

DATE: July 14, 2014

SPECIFICATIONS

Project: Graham Road Sidewalk Project

Division 1 - General Requirements

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01005 - STATEMENT OF WORK

PART 1 - GENERAL

1.01 STATEMENT OF WORK: This is a general overview of the project. Follow details shown by the specifications and drawings, interpreted in accordance with contract clauses.

- A. Provide all labor, material, plant, equipment, supplies, and coordination required to install sidewalk, curb & gutter and storm drains on Graham Road in Macon- Bibb County Georgia.
- B. Price: Accomplish work shown for the original bid price. This includes special work times for utility outages and repair of damages. The words "at no additional cost to the Government" are implied whether stated or not.

1.02 CONTRACT SITE AND WORK RESTRICTIONS:

- A. Work area is restricted to the area at the construction site.

1.03 HOURS OF WORK:

- A. Standard work hours for this project are normal work hours of 8:00 AM to 5:00 PM local time, Monday through Friday. Work must stop on official City-County holidays unless specifically approved in advance.
- B. Alternate Work Hours
 - 1. If the Contractor desires to work another set of standard hours submit written request five (5) workdays before the date desired to work the different standard.
 - 2. To work special hours or days such as to continue paving until dark, request verbal approval from the Engineer at least four hours in advance.
 - 3. The Government reserves the right to refuse these requests. In addition, work requiring inspector presence such as placing concrete may not be possible outside normal hours on short notice. Digging outside of normal hours will normally not be approved.
- C. All references to days mean calendar days unless otherwise noted.

1.04 SUBMITTALS:

- A. General: Provide the following submittals in accordance with instructions found in Section 01300, Submittals and Contractor Furnished Items.
- B. Material Submittals: Omitted.

PART 2 - PRODUCTS - OMITTED

01005 - STATEMENT OF WORK

PART 3 - EXECUTION

3.01 COORDINATION: The contractor shall coordinate work between different disciplines.

A. Locations shown are approximate and may be moved if approved by the Engineer.

B. Manufacturers' recommendations and/or requirements, if more stringent than the specifications and drawings, shall be followed at no additional cost to the Government.

Section 01005 Submittals

<u>Para #</u>	<u>Description</u>	<u>Date Required</u>	<u>Inspector Check Mark</u>
1.03 B	Alternate Work Hours	5 days prior	_____

<<<<< END OF SECTION >>>>>

01040 – SITE REQUIREMENTS

PART 1 - GENERAL

1.01 UTILITY OUTAGES: Omitted

1.02 SUBMITTALS:

- A. General: Provide the following submittals in accordance with instructions found in Section 01300, Submittals and Contractor Furnished Items.
- B. Material Submittals: None required under this section.

1.03 SAFEGUARDING COMMUNICATION FACILITIES: For work that will interfere with buried fiber optics cable, aerial cable, house cable, underground cable, or other communication facilities, notify the utility and the Engineer in writing 14 days before the scheduled construction. Do no work until receiving approval.

PART 2 - PRODUCTS - OMITTED

PART 3 - EXECUTION

3.01 DIGGING/EXCAVATION REQUIREMENTS: The Drawings where applicable show underground utilities and structures as presently shown on the best available record drawings of the site, and these may have some inaccuracies. The information is provided for general bidding purposes only. The contractor shall determine actual locations and quantities at the site by calling the Georgia Utilities Protection Center prior to accomplishing any digging. .

- A. Damage: The contractor is responsible for any damage to underground structures and utility lines identified on the drawings and any identified and marked in the field as a result of obtaining the utility location. If any underground utility is damaged, notify the utility and the Engineer immediately.
- B. Cutting of Roads, Streets, and Paved Parking Areas:
 - 1. Mark, barricade, and illuminate construction work on or near roads or streets which may present a traffic hazard in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). Closures of streets, parking lots, and other traffic areas will not be permitted unless approved by the Engineer after written request 14 days before the scheduled closure.
 - 2. Road cuts shall be backfilled immediately after completion of associated utility work. When the road is reopened, the cut shall be filled with temporary or permanent materials to a smooth condition, or metal plates or other approved methods shall be employed to prevent discomfort or damage to vehicular traffic. Road cuts shall be permanently closed within 5 working days unless approved otherwise by the Engineer. Provide advance signage warning motorists of the condition in accordance with the MUTCD. Repair streets as shown on the drawings.

3.02 STORAGE AREA: The contractor shall obtain permission for all storage on private property. Materials stored on the county or state right of way must be obtained from the appropriate agency.

01040 – SITE REQUIREMENTS

3.03 SITE MAINTENANCE, CLEAN UP, AND RESTORATION

- A. Maintain the work site in a neat, orderly, and safe manner.
- B. Remove scrap, waste, and excess materials promptly. Provide signs, barricades, and lights as required to protect personnel.
- C. Do not allow trash and debris to accumulate and become unsightly. Sweep up and collect in contractor-maintained disposal containers daily. Dispose of collected debris weekly as a minimum.
- D. Store materials on site in a neat and orderly manner.
- E. Restore the project site to its final condition as required by the contract as soon as possible.
- F. Do not open trenches or excavations until material is on-hand or scheduled to arrive within three days. Close excavations or ditches as soon as the work has been placed, inspected, and accepted by the government.

Section 1040 Submittals

<u>Para #</u>	<u>Description</u>	<u>Date Required</u>	Inspector Checklist
3.01 B	Road/Parking Closure Request	14 days prior	_____

<<<<< END OF SECTION >>>>>

PART 1 - GENERAL

1.01 GENERAL:

A. Basic: Provide items requiring drawings, diagrams, certifications, manufacturers' literature, data brochures, technical data, sample requests, forms, and other data as noted under each specification section.

B. Contractor Responsibility: Review, Corrections, or Comments made on the Submittals do not relieve the contractor from compliance with the requirements of the Drawings, Specifications, Addendums, and Contract Documents. By entering into this contract, the contractor agrees that the purpose of submittals is to demonstrate to the Engineer that the contractor understands the design concept and that he demonstrates his understanding by indicating which equipment and material he intends to furnish, install, and use. Review of shop drawing will be general only for basic conformance with the design concept. The Government's review of such drawings, schedules, or cuts shall not relieve the contractor from the responsibility for correcting all errors of any sort contained in the submittals. The contractor is responsible for confirming and correlating all quantities and dimensions; selecting proper fabrication processes, construction methods and installation techniques; coordinating this work with that of all other trades; and performing all work in a safe, workmanlike and satisfactory manner.

1.02 OMITTED:

1.03 SUBMITTAL INSTRUCTIONS: Submittal requirements for each specification section are listed in those respective sections. The following apply to all sections.

A. Material Submittals:

1. Complete Submissions: All items requiring submittals prior to construction activities for each section should be provided at one time unless noted otherwise or logically required. In some instances the specifications may require certain items from one or more specifications sections to be submitted at one time.

2. Submittal Checklist: The contractor shall complete a copy of the checklist provided in the submittals paragraph of each specification section. This checklist shall be provided with each submittal. Submittal information shall be arranged in order to correspond with each checklist.

3. Time: The Contractor shall have approved submittals before ordering any equipment under this contract. If equipment is ordered prior to receiving approval, it will be solely at the Contractor's risk. Under no circumstances will material be installed prior to approval of submittals. There will be no time schedule for providing material submittals unless noted elsewhere in the specifications. The Contractor will be required to manage his materials/equipment lead times and obtain approval in sufficient time to complete the work on schedule. Disapproval of incomplete or unsatisfactory submittals shall not be grounds for contract extensions. Other submittals such as as-builts, test reports, etc., shall be provided as indicated. When the word "prior" is used, it shall generally mean prior to the delivery or installation of the product at the work site or prior to the time in question of the item addressed in the specification.

4. Exceptions: If any material proposed for use on this contract deviates from the specifications, the Contractor shall submit those proposed deviations for approval along with detailed

01300 - SUBMITTALS AND CONTRACTOR FURNISHED ITEMS

justification. All exceptions and deviations shall be described in detail with each product submittal. Cost will not be considered a justification for taking exceptions unless a credit is offered to the Government.

5. Substitutions: Products provided by manufacturers other than those specified as the "design basis" shall be considered substitutions.

- a. All features of items submitted as substitutions are implied to be in full compliance with Specifications and Drawings if not specifically noted as "Exceptions."
- b. Where a design basis is referenced in Specifications and Drawings, substitutions must meet or exceed the salient features of the design basis as determined by the Engineer. Exceptions to design basis characteristics must be clearly noted as "Exceptions." The contractor must demonstrate that the product substituted is clearly equal or superior to the specified product, or else the request for substitution will be denied.
- c. Changes required to accommodate approved substitution shall be made at no additional cost to the Government.

B. Other Submittals: Other submittals such as samples, test results, spare parts, and etc. shall be provided as required by each specifications section. Provide 2 copies of each or an electronic copy unless directed otherwise.

1.04 RETURN AND DISAPPROVAL OF SUBMITTALS: The Engineer will return submittals to the Contractor within 14 days after receipt indicating approval or disapproval. Resubmittal of disapproved submittals shall be accomplished within 14 days after receipt of disapproval. Disapproval shall not be cause for time extension.

1.05 SUPERINTENDENT or MANAGER: When requested, provide name and qualifications for review. Provide the name and contact information of the person who will be the primary contact with the Government on this project until project acceptance.

1.06 TURN-IN OF IDENTIFIED EQUIPMENT, SPARE PARTS, TOOLS, AND OTHER MATERIALS: Items indicated in the Submittals section of each specifications and elsewhere, for turn-in to the Government shall be delivered as directed or in the absence of direction, before prefinal inspection. Obtain receipts from Government employees receiving the materials and deliver them to the Engineer before prefinal inspection.

1.07 AS-BUILT DRAWINGS: Omitted

1.08 PROVIDE EQUIPMENT LIST: Omitted

1.09 FINAL INSPECTION ONLY: If the Engineer elects to have only a final inspection, turn in prefinal inspection submittals before the final inspection.

1.10 PRE-AWARD SUBMITTALS: Submit the following items before award, if directed.

A. Experience: Provide documentation on contractor experience relative to this project. After bid opening, the Government may examine contractor experience. The Contractor and/or named subcontractors shall have been

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regularly engaged in the type work of this project for at least (2) years. Include for each subcontractor the name of the business and the individual responsible for this project.

B. References: Provide the names, addresses and telephone numbers of at least two customers for whom similar projects were performed in the last (two) years.

1.11 PROGRESS SCHEDULES AND REPORTS: Omitted

END OF SECTION

01560 – ENVIRONMENTAL REQUIREMENTS

PART 1 - GENERAL

1.01 GENERAL:

- A. General Scope: This Section provides the requirements necessary to ensure that all construction projects are in environmental compliance. Major environmental program areas which may be affected include natural resources, air quality, underground storage tanks, asbestos, lead-based paint, PCBs, cultural resources, water quality, solid and hazardous wastes, and pollution prevention.
- B. Applicable Regulations and Publications: Comply with all applicable Federal, State of Georgia, any laws and regulations from other states where disposal might occur, and local laws and regulations concerning environmental compliance and pollution prevention.
- C. Ensure all products produced or generated under contract shall meet all stated performance objectives and shall not violate in any manner the environmental requirements of any applicable local, state, or federal entity. Applicable environmental requirements shall include but are not limited to a substance's toxicity, biodegradability, and volatile organic/inorganic compound content.
- D. Macon-Bibb County personnel will conduct no-notice inspections to ensure compliance with all environmental requirements.
- E. Definitions:
 - 1. Engineer-Macon-Bibb County Engineer or his or her designated representative.
 - 2. Inspector-The individual from the Macon-Bibb County Engineering Department designated to perform daily inspection of the contractor's work.
 - 3. Dust - Minute solid particles caused to be suspended by natural forces or by mechanical processes such as, but not limited to, crushing, grinding, milling, drilling, demolishing, shoveling, conveying, covering, bagging, mixing, and sweeping.
 - 4. Open Burning - Any outdoor fire from which the products of combustion are emitted directly into the open air without passing through a stack, chimney or duct.
 - 5. Solid Waste - Defined in CFR 261.2. Examples include garbage, refuse, and other discarded solid material including non-hazardous wastes resulting from industrial, commercial, and agricultural operations.
 - 6. GA EPD - Georgia Environmental Protection Division of the Department of Natural Resources.

1.02 OMITTED

1.03 SUBMITTALS:

- A. General: Provide the submittals in accordance with instructions found in Section 01300, Submittals and Contractor Furnished Items.
- B. Material Submittals: Not required under this section.

01560 – ENVIRONMENTAL REQUIREMENTS

1.04 NOTIFICATIONS:

A. Provide to the Engineer all data specified herein to insure compliance with applicable environmental requirements.

1. Permits: Not Required

2. Other Submittals, Notifications, and Approvals: The following submittals, notifications, and approvals are required to maintain compliance:

a. Solid Waste Disposal: The Contractor shall provide a solid waste disposal plan from the contractor stating how all materials leaving the site shall be disposed of.

(1) The plan shall certify that the Contractor shall dispose of all materials in compliance with all Federal, State of Georgia, and local laws. A senior official of the company shall sign this letter. The plan shall address the disposal of each item addressed in Sections 3.01 and 3.02 as applicable. Non-hazardous solid waste shall be broken down into individual types, i.e., asphalt, concrete, wood, brick, etc.

(2) The plan shall address each landfill to be used. A copy of all landfill permits shall be provided unless the Macon, Wolfe Creek, or Houston County landfill is to be used. The plan shall designate the employee who shall be responsible for verifying that all materials removed from the site are disposed of in accordance with the above referenced laws. The employee shall be an employee of the contractor and shall have authority to act for the contractor. Provide two copies of the Disposal Plan to the Engineer prior to the Pre-construction Conference or 14 calendar days prior to the start of disposal operations if no pre-construction conference is held.

(3) Omitted.

(4) Keep on hand evidence of proper disposal of construction debris as well as providing this evidence to the Engineer. Examples of evidence include dump tickets from a licensed sanitary landfill and copies of a current landfill permits from the State of Georgia (unless Macon, Wolfe Creek, or Houston County landfill is used.), manifest, bill of sale, or other record for recycling. This evidence shall be provided the workday after the load is carried off.

(5) After contract work is completed and prior to final payment, the Contractor shall submit a letter of certification signed by a senior official of the company certifying that all materials removed from the site have been disposed of in accordance with all applicable Federal, State, and local laws. Attach a copy or duplicate of the disposal documents for each load transported to the Macon, Wolfe Creek or Houston County Landfill. See paragraph 3.01.B.2.a.(1)

b. Hazardous Waste: See Section 09 97 02 for requirements.

PART 2 - PRODUCTS - OMITTED.

PART 3 - EXECUTION

01560 – ENVIRONMENTAL REQUIREMENTS

3.01 DISPOSAL OF WASTE/EXCESS MATERIAL:

A. Omitted.

B. Non-hazardous Solid Waste or Excess Material, except topsoil and suitable fill material, shall be removed from the site daily unless permitted otherwise by the Engineer. Dispose in a manner approved by the US Environmental Protection Agency and the Georgia Department of Natural Resources, Environmental Protection Division (EPD). Also comply with applicable local codes and requirements. Equipment/material to be removed from the project but not turned in to the Government is the property of the contractor.

1. Disposal: Use one or more of the following methods to dispose of non-hazardous solid waste.

a. Sanitary Landfill: All solid waste may be disposed of in a sanitary landfill properly licensed by the State of Georgia. If a landfill other than the Macon, Wolfe Creek, or Houston County sanitary landfill is used, provide a copy of the landfill license. Provide proof that any Georgia municipal solid waste disposal facility to which they propose to bring waste, except Macon, Wolfe Creek, or Houston County, is operated by someone who has obtained the certification required by the Georgia Solid Waste Management Act, O.C.G.A. 12-8-24.1.

b. Inert Waste Landfill: Materials not likely to cause production of leachate of environmental concern may be disposed of in an inert waste landfill. Only earth and earth-like products, concrete, cured asphaltic concrete, rock, bricks, yard trimmings, and land clearing debris such as stumps, limbs, and leaves are acceptable for disposal in an inert waste landfill. This definition excludes industrial and demolition waste not specifically listed above. Provide a copy of the written notice of commencement of operation by the landfill as given to the Georgia EPD. Include the weights of material disposed of in this type of landfill in the disposal and recycling report required in paragraph 3.01.C below.

c. Construction/Demolition Disposal Site: Only wood, metal, wallboard, paper, cardboard, as well as materials that can go in an inert waste landfill may be disposed of in this facility. Provide a copy of the landfill license.

d. Recycling: Recycling of materials is strongly encouraged. Materials destined for recycling must meet the definition of non-hazardous wastes under federal/state solid waste regulations. Materials defined as “recovered materials” by GA EPD regulations are excluded from regulation as solid wastes.

e. All materials to be disposed of in other than a sanitary landfill must be kept segregated at the project site from those materials, which are allowed only in a sanitary landfill.

3. Solid Waste Disposal Outside of Georgia: Dispose of no solid waste outside the state of Georgia without prior written approval of the Engineer. If the contractor desires this, he shall provide sufficient information as determined by the Engineer to allow verification

3.02 SPECIAL WASTES OR HAZARDOUS MATERIALS: Not applicable.

3.03 PROTECTION OF LAND RESOURCES:

01560 – ENVIRONMENTAL REQUIREMENTS

- A. General: Do not take any action which shall adversely affect the existing Water Quality Standards classification of any streams, rivers, lakes or reservoirs within or adjacent to the project site or which would otherwise contribute to pollution of these water resources. No fuel, oils, bituminous, calcium chloride, acids, construction waste or otherwise harmful materials shall be permitted to enter these water resources. Preserve the land resources in their present condition or restore to a condition that appears natural and does not detract from the appearance of the surrounding area. If restoration is to be accomplished, the Contractor must submit his restoration plan and receive approval from the County on his proposed procedures.
- B. Omitted.
- C. Omitted
- D. Restoration of Landscape Damage:
1. Do not allow any trees or other debris to get into the storm drainage system.
 2. Surface Drainage:
 - a. Surface drainage from cuts and fills within the construction limits, whether or not completed, and from borrow and waste disposal areas, shall, if turbidity producing materials are present, be held in suitable sedimentation ponds or shall be graded to control erosion. Temporary erosion and sediment control measures such as berms, dikes, drains, or sedimentation basins, if required to meet the above standards, shall be provided and maintained until permanent drainage and erosion control facilities are completed and operating. The area of bare soil exposed by construction operations at any time shall be held to a minimum. Stream crossings by fording with equipment shall be limited to control turbidity. Fills and waste areas shall be constructed by select placement to eliminate pollution to adjacent streams.
 - b. Stabilization of permanent steep slopes shall be accomplished as soon as possible, using a 2-step procedure, if necessary, to establish vegetation. Apply mulch immediately after finished grading is completed, regardless of season, and delay permanent seeding and fertilizing, if necessary, until the season most favorable for germination.
- E. Spills: Prevent the spill of chemicals, fuels, oils, grease, bituminous materials, waste washings, herbicides, cement drainage or any other hazardous materials. Immediately report all spills to the Macon-Bibb County Fire Department, emergency number 911, giving name, telephone number, location of spill, and type and amount of material spilled. Notify the Engineer of the spill immediately following initial reporting to the Fire Department. Take containment action against any hazardous spills, which threaten storm drains and other environmental areas. Ensure clean up of materials spilled as a result of contractor action, or lack thereof. The contractor is responsible for the clean up of material(s) spilled. No spill residue shall be transported off site without specific approval from the Engineer. The contractor shall provide support, as appropriate, for containment and clean up of spills. If the spill exceeds reportable quantity limits, coordinate notification to the National Response Center with the local office of the Environmental Protection Division (EPD) through the Engineer.

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3.04 AIR QUALITY:

- A. Open burning operations must be approved by the Macon-Bibb County Fire Department and the Georgia Forestry Commission. Note that a burn ban is in effect from 1 May to 30 September of each year.

3.05 DUST CONTROL: Maintain all excavations, embankments, stockpiles, haul roads, permanent access roads, plant sites, waste areas, borrow areas, and all other work within or without the project boundaries free from dust which could cause a hazard or nuisance to others. Approved temporary methods of stabilization consisting of sprinkling, chemical treatment, light bituminous treatment or similar methods are permitted to control dust. To be approved, sprinkling must be repeated at such intervals as to keep all parts of the disturbed area damp at all times. If sprinkling is used, keep sufficient equipment on the job site at all times. Perform dust control as the work proceeds and whenever a dust nuisance or hazard occurs.

3.06 USING HAZARDOUS MATERIALS IN PERFORMING THE WORK: Omitted

3.07 PESTICIDES (INSECTICIDES, FUNGICIDES, HERBICIDES, ETC.): Omitted

3.08 Omitted

3.09 THREATENED AND ENDANGERED SPECIES:

- A. The construction project is not anticipated to have any impact in this area since most plant and animal species of concern exist in wetlands. Any project activities believed to interface with threatened and endangered species shall be coordinated through the Engineer.

3.10 WETLANDS: Comply with water and land protection paragraphs of this Section to prevent construction site sediments and runoff from entering wetlands.

3.11 UNDERGROUND STORAGE TANKS (UST's): Not applicable.

Section 1560 Submittals

<u>Para #</u>	<u>Description</u>	<u>Date Required</u>	<u>Inspector</u> <u>Check Mark</u>
1.04 A.2.a	Solid Waste Disposal Plan	at pre-construction conf.	_____
1.04 A.2.a	Landfill receipts	within 1 day of dumping	_____
1.04 A.2.d	Disposal Certification Letter.	prior to final payment	_____
3.01 B.2.c	Landfill License	prior to dumping	_____

---- END OF NARRATIVE SECTION ----

PART 1 - GENERAL

1.01 CONTRACTOR OPERATIONS: This section establishes requirements to ensure the safety of Government and other personnel not directly or indirectly under the employment of the Contractor. Comply with standards maintained by Occupational Safety and Health Administration (OSHA), identified sections of Corps of Engineers Safety Manual (EM 385-1-1), and National Fire Protection Association (NFPA).

A. CONTRACTOR EMPLOYEES: Compliance with OSHA and other applicable laws and regulations for the protection of Contractor employees is the obligation of the Contractor. This contract is not intended in any way to require persons to work in surroundings or under working conditions that are unsafe or dangerous to their health.

B. Coordinate and perform work so as not to impact the safety of Government or non-Contractor personnel, or cause damage to government property. This requires providing appropriate safety devices to be utilized in and around the work areas to perform the job safely and protect others from hazards generated by the work.

1.02 SUBMITTALS:

A. General: Provide the following submittals in accordance with instructions found in Section 01300, Submittals and Contractor Furnished Items.

B. Material Submittals: None required under this section.

C. Other Submittals: Provide the following submittals as required by the contract or as directed by the Contracting Officer.

<u>Para #</u>	<u>Description</u>	<u>Date Required</u>	<u>Inspector Checklist</u>
3.01.C.	Fire Reporting	If Fire	_____
3.9	Injury/Mishap Reports	By 1 hour after	_____

1.03 OSHA INSPECTIONS: Department of Labor (DOL) OSHA inspectors may arrive at Contractor work sites without formal notification in the event of an employee complaint or a no-notice inspection. The DOL has the right to stop or delay work and/or issue costly fines due to noncompliance with safety requirements. Any costs borne by such actions are the sole responsibility of the Contractor.

PART 2- PRODUCTS: Omitted

PART 3- EXECUTION

3.01 FIRE REPORTING: Report all fires as soon as discovered. The fire reporting number is 911. The caller should give his or her name and location of what is on fire. Also, give any other information that may be requested by the Fire Department dispatcher. Stay on the telephone until the dispatcher has obtained all necessary information.

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3.02 OPERATIONS INVOLVING WELDING, CUTTING, BRAZING, AND OPEN FLAME are carefully controlled on the project site due to several fires caused by such operations.

- A. Start no such work until the Engineer has been notified, the site has been inspected, and the operation approved by the authorized Fire Inspector. Do not contact the Fire Department directly.
- B. Observe caution and provide welding, cutting, brazing, and open flame equipment in accordance with NFPA 51B and OSHA 1926.350 through 1926.354.
- C. Perform a fire watch to inspect the work area and adjacent areas for the evidence of fire for at least one-half hour after completion of the welding, cutting, brazing, or open flame.

3.03 FIRE HYDRANTS/HOSES

- A. Fire hydrants shall not be used without prior approval of the Macon Water Authority. If permission is granted for use of a fire hydrant, the Contractor must furnish a gate valve to fit the 2 1/2" outlet and a proper hydrant wrench. Each time a hydrant is to be opened or used, it must be opened slowly to prevent a water surge, and it must be opened to the full "open" position. When closing the hydrant, close it slowly to prevent a water surge.
- B. The Fire Department will not loan equipment; e.g., fire hoses, nozzles, or hydrant wrenches.
- C. No vehicles or equipment shall be parked or stored within 15 feet of a fire hydrant.

3.04 DEBRIS

- A. The accumulation of all debris shall be kept to a minimum during construction.
- B. Piles of debris awaiting removal outside any facility shall not be placed in fire lanes or within 25 feet of the facility.
- C. Walkways, roadways and sidewalks shall be kept clear of building material, equipment, or other obstructions caused by the Contractor operation. Protective barriers and warning signs shall be installed.

3.05 FLAMMABLE AND COMBUSTIBLE LIQUIDS

- A. All flammable liquids shall be stored in suitable metal containers only.
- B. Store other flammable materials properly.
- C. Gasoline or any other low flash point flammable liquid shall not be used for cleaning purposes or to start fires.

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D. Static bonding wires shall be properly attached before combustible or flammable liquid is transferred from one vessel to another. This includes vehicles, portable gasoline driven equipment, etc.

E. Smoking or the use of spark or flame producing equipment in areas where flammable liquids are being used or stored is strictly prohibited.

3.06 FIRE EXTINGUISHERS: The Contractor is responsible for providing an adequate number of fire extinguishers. Extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.

3.07 HAZARD COMMUNICATION: Not applicable.

3.8 CONFINED SPACE ENTRY: In recent years, there have been increased injuries and mishaps in confined spaces. The Contractor assumes full responsibility for performing all work in and around a confined space in a safe manner and IAW CFR 1910.146. Protect Macon-Bibb County personnel and the public by supplying barricades, warning signs, and traffic control measures as necessary.

3.9 INJURIES/MISHAP REPORTING: The Contractor shall report mishaps or incidents exceeding \$1,000 (material + labor) and all injuries requiring medical treatment to any personnel, including Contractor employees, within one (1) hour by phone to the Engineer during normal day shift hours. This report shall contain all available facts. Mishaps/Incidents occurring at other times of the day shall be reported as soon as possible the next normal workday.

3.10 MOTOR VEHICLES: No vehicle shall be stopped, parked, or left standing on any road or adjacent thereto or in any area in such a manner as to endanger the vehicle, other vehicles, equipment, or personnel using or passing that road or area. Roads shall be swept if spillage occurs during hauling. For chemical spills, see the Environmental Requirements section of the specifications. Ensure safe operating condition of all Contractor-owned vehicles. Unsafe and unserviceable vehicles shall be removed from service immediately. Ensure that all Subcontractors comply with these requirements.

3.11 EXCAVATIONS: In all excavations where any personnel may be exposed to danger from moving ground, protection shall be provided by means of a shoring system, sloping of the ground, or some other equivalent means. All trenches over five feet deep in either hard and compact or soft and unstable soil shall be sloped, shored, sheeted braced or otherwise supported. Trenches less than five feet in depth shall also be effectively protected when hazardous ground movement may be expected. Additional information/requirements may be found in 29 CFR 1926 and EM 385-1-1.

3.12 PROTECTIVE BARRIERS/WARNING SIGNS: When it is necessary to barricade an area for excavation, open manholes, overhead work, or the protection of personnel from hazardous operations, moving equipment or cranes, barricades are to be provided by the Contractor. Barricades must be erected before the work begins. If the barricades are in a roadway or walkway, blinking lights must be used during the hours of darkness. Barricades and associated equipment shall be kept neat and orderly at all times. When the work is complete, the barricades must be removed immediately from the job site. Kerosene lamps and open flame pots shall not be used for or with warning signs or devices. Additional information/requirements may be found in 29 CFR 1926 and EM 385-1-1. Provide as required safety

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signs at job sites, such as MEN WORKING ABOVE, DO NOT WATCH WELDER, and NO SMOKING.

3.13 PROTECTIVE EQUIPMENT: The Contractor is responsible for the use of appropriate personal protective equipment by his and subcontractor employees and guests. The Government recommends voluntary use of the standards in EM 385-1-1.

3.14 TOOLS AND EQUIPMENT

A. LADDERS/SCAFFOLDS: Use standard ladders that are structurally rigid, sound, equipped with approved safety shoes, and free of cracks. Metal ladders shall not be used near or for electric service. All ladders shall be tied off at the top and bottom as necessary. Special purpose job ladders may be constructed if they are properly designed and built IAW 29 CFR 1926. Scaffolds and platforms shall have handrails and toe boards. Additional information/requirements may be found in EM 385-1-1.

B. HAND TOOLS/ELECTRICAL TOOLS, PNEUMATIC TOOLS/COMPRESSED AIR: The Contractor is responsible for ensuring that all hand tools used by his or subcontractor personnel are used IAW applicable safety standards, especially 29 CFR 1910 and 1926.

C. ELECTRICAL WIRING AND EQUIPMENT: All electrical wiring and equipment shall be a type listed by UL or another recognized listing agent. All temporary electrical wiring shall be adequately installed and placed to avoid physical damage from other operations and comply with 29 CFR 1926.405. Temporary wiring shall be removed immediately upon completion of construction or the purpose for which the wiring was installed. All extension cords shall be of the three-wire type and kept in a good state of repair. Splices shall be avoided, but if they are made, they must comply with 29 CFR 1926.405. All portable electrical appliances and equipment shall be unplugged at the end of each workday.

<<<<< END OF SECTION >>>>>

Section 03000
TECHNICAL SPECIFICATIONS
CONCRETE SIDEWALKS, DRIVEWAYS AND CURB AND GUTTER

I. Scope of Work

Work done under this item shall consist of the construction, reconstruction, or alteration of a one-course Portland cement concrete sidewalk, or a one-course Portland cement concrete driveway in accordance with these specifications, or a one-course Portland cement combination curb and gutter, and in conformity to the line and grades established by the Engineer. It shall also consist of the removal of existing sidewalks or driveways or curb and gutter and other obstructions for excavating and filling, for fine grading and compaction of subgrade, and all backfilling necessary to complete the work, including the disposal of surplus material and cleaning up of the work.

A. MATERIALS

1- Concrete

Concrete shall contain cement, coarse aggregate, and fine aggregate with a minimum of 3,000 pounds compressive strength per square inch at 28 days.

2- Water

Water shall be clean and free from salt, oil, or organic substances. Water from local rivers, creeks, or ditches shall not be used.

B. CONSTRUCTION METHODS – SIDEWALK AND DRIVEWAY

1- Subgrade Preparation

The subgrade for sidewalks and driveways shall be formed by excavating to the required depth, and shaped to the proper cross section, and shall be thoroughly compacted by rolling or tamping before placing any concrete to 95% compaction.

Where tree roots are encountered, they shall be removed to a depth of one foot for the full width of the walk.

All soft and spongy places shall be removed and all depressions filled with suitable material which shall be thoroughly compacted in layers not exceeding six (6) inches in thickness.

- II. Where existing sidewalks or driveways are to be removed, they shall be removed for their entire depth and disposed of in a satisfactory manner. Entire sections of a sidewalk slab between joints shall be removed when directed by the Engineer.

1. Protection of Subgrade

Ditches and drains shall be provided and maintained to satisfactorily drain the subgrade. In no case shall sidewalk and driveway be placed on frozen or muddy subgrade. Frost crystals or mud caused by freezing and thawing shall be removed and replaced with suitable material at the Contractor's expense, or allowed to dry before placing sidewalk and driveway. If ruts are formed in the prepared subgrade, the subgrade shall be scarified and thoroughly compacted. If borrow material is required because of improper handling or drainage, the cost of such will be borne by the Contractor.

2. Grading Specifications

Refer to plan, profile and cross sections.

3. Dimensions

Sidewalk slabs shall have an area of not more than thirty-six (36) square feet, and the length of the slab shall be equal to the width providing, however, that where sidewalks are to be repaired, the size of the slab replaced shall be of the same dimensions as those remaining in the old walk.

The minimum thickness of a sidewalk shall be four (4) inches, except where it is crossed by a driveway, and then it shall be a minimum of six (6). Where, in the opinion of the Engineer, driveways and sidewalks are to be subjected to very heavy traffic loads, he may designate the minimum thickness to be eight (8) inches, or may require wire mesh reinforcement or both.

4- Alignment and Grades

Sidewalks shall be constructed in conformance to the lines and grades on the Plans. Sidewalks shall have a uniform slope towards the back of the curb of not less than one-quarter (1/4) inch per foot, nor greater than one-half (1/2) inch per foot.

5- Drainage

Omitted.

6- Forms

Forms used in construction sidewalks shall be of wood or metal for full depth of the concrete, straight, free from warp, and sufficient strength. They shall be staked securely enough to resist the pressure of the concrete without springing. If of wood, they shall be of two-inch (2") surfaced planks. All work forms shall be thoroughly cleaned before being reused.

7- Placing Concrete

No concrete shall be placed until the forms and subgrade have been approved by the Engineer. The subgrade shall be thoroughly wetted and the concrete shall be placed thereon in one course to the required depth. The concrete shall be thoroughly spaded and rammed and struck off with a template to the required grade and cross section. Successive batches of concrete shall be deposited in a continuous operation until individual sections are completed.

8- Joints

Contraction joints shall be provided uniformly to separate the slab, and shall be cut in a straight line to a depth equal to at least one-third ($1/3$) of the total slab thickness. The joint shall be not less than one-eighth inch ($1/8"$), nor more than one-fourth inch ($1/4"$) in width.

A one-half inch ($1/2"$) expansion joint filled with joint filler shall be placed between all sidewalks and adjoining backs of curbs and between the intersection of two (2) sidewalks and between all sidewalks and driveways. Sidewalks constructed adjacent to buildings shall be separated from the building with a similar joint. The maximum distance between transverse expansion joints shall be forty (40) feet. The joint filler shall extend the full depth of the concrete and shall be one-fourth ($1/4$) of an inch below the finished surface of the sidewalk.

9. Finishing

After the freshly-poured concrete has been brought to the establishing grade, it shall be floated to produce a surface free from irregularities. The final surface shall be obtained by troweling with a steel trowel or hand float and brushing lightly with a light weight brush in a transverse direction so as to produce a uniform gritty surface of the proper texture. All edges and joints shall be rounded to one-fourth inch ($1/4"$).

No more concrete shall be laid than can be properly finished and covered during daylight, unless artificial light satisfactory to the Engineer is provided.

10- Cold Weather Pouring

Concreting operations shall not be undertaken or continued when the surrounding air temperature is below 40° F or the local weather reports indicate the possibility of temperatures of 32°F or lower within the ensuing twenty-four (24) hours, unless provisions are made to insulate or heat the concrete in a manner satisfactory to the Engineer. In any event, the Contractor shall plan and protect his work in a manner which will assure satisfactory results. Any concrete damage by freezing shall be removed and replaced by the Contractor at his own expense.

Concrete when deposited in the forms, shall have a temperature of not less than 50°F nor more than 90°F. The concrete shall be maintained at a temperature of not less than 50°F for a period of at least seventy-two (72) hours in case of normal concrete, or twenty-four (24) hours when high early cement is used. Concrete shall not be deposited on a frozen subgrade.

11- Curing and Protection

Immediately after finishing operations have been completed, the entire surface of the concrete shall be covered and cured under burlap or other material approved by the Engineer. The burlap shall be free from holes, dirt, clay, or other foreign matter.

Curing operations shall be carried on at all times when the air surrounding the concrete is 50°F or greater. After finishing the concrete and the surface is hardened sufficiently or prevent marring, the entire surface shall be covered with one layer of thoroughly saturated burlap overlapping at least six inches (6") at joints to prevent gaps. The covering shall be maintained fully wetted for seventy-two (72) hours after the concrete has been placed. Water shall be applied by a spray fine enough to avoid damage to the fresh concrete.

Liquid membrane forming curing compound may be used in lieu of keeping the concrete wet. When used, it shall be applied at a rate of one (1) gallon per one hundred fifty (150) square feet of area immediately after the concrete has been finished and the surface water sheen has disappeared. After the curing compound has been applied, the concrete shall be kept covered with a tarpaulin or heavy building paper for at least three (3) days to protect the surface from traffic and rain. Sufficient barricades, signs, and warning devices shall be provided by the Contractor to protect the finished concrete.

12- Removal of Forms and Backfilling

After the concrete has set sufficiently, the forms shall be removed and the spaces on both sides shall be backfilled with suitable earth, uniformly spread and compacted/ The areas between the curb and sidewalk, and immediately back of the sidewalk, shall be left in a smooth, neat, and workmanlike condition.

13- Protection of Concrete

Immediately after the forms have been removed, traffic shall be excluded from crossing the concrete for a period of approximately fourteen days (14) days by erection and maintenance of suitable barricades. The Contractor shall be responsible for any damage resulting from traffic within the fourteen (14) day period and he shall remove and replace any concrete damage as directed by the Engineer.

14- Removal of Defective Work

The Engineer shall have the authority to and shall require the removal of any sidewalk or portion thereof laid under these specifications which does not conform to the requirements as set forth herein. Upon notification in writing by the Engineer, the Contractor shall take immediate action to correct the faulty work at his own expense.

15- Cleaning Site

Prior to the acceptance of the work, all surplus and rejected material and unsightly objects such as stones, stumps, limbs, roots, concrete, etc., shall be removed from the site and not be considered complete until all cleaning up has been done and the site is of a neat appearance, with appropriate seeding, fertilizer, etc., completed.

C. CONSTRUCTION METHODS – CURB AND GUTTER

1. Subgrade

The subgrade shall be excavated to the required depth below the finished surface in accordance with the plans to the lines and grades established by the Engineer. All soft and yielding material or other unsuitable material shall be removed and replaced with suitable material, and the subgrade shall be compacted thoroughly and finished to a firm, smooth surface. No curb and gutter shall be poured until the subgrade is approved by the Engineer. If borrow material is required because

of improper handling or drainage, the cost of such will be borne by the Contractor.

2- Protection of Subgrade

Ditches and drains shall be provided and maintained to satisfactorily drain and subgrade. In no case shall curb and gutter be placed on frozen or muddy subgrade. Frost crystals or mud caused by freezing and thawing shall be removed and replaced with suitable material at the Contractor's expense, or allowed to dry before placing any curb and gutters. If ruts are formed in the prepared subgrade, the subgrade shall be scarified and thoroughly compacted.

3- Grading Specifications

Omitted.

4- Forms

The forms shall be of metal of the necessary dimensions to construct the combined curb and gutters specified in the plans. Wood forms may be used where conditions make the use of metal forms impractical. The forms shall be set true to the line and grade established by the Engineer, and held rigidly in position so as to prevent leakage of mortar and springing out of line when the concrete is placed in them. The forms shall be true in line, free from warping or bending.

5- Placing of Concrete

The subgrade shall be moistened and the concrete shall be placed in the forms and tamped sufficiently to bring the mortar to the surface, after which it shall be finished smooth and even.

The curb and gutter shall be constructed in place in uniform sections ten (10) feet in length. Expansion joints of suitable material shall be provided at the same length.

6- Finishing

The edge of the curb and gutter shall be finished with an approved edging tool of one-half inch (1/2") radius. Joints shall be similarly finished immediately after the templates have been removed.

The forms shall be left in place until the concrete has set sufficiently so that they can be removed without injury to the curbing. Upon the removal of the forms, the concrete shall be rubbed down to a smooth and uniform finish, but no plastering will be allowed.

No more concrete shall be laid than can be properly finished and covered during daylight, unless adequate artificial light satisfactory to the Engineer is approved.

7- Removing Forms

Forms shall not be removed from freshly placed concrete until it has set for at least twelve (12) hours. They shall be carefully removed and in such a manner as to prevent damage to the edges of the concrete.

8- Other Specifications

Omitted.

D. METHOD OF MEASUREMENT

- 1- The area of concrete sidewalk completed and accepted shall be measured and computed in linear feet. No measurement shall be made of fine grading of subgrade and backfill. The length of curb and gutter complete and accepted shall be measured in linear feet. The measurements of the curb and gutter shall be measured along the bottom of the gutter near the face of the curb. No measurement shall be made of fine grading of subgrade and backfill.

E. METHOD OF PAYMENT

- 1- The contractor shall be paid by the unit bid price of each item. Any common excavation necessary (including cutting, backfilling, grading, forming and grassing) shall be included in the grading item, and shall be paid by the lump sum.

The contractor shall be responsible for furnishing all labor, material, and equipment. The contractor shall provide adequate construction signings, barricades, traffic control devices and other related items for the project area, during the construction period. All above items shall be included in the traffic control bid schedule, and shall be paid by lump sum.

General Notes:

1. The contractor shall verify all utility locations prior to construction, by calling the Utility Protection Center.
2. The contractor shall be responsible for furnishing all labor, material; equipment and incidental items needed to provide adequate construction signings, barricades, traffic control devices and other related items for the project area, during the construction period.
3. The contractor shall provide reasonable access to residential, commercial and public properties in the project area. During construction, traffic may be restricted to local traffic, only with approval of the Traffic Engineer.
4. Any surplus excavation shall become the property of the contractor, and disposal shall be the contractor's responsibility at no additional cost.
5. All disturbed area shall be grassed by the contractor at no additional cost.
6. The contractor shall level all disturbed areas with topsoil and hand rake to a uniform appearance.
7. All work shall be done according to the specifications.
8. Contractor shall be paid at unit bid prices only.
9. As time is of the essence the contractor agrees to begin work promptly and keep work in progress until completion of said contract.
10. The contractor shall obtain permission for all storage on private property. Materials stored on the city right-of-way must be permitted by the appropriate authority.
11. Macon-Bibb reserves the rights to require compaction and thickness testing. The city will pay for the cost of the testing, however if testing fails, the contractor shall repair all failed tested material at his expense.
12. The actual quantities may vary. Unit price bid remains the same.