seismograph is installed:

Date and time of installation

Coordinates of installed instrument or Station and offset

Method of transducer attachment

Name and affiliation of the person installing the instrument

1. Monthly Seismograph Data and Data Summary Report and Activity Log:

Compile a Monthly Seismograph Data and Data Summary Report containing the data from the seismograph and a summarization of the data showing time and magnitude of the maximum vibration that has occurred each day.

Maintain an activity log of all construction activities within 500 feet (152 meters) of the seismograph. Include the following data in each log:

Location of construction activity

Type of construction activity

Types and number of construction equipment being used, including model, manufacture and weight.

Date and times construction equipment was used.

Submit Monthly Seismograph Data Summary Report and Activity Log to the Engineer on a monthly basis.

B. Preconstruction Crack Survey

Complete a preconstruction crack survey on the outside and inside of all buildings located on Parcels 4, 21, and

the other street addresses listed under the General Description. Document building conditions by taking photographs and detailed notes citing location, length and width of cracks. Compile documentation into a Preconstruction Crack Survey Report and submit to the Engineer.

C. Building Monitoring

Monitor buildings during construction for any new cracks and or elongation or widening of existing cracks. Provide a report of building conditions to the Engineer regarding cracks or any other damage potentially caused by construction activities as complaints are received.

D. Post Construction Crack Survey

Complete a post construction crack survey on the outside and inside of all buildings located on Parcels: #. Document building conditions by taking photographs and detailed notes citing condition of cracks or damage identified in the pre-construction survey; also, location, length and width of cracks or any other damage potentially caused by construction activities.

154.4 Measurement

The Work under this Contract Item is not measured separately for payment.

154.5 Payment

This Contract Item completed and accepted will be paid for at the Lump Sum Price bid. Payment will be full compensation for furnishing and installing the seismograph(s) and crack gauges, for monitoring and reporting vibration data recorded on the seismograph(s) and crack gauges, and completing crack survey and documenting building conditions and providing copies of all data to the Engineer in accordance with this specification. Seismographs, crack gauges and all other measuring equipment and devices will remain property of the Contractor.

Payment will be made under:

Item No. 154	Construction Vibration Monitoring	Per Lump Sum
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Office of Materials and Testing

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

**PROJECT: Klondike Road (CR 57) / McDaniel Mill
Road (CR 62)/Hurst Road Intersection Improvements**

COUNTY: Rockdale

CSSTP-0006-00 (932)

P.I.:0006932

Section 670—Water Distribution System

Delete Section 670 and substitute the following:

670.1 General Description

This work consists of furnishing materials, labor, tools, equipment, and other items necessary for installing, removing, abandoning, relocating, and adjusting water distribution systems according to the Plans and Specifications.

670.1.01 Definitions

- A. General Provisions 101 through 150
- B. The term “The Facility Owner” shall be understood to mean “Rockdale Water Resources”.
- C. The term “Project Manager” shall mean the authorized individual having the authority to give instructions pertaining to the work and to approve or reject the work. The “Project Manager” shall not however be authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, Plans, and Specifications, nor shall they act as an agent for the Contractor. All Contract items pertaining to the Utility Owner shall be coordinated with the Rockdale Department of Transportation’s (RDOT) Project Manager and the Utility Owner.

670.1.02 Related References

A. Standard Specifications

Section 104—Scope of Work

Section 107—Legal Regulations and Responsibility to the Public

Section 108—Prosecution and Progress

Section 205—Roadway Excavation

Section 207—Excavation and Backfill for Minor Structures

Section 670—Water Distribution System

Section 210—Grading Complete

Section 400—Hot Mix Asphaltic Concrete Construction

Section 444—Sawed Joints in Existing Pavements

Section 500—Concrete Structures

Section 600—Controlled Low Strength Flowable Fill

Section 611—Relaying, Reconstructing or Adjusting to Grade of Miscellaneous Roadway Structures

Section 615—Jacking or Boring Pipe

Section 810—Roadway Materials

B. Related Documents

1. General Provisions 101 through 150.
2. All products supplied and all work performed shall be in accordance with The Facility Owner's Standard Specifications, applicable standards from American Society for Testing and Material (ASTM), American Water Works Association (AWWA), American National Standards Institute (ANSI), RDOT Utility Accommodation Policy and Standards, and the Georgia Environmental Protection Division (EPD) Minimum Standards for Public Water Systems. Latest revisions of all standards shall apply.

670.1.03 Submittals

A. General Provisions 101 through 150.

B. Refer to The Facility Owner's Standard Specifications, current published edition, for water utility submittal requirements. Copies of all submittals and documentation shall be submitted to RDOT, who shall distribute to the Utility Owner.

C. Shop Drawings / Product Data

1. Submit [6] copies of the following submittals to the RDOT Project Manager:

- a. Product data, including size, dimension, capacity, pressure rating, accessories, and special features, installation instructions, and operating characteristics for all proposed materials to show compliance with the requirements of this Special Provision.
- b. Test reports specified in the Quality Acceptance section of this Special Provision.
- c. Pipe manufacturer certification of compliance with specifications.
- d. Operation and maintenance literature, warranties, and other specified information.

D. Construction Record Documentation

1. The Contractor shall record on two sets of utility as-built drawings that will record changes and deviations from the Contract Drawings in sizes, lines or grade. Record also the exact final horizontal and vertical locations of underground utilities and appurtenances to an accuracy of +/- 0.2 ft, referenced to permanent surface improvements. Drawings shall utilize State Plane Coordinates and shall be legibly marked to record actual construction and submitted to RDOT no later than 30 days after installation and prior to Final Acceptance of the Project. The Utility Owner shall determine if the utility record drawings are complete prior to Final Acceptance of the project.
2. Record Drawings shall be signed and sealed by a professional engineer or land surveyor registered in the State of Georgia.
3. Record Drawings shall also be submitted in digital format as indicated in accordance with the Department's current Electronic Utility File Guidelines.
4. Except for standard bound materials, bind all 8.5"x11" (A4) documentation, including 11" x 17" (A3) drawings folded to 8.5"x11" (A4), in logical groupings in loose-leaf binders of either the 3-ring or plastic slide-ring type. Permanently and appropriately label each such bound grouping of documentation.

Section 670—Water Distribution System

670.1.04 Quality Assurance

- A. The Contractor shall comply with applicable codes, ordinances, rules, regulations and laws of local, municipal, state or federal authorities having jurisdiction over the Project.
- B. Furnish manufactured items, pipe, fittings, valves, service components, and appurtenances from manufacturers having regularly produced such items as specified herein which have proven satisfactory in actual service, over at least a 2-year period, or as approved by the Utility Owner and RDOT.
- C. Regardless of tolerances permitted by industry standards specified herein, the Utility Owner or the RDOT Project Manager may reject pipe or appurtenances at the manufacturing plant or project site which have cracks, chips, blisters, rough interior or exterior surface, evidence of structural weakness, joint defects, or other imperfections that might in the opinion of the Project Manager contribute to reduced functional capability, accelerated deterioration or reduced structural strength.
- D. The Utility Owner and the Utility Owner's consultant shall have the right to visit and inspect the work at any time. The Utility Owner may also have an Inspector assigned to the project authorized to inspect portions or all of the utility work done and the preparation, fabrication, or manufacture of the materials to be used. The Utility Owner shall be able to advise RDOT Project Manager of any observed discrepancies or potential problems. The cost of these inspections shall be the responsibility of the Utility Owner.
- E. GDOT shall notify the Utility Owner before authorizing any changes or deviations which might affect the Utility Owner's facilities. Contractor shall notify RDOT and Utility Owner a minimum of 24 hours prior to beginning work on utilities.
- F. The Utility Owner shall be notified by RDOT Project Manager when all utility work is complete and ready for final inspection. The Utility Owner shall be invited to attend the final inspection and may provide a corrections list to GDOT Project Manager prior to the final inspection.
- G. The Contractor shall verify the actual location and depth of all utilities prior to construction. All utilities and structures shall be protected during construction. Any damaged facilities shall be repaired or replaced at the Contractor's expense.

670.2 Materials

All materials provided shall be in conformance with the requirements and standards set forth in The Facility Owner's Standard Specifications, current published edition. All pipeline and appurtenance materials in contact with potable water shall be National Sanitation Foundation (NSF) 61 Certified and part of RDOT QPL list.

Pipes and appurtenances shall comply with Section 1417(a)(1) of the Safe Water Drinking Act as amended in 2011 which prohibits the use of any pipe, any pipe or plumbing fitting or fixture, and solder, or any flux, after June 1986, in the installation or repair of (i) any public water system; or (ii) any plumbing in a residential or non-residential facility providing water for human consumption, that is not lead free as defined in Section 1417(d).

670.2.01 Water Piping systems and Appurtenances

A. Ductile Iron Pipe and Fittings

1. Ductile iron pipe shall meet the latest edition of ANSI/AWWA C150/A21.50 and C151/A21.51 for the class and joint specified with a nominal laying length of 18 (5.5 m) to 20 feet (6 m). Joints for buried ductile iron pipe shall be mechanical or push-on joints. Unless specified otherwise in The Facility Owner's Standard Specifications, ductile iron pipe diameters 12 inch (300 mm) or less shall be minimum Pressure Class 350, while pipe diameters greater than 12 inch (300 mm) shall be minimum Pressure Class 250.
2. Ductile iron pipe for the interior of structures and above ground installations shall be flanged. Flanges shall be ductile iron and shall be threaded-on flanges conforming to ANSI/AWWA C115/A21.15 or cast-on flanges conforming to ANSI/AWWA C110/A21.10. The minimum class thickness for ductile iron flanged pipe to be threaded is Class 53.
3. Interior surfaces of ductile iron pipe and fittings shall be cement mortar lined in accordance with AWWA C104.

Section 670—Water Distribution System

4. Ductile iron shall have an exterior coating as specified in AWWA C151 for ductile iron pipe and AWWA C153/C110 for ductile iron fittings.
5. Buried ductile iron pipe and fittings shall be polyethylene encased at locations indicated on the Plans or as conditions warrant. Polyethylene encasement tubing shall be in accordance with ANSI/AWWA C105/A21.5 and ASTM A674 and shall have a minimum thickness of 8 mils. Polyethylene encasement tubing shall be blue in color to designate potable water.
6. Fittings: Ductile iron fittings shall be epoxy coated and meet the requirements of ANSI/AWWA C153/A21.53 or ANSI/AWWA C110 A21.10 with a minimum pressure rating of 250 psi. Ends shall be restrained mechanical joint. All ductile iron fittings shall bear the NSF approval seal for potable water pipe.
7. Mechanical Joint Fittings: Mechanical joints consisting of bell, socket, gland, gasket, bolts, and nuts shall conform to ANSI/AWWA C111/A21.11.
8. Push-On Joints: Push-on joints shall be designed in accordance with ANSI/AWWA C111/A21.11. Joint lubrication shall be as furnished by the manufacturer.
9. Rubber gasket joints for push-on or mechanical joints shall conform to the requirements of ANSI/AWWA C111/A21.11.
10. Restrained Joints: Restrained joints shall be provided as shown on the Plans and where required for thrust restraint. Restrained joints shall not require field welding or grooves cut into the pipe barrel for restraint. The restraining joints for mechanical joint fittings shall conform to the requirements of ANSI/AWWA C111/A21.11 with assembly in conformance with AWWA C600 and manufacturer's recommendations. Restrained joints for pipe shall be mechanical joints with ductile iron retainer or push-on type joints and shall have a minimum rated working pressure of 250 psi.
11. Mechanical joint retainer glands may be used to restrain mechanical joint pipe and fittings to the plain end of ductile iron pipe and fittings. Restrainer glands shall be manufactured of ductile iron per ASTM A536.
12. Corrosion-resistant bolts used with ductile iron joints shall be high-strength, low-alloy steel as specified in ANSI/AWWA C111/A21.11.
13. Welded Outlets: Welded outlets in ductile iron pipe shall be provided where specified and indicated on the Plans. Outlets shall be fabricated by welding sections of ductile iron pipe manufactured in accordance with ANSI/AWWA C151/A21.51. Welded outlet pipe shall be fabricated only by the pipe manufacturer. The minimum ductile iron pipe thickness for fabrication of welded outlet pipe shall be Thickness Class 53 for 4-inch to 54-inch (100 to 1350 mm) diameter pipe. All joints on welded-on branch outlets shall be provided in accordance with the latest revision of ANSI/AWWA C111/A21.11 and/or ANSI/AWWA C115/A21.15, as applicable. After the outlets are welded together and prior to finishing, the assembly shall be subjected to a 15 psi air test for leakage. The maximum size and laying length of the welded-on branch outlet shall be recommended by the pipe manufacturer and acceptable to the Utility Owner for the field conditions and connecting pipe or valve.

B. Polyvinyl Chloride (PVC) Pipe

1. PVC pipe diameters 4-inch through 12-inch (100 mm to 300 mm) shall meet ANSI/AWWA C900 requirements, and shall be a minimum pipe dimension ratio (DR) 18, Pressure Class 235 psi. PVC pipe diameters 14-inch (350 mm) and greater shall meet ANSI/AWWA C905 requirements, shall be DR 18 minimum, Pressure Class 235 psi. Pipe shall have a bell with an integral wall section with a factory installed, solid cross section elastomeric ring in accordance with ASTM F477.
2. All PVC pipe shall be formulated for sunlight exposure, be blue in color to designate potable water, and bear the NSF approval seal.
3. Joints for 4-inch (100 mm) and larger PVC pipe shall meet the requirements of AWWA C900/C905, latest edition. The rubber gaskets used for the joints shall consist of flexible elastomeric material conforming to ASTM F477.

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4. PVC pipe shall have the same outside diameter (OD) as ductile iron pipe and be compatible for use with ductile iron fittings.
5. Fittings for PVC pipe 4 inches (100 mm) and larger shall be ductile iron mechanical joint and comply with the requirements set forth in the specifications for Ductile Iron Pipe and Fittings.
6. Restrained Joints: Restrained joints shall be provided as shown on the Plans and where required for thrust restraint. Restrained joints shall comply with the requirements set forth in the specifications for Ductile Iron Pipe and Fittings.
7. Unless specified otherwise in the Plans or The Facility Owner's Standard Specifications, 2-inch (50 mm) and 3-inch (75 mm) diameter PVC pipe shall conform to the requirements of ASTM D2241 Class 1120 or 1220 (SDR 21) with a working pressure rating of 200 psi with integral bell gasketed joints. Pipe is to be manufactured to IPS standard pipe equivalent outside diameters.
8. Schedule 80 PVC pipes smaller than 4-inch (100 mm) nominal diameter shall be in accordance with ASTM D1785. Schedule 80 pipe shall have threaded joints. Solvent cemented joints are not allowed for buried pipes. Threaded type fittings for Schedule 80 PVC pipe shall be in conformance with ASTM D2464. All threaded joints shall be watertight.
9. Flanges for Schedule 80 PVC pipe shall be rated for a 150 psi working pressure with ANSI B16.1 dimensions and bolting pattern. Flanges shall be connected to PVC piping with threaded joints in accordance with ASTM D2467 or ASTM 2464, respectively.

C. Fusible PVC Pipe

1. Fusible PVC pipe sizes 4-inch (100 mm) to 36-inch (900 mm) shall conform to AWWA C900/C905 as applicable and follow the dimension ratios (DR) set forth in the requirements listed for PVC pipe.
2. Fusible PVC pipe shall be blue in color to designate potable water.
3. Fusible PVC pipe shall be extruded with plain ends. The ends shall be square to the pipe and free of any bevel or chamfer. There shall be no bell or gasket of any kind incorporated into the pipe.
4. Fusible PVC pipe shall be manufactured in a standard 40-foot nominal length-, or custom lengths as specified.
5. Joints shall be made by butt fusing sections of pipe with manufacturer-approved equipment.
6. Fittings shall be ductile iron mechanical joint and comply with the requirements set forth in the specifications for Ductile Iron Pipe and Fittings.

D. High Density Polyethylene (HDPE) Pipe

1. HDPE pipe sizes 4-inch (100 mm) and larger shall be a PE 4710/3408 high density, extra-high molecular weight polyethylene manufactured from first-quality high density polyethylene resin containing no additives, fillers, or extenders. The HDPE pipe shall have an ASTM D3350 cell classification of PE 445574C, shall meet the requirements of AWWA C906, and shall be sized based upon the ductile iron pipe size (DIPS), outside diameter (OD) sizing system. The HDPE pipe shall be a minimum DR 11, pressure class 160 psi, and shall bear the NSF approval seal.
2. HDPE pipe shall be blue or marked with a permanent blue stripe to designate potable water.
3. Joints shall be made by butt fusing sections of pipe with manufacturer-approved equipment.
4. Fittings shall be ductile iron mechanical joint meeting the requirements of ANSI/AWWA C110/A21.10 and ANSI/AWWA C111/A21.11.
5. The pipe shall have fusion welded restrainer ring, follower gland, and a 12-inch (300 mm) stainless steel insert for the mechanical joint connection.
6. HDPE water mains shall be properly sized utilizing the inside diameter of the nominal pipe diameter. If during construction HDPE is substituted for other pipe materials, the Contractor shall verify that the inside diameter of the HDPE is the same or larger than the inside diameter of the pipe originally specified.

E. Steel Casing Pipe

1. All materials, design, fabrication, handling, and testing of steel casing pipe shall conform to the requirements of ASTM A139, AWWA C200 and AWWA Manual M11 "Steel Pipe – A Guide for Design and Installation."
2. Steel casing pipe shall be new, smooth-wall, carbon steel pipe conforming to ASTM Specification A139, Grade B with a minimum yield strength of 35,000 psi. Steel casings shall be used with the size, minimum thickness, length, and coating specified on the Plans or The Facility Owner's Standard Specifications.
3. Additional anti-corrosion measures, as specified by the manufacturer or indicated on the Plans, shall be provided at connectors, couplings, rollers, restraints, etc.
4. Unless specified otherwise in the Plans or The Facility Owner's Standard Specifications, casing pipe end seals shall consist of 1/8-inch (6 mm) thick flexible synthetic rubber boot with adjustable stainless steel banding straps. The annular space of the casing shall not be filled with concrete or grout.
5. Casing spacers shall consist of a stainless steel shell, PVC ribbed liner, and non-conducting separators to keep the carrier pipe from touching the casing pipe. Spacers shall be provided at a maximum of 10-foot intervals and within 2 feet (0.6 m) of the end of the casing pipe.

F. Pipe Detection Wire

1. Unless otherwise specified by the Plans or The Facility Owner's Standard Specifications, open cut installations of non-metallic pipe shall include minimum #12 gauge tracing wire. Pipe installed by directional drill shall include two (2) insulated 8 gauge tracer wire. Wire shall be solid copper insulated with HDPE installed along pipe, wrapped around service line stub outs and stubbed into valve boxes for locating purposes. Wire shall be properly spliced to provide continuous conductivity.

G. Warning Tape

1. Water mains shall be installed with polyethylene film warning tape manufactured for marking and identifying underground water utilities. Tape shall be a minimum of 2 inches (50 mm) wide and 4 mils thick, blue in color, with continuously printed letters reading "CAUTION BURIED WATER LINE BELOW".

H. Gate Valves

1. Gate valves 3 inches (80 mm) and larger shall be of the resilient seat type meeting the requirements of AWWA C509 or C515. Valves shall be iron body, bronze trimmed, with non-rising stems, and shall be fusion-bonded epoxy coated per ANSI/AWWA C550. Valves shall have a minimum design working pressure of 200 psi.
2. Valves shall be manually operated by nut and open counter-clockwise unless specified otherwise in the Plans or The Facility Owner's Standard Specifications.
3. The resilient seating arrangement shall provide zero leakage at the design working pressure when installed with line flow in either direction. All ferrous surfaces inside and outside shall have a fusion bonded epoxy coating. All valves shall be provided with O-ring seals. The design and machining of valves shall be such as to permit replacing the O-ring seals in the valves while in service without leakage.
4. All gate valves, when fully opened, shall have an unobstructed waterway diameter equal to or larger than the full nominal diameter of the valve.
5. In general, valves shall be designed for vertical installation. Valves installed in the horizontal position shall be provided with bevel gears, extended gear case, rollers, tracks, and scrapers.
6. Exposed or above-ground gate valves shall be outside screw and yoke (OS&Y) flanged joint type with an operating hand wheel. The face-to-face dimensions and drilling shall conform to ANSI B16.10 for Class 125 flanged joint end gate valves.
7. Valves shall include mechanical joints, bolts, glands, gaskets, and all other materials necessary to join to existing work.

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8. Provide brass identification tag imprinted with "WATER", valve size, valve type, and direction and number of turns to open. Provide a ¼-inch (8 mm) hole in the brass tag and attach the tag to the end of the locate wire (twist wire around tag). Tag shall be 2-inch (50 mm) diameter and ⅛-inch (6 mm) thick brass with a ¼-inch (8 mm) hole.

I. Insertion Valve

1. Insertion type valves shall be resilient wedge gate valves designed to be installed into an existing pressurized potable water main without interruption of flow through the pipe and no reduction of line pressure.
 - a. Valve shall be fusion-bonded epoxy coated in compliance with AWWA C550.
 - b. The construction of the resilient wedge shall comply with AWWA C509 requirements.
 - c. The resilient wedge shall be fully encapsulated with EPDM rubber and shall seat on the valve body and not the pipe. The resilient wedge shall be totally independent of the carrier pipe.
 - d. Valve shall be restrained to the pipe.
- c. Valves shall be suitable for operating pressures up to 250 psi.

J. Butterfly Valves

1. Butterfly valves shall be of the tight-closing, rubber seated type, with rubber seat positively locking in place sealing against flow from either direction. Valves shall be hand operated with cast or ductile iron bodies. Valves shall conform to the requirements of AWWA C504, Class 150B, and shall be fusion-bonded epoxy coated per ANSI/AWWA C550.
2. Valves shall have a 2-inch (50 mm) square operating nut and shall be installed with extension stems to extend the operating nut in accordance with the project details. Valves shall open by turning the operating nut counter clockwise unless specified otherwise in the Plans or The Facility Owner's Standard Specifications.
3. Valve shafts shall be of 304 or 316 stainless steel.
4. Buried butterfly valve end connections shall be installed using restrained mechanical joints.
5. Flanged valves shall be fully faced and drilled in accordance with ANSI Standard B16.1, Class 125.
6. Provide brass identification tag imprinted with "WATER", valve size, valve type, and direction and number of turns to open. Provide a ¼-inch (8 mm) hole in the brass tag and attach the tag to the end of the locate wire (twist wire around tag). Tag shall be 2-inch (50 mm) diameter and ⅛-inch (6 mm) thick brass with a ¼-inch (8 mm) hole.

K. Ball Valves

1. Ball valves 2-inch (50 mm) and smaller shall be designed for a working pressure of not less than 175 psi. End connection shall be threaded. The body and all parts shall be made in accordance with AWWA C800 and ASTM B62 latest revision.

L. Tapping Sleeves and Valve Assembly

1. Tapping sleeves and valves sizes 4-inches (100 mm) and larger shall be stainless steel with wraparound gasket style, or ductile iron of the split-sleeve, mechanical joint type. Tapping sleeves shall be rated for a minimum 150 psi working pressure in accordance with ANSI/AWWA C110/A21.10.
2. When tapping an existing asbestos cement pipe, a stainless steel tapping sleeve which contains a full gasketed surface within the sleeve body shall be used due to variances in the manufactured outside diameter of the asbestos cement pipe.
3. Tapping sleeve shall have an outlet flange per ANSI B16.1, Class 125 standard.
4. The Contractor shall determine the outside diameter of the existing main before ordering the sleeve.
5. Tapping valves shall be mechanical joint outlet, non-rising stem, resilient seated gate valves meeting the applicable requirements of ANSI/AWWA C509/C515 and C550 with a minimum design working pressure of 200 psi.
6. Tapping valves shall be specifically designed for pressure tapping with sufficient seat opening to allow full diameter taps to be made.
7. Tapping valves shall be manufactured with an integral tapping flange having a raised lip design.

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8. Tapping valves shall be furnished with a combination flange and mechanical joint for connecting the branch to the main.

M. Valve Boxes

1. All valves shall be equipped with valve boxes. The valve boxes shall be heavy, roadway type boxes. The valve box cover shall be marked "WATER VALVE" or "WATER".
2. Valve box materials shall conform to the requirements and standards set forth in the The Facility Owner's Standard Specifications, current published edition.
3. The valve boxes shall be adjustable up or down from the nominal required cover over the pipe. Extensions shall be provided as necessary. A precast concrete ring shall be placed around the valve box opening when outside of paved areas.
4. Valves shall be furnished with extension stems as necessary to bring the operating nut to within 24 inches (600 mm) minimum of the top of the valve box.

N. Service Connection Assemblies

1. Water service connections and plumbing should conform to the standards set forth in The Facility Owner's Standard Specifications and relevant local and/or state plumbing codes or to the Standard Plumbing Code as applicable within the jurisdiction in which the system is located.
2. Service connection assemblies shall be provided for all new service line connections to existing meters. Existing service lines indicated for replacement shall be replaced with new materials from the water main to the existing or new water meter.
3. Service connection assemblies shall include:
 - a. Service saddle
 - b. Corporation stop
 - c. Service line
 - d. Fittings
 - e. Curb stop
 - f. Water meter box
 - g. Water meter (separate Pay Item for new service connections)
 - h. Backflow preventer (separate Pay Item for new service connections)

O. Service Saddles

1. Service saddles shall have ductile iron or bronze body with stainless steel epoxy coated double tie straps and nuts with pressure rating not less than that of the pipe to which it is to be connected.
2. Saddles shall have a rubber gasket cemented to the body, with compatible threading between the saddle and corporation stop. Saddles shall conform to ANSI/AWWA C800 standards.
3. The service saddle shall provide full support around the circumference of the pipe, providing a bearing area of sufficient width so that pipe will not distort when the saddle is tightened.

P. Water Service Pipe

1. Polyethylene (PE) pipe for water service lines shall conform to AWWA C901 and ASTM D-2737 and shall be 200 psi pipe, SDR 9 for copper tube size (CTS). Polyethylene extrusion compound from which the polyethylene pipe is extruded shall comply with applicable requirements for PE 3408 ultra-high molecular weight polyethylene plastic material as specified in AWWA C901.
2. Marking on the PE service pipe shall include the nominal pipe or tubing size, the type of plastic material, the standard thermoplastic pipe dimension ratio or the pressure rating in psi, the ASTM designation with which the pipe complies, and manufacturer's name or trade mark and code. It shall also include the NSF seal of approval for use with potable water.

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3. Copper tubing for water service lines shall be seamless and shall conform to ANSI/AWWA C800 and ASTM B88, Type K soft, suitable for potable water use with a working pressure of 150 psi.
4. Water service line fittings shall be as indicated in The Facility Owner's Standard Specifications.

Q. Corporation and Curb Stops

1. Corporation stops, curb stops, and other appurtenances for plastic or copper service lines shall meet the requirements of ASTM B62 and AWWA C800.
2. Service line taps shall be equipped with corporation stops. Corporation stops in sizes 1-inch (25 mm) through 2-inch (50 mm) shall be manufactured from cast bronze with machined fitting surfaces. The corporation shall be pressure rated to no less than 150 psi.
3. Curb stops shall be ball valve type and made of bronze. Pipe connections shall be suitable for the type of service pipe used and shall be pressure rated for no less than 150 psi.

R. Water Meters

1. Water meters shall conform to the requirements and standards set forth in The Facility Owner's Standard Specifications.

S. Meter Boxes

1. Water meter boxes shall be high density reinforced plastic body with one piece cast iron lid with lettering "WATER METER" on cover unless otherwise indicated on the Plans. Recessed hole shall be included in lid, if required by Utility Owner for electronic reading capability. Provide box of size and height appropriate to installation of meter and accessories required. Meter and curb stop shall be fully encased by the meter box.

T. Concrete Vault

1. Concrete vaults shall conform to the requirements and standards set forth in The Facility Owner's Standard Specifications and standard details.

U. Air Release Valve Assembly

1. Air release, air/vacuum valves, and combination air valves shall be suitable for use with potable water systems and manufactured in compliance with ANSI/AWWA C512.
2. Air release valves shall have a small venting orifice to vent the accumulation of air and other gases in the line or system under pressure.
3. Air/vacuum valves shall have a large venting orifice to permit the release of air as the line is filling or relieve the vacuum as the line is draining or is under negative pressure.
4. Combination air valves shall have operating features of both the air/vacuum valve and air release valve.
5. Valves shall be suitable for pressures up to 250 psi.
6. Air release, air/vacuum valves, and combination air valves shall conform to the requirements set forth in The Facility Owner's Standard Specifications and standard details.

V. Fire Hydrant Assembly

1. Fire hydrants shall be the compressive, post style, dry barrel type, and shall conform to the requirements of ANSI/AWWA C502 and local code requirements. The valve opening shall not be less than 4½-inch (115 mm). All hydrants shall be complete including joint assemblies.
2. Hydrants shall be suitable for working pressure of 150 psi and shall be hydrostatically factory tested to 300 psi.
3. All working parts, including the seat ring, shall be removable through the top without excavating or disturbing the barrel of the hydrant.
4. Hydrants shall be constructed with a lubricant chamber which encloses the operating threads and which provides automatic lubrication of the threads and bearing surfaces each time the hydrant is operated. This assembly shall be

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comprised of a top O-ring serving as a dirt and moisture barrier and a lower O-ring which will serve as a pressure seal.

5. Hydrants shall include two 2½-inch (65 mm) hose nozzles and one 4½-inch (115 mm) pumper connection with National Standard Fire Hose Threads unless specified otherwise in the Plans or The Facility Owner's Standard Specifications. Hydrant threads shall comply with the specifications of the local agency providing fire service.
6. Hydrant nozzle shall be constructed to face in any direction at any time by removing the safety flange bolts and revolving the head without digging or shutting off water.
7. Hydrants shall have pentagon operating nut measuring 1½-inch (40 mm) point to flat and shall open by turning counter-clockwise.
8. Hydrant shall have a safety-type vertical barrel with a minimum 3½-foot bury and be designed with safety flange and/or bolts to protect the barrel and stem from damage, eliminate flooding, and allow rapid replacement if hydrant is struck. All risers necessary for deeper bury applications shall be provided by the hydrant manufacturer.
9. Hydrants shall include positive, automatic drain valves which shall be fully closed when the main valve is open.
10. Bottom inlet of hydrant shall be provided with mechanical joint connection complete with accessories as specified and shall be 6-inch (150 mm) nominal diameter.
11. Fire hydrant shall be painted above ground with rust inhibiting enamel paint in accordance with The Facility Owners Standard Specifications.
12. Hydrant assemblies shall be restrained from the hydrant to the tee at the main.

W. Backflow Prevention Devices

1. Backflow prevention devices shall be installed where indicated on the Plans and shall meet all applicable AWWA, State, and local code/ordinance requirements.
2. Backflow preventer materials shall conform to the requirements and standards set forth in The Facility Owner's Standard Specifications.

X. Thrust Collars and Thrust Blocks

1. Concrete used for thrust collars or thrust blocks shall meet the "Class A" requirements for concrete listed in [Section 500](#).
2. Thrust collars shall include welded-on collars attached by the pipe manufacturer or retainer glands. Concrete shall be poured continuous around the pipe and bear against undisturbed earth.
3. Reinforcing steel shall meet the requirements set forth in the Plans or The Facility Owner's Standard Specification].
4. Mechanical joint restraints shall be utilized in lieu of thrust blocks with the approval of Utility Owner.

Y. Manholes

1. Precast reinforced manholes shall be manufactured in accordance with ASTM C478 and shall have a minimum wall thickness of 5 inches (127 mm). All concrete shall have a minimum compressive strength of 4,000 psi when tested in accordance with ASTM C478.
2. Joints between precast sections shall be sealed by means of rubber O-ring gaskets or flexible butyl rubber sealant.
3. Non-shrinking grout or a flexible seal shall be used to seal the pipe penetrations and prevent water from entering the manhole.
4. Manhole rings and cover shall be per The Facility Owner's Standard Specifications and standard details.

670.2.02 Delivery, Storage, and Handling

- A. Handle pipe, fittings, valves, and accessories carefully to prevent damage. Handle pipe by rolling on skids, forklift, or front end loader. Do not use material damaged in handling. Slings, hooks, or pipe tongs shall be padded and used in such a manner as to prevent damage to the exterior coatings or internal lining of the pipe. Do not use chains in handling pipe, fittings, or appurtenances.

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- B. To unload pipe, carefully lift and lower it into position using approved padded slings, hooks, or clamps. Furnish equipment and facilities for unloading, handling, distributing, and storing pipe, fittings, valves, and accessories. Make equipment available at all times for use in unloading. Do not roll, drop or dump materials. Any materials dropped or dumped shall be subject to rejection without additional justification.
- C. Stored materials including salvaged materials shall be kept in suitable areas safe from damage. The interior of all pipe, fittings, and other appurtenances shall be kept free from dirt or foreign matter at all times. Store and support plastic pipe to prevent sagging and bending. Store plastic pipe and gaskets to prevent exposure to direct sunlight. Valves and hydrants shall be stored and protected from damage by freezing.
- D. Pipe shall not be stacked higher than the limits recommended by the manufacturer. The bottom tier shall be kept off the ground on timbers, rails, or concrete.

670.3 Construction Requirements

670.3.01 Personnel

- A. General Provisions 101 through 150.
- B. Construction and installation of all water utilities shall be performed by a Contractor prequalified/registered with GDOT.
- C. All work specified in this section, except for water system service line installation shall be performed by a Contractor with a valid Utility Contractor's license issued by the State of Georgia. Water service line installation shall be performed by either a Utility Contractor licensed in the State of Georgia or by a Master Plumber licensed in the State of Georgia.

670.3.02 Equipment

- A. Ensure all equipment used is in conformance with the requirements and standards set forth in The Facility Owner's Standard Specifications, current published edition.

670.3.03 Preparation

General Provisions 101 through 150.

670.3.04 Fabrication

General Provisions 101 through 150.

670.3.05 Construction

A. Finding Existing Underground Utilities and Obstructions

1. Comply with Subsection 107.13 and Subsection 107.21.
2. According to the best information available to GDOT, all known water lines, sewer lines, gas lines, telephone conduits, drainage structures, etc. are shown on the Plans. However, to find such installations, use an electronic pipe and cable finder in locating existing installations or obstructions to the work.
3. When unforeseen conflicts require Plan changes, perform the work as altered according to Subsection 104.03 and Subsection 104.04.
4. Follow all Utility Owner customer notification requirements and obtain approval from the Utility Owner and GDOT Project Manager prior to disrupting any existing water services as required to install the water facilities shown on the Plans.

B. Jack and Bore

Comply with Section 615 for water main installations by jack and bore.

C. Directional Drilling

1. Install water mains and services by means of directional drilling at locations shown on the Plans or where approved by RDOT or Utility Owner. Provide submittals and follow all relevant procedures and requirements set forth in The Facility Owner's Standard Specifications.
2. The Contractor shall not initiate horizontal directional drilling until all submittals are received, reviewed, and accepted by RDOT and the Utility Owner, and all required permits are obtained.

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3. The Contractor shall select drilling additives and fluid mixture proportions to ensure continuous circulation, bore stability, reduce drag on the pipe, and completely fill the annular space between the bore and the pipe to ensure stability and control settlement.
4. The Contractor shall submit contingency plans for remediation of potential problems that may be encountered during the drilling operations. The contingency plans shall address the observations that would lead to the discovery of the problem and the methods that would be used to mitigate the problem. Potential problems that shall be addressed include:
 - a. Loss of returns/loss of circulation of drilling fluid.
 - b. Encountering obstruction during pilot bore or reaming/pullback.
 - c. Drill pipe or product pipe cannot be advanced.
 - d. Deviations from design line and grade exceed allowable tolerances.
 - e. Drill pipe or product pipe broken off in borehole.
 - f. Product pipe collapse or excessive deformation occurs
 - g. Utility strike.
 - h. Hydrolock occurs or is suspected.
 - i. Excessive ground settlement or heave of ground surface or existing utilities.
 - j. Inadvertent returns / hydrofracture or surface spills resulting in drilling fluids entering water or reaching the surface.
5. Pipe damaged in directional drilling operations shall be removed and replaced at no additional expense to GDOT or the Utility Owner.
6. Voids developed or encountered during the installation operation shall be pressure grouted with a grout mix approved by RDOT.
7. Installation shall include a locatable conduit system, with identification markers on each side of RDOT right-of-way where applicable. Two (2) insulated 8 gauge solid copper tracers wire shall be attached to the leading end of the pipe pulling head and shall extend the full length of the installed pipe.
8. The location and alignment of the pilot drill progress shall be continuously monitored for compliance with the proposed installation alignment and for verification of the depth of the bore. Monitoring shall be accomplished by computer generated bore logs which map the bore path based on x, y, z coordinate information provided by the locating/tracking system. Readings or plots shall be obtained on every drill rod, and shall be provided to the Inspector on a daily basis. Deviations between the recorded and design bore path shall be calculated and reported on the daily log. If the deviations exceed tolerances specified elsewhere, such occurrences shall be reported immediately to RDOT. The Contractor shall undertake all necessary measures to correct deviations and return to design line and grade.
9. Upon completion of the directional drill the Contractor shall furnish RDOT and the Utility Owner an as-built drawing along with a report of the monitoring of the drilling fluids during the pilot hole and back reamed hole.
10. Drilling fluid pressures, flow rates, viscosity, and density shall be monitored and recorded by the Contractor. The pressures shall be monitored at the pump. These measurements shall be included in daily logs submitted to GDOT. The Contractor shall document modifications to the drilling fluids, by noting the types and quantities of drilling fluid additives and the dates and times when introduced. The reason for the addition of drilling fluid additives or other modifications shall be documented and reported.
11. Management and disposal of drilling fluids shall be the Contractor's responsibility. Excess drilling fluids shall be contained at the entry and exit points until recycled or removed from the site. All drilling fluids shall be disposed of in a manner acceptable to the appropriate local, state and federal regulations. The Contractor's work will be immediately suspended by RDOT whenever drilling fluids seep to the surface other than in the boring entrance or exit pit, or when a paved surface is displaced.

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12. Surfaces damaged by the work shall be restored to their preconstruction conditions at no additional cost to RDOT or Utility Owner, and with no increase in contract time.
13. The following items shall be as shown on the Plans, unless otherwise approved in writing by RDOT:
 - a. Entry / exit points
 - b. Drill entry / exit angles
 - c. Pilot bore path
 - 1) Radius of Curvature
 - 2) Entry / exit tolerances: Contractor shall be solely responsible for all work necessary to correct excessive deviations from line and grade, including re-drilling, redesigning connections, and acquiring additional easement, at no additional cost to RDOT or Utility Owner and without schedule extension.
14. The pilot bore shall be pre-reamed and reamed using equipment and methods submitted by the Contractor. The Contractor shall completely ream the bore to the final diameter prior to pullback.
15. Pullback: The pipe shall be installed by pulling it into the reamed bore path in a continuous operation, behind a final reaming tool selected by the Contractor. The pipe shall be isolated from excessive torsional and axial stresses by a swivel device with a pre-established breakaway tensile capacity that is lower than the allowable tensile strength of the pipe. The maximum pull (axial tension force) exerted on the pipelines shall be measured continuously and limited to the maximum allowed by the pipe manufacturer with an appropriate factor of safety so that the pipe or joints are not overstressed. The end of the pipe shall be closed during the pull back operation.
16. Pipelines shall be adequately supported during installation so as to prevent overstressing or buckling. The Contractor shall provide adequate support/rollers along the pipe layout area to support the required length of pipe for the bore. The pipe layout area shall be cleared of all large stones, construction debris, or other foreign objects that could damage the pipe during pullback. The Contractor shall monitor and inspect pipe rollers and method for suspending pipe at entry during the pullback operation to avoid damage to the pipe.
17. The end of the pipe shall be closed during the pull back operation.
18. Each length of pipe shall be inspected and cleaned as necessary to be free of debris immediately before joining.
19. The Contractor shall at all times handle the pipe in a manner that does not overstress or otherwise damage the pipe. Vertical and horizontal curves shall be limited so that wall stresses do not exceed 50% of yield stress for flexural bending of the pipe. If the pipe is buckled or otherwise damaged, the damaged section shall be removed and replaced by the Contractor at his expense. The Contractor shall take appropriate steps during pullback to ensure that the pipe and tracer wires will be installed without damage.
20. If necessary, the pipe shall have water added as it enters the bore to achieve neutral buoyancy and reduce pullback loads and to ensure that adequate internal pressure is maintained at all points to counter balance collapse pressures.
21. The Contractor shall cease pullback operations if the pipe is damaged and shall remove the pipe from the bore and repair the pipe using the manufacturer's recommended procedure or replace the damaged pipe before resuming installation.
22. Damage to the pipe resulting from manufacturer defects, installation, or grouting is the responsibility of the Contractor, including costs for replacement and labor and materials. To confirm no damage to the pipe, upon completion of pull back, the Contractor shall pull a sphere or pig through the entire length of the pipeline. The pig shall be one inch less in diameter than the internal diameter of the product pipe, capable of allowing water to pass through it, complete with a pulling cable on either side. If the pig or sphere cannot pass through the pipe, it shall be considered collapsed and damaged.
23. After the carrier pipe is completely pulled through the bore, a sufficient relaxation period as recommended by the pipe manufacturer shall be provided before the final pipe tie-in.
24. The Contractor shall conduct a final hydrostatic test of the installed pipeline. Final test shall be in accordance with these specifications. The Contractor shall repair any defects discovered during this test, and repeat until the pipe passes the test.

D. Excavating Trenches

1. The Contractor shall provide all necessary shoring and bracing materials as required to assure safe working conditions and to protect the excavations. The Contractor shall be required to fully comply with all applicable OSHA Excavation Safety Standards. No separate payment shall be made for any special procedure used in connection with the excavation.
2. Excavate trenches to the proper depth and width as follows:
 - a. Trench to Grade: Excavated trench bottoms shall be firm, free from boulders, and conform to the established grade. Limit open trench excavation to a maximum of three 300 feet (90 m) ahead of completed backfill.
 - b. Care shall be taken not to over excavate except where necessary to remove unstable material, irregularities, lumps, rock, and projections. Unnecessary over excavation shall be replaced at the Contractor's sole expense and in accordance with Subsection 670.3.05.
 - c. Excavation carried below the established grade lines shown or established by the Utility Owner shall be backfilled according to Section 207 and Subsection 670.3.05. Use Class I or Class II Soils (defined in Section 810) and firmly compact the soil.
 - d. Where the established grade of a trench is in rock, undercut the bottom of the trench by at least 6 inches (150 mm) beneath the pipe or conduit and the greater of 24 inches (600 mm) wider than the pipe/conduit (12 inches or 300 mm each side) or 42 inches (1050 mm) wide, then backfill and compact according to Subsection 670.3.05.
 - e. Excavation in pavement and pavement patching shall be according to GA Standard No. 1401. Remove the pavement according to Section 444, except no separate payment shall be made for sawed joints.
 - f. Dewatering: Remove all water from excavations and maintain the excavations free of water while construction therein is in progress. Provide dewatering equipment as necessary to conform to this requirement. Dewatering procedures must meet all state and local regulatory requirements.
3. Minimum Trench Depth
 - a. Excavate trenches to provide at least 48 inches (1.2 m) cover depth directly above the pipe to the finished pavement surface, sidewalk, grass, etc. unless indicated otherwise on the Plans or by the Utility Owner and GDOT Project Manager. In order to avoid existing utilities, it may be necessary for the pipe to be laid shallower or deeper than the minimum cover specified. At such time the Contractor shall not be allowed extra compensation for additional excavation necessary for deeper installations.
 - b. Side slopes of the trenches shall be as nearly vertical as practicable. Trenches in excess of 5 feet (1.5 m) deep shall either have the trench sides laid back to conform to OSHA requirements for trench safety, if such area is available within the limits of excavation, or, alternatively, trenches deeper than 5 feet (1.5 m) shall be excavated via trench box or shored and braced.
 - c. If any part of a water main is to be placed in or under a new embankment, finish the embankment to at least a 2-foot plane above the outermost portion of the pipe barrel before excavating the trench.
4. Trench Width: Excavate trenches to uniform widths wide enough to allow proper installation of pipe, fittings, and other materials, a minimum of 6 inches (150 mm) and a maximum of 12 inches (300 mm) each side of the pipe or conduit.
5. Trench Bell Holes: Excavate bell holes deeply and widely enough to make joints and to allow the pipe barrel to rest firmly on the trench bottom.
6. Trench bottom: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduits. Shape subgrade to provide continuous support of bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits/pipes. Remove projecting stones, tree roots, debris, and sharp objects along trench subgrade. Abrupt changes in grade of the trench bottom shall be avoided. Unless otherwise indicated in the Plans or The Facility Owner's Standard Specifications, trenches for water mains shall be graded as much as possible to avoid high and low points that necessitate air release valves.

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7. Excavations may be completed and refilled either by hand or by machinery. Hand tool excavation shall be conducted where necessary to protect existing utilities and structures.
8. In the event that unsuitable material is encountered at or below the excavation depth specified or shown on the Plans, the Utility Owner and RDOT Project Manager shall be notified. Such material shall be removed and replaced with suitable material in accordance with Section 205 by the written request of the GDOT Manager.

E. Connecting to Existing Mains

1. Connect to an existing main with the appropriate fittings according to the Plans or the Utility Owner and GDOT Project Manager. When making connections under pressure, (i.e. when normal water service must be maintained), furnish and use a tapping sleeve and valve assembly or line stop fittings as indicated. Coordinate with Utility Owner 72 hours in advance for water service interruptions and temporary shut-offs. Evening or weekend work may be required to complete direct connections and tie-ins. Connect to existing mains as follows:
 - a. Before opening new pipeline trenches, locate the various points of connection to be made into existing pipelines. If necessary, uncover pipelines for the Utility Owner and RDOT Project Coordinators to prescribe the connections and fittings needed.
 - b. Connect to existing pipelines only to meet operating requirements. Cut existing lines only after obtaining the Utility Owner and GDOT Project Manager' permission.
 - c. Provide temporary line stops, associated fittings, and bypass pumping as indicated on the Plans and as necessary when cutting and plugging existing water mains to prevent service interruptions. Line stop and associated fittings shall be suitable for working pressures of 250 psi.
 - d. Connections to existing asbestos cement pipe shall be installed as indicated on the Plans or in The Facility Owner's Standard Specifications. Cutting, removing, handling, and disposing of asbestos cement pipe shall be in accordance with requirements established by EPA, OSHA, RDOT, NIOSH, and the State of Georgia Environmental Protection Division, and any other applicable laws and ordinances.

F. Laying Water Mains and Appurtenances

1. Preparing and Handling Pipes
 - a. Thoroughly clean the pipe and fittings before laying them. Keep them clean until accepted.
 - b. Use suitable tools and equipment. Do not damage the pipe, especially the cement lining inside the pipe.
 - c. Cut pipe in a manner to avoid damage to pipe or lining, leaving a smooth end at right angles to pipe axis. Smooth and bevel edges of cut pipe for push-on, gasket type joints.
 - d. Bedding shall be provided as specified by the Utility Owner or pipe manufacturer for the type of conditions encountered. Bedding typically consists of granular soil free of lumps, clods, cobbles, and frozen materials, and shall be graded to a firm-but-yielding surface without abrupt changes in bearing value. Unstable soils and rock ledges shall be undercut from the bedding zone and replaced with suitable material.
 - e. Bed pipe on coarse granular material in flat bottom trench with entire pipe barrel bearing uniformly on coarse granular material, except for an approximately 18-inch (450 mm) gap at pipe balance point for sling removal. Hand excavate and backfill as required to provide uniform and continuous bearing and support for the pipe. Do not support pipe on hubs or end bells. Consolidate coarse granular material under and around pipe up to pipe centerline by tamping.
 - f. Join pipe with bells facing direction in which laying operation is progressing. Lay pipe upgrade wherever line grade exceeds 10%.
 - g. Carefully examine pipe for cracks and other defects and do not lay defective pipe. If pipe or castings appear to be cracked, broken, or defective after laying, remove and replace those sections.
2. Alignment and Gradient

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- a. Pipe alignment and gradient shall conform to the Plans. Deflect pipe lines only where indicated on the Plans, within allowable horizontal and vertical deflection angles according to the manufacturer.
 - b. Water mains shall be laid at least 10 feet (3 m) horizontally from any existing or proposed sanitary sewer, storm sewer or sewer manhole. The distance shall be measured edge-to-edge. When local conditions prevent a horizontal separation of 10 feet (3 m), the water main may, on a case-by-case basis, be laid closer to a sewer provided the water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches (450 mm) above the top of the sewer.
 - c. Maintain a vertical separation of at least 18 inches (450 mm) between the crown of sanitary sewers and the invert of existing or proposed water mains with the sewer located below the water main. Where a vertical separation of 18 inches (450 mm) cannot be provided, and the water main cannot be relocated to provide adequate clearance, center one full length of water main over the sewer so that both joints of the water main will be as far from the sewer as possible.
3. Special Requirements for Laying Water Mains
- a. Excavate, clean, lay, joint, and backfill progressively and uniformly according to these requirements:
 - 1) Never leave pipe in the trench overnight without completely jointing and capping.
 - 2) Do not leave completed pipeline exposed in the trench. Backfill and compact the trench as soon as possible after laying, jointing, and testing are complete.
 - 3) At the close of work each day and when laying pipe, close the exposed end of the pipeline in the trench with an approved wood or metal head or barrier.
 - 4) If necessary to cover the end of an incomplete pipeline with backfill, close the end of the pipe with a satisfactory cap or plug.

G. Installing Water Mains by Open Cut

1. Use the following flexible joints for connections inside the roadway shoulders or curbs and gutters:
 - a. Mechanical Joints:
 - 1) When using mechanical joints, thoroughly wash bell sockets, spigots, gland, gasket, nuts, and bolts with soapy water before assembly. Keep these parts wet until the jointing operation is complete.
 - 2) Tighten nuts within the torque range recommended by the manufacturer. Check the tightening tolerance with a torque wrench.
 - 3) If effective sealing is not attained at the maximum recommended torque, disassemble, thoroughly clean, then reassemble the joint.
 - 4) Do not overstress bolts to compensate for improper installation or defective parts.
 - b. Push-On Type Joints
 - 1) Use push-on joints made according to the manufacturer's recommendations.
 - 2) Install PVC pipe in accordance with AWWA C605.
 - 3) Install ductile iron pipe in accordance with AWWA C600.
2. Restraints for pipe joints and fittings shall be provided as specified and as shown on the Plans. Restraints shall be installed per manufacturer's recommendations.
3. Buried ductile iron pipe and fittings shall be polyethylene encased as specified and as indicated on the Plans. Polyethylene encasement tubing shall be secured with polyethylene tape and installed in accordance with ANSI/AWWA C105/A21.5.
4. Unless otherwise specified by The Facility Owner's Standard Specifications, provide pipe detection wire on all non-metallic pipe systems. Tape the tracer wire to the top center of the pipe at intervals which prevent wire displacement during backfilling operations. Stub tracer wire up 6 inches (150 mm) above finished grade at all valves

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- and fire hydrants. For splices, use direct bury kits. After backfilling is complete, test electrical continuity of each tracer wire segment and provide test results to Utility Owner and RDOT Project Manager.
5. Install continuous underground warning tape during backfilling of trench for underground water distribution piping. Install 12 inches (300 mm) below finished grade, or 6 inches (150 mm) below subgrade under pavements and walkways, and buried directly over piping.
 6. Use pipe cutters when cutting pipe or special castings. Do not use a hammer, chisel, or a cutting torch.
 7. Locations where water mains do not meet minimum depth of cover requirements shall include a steel casing or concrete encasement installed per The Facility Owner's Standard Specifications.
 8. If HDPE pipe is to be installed where high groundwater table or water surrounding the pipe is expected, precautions shall be taken to provide neutral buoyancy to prevent floatation or a change in alignment.
 9. Isolation Valves on Water Mains: Install and joint gate and butterfly valves as specified in Subsection 670.2.01 in accordance with AWWA C600. Include the valve box and valve marker where required.
 10. Air release valves shall be located at high elevation points on the pipeline. Air release valves shall be installed at locations indicated in the Plans and in accordance with manufacturer's recommendations.
 - a. Air release valves shall be installed in a shallow manhole or vault as indicated in the Plans and The Facility Owner's Standard Specifications. Automatic air relief valves shall not be used in areas where flooding of the manhole or vault may occur.
 - b. An isolation valve shall be installed between the air release assembly and the connection to the main.
 - c. The Contractor shall furnish and install at no additional cost to GDOT or Utility Owner all necessary fittings for the installation of air release valves at high points.
 11. Pressure reducing/sustaining valves of the size and type indicated shall be installed as shown on the Plans per manufacturer's recommendations and The Facility Owner's Standard Specifications.
 12. Fire Hydrants: Install and joint hydrants as specified in Subsection 670.2.01 and in accordance with AWWA C600. Include required vertical extension sections. Also, include pipe strap installation, restraints, crushed stone drain, and backfill according to the Plans and this Section. Spacing of fire hydrants shall be as indicated in The Facility Owner's Standard Specifications.
 13. Concrete Thrust Collars and Thrust Blocks: If required, furnish materials and install thrust collars or concrete blocking according to Subsection 670.2.01. Form and pour concrete thrust collars or blocks in accordance with the Plans and The Facility Owner's Standard Specifications. Blocking shall be poured against undisturbed earth and all forms shall be removed before backfilling.
 14. Backfilling
 - a. Furnish equipment, labor, and when necessary material required for backfilling the pipe line trenches according to Section 207, and as follows:
 - 1) When testing for visual leaks in open trenches, do not backfill until testing is complete and leaks are eliminated.
 - 2) When retaining pavement adjacent to trenches, replace removed pavement with the same or better material when approved in accordance with the appropriate Section for the pavement type replaced.
 - 3) Place backfill on subgrades free of mud, frost, snow, or ice.
 - 4) Place and compact bedding course on trench bottoms and where indicated. Shape the bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits/pipes.
 - 5) Backfill shall include Class I or Class II Soils as defined in Section 810 or suitable material that conforms with The Facility Owner's Standard Specifications.
 - 6) Backfill shall be placed in two stages: first, side fill to a height of 12 inches (300 mm) above the top of pipe; second, overfill to former surface grade. Side fill shall consist of granular material laid in 6-inch (150

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mm) layers each consolidated by mechanical tamping and controlled addition of moisture, to a density of 95% as determined by as determined by the Standard Proctor test (AASHTO T-99 Method D) or GDT 67. Overfill shall be layered and consolidated to match the entrenched material in cohesion and compaction. The top 12 inches (300 mm) shall be compacted to 100% of specified density. Consolidation by saturation or ponding shall not be permitted.

- 7) **Soil Moisture Control:** Uniformly moisten and aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2% of optimum moisture content. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2% and is too wet to compact to specified dry unit weight.
 - 8) Initial backfill shall be carefully compacted under pipe haunches and evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Place and compact fill and backfill of satisfactory soil to final subgrade elevation. Backfill voids with satisfactory soil while removing shoring and bracing and/or trench boxes.
 - 9) After backfilling, maintain temporary surface restoration per GA Standard No. 1401 until permanent repaving is complete. No separate payment shall be made for replaced pavement.
15. **Disinfection of Water Mains**
- a. New and existing pipelines and appurtenances shall be disinfected before placing into service. Disinfection can be conducted in conjunction with the pressure test.
 - b. Before the main is chlorinated, it shall be filled to eliminate air pockets and shall be flushed to remove particulates.
 - c. During disinfection of the water mains, an appropriate cross-connection control device, consistent with the degree of hazard, shall be provided for backflow protection of the active distribution system.
 - d. **Chlorination:** Sterilize using only potable water with calcium hypochlorite (HTH), 1% chlorine solution, or other products acceptable to the Utility Owner and GDOT Project Manager and Department of Public Health. Comply with AWWA C651 including Section 9 procedures on final connections to existing mains.
 - 1) The chlorine solution used for disinfection of water mains shall have a free chlorine residual concentration not less than 25 mg/L or in accordance with The Facility Owner's Standard Specifications.
 - 2) Add enough disinfectant to provide a chlorine residual of not less than 10 parts per million (ppm) in 24 hours or as required in The Facility Owner's Standard Specifications. All valves and hydrants shall be operated to ensure disinfection of the appurtenances.
 - 3) At the end of 24 hours, check the chlorine residual. If it is less than 10 ppm, add additional chlorine and check the line again after 24 hours.
 - e. After the applicable retention period, the chlorinated water must not be disposed in a manner that will harm the environment. Neutralizing chemicals, such as Sulfur Dioxide, Sodium Bisulfite, Sodium Sulfite or Sodium Thiosulfate can be used to neutralize the chlorine residual remaining in the water to be wasted.
 - f. After sterilization, flush the line with potable water until the chlorine residual is equal to the existing system.
 - 1) After final flushing and before the water main is placed into service, water samples shall be collected from the main and tested for microbiological quality in accordance with the Georgia Rules for Safe Drinking Water. Samples shall be taken in the presence of the Utility Owner and GDOT Project Manager.
 - 2) When test results are not satisfactory, the pipeline shall be flushed and disinfected again as necessary without additional compensation until satisfactory results are obtained.

H. Laying Service Lines and Appurtenances

1. Except as modified in this Section, construct and install service connection assemblies and lines according to the Plans and the requirements for laying water mains. Install service lines at locations shown on the Plans or where designated by the Utility Owner and GDOT Project Manager.

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2. Install new pipe from the water main to the final location of the meter or to points designated by the Utility Owner and GDOT Project Manager to connect with existing or future service lines on abutting property.
3. No water service connections shall be performed until the main is tested and disinfected. Water service lines shall be tested and disinfected prior to connection to the main.
4. If required, install water service line inside casing pipe according to the Plans or The Facility Owner's specification document.
5. At roads, paved drives, retaining walls, and other paved areas, install service tubing or casing pipe by pushing, pulling, or augering techniques. At all other locations, install service tubing by trenching and backfilling unless directed otherwise by RDOT.
6. Service line installation includes all connections using saddles, unions, valves, fittings, corporation stops, curb stops, casing, and any and all appurtenant work required to provide a complete water service connection.
7. Excavate for service lines as specified in Subsection 670.3.05 with the following exceptions:
 - a. Ensure that trenches under pavements and across driveways are deep enough to provide at least 48 in (1.2 m) of cover, unless otherwise specified by The Facility Owner's Standard Specifications or directed by the Utility Owner and RDOT Project Manager.
 - b. At other areas, trench depth and backfill cover may be adjusted at the discretion of the Utility Owner and GDOT Project Manager to provide at least 18 in (450 mm) of cover.
8. Backfill service lines as specified in Subsection 670.3.05.
9. All service lines, fittings, and appurtenances necessary for the water service connections shall be installed and backfilled in accordance with the manufacturer's recommendations and as per The Facility Owner's Standard Specifications and standard details.

I. Cutting and Capping Existing Water Mains

1. Disconnect by sawing or cutting and removing a segment of existing pipe where cutting and capping or plugging is shown on the Plans or directed by the Utility Owner or RDOT Project Manager. Provide a watertight pipe cap or plug and restraint mechanism to seal off existing mains indicated to remain in service. If water main is to be abandoned or removed and not specified to be grout filled, seal ends with a pipe cap or plug or with a masonry plug and minimum 6-inch (150 mm) cover of concrete on all sides around the end of the pipe.
2. The Contractor shall be responsible for uncovering and verifying the size and material of the existing main to be capped or plugged.
3. Abandoned manholes and water mains greater than 6-inch (150 mm) shall be filled with flowable fill per Section 600 at the locations indicated on the Plans. Air release valves and water service connections along the abandoned main shall be plugged prior to grouting. Prior to backfilling, the bottom of the manhole shall be broken up in such a manner that water will readily pass through. The top portion of the manhole structure shall be removed in order to establish a minimum of 3 feet cover from subgrade or finished grade when not under the pavement and filled with sand or suitable backfill.
4. Water mains shall be flushed prior to placement of flowable fill. Use concrete or grout pumps capable of continuous delivery at planned placement rate with sufficient pressure to overcome friction and fill the sewer main.

J. Relocating, Adjusting, and Removing

1. Fire Hydrant Assemblies
 - a. Relocate, adjust to grade, or remove fire hydrant assemblies including valve and valve boxes according to the Plans or as designated by the Utility Owner and RDOT Project Manager.
 - b. Protect items during removal and relocation. Replace lost or damaged Items at no expense to GDOT or the Utility Owner.
 - c. Disconnect each joint before removing items from the trench.

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- d. Install relocated fire hydrant assemblies with tapping sleeve, and as specified herein for new fire hydrant assemblies.
 - e. Test for leakage, adjust, and retest until no leaks appear.
 - f. Backfill as specified in Subsection 670.3.05.
 - g. Consider valve boxes part of the valve assembly and remove them intact with the valve.
2. Water Valves and Boxes
- a. Adjust or remove water valves and valve boxes according to the Plans or as designated by the Utility Owner and RDOT Project Manager.
 - b. Protect items during adjustment or removal. Replace lost or damaged Items at no expense to GDOT or the Utility Owner.
 - c. Disconnect each joint before removing items from the trench.
 - d. Test for leakage, adjust, and retest until no leaks appear.
 - e. Backfill as specified in Subsection 670.3.05.
 - f. Consider valve boxes part of the valve assembly and remove them intact with the valve.
3. Existing Water Meters and Boxes
- a. Relocate existing water meters and boxes according to the Plans or the Utility Owner and RDOT Project Manager.
 - b. To relocate water meters, remove the existing meter, associated backflow preventer, and box and replace with a short section of pipe.
 - c. Inspect along with the Utility Owner and RDOT Project Manager each meter and backflow preventer before removal to determine the condition of each.
 - d. Unless specified otherwise in the Plans or The Facility Owner's Standard Specifications, new water meters and backflow preventers shall be furnished by the Contractor as necessary if these devices are deemed unsuitable for reuse. Contractor shall provide new water meter boxes if deemed unsuitable for reuse. The Contractor shall coordinate delivery of the water meters and backflow preventers to correspond to construction operations to minimize service interruptions.
 - e. Relocation of water meters and boxes shall include without additional compensation, required pipe, unions and appurtenances, adapter fittings, necessary storage protection, and installation of meter, backflow preventer, meter box, and curb stop in the existing service line.
4. Existing Water Service Lines
- a. Water lines shall be adjusted to grade by excavating the existing lines, lowering or raising the lines, and backfilling according to the Plans or the Utility Owner and RDOT Project Manager.
 - b. Furnish new materials or fittings required for the adjustment without additional compensation.
 - c. Change connections at the main that result from this work.
 - d. Repair leaks and damage caused by the operations at no expense to RDOT.
 - e. When retaining a water meter where an existing service line is to be adjusted, adjust the existing meter and box to the proper grade without additional compensation.
5. Other Water Appurtenances
- a. Relocate, adjust to grade, or remove water main appurtenances including but not limited to air release valves, backflow preventers, pressure reducing/sustaining valves according to the Plans or as designated by the Utility Owner and RDOT Project Manager.
6. Utility related items identified on the Plans to be salvaged are the property of the Utility Owner. Contractor shall coordinate with Utility Owner on delivery of salvaged materials. Should the Utility Owner choose to not accept these materials they shall be removed from the project site as soon as practical.

K. Aerial Crossings

1. Support must be provided for all joints in pipes utilized for aerial crossings. The supports must be installed to prevent frost heave, overturning, and settlement. Precautions against freezing, such as insulation, shall be provided.

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2. When the aerial crossing is accomplished by attachment to a bridge or drainage structure, the crossing shall meet all requirements of the agencies that own or have jurisdiction over such structures.
3. Aerial installations shall be installed to avoid or minimize stream blockage during normal high water events.
4. Underground valves shall be provided at both ends of the aerial crossing so that the section can be isolated for testing or repair. The valves shall be restrained, easily accessible, and not subject to flooding. An air release/vacuum relief valve shall be installed at all high points along the aerial crossing.
5. Appropriate guards shall be installed at both ends of the aerial crossing to prevent public access to the pipe.

670.3.06 Quality Acceptance

A. Materials Certification

For certain products, assemblies and materials, not on RDOT QPL List, and in lieu of normal sampling and testing procedures by the Contractor, the Utility Owner, and RDOT may accept from the Contractor the manufacturer's certification with respect to the product involved under the conditions set forth in the following paragraphs:

1. Material certifications shall be provided to RDOT, who shall distribute to the Utility Owner. Material certifications shall be approved by RDOT and the Utility Owner prior to construction. The certification shall state/specify that the named product conforms to these specifications and requirements of the Utility Owner and GDOT, and representative samples thereof have been sampled and tested as specified.
2. The certification shall either:
 - a. Be accompanied by a certified copy of the test results, or
 - b. Certify such test results are on file with the manufacturer and will be furnished to the Utility Owner and GDOT Project Coordinators upon demand.
3. The certification shall state/specify the name and address of the manufacturer and the testing agency and the date of tests; and sets forth the means of identification which shall permit field determination of the product delivered to the project as being the product covered by the certification.
4. Submit certification in triplicate with two copies of the covered product to the RDOT Project Coordinator, and one copy sent to GDOT's State Materials and Research Engineer at 15 Kennedy Drive, Forest Park, Georgia. The certification shall specify the project number and contract ID number. No certificate shall be required for Portland cement when furnished from a manufacturer approved by RDOT.
5. RDOT or the Utility Owner will not be responsible for any costs of certification or for any costs of the sampling and testing of products in connection therewith.
6. RDOT and the Utility Owner reserve the right to require samples and test products for compliance with pertinent requirements irrespective of prior certification of the products by the manufacturer. Any materials that fail to meet specification requirements will be rejected.
7. 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. 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.

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- b. Records to be provided by the Contractor 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.

B. Flushing

1. Prior to testing, water mains shall be cleaned and flushed to remove all sand and foreign matter. Water used for filling and cleaning shall be from an approved potable water source. Sufficient flushing water shall be introduced into the mains to produce a scouring velocity of not less than 3.5 feet per second to resuspend the solids, and this rate of flow shall be continued until the discharge is clear and no evidence of silt or foreign matter is visible. The Contractor shall dispose of all water used for flushing without causing a nuisance or property damage.
2. In the event that the Contractor cannot obtain the flushing velocity, a poly-pig swab may be used to clean the pipeline. The Contractor shall submit pigging plan to the Utility Owner and GDOT for review. The plan shall include type of pig material, water flow rate, discharge points, poly-pig detector and retrieval options.

C. Hydrostatic Testing of Water Mains

1. When the Utility Owner and RDOT Project Manager approve a section of pipe for testing, the Contractor shall furnish the materials, equipment, and labor to conduct the pressure and leakage tests. Use a test pump, pressure gauge, and a means of measuring the water necessary to maintain the required pressure during the prescribed testing time. All pressure and leakage testing shall be done in the presence of the Utility Owner and RDOT Project Coordinators as a condition precedent to the approval and acceptance of the system. All pipes shall have been thoroughly flushed prior to testing. Simultaneous or separate pressure and leakage tests may be performed.
2. All water for testing and flushing shall be potable water provided by the Contractor, at no cost to the Utility Owner or RDOT, from an approved source. Flow velocity during line filling shall not exceed 2 feet (0.6 m) per second (fps).
3. Testing Requirements
 - a. Water mains shall be tested in sections between valves, thereby, testing each valve for secure closure. Testing shall be done immediately after installation and backfilling has been completed.
 - b. The mains shall be tested in accordance with the latest revision of AWWA C600 for ductile iron and C605 for PVC under an average hydrostatic pressure of the greater of 1.5 times the maximum working pressure or 150 psi as measured at the lowest point in the system for a minimum of 2 hours. Pressure shall be maintained until all sections under testing have been checked for evidence of leakage.
 - c. While the system is being filled with water, air shall be carefully and completely exhausted. If permanent air vents are not located at all high points, the Contractor shall install corporation stops or fittings and valves at such points at no additional expense to the Utility so the air can be expelled as the pipe system is slowly filled.
 - d. Makeup water shall be added, as required, to maintain the pressure within 5 psi of the test pressure. The quantity used shall be measured by pumping from a calibrated container. The maximum amount of makeup water allowed shall be determined by the following formula:

$$L = \frac{SD P^{0.5}}{148,000}$$

148,000

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in which,

L = Allowable Leakage in gallons per hour

S = Length of pipe being tested in feet

D = Nominal pipe diameter in inches

P = Average test pressure during the test in psi gauge

- e. Visible leaks shall be corrected regardless of total leakage shown by test. All pipe fittings and other materials found to be defective under test shall be removed and replaced. Lines which fail to meet test requirements shall be repaired and retested as necessary until test requirements are met. No additional compensation shall be made for repairs or retesting.

670.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

670.4 Measurement

Incidentals including excavation, rock removal, backfilling, disinfection, testing, temporary water connections, pavement removal, pavement replacement, and other incidentals required for the installation of water distribution items are not measured for separate payment and shall be included in the applicable Pay Items below. Water mains, service lines, and other associated Items of work in this Specification, complete, in place, and accepted, are measured for payment as follows:

A. Ductile Iron Water Mains

Ductile iron water mains shall be measured in linear feet (meters) for each size, thickness class, and type (restrained, non-restrained) installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

B. PVC Water Main

PVC water mains shall be measured in linear feet (meters) for each size and type (restrained, non-restrained) installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

C. Fusible PVC Water Main

Fusible PVC water mains shall be measured in linear feet (meters) for each size and type installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

D. HDPE Water Main

HDPE water mains shall be measured in linear feet (meters) for each size and type installed. Measurement shall be horizontally above the centerline of the pipe and shall include the length of valves and fittings.

E. Ductile Iron Fittings

Ductile iron fittings are considered subsidiary to the water line in which they are used and are not measured for separate payment. This Item includes, but is not limited to, wyes, tees, bends, crosses, sleeves, plugs and caps, and reducers.

F. Restrained Joints

Joint restraints used with the installation of PVC or ductile iron pipe are considered subsidiary to the water line in which they are used and are not measured for separate payment.

G. Gate Valves

Gate valves shall be measured on an individual basis for each size valve and box assembly acceptably installed.

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H. Butterfly Valves

Butterfly valves shall be measured on an individual basis on the number of each size valve and box assembly acceptably installed.

I. Tapping Sleeve and Valve Assembly

Tapping sleeve and valve assemblies shall be measured on an individual basis on the number of each size tapping sleeve and valve assembly acceptably installed.

J. Double Strap Saddle

Double strap saddles shall be measured on an individual basis on the number of each size double strap saddle acceptably installed.

K. Fire Hydrant Assemblies

Fire hydrant assemblies shall be measured on an individual basis on the number of hydrants acceptably installed.

L. Water Service Lines

Service lines shall be measured in linear feet (meters) for each size of service pipe installed. Measurements are made from end to end and from center of lines to ends of branches and include tapping saddle, sleeve, valves, service connection assemblies, sleeves, adapters, and fittings.

M. Air Release Valve Assembly

Air release valve assemblies shall be measured on an individual basis on the number of each size and type of air release valve assembly acceptably installed.

N. Pressure Reducing / Sustaining Valve

Pressure reducing/sustaining valve shall be measured on an individual basis on the number of each pressure reducing/sustaining valves acceptably installed.

O. Blow-Off Assemblies

Blow-off assemblies shall be measured on an individual basis on the number of each blow-off assembly acceptably installed.

P. Backflow Prevention Assembly

Backflow prevention assemblies shall be measured on an individual basis on the number of each size and type backflow preventer acceptably installed.

Q. Water Meter

Water meters shall be measured on an individual basis on the number of each size meter acceptably installed.

R. Steel Casing

Steel casing pipe of the wall thickness and diameter specified shall be measured by the linear foot for each size and thickness of steel casing pipe installed. Measurement shall be horizontally above the centerline of the casing.

S. Relocation of Existing Fire Hydrant Assemblies, Air Release Valves, Water Meters, Water Backflow Preventers, Pressure Reducing or Sustaining Valves, Water Valves and Water Meter including Bypass and Vault

Relocation of existing fire hydrant assemblies, air release valves, water meters, backflow preventers, pressure reducing or sustaining valves, water valves, and water meter including bypass and vault shall be measured on an individual basis on the number of each acceptably relocated including relocation and final adjustment of boxes.

T. Adjustment of Existing Meter Boxes and Valve Boxes to Grade

Adjustment of existing meter boxes and valve boxes adjusted to grade in their original locations shall be measured on an individual basis on the number of each acceptably adjusted in accordance with Section 611.

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U. Adjustment of Blow-Off Assembly

Adjustment of blow-off assembly to grade in their original locations shall be measured on an individual basis on the number of each acceptably adjusted.

V. Adjustment of Existing Fire Hydrant Assembly

Adjustment of existing fire hydrant assembly to grade in their original locations shall be measured on an individual basis on the number of each acceptably adjusted.

W. Adjustment of Existing Backflow Preventers

Adjustment of existing backflow preventers to grade in their original locations shall be measured on an individual basis on the number of each acceptably adjusted.

X. Removal of Water Meters, Fire Hydrant Assemblies, Backflow Preventers, Water Valves, and Air Release Valves

Removal of existing water meters and boxes, fire hydrants assemblies, backflow preventers, water valves, and air release valves, shall be measured on an individual basis on the number of each removed.

Y. Adjustment of Water Service Lines

Adjustment of water service lines shall be measured in linear feet (meters) of service line pipe lowered or raised, and shall include the length of valves, fittings, meters, boxes, and other appurtenances. Measurements are made from end to end of actual adjustments.

Z. Concrete Thrust Blocks

Concrete thrust blocking installed shall be measured as indicated in Section 500 per cubic yard of concrete acceptably installed. When Concrete Thrust Blocks is not shown as a pay item, include the cost of the work in the bid price for the appropriate item.

AA. Concrete Thrust Collars

Concrete thrust collars shall be measured on an individual basis on the number of each size thrust collar acceptably installed. When Concrete Thrust Collars is not shown as a pay item, include the cost of the work in the bid price for the appropriate item

BB. Cut and Plug Existing Water Main

Cutting and plugging of existing water mains shall be measured on an individual basis per each instance of cutting and plugging existing mains as shown on the Plans.

CC. Removal of Water Mains

Unless specified removal of water mains shall be removed in accordance with Section 210. If specified removal of water mains shall be measured per linear foot for each size pipe actually removed in accordance with Section 610. Measurement shall be horizontally above the centerline of the pipe removed and shall include the length of valves and fittings.

DD. Line Stop

Line stops shall be measured on an individual basis on the number of each size line stop actually installed.

EE. Flowable Fill

Flowable fill shall be measured as indicated in Section 600 per cubic yard of flowable fill acceptably installed. When flowable fill is not shown as a pay item, include the cost of the work in the bid price for the appropriate item.

FF. Insertion Valve

Insertion valves shall be measured on an individual basis on the number of each size valve acceptably installed.

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GG. Three-Dimensional (3D) Survey

Three-dimensional survey shall be measured as one lump sum for a complete and accepted survey. This item will be included in the overall pipe measurement. No separate payment for this work.

670.4.01 Limits

General Provisions 101 through 150.

670.5 Payment

The Contract Unit Price for each Item, complete and accepted, shall include all costs incidental to the construction of the Item according to the Plans and as specified in this Section. The unit prices bid shall include due allowance for the salvage value of all materials removed from existing or temporary lines and not installed in the completed work. All such surplus items shall become the property of the Contractor unless such surplus items are specified to be salvaged. Payment for any Item listed below is full compensation for the Item or Items complete in place.

A. Ductile Iron Water Mains

Ductile iron mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of pipe, joints and jointing materials, anchoring, warning tape, polyethylene encasement, protection of existing utilities, connections to existing water mains, sampling taps, temporary blow-offs, flushing, cleaning, pigging, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration and all work and materials necessary to place the pipe into service.

B. PVC Water Main

PVC water mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of pipe, anchoring, tracer wire, warning tape, protection of existing utilities, connections to existing water mains, sampling taps, temporary blow-offs, flushing, cleaning, pigging, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the pipe into service.

C. Fusible PVC Water Main

Fusible PVC water mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, entry/exit pits, installation of pipe, joints and jointing materials, tracer wire, warning tape, mechanical joint adapters, protection of existing utilities, connections to existing water mains, fusion process materials and equipment, directional drilling materials and equipment, tracking system, assembling, welding, supporting, stringing, pulling, pigging, cleaning, sampling taps, temporary blow-offs, flushing, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, and restoration, and all incidentals necessary to place the pipe into service except where such items are shown to be paid for under a separate Pay Item.

D. HDPE Water Main

HDPE water mains shall be paid for at the unit price per linear foot for each diameter pipe installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, entry/exit pits, installation of pipe, tracer wire, warning tape, mechanical joint adapters, protection of existing utilities, connections to existing water mains, fusion process materials and equipment, directional drilling materials and equipment, tracking system, assembling, welding, supporting, stringing, pulling, pigging, cleaning, sampling taps, temporary blow-offs, flushing,

chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, and restoration, and all incidentals

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necessary to place the pipe into service except where such items are shown to be paid for under a separate Pay Item.

E. Ductile Iron Fittings

Ductile iron fittings are considered subsidiary to the water line in which they are used and are not measured for separate payment as outlined in the manufacturers' catalogues and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of fittings, joints and jointing materials, anchoring, warning tape, polyethylene encasement, protection of existing utilities, flushing, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, all other related and necessary materials, work and equipment required to install a complete and operable pipeline fitting. This Item includes, but is not limited to, wyes, tees, bends, crosses, sleeves, plugs and caps, couplings, and reducers.

F. Restrained Joints

Restrained joints are considered subsidiary to the water line in which they are used and are not measured for separate payment as outlined in the manufacturers' catalogues and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting, shoring, installation of the restraint device, polyethylene encasement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the restrained joint.

G. Gate Valves

Gate valves shall be paid for at the unit price per each size gate valve and box assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the gate valves (including valve box), concrete pad or collar, valve identification disc, valve marker, valve tag, polyethylene encasement, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the gate valve and place it in service.

H. Butterfly Valves

Butterfly valves shall be paid for at the unit price per each size butterfly valve and box assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the butterfly valves including valve box, concrete pad or collar, valve identification disc, valve marker, valve tag, polyethylene encasement, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration and all work and materials necessary to install the butterfly valve and place it in service.

I. Tapping Sleeve and Valve Assembly

Tapping sleeve and valves assemblies shall be paid for at the unit price per each size tapping sleeve and valve assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of tapping sleeves and valve assemblies including valve box, concrete pad or collar, valve marker, valve tag, polyethylene encasement, protection of existing utilities, tapping the potable water main, chlorine for disinfection, disinfection, sampling points, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and necessary hardware to install the tapping sleeve assembly and valve and place it in service.

J. Tapping Sleeve

Tapping sleeves shall be paid for at the unit price per each size tapping sleeve installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of tapping sleeves, concrete pad

or collar, valve marker, valve tag, polyethylene encasement, protection of existing utilities, tapping the potable water main, chlorine for disinfection, disinfection, sampling points, backfilling, backfill material, disposal of unsuitable backfill

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materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and necessary hardware to install the tapping sleeve and place it in service.

K. Double Strap Saddle

Double strap saddles shall be paid for at the unit price per each size double strap saddle installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of double strap saddles, concrete pad or collar, valve marker, valve tag, polyethylene encasement, protection of existing utilities, tapping the potable water main, chlorine for disinfection, disinfection, sampling points, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and necessary hardware to install the double strap saddle.

L. Fire Hydrant Assembly

Fire hydrant assemblies shall be paid for at the unit price per each hydrant installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the fire hydrant assemblies (all configurations), vertical extensions, tapping sleeve, valve, hydrant lead piping, joint connections, fittings, tees, restraints, crushed stone drain, polyethylene encasement, protection of existing utilities, valve box, concrete pad or collar, valve identification disc, valve marker, valve tag, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the fire hydrant assembly and place it in service.

M. Water Service Line

Water service lines shall be paid for at the unit price per linear feet (meters) of the size service line installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of water service line, tracer wire, tapping saddle, sleeve, corporation stops, fittings, curb stops, casing pipe, plugging abandoned water service connection, removal of abandoned water service line, protection of existing utilities, locating and connection to existing or new water main, chlorine for disinfection, disinfection, sampling points, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the water service line into service. Water meter and box shall be paid for under a separate Pay Item.

N. Water Meter and Box

Water meters shall be paid for at the unit price per each size water meter installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the meter and box, adjustment to final grade, fittings, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the meter into service except where such items are to be paid for under a separate Pay Item.

O. Backflow Prevention Assembly

Back flow prevention assemblies shall be paid for at the unit price per each type backflow preventer installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the backflow preventer, concrete vault, adjustment to final grade, testing and certification, fittings, tees, restraints, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the meter into service except where such items are to be paid for under a separate Pay Item.

P. Air Release Valve Assembly

~~Air release valve assemblies shall be paid for at the unit price per each size and type of air release valve assembly~~

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installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the air release assembly, tapping saddle, isolation valve, reducers, piping, restraints, fittings, tracer wire, concrete manhole or vault, ring and cover, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the air release assembly into service.

Q. Pressure Reducing / Sustaining Valve

Pressure reducing / sustaining valve shall be paid for at the unit price per each size and type of pressure reducing / sustaining valve installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the pressure reducing / sustaining valve, reducers, piping, restraints, fittings, tracer wire, concrete manhole or vault, ring and cover, tracer wire, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the pressure reducing / sustaining valve into service.

R. Blow-Off Assembly

Blow-off assemblies shall be paid for at the unit price per each blow-off assembly installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the blow-off assembly, valves, valve boxes, concrete pad or collar, piping, restraints, fittings, tracer wire, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to place the blow-off assembly into service.

S. Steel Casing

Steel casing pipe shall be paid for at the unit price per linear foot according to the diameter and thickness of the steel casing installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, protection of existing utilities, steel casing pipe, skid, steel straps, coatings, casing spacers, end seals, boring and jacking pits, backfilling, backfill materials, disposal of unsuitable backfill material, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the steel casing except where such items are shown to be paid for under a separate Item. The carrier pipe shall be paid from other applicable Pay Item.

T. Relocation of Existing Air Release Valve

Relocation of air release valves shall be paid for at the unit price per each air release valve assembly relocated and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing air release valve assembly, installation at another location, piping, restraints, tracer wire, fittings, adjustment to final grade, polyethylene encasement, protection of existing utilities, chlorine for disinfection, disinfection backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration and all work necessary to locate, remove and relocate the air release valve except where such items are shown to be paid for under a separate Pay Item.

U. Relocation of Existing Fire Hydrant Assembly

Relocation of fire hydrants shall be paid for at the unit price per each hydrant assembly relocated and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing fire hydrant assembly, installation at another location, vertical extensions, hydrant lead piping, joint connections, fittings, tees,

restraints, crushed stone drain, polyethylene encasement, valve box, concrete pad or collar, valve identification disc, valve marker, adjustment to final grade, protection of existing utilities, chlorine for disinfection, disinfection, backfilling,

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backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work necessary to locate, remove and relocate the hydrant.

V. Relocation of Existing Backflow Prevention Devices

Relocation of backflow prevention devices shall be paid for at the unit price per each backflow preventer relocated and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing backflow preventer, installation at another location, adjustment to final grade, testing and certification, fittings, tees, restraints, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work necessary to locate, remove and relocate the backflow prevention device. The service line from the main to the relocated backflow preventer shall be paid for under a separate Pay Item.

W. Relocation of Water Meter and Box

Relocation of existing water meter and boxes shall be paid for at the unit price of each water meter and box relocated and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of existing water meter and box, installation at another location, adjustment to final grade, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to relocate the water meter and box except where such items are shown to be paid for under a separate Item. The new service line from the main to the relocated meter shall be paid for under a separate Pay Item.

X. Relocation of Water Meter, including Bypass and Vault

Relocation of existing water meter including bypass and vault shall be paid for at the unit price of each water meter including bypass and vault relocated and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of existing water meter, bypass and vault, installation at another location, adjustment to final grade, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to relocate the water meter including bypass and vault except where such items are shown to be paid for under a separate Item. The new service line from the main to the relocated meter, bypass and vault shall be paid for under a separate Pay Item.

Y. Relocation of Pressure Reducing/Sustaining Valve

Relocation of pressure reducing/sustaining valve shall be paid for at the unit price of each pressure reducing/sustaining valve relocated and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of existing water meter and box, installation at another location, adjustment to final grade, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to relocate the water meter and box except where such items are shown to be paid for under a separate Item. The new service line from the main to the relocated pressure reducing/sustaining valve shall be paid for under a separate Pay Item.

Z. Relocation of Water Valve and Box

Relocation of existing water valves and boxes shall be paid for at the unit price of each water valve and box relocated and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of existing water meter and box, installation at another location, adjustment to final grade, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials

necessary to relocate the water meter and box except where such items are shown to be paid for under a separate Item.

~~The new service line from the main to the relocated valve shall be paid for under a separate Pay Item.~~

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AA. Adjustment of Existing Water Service Line

Adjustment of existing water service lines shall be paid in accordance with Section 611, for at the unit price per linear foot of service line adjusted and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, adjustment of service line, tracer wire and splices, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the service line except where such items are shown to be paid for under a separate Pay Item.

BB. Adjustment of Existing Water Valve Boxes to Grade

Adjustment of existing valve boxes shall be paid for in accordance with Section 611, at the unit price per each valve box adjusted to final grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, valve case and lid, trench adapter and operating nut extensions/reductions, tracer wire and splices, tracer wire riser and threaded plug, concrete pad, valve identification disc, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the valve box.

CC. Adjustment of Blow-off Assembly

Adjustment of existing blow-off assemblies shall be paid for at the unit price per each blow-off adjusted to final grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, valve case and lid, trench adapter and operating nut extensions/reductions, tracer wire and splices, tracer wire riser and threaded plug, piping, concrete pad or collar, valve identification disc, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the blow-off assembly.

DD. Adjustment of Existing Water Meter Boxes to Grade

Adjustment of existing meter boxes shall be paid for at the unit price per each meter box adjusted to finished grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, adjustment of water meter box to final grade, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the water meter box.

EE. Adjustment of Backflow Preventer

Adjustment of existing backflow preventers shall be paid for at the unit price per each backflow preventer adjusted to finished grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, adjustment of backflow preventer to final grade, adjustment of backflow preventer vault to final grade, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the water meter box.

FF. Adjustment of Existing Fire Hydrant Assembly to Grade

Adjustment of existing fire hydrants shall be paid for , at the unit price per each hydrant adjusted to finished grade and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, adjustment of hydrant, protection of existing utilities, chlorine for disinfection, disinfection, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to adjust the hydrant.

GG. Removal of Water Valve and Box

~~Removal of water valves shall be paid for at the unit price per each valve removed and shall cover the cost for all~~

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materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing water valve and box, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of removed valves identified to be salvaged, and all work necessary to remove the valve and box.

HH. Removal of Water Meter and Box

Removal of water meters shall be paid for at the unit price per each meter removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing water meter and box, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of removed meters and boxes identified to be salvaged, and all work necessary to remove the meter.

II. Removal of Fire Hydrant Assembly

Removal of fire hydrant assemblies shall be paid for at the unit price per each hydrant assembly removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing fire hydrant assembly, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of removed hydrants identified to be salvaged, and all work necessary to remove the hydrant.

JJ. Removal of Air Release Valve

Removal of air release valves shall be paid for at the unit price per each air release valve removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, removal of air release valve assemblies, piping, concrete manholes or vaults, and fabricated enclosures, backfilling, backfill materials, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of air release valves identified to be salvaged, and all work necessary to remove the air release valve.

KK. Removal of Backflow Prevention Devices

Removal of backflow prevention devices shall be paid for at the unit price per each backflow preventer removed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheet and shoring, removal of existing backflow preventer and vault, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, storage and delivery of removed backflow preventers identified to be salvaged, and all work necessary to remove the backflow preventers.

LL. Concrete Thrust Blocks

Concrete thrust blocks shall be paid for at the unit price per cubic yard of concrete complete in place as indicated in Section 500 and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, concrete, forming, reinforcement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install a complete thrust block. When Concrete Thrust Blocks is not shown as a pay item, include the cost of the work in the bid price for the appropriate item

MM. Concrete Thrust Collars

Concrete thrust collars shall be paid for at the unit price per each size of thrust collar and shall cover the cost of all materials, transportation, labor, equipment, excavation, sheeting and shoring, reinforced concrete thrust collars, retainer glands, reinforcement, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install a complete thrust collar. When Concrete Thrust Collar is not shown as a pay item, include the cost of the work in the bid price for the appropriate item.

NN. Removal of Water Main

~~Removal of water mains shall be paid for at the unit price per linear foot of the size of water main to be removed in~~

Section 670—Water Distribution System

accordance with Section 610 and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, bypass pumping (as required), restoration, and all work and materials necessary to locate, remove and dispose of the pipe and associated appurtenances. Unless indicated for removal in a separate Pay Item, appurtenances to be removed shall include but not be limited to fittings, isolation valves, air release valves, valve boxes, blow-offs, steel casings, casing spacers, fire hydrant assemblies, water service lines, water meter boxes, thrust blocks, and concrete. All such surplus items shall become the property of the Contractor unless specified to be salvaged by the Utility Owner.

OO. Cut and Plug Existing Water Main

Cutting and plugging of existing water mains shall be paid for at the unit price per each installation and shall cover all materials, transportation, labor, equipment, excavation, sheeting and shoring, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to cut and plug existing water mains, except where such items are shown to be paid for under a separate Pay Item.

PP. Line Stops

Line stops shall be paid for at the unit price per each size line stop installed and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the line stop assemblies, valves, valve boxes, fittings, restraints, protection of existing utilities, chlorine for disinfection, disinfection, sampling points, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the gate valve and place it in service.

QQ. Flowable Fill

Flowable fill shall be paid for at the unit price per cubic yard of flowable fill complete in place as indicated in Section 600 and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, flushing, plugging air release valves and service connections, installation of flowable fill, protection of existing utilities, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, utility crossings, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the gate valve and place it in service. When flowable fill is not shown as a pay item, include the cost of the work in the bid price for the appropriate item

RR. Insertion Valve

Insertion valves shall be paid for at the unit price per each size valve inserted and shall cover the cost for all materials, transportation, labor, equipment, excavation, sheeting and shoring, installation of the valve, valve boxes, fittings, restraints, concrete pad or collar, valve identification disc, valve marker, polyethylene encasement, protection of existing utilities, chlorine for disinfection, disinfection, sampling points, backfilling, backfill material, disposal of unsuitable backfill materials, tamping, testing, densities, dewatering, trench stabilization, clean-up, restoration, and all work and materials necessary to install the insertion valve and place it in service.

SS. Three-Dimensional (3D) Survey

Three-dimensional survey cost will be included in the overall pipe measurement and no separate payment for this work will be made, and it shall cover the costs for all non-destructive methods of locating installed utilities and associated electronic deliverables per Utility Owner specifications.

Payment will be made under:

670-1080	Water Main, 8 in	2780 LF
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Section 670—Water Distribution System

670-1060	Water Main, 6 in	20 LF
670-2080	Gate Valve, 8 in	3 EA
670-3087	Tapping Sleeve and Valve Assembly, 8 in x 8 in	4 EA
670-4000	Fire Hydrant assembly with valve	3 EA
670-5010	Water Service Line 1 in	80 LF
670-9710	Relocate Existing Fire Hydrant	1 EA
670-9730	Relocate existing water meter including box	3 EA
670-7215	Insertion Valve, 6 in	1 EA
670-1600	Cut and Plug Existing Water Main	4 EA
670-4510	Concrete Thrust Collar, 8 in	5 EA
670-2002	Valve Markers	9 EA
670-9450	Rock Excavation	900 CY
171-0030	Temporary Silt Fence, Type C	2700 LF
165-0030	Maintenance of Temporary Silt Fence, Type C	1350 LF
163-0240	Mulch	2 TN
163-0232	Temporary Grassing	0.40 AC

670.5.01 Adjustments

General Provisions 101 through 150.

ROCKDALE COUNTY, GEORGIA

2017 SPLOST CONSTRUCTION PROGRAM

ITB # 19-26

CR 57/Klondike Road @ CR 62/McDaniel Mill Road/Hurst Road

CSSTP-0006-00(932) P.I. No. 0006932

CONTRACT AGREEMENT

For

Rockdale County Department of Transportation (RDOT)

CONTRACT # C-2019 - _____

CONTRACT AGREEMENT

THIS AGREEMENT made by and between ROCKDALE COUNTY, GEORGIA, hereinafter called "**County**", and _____ a contractor doing business as a corporation of the City of _____, County of _____, and State of _____, hereinafter called "**Contractor**".

WITNESSETH: that for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the **County**, the **Contractor** hereby agrees to commence and complete the construction described as follows:

Furnish all labor, materials and equipment for the intersection reconstruction of the Klondike Road/McDaniel Mill Road/Hurst Road intersection to a roundabout in Rockdale County. The project will relocate Klondike Road to a new intersection approximately 500 feet south of the existing intersection. Approximately 2500 feet of Klondike Road will be relocated as part of this project on both sides of the new intersection. The relocated intersection will be constructed as a single-lane roundabout. The existing intersection along McDaniel Mill Road will remain and serve as the eastern terminus of Hurst Road, but the fifth leg of the existing intersection will be removed. The McDaniel Mill Road profile will be lowered by several feet immediately north of the existing intersection in order to improve intersection sight distance. The proposed typical section will include 12-foot lanes and a 10' rural shoulder, except for the roundabout approaches and McDaniel Mill north of the roundabout, which will have curb and gutter and a 5-foot sidewalk. The total length of the project is 0.81 miles. This project is located in unincorporated Rockdale County, approximately 3 miles east of the City of Conyers.

hereinafter called the "**Project**", for the sum of \$**XXX,XXX.XX** (**XXX, XX, and XX Cents**) and all extra work in connection therewith, under the terms as stated in the General Conditions, Special Provisions, Appendices and Detailed Specifications of the Contract, and at **Contractor's** own cost and expense necessary to furnish all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services to complete the said project in accordance with the conditions and prices stated in the proposal, the General Conditions, Special Provisions, Appendices, and Detailed Specifications of the Contract, the plans, which include all explanatory matter thereof, as prepared by Rockdale County, the specifications and contract documents as enumerated in Section 105.04 of the General Conditions, hereinafter called the "**Work**", all of which are made a part hereof and collectively constitute the Contract.

The **Contractor** shall promptly commence the Work with adequate force and equipment within ten (10) calendar days from receipt of Notice to Proceed, or as may be specified by Special Provision, and to complete the Work by **548 Days from Notice to Proceed** or as may be specified by Special Provision.

The **County** agrees to pay the **Contractor** in current funds for the performance of the Contract subject to additions and deductions as provided in the General Conditions of the Contract, and to make payments on account thereof as provided in Section 109 of the Specifications, as modified in the General Conditions and Special Provisions.

CONTRACT
page 2 of 2

IN WITNESS WHEREOF, the parties to those presents have executed this Contract in two (2) counterparts, each of which shall be deemed an original.

Executed this ___ day of _____, 201__.

ROCKDALE COUNTY, GEORGIA

ATTEST: _____ By: _____ (Seal)
Ex-Officio Clerk Osborn Nesbitt, Sr.
Chairman, Board of Commissioners

Approved as to Form:

County Attorney

CONTRACTOR

ATTEST: _____ By: _____ (Seal)
Secretary or Assistant (Print)
President or Vice President

100% PERFORMANCE BOND
page 1 of 2

KNOW ALL MEN BY THESE PRESENTS: that, _____, as Principal, hereinafter called **Contractor**, and _____, a corporation organized and existing under the laws of the State of _____, hereinafter called **Surety**, are held and firmly bound unto ROCKDALE COUNTY, GEORGIA, as obligee, hereinafter called **County**, in the amount of **\$XXX,XXX.XX (XXX, XXX, XXX and XX Cents)** for the payment whereof **Contractor** and **Surety** bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, **Contractor** has by written agreement dated _____, 201__, entered into a contract with the **County** to:

Furnish all labor, materials and equipment for the intersection reconstruction of the Klondike Road/McDaniel Mill Road/Hurst Road intersection to a roundabout in Rockdale County. The project will relocate Klondike Road to a new intersection approximately 500 feet south of the existing intersection. Approximately 2500 feet of Klondike Road will be relocated as part of this project on both sides of the new intersection. The relocated intersection will be constructed as a single-lane roundabout. The existing intersection along McDaniel Mill Road will remain and serve as the eastern terminus of Hurst Road, but the fifth leg of the existing intersection will be removed. The McDaniel Mill Road profile will be lowered by several feet immediately north of the existing intersection in order to improve intersection sight distance. The proposed typical section will include 12-foot lanes and a 10' rural shoulder, except for the roundabout approaches and McDaniel Mill north of the roundabout, which will have curb and gutter and a 5-foot sidewalk. The total length of the project is 0.81 miles. This project is located in unincorporated Rockdale County, approximately 3 miles east of the City of Conyers.

in accordance with drawings and specifications prepared by Rockdale County, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, the condition of this obligation is such that, if **Contractor** shall promptly and faithfully perform said Contract, then this obligation shall be null and void, otherwise it will remain in full force and effect.

The **Surety** hereby waives notice of any alteration or extension of time made by the **County**.

Whenever **Contractor** shall be, and declared by **County** to be, in default under the Contract, the **County** having performed **County's** obligation thereunder, the **Surety** may promptly remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions; or,
2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by **Surety** of the lowest bidder, or, if the **County** elects, upon determination by the **County** and **Surety** jointly of the lowest responsible bidder, arrange for a Contract between such Bidder and the **County**, and make available as work progresses (even though there should be

100% PERFORMANCE BOND
page 2 of 2

a default or a succession of defaults under the Contract or Contract of Completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract price; but not exceeding, including other costs and damages for which the **Surety** may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price", as used in this paragraph shall mean the total amount payable by **County** to **Contractor** under the Contract and any amendments hereto, less the amount properly paid by **County** to **Contractor**.

No action can be instituted on this bond after one year from the completion of the Contract and the acceptance by the **County** of the work thereunder.

Signed and sealed this ___ day of _____, 201__.

in the presence of:

Contractor

_____ By: _____ (SEAL)
Witness

Surety

_____ By: _____ (SEAL)
Witness

100% LABOR AND MATERIAL PAYMENT BOND
page 1 of 2

KNOW ALL MEN BY THESE PRESENTS: that, _____, as Principal, hereinafter called **Contractor**, and _____, a corporation organized and existing under the laws of the State of _____, hereinafter called **Surety**, are held and firmly bound unto **ROCKDALE COUNTY, GEORGIA**, as obligee, hereinafter called **County**, in the amount of **\$XXX,XXX.XX (XXX, XXX, XXX, XXX, and XX cents)** for the payment whereof **Contractor** and **Surety** bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor as by written agreement dated _____, 201__, entered into a Contract with County to:

Furnish all labor, materials and equipment for the intersection reconstruction of the Klondike Road/McDaniel Mill Road/Hurst Road intersection to a roundabout in Rockdale County. The project will relocate Klondike Road to a new intersection approximately 500 feet south of the existing intersection. Approximately 2500 feet of Klondike Road will be relocated as part of this project on both sides of the new intersection. The relocated intersection will be constructed as a single-lane roundabout. The existing intersection along McDaniel Mill Road will remain and serve as the eastern terminus of Hurst Road, but the fifth leg of the existing intersection will be removed. The McDaniel Mill Road profile will be lowered by several feet immediately north of the existing intersection in order to improve intersection sight distance. The proposed typical section will include 12-foot lanes and a 10' rural shoulder, except for the roundabout approaches and McDaniel Mill north of the roundabout, which will have curb and gutter and a 5-foot sidewalk. The total length of the project is 0.81 miles. This project is located in unincorporated Rockdale County, approximately 3 miles east of the City of Conyers.

in accordance with drawings and specifications prepared by Rockdale County, which contract is by reference made a part hereof, and is hereafter referred to as the Contract.

NOW, THEREFORE, the condition of this obligation is such that if the Contractor shall promptly make payment to all claimants as is herein below defined, for all labor and materials used or reasonably required for use in the performance of the Contract, this obligation shall be null and void; otherwise, it shall remain in full force and effect subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Contractor or with a Subcontractor of the Contractor for labor, material, or both, used or reasonably required for use in the performance of the Contract; labor and material being construed to include that part of water, gas, power, light, heating oil, gasoline, telephone service, rental of equipment, or repair of equipment directly applicable to the Contract.
2. The above-named Contractor and Surety hereby jointly and severally agree with the County that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant,

100% LABOR AND MATERIAL PAYMENT BOND
page 2 of 2

and have execution thereon. The County shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

A. Unless claimant, other than one having a direct contract with the Contractor, shall have given written notice to any two of the following: the Contractor, the County, or the Surety above-

named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Contractor, the County, or the Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State in which the aforesaid project is located, save that such service need not be made by a public officer.

B. After one year from the completion of the Contract and the acceptance by County of the Work thereunder; it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

C. Other than in a state court of competent jurisdiction in and for the County or other political subdivision of the State in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety for mechanics' liens which may be filed on record against improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this ____ day of _____, 201__.

Contractor

By: _____ (Seal)

Witness

Surety

By: _____ (Seal)

Witness

This bond is issued simultaneously with Performance Bond in favor of the County.
Georgia Representative

SUBCONTRACTOR NOTIFICATION LIST

Required information on Subcontractors doing work in Rockdale County:

Please list any Subcontractors, the address, Business License number, scope of work and start date, and percent of work assigned for each Subcontractor who may be doing work in the County.

General Contractor/Developer: _____

License Number: _____

Subcontractor: _____

License Number: _____ Start Date: _____

Scope of Work: _____ Percent of Work: _____

Subcontractor: _____

License Number: _____ Start Date: _____

Scope of Work: _____ Percent of Work: _____

Subcontractor: _____

License Number: _____ Start Date: _____

Scope of Work: _____ Percent of Work: _____

Subcontractor: _____

License Number: _____ Start Date: _____

Scope of Work: _____ Percent of Work: _____

Subcontractor: _____

License Number: _____ Start Date: _____

Scope of Work: _____ Percent of Work: _____

cc: Rockdale County Department of Transportation
Rockdale County Department of Finance

NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR

State of _____)

County of _____)

_____, being first duly sworn, deposes, and says that:

1. He is _____ (Owner, Partner, Officer, Representative, or Agent) of _____, hereinafter referred to as the "Subcontractor";
2. He is fully informed respecting the preparation and contents of the Subcontractor's Proposal submitted by the Subcontractor to _____, the Contractor, for certain work in connection with the _____ Contract pertaining to the Project in Rockdale County, Georgia;
3. Such Subcontractor's Proposal is genuine and is not a collusive or sham Proposal;
4. Neither the Subcontractor nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Proposal in connection with such Contract or to refrain from submitting a Proposal in connection with such Contract or has in any manner, directly or indirectly, sought by unlawful agreement or connivance with any other Bidder, firm, or person to fix the price or prices in said Subcontractor's Proposal, or to secure through collusion, conspiracy, connivance, or unlawful agreement any advantage against Rockdale County or any person interested in the proposed Contract; and,
5. The price or prices quoted in the Subcontractor's Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

Name _____ (Print)

Title _____

Subscribed and Sworn to before me

this _____ day of _____, 201__.

_____ (SEAL)

Title

FINAL AFFIDAVIT

TO: ROCKDALE COUNTY, GEORGIA

I, _____, hereby certify that all suppliers of materials, equipment and service, Subcontractors, mechanics, and laborers employed by _____ or any of his Subcontractors in connection with the construction of

Furnish all labor, materials and equipment for the intersection reconstruction of the Klondike Road/McDaniel Mill Road/Hurst Road intersection to a roundabout in Rockdale County. The project will relocate Klondike Road to a new intersection approximately 500 feet south of the existing intersection. Approximately 2500 feet of Klondike Road will be relocated as part of this project on both sides of the new intersection. The relocated intersection will be constructed as a single-lane roundabout. The existing intersection along McDaniel Mill Road will remain and serve as the eastern terminus of Hurst Road, but the fifth leg of the existing intersection will be removed. The McDaniel Mill Road profile will be lowered by several feet immediately north of the existing intersection in order to improve intersection sight distance. The proposed typical section will include 12-foot lanes and a 10' rural shoulder, except for the roundabout approaches and McDaniel Mill north of the roundabout, which will have curb and gutter and a 5-foot sidewalk. The total length of the project is 0.81 miles. This project is located in unincorporated Rockdale County, approximately 3 miles east of the City of Conyers.

in ROCKDALE COUNTY have been paid and satisfied in full as of _____, 201__, and that there are no outstanding obligations or claims of any kind for the payment of which Rockdale County on the above named project might be liable, or subject to, in any lawful proceeding at law or in equity.

Signature _____

Title _____

Personally appeared before me this _____ day of _____, 201__.

_____, who under oath deposes and says that he is of the firm of _____ that he has read the above statement and that to the best of his knowledge and belief same is an exact true statement.

Notary Public _____

My Commission Expires _____

Date _____

CONTRACT SCHEDULE OF ITEMS

Furnish all labor, materials and equipment for the intersection reconstruction of the Klondike Road/McDaniel Mill Road/Hurst Road intersection to a roundabout in Rockdale County. The project will relocate Klondike Road to a new intersection approximately 500 feet south of the existing intersection. Approximately 2500 feet of Klondike Road will be relocated as part of this project on both sides of the new intersection. The relocated intersection will be constructed as a single-lane roundabout. The existing intersection along McDaniel Mill Road will remain and serve as the eastern terminus of Hurst Road, but the fifth leg of the existing intersection will be removed. The McDaniel Mill Road profile will be lowered by several feet immediately north of the existing intersection in order to improve intersection sight distance. The proposed typical section will include 12-foot lanes and a 10' rural shoulder, except for the roundabout approaches and McDaniel Mill north of the roundabout, which will have curb and gutter and a 5-foot sidewalk. The total length of the project is 0.81 miles. This project is located in unincorporated Rockdale County, approximately 3 miles east of the City of Conyers.

Contract
Scope:

Vendor: _____

Signature: _____

**A COPY OF THE BID SCHEDULE WILL BE DUPLICATED AS PART OF
THE CONTRACT.**

END OF SECTION

ROCKDALE COUNTY, GEORGIA

2017 SPLOST CONSTRUCTION PROGRAM

ITB # 19-26

CR 57/Klondike Road @ CR 62/McDaniel Mill Road/Hurst Road

CSSTP-0006-00(932) P.I. No. 0006932

GENERAL CONDITIONS

For

Rockdale County Department of Transportation (RDOT)

CONTRACT # C-2019-_____

GENERAL CONDITIONS

Unless otherwise directed, all work performed under this contract shall be in accordance with the Georgia Department of Transportation Standard Specifications, Construction of Transportation Systems, 2013 Edition, and any Supplemental Specifications modifying them, except as noted below and in the Special Provisions.

Modification of Standard Specifications

SECTION 101 - DEFINITION AND TERMS

Section 101.10 BOARD

Delete as written and substitute the following:

"BOARD OF COMMISSIONERS OF ROCKDALE COUNTY, GEORGIA";

Section 101.13 CHIEF ENGINEER

Delete as written and substitute the following:

"THE ROCKDALE COUNTY DIRECTOR OF TRANSPORTATION"

Section 101.14 COMMISSIONER

Delete as written and substitute the following:

"THE CHAIRMAN OF THE BOARD OF COMMISSIONERS OF ROCKDALE COUNTY"

Section 101.16 CONTRACT

Delete the second paragraph and substitute the following:

"The Contract Documents shall be composed of the Advertisement for Bid; Notice to **Contractors**; Form of Bid Proposal; General Conditions; Special Provisions; Detail Specifications, as identified in Section 105.04; Form of Contract; Form of Bond(s); Addenda; the drawings, including all changes incorporated herein before their execution; and also any Change Orders and Supplemental Agreements that are required to complete the construction of The Work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument. No oral agreement or orders are to be considered as valid or as a part of the Contract."

Section 101.22 DEPARTMENT

Delete as written and substitute the following:

"THE ROCKDALE COUNTY DEPARTMENT OF TRANSPORTATION"

Section 101.24 ENGINEER

Delete as written and substitute the following:

"THE ROCKDALE COUNTY DIRECTOR OF TRANSPORTATION, ACTING DIRECTLY OR THROUGH HIS DULY AUTHORIZED REPRESENTATIVES."

Section 101.62 STATE HIGHWAY ENGINEER

Delete as written and substitute the following:

"THE ROCKDALE COUNTY DIRECTOR OF TRANSPORTATION, ACTING DIRECTLY OR THROUGH HIS DULY AUTHORIZED REPRESENTATIVES."

Section 101.74 SUPPLEMENTAL AGREEMENT

Retain as written and add the following:

"Any Supplemental Agreement that has a dollar value amount that is less than \$25,000.00 shall not require the assent of the Surety."

Section 101.81 TREASURER

Delete as written and substitute the following:

"THE ROCKDALE COUNTY DIRECTOR OF FINANCE"

Add Section 101.84:

Section 101.84 "COUNTY: THE ROCKDALE COUNTY BOARD OF COMMISSIONERS"

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS

Section 102.01 PREQUALIFICATION OF BIDDERS

Delete in its entirety and substitute the following:

"Proposals will be considered only from experienced and well-equipped Contractors engaged in work of this type and magnitude. Contractors must be presently prequalified to do this type of work with the Georgia Department of Transportation and have received a Certificate of Qualification in accordance with the Rules and Regulations approved and adopted by the State Transportation Board.

Bidders may be required to submit evidence setting forth qualifications which entitle him to considerations as a responsible Contractor. A list of work of similar character successfully completed within the last two years may be required giving the location, size and listing equipment available for use on this work. Before accepting any bid, the **County** may require evidence of the Contractor's financial ability to successfully perform the work to be accomplished under the contract.

The **County** may make such investigations as it deems necessary to determine the ability of the **Bidder** to perform the work, and the **Bidder** shall furnish to the **County** all such information and data for this purpose as the **County** may request. The **County** reserves the right to reject any bid if the evidence submitted by, or investigation of, such **Bidder** fails to satisfy the **County** that such **Bidder** is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. Conditional bids will not be accepted."

Section 102.03 CONTENTS OF PROPOSAL FORMS

Delete in its entirety and add the following:

"Upon request, the **County** will furnish the prospective **Bidder** with a Proposal Form. This form will state the location and description of the contemplated construction and will show the approximate estimate of the various quantities and kinds of work to be performed or materials to be furnished, and will have a Schedule of Items for which Unit Bid prices are invited. The Proposal Form will state the time in which The Work must be completed, the amount of the Proposal Guaranty, and the date of the opening of Proposals. The form

will also include any Special Provisions or requirements which vary from or are not contained in the Standard Specifications. All papers which are required to be submitted as part of the Proposal are identified in the Proposal Form, and those papers must not be altered except as directed by Addendum. The Plans, Specifications, and other documents designated in the Proposal Form will be considered a part of the Proposal whether attached or not. The prospective **Bidder** will be required to pay the sum stated in the Notice to Contractors for each copy of the Proposal Form and each set of Plans."

Section 102.05 EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF THE WORK

Add the following:

"Each **Bidder** must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful **Bidder** of his obligation to furnish all material and labor necessary to carry out the provisions of his Contract. Insofar as possible the **CONTRACTOR**, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor. Bidders, before making proposals, shall examine the plans and specifications and make such examinations on the ground as are necessary to thoroughly familiarize themselves with the nature and extent of the proposed construction and all local conditions affecting the same, as the **County** will not be responsible for **Bidder's** errors or misjudgment, nor for any information on local conditions or general laws or regulations.

No interpretation of the meaning of the plans and specifications or other pre-bid documents will be made to any bidder orally. Every request for such interpretations should be in writing and addressed to:

Rockdale County Finance Department Purchasing Division
Attn: Meagan Porch, Buyer
958 Milstead Avenue
Conyers, GA 30012
Phone: (770) 278-7557, Fax (770) 278-8910
E-mail: meagan.porch@rockdalecountyga.gov

and to be given consideration must be received at least six (6) calendar days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the Specifications which, if issued, will be mailed by registered mail, with return receipt requested, to all prospective **Bidders**, at the respective addresses furnished for such purposes, not later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such **Bidder** from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.

At the time of the opening of bids, each **Bidder** will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and Contract Documents (including all addenda). The failure or omission of any **Bidder** to examine any form, instruments or documents shall in no way relieve any bidder from any obligation in respect to his bid."

Section 102.06 PREPARATION OF PROPOSAL

Retain as written except delete the sixth and seventh paragraphs, and add the following:

"If a proposal is made by an individual, his name and post office address must be shown. If made by a firm or partnership, the name and post office address of each member of the firm or partnership must be shown. If made by a corporation, the person or persons signing the proposal must show the name of the state under which the laws of the corporation are chartered and his or their authority for signing same; the names, titles, and address of their President, Secretary, and Treasurer, and the corporate authority for doing business in Georgia."

Section 102.07 REJECTION OF PROPOSALS

Add the following subparagraphs:

I. The **County** reserves the right to reject any and all bids, to waive formalities and to re-advertise. It is understood that all bids are made subject to this Contract Agreement, that the **County** reserves the right to award the bid to the lowest, responsible Bidder, and in arriving at this decision, full consideration will be given to the reputation of the Bidder, his financial responsibility, and work of this type successfully completed.

J. The **County** also reserves the right to reject any and all bids from any person, firm, or corporation who is in arrears in any debt or obligation to Rockdale County, Georgia."

Section 102.08 PROPOSAL GUARANTY

Delete and substitute the following:

"No proposal will be considered unless it is accompanied by a certified check or acceptable Bid Bond in an amount not less than five percent (5%) of the amount bid and made payable to the Board of Commissioners of Rockdale County. Such Bid Bond shall be on the forms provided by the **County**.

Each bid must be accompanied by a Bid Bond prepared on the form of Bid Bond attached hereto, duly executed by the **Bidder** as **Contractor**, and having as surety thereon a surety company approved by the **County** and accepted by the U. S. Department of the Treasury and listed in Department Circular 570. The surety must be licensed to conduct business in the State of Georgia. The Bid Bond must be in the amount of 5% of the bid. No Proposal Guaranty will be considered to cover any Bid except the one to which it is attached.

Attorneys-in-fact who sign Bid Bonds must file a certified and effectively dated copy of their power of attorney."

Section 102.09 DELIVERY OF PROPOSALS

Delete in its entirety and substitute the following:

"All bids must be on forms in conformity with the proposal form included herein and must be for labor and materials called for in the Specifications, shown on the plans and bulletins issued prior to bidding. Bids must be submitted in a sealed envelope of sufficient size with the following clearly typed or printed on the outside:

Rockdale County Department of Finance
Proposal for Construction
Project Name
Date and Hour of Bid Opening
Company Name

If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form.

The entire proposal package as designated in the Proposal Form must be submitted with the bid. Failure to do so could result in the omission of pertinent documents and the rejection of the apparent low bid."

Four (4) hard copies and one (1) USB flash drive with a copy of the Bid in Adobe PDF format will be required for review purposes.

Section 102.10 WITHDRAWAL OR REVISION OF PROPOSALS

Add the following:

"Any **Bidder** may modify his bid by telegram, letter or facsimile transmission at any time prior to the scheduled closing time for receipt of bids, provided such communication is received by the **County** prior to the closing time and provided, further, the **County** is satisfied that a written confirmation of the transmitted modification over the signature of the bidder was mailed prior to the closing time. If written confirmation is not received within two days from the closing time, no consideration will be given to the transmitted modification."

SECTION 103 - AWARD AND EXECUTION OF CONTRACT

Section 103.01 CONSIDERATION OF PROPOSALS

Delete the third sentence in its entirety and substitute the following:

"In determining Unit Bid Prices, fractional parts of a cent less than one cent (\$0.01) will not be considered significant and will be dropped."

Section 103.02 AWARD OF CONTRACT

Delete in its entirety and substitute the following:

If a Contract is awarded, it will be awarded to the lowest responsible **Bidder**. The **County** will determine that **Bidder**, and, in so doing, the following elements will be considered: whether the **Bidder** involved (a) maintains permanent place of business; (b) has adequate plant equipment to do the work properly and expeditiously; (c) has a suitable financial status to meet obligations incident to the work; and (d) has appropriate technical experience (e) past performance on county contracts (i.e.: scheduling, coordination, cooperation, etc.) (f) past, pending, or threatened litigation, arbitration, or mediation with the **County**. The Contract will be awarded on the base bid only. Rockdale County reserves the right to exercise its discretion as to the responsibility of any **Bidder**.

When notified by and of the Department's recommendation for award of this Contract, the **Contractor** shall immediately secure Performance and Payment Bonds as per the Contract, properly execute two (2) original Contract Documents and submit them to the **County**, with proof of insurance in accordance with the Special Provision in the Proposal, within five (5) calendar days of notification.

The Board shall have the right to hold bids after bid opening for a period of ninety (90) days."

Section 103.04 RETURN OF PROPOSAL GUARANTY

Delete in its entirety and add the following:

"All Proposal Guaranties (Bid Bonds) will be returned to all except the three lowest **Bidders** within three days after the opening of the bids, and the remaining Bid Bonds will be returned promptly after the **County** and the accepted **Bidder** have executed the Contract, or, if no award has been made within ninety (90) days after the date of the opening of bids, upon demand of the **Bidder** at any time thereafter, so long as he has not been notified of the acceptance of this bid.

The **County** reserves the right to return all Proposal Guaranties by registered or certified mail and its responsibility pertaining to them will end when they are mailed."

Section 103.05 REQUIREMENTS OF PERFORMANCE AND PAYMENT BONDS

Delete in its entirety and substitute the following:

"Simultaneously with his delivery of the executed Contract, the **Contractor** shall furnish a surety bond or bonds, in a sum equal to the full amount of the Contract, as security for faithful performance of the Contract and for the payment of all persons performing labor on the project under this Contract, and furnishing material in connection with this Contract. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the **County** and be countersigned by the State of Georgia's representative/agent. The surety

issuing the bonds must be accepted by the U.S. Department of the Treasury and listed in Department Circular 570 and approved by the **County**.

Attorneys-in-fact who sign performance and payment bonds must file a certified and effectively dated copy of their power of attorney."

Section 103.06 EXECUTION AND APPROVAL OF CONTRACT

Add the following:

"Execution of the Contract by **Contractor** shall not be considered complete unless **Contractor** submits proper proof of coverage of Insurance in compliance with the following requirements:

- A. **Contractor's Liability Insurance:** **Contractor** shall purchase and maintain such comprehensive general liability and other insurance as will provide protection from claims set forth below which may arise out of or result from **Contractor's** performance or non-performance of the work and **Contractor's** other obligations under the Contract Documents, whether such performance is by the **Contractor's** own organization, its subcontractors or suppliers, or any individual directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

The Contractor, at all times that this Contract is in force, agrees to provide, as a minimum, insurance coverages in accordance with the attached insurance requirements. The **County**, its subcontractors, and affiliated companies, their officers, directors, employees and agents shall be named on the Certificates of Insurance as additional insured and endorsed onto the policies for Comprehensive General Liability, Automobile Liability, Contractor's Pollution Liability and Umbrella Liability Insurance maintained pursuant to this Contract in connection with liability of the **County** and their officers, directors, employees and agents arising out of Contractor's operations. Copies of the endorsements shall be furnished to the **County** prior to execution of the contract. Such insurance is primary insurance and shall contain a severability of interest clause as respects each insured.

- 1) Claims under workers' or workmen's compensation, disability benefits and other similar employees benefit acts;
- 2) Claims for damages because of bodily injury, occupational sickness or disease, or death of **Contractor's** employees;
- 3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than **Contractor's** employees;
- 4) Claims for damages insured by personnel injury liability coverage which are sustained a) by any person as a result of an offense directly or indirectly related to the employment of such person by **Contractor**, or b) by any other person for any other reason;
- 5) Claims for damages, other than to work itself because of injury to or destruction of tangible property, including loss of use resulting therefrom; and,
- 6) Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle.

The insurance required by this paragraph shall include the specific coverages and be written for not less than the limits of liability and coverages provided in these specifications, or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. All such insurance shall contain a provision that the coverage afforded will not be canceled, materially changed, or renewal refused until at least thirty (30) days prior written notice has been given to **County**. All such insurance shall remain in effect until final payment and at all times thereafter when **Contractor** may be correcting, removing, or replacing defective work. In addition, **Contractor** shall maintain such completed

operations insurance for at least one year after final payment and furnish **County** with evidence of continuation of such insurance at final payment.

- B. **County** shall not be responsible for purchasing and maintaining any property insurance to protect the interests of **Contractor** or subcontractors in the work to the extent of any deductible amounts that are provided in the supplemental conditions. If **Contractor** wishes property insurance coverage within the limits of such amounts **Contractor** may purchase and maintain it at his own expense.
- C. If **County** has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by **Contractor** in accordance with subparagraphs A through E, **County** will notify **Contractor** thereof within ten (10) days of the date of the delivery of such certificates to **County**. **Contractor** will provide to the **County** such additional information in respect of insurance provided by him as **County** may reasonably request. The right of the **County** to review and comment on Certificates of Insurance is not intended to relieve the **Contractor** of his responsibility to provide insurance coverage as specified nor to relieve the **Contractor** of his liability for any claims which might arise.
- D. The limits of liability for the insurance required by paragraph A of these General Conditions shall provide coverage for not less than the following amounts or greater where required by law.

For Claims under paragraphs A.1 and A.2. Workmen's Compensation

State	Statutory
Applicable Federal (e.g.) Longshoremen's Employer's Liability	Statutory \$1,000,000/person \$1,000,000/occurrence

For Claims under A.2 through A.5.

Commercial General Liability

\$1,000,000	Each Occurrence Limit
\$1,000,000	Personal & Advertising Injury Limit
\$2,000,000 (per project)	General Aggregate Limit
\$2,000,000	Products / Completed Ops Aggregate Limit

Bodily Injury:

\$1,000,000	Each Person
\$1,000,000	Each Occurrence
\$1,000,000 Operations	Annual Aggregate Products and Completed

Property Damage Liability Insurance will provide explosion, collapse, and underground coverage where applicable.

Property Coverage or Builders Risk Policy:

\$1,000,000	Each Person
\$1,000,000	Each Occurrence

Personal injury with employment exclusion deleted.

\$1,000,000	Annual Aggregate
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For Claims under A.6. Comprehensive Automobile Liability:

Bodily Injury:

\$1,000,000	Each Person
\$1,000,000	Each Accident

Property Damage:

\$1,000,000	Each Occurrence
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The Contractual Liability required by paragraph B shall provide coverage for not less than the following amounts:

Contractual Liability Insurance:

Bodily Injury:

\$1,000,000	Each Occurrence
-------------	-----------------

Property Damage:

\$1,000,000	Each Occurrence
\$1,000,000	Annual Aggregate

E. Scope of Insurance and Special Hazards

The amounts of insurance in subparagraph "D" above are minimum amounts of insurance to be carried. The **Contractor** shall carry such additional insurance as may be required to provide adequate protection of the **Contractor** and his subcontractors, respectively, against any and all damage claims which may arise from operations under this Contract, whether such operations may be by the insured or by anyone directly or indirectly employed by him and, also, against any of the special hazards which may be encountered in the performance of this Contract.

The **Contractor's** and subcontractors' Public Liability and Property Damage Insurance shall provide adequate protection against the following special hazards: excavation, shoring, underpinning, blasting and explosion to the extent to which such risks are present."

Contractor's Pollution Liability (with 1 year extended reporting period)

\$1,000,000	Each Occurrence
\$2,000,000	Each Aggregate

Excess Umbrella Liability:

\$3,000,000	Excess Umbrella Liability
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Section 103.07 FAILURE TO EXECUTE CONTRACT

Delete in its entirety and substitute the following:

"Failure or refusal to execute and deliver the Contract, Contract Performance and Payment Bond, or furnish satisfactory proof of insurance coverage required within ten (10) days after the date of notice of the Department's recommendation for award shall be just cause for the annulment of the award and for the

forfeiture of the Proposal Guaranty to Rockdale County, not as a penalty, but as liquidation of damages sustained for such failure or refusal. At the discretion of the **County**, the award may then be made to the next lowest responsible Bidder, or the Work may be re-advertised or constructed by County forces.

If the **County** re-advertises the project, the **County** may, at its discretion, not allow the Bidder who refused or failed to execute a contract, or who requested to withdraw any bid, to perform work on that contract or project as a contractor, subcontractor or in any other capacity for any function of construction. The Contract and Contract bonds shall be executed in two (2) original counterparts."

SECTION 105 - CONTROL OF WORK

Section 105.02 PLANS AND WORKING DRAWINGS

Add the following paragraphs:

"If, in the process of the Contract, discrepancies arise, the **Contractor** will be furnished additional instructions and detail drawings as necessary to carry out the work included in the Contract. The additional drawings and instructions thus supplied to the **Contractor** will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof.

The **Contractor** shall submit promptly to the Engineer six (6) copies of each shop or setting drawing prepared in accordance with the schedule predetermined as aforesaid. After examination of such drawings by the Engineer and the return thereof, the **Contractor** shall make such corrections to the drawings as have been indicated and shall furnish the Engineer with two (2) corrected copies. If requested by the Engineer, the **Contractor** must furnish additional copies. Regardless of corrections made in or approval given to such drawings by the Engineer, the **Contractor** shall nevertheless be responsible for the accuracy of such drawings and for their conformity to the Plans and Specifications at the time he furnishes such drawings."

Section 105.07 COOPERATION BETWEEN CONTRACTORS

Add the following paragraph:

The contractor shall coordinate with other contractors in the area constructing the Salem Gate Market Development. Drainage structures and other adjoining items shall be coordinated to ensure that all connections and proper drainage flow are maintained.

Section 105.14 MAINTENANCE DURING CONSTRUCTION

Retain in its entirety, but insert the following after the first paragraph:

"At all times, the **Contractor** shall perform work as may be required to protect the entire site, including both existing conditions and performed work, from damage. Furthermore, the **Contractor** shall be responsible for all damages to all persons and property due to the non-maintenance of the project site."

SECTION 106 - CONTROL OF MATERIALS

Section 106.03.A.3 SAMPLES, TESTS, CITED SPECIFICATIONS

Add the following paragraphs:

"The costs of any initial tests shall be borne by the **County**. Retesting due to failure of the initial test shall be billed to the **Contractor** by the County to include a ten percent (10%) administrative fee."

"Whenever a material, article, or piece of equipment is identified on the Plans or in the Specifications by reference to manufacturer's or vendor's names, catalog number, etc., it is intended merely to establish a standard; and any material, article, or equipment of the other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article,

or equipment so proposed is, in the opinion of the Engineer, of equal substance and function. It shall not be purchased or installed by the **Contractor** without the Engineer's written approval."

SECTION 107 - LEGAL REGULATIONS AND RESPONSIBILITY TO THE PUBLIC

Section 107.02 PERMITS AND LICENSES

Add the following paragraphs:

"The **Contractor** shall provide the **County**, on the proper form, proof of being licensed to do business within Rockdale County; proof of proper business licenses shall also be provided by the prime **Contractor** for any and all subcontractors coming under the jurisdiction of this Contract. (See Subcontractors' Notification List.)

Before any work proceeds along areas adjacent to a State Highway, the **Contractor** shall assure that a permit showing that the project is approved by the Georgia Department of Transportation is posted. **The Contractor shall notify both the Engineer and the local Georgia Department of Transportation's representative 48 hours before moving into a new area to begin construction.**"

Section 107.07 PUBLIC CONVENIENCE AND SAFETY

Retain as written and add the following:

"The **Inspector** shall distribute a notice to each residence or business adjacent to the roadway *within the limits* of the project. The **County** will provide this notice to the **Inspector**, and it will be the responsibility of the **Inspector** to deliver the notices. To ensure that that these notices will be timely, they shall be distributed by individual road segment (project site), and they shall be distributed at least 24 hours prior to beginning construction activities on the respective road segment.

The notices will be used to inform the affected parties of the activities that will be occurring and will identify the **Contractor**.

The notice will be in the form of a letter and are not to be placed in or on the mailboxes. The **Inspector** will notify the **Contractor** upon completion of this work so that the **Contractor** can perform the work on the roadway. The **Contractor** may not work on a street without the letters being distributed.

Section 107.13 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE

Retain subparagraph C. and add the following paragraph:

"All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions."

Delete subparagraph F in its entirety and substitute the following:

"The **Contractor** shall have the responsibility for removing and relocating all mailboxes to an area outside of the construction limits but still accessible for mail deliveries and convenient to the mail carrier and the patron during the entire time of construction. It may be necessary for the **Contractor** to confer with the Post Office serving the area.

As soon as construction has progressed to the stage that the mailbox may be erected in its permanent position, the **Contractor** shall coordinate the erection with the patron and the Post Office serving the area. Any damages to the posts or mailboxes due to the removal and/or relocations by the **Contractor** will remain the responsibility of the **Contractor**, all damaged posts and/or mailboxes shall be replaced and installed by the **Contractor** at his expense, including mailbox enclosures of masonry construction.

Any cost or costs to the **Contractor** for removing, relocating or installations of mailboxes as stated above shall be included in the overall bid price. Masonry mail boxes will not be relocated; however, if removed, a standard mail box will be installed."

Section 107.15 RESPONSIBILITY FOR DAMAGE CLAIMS

Add the following paragraph:

"**Contractor** shall indemnify and hold harmless the **County** and its agents, employees, successors, and assigns from and against all loss, cost, damage, claim, suit, and judgment, including attorney's fees, arising out of or resulting from the performance or non-performance of the work. **Contractor's** duty to indemnify applies in connection with, but is not limited to, injury to or death of any person or persons, loss of or damage to property caused by or in any way connected with **Contractor's** performance or non-performance of the work, whether such injury, death, loss, or damage results from any cause whatsoever. The **Contractor's** duty to indemnify shall extend to all claims, damage, loss, or expense caused in whole or in part by any act or omission of the **Contractor**, any subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. The duty of the **Contractor** to indemnify, contained herein, shall not extend to any claim, damage, loss, or expense which results solely from the negligence of a party indemnified hereunder."

Section 107.17 CONTRACTOR'S RESPONSIBILITY FOR THE WORK

Retain in its entirety and add the following new paragraph:

"In case of an emergency which threatens loss or injury of property and/or safety of life, the **Contractor** will be allowed to act, without previous instruction from the Engineer, in a diligent manner. He shall notify the Engineer immediately thereafter. Any claim for compensation by the **Contractor** due to such extra work shall be promptly submitted to the Engineer for approval.

Where the **Contractor** has not taken action but has notified the Engineer of an emergency threatening injury to persons or damage to the work or any adjoining property, he shall act as instructed or authorized by the Engineer."

Section 107.18 AQUISITION OF RIGHT OF WAY

Delete in its entirety and substitute the following:

"The **County** shall furnish all land and right-of-way necessary for the carrying out of this Contract and the completion of the Work herein contemplated and will use due diligence in acquiring said land and rights-of-way as speedily as possible. But it is possible that all lands and rights-of-way as herein contemplated may not be completely secured before construction begins, in which event the **Contractor** shall begin his Work upon such land and rights-of-way as the **County** may have previously acquired, and no claim for damages whatsoever will be allowed by reason of the delay in obtaining the remaining land and rights-of-way. Should the **County** be prevented or enjoined from proceeding with the Work, or from authorizing its prosecution, either before or after the commencement, by reason of any litigation, or by reason of its inability to procure any lands or rights-of-way for the said Work, the **Contractor** shall not be entitled to make or assert claim for damage by reason of said delay, or, to withdraw from the Contract except by consent of the **County**, but time for completion of the Work will be extended to such time as the **County** determines will compensate for the time lost by such delay, such determination to be set forth in writing."

Section 107.20 NO WAIVER OF LEGAL RIGHTS

Retain in its entirety and add the following:

"The **Contractor** shall guarantee the work accomplished under this Contract for a period of twelve (12) months from the date of final acceptance. The **Contractor** shall remedy, at his own expense, and without additional cost to the **County**, all defects arising from either workmanship or materials, as determined by the Engineer. The guarantee shall not cover any accidental or deliberate damage to the work, or any defects occurring due to normal wear and tear during the twelve (12) months.

All equipment of whatever nature incorporated in the work covered by this Contract shall carry the same guarantee as outlined above for construction. Failure of any equipment or part thereof within the specified time shall be corrected to the satisfaction of the **County**, at the **Contractor's** expense. This guarantee does not apply to manufacturing defects of equipment furnished by the **County**.

The Performance Bond shall remain in full force and effect through the guarantee period."

107.23 ENVIRONMENTAL CONSIDERATIONS

Delete Subsection 107.23.A and replace with the following:

All environmental considerations and clearances shall be the responsibility of the County or municipality to meet, including the requirements of Section 404 of the Clean Water Act (33 USC 1344).

After July 1, 1991, State funded projects must comply with the requirements of Chapter 16 of Title 12 of the Official Code of Georgia Annotated, the Georgia Environmental Policy Act (GEPA), of 1991. In the compliance with GEPA, those projects for which Federal funding sought, and NEPA compliance is accomplished, are exempt from the requirements of GEPA.

GEPA requires that environmental documentation be accomplished for County or City projects if more than 50 percent of the total project cost is funded by a grant of a State Agency or a grant or more that \$250,000.00 is made by the State Agency to the municipality or County. The "responsible official of the government agency shall determine if a proposed governmental action is a proposed governmental action which may significantly adversely affect the quality of the environment."

A. The Following Project Would Not Significantly Adversely Affect The Quality Of The Environment:

Non-land disturbing activities and minor land disturbing activities that would not be anticipated to significantly affect the quality of the environment include the following list. These types of projects funded with state money would not be able to subject to environmental assessment of any kind. Hearing procedures outline in GEPA would not be applicable.

1. Minor roadway and non-historic bridge projects.
 - a. Modernization of an existing highway by resurfacing, restoration, rehabilitation, adding shoulders, widening a single lane or less in each direction and the addition of a median within previously disturbed existing right-of-way.
 - b. Adding auxiliary lanes for localized purposes (weaving, climbing, speed changes, etc.) and correction substandard curves and intersections within previously disturbed existing right-of-way.
 - c. Non-historic bridge replacement projects in existing alignment with no detour bridge.
2. Lighting, signing, pavement marking, signalization, freeway surveillance and control systems, and railroad protective devices.
3. Safety projects such as grooving, glazed screen, safety barriers, energy attenuators, median barriers, etc.

4. Highway landscaping and landscaping modification, rest area projects and truck weigh stations within previously disturbed existing right-of-way.
5. Construction of bus shelters and bays within existing right-of-way.
6. Temporary replacement of a highway facility that is commenced immediately after the occurrence of a natural disaster of catastrophic failure to restore the highway for the health, welfare, and safety of the public.

B. The Following Projects May Not Significantly Adversely Affect The Quality of The Environment:

For projects that will cause land disturbance and for which there is no anticipation that the project may significantly adversely affect the quality of the environment, certain studies will be undertaken. These studies would serve to document whether or not the County or municipality should anticipate that a project might significantly adversely affect the quality of the environment. Documentation of the studies will be accomplished through the use of the "GEPA Investigation Studies" checklist.

The types of projects that would fall under the category would include:

1. Bridge replacement projects on new location or with a detour bridge, where there are no significant adverse impacts to historic or archaeological resources, no involvement with Federally listed threatened and endangered species and no significant adverse impact to wetlands.
2. Passing lanes, median additions and widening projects, where there are no significant adverse impacts to historic or archaeological resources, no involvement with Federally listed threatened and endangered species and no significant adverse impact to wetlands.
3. Safety and intersection improvements where there are no significant adverse impacts to historic or archaeological resources, no involvement with Federally listed threatened and endangered species and no significant adverse impact to wetlands.
4. Rest area projects and truck weigh stations with no purchase of additional right-of-way.
5. New location projects where there are no significant adverse impacts to historic or archaeological resources, no involvement with Federally listed threatened and endangered species and no significant adverse impact to wetlands.

If studies demonstrate that the project will not significantly adversely affect the quality of the environment, project files will be documented. If studies demonstrate that the project may significantly adversely affect the quality of the environment, development of an environmental effects report (EER) will be undertaken along with full GEPA compliance.

C. The Following Projects May Not Significantly Adversely Affect The Quality of The Environment:

This category of projects may include major widening and new location projects. If such projects result in a significant adverse effect, an EER shall be prepared.

D. EER Procedure:

GEPA calls for consideration of the "cumulative effect of the proposed government actions on the environment....if a series of proposed government actions are related to either geographically or as logical parts in a chain of contemplated actions." Therefore, EER's for sections of roadways to be widened or built as new location facilities will include all projects that are connected geographically or as logical parts in a chain of contemplated actions.

1. During preparation of an environmental effect report, the County or Municipality will consult with and solicit comments from agencies that have jurisdiction by law, special expertise, or other interest with respect to environmental impacts.
2. In compliance with GEPA the following shall be contained in the EER, at a minimum:

- a. Cover sheet;
 - b. Executive summary;
 - c. Alternatives, including the no-build;
 - d. Relevant environmental setting; Geology, soils, water supply and wetlands, floral fauna, archaeology/history, economic environment, energy, cultural resources;
 - e. The environmental impact of the proposed action of the relevant setting and mitigation measures proposed to avoid or minimize adverse impact;
 - f. Unavoidable adverse environmental effects;
 - g. Value of short-term uses of the environment and maintenance and enhancement of its long-term value;
 - h. Beneficial aspects, both long term and short term and its economic advantages and disadvantages;
 - i. Comments of agencies which have jurisdiction by law, special expertise, or other interest with respect to any environmental impact or resource;
3. At least 45 days prior to making a decision as to whether to proceed with the undertaking, publish in the “legal organ of each County in which the proposed governmental action or any part thereof is to occur, notice that an environmental effects report has been prepared”.
 4. The County or Municipality shall send a copy of the EER and all other comments to the Director, EPD.
 5. The County or Municipality shall make the document available to the public and agencies, upon request.
 6. A public hearing will be held in each affected county if at least 100 residents of the State of Georgia request on within 30 days of publication in the legal organ of an affected County. The responsible official or his designee may hold a public hearing if less than 100 requests are received. (The county or municipality is not relieved of other State legal requirements of public hearings, however.)
 7. Following the public notice period and/or public hearing, a summary of the document, comments received and recommendation as to whether to proceed with the action as originally prepared, to proceed with changes, or not to proceed will be prepared (Notice of Decision).
 8. This decision document, when signed by the responsible official, will be sent to the director, EPD, and an abbreviated notice of the decision will be published in the legal organ of each County in which the proposed governmental action or any part thereof is to occur.
 9. A copy of the decision document, the EER and public hearing comments (if any) will be sent to Rockdale County Department of Transportation, Georgia Department of Transportation, Office of Environment and Location and the Department of Natural Resources, Environmental Protection Division for their files.

**Department of Transportation
Office of Environmental Services
600 W. Peachtree Street, NW
Atlanta, Georgia 30308**

**Department of Natural Resources
Environmental Protection Division
205 Butler Street, SE
Suite 1152
Atlanta, Georgia 30334**

SECTION 108 - PROSECUTION AND PROGRESS

Section 108.01 SUBLETTING OF CONTRACT

Retain as written except as follows:

Delete the second and third paragraph and substitute the following:

In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform, with his own organization, work amounting to not less than fifty percent (50%) of the total contract cost, including materials, equipment and labor.

All Subcontractors approved by the Engineer must submit a "Noncollusion Affidavit for Subcontractors, before any work by that Subcontractor may proceed."

Add the following:

"In accordance with the provisions stated above, the following items are designated Specialty Items whenever they appear in the Contract:

- All Grassing Items
- All Fencing Items
- All Highway Lighting Items
- All Highway Sign Items
- All Guardrail Items (Except Bridge Handrail)
- All Utility Items
- All Comfort and Convenience Facilities in Rest Areas
- All Landscaping Items
- All Pressure Grouting, Slab Removal and Replacement
- All Permanent Traffic Markings
- All Signal Systems
- All Railroad Trackwork above Sub-ballast
- Construction Layout

The cost of the above items will be subtracted from the original Contract Amount and the subsequent balance used to determine the percent limitation mentioned above.

If the **Contractor** elects to sublet a Specialty Item, no work on any such Specialty Items shall be begun without prior approval of the necessary Subcontract.

The **Contractor's** cost for Construction Layout shall be fully documented prior to deduction from the original Contract amount."

108.03 PROSECUTION AND PROGRESS

Retain Subsection 108.03 except as modified below:

For this Project, the Progress Schedule required by Subsection 108.03 need not be submitted.

108.11 SCHEDULING

Every effort shall be made to meet project schedules submitted and approved by the County. If scheduling changes are necessary, the Contractor shall notify the County 24 hours in advance to allow for rescheduling of field and material testing contractors contracted by the County. The Contractor shall be liable for costs accrued by the field and material testing contractor for work cancellations resulting from insufficient notification.

The County requires five (5) working days to process requests to trim trees, shrubs, or bushes from the right-of-way to accommodate resurfacing operations.

Notify Rockdale County Water Resources two (2) weeks in advance for requests to verify existing utilities which may require lowering of water lines or laterals that may interfere with operations.

The County shall not be liable for delays to schedules as a result of insufficient notice regarding the items above.

SECTION 109 - MEASUREMENT AND PAYMENT

Section 109.07 PARTIAL PAYMENTS

Delete Subsection 109.07.A in its entirety and substitute the following:

"A. General:

The Contractor shall on the first Business Day of each calendar month submit the estimated total value of items complete in place for the previous calendar month to the Engineer for verification for only the roads in which work has been completed. If discrepancies are discovered by the Engineer, he will contact the Contractor to make any necessary corrections as soon as possible. Such estimate is approximate only, and may not necessarily be based on detailed measurements. Value will be computed on the basis of Contract Unit Prices or on percentage of completion of any Lump Sum Item."

Add Subsection 109.07.I to read as follows:

"I. Retainage

Retainage will not be withheld from payments under this Contract"

Section 109.08 FINAL PAYMENT

Delete in its entirety and substitute the following:

"Upon completion by the **Contractor** of The Work, including the receipt of any final written submission of the **Contractor** and the approval thereof by the Department, the **County** will pay the **Contractor** a sum equal to 100 percent (100%) of the compensation set forth herein, less the total of all previous partial payments, paid or in the process of payment.

The **Contractor** agrees that acceptance of this final payment shall be in full and final settlement of all claims arising against the **County** for work done, materials furnished, costs incurred, or otherwise arising out of this Contract Agreement and shall release the **County** from any and all further claims of whatever nature, whether known or unknown for and on account of said Contract Agreement, and for any and all work done, and labor and materials furnished, in connection with same.

No final payment shall be made until the **Contractor AND his Subcontractors** furnish to the **County** a sworn affidavit to the effect that all bills are paid and no suits and/or liens are pending in connection with the work

done or labor and materials furnished under this Contract. Final payment will be made within sixty (60) days after approval by the Engineer.

The **Contractor** will be required to maintain all work done by him in a first-class condition for sixty (60) days after the same has been completed as a whole, and the Engineer has notified the **Contractor** in writing that the work has been finished to his satisfaction. The retained percentage will not be due or payable to the **Contractor** until the 60-day maintenance period has ended."

SECTION 149 - CONSTRUCTION LAYOUT

Section 149.3.05 CONSTRUCTION

Delete Subsection K, paragraph 2, which begins, "For new bridges ..." in its entirety.

SECTION 150 - TRAFFIC CONTROL

Add the following:

150.01 General

This section as supplemented by the Plans, Specifications, and Manual on Uniform Traffic Control Devices (MUTCD) shall be considered the Traffic Control Plan. Activities shall consist of furnishing, installing, maintaining, and removing necessary traffic signs, barricades, lights, signals, cones, pavement markings and other traffic control devices and shall include flagging and other means for guidance and protection of and vehicular 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 with 2012 Revisions 1 and 2 Edition of the MUTCD shall be in effect for the duration of the project.

The Worksite Traffic Control Supervisor (WTCS) shall have a copy of Part VI of the MUTCD on the job site. Copies of the current MUTCD may be obtained from the FHWA web page at <https://mutcd.fhwa.dot.gov/pdfs/2009r1r2/mutcd2009r1r2edition.pdf>

A. WORKER SAFETY APPAREL

All workers exposed to the risks of moving roadway traffic or construction equipment shall wear high-visibility safety apparel meeting the requirements of International Safety Equipment Association (ISEA) American National Standard for High-Visibility Safety Apparel, or equivalent revisions, and labeled as ANSI-2004 Class 2 or 3 risk exposure.

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 Traffic Control 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 traffic control 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, the National Safety Council Certification program or an equal approved by the Department.

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 travel way 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, 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.

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:

- Guardrail including anchors and delineation
- Impact attenuators
- Traffic signals
- Warning devices
- Pavement markings including words, symbols, stop bars, and crosswalks
- 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 the mainline, cross-streets and side streets. The Contractor shall develop detailed staging and 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 flow. The Engineer may require detailed staging and traffic control plans for lane closures. 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 not longer necessary for the satisfactory progress of the Work. Bypasses and detours shall meet the minimum requirements of Subsection 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. A twenty calendar day lead time for the Department's review shall be given to this submission so that a decision on its acceptability can be made and presented at the Preconstruction Conference. Insufficient lead time or no submission by the Contractor shall be construed as acceptance of the Sequence of Operations outlined in the Contract and the willingness of the Contractor to execute this as-bid 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 traffic control 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.
 - a. 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.

- b. 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.

I. Compliance dates for provisions of the MUTCD

Federal law requires that traffic control devices (temporary or permanent) installed on new highway or bikeway construction or reconstruction shall be compliant with the latest version of the MUTCD before the road is opened to the public for unrestricted travel. The latest version of the MUTCD is the 2009 Edition with 2012 Revisions 1 and 2, which the Georgia Department of Transportation has adopted. However, the FHWA, in the introduction to the MUTCD has established alternate compliance dates for some of the new provisions of the 2009 MUTCD. Below is a list of those compliance dates.

The Department may decide to require contractors to implement some or all of these provisions at an earlier date than the compliance dates noted below. However notice will be given in advance of the letting date if these provisions are to be implemented prior to the compliance dates. The contractor may also decide to implement the new provisions in the 2009 MUTCD earlier than required by the compliance dates below.

The target dates established by the FHWA shall be as follows:

Section 6D.03 Worker Safety Considerations – high-visibility apparel requirements – December 31, 2011

Section 6E.02 High-Visibility Safety Apparel – high-visibility apparel requirements for flaggers – December 31, 2011.

150.02 Temporary Traffic Control 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 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.

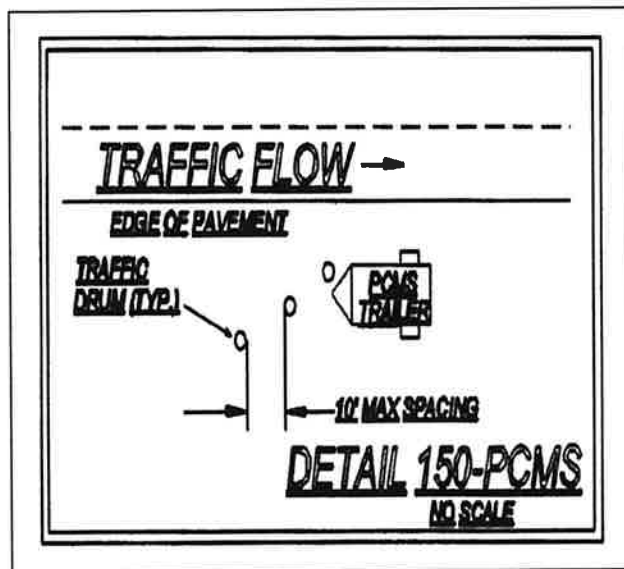
Arrow panels shall be equipped with automatic dimming features for use during hours of darkness. The arrow panels shall also meet the requirements for a Type C panel as shown in the MUTCD. The sequential or flashing arrow panels shall not be used for lane closure on two-lane, two-way highways when traffic 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 Subsection 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 620.

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 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 Subsection 150.08.

Prior to the removal of any rumble strips located in the travel way, 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.C. 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 greater.

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 greater.

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. Failure to comply with the above time and quantity restrictions shall be considered as non-compliance under Subsection 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. As a guide for enhanced traffic control features that may be considered, the Engineer or the WTCS may refer to the Department's guidelines for "Opening of New Roadways to Traffic" (Document #6635-2). 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 specific 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 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 traffic control 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

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.

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. Travel way 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-2) 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) Signage (Detail 150-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, 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 Subsection 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. Severely potholed milled surfaces that pose a damage threat to vehicular traffic must be repaired immediately by contractor to the satisfaction of the Engineer. Milled Surface signage shall be placed on roads where milling is not resurfaced within a 7 day period. All variable depth milling shall take place prior to deep patching where both line items occur within the same area.

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.

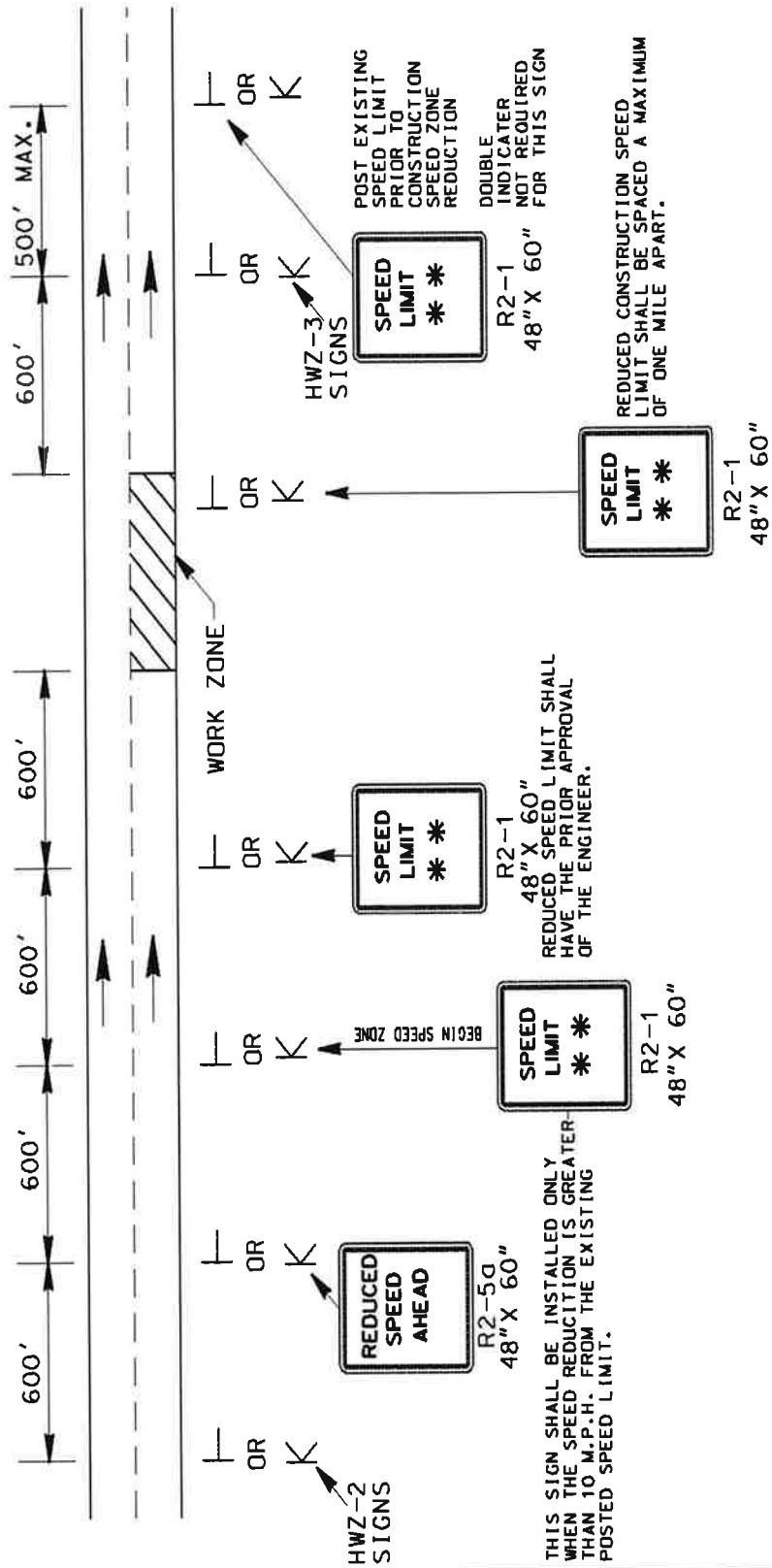
All temporary traffic control devices shall be removed as soon as practical when these devices are no longer needed. When work is suspended for short periods of time, temporary traffic control devices that are no longer appropriate shall be removed or covered.

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 punch list items. The portable signs shall be removed daily. All permanent mount height signs shall be removed prior to the beginning of the punch list work except "Low/Soft Shoulder" signs and any signs that have the prior written approval of the Engineer to remain in place while the punch list 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 Subsection 150.08.

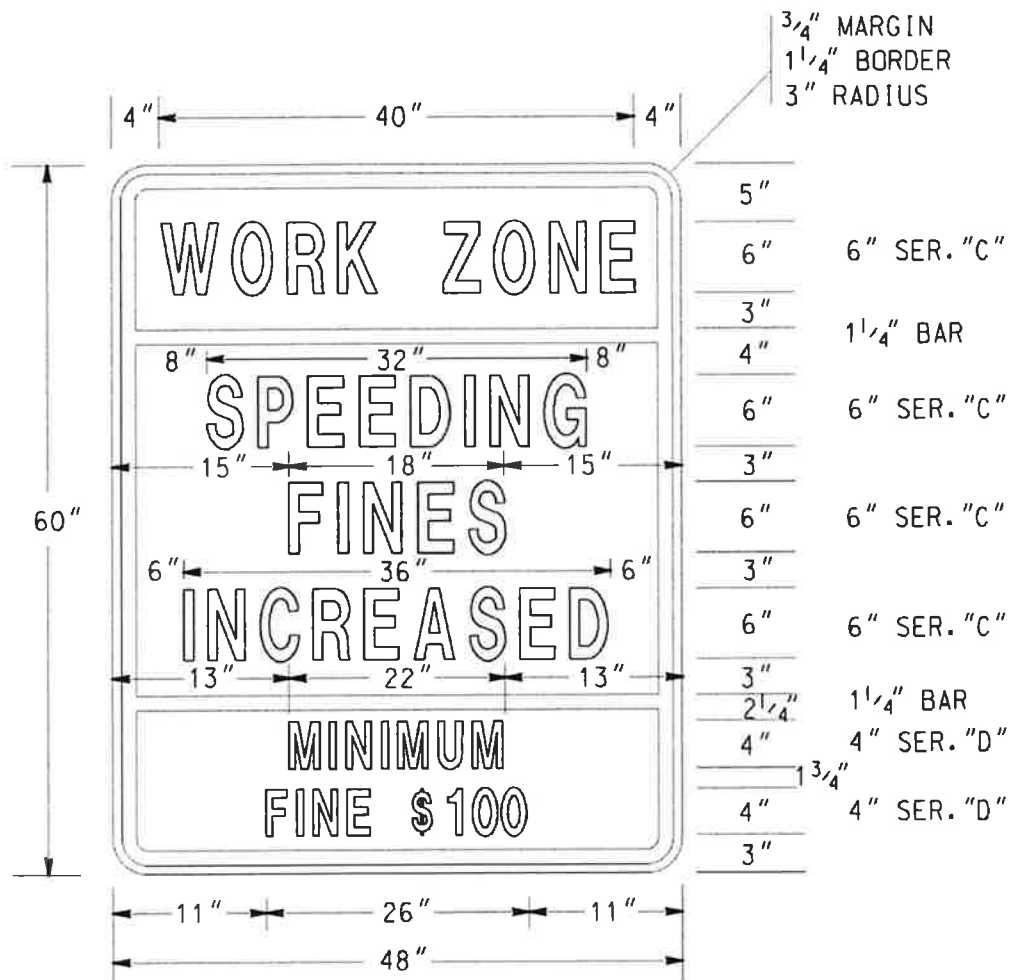
**SPEED LIMIT REDUCTION FOR HIGHWAY WORK ZONE
INTERSTATE AND MULTI-LANE DIVIDED HIGHWAY SIGNING SHALL BE
DOUBLE INDICATED (RIGHT SHOULDER AND MEDIAN SHOULDER)**



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 150-HWZ-1

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).



HWZ-2

COLORS

TOP PANEL

LEGEND & BORDER - BLACK (NON-REFL)

BACKGROUND - FLUORESENT ORANGE

(ASTM TYPE VII, VIII, IX or X)

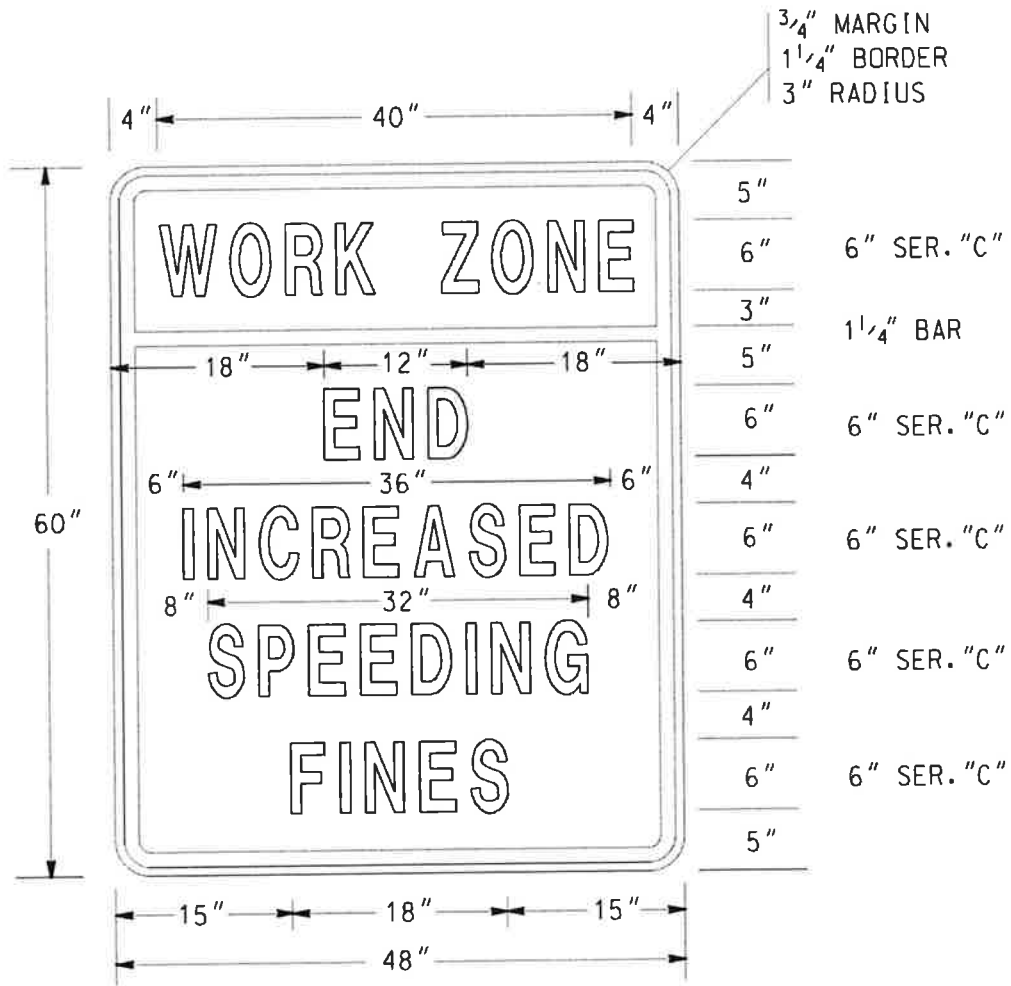
MIDDLE & BOTTOM PANELS

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 work zone 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.

2. Removal Of Lane Closures

To provide the greatest possible convenience to the public in accordance with 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. 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. Channelization device spacing shall be 10 feet for 200 feet in advance of the temporary gore, and 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.

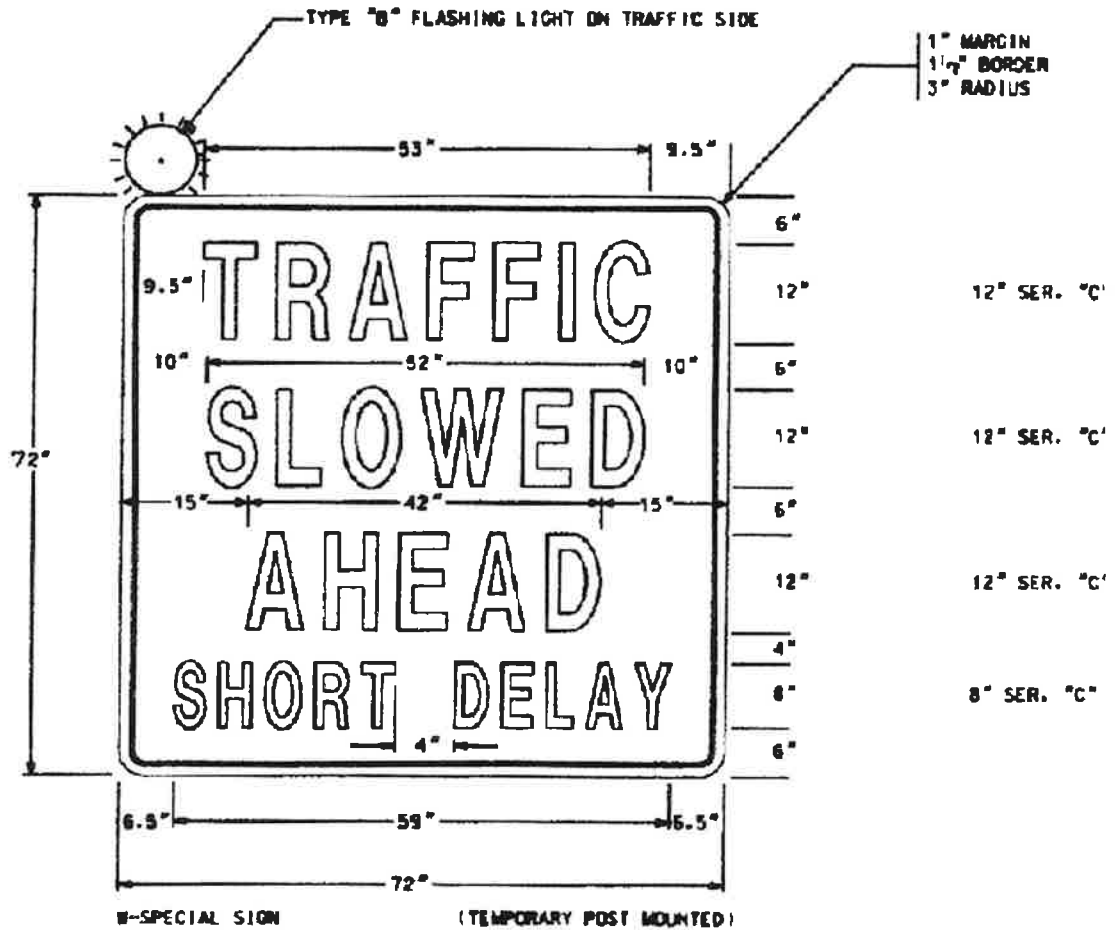
When ready to start the work activity, the police vehicle will act as a pilot vehicle slowing the traffic thereby providing a gap in traffic allowing the Contractor to perform the Work. Any on-ramps between the pace and the work area shall be blocked during pacing of traffic, with a flagger properly 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 traffic control 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 Subsection 201.02.E.3 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. Night work

Adequate temporary lighting shall be provided at all nighttime work sites where workers will be immediately adjacent to traffic. For their own protection, workers in or adjacent to traffic during nighttime operation shall wear reflectorized vests that meet the requirements of the MUTCD.

I. Construction vehicles in the work zone

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 travel way. 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 access to the work

All existing pedestrian walkways shall be maintained. Whenever changes to the worksite necessitate changes to existing walkways, temporary walkways shall be provided and maintained, with appropriate signs as necessary, to allow safe passage of pedestrian traffic.

L. Traffic Signals

If the sequence of operations, staging, or the 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.

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.

150.03 Signs

A. Signing requirements of the traffic control plan

When existing regulatory, warning or guide signs are required for proper traffic control the Contractor shall maintain these signs in accordance with the traffic control 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 Traffic Control Plan. The Contractor's review of all signs in the Traffic Control Plan shall establish compliance with the requirements of the most recent version 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 traffic control 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 Subsection 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 traffic control 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 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 most recent version 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 punch list 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 Sub-Section 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.

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.

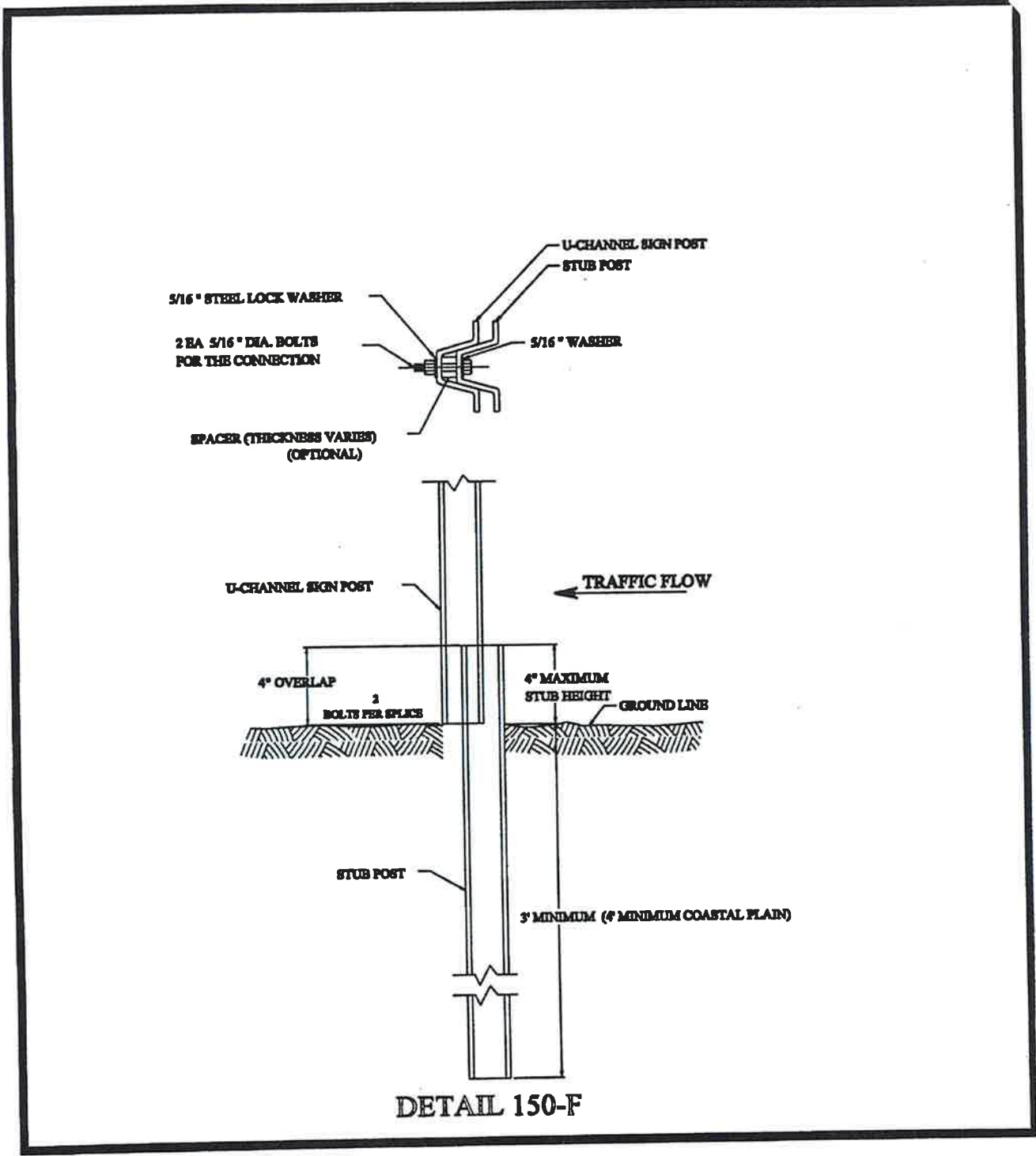
2. Sign Blanks And Panels- Permanent mounting height of seven (7') feet-

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 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 traffic control 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 traffic control 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 most recent version 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 work zone 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 punch list 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 foot 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 work zone 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 acceleration/deceleration lane adjacent to the mainline traveled way. Portable advance warning signs (W20-1; 1500 ft./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 deceleration 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 most recent version of 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 travel way 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 travel way 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.C.

“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 travel way 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 most recent version 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.

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 judgment 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 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 656.2.

THE ELIMINATION OF CONFLICTING PAVEMENT MARKINGS BY OVERPAINTING WITH PAINT OR 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 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 the 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 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. Exceptions to the requirements for interim traffic marking tape shall have the written prior approval of the Engineer before the application of any other method is permitted.

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 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 656.2.

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 Subsection 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 foot 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 GDOT 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

Edge lines 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, edge lines shall be placed within 30 calendar days of the time that the final surface was placed.

2) All Other Types of Pavement

Edge lines 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, edge lines 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) Landlines- Interim skip (broken) stripe as described in Subsection 150.04E.1.a. may be used for periods not to exceed three calendar days. Skip lines are not permitted in lane shift areas. Solid lines shall be used.

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

b. DIVIDED HIGHWAYS (GRASS OR RAISED MEDIAN)

1) Landlines- 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/Edge line- 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- Edge lines shall be placed on intermediate and final surfaces prior to opening to traffic.

2) Portland Cement Concrete Pavement- Edge lines 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 edge lines) 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 most current version 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 (TMA) 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 travel way through the work zone and alert drivers and pedestrians to conditions created by work activities in or near the travel way. 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.C. 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 travel way shall be as shown in Table 150-1:

TABLE 150-1

Posted Speed Limit, MPH	Lane Width	Lane Width	Lane Width	Lane Width	Maximum Drum Spacing in Tapers, (Feet)
	9 Feet	10 Feet	11 Feet	12 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 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. 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 travel way should permit a remaining lane width of ten feet. When encroachment reduces the travel way to less than ten feet, vertical panels shall be used to restore the travel way 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 most current version 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.C.

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 work zone 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 Georgia Standard 4960, Construction Details 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 Unit/Arrays.

2. Materials

Materials used in the Attenuator/Array shall meet the requirements of Section 648 for Portable Impact Attenuators.

3. Construction

Portable Impact Attenuator Unit/Array installation shall conform to the requirements of Section 648, Manufacturer's recommendations, and/or Georgia Standards 4960 & 4962 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 150.06G 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 travel way 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 travel way that has been reduced in width just off the travel way 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 travel way. 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 Toppings

1. Differences in elevation between the surfaces of adjacent

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 travel way and paved

Differences in elevation between the asphalt travel way 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.

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 travel way 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 travel way

Drainage structures, utility facilities, or any other work which results in a difference in elevation adjacent to the travel way 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 Details 150-B, 150-C, 150-D AND 150-E

The Contractor may propose any alternate 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 traffic control 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 edge line (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.

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.

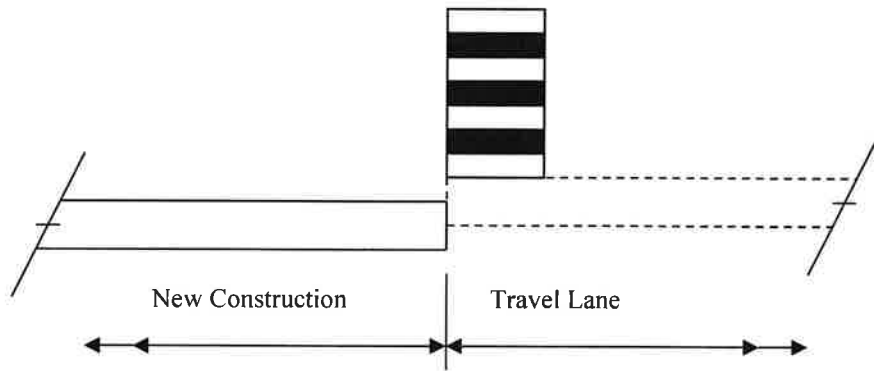
Any modifications to the staging and time restrictions that are approved as part of the traffic control plan shall be agreed to in writing. Failure to meet these modifications shall be considered as non-performance of the Work under Subsection 150.08.

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 travel way 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 travel way 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 punch list items has been completed. See Subsection 150.03.L for the requirements for "LOW/SOFT SHOULDERS" and "SHOULDER DROP-OFF" signage.

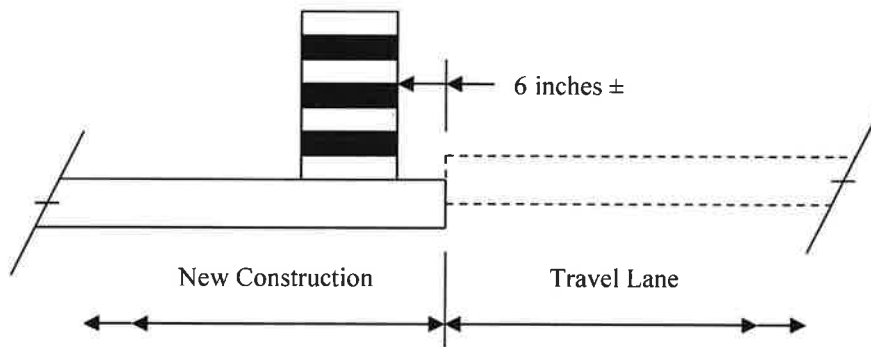
Location of drums when Elevation Difference exceeds 4 inches. Drums spaced at 20 foot intervals. Note: If the travel way width is reduced to less than 10 feet by the use of drums, vertical panels shall be used in lieu of drums.
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ELEVATION DIFFERENCE GREATER THAN 4 INCHES
DETAIL 150-B

Drums spaced at 40 foot intervals.

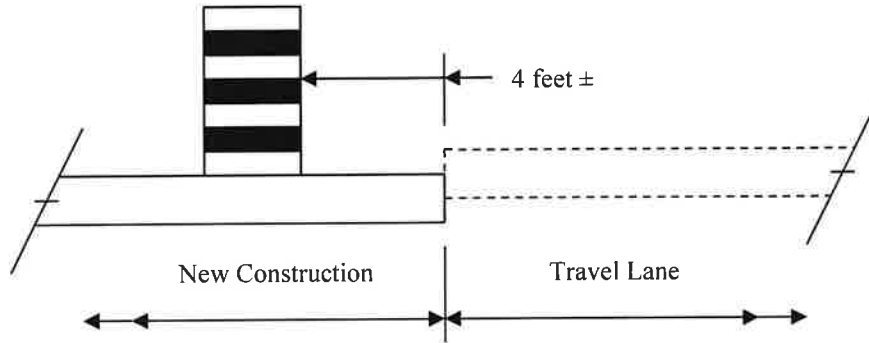
Location of drums when Elevation Difference is 2+ inches to 4 inches.



ELEVATION DIFFERENCE 2+ TO 4 INCHES
DETAIL 150-C

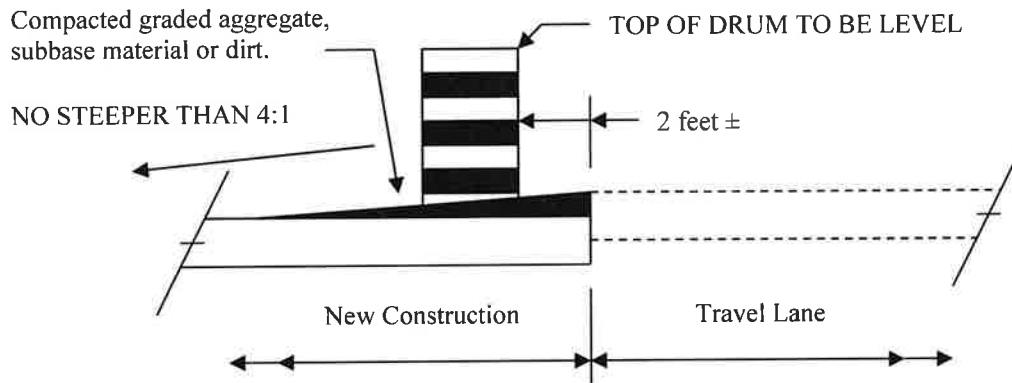
Drums spaced at 80 foot intervals.

Location of drums when Elevation Difference is 2 inches or less.



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 a Department approved training program. 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 the most current version of the MUTCD and 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 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 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 Section 620.

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.

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

SECTION 161 CONTROL OF SOIL EROSION AND SEDIMENTATION

The Contractor shall provide sufficient erosion and sedimentation controls as necessary or as directed by the County to prevent stormwater pollution or illicit discharges.

END OF SECTION