

CITY OF TUSCALOOSA *DCE*



CITY WALK
AT
UNIVERSITY PLACE & FOREST LAKE

CITY PROJECT No. A12-1413 / A12-0993

CONTRACT DOCUMENTS AND
TECHNICAL SPECIFICATIONS

MAYOR

WALTER MADDOX

CITY COUNCIL

BURRELL ODOM

HARRISON TAYLOR

CYNTHIA ALMOND

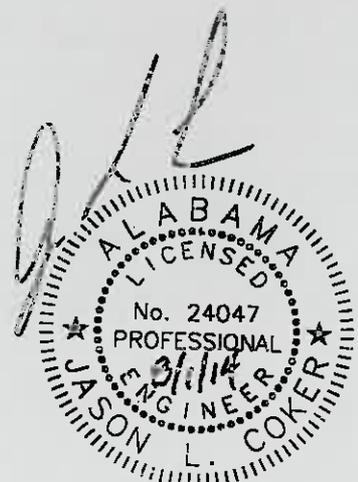
MATTHEW CALDERONE

KIP TYNER

EDDIE PUGH

SONYA MCKINSTRY

AUGUST 1, 2014





ADDENDUM NO. 1

Date: August 8, 2014

Project: City of Tuscaloosa
City Walk at University Place and Forest Lake
Project No. A12-1413/A12-0993

Bid Date: Thursday, August 28, 2014
9:00 a.m. local time
Narashino Conference Room in City Hall

The following changes, additions, clarifications, and/or deletions are hereby made part of the Contract Documents for the project referenced above as fully and completely as if the same were set forth fully therein:

1. Due to the renovations in the Council Chambers at City Hall, the locations for the Pre-Bid and the Bid Opening shall be as follows:
 - a) Pre-Bid Conference – August 15, 2014 at 9:00 am local time in the Assembly Conference Room of the City of Tuscaloosa Environmental Services Building at 3440 Kauloosa Avenue Tuscaloosa, AL 35401.
 - b) Bid Opening – August 28, 2014 at 9:00 am local time in the Narashino Conference Room on the second floor of City Hall, 2201 University Boulevard Tuscaloosa, AL 35401.
2. City of Tuscaloosa Special Conditions for Federally Funded Contracts Pages 70 and 74 shall be replaced in their entirety as per the attachment to this Addendum; alterations identified in red.
3. As per City of Tuscaloosa Special Conditions for Federally Funded Contracts, Part VII – General Requirements, Paragraph H., the Davis-Bacon Act shall apply on this project. The associated Davis-Bacon wage rates applicable for this project are included as an attachment to this Addendum.

Attachments:

- City of Tuscaloosa Special Conditions for Federally Funded Contracts Pages 70 and 74
- Davis-Bacon wage rates

END OF ADDENDUM NO. 1

CITY OF TUSCALOOSA
SPECIAL CONDITIONS FOR
FEDERALLY FUNDED CONTRACTS

I. DEFINITIONS

"Construction Contract" means a contract for construction, rehabilitation, alteration, and/or repair, including painting and decorating.

"Contractor" means an entity that has entered into an agreement with the local government for the performance of specific work on a project or activity, the provision of professional services, or for the supply of equipment and/or materials.

" HUD " means US Department of Housing and Urban Development (HUD) (Federal Agency).

"Local Government" means the City of Tuscaloosa.

"Program" means the Community Development Block Grant Disaster Recovery (CDBG-DR) (Federal Program) operated under the provisions of HUD

"Projects/Activities" means those undertakings which are included in the Program and are funded wholly or in part by CDBG -DR and HUD

"Project Area" means the corporate limits of the City of Tuscaloosa.

"Subcontractor" means a person, firm or corporation supplying services or labor and materials or only labor or only materials for work at the site of the project, for and under contract or agreement with the Contractor.

II. CONFLICT OF INTEREST

A. Interest of Members of the Local Government. No officer, employee or agent of the local government who exercises any function or responsibilities in connection with the planning and carrying out of the program, or any other person who exercises any functions or responsibilities in connection with the program, shall have any personal financial interest, direct or indirect, in this contract, and the Contractor shall take appropriate steps to assure compliance.

B. The Contractor agrees that it will incorporate into every subcontract required in writing the following provision: Interest of Contractor and Employees. The Contractor agrees that no person who presently exercises any functions or responsibilities in connection with the program, has any personal financial interest, direct or indirect, in this contract. The Contractor further covenants that he presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of his services hereunder.

The Contractor further covenants that in the performance of this contract no person having any conflicting interest shall be employed. Any interest on the part of the Contractor or his employees must be disclosed to the City. Provided, however, that this paragraph shall be interpreted in such a manner so as not to unreasonably impede the statutory requirement that maximum opportunity be provided for employment of and participation by low income residents of the area.

C. Provisions of the Hatch Act. Neither the funds provided by this agreement nor the personnel employed in the administration of the agreed upon work shall be in any way or to any extent engaged in the conduct



RECEIPT OF ADDENDUM NO. 1

Project: City of Tuscaloosa
City Walk at University Place and Forest Lake
Project No. A12-1413/A12-0993

The following hereby acknowledges receipt of Addendum No. 1, dated August 8, 2014.

Complete the following and return by fax to (205) 759-1524 or scan and email to dmarcum@mcgiffert.com.

We are in receipt of Addendum No. 1 and fully understand the contents and our bid on the above referenced project submitted reflects the intent of this Addendum.

ETFC CONSTRUCTION INC
Contractor Name

*By: [Signature]
Date: 8/20/14

* Signature must be by person legally qualified to sign bid.



ADDENDUM NO. 2

Date: August 18, 2014

Project: City of Tuscaloosa
City Walk at University Place and Forest Lake
Project No. A12-1413/A12-0993

Bid Date: Thursday, August 28, 2014
9:00 a.m. local time
Narashino Conference Room in City Hall

The following changes, additions, clarifications, and/or deletions are hereby made part of the Contract Documents for the project referenced above as fully and completely as if the same were set forth fully therein:

1. **Warranty Period:**
Warranty period for all items on the project shall be one (1) year from the Substantial Completion of the entire project, as determined and established by the City/City Representative. This shall include and supersede any and all references otherwise in the project technical specifications, including, but not necessarily limited to, irrigation, landscaping, grass/sod, electrical, etc. Furthermore, any reference to the guarantee period in the contract documents shall be considered as warranty period.
2. **Technical Specification Section 02229, Construction Best Management Practices Plan, shall be added to the contract documents.**
3. **Technical Specification Section 02240, Stormwater Monitoring and Temporary Erosion Control, shall be replaced in its entirety.**
4. **Technical Specification Section 12810, Underground Irrigation System, shall be amended to include the following as Part 3, Paragraph 3.9.D:**
The Contractor shall anticipate having the irrigation subcontractor available to assist the City with final adjustment and operation of the irrigation system following the installation of all landscape, plantings, sod, etc., including, but not necessarily limited to, adjustment of irrigation heads, valves, timers, control panel, etc. Such work shall be coordinated with and at the discretion of the City of Tuscaloosa, and shall include a maximum of one (1) – eight hour work.
5. **Construction Plans:**
 - a) Sheet C2.0 – demolition of existing light pole assembly
 - b) Sheets C5.0, C5.1, and C8.7 – general revisions to erosion control plans (C5.0 and C5.1) and erosion/sedimentation control details (C8.7)
 - c) Sheet C8.4 – elimination of duplicate ALPCO pull box details and duct bank trench revisions
 - d) Sheet C8.5 – modification of pole details
 - e) Sheet C8.9 – general modification of ALPCO details
 - f) Sheet E0.1 – Light Fixture Schedule and general note modification / additions.
 - g) Sheet E1.7 – added additional pole assembly and circuitry
6. **Bid Proposal:**
 - a) Unit Price Bid Item No. 89 Quantity Modified
 - b) Unit Price Bid Item No. 90 Quantity Modified
 - c) Unit Price Bid Item No. 92 Description Modified
 - d) Unit Price Bid Item No. 120 Added (IT/Communication Cabinet Pole Mounted Box Assembly)
 - e) Unit Price Bid Item No. 121 added (Unsuitable Soil Removal and Replacement)
 - f) Unit Price Bid Item No. 122 added (Removal of Existing Light Assembly)

7. Sales and Use Taxes:

- a) Article II., Paragraph J. of the Contract Agreement (page 28) shall be removed in its entirety and replaced with the following: Sales and Use Taxes SHALL NOT be included in the bid. The project will be bid and administered in compliance with the State of Alabama Act 2013-205, Certificate of Exemption from Sales and Use Tax for Governmental Entities, regarding sales and use taxes. The Contractor shall be responsible for obtaining a certificate of exemption from the Alabama Department of Revenue for purchases of materials and other tangible property made part of the project. Any subcontractors purchasing materials or other tangible personal property as part of the project shall also be responsible for obtaining a certificate of exemption.
- b) As per the State of Alabama Act 2013-205, Certificate of Exemption from Sales and Use Tax for Governmental Entities, the estimated sales and use tax savings must be accounted for on the bid proposal. Failure to provide the estimated sales and use tax savings shall render the bid as non-responsive. Other than determining responsiveness of the bid, sales and use tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive bidder.
- c) See the attached revised Bid Proposal sheet 15 to be used in the bid submittal which includes provisions for sales and use tax savings accounting on the bid proposal.
- d) For more information regarding the State of Alabama Act 2013-205, see the following link
 - <http://www.burr.com/News--a--Resources/Resources/-/media/3017788EA20048F19607FC0343BCF025.ashx>

8. Bidder Questions:

- a) Question: Will the provisions of the contract regarding contractor (prime contractor) must perform 50% of the work with own forces be required?
Answer: Yes; based on the estimated construction cost breakdown this will be attainable.
- b) Question: Will the installation of the PVC conduits for the future technology duct bank, ALPCO, ATT, Comcast PVC conduits and associated pullboxes, pedestals, pads be required to be installed by an electrical contractor?
Answer: No; as per the Alabama General License Board of General Contractors, contractors licensed in the State of Alabama as a General Contractor along with a Municipal and Utility classification may install such conduits and associated appurtenances.
- c) Question: Are sales and use taxes to be included in the bid? Purchasing agent agreement required? Does the recently enacted State of Alabama Act 2013-205 not apply?
Answer: See item 7 above; the purchasing agent agreement will not be used.
- d) Question: Any assistance with finding MBE / DBE / WBE subcontractors to satisfy the stated 10-20% goals established by the City of Tuscaloosa?
Answer: BCIA can assist in finding approved MBE / DBE / WBE
- e) Question: Will a building permit from the City of Tuscaloosa be required, and if so, who responsible for the costs, coordination with inspections department, plan submittal to the City?
Answer: A building permit will be required for the project in order to satisfy connections to ALPCO. All associated costs, coordination, plan submittal, etc. shall be handled by the City.
- f) Question: What is the estimated construction cost of the project?
Answer: Bracketed between \$2.25 and \$2.75 million;
- g) Question: Construction testing, construction layout, record drawings?
Answer: TTL, Inc. will provide all construction materials testing. McGiffert and Associates, LLC will provide all construction layout and preparation of record drawings on behalf of the City at no costs to the contractor. Any re-testing associated with initial failed

material tests shall be the responsibility of the contractor. Any re-staking due to negligence on the contractors behalf shall be the responsibility of the contractor.

h) Question: Will the contractor be responsible for any costs associated with ALPCO, ATT, Comcast relocations and / or conversions of overhead to underground other than the items as specified in the Bid Proposal?

Answer: No, all such costs shall be paid by the City.

Attachments:

- Revised Bid Proposal, page 15
- Revised Bid Proposal Unit Price Bid Schedule, pages 15E and 15G
- Pre-Bid Agenda and Sign-In Sheet
- Technical Specification Section 02229
- Technical Specification Section 02240
- Construction Plan Sheet C2.0
- Construction Plan Sheet C5.0
- Construction Plan Sheet C5.1
- Construction Plan Sheet C8.4
- Construction Plan Sheet C8.7
- Construction Plan Sheet C8.9

END OF ADDENDUM NO. 2



RECEIPT OF ADDENDUM NO. 2

Project: City of Tuscaloosa
City Walk at University Place and Forest Lake
Project No. A12-1413/A12-0993

The following hereby acknowledges receipt of Addendum No. 2, dated August 14, 2014.

Complete the following and return by fax to (205) 759-1524 or scan and email to dmarcum@mcgiffert.com.

We are in receipt of Addendum No. 2 and fully understand the contents and our bid on the above referenced project submitted reflects the intent of this Addendum.

AIFC CONTRACTOR INC
Contractor Name

*By: [Signature]

Date: 8/19/14

* Signature must be by person legally qualified to sign bid.





ADDENDUM NO. 3

Date: August 26, 2014
Project: City of Tuscaloosa
City Walk at University Place and Forest Lake
Project No. A12-1413/A12-0993
Bid Date: Thursday, August 28, 2014
9:00 a.m. local time
Narashino Conference Room in City Hall

The following changes, additions, clarifications, and/or deletions are hereby made part of the Contract Documents for the project referenced above as fully and completely as if the same were set forth fully therein:

1. Construction Plans:
 - a) Sheet C3.3b.0 – modification to Section 03
2. Bidder Questions:
 - a) Question: Clarification of Intent of Note 17 on Sheet I1.3?
Answer: Wiring from the flow sensor to the controller shall be in a separate conduit and not contained in a conduit with the other controller wire. The sensor wiring shall meet the flow sensor manufacturer's specifications. The contractor will be required to install a minimum of four feet of straight run pipe going into and coming out of the flow sensor. Based on other installations these straight sections of piping will reduce the potential of having false flow readings that can potentially turn off the system.

Attachments:

- Construction Plan Sheet C3.3b

RECEIPT OF ADDENDUM NO. 3

The following hereby acknowledges receipt of Addendum No. 3, dated August 26, 2014.

Complete the following and return by fax to (205) 759-1524 or scan and email to dmarcum@mcgiffert.com.

We are in receipt of Addendum No. 3 and fully understand the contents and our bid on the above referenced project submitted reflects the intent of this Addendum.

GFC Outreach 122
Contractor Name

*By: [Signature]

Date: 8/28/14

* Signature must be by person legally qualified to sign bid.



ADDENDUM NO. 3

Date: August 26, 2014
Project: City of Tuscaloosa
City Walk at University Place and Forest Lake
Project No. A12-1413/A12-0993
Bid Date: Thursday, August 28, 2014
9:00 a.m. local time
Narashino Conference Room in City Hall

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1. Construction Plans:
 - a) Sheet C3.3b.0 – modification to Section 03
2. Bidder Questions:
 - a) Question: Clarification of Intent of Note 17 on Sheet I1.3?
Answer: Wiring from the flow sensor to the controller shall be in a separate conduit and not contained in a conduit with the other controller wire. The sensor wiring shall meet the flow sensor manufacturer's specifications. The contractor will be required to install a minimum of four feet of straight run pipe going into and coming out of the flow sensor. Based on other installations these straight sections of piping will reduce the potential of having false flow readings that can potentially turn off the system.

Attachments:

- Construction Plan Sheet C3.3b

RECEIPT OF ADDENDUM NO. 3

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Complete the following and return by fax to (205) 759-1524 or scan and email to dmarcum@mcgiffert.com.

We are in receipt of Addendum No. 3 and fully understand the contents and our bid on the above referenced project submitted reflects the intent of this Addendum.

Contractor Name

*By: _____

Date: _____

* Signature must be by person legally qualified to sign bid.

CITY OF TUSCALOOSA, ALABAMA
PUBLIC WORKS CONTRACT DOCUMENTS

WALTER MADDOX, MAYOR
CITY COUNCIL OF TUSCALOOSA

Council Members:

Burrell Odom
Harrison Taylor
Cynthia Almond
Matthew Calderone
Kip Tyner
Eddie Pugh
Sonya McKinstry

Glenda Webb, City Attorney

PROJECT: City Walk at University Place and Forest Lake

PROJECT NUMBER: A12-1413 / A12-0993

FOR: Office of the City Engineer
(CITY DEPARTMENT)

(2014)

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STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

**SECTION ONE
ADVERTISEMENT AND NOTICE FOR BIDS
(2014)**

Sealed bids will be received by the City of Tuscaloosa, Alabama, a Municipal Corporation, in the Narashino Conference Room on the second of City Hall, 2201 University Boulevard, on the 28th day of August, 2014, until 9:00 o'clock a.m., local time, and then publicly opened and read for the furnishing of all labor and material (where required) and equipment for performing a public works project according to the plans, details, specifications and Contract Documents.

Award of the contract will be made within forty-five (45) calendar days from the date of the bid opening.

1. The Project:

A. The Project shall be known as City Walk at University Place and Forest Lake (City Project No. A12-1413 / A12-0993) and the general character of said public works project shall consist of the following:

Construction of pedestrian pathway, street construction, pedestrian lighting, technology duct bank, and other related facilities and appurtenances.

B. The approximate quantities of said Project are as follows: 3,300 lf City Walk (mixture of asphalt and concrete) 3,400 lf PVC ductbank for future technology use, pedestrian lighting, 300 lf street construction, landscaping, curb, gutter, and other related items.

C. Special instructions are as follows: None.

D. The City will furnish the following: Light poles, light fixtures, and associated hardware and other appurtenances.

E. Time of Construction: From the date stated in the Notice to Proceed, the Project time of construction is 210 consecutive calendar days.

2. Plans and Specifications:

Plans and specifications and all related Contract Documents are open for public inspection at the office of McGiffert and Associates, LLC, located at 2814 Stillman Blvd., Tuscaloosa, Alabama 35401, and plans, specifications and other elements of the contract documents may be obtained from the office of the Engineer/Architect McGiffert and Associates, LLC, designated as the office of the awarding authority for this purpose, located at 2814 Stillman Blvd, Tuscaloosa, Alabama 35401. The contact person for the project is Jason L. Coker. They can be reached at 251-759-1521.

- A. Plans, specifications and Contract Documents may be obtained at the above location upon the deposit of \$ 150.00, which amount does not exceed twice the cost of printing, reproduction, handling and distribution of each set of such documents. Deposits by prime Contractor bidders are refundable in full upon return of all documents in reusable condition within ten (10) days of bid opening. Additional sets of bid documents for prime Contractor bidders, subcontractors, vendors or dealers may be obtained upon payment of the same deposit. Such deposits will be refunded, less the cost of printing, reproduction, handling and distribution, if all the documents are returned in reusable condition within ten (10) days of bid opening.
- B. All eligible refunds of deposits for plans and specifications will be made by the City within twenty (20) days of bid opening.

3. Qualification of Bidders:

- A. All bidders must be responsible, meeting the criteria and requirements set forth in the Instructions to Bidders and bid proposal.
- B. Prequalification of Bidders IS _____; IS NOT x required.
If prequalification of bidders is indicated to be required by the preceding sentence, then written prequalification information is available for review at the same office where plans, specifications and Contract Documents are available.
- C. The attention of all bidders is called to the provisions of State law governing "general Contractors," as set forth in Ala. Code §34-8-1, et seq. (1975), and rules and regulations promulgated pursuant thereto.
- D. If a construction manager is being utilized and this contract is one of a multiple of trade contracts, then the bidder shall be fully licensed for the trade, as determined by applicable law.
- E. The City may not enter into a contract with a non-resident corporation or entity which is not qualified under State law to do business in the State of Alabama.
- F. All bidders shall possess all other licenses and/or permits required by applicable law, rule or regulation for the performance of the work.
- G. All bidders must submit with their proposal, Contractor's license number and a copy of the license. State law, Ala. Code §34-8-8(b), requires all bids to be rejected which do not contain the General Contractor's current license number.
- H. The City reserves the right to reject all bids and/or reject and rebid the Project should it determine the same is in the best interest of the City.

4. Construction Manager:

_____ If the preceding blank is marked with an affirmative indication, it means that this contract involves the use of a construction manager and this contract is one of several multiple trade and/or multiple prime contracts for work on the Project. Bidders attention is called to the supplemental conditions attached to the General Conditions of the Contract Documents regarding this topic.

5. Bid Bonds: Each bidder must submit with its bid a cashier's check drawn on an Alabama bank or a fully executed bid bond on the form that is contained in the Contract Documents executed by a surety company duly authorized and qualified to make bond in the State of Alabama. All bonds, sureties and/or cashier checks will be made payable to the City for an amount not less than 5 percent of the City's or its engineers or architects estimated cost of the Project or of the total bid in the proposal, but in no event more than \$10,000.00.

6. Sales and Use Tax Savings: Alabama Department of Revenue Rule 810-6-3.69.02(2010) exempts certain payment of state, county, and municipal sales and use taxes by the contractor or subcontractor on tangible personal property to be incorporated into the realty pursuant to a contract with a municipal corporation such as the City of

Tuscaloosa. All bidders shall bid the work on the project in accordance with said law by not including the payment of such taxes where applicable. All successful contractors and subcontractors of bidders shall be required to enter into a Purchasing Agent Appointment Agreement. All tax exempt purchases shall be in accordance with the laws of this state and the Alabama Department of Revenue. It is the sole responsibility of the successful contractor to make the necessary inquiries and determinations as to what materials or items of tangible personal property to be incorporated into the project qualify as tax exempt in the opinion of the Alabama Department of Revenue.

In the event the City elects to utilize a Purchasing Agent Appointment agreement in conjunction with this contract, the Contractor will be required to execute such an agreement and perform in accordance therewith.

7. Pre-Bid Conference: A Pre-Bid Conference IS required for this project. All Bidders will be required to attend a mandatory pre-bid conference to be held in the Assembly Conference Room in the City of Tuscaloosa Environmental Services Building located at 3340 Kauloosa Avenue, Tuscaloosa, AL. 35401, at 9:00 am local time on August 15, 2014. A tour of the project area to familiarize the contractor with the general location of the project will be given following the pre-bid conference. This will be a 'windshield' survey only and will not include actually 'walking' any portion of the project. It shall be mandatory that all bidders submitting a bid attend the Pre-Bid Conference. The tour of the project area WILL NOT be mandatory. Any questions concerning the pre-bid conference shall be directed to Jason L. Coker, (205)-759-1521. If the BIDDER fails to have a company employee present at the mandatory pre-bid conference, bidder shall return contract documents, specifications, and construction plans immediately to the ENGINEER. Failure to have a representative present will disqualify the BIDDER from having a bid considered and will be considered a non-responsive bidder.

NOTE: All bidders are advised to carefully read the Instructions to Bidders contained in the Contract Documents, which provisions and requirements are adopted herein by reference.

CITY OF TUSCALOOSA, ALABAMA,
A MUNICIPAL CORPORATION
Walter Maddox, Mayor

[END ADVERTISEMENT FOR BID—OFFICE OF THE CITY ATTORNEY]

**CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS
SECTION TWO
INSTRUCTION TO BIDDERS
(2014)**

NOTE: THIS DOCUMENT CONTAINS IMPORTANT BIDDING AND CONTRACTING INFORMATION. ALL POTENTIAL BIDDERS SHOULD READ IT THOROUGHLY

1. **Intention:** The Advertisement for Bids, Instruction to Bidders, Contract Agreement, any modifications or supplemental conditions to the Contract Agreement, Bid Proposal, and the Plans and Specifications are interrelated and apply to the complete work to which they relate.
2. **Definitions:** Where the following words, or the pronouns used in their stead, occur herein, they shall have the following meaning:

"Awarding Authority" shall mean the City of Tuscaloosa, Alabama.

"Bidder" shall mean any person, firm or corporation, that is responsible, submitting a responsive bid for the Project contemplated by the contract documents, who meets the requirements set forth in the contract documents, maintains a permanent place of business, has adequate forces and equipment to perform the work on the Project properly and within the time limit that is established, has sufficient experience in the type work provided for in the contract documents and has adequate financial status and resources to meet its obligations contingent to the work.

"City" or "Owner" shall mean the City of Tuscaloosa, Alabama, as the awarding authority or its authorized and legal representatives.

"Construction Manager" shall mean that person or entity employed by the City to provide Construction Manager services on the work or Project, who shall be the City's representative on the Project.

"Contractor" shall mean initially the successful or probable low bidder and then the party of the first part to the construction agreement or the legally authorized representatives of such party, including a trade contractor.

"Engineer/Architect" shall mean an Engineer or Architect responsible for design and related services on the Project, and if no Construction Manager is employed, then the Engineer is the representative of the City of Tuscaloosa, Alabama, on the Project. References to the "Engineer" shall mean the Construction Manager, if the City has employed such services, to the extent such services are applicable to construction management activity as set forth in the agreement between the City and the Construction Manager, and the context herein indicates that it would relate to services traditionally and customarily performed by a Construction Manager; otherwise, "Engineer" shall refer to the Engineer or Architect.

"Force Account Work" work paid for by reimbursing for the actual cost for labor, materials and equipment usage incurred in the performance of the work, as directed, including a percentage for overhead and profit where appropriate.

"Gender": a word importing one gender shall if appropriate extend to and be applied to the other gender. The masculine shall include the feminine and vice versa, unless the context clearly indicates otherwise.

"Inspector" shall mean a representative of the Engineer/Architect, Construction Manager or the City, as the case may be.

"Non-Resident Contractor" shall mean a contractor which is neither (a) organized and existing under the laws of the State of Alabama nor (b) maintains its principal place of business in the State of Alabama. A non-resident contractor which has maintained a permanent branch office within the State of Alabama for at least five (5) continuous years shall not thereafter be deemed to be a non-resident contractor so long as the contractor continues to maintain a branch office within Alabama.

"Project" shall mean the Public Work to which these Contract Documents relate, including the labor, materials and all work to be done by Contractor that is the subject of the bid, plans, specifications and contract documents.

"Public Property" Real property which the awarding authority owns or has contractual right to own or purchase, including easements, rights-of-way, or otherwise.

"Public Work(s)" shall mean a Project consisting of the construction, repair, renovation, or maintenance of public buildings, structures, sewers, water works, roads, bridges, docks, underpasses and viaducts, as well as any other improvement to be constructed, repaired or renovated or maintained on public property to be paid, in whole or in part, with public funds or with financing to be retired with public funds in the form of lease payments or otherwise.

"Responsible Bidder" shall mean a bidder who, among other qualities determined necessary for performance, is competent, experienced and financially able to perform the contract.

"Responsive Bidder" shall mean a bidder who submits a bid that complies with the terms and conditions of the invitation for bids, including plans, drawings, specifications and other provisions of the contract documents.

"Retainage" shall mean that money belonging to the Contractor which has been retained by the awarding authority conditioned upon final completion and acceptance of all work in connection with the Project.

"Singular/Plural" the singular shall include the plural and vice versa, unless the context clearly indicates otherwise.

"Trade Contracts" "Trade contracts" or "multiple prime contracts" are multiple but separate contracts with the City on the same Project that represent significant construction activities performed concurrently with and closely coordinated with construction activities performed on the Project under other trade contracts.

"Unbalanced Bid" Unbalanced bids may be considered non-responsive and may be subject to rejection. An unbalanced bid includes but is not limited to one which results in a substantial advance payment to the contractor.

3. **Work to be Performed:** The City contemplates the construction of a public works project as generally described in the Advertisement for Bid and as more particularly described, shown and depicted on the plans, specifications, drawings and in the contract documents.

4. **Bidding, Generally:**

- A. All bids must be made upon the bid proposal forms contained in the contract documents, shall state the amount bid for each item as shown therein and all blanks shall be properly filled in and bid proposal executed as required.
- B. Any bidder may withdraw his or its bid, either personally or by telegraphic or written request (not by facsimile), at any time prior to the scheduled opening time for receipt of bids. Except as provided in

- Ala. Code §39-2-11(b)(c)(d), no bid may be withdrawn after opening of bids prior to the time of returning bid bonds as provided for herein.
- C. Any unauthorized conditions, limitations or provisos attached to the bid proposal, except as otherwise provided herein, will render a bid proposal informal and may cause its rejection. Unbalanced bids may be subject to rejection. Bids without the General Contractor's license number and a copy of the license will be rejected.
 - D. All bids will be opened in public at the time and date specified in the Notice of Advertisement for bids, unless otherwise altered by addendum. All bidders are invited to be present at the opening of bids. No bids will be received after the time established for the opening of bids.
 - E. All bids are to be enclosed in a sealed envelope addressed to the City of Tuscaloosa, P. O. Box 2089, Tuscaloosa, Alabama and/or hand delivered to the City Clerk, 2201 University Boulevard, City Hall, Tuscaloosa, Alabama. All bids are to be marked to indicate clearly the Project to which it applies and include the following language: "Bid Enclosed" and "Attention City Clerk."

NOTE: Bidders current General Contractor's license number must be displayed on the bid and the sealed envelope.

5. **Responsible, responsive bidders:** The City reserves the right to reject any bid that is submitted by a bidder that is determined by the City to not be a responsible bidder or whose bid proposal is not responsive.

In determining whether a bidder or bid is responsible and/or responsive, the City reserves the right to also request and consider the following factors:

- A. Types or kinds of materials or items best suited to the City's needs for the Project.
- B. A current financial statement of the bidder and/ or bonding capability or limits.
- C. An accurate inventory of equipment to be used on the Project for a list of key personnel to be used on the Project and detailed histories of their experience.
- D. A list of similar work performed by any person, firm, or corporation with the same name as the name or any of the names in the bidder's proposal within the last five (5) years.
- E. A list of five (5) references familiar with the bidder's competence, experience, capabilities, skill and integrity.
- F. A statement of bidder pertaining to bankruptcies, judgments, liens or litigation within the last five (5) years. Such statement shall also apply to each company, officer and the key personnel on the Project.
- G. The General Contractor's State license number and class.
- H. Bidder's performance and prosecution of past projects for the City.
- I. An unbalanced bid.
- J. Other information supplied in the bid proposal.

The City may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the City all such information and data for this purpose as the City may request. The City reserves the right to reject any Proposal if the evidence submitted by, or investigation of, such Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligations of the Contract and complete the work contemplated therein.

6. **Bid Bonds:** Each bidder must submit with its bid, a cashiers check drawn on an Alabama bank, made payable to the City of Tuscaloosa or a fully executed bid bond on the form that is contained in the contract documents, executed by a surety company duly authorized and qualified to make bond in the State of Alabama. All bonds and/or cashiers check will be made payable to the City of Tuscaloosa for an amount not less than five (5) percent of the City's or its engineers or architects estimated cost of the Project or of the total bid in the proposal, but in no event more than \$10,000.00. The purpose of said bid bond is to insure that the successful bidder will enter into

a written contract with the City for the Project on the form included in the contract documents and furnish a performance bond and payment bond executed by a surety company duly authorized and qualified to make such bond in the State of Alabama, in the amount required and provide evidence of insurance as required by the bid documents within time specified or if no time is specified, within thirty (30) days after the forms have been presented to the successful bidder for signature. Provided; however, if extenuating circumstances prevail, the City may grant an extension of time not exceeding five (5) days for the return of the contract bonds and evidence of insurance.

The price or cost of all items bid shall remain in effect for a period of fifty (50) days after Notice of Award.

7. Return of Bid Bonds: All bid bonds, except those of the three lowest bona fide bidders, will be returned immediately after bids have been checked, tabulated and the relation of the bids established. The bid bonds of the three lowest bidders may be retained and if so will be returned as soon as the contract bonds and the contract documents of the successful bidder have been approved and properly executed.

In the event it is necessary to defer a contract award for longer than fifteen (15) days, after opening of bids, then all bid bonds, except that of the potential successful bidders will be returned.

Award of the contract will be made within the time specified after the opening of bids. In the event no award is made within such time, all bids may be rejected and all bonds returned.

Provided; however, the potentially successful bidder may enter into a written agreement with the City for an extension of time for consideration of its bid, in which case, the bidder's bond shall remain in full force and effect or the City may permit said bidder to substitute a satisfactory surety for the cashier's check if submitted as a guaranty to the bid bond.

8. Forfeiture of Bid Bonds: Should the successful bidder or bidders to whom a contract is awarded fail to execute a contract(s) and furnish acceptable contract securities and evidence of insurance, as required, within thirty (30) days after the prescribed forms have been presented to him/her, the City may retain from the proposal guaranty, if it is a cashier's check or recovered from the principal or the sureties, if the guaranty is a bid bond, the difference between the amount of the contract as awarded, and the amount of the proposals of the new lowest bidder. If no other bids are received, the full amount of the proposal guaranty may be so retained and recovered as liquidated damages for such default. Any sum so retained or recovered shall be the property of the awarding authority.

9. Consideration of Bid Proposals:

- A. Generally: The contract will be awarded to the lowest responsible and responsive bidder, unless the City determines that all the bids are unreasonable or that it is not in the best interest of the City to accept any of the bids. Award of the contract will be made on the basis of the lowest actual bid amount for the contract, which is defined as the total of the bid and/or extended total amounts for unit price items, plus requested and accepted additive or deductive alternates, pursuant to the provisions hereof. The City reserves the right to reject all bids and/or reject and rebid the Project should it determine the same is in the best interest of the City.
- B. Minor irregularities as determined by the City or its representatives, will not cause a bid to be non-responsive and may be waived by the City.
- C. Bidder must possess all licenses and permits required by applicable law, rule or regulation for the performance of the work prior to bidding.
- D. Where the City elects to prequalify contractors prior to bidding, it shall be understood that such prequalification may be general in nature and shall not limit the City's right to revoke such prequalification pursuant to Ala. Code §39-2-4(d) (1975).

- E. Joint ventures shall not generally be considered acceptable bids without special waiver from the City, which must be requested in writing at least thirty (30) days prior to bid opening.
 - F. Additive and/or Deductive Alternates: If the City has elected to request bids for additive and/or deductive alternates, then the following procedure shall be the basis for calculating such bids:
 - 1) Deductive Alternates: Any deductive alternate from the base bid shall constitute cumulative deductions from the base bid; and in determining the lowest bidder, if the City elects to consider any deductive alternates, the City will proceed to consider the bids upon the basis of the base bids of all qualified bidders minus the respective deduction stated for the first alternate. If the City determines that it wishes to proceed to consider additional deductive alternates, it may do so sequentially and in like manner throughout the deductive alternates the City elects, so that the base bids of all qualified bidders shall be calculated minus the respective number of deductive alternates in sequence the City has elected to consider. The lowest responsible responsive bid will be the lowest actual base bid of a qualified bidder less the selected sequential deductive alternates.
 - 2) Additive Alternates: To determine additive alternates, any additive alternate shall constitute cumulative additions to the base bid; and in determining the lowest bidder if the City elects to consider any additive alternates, the City will proceed to consider the bids upon the basis of the base bid of all bidders plus the respective addition stated for the first alternate. If the City determines that it wishes to proceed to consider additional additive alternates it may do so sequentially, and in like manner, throughout the additive alternates, the City elects, so that the base bids of all qualified bidders shall be calculated plus the respective number of additive alternates in sequence the City has elected to consider. The lowest responsible responsive bid will be the lowest actual base bid of a qualified bidder plus the selected sequential additive alternates. Once the City has determined the lowest responsible responsive bidder as set forth herein, then it may award the contract on the basis of accepting and/or rejecting any additive and/or deductive alternates of that bid as it determines is in the best interest of the City.
 - G. No Bids or Only One Bid: In the event no bid proposals or only one bid proposal is received in response to the City's Advertisement for Bids at the time stated for the opening of bids, the City may elect at its discretion, any of the following options:
 - 1) Advertise for and seek other competitive bids.
 - 2) Direct that the work shall be done by force account under its direction and control.
 - 3) Negotiate for the work through the receipt of informal bids. Provided; however, where only one responsible and responsive bid has been received, any negotiation for the work shall be for a price lower than that bid.
 - H. An unbalanced bid.
10. **Materials and Work:** All materials, which the engineering plans specify or are required, will be installed as they are shown on the drawings, plans and/or specs.
- A. Brand names, catalog numbers, weights, etc., are used to indicate levels of quality only and are not intended to restrict the bidding. If bidding on an item of another brand or manufacturer than that specified, bidder's proposal should be accompanied by brochures or other pertinent literature giving detailed specifications of the item(s) on which the proposal is being made. Bids or proposals received without sufficient literature to determine equal quality may not be considered. Final determination as to equal quality will be made by the City.
 - B. Quantities: The quantities shown in the proposal shall be considered by the contractor as the quantities required to complete the work for the purpose of bidding. Should the actual quantities required in the construction of the work be greater or less than the quantities shown, an amount equal

to the difference of quantities at the unit prices bid for the items will be added to or deducted from the contract total.

- C. Adjustment Items: During the course of work, the prices bid for adjustment items may be used by the City to increase or decrease the total cost for the work if the quantity of work exceeds or is less than the amount shown on plans.
- D. The attention of all bidders is called to the fact that all or a portion of this Project may be federally funded and if so, the special conditions of a federally funded contract including federal labor standard provisions, the minimum wage rates included in the contract documents, plans and specifications must be followed.
- E. Construction Crews: The Contractor will be required to furnish at least one separate construction crew during the work as set forth in the contract. Unless waived by the City, the Contractor shall perform on the sites and with his own organization and equipment, at least fifty percent of the total amount of the work to be performed under this Contract. The Contractor may only subcontract a maximum of fifty (50%) percent of the work without City consent. If, during the progress of the work hereunder, the Contractor requests a reduction of such percentage, and the City representative determines that it would be to the City's advantage, the percentage of the labor required to be performed by the Contractor's own organization may be reduced; PROVIDED prior written approval of such reduction is obtained by the Contractor from the City.
NOTE: Bidders are advised to carefully review all other elements of the contract documents for more details concerning requirements for performing work on the Project.
- F. In the event the City elects to utilize a Purchasing Agent Appointment agreement in conjunction with this contract, the Contractor will be required to execute such an agreement and perform in accordance therewith.

11. Execution of Contract, Notice to Proceed: Award of the contract will be made within the time specified after the opening of bids.

The bidder to whom award is made shall enter into a written contract for the Project with the City on the forms provided in the contract documents, furnish the required performance and labor and material bonds with proper surety and furnish the evidence of insurance as required, all within thirty (30) days of presentation of the prescribed forms to the bidder. If extenuating circumstances prevail, the City may grant an extension of time not exceeding five (5) days for the return of the contract, required bonds and evidence of insurance.

Within twenty (20) days after presentation by the bidder to the City, the City shall review the bonds, surety and evidence of insurance to ascertain whether they meet the requirements of the contract documents, and if such requirements have been met the City shall complete the execution of the contract.

A notice to proceed order will be issued by the City or its representatives within fifteen (15) days after final execution of the contract by the City. The Contractor shall begin work on the date specified in the Notice to Proceed.

12. Labor, Material and Performance Bonds: Within thirty (30) days after the prescribed forms have been presented, the successful bidder shall execute a performance bond with good and sufficient surety from a company duly authorized and qualified to make such bond in the State of Alabama, a performance bond made payable to the City of Tuscaloosa, with a penalty equal to 100 percent of the amount of the contract price and in addition thereto, another bond with good and sufficient surety by a surety company duly authorized and qualified to make such bond in the State of Alabama, payable to the City of Tuscaloosa, in an amount equal to 100 percent of the contract price with an obligation that such contractor shall promptly make payments to all persons supplying it or them with labor, materials or supplies for or in prosecution of the Project provided for in such contract and for the payment of reasonable attorneys fees incurred by any successful claimants or plaintiffs in civil actions on said bond, pursuant to the provisions of Ala. Code §39-1-1 (1975).

13. Surety and Insurer Qualifications: All certificates of insurance and bonds (furnished in connection with the work to be performed under this contract) shall be countersigned by a licensed agent residing and engaged in doing business in the State of Alabama. The surety and insurer shall be licensed and authorized to do business in the State of Alabama. The surety companies on bonds shall be rated A- or better by A. M. BEST and listed on the United States Treasury Department 570 list.

14. Power-of-Attorney: The attorney-in-fact (resident agent) who executes the performance bond and/or payment bond on behalf of the surety must attach a notarized copy of his or her power-of-attorney as evidence of his authority to bind the surety of the date of execution of the bonds. Certification by a resident agent authorized to do business in Alabama is required.

15. Insurance: The successful contractor shall file with the City, at the time of delivery of the signed contract, satisfactory evidence of insurance, the requirements as set forth in the contract agreement. Satisfactory evidence of insurance shall include at a minimum, the insurers standard "Certificate of Insurance" (modified pursuant to insurance requirements of the contract agreement) and the agents verification of insurance as required by Section 26. If the City deems that additional evidence or clarification, etc., of insurance is appropriate, the bidder shall promptly furnish the same to the City upon request.

16. Examination of Contract Documents and of the Site of the Project: Before submitting a bid proposal for the Project, each bidder shall carefully examine the Contract Documents, including but not limited to plans, drawings, specifications, contract, etc., visit the site, and satisfy itself as to the nature and location of the Project, and the general and local conditions, including weather, the general character of the site or building, the character and extent of existing work within or adjacent to the site, any other work being performed or proposed thereon at the time of submission of their bids. It shall obtain full knowledge as to transportation, disposal, handling, and storage of materials, availability of water, electric power, and all other facilities in the area which will have a bearing on the performance of the Project for which they submit their proposals. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and visit and has judged for and satisfied himself as to conditions to be encountered regarding the character, difficulties, quality, and quantities of work to be performed and the material and equipment to be furnished, and as to the contract requirements and contingencies involved. It shall be the Bidder's obligation to verify for himself and to his complete satisfaction, all information concerning site and surface conditions.

17. Subsurface Reports: Prior to Bid opening, the City will make available to prospective Bidders, upon request, any information that it may have as to subsurface conditions and surface topography at the work site. Investigations of subsurface conditions were made for the purpose of study and design, and neither the City nor its consultants that performed such testing assume any responsibility whatsoever in respect to the sufficiency or accuracy of borings, or of the logs of test borings, or of other investigations that have been made, or of the interpretations made thereof, and there is no warranty or guarantee, either expressed or implied, that the conditions indicated by such investigations are representative of those existing throughout such area, or any part thereof, or that unforeseen developments may not occur.

Logs of test borings, geotechnical reports, or topographic maps showing a record of the data obtained by the investigations of surface and subsurface conditions that are made available shall not be considered a part of the Contract Documents, and are available only for the convenience of the Bidders. Such logs and reports represent only the opinion of the Engineer/Architect or Consultant as to the character of the materials encountered by him in his investigations of the test borings.

Information derived from inspection of logs of test borings, or pits, geotechnical reports, topographic maps, or from Drawings showing location of utilities and structures will not in any way relieve the Contractor from any risk,

or from properly examining the site and making such additional investigations as he may elect, or from properly fulfilling all the terms of the Contract Documents.

The City shall not be responsible for any interpretations or conclusions drawn from any subsurface exploration reports or borings. Each bidder is to base his bid upon his determination of the subsurface conditions and of the types and quantities of material to be encountered or needed. Additional tests or other exploratory operations may be made at no cost to the City.

18. Interpretation of Plans and Specifications: If any bidder contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of plans, specifications, or other proposed contract documents, he may submit to the Engineer/Architect or Construction Manager, as the case may be, a written request for an interpretation thereof at least ten (10) days prior to bid opening. The bidder submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by written addendum duly issued and a copy of such addendum will be mailed or delivered to each person receiving a set of such documents. The City, Construction Manager or Engineer/Architect will not be responsible for any other explanations or interpretations of the proposed documents.

19. General Contractor's Permit or License: The attention of all bidders is called to the provisions of the State law governing general contractors as set forth in Ala. Code §34-8-1 et seq. (1975), particularly in regard to the need for and evidence of a State general contractor's license. The provisions of said statute are adopted herein by reference and form a part of the Contract with the selected bidder should this Project be awarded.

Bidders are reminded that they will be governed by said statutes insofar as they are applicable. To summarize the above quoted statutes, Ala. Code §34-8-1, et seq. (1975) provides that no one is entitled to bid and no contract may be awarded to anyone who does not possess a valid general contractor's permit or license, including specialty classifications for the work, as provided by the foregoing sections of the State Code, and rules and regulations promulgated pursuant thereto and that said bid may not be considered without evidence being produced that he is so qualified. Trade contractors must be duly licensed in accordance with applicable law. The City may not enter into a contract with a nonresident corporation that is not qualified under the State law to do business in Alabama.

Bidder **MUST** include with proposal contractor's current license number and a copy of the license. State law, Ala. Code §34-8-8(b) (1975) requires all bids to be rejected which do not contain general contractor's license number.

20. U. S. Products Preference: The successful bidder (contractor) shall comply with Ala. Code §39-3-1 (1975), shall agree to utilize in the execution of the Project, materials, supplies and products manufactured, mined, processed or otherwise produced in the United States or its territories, if the same are available at reasonable and competitive prices and not contrary to any sole source specifications. It is further stipulated that a breach of the foregoing provision of this agreement by the contractor in failing to utilize domestic products shall result in a downward adjustment in the contract price equal to any realized savings or benefit to the Contractor.

21. Use of Domestic Steel: The attention of all bidders and that of the successful bidder (contractor) is drawn to Ala. Code §39-3-4 (1975), requiring the use of steel produced within the United States for municipal construction projects when specifications in the construction contract require the use of steel and do not limit its supply to a sole source. This provision is subject to waiver if the procurement of domestic steel products becomes impractical as a result of national emergency, national strike or other causes. Violations of the use of domestic steel requirements shall result in a downward adjustment in the contract price to equal any savings or benefit to the Contractor.

22. In State Bidder Preference: Pursuant to Ala. Code §39-3-5 (1975), in the letting of public contracts in which municipal funds are utilized, except those contracts funded in whole or in part with funds received from a federal agency, preference shall be given to resident contractors, and a nonresident bidder domiciled in a state having laws granting preference to local contractors shall be awarded Alabama public contracts only on the same basis as the nonresident bidders' state awards contracts to Alabama contractors bidding under similar circumstances; and resident contractors in Alabama, as defined in Ala. Code §39-2-12 (1975), be they corporate, individuals or partnerships, are to be granted preference over non residents in awarding of contracts in the same manner and to the same extent as provided by the laws of the state of the domicile of the nonresident.

Nonresident bidders must accompany any written bid documents with a written opinion of an attorney-at-law licensed to practice law in such nonresident bidder's state of domicile, as to the preferences, if any or none, granted by the law of that state to its own business entities whose principal places of business are in that state in the letting of a public contract.

23. Applicable Laws: Each Bidder shall inform himself of, and the Bidder awarded a contract shall comply with, federal, state, and local laws, statutes, and ordinances relative to the execution of the work. This requirement includes, but is not limited to, applicable regulations concerning minimum wage rates, the use of domestic products, U.S. steel and resident labor, non-discrimination in the employment of labor, protection of public and employee safety and health, environmental protection, the protection of natural resources, fire protection, burning and non-burning requirements, permits, fees and similar subjects. Certain statutory requirements are summarized immediately hereinafter. The attention of all bidders is called to the fact that the work will be subject to compliance with all applicable City building and technical codes and will be subject, in addition to all other inspections, to inspection by a representative of the City of Tuscaloosa Building Inspections Department.

24. SRF/DWSRF Special Requirements. If all or any portion of the Project to which this contract applies is funded in whole or in part by the proceeds of a loan or loans from the Alabama Department of Environmental Management (ADEM) through either a State Revolving Fund for Wastewater or Water (SRF or DWSRF, respectively), additional requirements for the Contractor exist (Requirements). These Requirements relate to Project objectives for utilization of Minority Business Enterprises/Women Business Enterprises (MBE/WBE). The Contractor must document efforts made to utilize MBE/WBE firms and submit to ADEM, with a copy to the City within ten (10) days after contract execution, evidence of the positive steps in accordance with the requirements to utilize small minority and women businesses in the procurement of subcontracts.

Other Requirements relate to Federal Labor Standards, Title VI of the Civil Rights Act of 1964, Equal Employment Opportunity, Affirmative Action Equal Opportunity Clause, Goals and Timetables, compliance with Occupational Safety and Health Act of 1970 and Section 107 of Contract Work Hours and Safety Standards Act (PL91-54) which are adopted herein by reference to the extent applicable.

For DWSRF and SRF funded projects, special requirements are also set forth in Supplemental General Conditions. If not attached to the contract documents, Contractors should contact the City representative and/or the City's consulting engineer for a copy of all special requirements and conditions.

25. Special Conditions for Federally Funded Contracts. If all or any portion of the Project to which this contract applies is funded in whole or in part by the proceeds of a grant from an agency of the United States Government, additional requirements for the Contractor exist. A summary of these requirements entitled, "Special Conditions for Federally funded Contracts," is attached hereto and made a part hereof. Bidder should contact the Engineer or City Representative to confirm the applicability of these requirements to the Project.

26. **Agent's Verification of Insurance.** This form or a letter equivalent from the Insurance Agent should be submitted with each Contractor's Bid, or in the alternative, Contractor may provide a copy of the insurance policy or policies reflecting the coverages required herein.

27. **Compliance with Immigration Law.** By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom, to the extent allowed by Federal law.

28. **Compliance with the City of Tuscaloosa Minority Enterprise / Disadvantage Business Enterprise (MBE/DBE/WBE) Policy for Public Works Projects Over \$50,000.** The City of Tuscaloosa has voluntarily adopted a Minority / Disadvantaged Business Enterprise ("MBE/DBE/WBE") Program designed to encourage the participation and development of minority and disadvantaged business enterprises and to promote equal business opportunities to the fullest extent allowed by state and federal law.

It is the intent of the City to foster competition among contractors, suppliers, and vendors that will result in better quality and more economical services rendered to the City. Under this policy, the City of Tuscaloosa has established a goal of ten to twenty percent (10-20%) inclusion of minority and disadvantaged business enterprises for all services required to deliver City projects. In no case shall the stated percentage be the determining factor in contract awards. Rather, contractors must demonstrate a good faith effort to attain the desired percentage goal.

The Policy as adopted is entitled THE CITY OF TUSCALOOSA MINORITY ENTERPRISE / DISADVANTAGED BUSINESS ENTERPRISE (MBE/DBE/WBE) POLICY FOR PUBLIC WORKS PROJECTS OVER \$50,000, and is attached hereto as "Exhibit A" (the "Policy"). Contractors are encouraged read the Policy in its entirety, and must follow the instructions contained therein. **The Policy requires submission of various forms at specified times, and failure to do so may result in rejection of bid due to non-responsiveness.** Contractors shall work in coordination with the City's consultant, the Birmingham Construction Industry Authority (BCIA), which was hired by the City to assist in administration of the program.

BCIA contact information is as follows:

Vaneatria K. McKinnon, Contract Administrator, vmckinnon@bcia1.org,
David Merrida, Associate Director, dmerrida@bcia1.org
www.bcia1.org / Telephone: 205-324-6202 / FAX: 205-324-6210

Questions about Policy requirements should be directed to the City of Tuscaloosa Office of the City Attorney at 205-248-5140.

[END INSTRUCTION TO BIDDERS—OFFICE OF THE CITY ATTORNEY]

CITY OF TUSCALOOSA PUBLIC WORKS
SECTION THREE
PROPOSAL (BID)
(2014)

NOTE TO BIDDER: Use BLACK ink for completing this Proposal form.

To: City of Tuscaloosa
Address: Council Chambers in the City Hall
2201 University Boulevard Tuscaloosa, AL 35401
Project Title: City Walk at University Place and Forest Lake
Project No.: A12-1413 / A12-0993
Trade: The trade portion of the work for which this Proposal is submitted is:
N/A (if applicable)
Trade Package No.: N/A

BIDDER: The name of the Bidder submitting this Proposal is GFC Construction, Inc. doing business at 10474 Hwy 82 East Duncanville AL 35456
Street City State Zip

which is the address to which all communications concerned with this Proposal and with the Contract shall be sent.

Licensed, Class U, Alabama General Contractor No.: 17900 (Attach Copy)

Alabama General Contractor Specialty EV: Environmental
H/RR: Heavy and Railroad HS: Highways and Streets
MU: Municipal and Utility

Alabama General Contractor License Major Categories:

(1) EV: Environmental (2) H/RR: Heavy and Railroad
MU: Municipal and Utility HS: Highways and Streets

Bidder's contact person for additional information on this Proposal:

Name: Johnny Free Telephone: (205) 758-1948

ADDENDA: The Bidder hereby acknowledges that he has received Addenda No's. 1, 2, 3 (Bidder shall Insert No. of each Addendum received) and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that his Proposal(s) includes all impacts resulting from said addenda.

LUMP SUM: The Bidder agrees to accept as full payment of the work proposed under this Project, as services are rendered, as herein specified and as shown on the Contract Documents, upon the undersigned's own estimate of quantities and costs, the following lump sum of: N/A Dollars and N/A cents (\$ N/A). (Amount written in words has precedence)

ALTERNATES: Attach additional sheets for additive or deductive alternates, if in contract documents.

UNIT PRICES: Where the Project is bid in unit prices then Bidder agrees to perform the work in the stated quantities of the materials at the unit prices so bid, the cumulative total of which constitutes the base bid set forth below, and to accept as final payment for the work performed under this Project as herein specified the extension of each such unit price for the quantities actually installed in accordance with the following or attached unit price schedule.

An unbalanced bid, as herein defined, may be considered non-responsive. A bid resulting in a substantial advance payment on an item that is for a single lump sum payment may be considered non responsive.

Prices for mobilization and demobilization combined shall not exceed 5% of the total base bid unless a reasonable explanation is provided in writing with the bid and accepted by the Owner. Lump sum payments and unit price bids for a single or lump sum payment may be spread over the course of the period of work until the line item is complete at owner's option.

The Bidder's unit price for materials listed is as including the payment of taxes (See Page 3) where applicable: (See Attached Bid Schedule (15a thru 15g))

SALES AND USE TAX SAVINGS ACCOUNTING

Pursuant to State of Alabama Act 2013-205, Section 1(g) the Contractor accounts for the sales tax NOT included in the bid proposal form as follows:

ESTIMATED SALES AND USE TAX

BASE BID: \$ 30,300

Additive Alternate: \$ 2,000

Failure to provide an accounting of sales tax shall render the bid non-responsive. Other than determining responsiveness, sales tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive bidder.

AS BUILT DRAWINGS: The Bidder's Proposal contains \$ N/A for "as built drawings."

BIDDER'S DECLARATION AND UNDERSTANDING: The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein, that this Proposal is, in all respects, fair and without fraud, that it is made without collusion with any official of the City, and that the Proposal is made without any connection or collusion with any person submitting another Proposal on this Contract.

The Bidder further agrees that he has checked and verified the completeness of the Contract Documents and that he has exercised his own judgment regarding the interpretation of subsurface information utilizing all pertinent data in arriving at his conclusions. The Bidder shall be fully responsible for any damages or liability arising out of his or his subcontractors prebid investigations.

The Bidder understands and agrees that if a Contract is awarded, the City may elect to award all schedules under one Contract, lump sum, separately, or in any combination that best serves the interests of the City.

The Bidder further declares that he has carefully examined the Contract documents for the construction of the Project and has checked and verified the completeness of the Contract Documents, that he has personally inspected the site, that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved. Bidder further declares that he is fully aware of the fact that the description of the work, quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents. Bidder also declares that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal.

Item No.	Estimated Quantities			Unit	Description	Unit Price	Extended Sub-Total		Total
	Univ. Place	Forest Lake	Total				Univ. Place	Forest Lake	
1	0.3	0.7	1	l.s.	Mobilization / Demobilization	\$ 69,100.00	\$ 20,730.00	\$ 48,370.00	\$ 69,100.00
2	0.5	0.5	1	l.s.	Demolition of Existing Paving, Curb, Sidewalk, Fencing, etc. Signs, Concrete, Utility Poles, or other items necessary for completion of the project	\$ 68,146.00	\$ 34,073.00	\$ 34,073.00	\$ 68,146.00
3	1		1	l.s.	Removal of Existing Tree and Stump	\$ 41,208.00	\$ 41,208.00		\$ 41,208.00
4	0.3	0.7	1	l.s.	Traffic Control	\$ 25,570.00	\$ 7,671.00	\$ 17,899.00	\$ 25,570.00
5	1	1	2	each	Project Sign	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 2,000.00
6	0.3	0.7	1	l.s.	Earthwork	\$ 109,000.00	\$ 32,700.00	\$ 76,300.00	\$ 109,000.00
7	3500	2800	6300	s.y.i.p.	Subgrade Processing	\$ 3.00	\$ 10,500.00	\$ 8,400.00	\$ 18,900.00
8	1		1	l.s.	Concrete Traffic Island at University Place School Exit	\$ 2,750.00	\$ 2,750.00		\$ 2,750.00
9	340	280	620	l.f.	5' High Chainlink Fence	\$ 11.28	\$ 3,835.20	\$ 3,158.40	\$ 6,993.60
10	2		2	each	Set New Chain Link Fence Post	\$ 165.00	\$ 330.00		\$ 330.00
11		170	170	s.y.i.p.	4' Concrete Valley Gutter	\$ 53.90		\$ 9,163.00	\$ 9,163.00
12	100	50	150	s.y.i.p.	6' Concrete Valley Gutter	\$ 51.70	\$ 5,170.00	\$ 2,585.00	\$ 7,755.00
13		40	40	l.f.	12" Concrete Ribbon Curb	\$ 27.50		\$ 1,100.00	\$ 1,100.00
14	1200	1800	3000	l.f.	24" Combination Curb and Gutter	\$ 28.60	\$ 34,320.00	\$ 51,480.00	\$ 85,800.00
15	4	20	24	each	Accessible Ramp (Includes Stand Up Curb, Concrete, Reinforcement, and Truncated Domes)	\$ 1,677.50	\$ 6,710.00	\$ 33,550.00	\$ 40,260.00
16		1	1	l.s.	Concrete Steps at Forest Lake Baptist Church	\$ 2,200.00		\$ 2,200.00	\$ 2,200.00
17		1	1	l.s.	Concrete Steps along Lake Avenue	\$ 1,100.00		\$ 1,100.00	\$ 1,100.00
18	60	140	200	s.y.i.p.	Concrete Sidewalk, Minimum 4" Thickness	\$ 41.36	\$ 2,481.60	\$ 5,790.40	\$ 8,272.00
19	18	18	36	s.y.i.p.	Concrete Pad for Bench / Bike Rack	\$ 49.50	\$ 891.00	\$ 891.00	\$ 1,782.00
20	4	20	24	each	Bollard	\$ 750.00	\$ 3,000.00	\$ 15,000.00	\$ 18,000.00
21	945	1680	2625	l.f.	Broken Yellow Class 2T Type A Traffic Stripe	\$ 1.05	\$ 992.25	\$ 1,764.00	\$ 2,756.25
22	260	1540	1800	s.f.i.p	Traffic Markings, Class 2, Type A (Pedestrian Crossing Hatching)	\$ 4.95	\$ 1,287.00	\$ 7,623.00	\$ 8,910.00
23	70	130	200	s.f.i.p	Traffic Markings, Class 2, Type A (Stop Bar)	\$ 4.95	\$ 346.50	\$ 643.50	\$ 990.00
24	4	7	11	each	Adjust Existing Sewer Ring and Cover to Grade	\$ 300.00	\$ 1,200.00	\$ 2,100.00	\$ 3,300.00
25	5	5	10	each	Adjust Existing Valve Box to Grade	\$ 100.00	\$ 500.00	\$ 500.00	\$ 1,000.00

26	200	400	600	c.y.i.p.	Select Backfill for Utility Trenches (ALDOT #57 Crushed Stone)	\$	42.00	\$	8,400.00	\$	16,800.00	\$	25,200.00
27	140	760	900	s.y.i.p.	Select Backfill for Utility Trenches (ALDOT 825B Crushed Stone, 12" minimum compacted thickness)	\$	13.20	\$	1,848.00	\$	10,032.00	\$	11,880.00
28	1900	4700	6600	s.y.i.p.	Improved Bituminous Concrete Wearing Surface Layer, ALDOT Section 424A, 3/8" Maximum Aggregate Size Mix, ESAL Range B, (Minimum 1-1/2" Compacted Thickness)	\$	8.10	\$	15,390.00	\$	38,070.00	\$	53,460.00
29	100	200	300	tons	Improved Bituminous Concrete Binder Layer, Leveling, ALDOT Section 424B, 1" Maximum Aggregate Size Mix, ESAL Range B, (Minimum 5" Compacted Thickness)	\$	102.60	\$	10,260.00	\$	20,520.00	\$	30,780.00
30	100	800	900	s.y.i.p.	Improved Bituminous Concrete Binder Layer, Patching, ALDOT Section 424B, 1" Maximum Aggregate Size Mix, ESAL Range B, (Minimum 5" Compacted Thickness) (Includes Duct Bank, Utilities, Curb, Gutter Patching)	\$	37.20	\$	3,720.00	\$	29,760.00	\$	33,480.00
31	1500	100	1600	s.y.i.p.	Improved Bituminous Concrete Binder Layer, ALDOT Section 424B, 1" Maximum Aggregate Size Mix, ESAL Range B, (Minimum 2" Compacted Thickness)	\$	11.90	\$	17,850.00	\$	1,190.00	\$	19,040.00
32	1500	100	1600	s.y.i.p.	Crushed Limestone Aggregate Base Course (ALDOT Section 825, Type B), 6" Compacted Thickness	\$	9.65	\$	14,475.00	\$	965.00	\$	15,440.00
33	1100	1500	2600	s.y.i.p.	City Walk - Improved Bituminous Concrete Wearing Surface Layer, ALDOT Section 424A, 3/8" Maximum Aggregate Size Mix, ESAL Range B, (Minimum 2" Compacted Thickness)	\$	16.40	\$	18,040.00	\$	24,600.00	\$	42,640.00
34	70	400	470	s.y.i.p.	City Walk - Midnight Black Tinted Concrete, Minimum 5" Thickness	\$	50.60	\$	3,542.00	\$	20,240.00	\$	23,782.00
35	1300	3100	4400	s.y.i.p.	City Walk - Crushed Limestone Aggregate Base Course (ALDOT Section 825, Type B), 5" Compacted Thickness	\$	9.00	\$	11,700.00	\$	27,900.00	\$	39,600.00

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36	215		215	s.y.i.p.	Concrete Pavement	\$	57.20	\$	12,298.00		\$	12,298.00
37			375	s.y.i.p.	Concrete Driveway Replacement at City Walk (Midnight Black Tinted Concrete)	\$	57.20				\$	21,450.00
38	215		590	s.y.i.p.	Concrete Driveway / Pavement Crushed Limestone Aggregate Base Course (ALDOT Section 825, Type B), 5" Compacted Thickness	\$	6.05	\$	1,300.75		\$	2,268.75
39	1500	100	1600	s.y.i.p.	Bituminous Treatment 'A'	\$	1.00	\$	1,500.00		\$	1,600.00
40	2100	5700	7800	s.y.i.p.	Tack Coat	\$	0.25	\$	525.00		\$	1,950.00
41	420		4920	s.y.i.p.	Milling of Existing Asphalt Paving (minimum thickness to accommodate 1-1/2" wearing surface) (Full Width of Lake Avenue)	\$	2.80	\$	1,176.00		\$	13,776.00
42	4900	4300	9200	s.y.i.p.	Topsoil Placement (4" Minimum Thickness)	\$	5.50	\$	26,950.00		\$	23,650.00
43	4900	4300	9200	s.y.i.p.	Solid Sodding (Empire Zoysia)	\$	5.90	\$	28,910.00		\$	25,370.00
44	59	83	142	each	Tri-color Asian Jasmine - 1 Gallon	\$	9.60	\$	566.40		\$	796.80
45			21	each	Asian Jasmine - 1 Gallon	\$	6.65				\$	139.65
46			54	each	Big Blue Liriope - 1 Gallon	\$	6.65				\$	359.10
47	26	21	47	each	Coral Drift Rose - 3 Gallon	\$	41.05	\$	1,067.30		\$	862.05
48	15	5	20	each	Cathedral Live Oak - 3.5" Caliper	\$	383.40	\$	5,751.00		\$	1,917.00
49	41	121	162	each	Dwarf Burford Holly - 3 Gallon	\$	18.55	\$	760.55		\$	2,244.55
50			24	each	Dwarf Hamlin Grass - 3 Gallon	\$	24.00				\$	576.00
51			51	each	Red Drift Rose	\$	41.50				\$	2,116.50
52	68		68	each	Glossy Abelia - 3 Gallon	\$	18.55	\$	1,261.40			1,261.40
53			6	each	Kaleidoscope Abelia - 3 Gallon	\$	48.00				\$	288.00
54	10	6	16	each	Nuttall Oak - 3.5" Caliper	\$	421.25	\$	4,212.50		\$	2,527.50
55			11	each	Red Knockout Rose - 3 Gallon	\$	27.25				\$	299.75
56			3	each	Natchez Crape Myrtle - 10' to 12' Tall	\$	345.60				\$	1,036.80
57			130	each	Stella De Ora Daylily - 1 Gallon	\$	9.50				\$	1,235.00
58	7	14	21	each	Tuscarora Crape Myrtle - 10' to 12' Tall	\$	356.40	\$	2,494.80		\$	4,989.60
59			3	each	Tea Olive - 5 Gallon	\$	32.40				\$	97.20
60	2	8	10	each	Willow Oak - 3.5" Caliper	\$	373.00	\$	746.00		\$	2,984.00
61			7	each	October Glory Red Maple - 3.5" Caliper	\$	400.00				\$	2,800.00
62	0.40	0.60	1	l.s.	Irrigation (as per Irrigation Plans; Includes Sleeves)	\$	50,300.00	\$	20,120.00		\$	30,180.00
63	1	1	2	each	2" Irrigation Meter Assembly Set (Material Provided by City)	\$	350.00	\$	350.00		\$	350.00
						\$		\$			\$	700.00

64	400		400	l.f.	2" PVC CL200 Irrigation Main Replacement at South side of University Place School (Includes all Fittings, Thrust Blocks, Excavation, Reconnections to Existing Main)	\$ 7.60	\$ 3,040.00		\$ 3,040.00
65		1	1	l.s.	Cut and Cap Existing Watermain in Lake Avenue (approx right of Sta 28+35)	\$ 1,288.00		\$ 1,288.00	\$ 1,288.00
66	1	1	2	each	Adjustment of Existing Water Vaults to Finish Grade	\$ 350.00	\$ 350.00	\$ 350.00	\$ 700.00
67	1	3	4	each	Fire Hydrant Relocation (includes hydrant repainting)	\$ 2,401.00	\$ 2,401.00	\$ 7,203.00	\$ 9,604.00
68	1	4	5	each	6" Valve and Valve Box	\$ 790.00	\$ 790.00	\$ 3,160.00	\$ 3,950.00
69		1	1	each	6" Tapping Sleeve and Valve and Valve Box	\$ 2,194.00		\$ 2,194.00	\$ 2,194.00
70	40	160	200	l.f.	6" D.I Class 350 Watermain	\$ 17.85	\$ 714.00	\$ 2,856.00	\$ 3,570.00
71		12	12	each	Relocation of Existing Domestic Service / Irrigation Service Assembly (includes meter box(s), backflow preventer(s), regulators, etc.)	\$ 501.00		\$ 6,012.00	\$ 6,012.00
72		480	480	l.f.	3/4" Type "K" Copper Service Tubing for Meter Relocations and Reconnections to Existing Domestic Service Mains Beyond Meter (includes all couplings, fittings, etc. Necessary for Reconnections / Relocations)	\$ 10.88		\$ 5,222.40	\$ 5,222.40
73	200	600	800	lbs	D.I Class 350 Watermain Fittings, Compact	\$ 7.56	\$ 1,512.00	\$ 4,536.00	\$ 6,048.00
74	3000	3500	6500	l.f.	Erosion Control Silt Fence, Type 'A'	\$ 2.94	\$ 8,820.00	\$ 10,290.00	\$ 19,110.00
75	100	200	300	each	Erosion Control Hay Bales	\$ 7.50	\$ 750.00	\$ 1,500.00	\$ 2,250.00
76	500	1000	1500	each	Erosion Control Watle	\$ 5.50	\$ 2,750.00	\$ 5,500.00	\$ 8,250.00
77	10	25	35	each	Erosion Control Inlet Protection	\$ 485.00	\$ 4,850.00	\$ 12,125.00	\$ 16,975.00
78	0.3	0.7	1	l.s.	Erosion Control Storm Water Best Management Practices: Management, Maintenance, Repair, Replacement, etc. of All Erosion Control Items, Structures, etc.	\$ 29,655.00	\$ 8,896.50	\$ 20,758.50	\$ 29,655.00
79	89	74	163	l.f.	15" RCP Class III Storm Sewer	\$ 63.00	\$ 5,607.00	\$ 4,662.00	\$ 10,269.00
80		35	35	l.f.	22"x13" RCAP Class III Storm Sewer	\$ 74.00		\$ 2,590.00	\$ 2,590.00
81	2	2	4	each	S-Inlet, Single Wing	\$ 3,179.00	\$ 6,358.00	\$ 6,358.00	\$ 12,716.00
82	1	1	2	each	S-Inlet, Double Wing	\$ 3,399.00	\$ 3,399.00	\$ 3,399.00	\$ 6,798.00

83			2	2	each	Concrete Grate Inlet	\$ 1,559.00		\$ 3,118.00	\$ 3,118.00
84	2		1	3	each	Concrete Junction Box	\$ 2,239.00	\$ 4,478.00	\$ 2,239.00	\$ 6,717.00
85			1	1	I.s.	Trench Drain with Concrete Apron	\$ 10,363.00		\$ 10,363.00	\$ 10,363.00
86	1			1	each	Connect To Existing Storm Sewer Inlet	\$ 1,500.00	\$ 1,500.00	\$ -	\$ 1,500.00
87			1	1	each	Convert Existing Inlet to Junction Box	\$ 1,557.00		\$ 1,557.00	\$ 1,557.00
88			1	1	each	Core Drill Existing Concrete Wall (Whitfield Creek Drainage Flume)	\$ 2,400.00		\$ 2,400.00	\$ 2,400.00
89	15	10	25	each	Street-Pedestrian Combination Pole/Fixture Assembly Installation (Includes Pole, Pole Arm, Fixtures, Anchors Bolts, Decorative Base Provided by City; Circuitry, Electrical Outlets, etc. Provided by and Installed by Contractor)	\$ 642.95	\$ 9,644.25	\$ 6,429.50	\$ 16,073.75	
90		16	16	each	Street Pole/Fixture Assembly Installation (Includes Pole, Pole Arm, Fixtures, Anchors Bolts, Decorative Base Provided by City; Circuitry, Electrical Outlets, etc. Provided by and Installed by Contractor)	\$ 518.10		\$ 8,289.60	\$ 8,289.60	
91		2	2	each	Pedestrian Light Assembly Installation (Includes Pole, Pole Arm, Fixture, Anchors Bolts, Decorative Base Provided by City; Circuitry, Electrical Outlets, etc. Provided by and Installed by Contractor)	\$ 518.10		\$ 1,036.20	\$ 1,036.20	
92	15	28	43	each	Concrete Pole Base Installations (All Types) (Includes all reinforcement, conduits, circuitry, electrical outlets, grounding wire/rods, etc. as on light pole base detail)	\$ 1,466.30	\$ 21,994.50	\$ 41,056.40	\$ 63,050.90	
93		2	2	I.s.	Lighting Control Panels and Connection to ALPCO	\$ 8,688.90		\$ 17,377.80	\$ 17,377.80	
94	1		1	I.s.	Connect to Existing Lighting Control Panel	\$ 1,655.50	\$ 1,655.50		\$ 1,655.50	
95		1	1	I.s.	Allowance for ALPCO Service Connection Fee	\$ 8,000.00		\$ 8,000.00	\$ 8,000.00	
96	2500	4500	7000	I.f.	Buried Electrical Conductors and Conduits for Site Lighting and Irrigation Power Supply	\$ 13.06	\$ 32,650.00	\$ 58,770.00	\$ 91,420.00	
97	1500	2000	4000	I.f.	Buried Electrical 1-1/4" PVC Conduits for Security Cameras, WAP, etc.	\$ 3.32	\$ 4,980.00	\$ 6,640.00	\$ 13,280.00	
98	3	3	6	each	TDOT Quazite Vaults/Pull Boxes (36" x 48" x 36")	\$ 3,523.30	\$ 10,569.90	\$ 10,569.90	\$ 21,139.80	
99	1	4	5	each	TDOT Quazite Vaults/Pull Boxes (48" x 72" x 48")	\$ 4,304.30	\$ 4,304.30	\$ 17,217.20	\$ 21,521.50	

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100	1100	2260	3360	l.f.	Buried Empty Fiber Optic Six Way 4" (Inside Diameter) Conduits with Three Way 1-1/4" Innerducts per Each 4" Conduit with pull cords (Includes all Spacers, Excavation, Native Material Backfill, Compaction, per trench detail)	\$ 74.54	\$ 81,994.00	\$ 168,460.40	\$ 250,454.40
101	5	5	10	each	Carsonite Markers (Electrical)	\$ 181.78	\$ 908.90	\$ 908.90	\$ 1,817.80
102	600	1600	2200	l.f.	ALPCO: Dual 3" (Inside Diameter) Sch. 40 PVC Conduits for Single Phase Secondary (Includes all Conduits, Spacers, Fittings for Turn-ups, Pull-cords, Excavation, Native Backfill Material, Compaction, per detail)	\$ 14.11	\$ 8,466.00	\$ 22,576.00	\$ 31,042.00
103		600	600	l.f.	ALPCO: Dual 3" (Inside Diameter) Sch. 40 PVC Conduits for Three-Phase Secondary (Includes all Conduits, Spacers, Fittings for Turn-ups, Pull-cords, Excavation, Native Backfill Material, Compaction, per detail)	\$ 15.00		\$ 9,000.00	\$ 9,000.00
104		1300	1300	l.f.	ALPCO: Dual 2" (Inside Diameter) Sch. 40 PVC Conduits for Primary (Includes all Conduits, Spacers, Fittings for Turn-ups, Pull-cords, Excavation, Native Backfill Material, Compaction, per detail)	\$ 11.71		\$ 15,223.00	\$ 15,223.00
105		3000	3000	l.f.	ATT: 2" (Inside Diameter) Sch. 40 PVC Conduits (Includes all Conduits, Spacers, Fittings for Turn-ups, Pull-cords, Excavation, Native Backfill Material, Compaction, per detail)	\$ 9.52		\$ 28,560.00	\$ 28,560.00
106		3000	3000	l.f.	Comcast: 2" (Inside Diameter) Sch. 40 PVC Conduits (Includes all Conduits, Spacers, Fittings for Turn-ups, Pull-cords, Excavation, Native Backfill Material, Compaction, per detail)	\$ 5.78		\$ 17,340.00	\$ 17,340.00
107		3	3	each	Installation of ALPCO Transformer Pads	\$ 1,742.40		\$ 5,227.20	\$ 5,227.20
108		8	8	each	Installation of ALPCO Secondary Pedestal Boxes (Provided by ALPCO)	\$ 270.88		\$ 2,167.04	\$ 2,167.04
109		2	2	each	Installation of ALPCO Secondary Three Phase Pull Box (Provided by ALPCO)	\$ 211.20		\$ 422.40	\$ 422.40

110	100	750	850	c.y.i.p.	Select Backfill for Duct Bank / Lighting Conduits (ALDOT #57 Crushed Stone)	\$ 67.32	\$ 6,732.00	\$ 50,490.00	\$ 57,222.00
111	200	850	1050	s.y.i.p.	Select Backfill for Duct Bank / Lighting Conduits (ALDOT 825B Crushed Stone, 12" minimum compacted thickness)	\$ 18.75	\$ 3,750.00	\$ 15,937.50	\$ 19,687.50
112	1	1	2	each	Decorative Bench	\$ 1,829.00	\$ 1,829.00	\$ 1,829.00	\$ 3,658.00
113	1	1	2	each	Decorative Trash Receptacle	\$ 1,708.00	\$ 1,708.00	\$ 1,708.00	\$ 3,416.00
114	1	1	2	each	Bike Rack	\$ 1,337.00	\$ 1,337.00	\$ 1,337.00	\$ 2,674.00
115	68	184	252	s.f.i.p	Permanent Street / City Walk Signage (includes U-Channel post, fasteners, etc.)	\$ 11.00	\$ 748.00	\$ 2,024.00	\$ 2,772.00
116		1	1	l.s.	Culvert Crossing at Lake Avenue (Hoo's Q / Gilda's); includes all handrails, structural items, modifications to existing concrete flume walls, etc.	\$ 44,565.00		\$ 44,565.00	\$ 44,565.00
117		2	2	each	Reset Endpost for Existing Chainlink Fence at Whitfield Creek (match existing connection to wall)	\$ 250.00		\$ 500.00	\$ 500.00
118		180	180	l.f.	Wrought Iron / Brick Fencing	\$ 190.00		\$ 34,200.00	\$ 34,200.00
119		7	7	each	Mailbox Relocation (Includes Multiple Temporary Re-sets as Necessary during Construction)	\$ 400.00		\$ 2,800.00	\$ 2,800.00
120	7	14	21	each	IT/Communications Cabinet Pole Mounted Box Assembly (Includes all Conduits, Hardware, Circuitry, etc. for Complete Operable Assembly)	\$ 658.52	\$ 4,609.64	\$ 9,219.28	\$ 13,828.92
121	1000	500	1500	c.y.i.p.	Unsuitable Soil Removal and Replacement (A-4 Soils or Better) (Only as Directed by Engineer)	\$ 25.00	\$ 25,000.00	\$ 12,500.00	\$ 37,500.00
122	1		1	each	Removal of Existing Light Pole Assembly and Demolition of Existing Pole Base	\$ 1,190.20	\$ 1,190.20	\$ -	\$ 1,190.20
Total Base Bid									\$ 2,108,349.71

Additive Alternate		
200	6100	Full Width Milling of Existing Asphalt Paving (minimum thickness to accommodate 1-1/2" wearing surface)
		\$ 2.80 \$ 17,080.00



201	6100	s.y.i.p.	Improved Bituminous Concrete Wearing Surface Layer, ALDOT Section 424A, 3/8" Maximum Aggregate Size Mix, ESAL Range B, (Minimum 1-1/2" Compacted Thickness); Includes Tack Coat	\$	8.10	\$ 49,410.00
202	1	l.s.	Replace Existing Traffic Striping, Markings, Legends as per Existing Layout	\$	2,750.00	\$ 2,750.00
203	1	l.s.	Adjustment of Existing Manhole Covers and Valve Boxes to Finish Overlay Grade	\$	4,100.00	\$ 4,100.00
				Alternate Bid Only		
				\$ 73,340.00		

Total Base Bid and Alternate

\$ 2,181,689.71

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STATE OF ALABAMA

BID LIMIT: U

LICENSE NO: 17900

AMOUNT: UNLIMITED

TYPE: RENEWAL



State Licensing Board for General Contractors

THIS IS TO CERTIFY THAT

GFC CONSTRUCTION INC

DUNCANVILLE, AL 35456

is hereby licensed a General Contractor in the State of Alabama and is authorized to perform the following type(s) of work:

EV: ENVIRONMENTAL, HRR: HEAVY AND RAILROAD, HS: HIGHWAYS AND STREETS, MU: MUNICIPAL AND UTILITY

until

When this Certificate expires.

August 31, 2014

Witness our hands and seal of the Board, dated Montgomery, Ala.,

1st day of

August, 2013

SECRETARY-TREASURER

CHAIRMAN

94153



The Bidder declares that he understands and agrees that the quantities shown in the Advertisement for Bids and in the Proposal are approximate only and are subject to either increase or decrease; and that should quantities be decreased, he also understands and agrees that payment will be made on actual quantities installed at the unit bid prices, and will make no claim for anticipated profits for any decreases in the quantities. Actual quantities will be determined upon completion of the work.

START OF CONSTRUCTION AND CONTRACT COMPLETION TIME: The Bidder further agrees to begin work on the date stated in the Notice to Proceed and to fully complete the work, in all respects, within the time specified in the contract documents for completion.

EXPERIENCE OF BIDDER: Unless advised by the awarding authority in the Advertisement for Bids that the same is not required, the Bidder submits the following list of at least three clients for whom projects involving construction of similar projects have been performed within the past 5 years.

1.	City of Tuscaloosa - David Griffin, PE	(205) 248-5380
	Name of Client	Telephone Number
	2201 University Blvd	Tuscaloosa, AL 35401
	Street	City
	DTURRP Phase I	\$11,388,446
	Facility	Size
		2011
		Date
	Frank Summers, PE/Almon Associates, Inc.	(205) 349-2100
	Name of Engineer/Architect/Engineering Firm	Telephone Number
2.	City of Tuscaloosa/ALDOT - David Griffin, PE	(205) 248-5380
	Name of Client	Telephone Number
	2201 University Blvd	Tuscaloosa, AL 35401
	Street	City
	Greensboro Avenue - Streetscape Project	\$3,366,821
	Facility	Size
		2012
		Date
	Craig Williams, PE/Burk-Kleinpeter, Inc.	(205) 759-3221
	Name of Engineer/Architect/Engineering Firm	Telephone Number
3.	City of Tuscaloosa - Daniel Price, PE	(205) 248-5367
	Name of Client	Telephone Number
	2201 University Blvd	Tuscaloosa, AL 35401
	Street	City
	DTURRP Phase II	\$6,254,720
	Facility	Size
		2014
		Date
	Josh Roger, PE/ Almon Associates, Inc.	(205) 349-2100
	Name of Engineer/Architect/Engineering Firm	Telephone Number

PERFORMANCE OF WORK BY CONTRACTOR: The Bidder shall perform at least 50 percent of the work with his own forces (refer to the INSTRUCTIONS TO BIDDERS).

SUBCONTRACTORS: Unless the same information has been provided in the prequalification statement, the Bidder further certifies that if his bid is accepted, the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work:

Description of Work Electrical/Utility Work

Premier Service Company, Inc.

Name

1201 15th Street Tuscaloosa AL 35401
Street City State Zip

Description of Work Landscape & Irrigation

Guthrie Landscape Services, LLC

Name

5400 Watermelon Road Northport AL 35473
Street City State Zip

Description of Work Concrete Work

Rushing Concrete Company, Inc.

Name

13865 Chism Road Northport AL 35475
Street City State Zip

Description of Work _____

Name _____

Street _____ City _____ State _____ Zip _____

SURETY: If the Bidder is awarded a construction contract on this Proposal, the Surety who provides the Performance Bond and Payment Bond will be:

The Cincinnati Insurance Company

whose address is

P.O. Box 145496 Cincinnati Ohio 43250-5496
Street City State Zip

Single Job Bond Limit 12,000,000 Aggregate Job Bond Limit 20,000,000

If Sole Proprietor or Partnership:

IN WITNESS hereto the undersigned has set his (its) hand this _____ day of _____, 20____.

Signature of Bidder

Title

If Corporation:

IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers, this 28th day of August, 2014.

GFC Construction, Inc.
Name of Corporation

By [Signature]
Title PRESIDENT

Attest [Signature]
Secretary

(seal)

The Bidder declares that he understands and agrees that the quantities shown in the Advertisement for Bids and in the Proposal are approximate only and are subject to either increase or decrease; and that should quantities be decreased, he also understands and agrees that payment will be made on actual quantities installed at the unit bid prices, and will make no claim for anticipated profits for any decreases in the quantities. Actual quantities will be determined upon completion of the work.

Attached hereto is a (Bid Bond) or (Check) for the sum of 5% of Bid Not to Exceed \$10,000.00 according to the conditions under "Instructions to Bidders" and provisions therein.

Dated this 28th day of August, 2014.

BY: [Signature]
Title PRESIDENT

(NOTE) If the Bidder is a corporation, the Proposal shall be signed by an officer of the corporation; if a partnership it shall be signed by a partner. If signed by others, authority for signature shall be attached.

[END OF BID PROPOSAL—OFFICE OF THE CITY ATTORNEY]

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

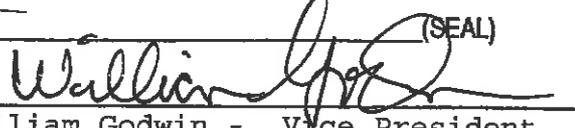
IN WITNESS WHEREOF, the above-bonded parties have executed this instrument under their several seals, this the 28th day of August, 2014 the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WITNESS:



PRINCIPAL:

GFC Construction, Inc.

By:  (SEAL)
William Godwin - Vice President
Title: _____

Address: P.O.Box 87, Duncanville, AL 35456

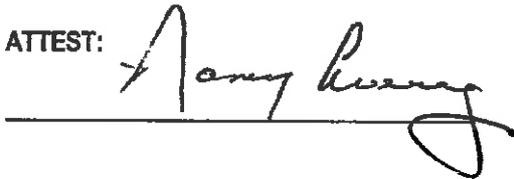
SURETY:

The Cincinnati Insurance Company
(SEAL)

P.O.Box 145496

(Business Address)
Cincinnati, Ohio 45250-5496

ATTEST:

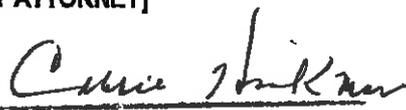


By: 
Title: Carrie Hickman
Attorney in Fact

NOTE: Surety must be qualified and duly authorized to make bonds in the state. All Bonds and Sureties are subject to review and approval by the City Attorney. Valid current Power of Attorney for Corporate Surety must be attached.

NOTE: Bidder may submit a cashier's check drawn on an Alabama bank to the order of the City of Tuscaloosa equal to 5% of the amount bid, in lieu of a Corporate Surety, under the same terms.

[END DOCUMENT—OFFICE OF THE CITY ATTORNEY]


LICENSED RESIDENT AGENT
STATE OF AL

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

SECTION FIVE
CONTRACT AGREEMENT
(2014)

THIS AGREEMENT made and entered into this 5th day of September, 2014, by and between GFC Construction, Inc., hereinafter sometimes called the CONTRACTOR, as party of the first part, and the CITY OF TUSCALOOSA, Alabama, a Municipal Corporation, hereinafter sometimes called the CITY or OWNER, as party of the second part,

W-I-T-N-E-S-S-E-T-H:

In consideration of the amounts herein named and of the mutual agreements and provisions herein contained, the Contractor and the City agree in regard to a public works project (hereinafter either the "work" or the "Project") as described in the Advertisement for Bids.

The Contractor will perform the work and/or construct the Project as well as furnish at his own cost and expense all labor, tools, equipment and transportation as are herein and in the Contract documents required to be furnished by the Contractor, and shall perform all the work in a manner and form required to construct the Project described in and shown on the contract documents as the same are hereinafter more specifically described and as provided by the plans, specifications and documents which are attached hereto and made a part hereof, as if fully set out herein and addenda together with all plans and drawings on file in the office specified below.

ARTICLE I. GENERALLY

A. **Contract Documents:** As used throughout the documents constituting the contract, the term "Contract Documents" shall mean and include the following: Advertisement for Bids, Addenda (if issued), the Instructions to Bidders, the Bid Proposal, the General Specifications, the Detail Specifications, Supplemental and Special Conditions (if attached), together with this Contract Agreement and any modifications, including change orders, if made, and the drawings, plans and profiles that are now on file in the office referred to in the advertisement, the Performance Bond and the Labor and Material Bond, executed by the Contractor in connection with this Contract and insurance requirements and certificates.

All such documents hereinabove enumerated are adopted herein by reference and constitute the Contract between the parties to the same extent as if each were set out in full in this agreement.

B. **Independent Contractor:** The Contractor enters into this Contract with the City as an independent contractor and, as such, agrees that neither the City nor its officers, agents, employees or inspectors shall be responsible for the acts or omissions of the Contractor, or any subcontractor, or any of the Contractor's or subcontractor's agents or employees, or any other persons performing any of the work pursuant to this Contract. The Contractor shall be solely responsible for controlling construction manner, means and techniques consistent with the contract documents, plans and specifications.

C. **Order of Precedence:** Should there be a direct conflict between the various elements of the contract documents to the extent that the same cannot be reconciled to be read *in para materia*, then precedence shall be given the same in the following order:

1. Subsequent modifications (change orders or amendments) to contract agreement after execution
2. Addenda (if issued)
3. Supplemental general conditions and special conditions (if included)
4. The Contract Agreement
5. General and technical specifications
6. Large Scale Drawings (if included)
7. Enlarged Plans (if included)
8. Plans (if included)
9. Instructions to bidders
10. Advertisement for bids
11. Proposal (Bid)
12. Purchasing Agent Appointment Agreement (if utilized)

Where more than one document relates to the same matter if both can be given reasonable effect both are to be retained. Written specifications will take precedence over drawings.

D. **Integration; Contract Terms and Construction:**

1. **Integration:** This Agreement, together with all documents which constitute the "Contract Documents," constitute the entire agreement of the parties, as a complete and final integration thereof with respect to its subject matter. All understandings and agreements heretofore had between and among the parties are merged into this Agreement, which alone fully and completely expresses their understandings. No representation, warranty, or covenant made by any party which is not contained in this Agreement or expressly referred to herein has been relied on by any party in entering into this Agreement.
2. **Amendment in Writing:** This Agreement may not be amended, modified, altered, changed, terminated, or waived in any respect whatsoever, except by a further agreement or change order, in writing, properly executed by all of the parties.
3. **Binding Effect:** This Agreement shall bind the parties and their respective personal representatives, heirs, next of kin, legatees, distributees, successors, and assigns.
4. **Captions:** The captions of this Agreement are for convenience and reference only, are not a part of this Agreement, and in no way define, describe, extend, or limit the scope or intent of this Agreement.
5. **Construction:** This Agreement shall be construed in its entirety according to its plain meaning and shall not be construed against the party who provided or drafted it.
6. **Mandatory and Permissive:** "Shall," "will," and "agrees" are mandatory; "may" is permissive.
7. **Governing Laws:** The laws of the State of Alabama shall govern the validity of this Agreement, the construction of its terms, the interpretation of the rights, the duties of the parties, the enforcement of its terms, and all other matters relating to this Agreement.
8. **Ownership of Contract Documents:** The Contract Documents, and copies of parts thereof, are furnished and owned either by the City or the design professional. All portions of the Contract Documents, and copies of parts thereof, are the instruments of service for this Project. They are not to be used on other work and are to be returned to the City on request at the completion of the Project. Any reuse of these materials without specific written verification or adaptation by the City will be at the risk of the user and without liability or legal expense to the City or Engineer/Architect. Such user shall hold the City and Engineer/Architect harmless from any and all damages, including reasonable

attorneys' fees, from any and all claims arising from any such reuse. Any such verification and adoption shall entitle the City to further compensation at rates to be agreed upon by the user and the City.

E. Rules of Construction: For the purposes of this contract, except as otherwise expressly provided or unless the context otherwise requires:

1. Words of masculine, feminine or neuter gender include the correlative words of other genders. Singular terms include the plural as well as the singular, and vice versa.
2. All references herein to designated "articles," "sections," and other subdivisions or to lettered exhibits are to the designated articles, sections and subdivisions hereof and the exhibits annexed hereto unless expressly otherwise designated in context. All article, section, other subdivision and exhibit captions herein are used for reference only and do not limit or describe the scope or intent of, or in any way affect this agreement.
3. The terms "include," "including," and similar terms shall be construed as if followed by the phrase, "without being limited to".
4. The terms "herein," "hereof," and "hereunder," and other words of similar import refer to this agreement as a whole and not to any particular article, section, other subdivision or exhibit.
5. All recitals set forth in, and all exhibits to, this agreement are hereby incorporated in this agreement by reference.
6. No inference in favor of or against any party shall be drawn from the fact that such party or such party's counsel has drafted any portion hereof.
7. All references in this agreement to a separate instrument are to such separate instrument as the same may be amended or supplemented from time to time pursuant to the applicable provisions thereof.

F. Construction Manager - Multiple Trade Contracts: If indicated in the Advertisement for Bids, the City has elected to engage the services of a Construction Manager for the work on this Project. If so, the same will be indicated in the bid packages and special supplemental conditions will be attached in regard to trade contracts. Contractor, as one of the multiple trade contractors on the Project shall adhere to all terms and conditions of the contract documents, particularly the supplemental conditions regarding multiple trade or multiple prime contractors. Any provision of the general conditions in direct conflict with the supplemental conditions is superseded to the extent of the conflict. If using a Construction Manager format, then this shall be a multiple trade or multiple prime contract agreement subject to the supervision and direction of a Construction Manager, in accordance with the terms and provisions of the Construction Manager's agreement with the City, which agreement is adopted herein by reference.

G. Coordination of Plans, Specifications, etc.: The specifications, the plans, drawings and all supplementary documents are essential parts of the Contract, and requirements occurring in one are as binding as though occurring in all. They are intended to be comprehensive to describe and provide a complete work. In case of discrepancy, figured dimensions shall govern.

H. Corrections of Plans, etc.: Should any portions of the plans, specifications or drawings be obscure or in dispute, they shall be referred to the Engineer/Architect and he shall decide as to the true meaning and intent. The Engineer/Architect shall also have the right to correct any errors or omissions at any time when such corrections are necessary for the proper fulfillment of said plans and specifications.

I. Taxes and Charges: Except to the extent the City and the Contractor are utilizing a "Purchasing Agent Appointment agreement," Contractor shall withhold and pay all sales and use taxes and all withholding taxes, whether local, state or federal and pay all Social Security taxes and also all State Unemployment Compensation taxes, and pay or cause to be withheld, as the case may be, any and all taxes, charges, or fees or sums whatsoever,

which are now or may hereafter be required to be paid or withheld under any laws. Pursuant to Ala. Code §39-1-3 (1975), Contractor shall be reimbursed for any additional severance, sales or uses taxes incurred as a result of an increase in such taxes during performance of the contract.

J. **Shop Drawings and Submittals.** The Contractor shall submit shop drawings, samples and submittals depicting or representing the construction of portions of the Project in accordance with the plans and specifications to the Engineer/Architect and if there is no Engineer or Architect on the Project, to the City representative. The Contractor shall pay for or the cost may be withheld from payments to the Contractor for more than two (2) reviews of the shop drawings, samples or submittals or similar element of work by the Engineer, Architect or City representative.

K. **Alabama Immigration Law.** By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom, to the extent allowed by Federal law.

ARTICLE II. PAYMENTS, CLAIMS AND CHARGES, ETC.

A. **Contract Price:** The City will pay and the Contractor will accept in full consideration for the performance of the work/Project, subject to additions and deductions (including but not limited to liquidated damages) as provided in the contract documents and herein, the sum of Two Million One Hundred Eighty Thousand Twenty-Nine and 71/100 (\$ 2,180,029.71) and/or in unit prices as shown in Bidder's schedule for the amount of \$2,180,029.71, being the amount of the Contractor's bid as awarded by the City.

B. **Estimated Quantities and Unit Prices:** If award was made in whole or in part based upon unit prices, the Contractor agrees that the prices given in the Proposal are unit prices. The estimated quantities as stated in the Advertisement for Bids and in the Proposal and as indicated on the plans or in other places are approximate only, are subject either to increase or decrease and are only for the purpose of comparing on uniform basis the bids offered for the Project under this contract. The Contractor further agrees that should the quantities of any of the items of the work be increased, he will do the additional work at the unit prices set out in the Proposal and should the quantities be decreased, payment will be made on actual quantities at the unit prices and he will make no claim for anticipated profits for any decrease in the quantities. Actual quantities will be determined upon completion of the Project.

C. **Overtime Work by Contractor:** If the Contractor for his convenience and at his own expense should desire to carry on his work at night or outside regular hours, he shall submit written notice to the Engineer/Architect and he shall allow ample time for satisfactory arrangements to be made for inspecting the work in progress. At no time shall the notice be given less than 24 hours before such overtime work is started. The Contractor must obtain, through the Engineer/Architect, the City's approval for work at night, on Saturdays, Sundays or legal holidays. The Contractor shall light the different parts of the Project as required to comply with all applicable federal and state regulations and with all applicable requirements of the City.

Overtime hours shall be considered any hours worked by the Contractor on Saturday, Sunday and legal holidays, which in the Engineer/Architect's opinion requires the Engineer/Architect's resident observers' presence to observe such overtime work. Overtime hours requiring the presence of City inspectors shall be considered any hours worked by the Contractor in excess of eight (8) hours during any working day and/or in excess of forty (40) hours from Monday through Friday and/or any time on Saturday, Sunday or legal holiday. In general, it should be

expected that the Engineer/Architect's resident observer(s) or City's inspectors will be present at all times that the Contractor is working.

If the Contractor elects to schedule and perform overtime work, the Contractor shall pay the City for the City's resident inspector's salary plus costs for each hour of overtime work. Overtime shall be rounded up to the nearest whole hour. This amount shall include the inspector's salary at overtime rate, labor additive, which includes insurance, social security, workmen's compensation, sick pay, paid holidays, vacation pay and his vehicle and equipment. Payment to the City shall be made by a deduction from the Contractor's monthly payment invoice for any overtime worked.

D. Payments on Account/Payments Withheld/Retainage: Upon presentation of a verified application for payment, which shall include a "Contractor's Affidavit of Payment of Debts and Claims," AIA Form G706 or equivalent, then usually by the fifteenth (15th) day of each calendar month or as soon thereafter as is practical, as the Project progresses, the City shall make partial payments to the Contractor of the billable work performed less payments already made and less deductions for any incomplete, unaccepted or defective work. In making partial payments to the Contractor, there shall be retained five (5%) percent of the estimated amount of work done and value of materials stored on the site or suitably stored and insured off-site. Provided; however, after fifty (50%) percent of the Project has been satisfactorily completed, no further retainage will be withheld.

Retainage shall be held until final completion and acceptance of all work covered by the Contract Documents unless escrow or deposit arrangements are agreed to by the City. When maintenance periods are included in the Contract Documents covering highways, bridges or similar structures, such period shall be considered a component part of the contract and retainage will be held until the expiration of such periods.

On completion and acceptance of each separate building, public work or other separately identifiable and complete division of the Project in regard to which a separate price has been stated in the Contract Documents or can be separately ascertained, payment may be made in full including retainage but less deductions. Provided; however, the City will not consider making such payment on any such item of work if it is an integral part of a complete project.

All materials and work covered by partial payments as provided for herein shall become the sole property of the City; provided, however, the Contractor shall not be relieved from the sole responsibility for the care and protection of materials and work upon which payments have been made and for the restoration of any damaged work.

The City may also withhold from time to time from payment to the Contractor such an amount or amounts as may be necessary to pay and fully satisfy all claims and demands for labor and services rendered in and about the Project, including any such amount or amounts due to be paid to or by any subcontractor or supplier, amounts for City's or Engineer/Architect's observers or inspectors for contractors' overtime as herein provided, or for engineering or design services associated with Contractor initiated change orders or submittals in excess of that permitted herein. The Contractor hereby authorizes the City as its agent, to apply such amounts so withheld to the payment of any amount so due to be paid and all other just and lawful claims other than claims for damages for tort. In case of disagreement with reference to any such claim or claims, the City may keep such amounts so withheld on account of such claim or claims until such disagreement is finally settled and determined.

In addition, the City may also withhold payment of the whole or any part of a verified or approved application for payment from the Contractor to such an extent as may be necessary to protect itself from loss on account of any of the following causes discovered subsequent to its verification or approvals:

1. Defective work.
2. Evidence indicating probable filing of claims by other parties against the Contractor.
3. Failure of the Contractor or subcontractor to promptly make payments to subcontractors or for materials, labor, food stuffs and supplies.
4. Damage to another contractor under separate contract with the City.
5. Assessment of liquidated damages.

When the above grounds are removed, applications for payment will then be verified and/or approved for amounts not previously verified and approved because of them.

The Contractor shall not attempt to withdraw at any time during the term of this contract or any extensions thereof, without the expressed written consent of the City, the whole or any part of the amounts so retained by the City from payments due the Contractor by the establishment of an escrow account or by depositing securities in lieu thereof, pursuant to Ala. Code §39-2-12(e) or (f), or any amendments thereto or any equivalent law, ordinance or regulation. It is expressly agreed between the parties hereto that should the City elect not to consent to the same, then the Contractor shall not elect to, attempt to or in any manner endeavor to withdraw such retained amounts.

E. Claims for Extra Cost: If the Contractor claims that any instructions by drawings or otherwise involve extra cost or any extension of time, he shall notify the City in writing within ten (10) days after the receipt of such instructions and in any event before proceeding to execute the Project. Thereafter, the procedure shall be the same as that for change orders. No such claim shall be valid unless made in accordance with the terms of this section. There shall be no damages for delay.

Except as otherwise herein provided, no charge for any extra work will be allowed unless the same has been duly authorized in writing by the City and the price stated in such order.

F. Differing Site Conditions: If, in the performance of the Contract, subsurface or latent conditions are found to be materially different from those indicated by the plans and specifications, or unknown conditions of an unusual nature are disclosed differing materially from conditions usually inherent in work of the character shown and specified, the Contractor shall immediately notify the Engineer/Architect in writing regarding such conditions but in no event later than forty-eight (48) hours after discovery of such conditions by the Contractor.

The written notice shall describe the conditions, and other pertinent information, in no event shall such notice be later than forty-eight (48) hours before such conditions are disturbed. Upon such notice, or upon such observation of conditions, the Engineer/Architect will promptly make such changes in the plans and/or Specifications as he finds necessary (if any are necessary) to conform to the different conditions, and any increase or decrease in the cost of the Project resulting from such changes may be adjusted as provided under Change Orders or Claims for Extra Cost as set forth in the Contract documents.

G. Change Orders: Change orders shall be allowed only under the following conditions: 1) Minor changes for a total monetary amount less than that required for competitive bidding; or 2) Changes for matters incidental to the original contract necessitated by unforeseeable circumstances arising in the course of work under the contract; or 3) Changes due to emergencies; or, 4) Changes provided for in the original bidding and original Contract Documents as alternates; 5) Changes of relatively minor items not contemplated when the plans and specifications were prepared and the Project was bid and which are in the public interest and generally do not exceed 10 percent of the Contract Price, subject to Alabama Bid Law exceptions.

The Contractor or successful bidder is expected to complete the Project as bid and specified within the financial parameters stated therein. However, if it shall be determined that a change order condition possibly exists in any given case during the performance of the contract, the Contractor shall promptly notify in writing the

representative of the City and shall not implement such change until having notified the representative of the City. If the change is minor in the opinion of the representative of the City and does not involve, 1) an adjustment in the contract sum or construction bid price, or 2) result in extension of the contract time, or 3) a material change in the contract scope of services, then the City representative may authorize the change in writing to the Contractor. The Contractor shall not perform such change until receipt of such written change order.

In the event the change order requested by the Contractor involves, 1) an increase in the contract sum or construction bid price, 2) extend the contract time, or 3) materially change the Contractor's scope of work or services, then the Contractor shall request a change order in writing and present the same to the City representative. The representative of the City, shall determine whether this is a change order which can be allowed and, if so, what exception it would fall under. The representative of the City shall then document the same, attach the same to the Contractor's request for a change order and submit the same with his recommendation to the City Council at its next or any subsequent regularly scheduled Council meeting for approval.

The City reserves the right to institute change orders as the Owner pursuant to the aforesaid terms and conditions.

In no event is a change order to be executed by the Contractor prior to approval thereof by the City, except for emergencies.

H. Determination of Adjustment of the Contract Sum: The adjustment of the Contract Sum resulting from a change in the Work shall be determined by one of the following methods as determined by Owner:

1. By mutual agreement to a lump sum based on or negotiated from an itemized cost proposal from the Contractor.
2. Additions to the Contract Sum shall include the Contractor's direct costs plus a maximum 15% markup for overhead and profit. Where subcontract work is involved, the total mark-up for the Contractor and a subcontractor shall not exceed 25%. No allowance for overhead and profit shall be figured on a change which involves a net credit to the Owner. For the purposes of this method of determining an adjustment of the Contract Sum, "overhead" shall cover the Contractor's indirect costs of the change, such as the cost of bonds, superintendent and other job office personnel, watchman, job office, job office supplies and expenses, temporary facilities and utilities, and home office expenses.

I. Construction Schedule and Periodical Estimates: Immediately after execution and delivery of the contract and before the first partial payment is made, the Contractor shall deliver to the City and Engineer/Architect and Construction Manager, a construction schedule in a form satisfactory to the City or Construction Manager, which may include CPM for all major trades, showing the proposed dates of commencement and completion of each of the various activities, of work required under the Contract documents, the interrelationship of each activity, sequences, resources for each and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule. The Contractor shall also furnish (1) a detailed estimate giving a complete breakdown on the contract price and (2) periodical itemized estimates of the work done for the purpose of making partial payments, however the same will not be considered as fixing a basis for additions to or deductions from the contract price. Scheduling is particularly critical if Contractor is a trade contractor and adherence to the Construction Manager progress schedule is required.

NOTE: Depending upon the complexity of the work the City may require CPM or equivalent meeting all criteria above.

J. **Sales and Use Tax Savings:** In the event the parties have executed a Purchasing Agent Appointment Agreement (Alabama Department of Revenue Form ST: PAA1) materials and supplies will be ordered and/or paid for in accordance therewith.

ARTICLE III. TIME

A. **Time for Completion/Delays:** The Contractor hereby agrees to commence work under this contract on the date to be specified in a written "Notice to Proceed" of the Engineer/Architect or thirty (30) days from the date of contract execution if no notice is issued, and to fully complete the Project within 210 consecutive calendar days thereafter. If this is a trade contract, then the Contractor shall perform within the time periods and at the times as established by the Construction Manager's approved construction schedule for the project. The Contractor further agrees to pay to the City, liquidated damages for each consecutive calendar day thereafter as hereinafter provided. Time is of the essence and a material element to this agreement.

NOTE: When maintenance periods are included in the contract for highways, bridges or similar structures, such periods shall be considered component parts of the contract. To the extent the construction schedule contains "float," the parties agree that the same belongs to the Project and may be utilized by either party.

Delay: If the Contractor is delayed at any time in the progress of work by any of the following causes, the Contractor may be entitled to a reasonable extension of time as determined by the City in which to complete the Project. Provided, however, no such delay nor the extension of time if granted shall be grounds for a claim by the Contractor for damages or for additional cost, expenses, overhead or profit or other compensation:

1. Fires, abnormal floods, tornadoes or other cataclysmic phenomenon of nature.
2. Strikes, embargoes, lockouts, war, acts of public enemy.
3. Change orders.
4. Acts of performance or delays in performance by other contractors employed by the City or their subcontractors.
5. Causes beyond the control of the Contractor.

Provided further, that the Contractor shall immediately give notice in writing to the City and follow extension of time procedures as provided for herein. The City expressly disclaims any liability to Contractor for any cost, expense or damage caused by other contractors, subcontractors or suppliers, including those engaged by the City. The City shall not be liable for damages or cost to the Contractor sustained due to any interference from utilities or appurtenances or from the operations of relocating the same.

B. **Extensions of Time:** All written requests for extensions of time must be submitted to Engineer/Architect within ten (10) days after the occurrence of the cause for delay. The Engineer/Architect shall ascertain the facts and the extent of the delay and shall recommend to the City Council whether it should extend the time for completing the Project. Any extension of time shall be in writing and processed as a change order.

For change orders requesting extensions of time due to rain, wind, flood or other natural phenomenon, the Contractor's written request must be accompanied, at the City's request, by a detailed report of weather at this site for the last ten (10) years with averages showing means and statistical deviations from mean averages to support request for extension.

No extension shall be made for delays due to rain, wind, flood or other natural phenomenon of normal intensity for the locality.

In the event any material changes, alterations, or additions are made as herein specified, which in the opinion of the Engineer/Architect will require additional time for execution of any work under the contract, then in that case, the time of the completion of the Project may be extended through change order. No extensions of time shall be given for any minor changes, alterations or additions. The Contractor shall not be entitled to any reparation or compensation on account of such additional time or extensions of time. To the extent that the construction schedule contains "float," the parties agree that the same belongs to the Project and may be utilized by either party.

C. Right of the City to Terminate Contract: If the Contractor should be adjudged as bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed for the Contractor or any of its property, or if it should persistently or repeatedly refuse or fail to supply enough properly skilled workmen or if it should refuse or fail to make prompt payment to persons supplying labor for the Project under the Contract, or persistently disregard instructions of the Engineer/Architect or fail to observe or perform any provisions of the Contract documents, or fail or neglect to promptly prosecute or perform the Project in accordance with the contract documents or otherwise be guilty of a substantial violation of any provision of the Contract documents, then the City may, on giving at least thirty (30) days' written notice to the Contractor, without prejudice to any other rights or remedies of the City in the premises, terminate the Contractor's right to proceed with the Project. In such event, the City may take over the Project and prosecute the same to completion, by contract or otherwise, and the Contractor and its sureties shall be liable to the City for any and all excess cost occasioned to the City thereby, including attorney's fees; and in any such case, the City may take possession of and utilize in completing the Project such appliances and plant of the Contractor or its subcontractors as may be on the site work and necessary or useful thereof. In the event of termination, the same shall not relieve the Contractor nor any of its sureties of their obligation pursuant to this agreement. In the event it becomes necessary for the City to maintain any legal action against the contractor, to enforce its rights herein, the Contractor shall pay the City all expenses associated therewith including a reasonable attorney's fee.

Owner may at any time and for any reason terminate Contractor's services and work at Owner's convenience. Upon receipt of such notice, Contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement. Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this Agreement; plus, (2) such other costs actually incurred by Contractor as are permitted by the prime contract and approved by Owner; (3) plus ten percent (10%) of the cost of the work referred to in subparagraph (1) above for overhead and profit.

D. Liquidated Damages: Should the work under this contract not be completed within the time specified, scheduled or as extended, it is understood and agreed that there may be deducted by the City or Engineer/Architect from the partial and/or final payments to the Contractor or otherwise charged to the Contractor, a sum computed at the rate of Five Hundred Dollars (\$500.00) per day beginning from the stated or extended date of completion and continuing for so long as the Project remains incomplete. It is understood and agreed that the above deduction is not a penalty, but money due to reimburse the City/Owner for inconvenience and damage to the general public, due to the delay in the completion of the Project and is reasonable. The collection of liquidated damages by the City shall not constitute an election or waiver by the City of recovery of additional delay or non-delay related damages from the Contractor, and the City expressly reserves the right to recover actual damages for other harms resulting from delay. The provisions of the liquidated damage clause shall apply and continue to apply even if the Contractor terminates or abandons the Project prior to the scheduled completion dates.

The amounts of such liquidated damages and actual damages incurred by reason of failure to complete the work stipulated in the Contract are hereby agreed upon as reasonable estimates of the costs which may be accrued by the City. It is expressly understood and agreed that these amounts are not to be considered in the nature of penalties, but as damages which have accrued against the Contractor. The City shall have the right to deduct such

damages from any amount due, or that may become due the Contractor, or the amount of such damages shall be due and collectible from the Contractor or Surety.

ARTICLE IV. WORK AND MATERIALS

A. **Cooperation of Contractor:** The Contractor shall have available on the job site, at all times, at least one (1) copy of the plans and specifications if prepared for the Project.

He shall give the Project the constant attention necessary to facilitate the progress thereof and shall cooperate with the City, Engineer/Architect and with other Contractors in every way possible. The Contractor shall at all times have a superintendent, capable of acting as his agent on the Project, who shall receive communications from the Engineer/Architect or his authorized representatives or the City's authorized representative. The superintendent shall have full authority to give and execute orders relating to the Project without delay and to promptly supply such tools, plant equipment, materials and labor as may be required.

The City reserves the right to utilize its own forces on the site or those of another contractor and to communicate through its representative directly with the Contractor.

B. **Coordination - Trade Contractors:** If the supplemental conditions are attached to these general conditions indicating that this Project involves the use of multiple trade or multiple prime contractors under the supervision and direction of a Construction Manager employed by the City, then each such trade contractor shall cooperate and coordinate its construction activities and operations with those of other trade contractors and other entities involved in the Project and included under different sections of the specifications that are dependent upon each other in any manner for proper and correct installation, connection and operation, to assure efficient, prompt, orderly and proper installation of each part of the Project.

When utilizing trade contractors and/or multiple prime contractors under the supervision of Construction Manager cooperation and coordination of activities is extremely important. Refer to the provisions of the supplemental conditions for detailed requirements.

C. **Superintendence:** The Contractor shall assign to and keep at the Project site competent supervisory personnel. The Contractor shall designate, in writing, before starting work, an authorized representative who shall be an employee of the Contractor and shall have complete authority to represent, to receive notice for, and to act for the Contractor. The Contractor shall not permit or allow any work to be conducted upon the Project site without the presence of supervisory personnel. The Engineer/Architect shall be notified in writing prior to any change in superintendent assignment. Using his best skill and attention, the Contractor shall give efficient supervision to the Project. The Contractor shall be solely responsible for all construction means, methods, techniques, and procedures, for providing adequate safety precautions, and for coordinating all portions of the Project under the Contract. It is specifically understood and agreed that neither the Engineer/Architect nor the City shall not have control or charge of and shall not be responsible for the construction means, methods, techniques, or procedures, or for providing adequate safety precautions in connection with the Project under the Contract.

D. **Contractor's Tools and Equipment:** The Contractor's tools and equipment used on the Project shall be furnished in sufficient quantity and of a capacity and type that will adequately and safely perform the work specified, and shall be maintained and used in a manner that will not create a hazard to persons or property, or cause a delay in the progress of the Project.

E. **Furnishing Labor and Equipment:** The Contractor shall furnish and pay for all equipment, labor and supervision, and all such materials as required to be furnished in the Notice to Bidders and as may other-wise be necessary to the completion of the Project and the operation of each construction crew required.

F. **Employees:** The Contractor shall employ only competent, skillful workers on the Project, and whenever any person shall appear to be incompetent or to act in a disorderly, unsafe improper manner, such person shall promptly be removed from the Project by the Contractor.

G. **Materials and Appliances:** Unless otherwise stipulated, the Contractor shall provide and pay for all other materials, water, heating, lighting, fuel, power, transportation, machinery, appliances, telephone, sanitary facilities, temporary facilities and other facilities and incidentals necessary for the execution and completion of the Project.

The Contractor warrants to the City and the Engineer/Architect that, unless otherwise specified, all materials and equipment furnished under this contract shall be new, and both workmanship and materials shall be of good quality, free of faults and defects, and in conformance with the Contract Documents. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials. In selecting and/or approving equipment for installation in the Project, neither the City nor Engineer/Architect assume responsibility for injury or claims resulting from failure of the equipment to comply with applicable federal, state, and local safety codes or requirements, or the safety requirements of a recognized agency, or failure due to faulty design concepts, or defective workmanship and materials. Material and/or equipment damaged by flooding or other causes during the construction period shall be subject to rejection by the Engineer/Architect; reconditioning and/or repairing material and/or equipment is not acceptable.

H. **Asbestos and Hazardous Materials:** Unless specifically authorized and instructed to the contrary by the City, the Contractor shall not permit, allow, place, install or incorporate into the Project or upon the work site, any hazardous material(s), including, but not limited to, any products or materials that contain asbestos in any quantity. It shall be the responsibility of the Contractor to inspect all materials and products delivered for incorporation or installation in the Project to ensure that they contain no hazardous materials or asbestos. Where the Contractor or any subcontractor has or should have a reasonable suspicion that any product or material contains asbestos or other hazardous material, the Contractor shall immediately inspect the material or product, obtain a product or material data sheet, and notify the City's representative prior to installation or incorporation of the same into the Project. Any product or material determined to contain asbestos or other hazardous material shall be removed from the Project immediately and properly disposed of as required by law. Products or material to which the contractor should pay particular attention to avoid the presence of asbestos incorporated therein include, but are not limited to the following: concrete, batt insulation, roof insulation, building felts, mastics, water proofing products, adhesives, resilient flooring products, ceiling tiles, interior coatings, exterior coatings, roofing, pipe installation, duct installation and pre-assembled items of equipment.

At the completion of the Project, the Contractor shall submit a duly executed Asbestos Affidavit in the form as attached hereto prior to final payment.

The Contractor is responsible for insuring that all of its employees and subcontractors are adequately trained to handle hazardous materials in accordance with 49 CFR §172(g).

I. **Protection of Work and Property:** The Contractor shall furnish and install all necessary temporary works for the protection of the Project. The Contractor shall at all times adequately maintain, guard and protect his own work from damage, and safely guard and protect private, commercial, industrial, the City's and others' property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except such as may be directly due to errors in the plans or specifications or caused by agents or employees of the City.

The Contractor shall protect all existing vegetation such as trees, shrubs, and grass on or adjacent to the site which are not required to be removed or do not unreasonably interfere with construction, as may be determined

by the Engineer/Architect, and be responsible for all cutting or damaging of trees and shrubs or grassed areas, including damage due to careless operation of equipment, stockpiling of materials or equipment.

Care shall be taken by the Contractor in felling trees that are to be removed to avoid any unnecessary damage to vegetation or other trees that are to remain in place. Any limbs or branches unavoidably broken during such operations shall be trimmed with a clean cut and painted with an approved tree priming compound. The Contractor may be required to replace or restore at his own expense all vegetation not protected and preserved, as above required, that may be destroyed or damaged.

The Contractor shall provide and maintain all passageways, guard fences, lights, and other facilities required for protection by federal, state or municipal laws and regulations or local conditions.

The Contractor shall comply with local and state regulations governing the operation of premises which are occupied and shall perform the contract in such a manner as not to interrupt or interfere with the operation of other facilities.

The Contractor shall store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the Project as will not unduly interfere with the progress of his work or the work of any other contractor.

Necessary crossings of curbs, sidewalks, roadways or parkways shall be protected against damage and any damage shall be repaired by or at the expense of the Contractor.

The Contractor shall not place upon the Project or any part thereof, loads inconsistent with the design or safety of that portion of the Project.

The Contractor shall provide and maintain access to all public and private properties at all times and be responsible for any damage caused by his operation to existing driveways, yards, streets, parking lots, utilities, railroads, etc., and such damage shall be corrected at the Contractor's expense. Roadways authorized closed by State or Local authorities shall be maintained to provide access to all fire, police, and other emergency vehicles and all individuals having private property in the closed area. The Contractor shall notify at least 24 hours in advance the Fire, Police, and Transportation Departments having local jurisdiction, the Owner and any other individuals, businesses, or agencies that may be affected.

J. Protection of Existing Utilities. Contractor shall be responsible for any damage to existing structures or the interruption of any utility services which shall be repaired or restored promptly by and at the expense of the Contractor.

To that extent, the Contractor shall provide whatever measures are necessary to properly protect and maintain all existing utilities encountered in the course of the work. The Contractor shall be exclusively responsible to the utility owner for any and all damages to the various utilities caused by the Contractor's actions or lack of actions to adequately protect the same.

The Contractor shall determine the exact location of all existing utilities before commencing work and agrees hereby to be fully responsible and liable for any and all damages which might occur by his failure to exactly locate and/or preserve the location of any and all underground or overhead utilities. The Contractor shall be solely and directly responsible to the utility owner for any and all damages to the various utilities, caused by the Contractor's actions or lack of actions to adequately protect such utilities. If any utilities are to be affected during the course of construction, the Contractor shall so notify the owners thereof at least seventy-two (72) hours prior to any such construction activity. The Contractor shall fully cooperate and coordinate with all utility owners in the event of

an interruption to any utility service. The cost for locating, uncovering and protecting underground and/or overhead utilities is included within the Contractor's bid price for various other items of work.

The Contractor shall maintain all storm sewers, drains and/or ditches so that flow is not disturbed or impeded. The Contractor shall protect storm drains, inlets and/or ditches, lawns, landscaping and other facilities, from damage during the testing, and flushing.

K. Limiting Exposures: The Contractor shall prosecute the work on the Project to insure that no part of the construction, complete or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to the following:

Excessive static or dynamic loading	Chemicals	Improper lubrication
Excessive internal or external pressures	Light	Unusual wear or other misuse
Excessively high or low temperatures	Puncture	Contact between incompatible materials
Thermal shock	Abrasions	Destructive testing
Excessively high or low humidity	Heavy traffic	Misalignment
Air contamination or pollution	Soiling, staining & corrosion	Excessive weathering
Water or ice	Bacteria	Unprotected storage
Solvents	Rodent and insect infestation	Improper shipping or handling
	Combustion	Theft
	Electrical current	Vandalism
	High speed operation	

The Contractor shall minimize dust and air pollution through the use of water or other devices, require the use of properly operating combustion emission control devices and by encouraging the shutdown of construction vehicles when not in use.

L. Safety: The completed Project shall include all necessary permanent safety devices, such as machinery guards and similar ordinary safety items as may be appropriate or required by law. Further, any feature of the Project (including City-furnished or City-selected equipment) subject to such safety regulations shall be fabricated, furnished, and installed in compliance with these requirements. Contractors and manufacturers of equipment shall be held responsible for compliance with the requirements included herein. Contractors shall notify all equipment suppliers and subcontractors of the provisions of this Article.

In selecting and/or accepting equipment for installation in the Project, neither the City nor Engineer/Architect assume responsibility for any personal injury, property damage, or any other damages or claims resulting from failure of the equipment to comply with applicable safety codes or requirements, or the safety requirements of a recognized agency, or failure due to manufacturer's faulty design concepts, or defective workmanship and materials. The Contractor shall indemnify and hold the City, Program Coordinator, and Engineer/Architect harmless against any and all liability, claims, suits, damages, costs, or expenses without limitation arising out of the installation or use of such equipment.

The Contractor shall take all necessary precautions for the safety of employees on the Project and shall comply with all applicable provisions of federal, state, and municipal safety laws and building codes to prevent accidents or injury to persons on or about or adjacent to the premises where the Project is being performed. He shall erect and properly maintain at all times, as required by conditions, and progress of the Project, all necessary safeguards for the protection of workmen and the public, and shall post danger signs warning against the hazards created by features of construction and the site.

Machinery, equipment and all hazards shall be guarded or eliminated in accordance with the State Accident Prevention in Construction provisions to the extent that such provisions are not in contravention with applicable laws.

The Contractor shall do whatever work is necessary for safety and be solely and completely responsible for conditions of the jobsite, including safety of all persons (including but by no means limited to the public, site personnel, visitors, or employees) and property during the Contract period. The contract period shall include any subsequent warranty or other period associated with Project deficiency or repair and all hours including, and in addition to, normal working hours.

Safety provisions shall conform to the Federal and State Departments of Labor and the Occupational Safety and Health Act (OSHA), and all other applicable federal, state, county, and local laws, ordinances, codes, the requirements set forth herein, and any regulations that may be specified in other parts of these Contract Documents. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth therein.

The Contractor shall at all times provide proper facilities for safe access to the work by authorized government officials (federal, state, county and local) and representatives of the Owner.

M. Traffic Control: The Contractor shall be responsible for traffic control, including plan and devices to the extent the same is required due to work in, upon or in proximity to public right-of-way, streets, roads or vehicular traffic. The traffic control plan and all traffic control devices shall conform at a minimum to the Manual on Uniform Traffic Control Devices for Streets and Highways, Latest Edition, Federal Highway Administration. A copy of which is on file in the office of the City of Tuscaloosa Director of the Department of Transportation for examination. Copies may be obtained from the Alabama Department of Transportation. Should the appropriate public authority determine a greater degree of traffic control is required, then the Contractor shall promptly provide same. The Contractor shall submit a plan to the City Engineer for approval before commencing construction.

Reasonable means of ingress and egress by vehicular and/or pedestrian traffic to property adjacent to the Project shall be maintained at all times. The Contractor shall indemnify and hold the City harmless for any claims or causes of action including but not limited to those for inverse condemnation and/or lost profits arising out of or in any manner associated with access to or the restriction or prevention thereof to adjoining property. Traffic control and erosion control is of paramount importance during the construction of this Project and the terms and conditions in the contract documents in regard to these matters must be strictly adhered to.

N. Responsibility to Act in Emergency: In case of an emergency which threatens loss or damage to property, and/or safety, the Contractor shall act, without previous instructions from the City or Engineer/Architect, as the situation may warrant. The Contractor shall notify the Engineer/Architect thereof immediately thereafter. Any claim for compensation by the Contractor, together with substantiating documents in regard to expense, shall be submitted to the City through the Engineer/Architect. The claim will be handled in accordance with the provisions for extra work. However, if the emergency is created or aggravated by the Contractor, he shall be liable for the resulting damages. If the Contractor fails to take necessary action as required by such an emergency, the City may assign another Contractor or use his own forces to perform the emergency work. Costs or damages arising from the failure of the Contractor to act in an emergency may be deducted from the Contractor's request for payment.

O. Sanitary Regulations: The Contractor shall provide and maintain such sanitary accommodations for the use of his employees and those of his subcontractors as may be necessary to comply with the requirements and regulations of the local and State Department of Health. At a minimum, necessary sanitary conveniences for the use of the laborers on the work shall be erected and maintained by the Contractor, in such a manner and at such points

as shall be approved by the Engineer/Architect. Their use shall be strictly enforced. In the Construction Manager format, the City may provide sanitary accommodations through the Construction Manager.

P. Cutting, Patching, etc.: Unless otherwise stated in the contract documents, the Contractor shall do all necessary cutting, fitting and patching of the Project that may be required to properly receive the work, to make its several parts join together properly, receive and provide for the work of various trades, and be received by the work of other contractors, or as required by drawings and specifications to complete the Project. After such cutting, he shall replace or restore or repair and make good all defective or patched work as required by the Engineer/Architect. He shall not cut, excavate or otherwise alter any work in any manner or by a method or methods that will endanger the Project, adjacent property, workmen, the public or the work of any other contractor. The Contractor shall check the location of all sleeves, openings, slots, etc., for the piping, ducts, breeching, conduits, louvers, grills, fans, etc., as they are laid out on the job.

Provisions for openings, holes and clearances through walls, beams, floors, ceilings and partitions shall be made and checked by the Contractor and/or his subcontractor in advance of constructing such parts of the Project and unnecessary, superfluous or dangerous cutting shall be avoided.

Pipes passing through concrete or masonry walls shall be protected by pipe sleeves two sizes larger than the pipe, plus its installation to provide free movement.

Under no condition shall structural, framing or other parts or members subjected to computed stress be cut or disturbed without the approval of the Engineer/Architect. Any plates, studs or joists, and/or rafters that are approved to be cut to execute necessary work shall be securely strapped and braced to restore their strength by approved methods.

Unless otherwise indicated in Supplemental Conditions, all road crossings and/or driveways cut by the Contractor during the performance of the Project shall be returned to service as soon as possible and replaced or repaired within seven (7) calendar days.

All major thoroughfares must be repaired the same day as cut. The Contractor shall be responsible for the safety and welfare of the traveling public while construction work is being done and until the City accepts the Project.

The Contractor will replace at his own expense, all pipe and accessories that may be broken, damaged, stolen or lost and all materials that may become damaged, lost, stolen or misused.

The Engineer/Architect's approval shall be obtained before cutting or drilling holes in concrete or masonry that tend to damage or weaken the load capacity.

Q. Trailers: With the approval of the City or Engineer/Architect, the Contractor may park trailers or other structures for housing men, tools, machinery and supplies, but they will be permitted only at approved places and their surroundings shall be maintained at all times in a sanitary and satisfactory manner by the Contractor. On or before the completion of the Project, all such trailers or structures shall be removed, unless the City authorizes their abandonment without removal, together with all rubbish and trash, at the expense of the Contractor.

R. Construction Staking: If necessary, the Engineer or the City will furnish initial lines and grades to establish the initial horizontal and vertical control points and define the beginning and ending points of the Project. The Contractor is responsible for engaging the services of a qualified Engineer or land surveyor to replace and/or re-establish in accordance with the construction plans and/or specs, all construction stakes that are disturbed, displaced or destroyed during construction.

If the Contractor finds any errors or discrepancies with the construction staking or the criteria upon which it is based, he/she shall promptly notify the Owner's representative.

S. Periodic Cleanup: The Contractor shall periodically, at least weekly, or as requested during the progress of the Project, clean up and remove from the premises, all refuse, rubbish, scrap materials and debris caused by its employees or its subcontractors resulting from its work, to the end that all times the premises are sanitary, safe, reasonably clean, orderly and workmanlike. Trash and combustible materials shall not be allowed to accumulate inside buildings or elsewhere on the premises. At no time shall any rubbish be thrown from window openings, except during renovations with adequate precautions and into proper receptacles. The Contractor shall comply with all municipal litter and construction site ordinances.

Before the Project is considered as complete, all rubbish created by or in connection with the construction must be removed by the Contractor and the premises left in a condition by the Contractor satisfactory to the City. Street, curbs, crosswalks, pavements, sidewalks, fences and other public and private property disturbed shall be restored to their former condition or better, and final payment will be withheld until such work is finished by the Contractor.

Contractor shall conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws. No burning or burying of rubbish or waste materials is permitted on the Project site. The Contractor shall dispose of any hazardous material in a safe manner, off site, in accordance with applicable laws and regulations and shall not dispose of volatile or hazardous waste in storm or sanitary sewer drainage ditches, streams or waterways.

Contractor shall periodically wet down dry materials and rubbish to lay dust and prevent blowing dust; and shall provide adequate and approved containers for collection and disposal of waste material, debris and rubbish, removing grease, dust, dirt, stains, labels, fingerprints and other foreign materials from exposed and semi-exposed surfaces.

T. Termite Control. If the Project involves construction of a building or if otherwise specifically required by the City, then the Contractor shall provide soil treatment for termite control under all interior slabs on grade and foundation walls, and as herein specified. Contractor shall also comply with manufacturer's instructions and recommendations for work, including preparation of substrate and application and shall engage a professional pest control operator, licensed in accordance with regulations of governing authorities for application of soil treatment solution and doing business in the state where the Project is located for a minimum of five (5) years.

Contractor shall not apply soil treatment solution until excavating, filling and grading operations are completed, except as otherwise required in construction operations. To insure penetration, the soil treatment will not be applied to frozen or excessively wet soils or during inclement weather. Contractor shall comply with all handling and application instructions of the soil toxicant manufacturer. The type of materials to be used for soil poisoning shall first be submitted to the City for approval.

The soil treatment solution shall be an emulsible concentrate insecticide for dilution with water, specially formulated to prevent infestation by termites. Fuel oil will not be permitted as a dilutant.

Contractor shall strictly comply with the Environmental Protection Agency's (EPA) rules and regulations governing chemicals and their use. Only soil treatment solutions which are not injurious to planting shall be used. Other solutions may be used as recommended by Applicator when acceptable to the EPA, local governing authorities, and the Engineer/Architect.

Contractor shall comply with the following requirements when applying the soil treatment solution:

1. **Surface Preparation:** Remove foreign matter which could decrease effectiveness of treatment on areas to be treated. Loosen, rake, and level soil to be treated, except previously compacted areas under slabs and foundations. Toxicants may be applied before placement of compacted fill under slabs if recommended by toxicant manufacturer.
2. Under slab-on-grade structures, treat soil before concrete slabs are placed using either power sprayer or tank type garden sprayer.
 - (A) Apply 4-gallons of chemical solution per 10 linear feet to soil in critical areas under slab, including entire inside perimeter inside of foundation walls, along both sides at interior partition walls, around plumbing pipes and electric conduit penetrating slab, and around interior column footings.
 - (B) Apply one gallon of chemical solution per 10 sq. ft. as an overall treatment under slab and attached slab areas where fill is soil or unwashed gravel. Apply 1-1/2 gallons of chemical solution to areas where fill is washed gravel or other coarse absorbent material.
 - (C) Apply 4 gallons of chemical solution per 10 linear feet of trench for each foot of depth from grade to footing, along outside edge of building. Dig a trench 6" to 8" wide along outside of foundation to a depth of not less than 12". Punch holes to top of footing at not more than 12" o.c. and apply chemical solution. Mix chemical solution with the soil as it is being replaced in trench.
3. Post signs in areas of application warning workers that soil poisoning has been applied. Remove signs when areas are covered by other construction.
4. Reapply soil treatment solution to areas disturbed by subsequent excavation or other construction activities following application.

U. Erosion Control.

1. To the extent there has been issued by the City Engineer a land development permit in accordance with applicable ordinances, the Contractor shall conform to and abide by all terms and conditions of such permit.
2. Erosion control measures shall be performed on all disturbed areas in accordance with the BMPP included in the Notice of Intent and with Section 665, Alabama Highway Department Specifications. The CONTRACTOR will perform all erosion control measures necessary to prevent silt and soil from leaving construction area and entering private property or the "Waters of the State." Erosion control measures shall be in strict accordance with Alabama Non Point Source Management Program Document and EPA Storm Water Pollution Prevention for Construction Activities.
3. In accordance with Section 665 of Alabama Highway Department Specifications, temporary erosion control work shall involve the construction of temporary berms, dikes, drains, fences, dams, etc. with the use of temporary seeding, mulching, erosion control netting, hay bales, sandbags, check dams, etc., as necessary in order to prevent silt and soil from leaving rights-of-way and entering private property or from washing into drainage structures located on State or County rights-of-way. CONTRACTOR shall mow grassed areas as required during the construction phase of the contract.
4. Erosion control measures shall be maintained by the CONTRACTOR through the warranty period of the contract. If additional measures are required to correct problems which might occur, these shall be performed by the CONTRACTOR at no additional cost to the OWNER.
5. Materials used for erosion control measures shall be in accordance with Section 665.02 of Alabama Highway Department Specifications and shall include hay bales, sandbags, silt fencing rip rap, crushed stone, mulch or other materials necessary in order to accomplish erosion control.

V. **Wastewater Containment and Management Plan.** In accordance with ADEM Consent Order, NPDES permit NO. AL0022713, Tuscaloosa WWTP, Tuscaloosa County (125) dated September 8, 2009 and the "City of Tuscaloosa, Water and Sewer Department Engineering Report and Compliance Plan", December 2009; to the extent that construction activity by the Contractor involves any wastewater infrastructure or construction activities in close proximity to any wastewater infrastructure and/or to any City sanitary sewer assets the Contractor shall submit to the City Engineer, prior to commencing construction, a wastewater containment and management plan (the "Plan"). The Plan shall adequately address the means, methods and techniques to be employed by the Contractor for containing and transporting wastewater in a sanitary manner without, at any time, permitting the discharge of wastewater into the environment or creating the necessity of a State required sanitary sewer overflow report. The Plan shall be submitted by the Contractor to the Office of City Engineer for review and approval before commencing any construction activity. The City Engineer may waive the requirement of submitting a Plan if he/ she determines that the construction activity to which the Plan would relate does not involve any potential for the discharge of wastewater into the environment or creating the potential for the necessity of a State required sanitary sewer overflow report.

W. **Environmental Clause/Covenant.** Contractor shall not allow any toxic, hazardous or contaminated substances or gases (including, but not limited to, asbestos and raw materials which include hazardous constituents or any other similar substances or materials which are included under or regulated by any local, state, or federal law, rule or regulation pertaining to environmental regulations, contamination, clean-up or disclosure such as, without limitation, the Comprehensive Environmental Response Compensation and Liability Act of 1980 ("CERCLA"); the Clean Air Act (42 U.S.C. Sec. 7401 et seq.); the Clean Water Act (33 U.S.C. §1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §6901 et seq.); and the Toxic Substances Control Act (42 U.S.C. §2601 et seq.) or state environmental clean-up or disclosure acts and statutes as all such acts and statutes exist now or are hereafter amended (such acts and statutes referred to herein as "Environmental Laws")(such substances or gases referred to herein as 'Hazardous Substances') to be stored, located, or discharged on the premises without specific prior written consent of the City. Contractor shall comply with all Environmental Laws affecting the premises. Contractor covenants to hold the City, its officers, agents and employees harmless from and against any loss, costs, damage or expenses (including attorney's fees and expenses) arising out of the presence of Hazardous Substances (as hereinbefore described) on or about the premises or the violation of any Environmental Laws with respect thereto, the occurrence of which Hazardous Substances on the premises or the violation of any Environmental Laws shall have arisen solely from the acts or omissions of Contractor, its subcontractors, agents, invitees and employees. This indemnity shall survive the termination of this contract and shall inure to the benefit of the City of Tuscaloosa, its successors and assigns.

ARTICLE V. INSURANCE, LIABILITY, ETC.

A. Contractor's Insurance (Generally):

1. **Insurance Required.** The Contractor shall not commence work under this contract until it has obtained all insurance required by the Contract documents and such insurance has been accepted by the City. The Contractor shall maintain the required insurance during the term of the contract including any extensions of the term.

Insurance shall be written in comprehensive form by insurance companies rated A- or better by A. M. BEST and shall protect the Contractor and the City against claims for injuries to members of the public (including City employees) or damages to property of others (including City property) arising out of any act of the Contractor or any of its agents, employees or subcontractors and shall cover both on-site and off-site operations under this contract and insurance coverage shall extend to any motor vehicles or other related equipment, irrespective of whether the same is owned, non-owned or hired.

The obtaining and maintaining by Contractor and subcontractors of the insurance required herein does not relieve the Contractor of any responsibilities, obligations or duties to the City pursuant to this contract.

2. **Additional Insurance.** The Contractor shall have an insurance professional review the Contractor's activities in regard to the performance of this contract and the Contractor shall obtain any further or additional insurance or greater limits as recommended by the insurance professional.

3. **Insurance Limits.** Neither the setting of insurance limits or requirements nor the acceptance or approval of the same by the City imply or represent that the limits or the insurance carrier is sufficient or that such insurance actually has been obtained, that being the responsibility of the Contractor.

4. **Subcontractors.** The Contractor shall require all subcontractors to take out and maintain the type of insurance required herein to the extent of their involvement in the Project so as to be adequate to protect against liability. In the event any work under this Contract is performed by a subcontractor(s), the Contractor shall remain responsible for any liability directly or indirectly arising out of the work performed under this Contract, regardless of whether or not such work is covered by the subcontractor's insurance. The Contractor shall not allow any subcontractor to commence work on the project until all similar insurance required of the subcontractor has been obtained. All subcontractors shall maintain required insurance during the term of the contract including any extensions of the term.

5. **City's Right to Review Coverage.** The City shall have the right to inspect and approve Contractor's insurance coverage herein required. Should the City deem it advisable to modify the coverage in any way, it shall so request of the Contractor in writing and should the Contractor fail to modify the coverage, then the City may pay the cost of any increased coverage or take credit for any decreases as may be appropriate. Review or acceptance of insurance by the City or representatives of the City shall not relieve or decrease the responsibility of the Contractor hereunder.

6. **Waiver of Subrogation.** To the extent that the Contractor is required to maintain insurance coverage for loss or damage to property or bodily injury, including Builders Risk All Risk insurance, the insurance must waive and the Contractor hereby waives subrogation of claims against the City, its officers, agents and employees.

7. **City as Additional Insured.** The City shall be named as additional insured , for ongoing and completed operations for up to two (2) years, on the Contractor's and any subcontractor's policies for any claims arising out of work performed under this Contract. The Contractor shall provide the City with a Certificate of Insurance naming the City as an additional insured using ISO for CG 2010 1185 (or a substitute form providing equivalent coverage) or on the combination of ISO forms CG 20 10 07 04 or CG 20 33 07 04 and CG 20 37 07 04 (or a substitute or ISO form providing equivalent coverage) naming the City as an additional insured , giving all parties a 30 notice of cancellation or intent not to renew the insurance, a waiver of subrogation and list any and all exclusions. The coverage available to the City as an additional insured shall not be less than \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate (subject to a per project general aggregate applicable to the project.), \$2,000,000 Products/completed Operations Aggregate, and \$1,000,000 Personal and Advertising injury limits. Additional insured coverage shall apply as primary, non contributory, insurance with any other insurance afforded to the City and the Contractor.

8. **Elevators, Hoist and Cranes.** If the Contractor or a subcontractor will utilize in connection with the performance of the work pursuant to this contract an elevator, material hoist, crane or other equipment, or conveyor, then the Contractor shall take out and maintain or require the subcontractor to take out and maintain insurance that shall protect the Contractor and the City against claims for injuries to members of the public (including City employees) or damages to property of others (including City property) arising out of any act of the Contractor or any of its agents, employees or subcontractors resulting from the operation of such elevator, material hoist, crane or other equipment, or conveyor.

B. Insurance:

1. **Workmen's Compensation Insurance:** The Contractor shall take out and maintain during the term or any extensions of this contract Workmen's Compensation Insurance as required by Alabama law for all of its employees employed at the site of the Project or off-sites related to the Project and, in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor.

In case any class of employees engaged in any work under this contract at the site of the Project is not protected under the Workmen's Compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, adequate accident insurance for the protection of its employees not otherwise protected.

Water or Navigational Exposure; Where work under this contract may trigger the requirement for Federal Longshoreman's and Harbor worker's Act and Federal Jones Act or insurance required by other applicable law or regulations, the Contractor shall obtain the same if required.

2. **Comprehensive Automobile and Vehicle Liability Insurance:** The Contractor shall maintain during the term or any extensions of this contract, comprehensive automobile and vehicle liability insurance. The limits of liability shall not be less than \$1,000,000 combined single limit or equivalent.

3. **Commercial General Liability Insurance:** The Contractor shall maintain during the term or any extensions of this contract, Commercial General Liability Insurance, including officers, agents and employees. The limits of liability shall not be less than \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate (subject to a per project general aggregate applicable to the project), \$2,000,000 Products/Completed Operations Aggregate, and \$1,000,000 Personal and Advertising Injury Limits Combined Single Limit or equivalent.

4. **Owner's Protective Insurance:** For projects with a contract amount of \$500,000.00 or greater, an Owner's Protective Policy is required in the minimum amount of \$1,000,000 each occurrence. Provided; however, the City may require such insurance on projects of lesser amount if an insurance limit amount is stated herein.

5. **Umbrella Excess Liability Over Primary Insurance:** The Contractor shall take out and maintain during the term of this contract, and any extensions thereof, Umbrella Excess Liability Insurance. The minimum limits of coverage shall be as follows:

Each Occurrence	\$ 5,000,000
Aggregate	\$ 5,000,000

The coverage shall be over the required general liability insurance and automobile liability insurance as a minimum. There shall be no gaps or sublimit deductibles, etc.

6. **Miscellaneous Insurance:** The Contractor shall provide whatever insurance may be required of the City or the Contractor by permits or agreements, etc., with the railroad, highways, or other utilities. The Contractor shall familiarize himself with all insurance requirements contained in easements, permits, and agreements associated with this Project. The Contractor shall provide any Railroad Protective Liability and other General Liability Insurance in the amounts contained in the agreements, permits or easements or in greater amounts if higher limits are appropriate or required elsewhere. The Contractor shall bear the cost of all required insurance and shall include in his bid a sufficient amount to cover the cost of all required insurance. To the extent the City obtains permits or licenses for railroad or highway bores,

crossings or other work involved in the Project, the Contractor shall obtain adequate insurance to protect itself and the City.

7. **Builders Risk All Risk Insurance:** To the extent applicable to the Project, the Contractor shall secure and maintain during the life of this Contract, Builder Risk All Risk Insurance coverage for 100 percent of the Contract Price. This insurance shall not exclude coverage for earthquake, landslide, tornado, flood, collapse or loss due to the result of faulty workmanship. Such insurance shall also provide for any damages caused by injury to, or destruction of, tangible property, including loss of use resulting therefrom, and shall pay all losses to the Contractor and the City as their interest may appear.

If this is a trade contract under a construction manager format, the provisions of this subsection shall not apply.

8. **Proof of Carriage of Insurance:** The Contractor shall furnish the City with satisfactory proof of carriage of the insurance required herein, in the form of an insurance certificate or if the City elects in the form of a policy. Insurance shall be in a form satisfactory to the City.

(A) The Contractor's and any subcontractor's general liability and automobile liability insurance shall endorse the Owner (City of Tuscaloosa), its officers, agents and employees, as additional insured's for any claims arising out of work performed under this contract.

(B) The Contractor's insurance endorsing the Owner and others as additional insured's shall be "primary" and non contributory as to such endorsed insured's.

(C) Cancellation: The certificate and policy, as the case may be, shall state that the City shall be given thirty (30) days' written notice of cancellation or any change in the insurance coverage.

(D) There shall be a statement that the Contractor and any subcontractors waive subrogation as to the City, its officers, agents, employees and Program Coordinator.

(E) There shall be a statement that full aggregate limits apply per job or contract.

(F) Agents verification of Contractor's insurance on form provided by the City or equivalent.

(G) Insurance shall contain no exclusions for x, c or u.

(H) Full aggregate limits must apply per job or contract.

C. **No Personal Liability of Public Officials:** In carrying out any of the provisions hereof in exercising any authority granted by the Contract, there will be no personal liability upon any public official.

D. **Indemnity:** To the maximum extent permitted by law, the Contractor shall save harmless, indemnify and defend the City, its officers, agents and employees from and against any and all claims and losses, cost, expense or liability including attorney's fees and litigation costs caused by, arising out of, resulting from, or occurring in connection with the performance of the work by the Contractor or any subcontractor, regardless of the fault, breach of contract, or negligence of the City, its officers, agents or employees excepting only such claims or losses that have been adjudicated to have been caused solely by the negligence of the City and regardless of whether or not the Contractor is or can be named a party in a litigation.

Contractor agrees to indemnify and/or reimburse the City for any fines, violations, charges, suits, or sums of money imposed by the Alabama Department of Environmental Management (ADEM), Environmental Protection Agency (EPA), or any administrative agency on the City of Tuscaloosa for any sewage or contaminate discharged or Wetlands regulations violation as a result of or arising out of the work by the Contractor pursuant to this agreement.

E. **Errors and Omissions.** The Contractor does agree to release and hold harmless the City of Tuscaloosa or any of its officers, agents and employees and its Program Coordinator from any damages claimed by the Contractor or subcontractors resulting from or attributable in whole or in part to, errors in or omissions of the plans and

specifications, including final drawings of the Engineer/Architect or other design professionals. As to plans, specifications or designs prepared by independent design professionals, the parties agree that any City review or approval thereof was only for overall suitability, maintenance and usability and there are no express or implied warranties by the City as to the adequacy, accuracy, correctness, or code compliance thereof.

F. Exclusion of Contractor Claims: In performing its obligations, the Engineer/Architect and its consultants may cause expense for the Contractor or its subcontractors and equipment or material suppliers. However, those parties and their sureties shall maintain no direct action against the City or its officers, employees, agents and program coordinator for any claim arising out of, in connection with, or resulting from the Engineering services performed or required to be performed where such services are performed in good faith to protect the City or the Public.

G. Inadequate Surety/Insurance. It is further mutually agreed between the parties hereto that if, at any time after the execution of this agreement, any of the surety bonds of the Contractor or subcontractors relating to the Project for its faithful performance shall be deemed by the City to be unsatisfactory, or if for any reason such bond(s) ceases to be adequate to cover the performance of the work or the surety ceases to do business by agent in Tuscaloosa County, Alabama, the Contractor shall, at its expense, within five (5) days after the receipt of notice from the City so to do, furnish an additional bond or bonds in such form and amount and with such surety or sureties as shall be satisfactory to the City. In such event, no further payment to the Contractor shall be deemed to be due under this agreement until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to the City.

H. Changes. When changes in the scope of work by written order or change orders aggregate in amount equal to 10 percent of the total contract, including the change order or change orders, the insurance coverage included under this heading shall be increased accordingly by the Contractor. Proof of coverage shall be established by endorsement to the original policy or by re-issue of the original policy to include the added coverage, or in accordance with any other acceptable policy with the insuring company for increasing the coverage.

ARTICLE VI. OBSERVATION OF THE PROJECT

A. Generally: The Contractor shall furnish the Engineer/Architect and/or the City's observer with every reasonable facility for ascertaining whether or not the work performed is in accordance with the requirements and intent of the Specifications and Contract Documents. No work shall be done without suitable inspection by the Engineer/Architect's Inspector or the City's observer. Payment for work or failure to reject any defective work shall not in any way prevent later rejection when such defect is discovered, nor obligate the City to final acceptance. All work done when not in accordance with the Plans, specifications and contract will be rejected and, without cost to the City, shall immediately be removed and other work done in accordance therewith by the Contractor. If the Contractor fails to remove the work as above ordered, then the Engineer/Architect shall have the right and authority to stop the Contractor and his work at once and the City may correct the work as herein provided at the cost and expense of the Contractor.

Inspection is not acceptance and shall not constitute acceptance by the City.

The work shall also be subject to inspection by representatives of the City of Tuscaloosa Building Inspection Department.

B. Observation of the Project: The Engineer/Architect, the City and its observers, agents, any agency having jurisdiction, and their representatives shall have access at all times to the Project for inspection whenever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and inspection. The City or the Engineer/Architect may appoint or assign observers, with designated duties and restricted authority, to

inspect the Project as may be directed, or to make special observations requested in advance by the Contractor, and to report progress of the Project, and manner of procedure, quality of the material and workmanship, and compliance with the Contract Documents.

Inspection or observation is not acceptance and shall not constitute acceptance by the City.

All materials, workmanship, equipment, processes of manufacture, and methods of construction, shall be subject to inspection, examination, and test by such persons at any and all places where such manufacture and/or construction are being carried on. The Engineer/Architect shall have the right to reject material, workmanship and/or equipment that are defective or otherwise not in accordance with the drawings and Specifications and require its correction by the Contractor. Rejected workmanship shall be satisfactorily corrected, and rejected material shall be satisfactorily replaced with proper material by the Contractor without charge therefor, and the Contractor shall promptly segregate and remove the rejected material from the premises. Provided; however, neither the presence or absence of such observers nor the giving or failure to give such advice, direction or instruction shall in any manner relieve the Contractor from any contract requirement.

Upon rejection of material and/or workmanship by the Engineer/Architect or the City, there may be occasion where such deficiencies may be corrected more economically and timely through modification of the design versus removal and replacement. In such instances, the Engineer/Architect shall provide design services on behalf of the City necessary for analysis and correction of the rejected work. Costs associated with hourly fees for these professional services shall be paid by the City and deducted from payment to the Contractor based on the actual costs incurred. Prior to beginning any analysis and accrual of associated professional service fees, the Engineer/Architect shall provide the Contractor and City notice in writing of the intent to begin, summary of the scope of work, estimated time to complete, and estimated total fees. Any costs associated with corrective work performed by the Contractor to remedy such deficiencies shall be the sole responsibility of the Contractor.

Neither the City observers nor the Engineer/Architect, will be authorized to revoke, alter, relax, or waive any requirements of the Contract Documents; to issue instructions contrary to the drawings and Specifications; nor shall they supervise and direct work for the Contractor, nor unreasonably interfere with the Contractor's operations beyond the extent necessary to make certain that the Project is being carried out according to the contract requirements.

Any advice which they may give the Contractor shall not be construed as binding the City in any way, nor as releasing the Contractor from any of the contract requirements.

If the Contractor considers any work demanded of it to be outside the contract requirements, or any ruling of the Engineer/Architect or an inspector to be unfair, it may immediately, upon such work being demanded or ruling made, request written instructions from the Engineer/Architect, or inspector, or within ten days file an appeal to the Engineer/Architect or the City, stating clearly and in detail the basis of its objections. However, pending the decision on such appeal no work shall be done in disregard of the rulings of the Engineer/Architect or inspector or his instructions on items of work affected by such appeal.

The Contractor shall furnish promptly, without extra compensation, all reasonable facilities, labor, and material necessary for safe and convenient access, inspection, and tests that may be required by the Engineer/Architect.

C. Authority and Duties of Observers: If City or consultant inspectors, whether for the Engineer/Architect or Construction Manager, are being utilized, they shall be authorized and permitted to inspect all work done. The Inspector shall not be authorized to alter or waive any requirements of the Specifications. He shall have authority to call the attention of the Contractor to failure of the work to conform to the specifications and Contract. He may suspend the Project until any questions at issue can be referred to and decided by the Engineer/Architect or the City.

Neither the Engineer/Architect, Inspector, the City or other representatives for the City shall be responsible in any way for construction means, methods or techniques, nor for the safety of the construction work, progress, or employees of the Contractor or any subcontractors, except as set forth in the Construction Manager contract, if applicable.

The presence of the Inspector shall not in any manner lessen the responsibility of the Contractor pursuant to this agreement.

D. Defective Work/Correction of Work by the City: The inspection of the work shall not relieve the Contractor of any of its obligations to fulfill its contract and defective work shall be made good, notwithstanding that such work has been previously inspected by the Engineer/Architect and accepted or estimated for payment. The failure of the Engineer/Architect or inspector to condemn improper workmanship shall not be considered as a waiver of any defect, whether known at the time or discovered later, or as preventing the City at any time subsequently from recovering damages for work actually defective. All work shall be guaranteed by the Contractor against defects in workmanship for a period of one year from date of final payment.

Upon failure and/or neglect by the Contractor to promptly prosecute or perform the work in accordance with the contract documents, including any requirements with respect to the construction schedule, plans or specifications, the City may, without prejudice to any other remedy it may have, correct such deficiencies and may deduct the actual cost thereof from payment, then or thereafter due to the Contractor.

E. Disagreement: Should any disagreement or difference arise as to the estimated quantities or classifications or as to the meaning of the drawings or specifications, or any point concerning the character, or acceptability or nature of the several kinds of work, or construction thereof, the decision of the Engineer/Architect shall be final and conclusive and binding on the Contractor.

F. Stop Work Orders: During unseasonable weather all work must stop when the Engineer/Architect so directs and all work must be suitably protected by Contractor at all times. However, the Engineer/Architect shall be under no obligation to stop work on the Project. If the Project is stopped, the Contractor shall not be entitled to extra compensation for delays or problems associated with the stoppage.

G. Progress Meetings: The Contractor shall conduct regular progress meetings during the course of the Project at least once a month or more often if requested by the City or Engineer/Architect. The meetings shall be held at a site convenient to all parties and if a site cannot be agreed upon, the City will designate a site.

The Contractor or designated representative, the Contractor's Superintendent, all subcontractors, engineers, inspectors, and the City's representative shall attend.

The Contractor shall keep accurate written minutes of the meetings and forward copies thereof to the Engineer/Architect and the City's representative before the next scheduled meeting.

If a trade contract, progress meetings will be conducted by the Construction Manager, who will keep minutes. All trade contractors shall attend unless excused by the Construction Manager.

ARTICLE VII. PROJECT COMPLETION

A. Substantial Completion: "Substantial completion" shall be that degree of completion of the Project or a defined portion of the Project, as evidenced by the Engineer/Architect's written notice of Substantial Completion, sufficient to provide the City, at its discretion, the full-time use of the Project or defined portion of the work for the purposes for which it was intended. "Substantial Completion" of an operating facility or operating component of the Project shall be that degree of completion that has provided a minimum of seven (7) continuous days of successful, trouble-free operation in a "fully automatic" manner acceptable to the City and Engineer/Architect and with all redundant systems fully operational. All equipment contained in the Project, plus all other components necessary to

enable the owner to operate the facility in the manner that was intended, shall be complete on the substantial completion date.

When the Contractor considers that the Project, or where acceptable to the City, a designated portion thereof is substantially complete, the Contractor shall prepare and submit to the Engineer/Architect a list of items to be completed or corrected and request an inspection for Substantial Completion. The failure by the Contractor to include any items on such list does not alter the responsibility of the Contractor to complete all work in accordance with the Contract Documents. After inspection and/or if an operating facility, after a minimum of seven (7) continuous days of successful, trouble free operation has been achieved during startup, the Engineer/Architect may, at his sole discretion, issue a written notice of substantial completion for the purpose of establishing the starting date for specific equipment guarantees or warranties, and to establish the date that the City will assume the responsibility for the cost of operating such equipment.

Said notice shall not be considered as final acceptance of any portion of the Project or relieve the Contractor from completing the remaining work, including any remaining performance or acceptance testing, within the specified time and in full compliance with the Contract Documents. Specifically, the issuance of a written notice of Substantial Completion shall not relieve the Contractor of his obligation to promptly remedy any omissions and latent or unnoticed defects in the Project covered by the written Notice of Substantial Completion.

B. Final Inspection: Upon notice from the Contractor that its work is complete, the Engineer/Architect and/or other representatives of the City shall make a final inspection of the work or Project and conduct test or tests if applicable. The Engineer/Architect shall notify the Contractor of all apparent and/or visible instances where the Project fails to comply with the plans and specifications and contract documents, as well as any defects he may discover (punch list). The Contractor shall immediately make such alterations as are necessary to make the Project comply with the plans and specifications and to the satisfaction of the Engineer/Architect.

Upon completion of all such repairs in a satisfactory manner, and when the Engineer/Architect has determined that the work or Project is acceptable under the contract, including this provision and after publication of final completion and all other requirements of final payment as provided for in this agreement, then he shall issue a final certificate of payment to the City stating that the balance is due the Contractor, less such amounts as may have been withheld by the City from time to time as provided in the contract documents. In recommending to the City that it make such final payment to the Contractor, the Engineer/Architect shall also issue a certificate of final acceptance wherein he shall recommend to the City that it accept the Project and/or work as final and complete pursuant to the contract documents.

Verification, approval, inspection, final inspection, issuance of final acceptance, issuance of final certificate of payment, action or approval by the City upon the final certificate of payment or final acceptance shall not in any way relieve the Contractor of responsibility for faulty materials or workmanship.

All warranty or guarantee periods shall commence and start to run from the date of substantial completion.

C. "As Built" Drawings: Unless waived by the City representative, the Contractor must provide to the City a set of "as built" drawings acceptable to the City as a component part of the Project prior to final payment.

D. Final Cleanup: Before final completion and final acceptance, the Contractor shall remove from the City's property or rights-of-ways and from all public and private property, all tools, scaffolding, false work, temporary structures and/or utilities, including the foundations thereof (except such as the City permits in writing to remain); rubbish and waste materials resulting from its operation or caused by its employees; and shall remove all surplus materials, leaving the site clean and true to line and grade, and the Project in a safe and clean condition ready for

Department of Transportation Bond Form must be used. At the end of one (1) year from the completion of this work, the Department of Transportation will return the certified check or bond to the applicant provided all provisions of this permit have been complied with. Otherwise, the Department of Transportation shall apply the certified check or bond to the cost of repairing the rights-of-way with State forces.

C. Tuscaloosa County Right-of-Way: If any portion of the Project involves work upon County right-of-way, the Contractor agrees to execute an application and file with Tuscaloosa County a bond or certified check in the amount required, made payable to Tuscaloosa County to guarantee the faithful performance of this provision of this work suitable to the County for a period of one (1) year. At the end of one year from the completion of this work, the County will return the certified check or bond to the applicant provided all provisions of this permit have been complied with. Otherwise, the County shall apply the certified check or bond on the cost of repairing the right-of-way with the County forces.

D. Storm Water Permit and Monitoring:

1. To the extent that the Project has not been permitted or registered by the Engineer or the City, and the Project is defined as an NPDES Construction Site per ADEM Admin. Code Chapter 335-6-12 (the Rule), the Contractor shall submit to the Alabama Department of Environmental Management (ADEM) a Notice of Registration (NOR) under the Rule for Storm Water Discharges during construction activities.
The Contractor shall strictly adhere to all requirements of the NOR and the rule regardless of which party has obtained coverage.
2. Compliance with all provisions of ADEM Admin. Code Chapter 335-6-12 and this registration is required, including but not limited to, the preparation and implementation of a Construction Best Management Practices Plan (CBMPP) and any other plans as may be required, the regular maintenance of the Best Management Practices (BMPs) to the maximum extent practicable and the submittal of required reports. As required by the Rule, the Contractor shall retain a Qualified Credentialed Professional (QCP) to prepare the CBMPP and to certify that it was prepared in accordance with the requirements of the "Alabama Handbook" and the Rule.
3. This registration neither precludes nor negates an operator's responsibility or liability to apply for, obtain, or comply with other ADEM, federal, state, or local government permits, certifications, licenses, or other approvals.
4. The Contractor, unless application for registration has already been made, will be furnished a Storm Water NOR application package when the contract is awarded. The Storm Water NOR application package will include the following:
 - a. Typical transmittal letter to ADEM.
 - b. NOR applications filled out with Project information.
 - c. Project area map.
 - d. Other data as required by the NOR for Tier 1 waters if applicable.
5. The Contractor will complete or furnish the following items and submit to ADEM within five working days of the receipt of the NOR application provided by the Owner.
 - a. Information as outlined in the typical letter of transmittal, to the address indicated on the letter of transmittal, by registered mail or hand deliver.
 - b. The "Alabama Department of Environmental Management (ADEM), Field Operations Division Storm Water Program" Notice of Registration (NOR); NOR shall be signed by a responsible official who is the operator, owner, the sole proprietor of a sole proprietorship, a general/controller member or partner, or an executive officer of at least the level of vice-president for a corporation. Additionally, the QCP is required to sign the CBMPP certification part of the NOR.

- c. Determine applicable fee per ADEM Fee Schedule F and make check payable to: Alabama Department of Environmental Management for the NOR and submit to the Alabama Department of Environmental Management with the NOR application.
- 6. Application for the Storm Water Permit shall be made by the Contractor no later than five working days after receipt of application provided by Owner. The Contractor shall not commence any construction activities until ADEM has issued the authorization number for the Project.
- 7.
 - a. Payment will be made to the Contractor for obtaining the storm water NOR as specified herein for the lump sum amount as shown in the bid schedule. If there is no line item for registration, obtaining the NOR shall be considered a subsidiary obligation of mobilization.
 - b. Individual erosion and sediment control items shall be paid for at the unit prices as shown in the bid schedule. Routine inspections will be performed by the Owner's representative or Engineer to verify compliance with the CBMPP and the Rule shall be the Contractor's responsibility and shall be incidental to the storm water registration.
 - c. If no individual erosion and sediment control items are included in the bid schedule the cost of these items shall be incidental to the lump sum amount as shown in the bid schedule for Storm Water Monitoring and Temporary Erosion and Sediment Control and payment shall be made pro rata as the Project progresses.

E. The Contractor shall perform all work in compliance with and as required by any State, Federal or Local registration, permit or license, the terms and conditions of which are adopted herein by reference. The Contractor agrees to indemnify and hold harmless the City, Engineer, and their respective officers, agents and employees from any fines, penalties, damages, claims, liability or judgment arising out of or in any manner associated with the Contractor's failure to perform work on the Project in strict accordance with all storm water registration, permit or license requirements.

ARTICLE X. MISCELLANEOUS CLAUSES

A. Notice and Service Thereof:

- 1. All notices, demands, requests, change orders, instructions, approvals and claims shall be in writing. Unless expressly otherwise provided elsewhere in this agreement, any election, notice or other communication required or permitted to be given under this agreement shall be in writing and deemed to have been duly given if provided in accordance with the provisions hereof.
- 2. Any notice to or demand upon the Contractor shall be in writing and shall be sufficiently given if addressed to the Contractor at the address stated herein and deposited in the United States mail in a sealed envelope with sufficient postage prepaid or delivered with charges prepaid to any telegraph company for transmission to the Contractor at such address. It shall also be sufficient if such notice or demand be served upon the Contractor personally or its local representative in charge of the Project or delivered at his local office. The Contractor shall, from time to time, designate to the City in writing any change of address to which such notice or demand shall be sent.
- 3. Any notice to or demand upon the City shall be in writing and shall be sufficiently given if delivered to the office of the City's representative or if addressed to the City representative and deposited in the United States mail in a sealed envelope with sufficient postage prepaid or delivered with charges prepaid to any telegraph company for transmission to such representative of the City.

B. **City Representative:** The City's representative on this Project is hereby designated as McGiffert and Associates, LLC and whose address is 2814 Stillman Boulevard Tuscaloosa, Alabama 35401. All references to Engineer or Architect shall be to the City representative if no Engineer or Architect is involved in the Project.

With a copy to: Glenda Webb, Esquire, City Attorney, Office of the City Attorney
City of Tuscaloosa, Post Office Box 2089, Tuscaloosa, Alabama 35403-2089
Telephone: (205) 248-5140, Facsimile: (205) 349-0328

C. **Contractor Representative:** The Contractor's representative on this Project is hereby designated as _____ and whose address is _____.

D. **Capacity:** Each party to this agreement represents and warrants to the other as follows:

1. That it is an individual of the age of majority or otherwise a legal entity duly organized and in good standing pursuant to all applicable laws, rules and regulations.
2. That each has full power and capacity to enter into this agreement, to perform and to conclude the same including the capacity, to the extent applicable, to grant, convey and/or transfer; areas, assets, facilities, properties, (both real and personal), permits, consents and authorizations and/or the full power and right to acquire and accept the same.
3. That to the extent required, each party has obtained the necessary approval of its governing body or board and a resolution or other binding act has been duly and properly enacted by such governing body or board authorizing this agreement and said approval has been reduced to writing and certified or attested by the appropriate official of the party.
4. That each party has duly authorized and empowered a representative to execute this agreement on their respective behalf and the execution of this agreement by such representative fully and completely binds the party to the terms and conditions hereof.
5. That absent fraud, the execution of this agreement by a representative of the party shall constitute a certification that all such authorizations for execution exist and have been performed and the other party shall be entitled to rely upon the same. To the extent a party is a partnership, limited liability company or joint venture, the execution of this agreement by any member thereof shall bind the party and to the extent that the execution of agreement is limited to a manager, managing partner or specific member then the person so executing this agreement is duly authorized to act in such capacity for the party.
6. That each party represents and warrants to the other that there is no litigation, claim or administrative action threatened or pending or other proceedings to its knowledge against it which would have an adverse impact upon this transaction or upon either's ability to conclude the transaction or perform pursuant to the terms and conditions of this agreement.
7. That each party has obtained any and all required permits, approvals and/or authorizations from third parties to enable it to fully perform pursuant to this agreement.
8. Under the provisions of the Constitution and laws of the State of Alabama, each party has the power to consummate the transactions contemplated by this agreement;
9. Each party represents and warrants that the execution and delivery of this agreement and the consummation of the transactions contemplated herein will not conflict with, be in violation of, or constitute (upon notice or lapse of time, or both) a default under the laws of the State of Alabama, any resolution, agreement, or other contract agreement, or instrument to which a party is subject, or any resolution, order, rule, regulation, writ, injunction, decree or judgment of any governmental authority or court having jurisdiction over the party.
10. This agreement constitutes the legal, valid and binding obligation of each party and is enforceable against each party in accordance with its terms, except in so far as the enforceability thereof may be limited by:
 - (a) Bankruptcy, insolvency or other similar laws affecting the enforcement of creditors' rights
 - (b) General principles of equity, regardless of whether such enforceability is considered as a proceeding at equity or at law.

11. Neither party will enter into any agreement to do anything prohibited in this agreement or enter into any agreement or take any action which would in any way impair the ability of the other party to faithfully and fully perform its obligations hereunder.
12. Under the provisions of the Constitution and laws of the State of Alabama, each party has the power to consummate the transactions contemplated by this agreement.

E. Ownership of Contract Documents: The Contract Documents, and copies of parts thereof, are furnished and owned either by the City or the Engineer/Architect. All portions of the Contract Documents, and copies of parts thereof, are the instruments of service for this Project. They are not to be used on other work and are to be returned to the City on request at the completion of the Project. Any reuse of these materials without specific written verification or adaptation by the City will be at the risk of the user and without liability or legal expense to the City or Engineer/Architect. Such user shall hold the City, its officers, agents and employees harmless from any and all damages, including reasonable attorneys' fees, from any and all claims arising from any such reuse. Any such verification and adoption shall entitle the City to further compensation at rates to be agreed upon by the user and the City.

F. No Waiver of Rights: Neither the inspection by the City or the Engineer/Architect or any of their officers, employees, agents, or subconsultants, nor any order by the City for payment of money, nor any payment for, or acceptance of, the whole or any part of the Project by the City or Engineer/Architect, nor any extension of time or change order, nor any possession taken by the City or its employees, or non enforcement of any provision of this agreement by either party shall operate as a waiver of any provision of this agreement, or any power herein reserved to the City, or any right to damages, nor shall any waiver of any breach in this agreement be held to be a waiver of any other or subsequent breach. Acceptance or final payment shall not be final and conclusive with regards to latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the City's rights under any warranty.

G. Subletting or Assigning of Contract:

1. **Limitations:** The Contractor shall not sublet, assign, transfer, convey, sell or otherwise dispose of any portion of the agreement, his obligations, right, or interest therein, or its power to execute such agreement, to any person, firm or corporation without written consent of the City and such written consent shall not be construed to relieve the Contractor of any duty or responsibility for the fulfillment of the agreement. A sale, conveyance or transfer of 50% or more of the stock or ownership of the Contractor shall be considered an assignment. Provided; however, in no event shall any portion of this agreement be assigned to an unsuccessful bidder whose bid was rejected because he or she was not a responsible or responsive bidder. Use of subcontracts up to a combined (total) value of 50 percent of the value of all work will not be construed as an assignment. Unless otherwise stipulated in the proposal or general conditions, the Contractor shall perform, with its own organization, work with the value not less than fifty (50) percent of the value of all work embraced in the contract.
2. **Subcontractor's Status:** A subcontractor shall be recognized only in the capacity of an employee or agent of the Contractor.

H. Third Party Beneficiaries: It is the intent of the parties hereto that there shall be no third party beneficiaries to this agreement.

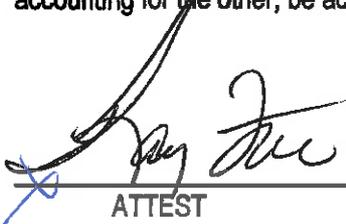
I. Final Integration: This Agreement constitutes the entire agreement of the parties, as a complete and final integration thereof with respect to its subject matter. All written or oral understandings and agreements heretofore had between and among the parties are merged into this Agreement, which alone fully and completely expresses their understandings. No representation, warranty, or covenant made by any party which is not contained in this Agreement or expressly referred to herein has been relied on by any party in entering into this Agreement.

- J. **Force Majeure:** Neither party to this Agreement shall hold the other party responsible for damages or delay in performance caused by acts of God, strikes, lockouts or other circumstances beyond the reasonable control of the other or the other party's employees, agents or contractors.
- K. **Amendment in Writing:** This Agreement may not be amended, modified, altered, changed, terminated, or waived in any respect whatsoever, except by a further agreement in writing, properly executed by all of the parties.
- L. **Binding Effect:** This agreement shall bind the parties and their respective personal representatives, heirs, next of kin, legatees, distributees, successors, and assigns.
- M. **Captions:** The captions of this Agreement are for convenience and reference only, are not a part of this Agreement, and in no way define, describe, extend, or limit the scope or intent of this Agreement.
- N. **Construction:** This Agreement shall be construed in its entirety according to its plain meaning and shall not be construed against the party who provided or drafted it.
- O. **Mandatory and Permissive:** "Shall", "will", and "agrees" are mandatory; "may" is permissive.
- P. **Governing Laws:** The laws of the State of Alabama shall govern the validity of this Agreement, the construction of its terms, the interpretation of the rights, the duties of the parties, the enforcement of its terms, and all other matters relating to this Agreement.
- Q. **Liability of the City or City Officials.** Notwithstanding any provision hereof to the contrary, the parties agree and acknowledge that the liability and obligations of the City, City officials or City employees as set forth herein are subject to the limitations imposed on municipalities by the Constitution and laws of the State of Alabama. No present or future official, officer or employee of the City shall ever be personally liable for the performance of any obligations hereunder.
- R. **Non Discrimination:** The Contractor agrees that in performing the work and services as required herein under this agreement, not to discriminate against any person on the basis of race color, religion, sex, age or disability. (The Contractor shall fully comply with the Americans with Disabilities Act), the Fair Labor Standards Act and all other applicable laws and regulations).
- S. **Fines and Penalties:** The Contractor shall be solely liable for any and all fines or penalties which may be levied by any governmental authority against the Owner and/or Contractor which are related to the Contractor's operations. The Owner shall deduct the amount of the levied fine or penalty from the Contract amount.
- T. **Agreement Date/Counterparts:** The date of this Agreement is intended as and for a date for the convenient identification of this Agreement and is not intended to indicate that this Agreement was necessarily executed and delivered on said date. This instrument may be executed in any number of counterparts, each of which so executed shall be deemed an original, but all such counterparts shall together constitute but one and the same instrument.
- U. **Use of Words and Phrases.** The following words and phrases, where used in this document, shall be given the following and respective interpretations: "Herein," "hereby," "hereunder," "hereof," and other equivalent words refer to this document as an entirety and not solely to the particular portion hereof in which any such word is used.

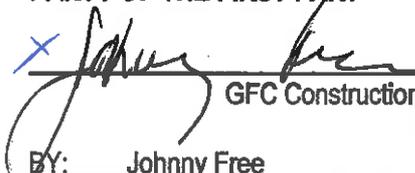
The definitions set forth in any portion of this Agreement unless the text or context indicates differently shall be deemed applicable whether the words defined are herein used in the singular or the plural. Wherever used herein any pronoun or pronouns shall be deemed to include both singular and plural and to cover all genders.

V. **Severability.** Each provision of this agreement shall be considered to be severable and, if for any reason, any such provision or any part thereof, is determined to be invalid and contrary to any existing or future applicable law, such invalidity shall not impair the operation of or affect those portions of this agreement that are valid, but this agreement shall be construed and enforced in all respects as if the invalid or unenforceable provision or part thereof had been omitted.

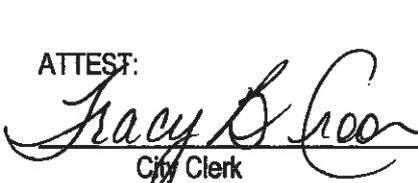
IN TESTIMONY WHEREOF, said Contractor has hereto affixed its signature and said City of Tuscaloosa has caused these presents to be executed by Walter Maddox, Mayor of the City of Tuscaloosa, and attested by the City Clerk, on the day and year first above written, in four counterparts, each of which shall, without proof or accounting for the other, be accepted as an original.

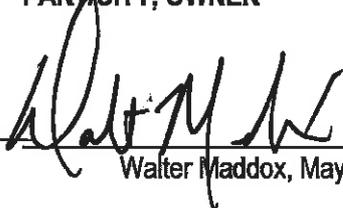

ATTEST

PARTY OF THE FIRST PART


GFC Construction, Inc.
BY: Johnny Free
ITS: President

CITY OF TUSCALOOSA, A MUNICIPAL CORPORATION/PARTY OF THE SECOND PART/CITY, OWNER

ATTEST:

City Clerk


Walter Maddox, Mayor

STATE OF ALABAMA)
COUNTY OF TUSCALOOSA)

I, Kim Harmon, a Notary Public in and for said State at Large, hereby certify that Johnny Free, who is named as President, is signed to the foregoing document, and,

- Who is known to me, or
- Whose identity I proved on the basis of _____, or
- Whose identity I proved on the oath/affirmation of _____, a creditable witness to the signer of the above document

and that being informed of the contents of the document, he/she, as such officer and with full authority, executed the same voluntarily on the day the same bears date.

Given under my hand and official seal this the 5th day of September, 20 14.

Kim Harmon
Notary Public.

My Commission Expires:
NOTARY PUBLIC STATE OF ALABAMA AT LARGE
MY COMMISSION EXPIRES: June 3, 2016
BONDED THRU NOTARY PUBLIC UNDERWRITERS

STATE OF ALABAMA)
COUNTY OF TUSCALOOSA)

Before me, the undersigned, a Notary Public in and for the State of Alabama, appeared Walter Maddox, Mayor of the City of Tuscaloosa and acknowledged that his signature is affixed hereto in his capacity as Mayor of the City of Tuscaloosa.

Done this the 10th day of September, 20 14.

Vickie Milliland
Notary Public in and for the
State of Alabama at Large

My Commission Expires:
3/17/15

[END OF CONTRACT AGREEMENT OFFICE OF THE CITY ATTORNEY]

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS
SECTION SIX
PERFORMANCE BONDS
(2014)

STATE OF ALABAMA)
TUSCALOOSA, COUNTY)

KNOWN ALL MEN BY THESE PRESENTS, that we, GFC Construction, Inc.
as principal and The Cincinnati Insurance Company (hereinafter called the "Surety"), as
surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the City of Tuscaloosa, Alabama,
(hereinafter called the "City") a municipal corporation existing under and by virtue of the laws of the State of
Alabama, for the use and benefit of those entitled thereto, in the penal sum of Two Million One Hundred Eighty
Thousand Twenty-Nine and 71/100 Dollars (\$2,180,029.71) for the payment of which well and truly be made in
lawful money of the United States, we do hereby bind ourselves, our successors and assigns and personal
representatives, jointly and severally, firmly by the presents.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS, the City has entered into a certain written contract with said Contractor for the City Walk
at University Place and Forest Lake in accordance with contract documents therefore on file in
the Office of the City Engineer at the price of, to-wit: Two Million One Hundred Eighty Thousand
Twenty-Nine and 71/100 Dollars (\$2,180,029.71) as more fully appears in said written contract bearing the date
September 5th, 2014, which contract is hereby referred to and made a part hereof to the same extent as if
set out herein in full.

NOW, THEREFORE, if the Contractor shall fully and faithfully perform all the undertakings and obligations
under the said agreement or contract herein before referred to and shall fully indemnify and save harmless the said
City from all costs and damages whatsoever which it may suffer by reason of any failure on the part of said
Contractor so to do, and shall fully reimburse and repay the said City any and all outlay and expense which it may
incur in making good any such default, and shall guarantee all workmanship against defects for a period of one year,
this obligation or bond shall be null and void, otherwise it shall remain in full force and effect.

And, for value received it is hereby stipulated and agreed that no change, extension of time, alteration or
addition to the terms of said agreement or contract or in the work to be performed thereunder or the specifications
accompanying the same shall in any wise affect the obligations of the principal or of the surety under this bond, and
notice is hereby waived of any such change, extension of time, alternative of or addition to the terms of the
agreement or contract or to the work or to the specifications.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety has
hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers on the 5th day of
September, 2014.

GFC Construction, Inc.
By Johnny Free
President
The Cincinnati Insurance Company

Surety
By Carrie Hickman
Carrie Hickman
Attorney-In-Fact

Title

ATTEST:

Chris Lee

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CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

SECTION SEVEN
LABOR AND MATERIAL BOND
(2014)

KNOWN ALL MEN BY THESE PRESENTS, that we, GFC Construction, Inc.
(hereinafter called the "Contractor") of P.O. Box 87, Duncanville, AL 35456
as principal and The Cincinnati Insurance Company (hereinafter called the
"Surety"), as surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the City of
Tuscaloosa, Alabama, (hereinafter called the "City"), a municipal corporation, existing under and by virtue of the
Laws of the State of Alabama, for the use and benefit of those entitled thereto, in the penal sum Two Million
One Hundred Eighty Thousand Twenty-Nine and 71/100 Dollars (\$2,180,029.71) for the payment of which well and
truly to be made in lawful money of the United States, we do hereby bind ourselves, or successors, assigns and
personal representatives, jointly and severally, firmly by these presents.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS: the City has entered into a certain written contract with said Contractor for the
City Walk at University Place and Forest Lake, in accordance with contract documents therefore
on file in the Office of the City Engineer at the price of, to-wit:
Two Million One Hundred Eighty Thousand Twenty-Nine and 71/100 Dollars (\$2,180,029.71), as more fully appears
in said written contract bearing date of September 5, 2014, which contract is hereby referred to and made a
part hereof to the same extent as if set out herein in full.

NOW, THEREFORE, if said Principal and all subcontractors to whom any portion of the work provided for in
said contract is sublet and all assignees of said Principal and of such subcontractors shall promptly make payment
to all persons supplying him or them with labor, foodstuffs, or supplies for or in the prosecution of the work provided
for in such contract, or in any amendment or extension of or addition to said contract, and for the payment of
reasonable attorney's fees, incurred by the claimant or claimants in suits on said bond, then the above obligation
shall be void; otherwise, it shall remain in full force and effect.

PROVIDED, however, that this bond is subject to the following conditions and limitations:

(a) Any person, firm or corporation that has furnished labor, foodstuffs, or supplies for or in the
prosecution of the work provided for in said contract, payment for which has not been made, shall have a direct right
of action in his or their name or names against the principal and surety on this bond, which right of action shall be
asserted in a proceeding, instituted in the county in which the work provided for in said contract is to be performed
and in any county in which said Principal or Surety does business. Such right of action shall be asserted in a
proceeding instituted in the name of the claimant or claimants for his or their use and benefit against said Principal
and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action
such claim or claims shall be adjudicated and judgment rendered thereon.

(b) In addition to any other legal mode of service, service of summons and other process in suits on
this bond brought in Tuscaloosa County may be had on the Principal or the Surety in accordance with Title 27,
Chapter 3, Section 24 of the Ala. Code (1975) by serving a copy of the summons and complaint or other pleading or
process, with the Commissioner of Insurance of the State of Alabama or his/ her designee and the Principal and
Surety agree to be bound by such mode of service above described and consents that such service shall be the
same as personal service on the Principal or Surety.

(c) The Surety shall not be liable hereunder for any damages or compensation recoverable under any workmen's compensation or employer's liability statute.

(d) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said contract.

(e) This bond is given pursuant to the terms of Title 39, Chapter 1, Section 1 of the Ala. Code (1975), and all the provisions of law with reference to this character of bond as set forth in said section or as may hereinafter be enacted are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers on the day of September 5th, 2014.

GFC Construction, Inc.

By Johnny Free

President

The Cincinnati Insurance Company

Surety

By:

Carrie Hickman

Attorney-In-Fact

Title

ATTEST:

Ann M. Pei

Carrie Hickman

LICENSED RESIDENT AGENT
STATE OF AL

THE CINCINNATI INSURANCE COMPANY
Fairfield, Ohio
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That THE CINCINNATI INSURANCE COMPANY, a corporation organized under the laws of the State of Ohio, and having its principal office in the City of Fairfield, Ohio, does hereby constitute and appoint

Robert W. Poellnitz, Jr.; Walter Wayne Guy; Rick Manasco;
Carrie Hickman; Robert G. Plott and/or W. Geoffrey Plott

of Tuscaloosa, Alabama its true and lawful Attorney(s)-in-Fact to sign, execute, seal, and deliver on its behalf as Surety, and as its act and deed, any and all bonds, policies, undertakings, or other like instruments, as follows:

Any such obligations in the United States, up to
Twenty Five Million and No/100 Dollars (\$25,000,000.00).

This appointment is made under and by authority of the following resolution passed by the Board of Directors of said Company at a meeting held in the principal office of the Company, a quorum being present and voting, on the 6th day of December, 1958, which resolution is still in effect:

"RESOLVED, that the President or any Vice President be hereby authorized, and empowered to appoint Attorneys-in-Fact of the Company to execute any and all bonds, policies, undertakings, or other like instruments on behalf of the Corporation, and may authorize any officer or any such Attorney-in-Fact to affix the corporate seal: and may with or without cause modify or revoke any such appointment or authority. Any such writings so executed by such Attorneys-in-Fact shall be binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company."

"RESOLVED, that the signature of the President or a Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary and the Seal of the Company may be affixed by facsimile to any certificate of any such power and any such power of certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company."

IN WITNESS WHEREOF, THE CINCINNATI INSURANCE COMPANY has caused these presents to be sealed with its corporate seal, duly attested by its Vice President this 9th day of April, 2014.

THE CINCINNATI INSURANCE COMPANY

STATE OF OHIO) ss:
COUNTY OF BUTLER)



Stephen A. Ventre
Vice President

On this 9th day of April, 2014 before me came the above-named vice President of THE CINCINNATI INSURANCE COMPANY, to me personally known to be the officer described herein: and acknowledged that the seal affixed to the preceding instrument is the corporate seal of said Company and the corporate seal and the signature of the officer were duly affixed and subscribed to said instrument by the authority and direction of said corporation.

VICKI A. GALL
Notary Public, State of Ohio
My Commission Expires 10/22/17



I the undersigned Secretary or Assistant Secretary of THE CINCINNATI INSURANCE COMPANY, hereby certify that the above is the Original Power of Attorney issued by said Company, and do hereby further certify that the said Power of Attorney is still in full force and effect.

GIVEN under my hand and seal of said Company at Fairfield, Ohio, this 5th day of September, 2014.



Scott R. Boden
Secretary

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

CONTRACTOR'S RELEASE OF LIENS AND CLAIMS
Project No. A12-1413 / A12-0993

THIS Contractor's Release of Liens and Claims is made in accordance with that certain contract between the CITY OF TUSCALOOSA, ALABAMA, a Municipal Corporation, (hereinafter the "City") and GFC Construction, Inc. (hereinafter the "Contractor" or undersigned), for a project known as City Walk at University Place and Forest Place in regard to which the undersigned warrants and certifies to the City as follows:

1. That there are no amounts owed by the undersigned or any tier of subcontractor or supplier of the undersigned which could become the basis for a lien or suit against the properties of the Contractor or the property of the City or any funds held by or in the possession of the City in regard to the Project.
2. That the undersigned has satisfied all claims and indebtedness of every nature in any way connected with the work, including (but not limited to) all payrolls, amounts due to subcontractors, accounts for labor performed and materials furnished, incidental services, liens and judgments.
3. In consideration of the receipt by the undersigned from the City of final payment under the above mentioned contract, the undersigned hereby waives and relinquishes all liens and claims of lien which the undersigned may have against the aforesaid property or funds; and further, undersigned also hereby remises, releases and forever discharges the City, its officers, agents and employees, of any and all claims, demands and causes of action whatsoever which the undersigned has, might have or could have against the City by reason of or arising out of the above-mentioned contract. The undersigned further agrees to indemnify and hold the City, its officers, agents and employees harmless against any and all claims or demands from subcontractors or suppliers arising out of the aforementioned contract.

IN WITNESS WHEREOF, the undersigned has duly executed this release this the _____ day of _____, 20_____.

CONTRACTOR:

GFC Construction, Inc.
BY: Johnny Free
TITLE: President

I, _____, after being duly sworn, depose and say as follows: That I am the _____ of the _____ Corporation and hereby certify that I am duly authorized to execute this Contractor's Release of Liens and Claims.

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
Sworn to and subscribed before me on this
the _____ day of _____, 20_____.

CONSENT OF SURETY:

SURETY

Notary Public

BY: _____
ATTORNEY-IN-FACT FOR SURETY

CITY OF TUSCALOOSA PUBLIC WORKS

ROOFING GUARANTEE

Project No. _____

Name of Project N/A

Location _____

Owner City of Tuscaloosa

General Contractor _____

Address _____

Date of Acceptance _____ Date of Expiration _____

1. The General Contractor does hereby certify to the City of Tuscaloosa that the roofing work included in this contract was installed in strict accordance with all requirements of the plans and specifications.

2. The General Contractor does hereby guarantee the roofing and associated work including all flashing, both composition and metal, against leaks due to faulty workmanship for a period of five (5) years and against leaks due to faulty or defective materials for fifteen (15) years, starting on the date of acceptance of the Project by the City.

3. Subject to the terms and conditions listed below, the General Contractor guarantees that during the Guarantee Period he will at his own cost and expense, make or cause to be made such repairs to, or replacements of said work, as are necessary to correct faulty and defective work and materials as are necessary to maintain said work in watertight conditions, and further, to respond on or within three (3) calendar days upon proper notification of leaks or defects by the City or Architect.

A. Specifically excluded from this Guarantee are damages to the work, other parts of the building and building contents caused by: Lightning, windstorm, hail storm and other unusual phenomena of elements; and, Fire. When the work has been damaged by any of the foregoing causes, the Guarantee shall be null and void until such damage has been repaired by the General Contractor, and until the cost and expense thereof has been paid by the City or by the responsible party so designated.

B. During the Guarantee Period, if the City allows alteration of the work by anyone other than the General Contractor, including cutting, patching and maintenance in connection with penetrations, and positioning of anything on the roof, this Guarantee shall become null and void upon the date of said alterations. If the City engages the General Contractor to perform said alterations, the Guarantee shall not become null and void, unless the General Contractor, prior to proceeding with said work, shall have notified the City in writing, showing reasonable cause for claim that said alterations would likely damage or deteriorate the work, thereby reasonably justifying a termination of this Guarantee.

C. Future building additions will not void this guarantee, except for that portion of the future addition that might affect the work under this contract at the point of connection of the roof areas, and any damage caused by such addition. If this contract is for roofing of an addition to an existing building, then this guarantee covers the work involved at the point of connection with the existing roof.

D. During the Guarantee Period, if the original use of the roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray cooled surface, flooded basin, or other use of service more severe than originally specified, this Guarantee shall become null and void upon the date of said change.

E. The City shall promptly notify the General Contractor of observed, known or suspected leaks, defects or deterioration, and shall afford reasonable opportunity for the General Contractor to inspect the work, and to examine the evidence of such leaks, defects or deterioration.

IN WITNESS THEREOF, this instrument has been duly executed this the ___ day of _____, 20__.

General Contractor's Authorized Signature
NAME AND TITLE _____

CITY OF TUSCALOOSA
ASBESTOS AFFIDAVIT
Project No. A12-1413 / A12-0993

DATE: _____

BUILDING OWNER: _____

PROJECT: City Walk at University Place and Forest Lake

TO WHOM IT MAY CONCERN:

The undersigned certifies that to the best of his knowledge, no products containing asbestos have been included in the construction of the captioned Project. Special care was exercised to avoid asbestos-containing products, including reviewing product data sheets, reviewing product labels, and visually verifying products in the field. Special care to avoid asbestos has been used in the selection, purchase, and installation of products, including, but not limited to, the following: concrete, batt insulation, roof insulation, building felts, mastics, waterproofing products, adhesives, resilient flooring products, ceiling tiles, interior coatings, exterior coatings, roofing, pipe insulation, duct insulation, and pre-assembled items of equipment.

Respectfully submitted,

Signature

Typed Name

Title

Firm Name

Address

Sworn to and subscribed before me on this the _____
day of _____, 20__.

Notary Public.

County, State

My Commission Expires:

PROJECT NAME City Walk at University

Place and Forest Lake

PROJECT NO. A12-1413 / A12-0993

CONTRACTOR/INSURED _____

STATE OF ALABAMA)
)
TUSCALOOSA COUNTY)

AGENT'S VERIFICATION OF CONTRACTOR'S INSURANCE

This is to certify to the City of Tuscaloosa, Alabama, a Municipal Corporation, that the Contractor in the above referenced Project does possess a policy or policies of insurance reflected on the Certificate of Insurance issued for the Project by the undersigned agency of which I am an authorized representative. I have read the contract document as it relates to insurance requirements and said Contractor's insurance is effective as of the dates stated in the certificate and meets or exceeds all ratings, limits, and amounts as required by the same.

This the _____ day of _____, 20_____.

AGENCY: _____

BY: _____

ITS: _____

STATE OF ALABAMA)
TUSCALOOSA COUNTY)

NOTICE OF CONDITIONAL BID AWARD
CITY OF TUSCALOOSA, ALABAMA

VIA EMAIL: johnny@gfcconstruction.com
TO: GFC Construction, Inc.
P.O. Box 87
Duncanville, AL 35456

Project Name: City Walk at University Place and Forest Lake
Project Number: A12-1413 / A12-0993
Date: 9/3/14

You are here notified pursuant to Ala. Code §39-2-6 (1975), that the City of Tuscaloosa has made a conditional bid award to you in regard to the above-referenced Project based upon your proposal of Two Million One Hundred Eighty Thousand Twenty-Nine and 71/100 Dollars (\$2,180,029.71).

The above bid award Does Does Not include the following additive and/or deductive alternates as requested in the bid documents:

Additive Alternates	Deductive Alternates
1. <u>Seventy-Three Thousand Three Hundred Forty and 00/100 (\$73,340.00)</u>	1. _____ (\$ _____)
2. _____ (\$ _____)	2. _____ (\$ _____)
3. _____ (\$ _____)	3. _____ (\$ _____)

Pursuant to Ala. Code §39-2-8 (1975), you are required to enter into a written contract on the form included in the proposal, plans and specifications, furnish a performance bond and a payment bond executed by a surety company authorized and qualified to make such bonds in the State of Alabama, in the amount required in the bid documents, and present evidence of insurance also as required by the bid documents, within the period of time stated therein or, if no period of time is stated, within thirty (30) days after the prescribed forms have been presented to you for signature.

Pursuant to Ala. Code §39-2-11 (1975), if you fail to execute the contract and furnish acceptable contract securities and evidence of insurance as required by the bid documents within the period of time as set forth, the awarding authority may retain all or a part of the proposal guarantee and may award the contract to the second lowest responsible responsive bidder. Under such circumstances, the owner will be entitled to consider all rights arising out of its acceptance of your proposal as abandoned.

DONE this 3rd day of September, 2014.

CITY OF TUSCALOOSA, ALABAMA
A MUNICIPAL CORPORATION
Post Office Box 2089
Tuscaloosa, Alabama 35403-2089

By: [Signature]
McGiffert and Associates, LLC
Jason L. Coker, PE

ACCEPTANCE OF NOTICE

I, on behalf of the above named contractor, do hereby accept receipt of the above notice of conditional bid award and acknowledge the contents of the same on this the 5th day of September 2014.

GFC CONSTRUCTION, INC.

[Signature]
Johnny Free
By its: President

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

**NOTICE TO PROCEED WITH PUBLIC WORKS PROJECT
CITY OF TUSCALOOSA, ALABAMA**

Project Name: City Walk at University Place and Forest Lake
Project No.: A12-1413 / A12-0993
Date: 9/11/2014

TO: GFC Construction, Inc.
P.O. Box 87
Duncanville, AL 35456

Pursuant to Ala. Code §39-2-10 (1975), you are hereby notified to immediately commence work in full accordance with the terms and conditions of the Contract Documents in the above referenced Project, dated SEPTEMBER 5th, 20 14, on or before SEPTEMBER 15th, 20 14, and you are to complete the work within the time specified therein.

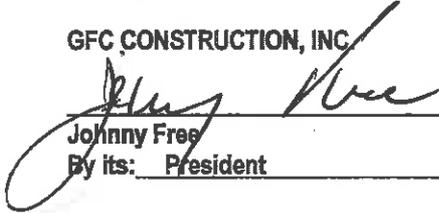
CITY OF TUSCALOOSA, ALABAMA
A MUNICIPAL CORPORATION
Post Office Box 2089
Tuscaloosa, Alabama 35403-2089

By: 
McGiffert and Associates, LLC
Jason L. Coker, PE

ACCEPTANCE OF NOTICE

I, on behalf of the above named contractor, do hereby accept receipt of the above notice to proceed with the referenced Project and acknowledge the contents of the same on this the 11th day of SEPTEMBER, 20 14.

GFC CONSTRUCTION, INC


Johnny Free
By its: President

CONTRACT CHANGE ORDER NO.
 City of Tuscaloosa, Office of the City Attorney

DATE: _____ **PROJECT:** City Walk at University Place and Forest Lake

TO: _____
 (Contractor)

TERMS: You are hereby authorized, subject to the provisions of your Contract for this Project, to make the following changes thereto in accordance with the attached Change Order Request and supporting documents and to:

FURNISH the necessary labor, materials and equipment to:

TOTAL ADDITION OR REDUCTION TO CONTRACT PRICE:

(Note: Numbers in parentheses are deductions).

ORIGINAL CONTRACT PRICE	\$	_____
LESS CONTINGENCY/ALLOWANCE	\$	_____
NET ORIGINAL CONTRACT PRICE	\$	_____
Net total of previous Change Orders	\$	_____
Previous revised Contract Price	\$	_____
This Change Order No. _____ <input type="checkbox"/> Add <input type="checkbox"/> Deduct	\$	_____
Revised Contract Price this date	\$	_____

Extension of time resulting from this Change Order _____ (Indicate number of calendar days).

The amount of this Change Order will be the responsibility of _____

This Contract Modification constitutes full and mutual accord and satisfaction for all time and all cost related to this change. By acceptance of this Contract Modification, the Contractor hereby agrees that the modification represents an equitable adjustment to the Contract, and further, agrees to waive all right to file any further claims or changes arising out of or as a result of this change, or the accumulation of executed Contract Modifications on this Contract.

The Contractor and Owner(s) hereby agree to the terms of this Change Order as contained herein.

CONSENT OF SURETY

 (Company)

By: _____

CONTRACTING PARTIES

 (Contractor)

By: _____
 (Authorized Representative)

RECOMMENDED

By: _____

 (Design Engineer or Architect)

CITY OF TUSCALOOSA

By: _____

 (Mayor)

CITY OF TUSCALOOSA
OFFICE OF THE CITY ATTORNEY

**CHANGE
ORDER
REQUEST**

OWNER: CITY OF TUSCALOOSA

ARCHITECT/ENGINEER: McGiffert and Associates, LLC

CONTRACTOR: GFC Construction, Inc.

PROJECT: City Walk at University Place and Forest Lake

CHANGE ORDER REQUEST NO. _____ **DATE:** _____

1. DESCRIPTION OF CHANGE:

2. CHANGE ORDER COSTS: _____

Proposal Attached _____ **Cost Estimated/Proposal Required**

<i>Item</i>	<i>Quantity</i>	<i>Material Unit Price</i>	<i>Labor (Hours)</i>	<i>Labor Unit Price</i>	<i>Sub-Total Cost</i>
a.					
b.					
c.					
d.					
e.					
f.*					
TOTAL:					

*If more than 6 items, provide attachments.

3. INSTITUTED BY:

4. JUSTIFICATION OF NEED:

5. JUSTIFICATION OF CHANGE ORDER VERSUS COMPETITIVE BIDDING:

6. COSTS REVIEW:

7. THIS CHANGE ORDER IS SUBMITTED FOR REVIEW AND APPROVAL AND IS CLASSIFIED AS THE FOLLOWING TYPE:

- Minor change of a total monetary value less than required for competitive bidding.
 - Changes for matters relatively minor and incidental to the original contract necessitated by unforeseeable circumstances arising during the course of work.
 - Emergencies arising during the course of work.
 - Change or alternates provided for in the original bidding where there is no difference in price of the Change Order from the original best bid on the Alternate.
 - Change of relatively minor terms not contemplated when the plans and specifications were prepared and the Project was bid and which are in the public interest and do not exceed 10% of the Contract Price.
-

8. EXTENSION OF TIME REQUESTED: Calendar Days:

RECOMMENDED:

APPROVED:

BY: _____
Tuscaloosa's Consulting Engineer/Architect

BY: _____
Contractor

BY: _____
City Representative

BY: _____
Owner's Legal Advisor

BY: _____
Owner's Authorized Representative

STATE OF ALABAMA)
COUNTY OF TUSCALOOSA)
CITY OF TUSCALOOSA)

**LEGAL NOTICE
NOTICE OF COMPLETION OF PUBLIC WORKS PROJECT
(Over \$50,000)**

Pursuant to Ala. Code §39-1-1 (1975), notice is hereby given that
GFC Construction, Inc. has completed its contract with
(Name of Company)
the City of Tuscaloosa, Alabama, for the City Walk at University Place and Forest Lake
located at Tuscaloosa, AL. This notice will be
published for a period of four (4) successive weeks beginning: _____
(Date)

A final settlement will not be made upon the contract until the expiration of thirty (30) days after
completion of notice. Any person or firm having claims on said Project for materials or labor should
contact the above contractor at:

GFC Construction, Inc.
P.O. Box 87 Duncanville, AL 35456
(Address of Contractor)

in the time and manner as required by law.

**CITY OF TUSCALOOSA
OFFICE OF THE CITY ATTORNEY
P. O. BOX 2089
TUSCALOOSA, ALABAMA 35403**

DATED: _____

**CITY OF TUSCALOOSA
SPECIAL CONDITIONS FOR
FEDERALLY FUNDED CONTRACTS**

I. DEFINITIONS

"Construction Contract" means a contract for construction, rehabilitation, alteration, and/or repair, including painting and decorating.

"Contractor" means an entity that has entered into an agreement with the local government for the performance of specific work on a project or activity, the provision of professional services, or for the supply of equipment and/or materials.

" HUD " means US Department of Housing and Urban Development (HUD) (Federal Agency).

"Local Government" means the City of Tuscaloosa.

"Program" means the Community Development Block Grant Disaster Recovery (CDBG-DR) (Federal Program) operated under the provisions of HUD

"Projects/Activities" means those undertakings which are included in the Program and are funded wholly or in part by CDBG -DR and HUD

"Project Area" means the corporate limits of the City of Tuscaloosa.

"Subcontractor" means a person, firm or corporation supplying services or labor and materials or only labor or only materials for work at the site of the project, for and under contract or agreement with the Contractor.

II. CONFLICT OF INTEREST

A. Interest of Members of the Local Government. No officer, employee or agent of the local government who exercises any function or responsibilities in connection with the planning and carrying out of the program, or any other person who exercises any functions or responsibilities in connection with the program, shall have any personal financial interest, direct or indirect, in this contract, and the Contractor shall take appropriate steps to assure compliance.

B. The Contractor agrees that it will incorporate into every subcontract required in writing the following provision: Interest of Contractor and Employees. The Contractor agrees that no person who presently exercises any functions or responsibilities in connection with the program, has any personal financial interest, direct or indirect, in this contract. The Contractor further covenants that he presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of his services hereunder.

The Contractor further covenants that in the performance of this contract no person having any conflicting interest shall be employed. Any interest on the part of the Contractor or his employees must be disclosed to the City. Provided, however, that this paragraph shall be interpreted in such a manner so as not to unreasonably impede the statutory requirement that maximum opportunity be provided for employment of and participation by low income residents of the area.

C. Provisions of the Hatch Act. Neither the funds provided by this agreement nor the personnel employed in the administration of the agreed upon work shall be in any way or to any extent engaged in the conduct

of political activities in contravention of Chapter 15 of Title 5, U. S. Code.

III. EQUAL OPPORTUNITY REQUIREMENTS: During the performance of this contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, or disability. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, national origin, age, or disability. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment, or recruitment advertising; layoff or termination; rates of pay or other forms of compensations; and selection of training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, or disability.

3. The Contractor will send to each labor union or representative of workers with which he has collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

5. The Contractor will furnish to the local government all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the local government, HUD, and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules regulations, and orders.

6. In the event of the Contractor's non-compliance with the nondiscrimination clauses of this agreement or with any of the said rules, regulations, or orders, this agreement may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further local government contracts in accordance with procedures authorized in Executive Order 11246 of September 24 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the City, Secretary of Labor, or as otherwise provided by law.

7. The Contractor will include the provisions of paragraph 1 through 6 above in every subcontract or purchase order unless exempted by rules, regulations, or orders of the local government or the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed 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 vendor as a result of such direction by the City, the Contractor may request the local government to enter into such litigation to protect the interests of the local government.

8. The Contractor agrees that it will assist and cooperate actively with the local government and the Secretary of Labor in obtaining the compliance of subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the local government and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the local government in the discharge of its primary responsibility for securing compliance.

9. The Contractor further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has

not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order. In addition, the agency agrees that if it fails or refuses to comply with these undertakings, the local government may take any or all of the following actions: terminate or suspend in whole or in part this contract; refrain from extending any further assistance to the Contractor under the program with respect to which the failure or refusal occurred until satisfactory assurance of future compliance has been received from such Contractor.

10. **Non-segregated Facilities.** The Contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Contractor covenants that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. As used in this paragraph, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise.

11. No person in the United States shall, on the ground of race, color, religion, sex, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity made possible by or resulting from this contract. The agency and each employer will comply with all requirements imposed by or pursuant to Title VI of the Civil Rights Act of 1964.

12. The Contractor shall maintain data which records its affirmative action in equal opportunity employment, including but not limited to employment, upgrading, demotions, transfers, recruitment or recruitment advertising, layoffs or terminations, pay or other compensation, and selection for training.

IV. LABOR STANDARDS PROVISIONS - CONSTRUCTION CONTRACTS ONLY

A. Contract Work Hours and Safety Standards Act

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 laborer or mechanic in any work-week in which he is employed on such work to work in excess of forty hours in any work-week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of forty hours in any work-week.

2. **Violations; Liability for Unpaid Wages; Liquidated Damages.** In the event of any violation of the clause set forth in subparagraph 1, the Contractor and any subcontractor responsible therefore shall be liable to any affected employee for his unpaid wages. In addition, such Contractor and subcontractor shall be liable to the City for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph 1 in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work-week of forty hours without payment of the overtime wages required by the clause set forth in subparagraph 1.

3. **Withholding for Unpaid Wages and Liquidated Damages.** The local government may withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages.

B. **Employment of Certain Persons Prohibited.** No person under the age of sixteen years and no person who at the time, is serving sentence in a penal or correctional institution shall be employed on the work covered by this contract.

C. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the labor standards provisions of this contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceedings or has testified or is about to testify in any proceedings under or relating to the labor standards applicable under this contract.

D. Questions Concerning Certain Federal Statutes and Regulations. All questions arising under this contract which relate to the application or interpretation of the aforesaid Contract Work Hours and Safety Standards Act, the regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to said Act, or the labor standards provisions of any other pertinent Federal statute, shall be referred, through the City of Tuscaloosa and the Secretary of Housing and Urban Development, to the Secretary of Labor, United States Department of Labor, for said Secretary's appropriate ruling or interpretation which shall be authoritative and may be relied upon for the purpose of this contract.

V. ENVIRONMENTAL PROTECTION REQUIREMENTS

A. The Contractor hereby agrees that any facility to be utilized in the performance of any nonexempt contract or subcontract shall not be a facility included on the list of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.

B. The Contractor also agrees to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.

C. As a condition of the award of the contract, the Contractor agrees to give prompt notice to the City of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized or to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

D. The Contractor agrees that it will include or cause to be included the criteria and requirements in subparagraph A through D of this section in every nonexempt subcontract and that it will take such action as the City or the EPS may direct as a means of enforcing such provisions.

VI. FINANCIAL MANAGEMENT: The Contractor shall maintain effective control over and accountability for all funds, property, and other assets that are provided for by this agreement. The Contractor shall adequately safeguard all such assets and shall assure that they are used solely for authorized purposes.

A. Ineligible Costs. In addition to any costs that are ineligible under other criteria included herein the following costs are specifically ineligible:

1. **Bad Debts.** Any losses arising from uncollected accounts and other claims, and related costs.
2. **Contingencies.** Contributions to a contingency reserve or any similar provisions for unforeseen events.
3. **Contributions and Donations.**
4. **Entertainment.** Costs of amusements, social activities, and incidental costs, such as meals, beverages, lodgings, and gratuities, relating to entertainment.
5. **Fines and Penalties.** Costs resulting from violations of or failure to comply with Federal, State, and local laws and regulations.
6. **Interest and Other Financial Costs.** Interest on borrowing (however represented), bond discounts, cost of financing and refinancing operations, and legal and professional fees paid in connection herewith.
7. **Legislative Expenses.** Salaries and other expenses of local government bodies such as

Scraper.....\$ 13.00
Striping Machine.....\$ 15.20
Track Hoe/Excavator.....\$ 14.64
Tractor and Loader (farm
rubber tired).....\$ 11.40
Tractor/Loader (all other
work).....\$ 11.22

Truck drivers:

Multi-Rear Axle.....\$ 12.25
Single Rear Axle.....\$ 11.54

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

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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 union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with
characters other than "SU" denotes that the union
classification and rate have found to be prevailing for that
classification. Example: PLUM0198-005 07/01/2011. The first
four letters , PLUM, indicate the international union and the
four-digit number, 0198, that follows 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.
The date, 07/01/2011, following these characters is the
effective date of the most current negotiated rate/collective
bargaining agreement which would be July 1, 2011 in the above
example.

Union prevailing wage rates will be updated to reflect any
changes in the collective bargaining agreements governing the
rates.

0000/9999: weighted union wage rates will be published annually
each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

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

made at less frequency considering the nature, size and complexity of the activity. The Contractor shall implement a systematic method to assure timely and appropriate resolution of audit findings and recommendations.

D. Breach of Contract Terms and Conditions. In the event of the Contractor's noncompliance with the terms and conditions of this contract or with any of the said rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or in part. Provided, that the right of the Contractor to proceed with this contract shall not be terminated or the Contractor charged with liquidated damages because of delays in the completion of the work due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted, to acts of God, or of the public enemy, acts of the Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather or delays of subcontractors due to such causes, if the Contractor shall within ten days from the beginning of any such delay notify the City in writing of the cause of the delay. The City shall ascertain the facts and the extent of the delay and extend the time for completing the work when, in the City's judgment, the findings of fact justify such an extension, and the City's findings of fact thereon shall be final and conclusive on the parties hereto, subject only to appeal, within thirty days, by the Contractor to the City whose decision on such appeal as to the facts of delay and the extension of time for completing the work shall be final and conclusive on the parties hereto.

E. Safety Standards. No Contractor or subcontractor contracting for any part of a construction contract shall require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety, as determined under construction safety and health standards promulgated by the Secretary of Labor.

F. Lead-based Paint Regulations. The construction or rehabilitation of residential structures with assistance provided under this contract is subject to the HUD Lead-based Paint regulations, 24 CFR part 35. Should this contract include activities involving the construction or rehabilitation of residential structures, the Contractor hereby agrees to comply with the regulations of 24 CFR part 35.

G. Subcontracts. The Contractor shall insert in any subcontracts all of the terms and conditions set forth in this contract and also a clause requiring the subcontractors to include these terms and conditions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

H. Davis-Bacon. As applicable, Contractors shall comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR Part 5), the provisions of which are incorporated by reference into this contract as if contained herein.

I. Debarment of contractors/subcontractors / City's right to monitor. All contracting and subcontracting agencies shall be actively registered in the sam.gov system and have a non-debarred status to perform work. The City of Tuscaloosa shall have all rights to any and all documentation related to the project. Periodic monitoring visits will be performed by City of Tuscaloosa staff to ensure all federal and contract requirements are followed.

J. Green Building Standard for Replacement and New Construction of Residential Housing. Contractors must meet the Green Building Standard in this subparagraph for: (i) all new construction of residential buildings; and (ii) all replacement of substantially-damaged residential buildings. Replacement of residential buildings may include reconstruction (i.e., demolishing and re-building a housing unit on the same lot in substantially the same manner) and may include changes to structural elements such as flooring systems, columns or load bearing interior or exterior walls. For purposes of this Notice, the Green Building Standard means the contractor will require that all construction covered by subparagraph, above, meet an industry-recognized standard that has achieved certification under at least one of the following programs (i) ENERGY STAR (Certified Homes or Multifamily High Rise); (ii) Enterprise Green Communities; (iii) LEED (NC, Homes, Midrise, Existing Buildings O&M, or Neighborhood Development); (iv) ICC-700 National Green Building Standard; (v) EPA Indoor AirPlus (ENERGY STAR a prerequisite); or (vi) any other equivalent comprehensive green building program, including regional

programs. Standards for rehabilitation of non-substantially-damaged residential buildings: For rehabilitation other than that described in subparagraph, above, contractors must follow the guidelines specified in the HUD CPD Green Building Retrofit Checklist, available on the CPD Disaster Recovery Web site. Contractors must apply these guidelines to the extent applicable to the rehabilitation work undertaken, including the use of mold resistant products when replacing surfaces such as drywall. When older or obsolete products are replaced as part of the rehabilitation work, rehabilitation is required to use ENERGY STAR- labeled, WaterSense labeled, or federal Energy Management Program (FEMP)- designated products and appliances. Implementation: For construction projects completed under construction, or under contract prior to the date that federal assistance was approved for the project the contractor is encouraged to apply the applicable standards to the extent feasible but the Green Building Standard is not required; (ii) for specific which an ENERGY STAR-or-WaterSense-labeled or FEMP-designated product does not exist, the requirement to use such products does not apply. The City encourages contractors to implement green infrastructure policies to the extent practicable.

VIII. ADECA-FUNDED CONTRACTS: The Contractor shall include the following provisions in all construction contracts funded by the Alabama Department of Economic and Community Affairs (ADECA). For all ADECA-funded construction contracts, in the event the provisions contained in this section conflict with provisions contained elsewhere in this document, the provisions contained in this section shall prevail.

A. Section 109 Clause, Housing and Community Development Act of 1974. No person in the United States shall on the grounds of race, color, national origin or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

B. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246) (applicable to contract/subcontracts exceeding \$10,000). Contractor's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

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 area, are as follows:

Goals for	Goals for
Minority	Female
Participation	Participation

(Insert Goals)	(Insert Goals)
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These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the Contractor performs construction work in a geographic area located outside of the covered area, it shall apply the goals established for such geographic area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its Federally involved and non-Federally involved construction.

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

C. "Section 3" Compliance in the Provision of Training, Employment and Business Opportunities.

1. The work to be performed under this Contract is a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12, U.S.C. 1701u. Section 3 requires that to the greatest extent feasible, opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by, persons residing in the area of the project.
2. The parties to this Contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of this Contract. The parties to this Contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements.
3. The Contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understanding, if any, a notice advising the said labor organization or workers' representative of this commitment under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.
4. The Contractor will include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for or recipient of Federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the Subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR Part 135. The Contractor will not subcontract with any Subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR Part 135 and will not let any subcontract unless the Subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.
5. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR Part 135, and all applicable rules and orders of the Department issued hereunder prior to the execution of the Contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance, its successors and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its contractors and subcontractors, its successors and assigns to those sanctions specified by the grant or loan agreement or contract through which Federal assistance is provided, and to such sanctions as are specified in 24 CFR Part 135.

D. Section 402 Veterans of the Vietnam Era (if \$10,000 or over). Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era.

1. The Contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based on their disability or veteran status in all employment practices such as the following: employment upgrading, demotion or transfer, recruitment, advertising, layoff or

termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

2. The Contractor agrees that all suitable employment openings of the Contractor which exist at the time of the execution of this Contract and those which occur during the performance of this Contract, including those not generated by this Contract and including those occurring at an establishment of the Contractor other than the one wherein the Contract is being performed but excluding those of independently operated corporate affiliates, shall be listed at an appropriate local office of the State employment service system wherein the opening occurs. The Contractor further agrees to provide such reports to such local office regarding employment openings and hires as may be required. State and local government agencies holding Federal contracts of \$10,000 or more shall also list all their suitable openings with the appropriate office of the State employment service, but are not required to provide those reports set forth in paragraphs 4 and 5.
3. Listing of employment openings with the employment service system pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and non-veterans. The listing of employment openings does not require the hiring of any particular job applicant or from any particular group of job applicants, and nothing herein is intended to relieve the Contractor from any requirements in Executive Orders or regulations regarding nondiscrimination in employment.
4. The reports required by paragraph 2 of this clause shall include, but not be limited to, periodic reports which shall be filed at least quarterly with the appropriate local office or, where the Contractor has more than one hiring location in a State, with the central office of that State employment service. Such reports shall indicate for each hiring location (1) the number of individuals hired during the reporting period, (2) the number of nondisabled veterans of the Vietnam era hired, (3) the number of disabled veterans of the Vietnam era hired, and (4) the total number of disabled veterans hired. The reports should include covered veterans hired for on-the-job training under 38 U.S.C.1787. The Contractor shall submit a report within 30 days after the end of each reporting period wherein any performance is made on this Contract identifying data for each hiring location copies of the reports submitted until the expiration of one year after final payment under the Contract, during which time these reports and related documentation shall be made available, upon request, for examination by any authorized representatives of the contracting officer or of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruitment and placement.
5. Whenever the Contractor becomes contractually bound to the listing provisions of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these provisions and has so advised the State system, there is no need to advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by the contract clause.
6. This clause does not apply to the listing of employment openings which occur and are filled outside of the 50 states, the District of Columbia, Puerto Rico, Guam and the Virgin

Islands.

7. The provisions of paragraphs 2, 3, 4 and 5 of this clause do not apply to openings which the Contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside of his own organization or employer-union arrangement for that opening.
8. As used in this clause:
 - a. "All suitable employment openings" includes, but is not limited to, openings which occur in the following job categories: production and nonproduction; plant and office; laborers and mechanics; supervisory and nonsupervisory; technical; and executive, administrative, and professional openings that are compensated on a salary basis of less than \$25,000 per year. This term includes full-time employment, temporary employment of more than three days' duration, and part-time employment. It does not include openings which the Contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement nor openings in an educational institution which are restricted to students of that institution. Under the most compelling circumstances an employment opening may not be suitable for listing, including such situations where the needs of the Government cannot reasonably be otherwise supplied, where listing would be contrary to national security, or where the requirement of listing would otherwise not be for the best interest of the Government.
 - b. "Appropriate office of the State employment service system" means the local office of the Federal-State national system of public employment offices with assigned responsibility for serving the area where the employment opening is to be filled, including the District of Columbia, Guam, Puerto Rico and the Virgin Islands.
 - c. "Openings which the Contractor proposes to fill from within his own organization" means employment openings for which no consideration will be given to persons outside the Contractor's organization (including any affiliates, subsidiaries, and the parent companies) and includes any openings which the Contractor proposed to fill from regularly established "recall" lists.
 - d. "Openings which the Contractor proposes to fill pursuant to customary and traditional employer-union hiring arrangements" means employment openings which the Contractor proposes to fill from union halls, which is part of the customary and traditional hiring relationship which exists between the Contractor and representatives of his employees.
9. The Contractor agrees to comply with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.
10. In the event of the Contractor's non-compliance with the requirements of this clause, actions for non-compliance may be taken in accordance with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.
11. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notice shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified

disabled veterans and veterans of the Vietnam era for employment, and the rights of applicants and employees.

12. The Contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Vietnam Era Veterans Readjustment Assistance Act, and is committed to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era.
13. The Contractor will include the provisions of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations or orders of the Secretary issued pursuant to the Act, so that such provisions will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any subcontractor or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for non-compliance.

E. Certification of Compliance with Air and Water Acts (applicable to Federally assisted construction contracts and related subcontracts exceeding \$100,000). Compliance with Air and Water Acts. During the performance of this Contract, the Contractor and all Subcontractors shall comply with the requirements of the Clean Air Act, as amended, 42 USC 1857 et seq., the Federal Water Pollution Contract Act, as amended, 33 USC 1251 et seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, as amended. In addition to the foregoing requirements, all nonexempt Contractors and Subcontractors shall furnish to the Owner, the following:

1. A stipulation by the Contractor or Subcontractors that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.
2. Agreement by the Contractor to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
3. A stipulation that as a condition for the Contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, or EPA indicating that a facility utilized, or to be utilized for the Contract, is under consideration to be listed on the EPA List of Violating Facilities.
4. Agreement by the Contractor that he will include, or cause to be included, the criteria and requirements in paragraphs A through D of this section in every nonexempt subcontract and requiring that the Contractor will take such actions as the Government may direct as a means of enforcing such provisions.

F. 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.

G. Drug-Free Workplace Requirements. The Drug-Free Workplace Act of 1988 (42 U.S.C. 701) requires grantees (including individuals) of federal agencies, as a prior condition of being awarded a grant, to certify that they will provide drug-free workplaces. Each potential recipient must certify that it will comply with drug-free workplace requirements in accordance with the Act and with HUD's rules at 24 CFR part 24, subpart F.

H. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). Contractors who apply or bid for an

award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.

IV. DISASTER RECOVERY FUNDED CONTRACTS: The Contractor shall include the following provisions in all Disaster Recover (DR) funded construction contracts. For all DR-funded construction contracts, in the event the provisions contained in this section conflict with provisions contained elsewhere in this document, the provisions contained in this section shall prevail.

A. The Contractor agrees to abide by all applicable Federal regulations in receiving, disbursing and accounting for Community Development Block Grant funds including, but not limited to all applicable sections of 24 CFR 570.

B. ADA Compliance. The Contractor hereby covenants and agrees that, in performing its responsibilities and obligations hereunder, the Contractor, its officers, agents or employees will not, on the grounds of race, color, sex, religion, national origin, disability or age, discriminate or permit discrimination against any person or groups of persons in any manner. The Contractor further agrees to comply with all applicable State and Federal ordinances and regulations, including but not limited to, the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA), the Civil Rights Act of 1964 and any regulations promulgated there under.

C. Section 3 Compliance. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. Contractor agrees to send to each labor organization or representative of workers with which the Contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the Contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. Contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. Contractor will not subcontract with any subcontractor where the Contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135. Contractor will certify that any vacant employment positions, including training positions, that are filled (1) after Contractor is selected by before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the Contractor's obligations under 24 CFR part 135. Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

D. Section 109 Compliance. No person in the United States will, on the ground of race, color,

national origin, religion, or sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity administered or provided under this Agreement, pursuant to Section 109 of title I of the Housing and Community Development Act of 1974 (Title I) (42 U.S.C. 5309).

E. Section 402 Compliance. Contractors and subcontractors shall take affirmative action to employ and advance in employment qualified covered veterans. Disabled veterans, recently separated veterans (veterans within 3 years of their discharge or release from active duty), veterans who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized (referred to as "other protected veterans"), and Armed Forces service medal veterans are covered veterans under VEVRAA, pursuant to the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended (VEVRAA).

F. Copeland Anti-Kickback Act Compliance. Pursuant to The Copeland "Anti-Kickback" Act, 40 USC §3145 and 18 USC §874, no contractor or subcontractor operating under this agreement shall induce an employee to give up any part of the compensation to which he or she is entitled under his or her contract of employment. Contractors and subcontractors shall submit a weekly statement of the wages paid to each employee performing on covered work during the preceding payroll period.

G. Affirmative Action. During the performance of this contract, the contractors and subcontractors operating under this agreement shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Contractors and subcontractors operating under this agreement shall comply with Affirmative Action laws and regulations to ensure equal employment opportunities, including, but not limited to 41 CFR Part 60-1; 41 CFR Part 60-2; 41 CFR Part 60-250; 41 CFR Part 60-741; compliance with E.O. 11246, "Equal Employment Opportunity," as amended by E.O. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity."

H. Compliance with Goals for Minority and Female Participation. The City of Tuscaloosa has voluntarily adopted a Minority / Disadvantaged Business Enterprise ("MBE/DBE/WBE") Program designed to encourage the participation and development of minority and disadvantaged business enterprises and to promote equal business opportunities to the fullest extent allowed by state and federal law. It is the intent of the City to foster competition among contractors, suppliers, and vendors that will result in better quality and more economical services rendered to the City. Under this policy, the City of Tuscaloosa has established a goal of ten to twenty percent (10-20%) inclusion of minority and disadvantaged business enterprises for all services required to deliver City projects. In no case shall the stated percentage be the determining factor in contract awards. Rather, contractors must demonstrate a good faith effort to attain the desired percentage goal. The Developer is encouraged to adopt corresponding goals to those of the City's Minority / Disadvantaged Business Enterprise ("MBE/DBE/WBE") Program.

I. Compliance with Environmental Laws; including The Clean Air Act and Clean Water Act. Contractors and subcontractors operating under this agreement shall be responsible for ensuring compliance with Federal, State, or local pollution control laws and related requirements, including but not limited to the Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 et seq.). If a contracting officer becomes aware of noncompliance with clean air or water standards in facilities used in performing nonexempt contracts, that contracting officer shall notify the agency head, or a designee, who shall promptly notify the EPA Administrator or a designee in writing.

J. Byrd Anti-Lobbying Agreement. Contractors operating under this agreement shall file the required certification under the Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.



ALABAMA DEPARTMENT OF REVENUE
SALES, USE & BUSINESS TAX DIVISION
Purchasing Agent Appointment

ST: PAA1
11/09

PURCHASING AGENT APPOINTMENT					
Name and Address of Agent			Name and Address of Governmental Entity or Exempt Organization		
NAME			NAME		
MAILING ADDRESS			MAILING ADDRESS		
CITY	STATE	ZIP CODE	CITY	STATE	ZIP CODE
PHYSICAL ADDRESS			PHYSICAL ADDRESS		
CITY	STATE	ZIP CODE	CITY	STATE	ZIP CODE
			ALABAMA EXEMPTION (NUMBER, ACT, LAW, ETC.)		
Name and Location of Project			Appointment Information		
NAME			EFFECTIVE DATE		
PHYSICAL ADDRESS			Agency appointment will expire on the date of completion of the project.		
CITY	STATE	ZIP CODE	SCHEDULED DATE OF COMPLETION:		
IDENTIFY PROJECT					

The undersigned governmental entity or exempt organization ("tax-exempt entity") hereby appoints the above-named person or company as its agent to (check the applicable box):

- order materials that will be incorporated into the real estate constituting the construction project identified above; or
- order and pay for materials that will be incorporated into the real estate constituting the construction project identified above with funds belonging to the tax-exempt entity.

As agent of the tax-exempt entity, the person or company named above (check the applicable box):

- is authorized to appoint subagents of the tax-exempt entity to order materials that will be incorporated into the real estate constituting the project; or
- is not authorized to appoint subagents of the tax-exempt entity.

By signing this appointment we acknowledge that: the appointment applies only to the purchase of materials after the effective date hereof (which cannot be prior to the date the appointment is signed); the agent has the authority to bind the tax-exempt entity contractually for the purchase of tangible personal property that will be incorporated into the real estate constituting the construction project identified above; payment for the purchases made pursuant to such appointment must be made with funds belonging to the tax-exempt entity; and the agent is required to notify all vendors and suppliers from which tax-exempt purchases are to be made of the agency relationship and that the obligation for payment is that of the tax-exempt entity and not the agent. All purchase orders and remittance devices furnished to these vendors/suppliers shall clearly reflect the agency relationship. The vendor or supplier may rely on the tax-exempt status of purchases made on behalf of the tax-exempt entity by the duly appointed purchasing agent, provided that the criteria in Alabama Department of Revenue Rule 810-6-3-.69.02 and in the attached instructions are followed and the proper documentation exists to confirm compliance with these instructions.

Sign Here _____

AUTHORIZED REPRESENTATIVE OF THE GOVERNMENTAL ENTITY OR EXEMPT ORGANIZATION

TITLE

DATE

Print Name _____

APPOINTMENT OF SUBAGENT					
Name and Address of Subagent (Subcontractor)			Appointment Information		
NAME			EFFECTIVE DATE		
STREET OR OTHER MAILING ADDRESS			Subagency appointment will expire on the date the subagent completes work on the project by fulfilling the contractual obligation to perform.		
CITY	STATE	ZIP CODE	SCHEDULED DATE OF COMPLETION:		
SCOPE OF WORK TO BE PERFORMED BY SUBAGENT					

The undersigned agent (contractor) hereby appoints the subagent (subcontractor) to act as a purchasing agent of the tax-exempt entity to order, but not to pay for, materials that will be incorporated into the real estate constituting the construction project identified above. In making purchases for the project, the subagent must comply with Alabama Department of Revenue Rule 810-6-3-.69.02 and the attached instructions.

Sign Here _____

AUTHORIZED REPRESENTATIVE OF AGENT (CONTRACTOR)

TITLE

DATE

Print Name _____

Instructions For Preparation of Form ST: PAA1

Purchasing Agent Appointment

The United States Government, the State of Alabama, counties and incorporated municipalities of the state, and various other entities within the state are specifically exempt from paying state and local sales and use tax on their purchases of tangible personal property. These tax-exempt entities cannot transfer their exempt status to a contractor or developer who is required to purchase and pay for the materials that are to be used pursuant to a construction contract with the tax-exempt entity. However, a tax-exempt entity may appoint as its agent a contractor to act on its behalf to order materials or to order and pay for materials that will be incorporated into real estate pursuant to a construction contract with the tax-exempt entity. Purchases made by the agent on behalf of the tax-exempt entity will be exempt from the payment of state and local sales or use tax provided that the procedures outlined in Alabama Department of Revenue Rule 810-6-3-.69.02 are followed. These procedures include the provisions below. *(Note: This form should not be used to purchase materials for a project that has been granted abatement pursuant to the Tax Incentive Reform Act of 1992, Chapter 9B of Title 40, Code of Alabama 1975, as amended, or for the exemption available to contractors for the purchase of building materials for construction projects with health care authorities organized under Article 11 of Chapter 21 of Title 22 or Chapter 62 of Title 11. Tax-exempt purchases of materials for these types of projects must be made in accordance with the provisions of the applicable sections of the Code of Alabama 1975, as amended, and ADOR Rules.)*

The appointment of the contractor as purchasing agent of the tax-exempt entity must be made in writing and may, but is not required to, take the form of a completed Purchasing Agent Appointment, Form ST: PAA-1. The appointment must be made prior to the contractor's purchase of materials that are claimed to be tax-exempt. In the absence of a written appointment the contractor must pay the sales and use taxes otherwise due. A contractor may not purchase materials, incorporate them into realty prior to obtaining a properly completed and signed Form ST: PAA-1, or other written appointment, and later claim an agency relationship and petition for a refund of sales and use tax paid on the materials. The Form ST: PAA-1 can only be used to appoint the contractor to purchase on behalf of the tax-exempt entity materials that will be incorporated into the real estate constituting the project. However, execution of the Form ST: PAA-1 does not preclude a separate written appointment of the contractor as agent of the tax-exempt entity to purchase other tangible personal property.

Purchases made by the purchasing agent on behalf of the tax-exempt entity are exempt from the payment of sales and use taxes, provided that funds belonging to the tax-exempt entity are directly obligated and payment is made with funds belonging to the tax-exempt entity. When the contractor is also appointed as agent to pay for the materials on behalf of the tax-exempt entity, payment must be made from an account designated for this specific purpose and funded by the tax-exempt entity. It is permissible to use a trust account for multiple projects, provided that the account is funded by the tax-exempt entities and records are maintained to document the source of funds for each project. The contractor may not commingle its own funds with the funds in the account. The contractor may not deposit its own money into the account. The contractor may not pay for materials with its own funds and receive reimbursement from the account.

PENALTY. Any person who makes unauthorized use of this document with the intent to evade payment of tax is liable for any sales and use taxes that may be due, together with interest, and may be assessed

additional penalties as provided in Section 40-2A-11, Code of Alabama 1975, as amended.

APPOINTMENT INFORMATION. All information requested on the attached Purchasing Agent Appointment, Form ST: PAA-1, must be provided, including by attachments to the form. The project name, location, and description must be included. Tax-exempt organizations must provide their Alabama Sales and Use Tax Certificate of Exemption number, Legislative Act number, or state law by which they are exempt from sales and use tax. The form or other written appointment document must reflect the date the appointment will become effective, which cannot be prior to the date the document is signed. The agency appointment will expire on the date of completion of the project. The scheduled date of completion must be reflected on the appointment document. However, the scheduled date of completion may be extended by approval of the tax-exempt entity when it is determined that the project will not be completed by that date. The agent shall not make any purchases without payment of sales or use taxes under the authority of this appointment before the effective date or after the date of completion of the project. This Purchasing Agent Appointment must be signed by an officer or duly-authorized representative of the tax-exempt entity. The signed original document must be retained by the contractor, and a copy should be retained by the tax-exempt entity. In a subsequent audit, to substantiate the contractor's appointment as agent to purchase on behalf of the tax-exempt entity, the contractor will be required to provide to the auditor upon request a copy of the executed appointment document.

AGENT'S APPOINTMENT OF ONE OR MORE SUBAGENTS. When authorized by the tax-exempt entity, the agent (contractor) may appoint one or more subagents (subcontractors) to act as the purchasing agent of the tax-exempt entity to order, but not to pay for, materials that will be incorporated into the project. For each subagent appointed, the agent (contractor) must document the appointment by completing the section provided on a copy of Form ST: PAA-1, or otherwise document the appointment in writing. The document must include the date the appointment of the subagent will become effective, which cannot be prior to the date the contractor signs the document appointing the subagent. The subagency appointment will expire on the date the subagent's work on the project is completed. The scheduled date of completion of the subagent's work on the project must be reflected on the appointment document. However, the scheduled date of completion may be extended by the contractor (agent) when it is determined that the subcontractor's work on the project will not be completed by that date. The subagent (subcontractor) shall not make any purchases without payment of sales or use taxes under the authority of this appointment before the effective date or after the date the subagent's work on the project is completed. A description of the work to be performed by the subagent must be included. For each subagent appointed, the Appointment of Subagent form or other writing must be signed by the agent (owner, partner, member, corporate officer, or other individual authorized to sign the document). The signed document must be retained by the subagent (subcontractor). A copy of the document must be provided to the tax-exempt entity for their records and a copy must be retained by the agent (contractor). A subagent's purchase of materials on behalf of the tax-exempt entity is exempt from the payment of state and local sales and use taxes provided that the criteria set out above and in ADOR Rule 810-6-3-.69.02 are followed. In a subsequent audit, to substantiate the subcontractor's appointment as agent to purchase on behalf of the tax-exempt entity, the subcontractor will be required to provide to the auditor upon request a copy of the executed subagent appointment document.

Exhibit A

THE CITY OF TUSCALOOSA MINORITY ENTERPRISE/DISADVANTAGED BUSINESS ENTERPRISE (MBE/DBE/WBE) POLICY FOR PUBLIC WORKS PROJECTS OVER \$50,000

General Mission Statement

THE CITY OF TUSCALOOSA (hereinafter, "City") has voluntarily adopted a Minority/Disadvantaged Business Enterprise (MBE/DBE/WBE) Program designed to encourage the participation and development of minority and disadvantaged business enterprises and to promote equal business opportunities in the City to the fullest extent allowed by state and federal law.

It is the intent of the City to foster competition among contractors, suppliers, and vendors that will result in better quality and more economical services rendered to the City. Under this policy, the City of Tuscaloosa has established a goal of ten to twenty percent (10-20%) inclusion of minority and disadvantaged business enterprise (hereinafter sometimes "MBE/DBE/WBE") for all services required to deliver City projects. In no case shall the stated percentage be the determining factor in contract awards. Rather, contractors must demonstrate a good faith effort to attain the desired percentage goal.

Program Goals

It is the goal of this program:

- To ensure non-discrimination in the award and administration of City contracts.
- To help to remove barriers to the participation of DBE/MBE/WBE's in competing for City contracts.
- To ensure a level playing field exists on which DBE/MBE/WBE's can compete fairly for City contracts.

Definition

1. "Minority Business Enterprise" ("MBE") means a business which is an independent and continuing enterprise for profit, performing a commercially useful function and is at least fifty-one percent (51%) owned and controlled by an African American, or Black American, and certified as such by the Birmingham Construction Industry Authority (hereinafter, the "BCIA").

2. "Women-owned Business Enterprise" ("WBE") means a business which is an independent and continuing enterprise for profit, performing a commercially useful function and is at least fifty-one percent (51%) owned, operated and controlled on a daily basis by one or more female American citizens.

3. "Disadvantaged Business Enterprise" (DBE) means a business which is an independent and continuing enterprise for profit, performing a commercially useful function and is owned by a majority of persons who are United States citizens or permanent resident aliens (as defined by the Immigration and Naturalization Service) of the United States, and who are Asian, Black, Hispanic or Native Americans, according to the following definitions:

"Asian" – means persons having origins in any of the original people of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

"African American" or "Black American" means persons having origins in any black racial group of Africa.

"Hispanic" means persons of Spanish or Portuguese culture with origins in Mexico, South of Central America, or the Caribbean Islands regardless of race.

"Native American" means persons having origins in any of the original people of North America, including American Indians, Eskimos and Aleuts.

A list of all pre-certified MBE's, DBE's and WBE's will be maintained at Birmingham Construction Industry Authority (BCIA).

4. "Birmingham Construction Industry Authority" (BCIA) means the consultant hired by the City to assist in administration of the program. The program is voluntary and is developed to maximize MBE/DBE/WBE business participation in the construction industry of the Tuscaloosa metropolitan area. Owners of construction projects in both the public and private sector are encouraged to participate in the BCIA's efforts to increase the participation of MBE/DBE/WBE's in their construction projects. MBE/DBE/WBE firms are certified as a Minority or Disadvantaged business by the BCIA and receive business counseling and technical assistance provided by the BCIA staff.

Equal Business Opportunity

It is the policy of the City to promote full and equal business opportunities for all persons doing business with the City, regardless of race, sex or national origin. It is the ultimate goal of this policy to promote an equitable business climate district. The City will seek to increase minority and women participation for contracts that require formal bids. These efforts will be for contracts above \$50,000 as allowed by the Alabama Public Works law. These efforts are designed to help prevent discrimination against minorities and disadvantaged businesses and promote more completion among vendors, suppliers, and contractors of the City of Tuscaloosa.

The City has established a goal of ten to twenty percent (10-20%) of the total construction related expenditures to be provided by minority and disadvantaged business enterprises. While the policy provides for voluntary participation by the City and is dependent upon race-neutral and gender-neutral considerations, contractors are encouraged to comply with the City's policy. The City of Tuscaloosa shall periodically review the policy, including race/gender-neutral remedies, to determine its effectiveness.

Good Faith Effect

The City require contractors to demonstrate a good faith effort to attain the goal of 10-20% participation of MBE/DBE/WBE's in all levels of the Public Works contracting process. Contractors shall document their efforts to obtain minority and disadvantaged business participation in the bid documents. Contractors should note that failure to document a good faith effort to the satisfaction of the City may subject the contractor to bid rejection for non-responsiveness.

The following process shall constitute a good faith effort under the City's policy:

(1) Contractors deciding to bid on a City project shall submit the MBE/DBE/WBE Documentation Statement and Acknowledgement (Form1). Submission of Form 1 confirms the commitment of the contractor to participate in the inclusion effort for the project. Form 1 must be submitted to the Office of the City Attorney no later

than seven (7) days prior to the bid, or at the pre-bid conference, whichever is earlier. The City reserves the right to modify the submittal deadline as-needed.

(2) Contractors shall submit MBE/DBE/WBE Bid Solicitation Notice (Form 2). Form 2 must be submitted to the Office of the City Attorney no later than seven (7) days prior to the bid, or at the pre-bid conference, whichever is earlier. The City reserves the right to modify the submittal deadline as-needed.

(3) Contractors shall submit a brief plan for achieving the stated MBE/DBE/WBE Participation Goal for his/her trade (Form 3). Form 3 must be submitted in the contractor's sealed bid.

(4) Contractor shall submit a listing of all MBE/DBE/WBE contractors that submitted bids (**Form 4**). Form 4 must be submitted in the contractor's sealed bid. (Note: In the event a MBE/DBE/WBE contractor submits a bid after the general contractor has sealed the bid, contractors should write on the envelope the name(s) and scope of work of the MBE/DBE/WBE contractor who submitted the bid.)

(5) Contractors shall be required to work in cooperation with the City's consultant in the implementation of this program. Failure to do so, in the discretion of the City, may result in a rejection of bid due to non-responsiveness.

Following compliance with item (5) above, submission of Form 1, Form 2, Form 3, and Form 4 at the above-prescribed times shall satisfy the good faith effort requirement. Failure to do so may result in rejection of bid due to non-responsiveness.

Additional Administrative Requirements/Procedure

(1) Once a tentative contract award has been made, the successful contractor shall submit a list of all MBE/DBE/WBE firms the contractor proposes to utilize during the execution of the contract (**Form 5**). In addition, the contractor shall include on Form 5 all firms that the major subcontractors propose to utilize.

(2) If the successful contractor will be subcontracting less than the stated percentage goal, the Contractor must complete a "MBE/DBE/WBE Unavailability Certification" (**Form 6**). Form 6 is due once a tentative contract award has been made.

(3) Contractors shall obtain the BCIA listing of certified MBE/DBE/WBE business by contacting the BCIA office to assist in soliciting MBE/DBE/WBE participation for the project. This listing will be continually monitored and updated by the BCIA. After once receiving the BCIA listing it will be necessary to only obtain revisions thereafter.

(4) Contractors shall not be required to use a MBE/DBE/WBE subcontractor who cannot display reasonable technical and financial qualifications to perform the work in question.

(5) In addition to the above requirements, contractors should note that the City reserves the right to periodically audit payroll records to ensure compliance with the program. The City employs the services of a Compliance Director.

(6) Upon completion of the project and prior to release of retainage or final payment, the contractor shall submit a Project Closeout Report (**Form 7**) that includes final accounting of all MBE/DBE/WBE firms utilized on the project.

(7) On a monthly basis, contractors shall submit updated MBE/DBE/WBE reports (Monthly Report Form) to identify any changes in MBE/DBE/WBE firm utilization (**Form 8**). Contractors shall submit Form 8 directly to the City's consultant.

Race/Gender – Neutral Remedies

The City recognizes that race/gender – neutral remedies may be effective tools used to increase MBE/DBE/WBE participation. Therefore, the City will continue to explore these remedies. The remedies will include, but will not be limited to, the following:

1. Technical assistance techniques to identify and increase the participation of MBE/DBE/WBE's in the City's contracting, subcontracting and purchasing opportunities.
2. Continuation of the certification process with the BCIA.

The City will periodically review the success of these measures in order to determine the extent to which the measures provide equitable access to the City's contracting, subcontracting and purchasing opportunities.

The City has determined that this policy complies with all applicable local, state and national laws concerning the contracting and purchasing process. The City shall not sacrifice product quality for lower pricing, but shall make all awards in accordance with applicable law. It shall be the primary responsibility of the City to insure that this policy is followed, and that all actions regarding the contracting and purchasing process comply with all applicable statutes as well as the defined goals relative to MBE/DBE/WBE participation on all construction projects.

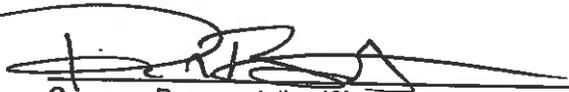
Form 1 (one page)
Documentation Statement and Acknowledgement

(Due no later than seven (7) days prior to the bid, or at the pre-bid
conference, whichever is earlier)

PROJECT NAME: City Walk at University Place and Forest Lake

The City of Tuscaloosa has adopted a program to encourage the participation of Minority Business Enterprises/Disadvantaged Business Enterprises (MBE/DBE/WBE) on its public works construction projects. The signed statement serves as a commitment by the undersigned company to comply with this program as outlined by the City, relative to the involvement of MBE/DBE/WBE firm in City guidelines.

The undersigned Company will adhere to City program guidelines set forth to utilize MBE/DBE/WBE businesses in all construction projects, and all program forms (1-8) have been reviewed and understood.


Company Representative (Signature)

8/15/14
Date

PAUL BURKHALTER
Company Representative (Printed)

PROJECT MANAGER
Title

GFC CONSTRUCTION INC
Company Name

(205) 758-1948
Telephone Number

DODDSTOWN, AL 35456
City, State, Zip

(205) 358-3303
Fax Number

Form 2 (6 pages)
Bid Solicitation Notice

(Due no later than seven (7) days prior to the bid, or at the pre-bid
Conference, whichever is earlier)

BID DATA

1. GENERAL CONTRACTOR: GFC Construction Inc
ADDRESS: P.O. Box 87
DONOVILLE AL 35456
CONTACT (S): Paul Burkholder
PHONE: (205) 758-1948
FAX: (205) 758-3303
E-MAIL: Paul @ GFC Construction . com
2. OWNER: _____
3. NAME OF PROJECT: City Walk at University Place and Forest Lake
4. SCHEDULE PRE-BID MEETING
DATE/TIME: August 15, 2014; 9:00 a.m.
LOCATION: City of Tuscaloosa Environmental Services Building
5. DATE/TIME FOR RECEIPT OF BIDS: August 28, 2014 at 9:00 a.m. local time
6. SCHEDULE BID OPENING
DATE/TIME: August 28, 2014; 9:00 a.m.
LOCATION: Narashino Conference Room at City Hall
7. ESTIMATED JOB START DATE: September 8, 2014
8. ESTIMATED COMPLETION DATE: April 6, 2015

PROJECT: City Walk at University Place
and Forest Lake

LOCATION: City of Tuscaloosa

BID DATE: August 28, 2014; 9:00 am

GENERAL CONTRACTOR CONTACT:

NAME: GFL Const., Inc.

ADDRESS: PO Box 87
Dunganville, AL 35456

TELEPHONE: (205) 758-1942

FAX: (205) 758-8503

EMAIL: paulegflconstruction.com

DEADLINE FOR PROPOSALS

8-22-14 10:00 AM
DATE/TIME

* Estimated Contract Opportunity Value:
(1) 0-\$5,000 (2) \$5,000-\$25,000 (3) \$25,000-\$50,000 (4)
\$50,000 - \$250,000 (5) over \$250,000

DIVISION 02 - EXISTING CONDITIONS
(1) (2) (3) (4) (5)*

- 02 21 EROSION
- 02 22 GEOTECHNICAL INVESTIGATIONS
- 02 41 DEMOLITION
- 02 42 REMOVAL and SALVAGE of CONSTRUCTION MATERIALS
- 02 43 STRUCTURE MOVING
- 02 55 SITE CONTAMINANT
- 02 56 UNDERGROUND STORAGE TANK REMOVAL
- 02 51 TRANSPORTATION and DISPOSAL of HAZARDOUS MATERIALS
- 02 52 ASBESTOS REMEDIATION
- 02 53 LEAD REMEDIATION
- 02 54 MOLD REMEDIATION
- 02 91 CHEMICAL SAMPLING, TESTING and ANALYSIS

02 _____
(Please fill-in for other opportunity)

DIVISION 3 - CONCRETE (1) (2) (3) (4) (5)

- 03 01 MAINTENANCE OF CONCRETE
- 03 11 CONCRETE FORMING
- 03 13 CONCRETE ACCENTORIES
- 03 21 REINFORCING STEEL
- 03 23 WELDED WIRE FABRIC REINFORCEMENT

- 03 30 CAST-IN-PLACE CONCRETE
- 03 31 STRUCTURAL CONCRETE
- 03 32 CONCRETE FINISHING
- 03 37 SPECIALTY PLACED CONCRETE
- 03 38 CONCRETE CURING
- 03 41 PRECAST STRUCTURAL CONCRETE
- 03 45 PRECAST ARCHITECTURAL CONCRETE
- 03 47 SITE-CAST CONCRETE
- 03 52 NON-BERKEL GROUTING
- 03 53 EPOXY GROUTING
- 03 51 CONCRETE CUTTING
- 03 52 CONCRETE BORING
- 03 _____

(Please fill-in for other opportunity)

DIVISION 4 - MASONRY (1) (2) (3) (4) (5)

- 04 21 CLAY UNIT MASONRY
- 04 22 CONCRETE UNIT MASONRY
- 04 25 UNIT MASONRY PANELS
- 04 30 MULTIPLE-UNIT MASONRY
- 04 40 STONE MASONRY
- 04 57 MASONRY FIREPLACES
- 04 71 MANUFACTURED BRICK MASONRY
- 04 73 MANUFACTURED STONE MASONRY
- 04 _____

(Please fill-in for other opportunity)

DIVISION 5 - METALS (1) (2) (3) (4) (5)

- 05 12 STRUCTURAL STEEL FRAMING
- 05 14 STRUCTURAL ALUMINUM FRAMING
- 05 16 WIRE ROPE ASSEMBLIES
- 05 21 STEEL JOINT FRAMING
- 05 31 STEEL DECKING
- 05 35 RAILROAD DECKING ASSEMBLIES
- 05 41 STRUCTURAL METAL STUD FRAMING
- 05 43 COLD-FORMED METAL JOINT FRAMING
- 05 44 COLD-FORMED METAL TRUSSES
- 05 51 METAL STAIRS
- 05 52 METAL RAILINGS
- 05 53 METAL GRATINGS
- 05 55 METAL STAIR TREADS & NOSE
- 05 56 METAL CASTINGS
- 05 58 FORMED METAL FABRICATIONS
- 05 71 DECORATIVE METAL STAIRS
- 05 73 DECORATIVE METAL RAILINGS
- 05 75 DECORATIVE FORMED METAL
- 05 _____

(Please fill-in for other opportunity)

DIVISION 6 - WOODS, PLASTICS & COMPOSITES
(1) (2) (3) (4) (5)

- 06 11 WOOD FRAMING

- 06 12 STRUCTURAL PANELS
- 06 15 WOOD DECKING
- 06 16 SHEATING
- 06 17 SHOP FABRICATED STRUCTURAL WOOD
- 06 22 MILLWORK
- 06 25 PREFINISHED PANEL
- 06 28 PANELING
- 06 43 WOOD STAIRS & RAILINGS
- 06 44 ORNAMENTAL WOODWORK
- 06 48 WOOD FRAMES
- 06 _____

(Please fill-in for other opportunity)

DIVISION 7 - THERMAL & MOISTURE PROTECTION
(1) (2) (3) (4) (5)

- 07 11 DAMPPROOFING
- 07 12 BUILT-UP BITUMINOUS WATERPROOFING
- 07 13 SHEET WATERPROOFING
- 07 16 CEMENTIOUS & REACTIVE WATERPROOFING
- 07 19 WATER REPELLANTS
- 07 21 THERMAL INSULATION
- 07 22 ROOF & DECK INSULATION
- 07 24 EXTERIOR INSULATION & FINISH SYSTEMS
- 07 25 WEATHER BARRIERS
- 07 26 VAPOR RETARDERS
- 07 31 SHINGLES & SHAKES
- 07 32 ROOF TILES
- 07 33 NATURAL ROOF COVERINGS
- 07 41 ROOF PANELS
- 07 42 WALL PANELS
- 07 46 SIDING
- 07 51 BUILT-UP BITUMINOUS ROOFING
- 07 52 MODIFIED BITUMINOUS MEMBRANE ROOFING
- 07 53 ELASTOMETRIC MEMBRANE ROOFING
- 07 54 THERMOPLASTIC MEMBRANE ROOFING
- 07 56 FLUID APPLIED ROOFING
- 07 58 ROLL ROOFING
- 07 61 SHEET METAL ROOFING
- 07 65 FLEXIBLE FLASHING
- 07 71 ROOF SPECIALTIES
- 07 72 ROOF ACCESSORIES
- 07 81 APPLIED FIREPROOFING
- 07 84 FIRESTOPPING
- 07 91 PREFORMED JOINT SEALS
- 07 92 JOINT SEALANTS
- 07 95 EXPANSION CONTROL
- 07 _____

(Please fill-in for other opportunity)

DIVISION 8 - OPENINGS (1) (2) (3) (4) (5)

- 08 11 METAL DOORS & FRAMES
- 08 12 METAL FRAMES
- 08 13 METAL DOORS
- 08 14 WOOD DOORS
- 08 16 COMPOSITE DOORS
- 08 17 INTEGRATED DOOR OPENING ASSEMBLIES
- 08 31 ACCESS DOORS & PANELS
- 08 32 SLIDING GLASS DOORS
- 08 33 COILING DOORS & GRILLES
- 08 34 SPECIAL FUNCTION DOORS
- 08 36 PANEL DOORS
- 08 38 TRAFFIC DOORS
- 08 41 ENTRANCES & STOREFRONTS
- 08 42 ENTRANCES
- 08 43 STOREFRONTS
- 08 44 CURTAIN WALL & GLAZED ASSEMBLIES
- 08 51 METAL WINDOWS
- 08 52 WOOD WINDOWS
- 08 53 PLASTIC WINDOWS
- 08 54 COMPOSITE WINDOWS
- 08 56 SPECIAL FUNCTION WINDOWS
- 08 62 UNIT SKYLIGHTS
- 08 63 METAL-FRAMED SKYLIGHTS
- 08 71 DOOR HARDWARE
- 08 74 ACCESS CONTROL HARDWARE
- 08 75 WINDOW HARDWARE
- 08 79 HARDWARE ACCESSORIES
- 08 81 GLASS GLAZING
- 08 83 MIRRORS
- 08 84 PLASTIC GLAZING
- 08 88 SPECIAL FUNCTION GLAZING
- 08 91 LOUVERS
- 08 95 VENTS
- 08 _____

(Please fill-in for other opportunity)

DIVISION 9 - FINISHES (1) (2) (3) (4) (5)

- 09 21 PLASTER & GYPSUM ASSEMBLIES
- 09 22 SUPPORTS FOR PLASTER & GYPSUM
- 09 23 GYPSUM PLASTERING
- 09 24 CEMENT PLASTERING
- 09 28 VENEER PLASTERING
- 09 28 BACKING S & UNDERLAYMENTS
- 09 29 GYPSUM
- 09 30 TILING
- 09 51 ACOUSTICAL CEILINGS
- 09 54 SPECIALTY CEILINGS
- 09 62 SPECIALTY FLOORING
- 09 63 MASONRY FLOORING
- 09 64 WOOD FLOORING

- 09 65 RESILIENT FLOORING
 - 09 66 TERRAZZO FLOORING
 - 09 68 CARPETING
 - 09 72 WALL COVERINGS
 - 09 77 SPECIAL WALL SURFACING
 - 09 91 PAINTING
 - 09 93 STAINING & TRANSPARENT FINISHING
 - 09 96 HIGH PERFORMANCE COATINGS
 - 09 97 SPECIAL COATINGS
 - 09 _____
- (Please fill-in for other opportunity)

DIVISION 10 - SPECIALTIES (1) (2) (3) (4) (5)

- 10 11 VISUAL DISPLAY UNITS
 - 10 14 SIGNAGE
 - 10 22 PARTITIONS
 - 10 26 WALL & DOOR PROTECTION
 - 10 28 TOILET, BATH & LAUNDRY ACCESSORIES
 - 10 44 FIRE PROTECTION SPECIALTIES
 - 10 51 LOCKERS
 - 10 71 EXTERIOR PROTECTION
 - 10 74 MANUFACTURED EXTERIOR SPECIALTIES
 - 10 75 FLAGPOLES
 - 10 81 PEST CONTROL DEVICES
 - 10 88 SCALES
 - 10 _____
- (Please fill-in for other opportunity)

DIVISION 11 - EQUIPMENT (1) (2) (3) (4) (5)

- 11 11 VEHICLE SERVICE EQUIPMENT
 - 11 12 PARKING CONTROL EQUIPMENT
 - 11 13 LOADING DOCK EQUIPMENT
 - 11 14 PEDESTRIAN CONTROL EQUIPMENT
 - 11 24 MAINTENANCE EQUIPMENT
 - 11 31 RESIDENTIAL APPLIANCES
 - 11 33 RETRACTABLE STAIRS
 - 11 41 FOODSERVICE STORAGE EQUIPMENT
 - 11 42 FOOD PREPARATION EQUIPMENT
 - 11 43 FOOD DELIVERY CARTS AND CONVEYORS
 - 11 44 FOOD COOKING EQUIPMENT
 - 11 46 FOOD DISPENSING EQUIPMENT
 - 11 47 ICE MACHINES
 - 11 48 CLEANING & DISPOSAL EQUIPMENT
 - 11 52 AUDIO-VISUAL EQUIPMENT
 - 11 53 LABORATORY EQUIPMENT
 - 11 68 ATHLETIC EQUIPMENT
 - 11 67 RECREATIONAL EQUIPMENT
 - 11 82 SOLID WASTE HANDLING
 - 11 _____
- (Please fill-in for other opportunity)

DIVISION 12 - FURNISHINGS (1) (2) (3) (4) (5)

- 12 21 WINDOW BLINDS
 - 12 22 CURTAINS & DRAPES
 - 12 23 INTERIOR SHUTTERS
 - 12 24 WINDOW SHADES
 - 12 32 MANUFACTURED CASEWORK
 - 12 35 SPECIALTY CASEWORK
 - 12 36 COUNTERTOPS
 - 12 46 FURNISHING ACCESSORIES
 - 12 48 RUGS & MATS
 - 12 51 OFFICE FURNITURE
 - 12 52 SEATING
 - 12 54 HOSPITALITY FURNITURE
 - 12 56 INSTITUTIONAL FURNITURE
 - 12 61 FIXED AUDIENCE SEATING
 - 12 63 STADIUM & ARENA SEATING
 - 12 67 Pews & Benches
 - 12 92 INTERIOR PLANTERS & ARTIFICIAL PLANTS
 - 12 93 SITE FURNISHINGS
 - 12 _____
- (Please fill-in for other opportunity)

DIVISION 13 - SPECIAL CONSTRUCTION (1) (2) (3) (4) (5)

- 13 11 SWIMMING POOLS
 - 13 17 TUBS & POOLS
 - 13 18 ICE RINKS
 - 13 21 CONTROLLED ENVIRONMENT ROOMS
 - 13 24 SPECIAL ACTIVITY ROOMS
 - 13 28 ATHLETIC & RECREATIONAL SPECIAL CONSTRUCTION
 - 13 31 FABRIC STRUCTURES
 - 13 34 FABRICATED ENGINEERED STRUCTURES
 - 13 36 TOWERS
 - 13 42 BUILDING MODULES
 - 13 48 SOUND, VIBRATION, & SEISMIC CONTROL
 - 13 49 RADIATION PROTECTION
 - 13 _____
- (Please fill-in for other opportunity)

DIVISION 14 - CONVEYING SYSTEMS (1) (2) (3) (4) (5)

- 14 11 MANUAL DUMBWAITERS
- 14 12 ELECTRIC DUMBWAITERS
- 14 21 ELECTRIC TRACTION ELEVATORS
- 14 26 HYDRAULIC ELEVATORS
- 14 27 CUSTOM ELEVATOR CABS & DOORS
- 14 28 ELEVATOR EQUIPMENT & CONTROLS
- 14 31 ESCALATORS

- 14 32 MOVING WALKS
- 14 42 WHEELCHAIR LIFTS
- 14 51 CORRESPONDENCE & PARCEL LIFTS
- 14 91 FACILITY CHUTES
- 14 92 PNEUMATIC TUBE SYSTEMS
- 14 _____

(Please fill-in for other opportunity)

DIVISION 21 - FIRE SUPPRESSION (1) (2) (3) (4) (5)

- 21 11 FIRE SUPPRESSION WATER SERVICE PIPING & METHODS
- 21 12 FIRE SUPPRESSION STANDPIPES
- 21 13 FIRE SUPPRESSION SPRINKLER SYSTEMS
- 21 21 CARBON-DIOXIDE FIRE EXTINGUISHING SYSTEMS
- 21 22 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
- 21 31 CENTRIFUGAL FIRE PUMPS
- 21 _____

(Please fill-in for other opportunity)

DIVISION 22 - PLUMBING (1) (2) (3) (4) (5)

- 22 07 PLUMBING INSULATION
- 22 11 FACILITY WATER DISTRIBUTION
- 22 13 FACILITY SANITARY SEWERAGE
- 22 14 FACILITY STORM DRAINAGE
- 22 41 COMMERCIAL PLUMBING FIXTURE
- 22 42 COMMERCIAL PLUMBING FIXTURES
- 22 45 EMERGENCY PLUMBING FIXTURES
- 22 47 DRINKING FOUNTAINS & WATER COOLERS
- 22 51 SWIMMING POOL PLUMBING SYSTEMS
- 22 66 CHEMICAL-WASTE SYSTEMS FOR LAB & HEALTHCARE FACILITIES
- 22 _____

(Please fill-in for other opportunity)

DIVISION 23 - HEATING VENTILATION AIR CONDITIONING (1) (2) (3) (4) (5)

- 23 07 HVAC INSULATION
- 23 09 INSTRUMENTATION & CONTROL FOR HVAC
- 23 13 FACILITY FUEL-STORAGE TANKS
- 23 21 HYDRONIC PIPING & PUMPS
- 23 22 STEAM & CONDENSATE PIPING & PUMPS
- 23 31 HVAC DUCTS & CASINGS
- 23 33 AIR DUCT ACCESSORIES
- 23 34 HVAC FANS
- 23 37 AIR OUTLETS & REGISTERS
- 23 38 VENTILATION HOODS

- 23 41 PARTICULATE AIR FILTRATION
- 23 52 HEATING BOILERS
- 23 54 FURNACES
- 23 56 SOLAR ENERGY HEATING EQUIP.
- 23 57 HEAT EXCHANGES FOR HVAC
- 23 62 PACKAGED COMPRESSOR & CONDENSOR UNITS
- 23 63 REFRIGERANT CONDENSORS
- 23 64 PACKAGED WATER CHILLERS
- 23 65 COOLING TOWERS
- 23 73 INDOOR CENTRAL-STATION AIR-HANDLING UNITS
- 23 74 PACKAGED OUTDOOR HVAC EQUIP
- 23 82 CONVECTION HEATING & COOLING UNITS
- 23 84 HUMIDITY CONTROL EQUIPMENT
- 23 _____

(Please fill-in for other opportunity)

DIVISION 26 - ELECTRICAL (1) (2) (3) (4) (5)

- 26 09 INSTRUMENTATION & CONTROL FOR ELECTRICAL SYSTEMS
- 26 12 MEDIUM VOLTAGE TRANSFORMERS
- 26 22 LOW VOLTAGE TRANSFORMERS
- 26 24 SWITCHES & PANELS
- 26 25 ENCLOSED BUS ASSEMBLIES
- 26 27 LOW VOLTAGE DISTRIBUTION EQUIPMENT
- 26 28 LOW VOLTAGE CIRCUIT PROTECTIVE DEVICES
- 26 29 LOW VOLTAGE CONTROLLERS
- 26 32 PACKAGED GENERATOR ASSEMBLIES
- 26 35 POWER FILTERS & CONDITIONERS
- 26 42 CATHODIC PROTECTION
- 26 51 INTERIOR LIGHTING
- 26 52 EMERGENCY LIGHTING
- 26 53 EXIT SIGNS
- 26 54 CLASSIFIED LOCATION LIGHTING
- 26 55 SPECIAL PURPOSE LIGHTING
- 26 56 EXTERIOR LIGHTING
- 26 61 LIGHTING SYSTEMS & ACCESSORIES
- 26 71 ELECTRICAL MACHINES
- 26 _____

(Please fill-in for other opportunity)

COMMUNICATIONS - 27 (1) (2) (3) (4) (5)

- 27 13 COMMUNICATIONS BACKBONE CABLING
- 27 41 AUDIO-VIDEO SYSTEMS
- 27 51 DISTRIBUTED AUDIO VIDEO
- 27 52 HEALTHCARE COMMUNICATIONS & MONITORING SYSTEMS
- 27 53 DISTRIBUTED SYSTEMS

27 _____
(Please fill-in for other opportunity)

ELECTRONIC SAFETY & SECURITY-28 (1) (2) (3) (4) (5)

28 13 COMMUNICATIONS BACKBONE CABLING

28 16 INTRUSION DETECTION

28 23 VIDEO SURVEILLANCE

28 31 FIRE DETECTION

28 33 FUEL-GAS DETECTION

28 39 MASS NOTIFICATION SYSTEMS

28 _____
(Please fill-in for other opportunity)

EARTHWORK-31 (1) (2) (3) (4) (5)

31 06 SCHEDULES FOR EARTHWORK

31 11 CLEARING & GRUBBING

31 15 SELECTIVE TREE & SHRUB REMOVAL & TRIMMING

31 14 EARTH STRIPPING & STOCKPILING

31 22 GRADING

31 23 EXCAVATION & FILL

31 25 EROSION & SEDIMENTATION

31 31 SOIL TREATMENT

31 32 SOIL STABILIZATION

31 33 ROCK STABILIZATION

31 36 GABIONS

31 37 RIPRAP

31 41 SHORING

31 43 CONCRETE RAISING

31 45 VIBROFLORATION & DENSIFICATION

31 46 NEEDLE BEAMS

31 42 UNDERPINNING

31 52 COFFERDAMS

31 56 SHURRY WALLS

31 62 DRIVEN PILES

31 63 BORED PILES

31 _____
(Please fill-in for other opportunity)

EXTERIOR IMPROVEMENTS-32 (1) (2) (3) (4) (5)

32 11 BASE COURSES

32 12 FLEXIBLE PAVING

32 13 RIGID PAVING

32 16 CURBS, GUTTERS SIDEWALKS & DRIVEWAYS

32 17 PAVING SPECIALTIES

32 18 ATHLETIC & RECREATIONAL SURFACING

32 31 FENCES & GATES

32 32 RETAINING WALLS

32 34 FABRICATED BRIDGES

32 35 SCREENING DEVICES

32 84 PLANTING IRRIGATION

32 91 PLANTING PREPARATION

32 92 TURF & GRASSES

32 93 PLANTS

32 94 PLANTING ACCESSORIES

32 98 TRANSPLANTING

32 _____
(Please fill-in for other opportunity)

UTILITIES-33 (1) (2) (3) (4) (5)

33 11 WATER UTILITY DISTRIBUTION PIPING

33 12 WATER UTILITY DISTRIBUTION EQUIPMENT

33 16 WATER UTILITY STORAGE TANKS

33 21 WATER SUPPLY WELLS

33 31 SANITARY UTILITY SEWERAGE PIPING

33 36 UTILITY SEPTIC TANKS

33 41 STORM UTILITY DRAINAGE PIPING

33 42 CULVERTS

33 45 STORM UTILITY WATER DRAINS

33 46 SUBDRAINAGE

33 48 STORM DRAINAGE STRUCTURES

33 51 NATURAL GAS DISTRIBUTION

33 52 LIQUID FUEL DISTRIBUTION

33 71 ELECTRICAL UTILITY TRANSMISSION & DISTRIBUTION

33 81 COMMUNICATIONS & STRUCTURES

33 _____
(Please fill-in for other opportunity)

TRANSPORTATION-34 (1) (2) (3) (4) (5)

34 11 RAIL TRACKS

34 41 ROADWAY SIGNALING AND CONTROL EQUIPMENT

34 71 ROADWAY CONSTRUCTION

34 72 RAILWAY CONSTRUCTION

34 _____
(Please fill-in for other opportunity)

MATERIAL PROCESSING & HANDLING

EQUIPMENT-41 (1) (2) (3) (4) (5)

41 21 CONVEYORS

41 22 CRANES & HOISTS

41 _____
(Please fill-in for other opportunity)

POLLUTION CONTROL EQUIP-44 (1) (2) (3) (4) (5)

44 11 PARTICULATE CONTROL EQUIPMENT

44 _____
(Please fill-in for other opportunity)

WATER & WASTEWATER EQUIPMENT-46

(1) (2) (3) (4) (5)

46 07 PACKAGED WATER & WASTEWATER TREATMENT EQUIPMENT

46 _____
(Please fill-in for other opportunity)

Form 4
Contractors Submitting Bids
(Must be submitted in the contractor's sealed bid)

General Contractor: GFC Construction, Inc.

Contact: Paul Burkhalter

Name of Project: City Walk at University Place and Forest Lake

Date Submitted: August 28, 2014

All MBE/DBE/WBE Firms Submitting Bids

Scope of Work

None Received

<hr/>	<hr/>

FORM 5
CONTRACTORS SUBMITTING BIDS
(Must be submitted following tentative bid award)

General Contractor: _____

Contact: _____

Name of Project: _____

Total Contract Amount: \$ _____

Total Amount of All Subcontractors: \$ _____

Date Submitted: _____

All MBE/DBE/WBE firms to be utilized

Scope of Work

Contract Amount

<hr/>	<hr/>	<hr/>

(Use additional pages if necessary)

**Form 6
Unavailability Certification
(Must be submitted following tentative bid award)**

I, _____ (Name/Title), of _____ (Company) certify that on _____ (Date) I contacted the following Minority/Disadvantaged Business Enterprise to obtain proposals/bids for the following work items:

<u>MDE/DBE/WBE Firm</u>	<u>Work Items Sought</u>	<u>Form of Proposal Sought</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

To the best of my knowledge and belief, said Minority/Disadvantaged Business Enterprises were unavailable for work on this project, or unable to prepare a proposal/bid for the following reason(s): _____

(This form to be completed by each MBE/DBE/WBE listed, which was contacted, but did not submit a bid/proposal)

_____ (Name of MBE/DBE/WBE) was offered an opportunity to submit a proposal on the above identified work on _____ (Date) by _____ (Company Name).

The above statement is a true and accurate account of why I did not submit a proposal/bid on this project.

_____ (Signature of MBE/DBE/WBE)

_____ (Date)

_____ (Title)

(Use additional pages if necessary)

Form 7
Project Closeout Report
(To be submitted upon completion of project)

General Contractor: _____
 Contact: _____
 Name of Project: City Walk at University Place and Forest Lake
 Total Contract Amount: \$ _____
 Final Contract Amount: \$ _____
 Date Submitted: _____

<u>All MBE/DBE/WBE firms verified</u>	<u>Original subcontract amount</u>	<u>Final subcontract amount</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Form 8
Monthly Report Form
(To be submitted monthly directly to the City's consultant)

General Contractor: _____
 Contact: _____
 Name of Project: City Walk at University Place and Forest Lake
 Total Contract Amount: \$ _____
 Date Submitted: _____

Billings

Each MBE/DBE/WBE Contractor utilized	Original subcontract amount	Previous amount	This period amount	Total Amount

(Use additional pages if necessary)

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

<u>TITLE</u>	<u>SECTION</u>
Summary of Project	Section 01011
Project Coordination.....	Section 01043
Regulatory and Safety Equipment	Section 01060
Submittals.....	Section 01301
Temporary Facilities and Controls.....	Section 01501
Contract Closeout	Section 01701
Cleaning and Maintenance	Section 01800
Stormwater Monitoring and Temporary Erosion Control.....	Section 02240
Demolition, Clearing and Grubbing	Section 02242
Site Construction	Section 02246
Trenching, Backfill and Compaction for Utilities.....	Section 02249
Storm Sewers.....	Section 02433
Bituminous Concrete Paving	Section 02500
Ductile Iron Pipe and Fittings.....	Section 02600
PVC Pipe.....	Section 02601
Gate Valves	Section 02603
Service Connections	Section 02605
Fire Hydrants	Section 02608
Tapping Sleeve and Valve	Section 02609
Existing Utilities	Section 02620
Valve Boxes.....	Section 02643
Fire Hydrants	Section 02644
Water System.....	Section 02660
Manholes	Section 02664

Traffic Control.....	Section 02800
Chain Link Fencing	Section 02834
Traffic Stripe, Marking, and Legends.....	Section 02911
Cast In Place Concrete.....	Section 02930

LANDSCAPING

Landscaping	Section 12800
Underground Irrigation System	Section 12810
Fertilization and Soil Preparation	Section 12820
Turfgrass Sod.....	Section 12830

ELECTRICAL

Basic Electrical Materials and Methods	Section 16050
Grounding and Bonding	Section 16060
Electrical Identification.....	Section 16075
Conductors and Cables	Section 16120
Raceway and Boxes.....	Section 16130
Exterior Lighting	Section 16521

SPECIAL CONDITIONS

Special Conditions.....	Section 20000
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SECTION 01011 - SUMMARY OF PROJECT

Article	Contents	Page
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1.01 Scope		1
1.02 Organization of Contract Documents		1
1.03 Project Engineering, Observation and Construction Staking		1

SECTION 01011 - SUMMARY OF PROJECT

PART 1 - GENERAL

1.01 Scope:

The project consists of the construction of a pedestrian pathway, site lighting, landscaping, irrigation, storm sewers, sanitary sewer, duct banks for future technological needs and other associated items of work as indicated by the construction plans.

1.02 Organization of Contract Documents:

The project consists of one proposal containing all of the work described in Section 1.01 Scope.

1.03 Project Engineering, Observation and Construction Staking:

McGiffert and Associates, LLC is the Project ENGINEER, employed by the OWNER. McGiffert and Associates, LLC, will perform all construction observation and construction staking.

END OF SECTION 01011

SECTION 01043 - PROJECT COORDINATION

Article	Contents	Page
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1.02 Construction Manager and Superintendent.....		1
1.03 Project Schedules		1
1.04 Coordination With Other Contractors		1
1.05 Submittals.....		1
1.06 Measurement and Payment.....		1
PART 2 - MATERIALS		2
2.01 Storage.....		2
PART 3 - EXECUTION		2

SECTION 01043 - PROJECT COORDINATION

PART 1 - GENERAL

1.01 Scope:

This section outlines the minimum required procedures for coordination of the proposed expansion.

1.02 Construction Manager and Superintendent:

The CONTRACTOR shall employ or appoint a designated well qualified and experienced Construction Manager and a Superintendent for the duration of the project. The Construction Manager and Superintendent shall both be designated in writing to the OWNER within fourteen (14) days following the Notice of Award. The designated Construction Manager shall be the point of contact for the PROJECT ENGINEER and his RESIDENT OBSERVER for the duration of the contract.

1.03 Project Schedules:

- A. Each CONTRACTOR shall submit, acceptable to the OWNER, in accordance with the City of Tuscaloosa contract as per Article II, Section I, Page 35, a proposed schedule for the project. The schedule shall be delivered to the OWNER, through the PROJECT ENGINEER, no later than fourteen (14) days following the Notice of Award. Revised acceptable Project Progress Schedules shall be submitted by the CONTRACTOR at intervals of no less than 30 days during the duration of the contract and when specifically requested by the OWNER. The project schedule shall include as a minimum: order of significant items, delivery of materials (specifically lighting fixtures/poles) and appurtenances, and their components, etc.
- B. The CONTRACTOR shall give a detailed listing of crews including the name of the major foreman of each crew as a part of the schedule.
- C. The critical items of the project shall be included as part of the schedule. Omission of items in scheduling or the failure of the CONTRACTOR to identify and schedule critical items shall not be justification for extension of contract time.

1.04 Coordination with Other Contractors:

The CONTRACTOR shall schedule, coordinate, and cooperate with any other Contractor or agent employed by the OWNER or other Contractors working on the project.

1.05 Submittals:

Submittals shall be delivered to the OWNER, through the PROJECT ENGINEER in accordance with Section 01301 no later than fourteen (14) days following the Notice of Award. Due to the critical time factor of the project, the CONTRACTOR shall require that all manufacturers carefully prepare their submittals and indicate all details needed to confirm compliance with the Contract Documents. The CONTRACTOR shall carefully check and coordinate every submittal prior to sending it.

1.06 Measurement and Payment:

No separate payment shall be made for Project Coordination as the cost of this item of the work shall be incorporated in the various unit pricing of the work.

PART 2 - MATERIALS

2.01 Storage:

The CONTRACTOR shall acquire a suitable storage facility for the storage of all materials. It shall be the sole responsibility of the CONTRACTOR to secure all storage of materials whether onsite or offsite. Storage areas shall be accessible to ENGINEER or his RESIDENT OBSERVER at all times. No materials shall be stored on rights-of-way without approval from the City of Tuscaloosa in writing.

PART 3 - EXECUTION

Not Used

END OF SECTION 01043

SECTION 01060 - REGULATORY AND SAFETY EQUIPMENT

Contents

Article	Page
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1.01 Scope.....	1
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1.03 Protection and Access to Public and Private Rights-of-Way.....	1
1.04 Protection of Air Quality	2
1.05 Traffic Control Devices.....	2
1.06 Safety.....	2
1.07 Payment.....	2

SECTION 01060 - REGULATORY AND SAFETY EQUIPMENT

PART 1 - GENERAL

1.01 Scope:

The CONTRACTOR shall maintain all work areas within or outside the project boundaries free of environmental pollution, abide by all applicable regulations set forth by Federal, State and Local authorities, and provide a safe work area for workers and the general public.

1.02 Protection of Existing Utilities:

- A. The CONTRACTOR shall provide whatever measures are necessary to properly protect and maintain all existing utilities encountered in the work.
- B. The CONTRACTOR shall be solely and directly responsible to the utility owner for any and all damages to the various utilities, caused by the CONTRACTOR'S actions or lack of actions to adequately protect such utilities.
- C. The CONTRACTOR shall notify utility owners that are affected during construction 48-hours in advance of the construction operation.
- D. The CONTRACTOR shall cooperate fully and coordinate with all utility owners in the event of interruption of service to the utility.
- E. The CONTRACTOR shall maintain all storm sewers, drains and/or ditches so that flow is not disturbed.
- F. The CONTRACTOR shall protect storm drains, inlets and/or ditches, lawns, landscaping and other facilities, from damage during the testing, and flushing.
- G. The locations of existing underground and overhead utilities on the plans are shown in an approximate way only. The CONTRACTOR shall determine the exact location of all existing utilities before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve any and all underground or overhead utilities. The CONTRACTOR shall include the cost for locating, uncovering, and protecting underground and overhead utilities in with the price bid for the various other items of work.

1.03 Protection and Access to Public and Private Rights-of-Way:

- A. The CONTRACTOR shall provide and maintain access to all public and private properties at all times. Roadways authorized closed by State or Local authorities shall be maintained to provide access to all fire, police, and other emergency vehicles and all individuals having private property in the closed area. The CONTRACTOR shall notify at least 24 hours in advance the Fire, Police, and Transportation Departments having local jurisdiction, the OWNER and any other individuals, businesses, or agencies that may be affected.
- B. All driveways shall be protected and access maintained by the CONTRACTOR during the construction phase.
- C. The CONTRACTOR shall be responsible for any damage caused by his operations to existing yards, streets, parking lots, utilities, railroads, etc., and such damage shall be corrected at the CONTRACTOR'S expense.

1.04 Protection of Air Quality:

The CONTRACTOR shall minimize dust and air pollution through the use of water or other devices, require the use of properly operating combustion emission control devices and by encouraging the shutdown of construction vehicles when not in use.

1.05 Traffic Control Devices:

- A. The CONTRACTOR shall provide and maintain, in service at all times, traffic control devices, barricades, cones, flagmen, etc. as appropriate or necessary and/or required by State and Local authorities. All traffic control shall as a minimum be in compliance with the National Manual On Uniform Traffic Control Devices (MUTCD) latest edition.
- B. The CONTRACTOR shall protect the public by adequate fencing, lighting, and/or flagging the construction work zone.

1.06 Safety:

- A. The CONTRACTOR shall do whatever work is necessary for safety and be solely and completely responsible for conditions of the jobsite, including safety of all persons (including but by no means limited to the public, site personnel, visitors, or employees) and property during the Contract period. The contract period shall include any subsequent warranty or other period associated with project deficiency or repair and all hours including, and in addition to, normal working hours.
- B. Safety provisions shall conform to the Federal and State Departments of Labor and the Occupational Safety and Health Act (OSHA), and all other applicable federal, state, county, and local laws, ordinances, codes, the requirements set forth herein, and any regulations that may be specified in other parts of these Contract Documents. Where any of these are in conflict, the more stringent requirement shall be followed. The CONTRACTOR'S failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth therein.
- C. The CONTRACTOR shall at all times provide proper facilities for safe access to the work by authorized government officials (federal, state, county and local) and representatives of the OWNER.

1.07 Payment:

No separate payments shall be made for Regulatory and Safety Requirements as costs for this item of work shall be incorporated in the various unit pricing of the work.

END OF SECTION 01060

SECTION 01301 - SUBMITTALS

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1.06 Copies Required		2
1.07 Work Performed Prior to Submittal Acceptance		3
1.08 Measurement and Payment		3

SECTION 01301 - SUBMITTALS

PART 1 - GENERAL

1.01 Scope:

This section of specifications covers the General Requirements for the preparation and assembly of submittals during the progress of the work. The CONTRACTOR'S attention is called to the General Conditions and to the individual sections of specifications pertaining to the items of work. Any questions concerning the submittal process should be directed to the ENGINEER.

1.02 Administrative Submittals:

- A. All administrative submittals required in the Bid Documents, General Conditions, Supplemental Conditions, or Technical Specifications shall be provided by the CONTRACTOR. These submittals include but are not limited to payrolls, construction schedules, EEO documentation, etc. (If required).
- B. All permits to Federal, State or Local authorities shall be submitted promptly by the CONTRACTOR.
- C. The CONTRACTOR shall submit on a daily basis the number of persons employed in the construction process, both CONTRACTOR and subcontractor personnel, their classification, equipment used during the day, equipment added or deleted from the jobsite and the amount of work accomplished in each classification of work performed that day.

1.03 Technical Submittals:

- A. Completely identify each submittal and resubmittal by showing at least the following information.
 - 1. Name and address of submitter, plus name and telephone number of the individual who may be contacted for further information.
 - 2. Name of project as it appears in the bid documents.
 - 3. Drawing number and specifications section number to which the submittal applies.
 - 4. Whether this is an original submittal or resubmittal.
- B. Prior to submittal for ENGINEER'S review, use all means necessary to fully coordinate all material, including, but not limited to, the following procedures:
 - 1. Determine and verify all field dimensions and conditions, materials, catalog numbers, and similar data.
 - 2. Coordinate as required with all trades and with all public agencies involved.
 - 3. Secure all necessary approvals from public agencies and others and signify by stamp, or other means, that they have been secured.
 - 4. Clearly indicate all deviations from the Contract Documents.
 - 5. Certify that the submittal complies with specifications except as noted, specifically in the transmittal letter memo of the submittal. Exceptions shall not be allowed without specific written authorization from the ENGINEER.

- C. **Grouping of Submittals:** Unless otherwise specifically permitted by the ENGINEER, make all submittals in groups containing all associated items; the ENGINEER may reject partial submittals as not complying with the provisions of the Contract Documents.
- D. **General:** Make all submittals far enough in advance of scheduled dates of installation to provide all required time for reviews, for securing necessary approvals, for possible revision and resubmittal, and for placing orders and securing delivery.
- E. In scheduling, allow at least ten full working days for the ENGINEER's review following his receipt of the submittal or resubmittal. Cost of delays occasioned by tardiness of submittals may be backcharged to the CONTRACTOR as necessary and shall not be borne by the OWNER, ENGINEER or his representative.

1.04 Substitutions:

- A. **ENGINEER's Approval Required:** The Contract is based on materials, equipment, and methods described in the Contract Documents:
 - 1. The ENGINEER will consider proposals for substitution of materials, equipment, and methods only when such proposals are accompanied by full and complete technical data and all other information required by the ENGINEER to evaluate the proposed substitution. The base bid shall meet the specifications and brand names listed herein. The ENGINEER, at his option, may evaluate alternative equipment and corresponding deducts after bidding.
 - 2. Do not substitute materials, equipment, or methods unless such substitution has been specifically accepted, in writing, for this work by the ENGINEER.
- B. **Or Equal:** Where the phrase "or equal" or "or equal as approved by the ENGINEER" occurs in the Contract Documents, do not assume that material, equipment, or methods will be approved as equal by the ENGINEER unless the item has been specifically accepted, in writing, for this work by the ENGINEER. The decision of the ENGINEER shall be final.

1.05 Shop Drawings:

A. Scale Required:

Unless otherwise specifically directed by the ENGINEER, make all Shop Drawings accurately to a scale sufficiently large to show all pertinent features of the item and its method of connection to the work.

B. Type of Prints Required:

Unless otherwise specifically directed by the ENGINEER, make all Shop Drawing prints in blue or black line on white background.

1.06 Copies Required:

In general, unless directed otherwise by the ENGINEER, the CONTRACTOR's submittals shall be in sufficient quantities to allow three (3) copies to be retained by the ENGINEER.

1.07 Work Performed Prior to Submittal Acceptance:

Any and all work performed by the CONTRACTOR prior to submittal review shall be at the CONTRACTOR'S risk. No payment shall be made on items prior to a reviewed submittal.

1.08 Measurement and Payment:

No separate payment shall be made for Submittals as cost of this item of work shall be incorporated in the various unit pricing of the work.

END OF SECTION 01301

SECTION 01501 - TEMPORARY FACILITIES AND CONTROLS

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1.04	Sanitary Facilities	2
1.05	Water for Testing.....	2
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1.04 Sanitary Facilities:

The CONTRACTOR shall provide, maintain, and remove, as required, sanitary facilities for use by his employees, and subcontractor employees and comply with the regulations of state and local health department regulations and as directed by the ENGINEER. However, the ENGINEER shall be under no obligation to direct the CONTRACTOR.

1.05 Water for Testing:

- A. The OWNER will provide water for use during the flushing and testing process of City of Tuscaloosa watermains and associated appurtenances. The CONTRACTOR shall provide all test apparatus. The CONTRACTOR shall be responsible for water used for any and all other items of work other than flushing and testing along with any associated fees and/or permits for the water.
- B. The CONTRACTOR shall be responsible for the disposal of water used during this phase. Any damage including, but not limited to, yards, paving, existing storm drains, ditches, or any other facility, etc., shall be repaired at the CONTRACTOR's expense.
- C. Operation of existing water valves and appurtenances shall be performed by the OWNER'S personnel only. The CONTRACTOR shall schedule with the OWNER, through the project ENGINEER or his RESIDENT OBSERVER, any need for these services.

1.06 Safety:

The CONTRACTOR shall be solely and completely responsible for safety. Neither the OWNER nor ENGINEER shall be responsible for safety. The CONTRACTOR shall take whatever actions, provisions, and methods that may be appropriate for safety and for the protection of all persons.

1.07 Payment:

No separate payment shall be made for Temporary Facilities and Controls as the cost of this item of the work shall be incorporated in the various unit pricing of the work.

END OF SECTION 01501

SECTION 01701 - CONTRACT CLOSEOUT

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SECTION 01701 - CONTRACT CLOSEOUT

1.01 General:

This Section of Specifications outlines the general procedures to be followed for the closeout of all Contracts.

1.02 Substantial Completion:

- A. The substantial completion date for each portion of work shall be as established by the General Conditions and the Contract.
- B. The CONTRACTOR should be aware that the OWNER may desire to place portions of the work into service prior to completion of the Contract.

1.03 Final Inspection:

- A. Upon final cleaning and written notice from the CONTRACTOR that the work is completed, the ENGINEER will make a preliminary inspection with the OWNER and CONTRACTOR present. Upon completion of the preliminary inspection, the ENGINEER will notify in writing any defective or incomplete work revealed by the inspection.
- B. Upon receiving notification from the ENGINEER, the CONTRACTOR shall immediately proceed to remedy all punch list items to the satisfaction of the OWNER. Remedy of items does not release the CONTRACTOR from warranty as otherwise specified.
- C. The CONTRACTOR shall inform the ENGINEER in writing that he has completed or corrected all punch list items, and desires final inspection. The ENGINEER, in the presence of the OWNER and CONTRACTOR, shall make a final inspection of the project.
- D. Should the ENGINEER find all work to be satisfactory, the CONTRACTOR may make application for final payment in accordance with the General Conditions of the Contract. Should the ENGINEER find deficiencies in the work, the ENGINEER will inform the CONTRACTOR and deny any request for final payment until such deficiencies are corrected to the satisfaction of the OWNER and ENGINEER.

1.04 Final Submittals:

- A. The Contract shall not be finalized and final payment shall be withheld until all submittals, shop drawings, as-built drawings, keys, etc. are submitted to the ENGINEER.
- B. All guarantees, bonds, affidavits, releases shall be finalized and satisfactorily submitted to the ENGINEER before final payment is made.
- C. Final payment shall be withheld until satisfactory evidence of release of all liens and claims against the CONTRACTOR have been submitted to the ENGINEER.
- D. Final payment shall be withheld until thirty (30) days after Advertisement of Completion and until satisfactory Proof of Advertisement has been submitted to the ENGINEER. The Legal Advertisement of Completion shall be run for four (4) consecutive weeks in the local newspaper. Form of Advertisement shall be as approved by the Engineer.

1.05 Measurement and Payment:

No separate payment shall be made for Contract Closeout as the cost of this item of the work shall be incorporated in the various unit pricing of the work.

END OF SECTION 01701

SECTION 01800 - CLEANING AND MAINTENANCE

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SECTION 01800 - CLEANING AND MAINTENANCE

1.01 General:

- A. This section covers the work necessary for cleaning during construction and final cleaning on completion of the work.
- B. At all times maintain areas affected by the Contract and public properties free from accumulations of waste, debris, and rubbish caused by or related to construction operations.
- C. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws. Do not burn or bury rubbish and waste materials on project site. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains. Do not dispose of wastes into streams of waterways.
- D. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- E. Use cleaning materials only on surfaces recommended by cleaning material manufacturers.

1.02 Cleaning During Construction:

- A. During execution of work, clean site, streets, gutters, and public properties and dispose of waste materials, dirt, dust, mud, debris, and rubbish, etc. to assure that buildings, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. Provide approved containers for collection and disposal of waste materials, debris, and rubbish.
- D. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from exposed and semi-exposed surfaces.
- E. Repair, patch, and touch up marred surfaces to specified finish to match adjacent surfaces.

1.03 Final Cleaning:

- A. At the completion of work on all contracts and prior to final inspection, the CONTRACTOR shall clean the entire project of all construction debris, materials, etc., from the work area and any other areas affected by the work. The areas shall be cleared and restored to as good or better than original condition.
- B. Should the CONTRACTOR not remove rubbish or debris from the site as specified above, the OWNER reserves the right to have the cleaning done at the expense of the CONTRACTOR. However, the OWNER shall be under no obligation to do so.
- C. Repair, patch, and touch-up marred surfaces to specified finish, to match adjacent surfaces.
- D. Broom clean paved surfaces; rake clean other surfaces of grounds.
- E. Remove from the OWNER'S property all temporary structures and all materials, equipment, and appurtenances not required as a part of, or appurtenant to, the completed work. See Section TEMPORARY CONSTRUCTION FACILITIES AND UTILITIES.

1.04 Payment:

No separate payment shall be made for Maintenance and Cleaning as the cost of this item of the work shall be incorporated in the various unit pricing of the work.

END OF SECTION 01800

SECTION 02240 - STORMWATER MONITORING AND TEMPORARY EROSION CONTROL

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SECTION 02240 - STORMWATER MONITORING AND TEMPORARY EROSION CONTROL

PART 1 - GENERAL

1.01 Stormwater Permit and Monitoring:

- A. The CONTRACTOR shall obtain a National Pollutant Discharge Elimination System (NPDES) General Permit Number ALR100000 (Stormwater Permit) from the Alabama Department of Environmental Management (ADEM) for discharges associated with regulated construction activity that will result in land disturbance equal to or greater than once acre. The CONTRACTOR shall strictly adhere to all requirements of the General Permit. Particular attention is directed to parts of the permit regarding inspections, sampling, monitoring, Construction Best Management Practices Plan, and Spill Prevention Control and Counter Measure Plan. McGiffert and Associates, LLC, on behalf of and at the expense of the Owner, will prepare the NPDES permit and associated support documents for the CONTRACTOR to execute.
- B. The erosion control plan included with the Contract Documents shall be interpreted as minimum requirements and not considered as all that is necessary for controlling erosion and sedimentation on the project. CONTRACTOR shall be responsible for adding or supplementing any additional items or techniques as necessary depending on type and sequence of work being performed on the project. The OWNER reserves the right to require additional items as deemed necessary by the qualified credential professional based on the required inspections at no additional costs to the project.
- C. The CONTRACTOR shall utilize erosion control techniques on all areas of the project to prevent sedimentation from leaving the project area. He shall install and maintain the necessary BMPs to prevent sedimentation and other pollutants from leaving the project area or entering "Waters of the State". Erosion control measures shall be implemented as shown on the Standard Details included in the contract documents and shall meet or exceed the requirements of Section 665.02 of Alabama Department of Transportation Specifications, Latest Edition and the Alabama Handbook for Erosion Control, Sediment Control, And Stormwater Management On Construction Sites and Urban Areas (Latest Edition).
- D. McGiffert and Associates, LLC, on behalf of the OWNER, will provide stormwater inspections and reports for the project as outlined in Part III.G of the General Permit. The CONTRACTOR shall review, sign, and return inspection reports provided by the OWNER to McGiffert and Associates, LLC for record retention as required by Part IV.J of the Permit to be made available for review by the Alabama Department of Environmental Management.
- E. The CONTRACTOR is responsible for his operations that may require monitoring oil & grease, etc. as outlined in ADEM Administrative Code Chapter 335-6-6-.12 (r) as noted in Part III.E of the Permit.
- F. The CONTRACTOR will be furnished a Stormwater Permit registration package when the contract is awarded. The Storm Water Permit registration package will include the following:
1. Typical transmittal letter to the Alabama Department of Environmental Management.
 2. Notice of Intent filled out with project information.
 3. Project area map.
 4. Construction Best Management Practices Plan (CBMPP)
- G. The CONTRACTOR shall return the following items to McGiffert and Associates, LLC for submittal to the Alabama Department of Environmental Management within five (5) working days of the receipt of the Stormwater Permit registration package provided by the OWNER:

1. The stormwater permit Notice of Intent and CBMPP both signed by the responsible official.
2. Check made payable to: Alabama Department of Environmental Management, in the amount of \$1,155.00 for the general permit registration fee. The costs for this permit registration fee shall be incidental to cost of the project.

1.02 Payment:

- A. Individual erosion control items shall be paid for at the unit prices as shown in the bid schedule.
- B. Monthly inspections will be provided by the OWNER. Other monitoring, as required by the permit for fuel tanks, oil and grease, fertilizers, etc. shall be the CONTRACTOR'S responsibility and shall be incidental to the project.
- C. No separate payment shall be made for adhering to all requirements of the ADEM Stormwater Permit. All such items, including all maintenance, installation, removal, etc. shall be the CONTRACTOR'S responsibility and shall be incidental to the cost of the project.
- D. The CONTRACTOR shall be responsible for all costs associated with any enforcement actions and penalties associated with all non-compliant issues.

PART 2 - MATERIALS

2.01 Erosion Control Materials:

Materials used for erosion control measures shall be in accordance with the Standard Details included in the contract documents and shall meet or exceed Section 665.02 of Alabama Department of Transportation Specifications, Latest Edition and the Alabama Handbook For Erosion Control, Sediment Control, And Stormwater Management On Construction Sites and Urban Areas (Latest Edition) in order to accomplish erosion control.

PART 3 - EXECUTION

3.01 Erosion Control Measures:

- A. Erosion control measures shall be performed on all disturbed area in accordance with the Standard Details included in the contract documents and shall meet or exceed Section 665.02 of Alabama Department of Transportation Specifications, Latest Edition and the Alabama Handbook For Erosion Control, Sediment Control, And Stormwater Management On Construction Sites and Urban Areas (Latest Edition). The CONTRACTOR will perform all erosion control measures necessary to prevent silt and soil from tracking/accumulating on driveways, roads, or other surfaces, leaving the construction area, and entering private property, entering storm drains/inlets, or the "Waters of the State".
- B. Erosion control measures shall be maintained by the CONTRACTOR until project area is permanently stabilized. If additional measures are required to correct problems which might occur, these shall be performed by the CONTRACTOR at no additional cost to the OWNER.
- C. The CONTRACTOR shall be totally responsible for all erosion and sedimentation control on the project until permit has been transferred or all areas are stabilized permanently as required by the General Permit and the permit is terminated.

- D. The CONTRACTOR shall be responsible for ensuring that all BMPs are properly implemented/maintained at all times during the project and specifically prior to any anticipated rain events. Maintenance, installation, etc. shall be of utmost importance prior to all anticipated rain events. CONTRACTOR shall promptly repair, maintain, supplement erosion control items prior to and immediately after all rain events, and shall immediately clean up and remove any silt from all BMPs and/or areas where sediment has discharged from the project area at no additional costs to the project.

- E. All fines, associated costs, penalties, or legal action resulting from improper or negligent erosion control practices as required by the regulatory requirements of ADEM, EPA, and local government ordinances shall be the responsibility of the CONTRACTOR.

END OF SECTION 02240

SECTION 02242 - DEMOLITION, CLEARING AND GRUBBING

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SECTION 02242 - DEMOLITION, CLEARING AND GRUBBING

PART 1 - GENERAL

1.01 Scope:

- A. The work under this section shall consist of partial clearing, grubbing, demolition and removal of all vegetation, debris, existing pavement, and structures from within the project area necessary to perform all items of work as shown on plans and set forth in the Specifications.
- B. All labor, materials, equipment, tools and services required to perform work under this section shall be furnished and performed in compliance with the Specifications.

1.02 Related Sections:

- A. Section 02246 – Site Construction
- B. Section 02620 – Existing Utilities

1.03 Unit Prices:

No separate payment shall be made as the cost of this item of the work shall be incorporated in the various unit pricing of the work.

PART 2 - PRODUCTS:

2.01 Materials:

A. Clearing:

The area within the construction limits shall be cleared of all surface objects and all trees, stumps, roots, and other objectionable obstructions resting or protruding through the surface of the original ground not designated to be retained.

B. Grubbing:

Areas within the construction limits shall be grubbed of all objectionable matter on or projecting through the ground surface. All fill areas shall be grubbed to a depth at least one foot below the natural ground.

C. Disposal:

1. Burning of perishable material will not be acceptable. All material shall be removed from the site.
2. Only such property may be salvaged by the CONTRACTOR as is directed by the ENGINEER and in the event of any doubt respecting the ownership of any particular property, the CONTRACTOR shall request from the ENGINEER a written statement respecting its ownership.

3. All salvage becomes the property of the CONTRACTOR, but storage of such materials and equipment on the project area will not be permitted except for the duration of the Contract and such storage shall at no time interfere with activities of the OWNER or of other CONTRACTORS.
4. Removal and proper disposal of all abandoned sidewalks, pipes, culverts, pavement, structures and appurtenances that require removing to complete construction as shown on the plans and set forth in the Specifications shall be included as payment under this section.
5. Material and debris removed from the project shall be disposed of in a manner acceptable to the ENGINEER. Indiscriminate dumping of these materials on abutting property with or without the OWNERS consent will not be considered satisfactory disposal. The CONTRACTOR must comply with all local, State and Federal laws and ordinances pertaining to the type of material being disposed of.
6. CONTRACTOR will be responsible for coordinating with the respected utility companies for capping of all abandoned utilities.

END OF SECTION 02242

SECTION 02246 - SITE CONSTRUCTION

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SECTION 02246 - SITE CONSTRUCTION

PART 1 - GENERAL

1.01 Scope:

The work under this section shall cover the construction of the pedestrian pathway and other driveway/street work shown on plans. The work shall include, but is not limited to, unclassified excavation, embankment and under-cut.

1.02 Related Sections:

- A. Section 02249 - Trenching, Backfill and Compaction for Utility Trenches
- B. Section 02433 - Storm Sewers
- C. Section 02661 - Gravity Sanitary Sewer System

1.03 Payment:

Payment shall be as indicated in the unit price bid schedule. Any item required but not identified in the unit price bid schedule shall be incidental to the project.

1.04 References:

- A. ALDOT Standard Specifications for Highway Construction, latest edition are hereby incorporated by reference.
- B. ALDOT Special and Standard Highway Drawings.
- C. National Manual on Uniform Traffic Control Devices, Latest Edition.

1.05 Construction Staking:

Control construction staking shall be the responsibility of the ENGINEER. The CONTRACTOR shall exercise due care to preserve stakes and destroy them only at the direction of the ENGINEER. If restaking is necessary due to negligence on the part of the personnel of the CONTRACTOR, the ENGINEER may "back charge" cost of restaking against this contract.

1.06 Bench Marks and Monuments:

- A. All bench marks, control monuments and stakes, whether newly established by the ENGINEER or previously existing, shall be carefully maintained and protected from damage or dislocation.
- B. If any discrepancies are found by the ENGINEER between the drawings and actual conditions at the site, the ENGINEER reserves the right to make such minor adjustments in work specified hereunder as are necessary to accomplish the intent of the Contract Documents, without increased cost to OWNER.

PART 2 - PRODUCTS:

2.01 Materials:

A. Unclassified Excavation:

1. Unclassified Excavation shall include necessary stripping excavation, roadbed excavation and approved undercut excavation. Work shall include topsoil stockpiling and disposal of all unsuitable or undesirable material to off-site disposal areas. Material unsuitable for use in embankments shall include:

- Organic silts
- Organic clays of medium to high plasticity
- Peat or other highly organic soils

2. All suitable on-site excavation that is performed as indicated by the contract drawings or directed by the ENGINEER may be recovered, processed and used as embankment fill and placed in the specified areas.
3. Areas exposed by excavation or stripping and on which sub-grade preparations are to be performed shall be scarified to a minimum depth of 6" and compacted to minimum of 95% of optimum density, in accordance with ASTM D 698.
4. Unclassified excavation shall include any over-excavation of subgrade in the roadways, parking lots, building pads, and other structural areas as required by the OWNERS ENGINEER. Any over-excavation required is considered unclassified excavation and the CONTRACTOR shall receive compensation as per the unit price bid for unclassified excavation.

B. Embankment Fill:

1. All materials entering the embankment shall be free of organic matter such as leaves, grass, roots, and other objectionable material.
2. Embankment fill materials may consist of site soils which are classified as A-4 or better, based on the AASHTO soil classification system. Sloped surfaces steeper than 1 vertical to 4 horizontal must be plowed, stepped or benched so that the fill material will bond with the existing strata. No fill materials should be placed on surfaces that are muddy, frozen or that contain frost. If off-site embankment borrow is required, the materials should consist of soils classified as A-4 or better, based on the AASHTO soil classification system.
3. The embankments shall be formed of satisfactory materials placed in successive horizontal layers of not more than 8 inches in loose thickness for the full width of the cross sections. Embankment fill shall be compacted to 95% standard proctor density in accordance with ASTM D 698. Embankment fills shall be moistened or aerated to 3% of optimum moisture as determined by ASTM D 698 before compaction.
4. The material in each layer of fill shall be of the proper moisture content before rolling to obtain the required compaction. Wetting or drying of the material and manipulation when necessary to obtain a uniform moisture content throughout the layer may be required.

C. Undercut:

1. Undercut will be performed at all locations that unsuitable material is encountered. The RESIDENT OBSERVER(S) shall determine areas and limits of undercut. The Resident Observer shall be notified immediately if unsuitable material is encountered.

D. Rock Excavation:

1. Rock encountered during excavation shall be removed across the total cross-section as shown in the construction plans for each area to be constructed in this phase; the rock shall be removed to six inches below the proposed finish sub-grade.
2. Rock can be removed by using a rock plow or track hoe or by drilling. Blasting shall not be permitted.

E. Topsoil Replacement

1. After all excavation has been completed and at the direction of the ENGINEER, topsoil shall be replaced on all excavated or filled areas so designated to a depth of four (4) inches.
2. In the event adequate topsoil has not been stockpiled by the CONTRACTOR, the CONTRACTOR shall provide top soil from an off site source, approved by the ENGINEER. No extra pay shall be made for top soil obtained from off site.

PART 3 - EXECUTION:

3.01 Soil Tests, Compaction and Inspection:

- A. A soil testing laboratory shall be employed by the OWNER to perform compaction test and/or any other materials testing that he may deem necessary.
- B. All testing referred to herein shall be paid for by the OWNER. Where tests fail to certify required limits, the cost of subsequent retesting shall be borne by the CONTRACTOR.
- C. The frequency of testing shall be as determined by geotechnical representative.
- D. The RESIDENT OBSERVER(S) shall be a designated employee of the ENGINEER.
- E. Acceptance of Improvements:
 1. The final inspection of the improvements will be made by representatives of the OWNER and the ENGINEER.

END OF SECTION 02246

SECTION 02249 - TRENCHING, BACKFILL AND COMPACTION FOR UTILITIES

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SECTION 02249 - TRENCHING, BACKFILL AND COMPACTION FOR UTILITIES

PART 1 - GENERAL

1.01 Summary:

This Section of Specifications deals with the requirements for Trenching, Backfill, and Compaction for all underground utilities installed on the project.

1.02 Products Installed but not Furnished Under This Section:

- A. Ductile Iron Pipe and Fittings
- B. PVC Pipe and Fittings
- C. Valves
- D. Valve Boxes and Vaults
- E. Reinforced Concrete Pipe

1.03 Related Sections:

- A. Section 02246 – Site Construction
- B. Section 02433 – Storm Sewers
- C. Section 02920 – Grassing

1.04 Payment:

A. Trenching:

Payment for trenching shall be considered incidental to the project. No separate payment shall be made for trenching.

B. Bedding:

1. Watermains

Payment for bedding, Class "1", where specified by the drawings or required by the ENGINEER, shall be per cubic yard, in place. Payment for bedding, Class "2", where specified by the drawings or required by the ENGINEER, shall be per cubic yard. No payment shall be made for bedding in native soils (Class "3").

2. Gravity Sewers

Payment for bedding, Class "1" which is required for all Gravity Sanitary Sewers and DI/PVC/HDPE Storm Sewers shall be considered as incidental to pipe laying and no separate payment shall be made for bedding under the pipe or to the top of the pipe. No bedding is required for Reinforced Concrete Pipe Storm Sewer(s).

C. Backfill:

- 1. Payment for Class "1" backfill material between the top of the bedding and the top of the pipe, which is required as specified in 1.04 B shall be considered incidental to pipe laying.
- 2. Payment for standard backfill shall be considered incidental to the cost of the pipe.

3. Payment for select backfill where select materials are required and not elsewhere noted to be incidental to pipe laying shall be per cubic yard, in place. Measurement shall be from the actual length of pipe laid, width of trench as specified in the Pay Limits detail in the drawings and the depth of cut from the top of pipe to the top of select backfill. All other select backfill material shall be incidental to the pipe. No extra payment shall be made for trench widths different from that called for in the Pay Limits detail in the drawings. However, the CONTRACTOR shall make the ditch as wide as necessary for safety and other considerations.

D. Trench Foundation:

Payment for trench foundation material and placement shall be per cubic yard in place at the unit price in the bid schedule. Measurement shall be from the actual length of pipe laid, the actual width of trench, not to exceed that specified in the Pay Limits detail in the drawings and the depth under the bedding at a depth as specified by the ENGINEER. Trench foundation is not considered the 6" of bedding required when rock is encountered and removed.

E. Compaction:

Payment for compaction shall be considered incidental to the cost of the pipe.

F. Incidental Work:

No separate payment shall be made for trenching, sloping back of trench walls, shoring, fence removal and replacement, or the protection and/or replacement of plants, trees, structures, etc. In general, the condition of the site after construction shall be as good or better than before construction. No payment will be made unless specifically itemized in the Bid Schedule.

1.05 References:

- A. U.S. Department of Labor, Occupational Safety and Health Administration.
- B. Alabama Department of Transportation Standard Specifications for Highway Construction.

1.06 Project Conditions:

Environmental Requirements:

1. The CONTRACTOR shall maintain all drainage ways, gutters, etc., at all times. Any eroded or washed material that enters pipes, ditches, or streams shall be removed by the CONTRACTOR at his own expense.
2. The CONTRACTOR shall provide erosion control as required to protect from damage to surrounding and downstream areas.
3. All areas damaged as a result of erosion shall be repaired to a condition equal or better than the condition prior to construction, as determined by the ENGINEER.

PART 2 - PRODUCTS

2.01 Materials:

A. Select Backfill:

Select backfill where specified or required shall be crushed stone. Crushed stone shall meet or exceed the requirements of the Alabama Department of Transportation Standard Specifications for Highway Construction, Section 801, No. 57. Where deemed appropriate by the ENGINEER, the CONTRACTOR shall utilize a different stone gradation, as specified by the ENGINEER, at no additional cost to the OWNER.

B. Standard Backfill:

Standard backfill shall consist of native soils free of large rocks, boulders and other deleterious substances. No separate payment shall be made for this type of backfill.

C. Bedding:

1. Class "1" Bedding shall be ALDOT Section 801 No. 57 crushed stone. Where deemed appropriate by the ENGINEER, the CONTRACTOR shall utilize a different stone gradation, as specified by the ENGINEER, at no additional cost to the OWNER.
2. Class "2" Bedding shall be reinforced concrete 3000 psi design mix.
3. Class "3" Bedding shall be native soils free from large rocks, organic materials and other deleterious substances.

D. Trench Foundation:

Trench foundation shall be ALDOT 801 No. 1, No. 2, No. 4 or No. 57 crushed stone as directed by the ENGINEER. This material shall only be used at the direction of the ENGINEER.

2.02 Source Quality Control:

The CONTRACTOR shall supply gradation analysis for each type of crushed stone used.

PART 3 - EXECUTION

3.01 Examination of Conditions:

The CONTRACTOR shall examine the area to be trenched and determine and verify his requirements for trenching.

3.02 Protection and Removals:

A. Fences:

All fences in conflict with the proposed construction shall be removed in a neat and workmanlike manner and then replaced immediately following construction operations. The CONTRACTOR shall protect the normally fenced property at all times when the fence is not in proper and normal services. Where materials removed are not suitable for reuse, they shall be replaced with new material of equal or better quality and construction. All fences shall be rebuilt to line, with posts well set, wires fastened with new staples or ties

and well stretched. All corner and end posts shall be well braced and set a minimum of 30 inches in the ground.

B. Utility Poles, Guy Wires, Miscellaneous Poles, Etc.:

1. All utility poles, guy wires, sign posts and similar private obstructions which are indicated on the plans or existing on the ground shall be removed and replaced by the CONTRACTOR at his own expense. In the event street sign posts or signs are damaged or destroyed by the CONTRACTOR'S operations, they may be replaced by the OWNER at the CONTRACTOR'S expense.
2. When it is necessary to remove or adjust any utilities, representatives of the utilities involved shall be notified to decide the method and nature of work to be done. The CONTRACTOR shall make satisfactory arrangements with other utilities for the required removal or adjustments at the CONTRACTOR'S expense, unless otherwise specified.
3. The CONTRACTOR shall be held liable for damage, including negligent or willful damage to any other utility and shall pay for the cost of all necessary repairs and any damages resulting to public or private property resulting there from.
4. The CONTRACTOR shall take whatever means necessary to support sewer mains to their true line and grade when they are encountered during excavation. The pipe shall be supported so that no leakage will occur and under no circumstances will the CONTRACTOR be allowed to bypass raw sewage or allow raw sewage to leak into the trench. If a repair becomes necessary the CONTRACTOR shall use PVC pipe and fittings conforming to ASTM D3034, SDR 26 minimum. All couplings to existing pipe shall be manufactured couplings and all metal parts shall be stainless steel.

C. Plants and Trees:

1. Plants and trees shall not be removed unless directed by the ENGINEER. When plants and/or trees are to be removed and replaced, the following steps shall be followed:
 - a. Remove all trees, shrubs or plants which interfere with construction intact with root system and protect from drying during construction period.
 - b. Replace plant to original location as soon as possible, taking care to insure that hole is large enough, and no damage is done to root system.
 - c. Fill hole with good topsoil and tamp lightly and firmly into place and water plant.
2. CONTRACTOR shall replace with like kind and size any plant, tree, or shrub which is disturbed by construction and dies within 1 year at the CONTRACTOR'S expense.

D. Adjacent Property:

1. The CONTRACTOR shall confine his operations to the rights-of-way and/or easements designated. Any damage to the rights-of-way, easements, or adjacent property shall be repaired by the CONTRACTOR at no additional cost to the OWNER.

E. Private Drives and Sidewalks:

1. The CONTRACTOR shall keep all private drives and sidewalks open and accessible at all times.
2. All streets and public roads shall be kept open and accessible to emergency vehicles at all times.

F. Existing Underground Utilities:

The CONTRACTOR shall protect all existing utilities during the trenching operation. The CONTRACTOR shall cooperate fully with the utility's requests for temporary and permanent supports during the trenching operation and shall furnish and install supports at the CONTRACTOR'S expense.

3.03 Preparation:

A. Clearing and Grubbing:

1. Where clearing or partial clearing of the right-of-way or easements is necessary, such work shall be completed prior to trench excavation. Projecting materials such as trees, logs, brush, hedges, etc., shall be cut as near to the surface of the ground as possible, and all stumps and roots shall be grubbed out unless specifically stated otherwise. All materials so cleared and grubbed shall be removed from the site. In no case shall excavated materials be allowed to cover brush or trees prior to disposal.
2. The CONTRACTOR shall dispose of all cleared and grubbed materials. Unless otherwise specified, all merchantable timber cut from the area designated to be cleared shall become the property of the CONTRACTOR.
3. Burning will not be permitted on the project.
4. In no case shall any materials from clearing and grubbing operations be left on the project, or be pushed onto abutting private properties, or be buried in embankments or trenches on the project.
5. On public property, existing trees or limbs over 2 inches in diameter shall not be cut unless they are within 7 feet of pipe centerline or specific permission is received from the ENGINEER. All limbs that are required to be removed shall be neatly cut and painted. On private easements or in lawns, no trees or brush shall be cleared or cut without prior approval of the ENGINEER or Inspector. The CONTRACTOR shall be required to remove trees, shrubs or plants on private property intact, and to ball the roots, keep watered as required, and replant in their original location upon completion of pipe laying operations, unless written permission is obtained from the ENGINEER, or unless otherwise specified. The CONTRACTOR shall replace, at his own expense, any trees, shrubs, or plants which shall be damaged as a result of his operations, or which shall die within 1 year of final payment for the project.

B. Saw Cutting:

1. Prior to beginning the trenching operation in paved areas such as roads, drives, sidewalks and parking lots, all paving shall be saw cut to a minimum depth of 2 inches and a width as shown on trench details. If the sawcut lines are damaged prior to patching, the CONTRACTOR shall recut the lines prior to patching, if necessary, to have a smooth and neat patch. All paving materials shall be removed and disposed of at the CONTRACTOR'S expense prior to the trenching operation.
2. Prior to beginning the saw cutting, all traffic control devices, barricades, cones and permits required shall be obtained and in place.

C. Verification of Existing Utilities:

1. Prior to the excavation but after the saw cutting in paved areas, the CONTRACTOR shall unearth all known utilities and confirm the location and depth of such utility sufficiently far enough in advance to adjust the vertical or horizontal alignment of the pipeline if necessary.

3.04 Trench Construction:

- A. All excavations shall be made to the lines and grades as established by the drawings, and shall be open cut through whatever material encountered. The ENGINEER may, if requested and deemed appropriate by the ENGINEER, make changes in the trench alignment to avoid major obstructions, if such changes can be made within the easement or right-of-way without adversely affecting the intended function of the facility. In areas where soil conditions permit normal and safe excavation of the trench, the sides shall be cut as nearly vertical as possible from the bottom of the trench to a point at least 12 inches above the top of the pipe. The trench width shall conform to Table 2 of the AWWA C600 Specification, unless a wider trench is desired for a safety or to allow the use of effective mechanized tamping equipment.
- B. The sides of the excavation shall be cut at such a slope that will prevent caving, and the trench shall be adequately supported and the safety of workers provided for as required by the most recent standards adopted by OSHA. Any sheeting or bracing used in areas of unsuitable material, or required to protect adjacent structures, property, workers, or the public, shall be left in place until the excavation has been backfilled to a sufficient depth to prevent caving. The CONTRACTOR is solely responsible for safety and shall take whatever action is necessary to protect his personnel, the general public, and others involved with the project.
- C. Trench widths and other construction activities shall be confined to dedicated rights-of-way or construction easements, unless special written agreements have been made with the affected property OWNER. Temporarily place all excavated materials within easements or rights-of-way, and do not obstruct any public or private roadways or streets.
- D. Materials deposited along open trenches shall be placed so as to avoid damage to the work or adjacent property, including sidewalks, curbs, gutters, etc. No material shall remain deposited in street sections after hours. Any excess material shall be removed from the site and disposed of immediately.
- E. Where select backfill is specified or required, all excavated materials shall be promptly removed and disposed of by the CONTRACTOR.
- F. Rock Excavation:
 - 1. Material which cannot be excavated with a backhoe having a bucket curling force rated at not less than 18,300 pounds (Caterpillar Model 215 or equivalent) shall be classified as trench rock. No rock blasting shall be allowed on the project.
 - 2. Rock encountered in trench excavation for pipe lines shall be removed for the over-all width of trench and to a depth of 6-inches below the bottom of the barrel of the pipe, if rock extends to such depth.
 - 3. Where pipe lines are constructed on concrete cradles, rock shall be excavated to the bottom of the cradle as shown on the plans. When necessary to provide sufficient working space, rock shall be excavated to additional depth for bell holes.
 - 4. After the ENGINEER has inspected the completed excavation, the space below the ultimate pipe or structure grade shall be filled with an approved foundation material and compacted to the proper grade.
 - 5. Rock excavation near existing structures of all types shall be conducted with the utmost care, and every precaution shall be taken to prevent damage to such structures. Any damage or injury of whatever nature to persons or property caused directly or indirectly by rock excavation shall be promptly repaired, replaced, or compensated for by the CONTRACTOR at his own expense and to the satisfaction of the persons injured or the OWNERS of the property damaged.

G. Dewatering:

1. The CONTRACTOR shall at all times provide and maintain the necessary equipment and means for removal of all water from excavated areas. All excavated areas shall be kept free of water while any work is in progress. Particular precautions shall be taken to prevent the displacement of structures or pipelines as a result of accumulated water.
2. Bedding material or pipe shall not be placed in wet or unstable trenches. Soil that cannot be properly dewatered shall be excavated and dry material tamped in place to such a depth as may be required to provide a firm trench bottom.
3. All water removed or diverted from excavations shall be disposed of in a manner which will prevent damage to adjacent property or any flooding of streets or property. Disposal of trench water through the pipeline under construction shall not be allowed.
4. Water shall be removed and disposed of so as to not damage adjacent property or existing drainage ways.

3.05 Bedding:

- A. All areas where bedding is not specifically called for or required by the ENGINEER, the pipe shall be bedded in native soils. Bell holes shall be excavated so that the entire pipe length rests on firm soil.
- B. Areas undercut by the CONTRACTOR through negligence, or his convenience, shall be backfilled and tamped with approved materials at the expense of the CONTRACTOR. In paved areas, the backfill material shall be select backfill.
- C. Bedding shall meet the requirements of Section 2.01 of these specifications.

3.06 Backfilling and Compaction of Trenches:

- A. Backfilling shall not begin before the ENGINEER or RESIDENT OBSERVER has inspected the grade and alignment of the pipe. No backfilling operations shall occur unless the ENGINEER'S RESIDENT OBSERVER is present at the backfilling operation.
- B. Backfilling (in 8-inch lifts) to the top of the pipe, defined as the pipe zone, shall be done with select backfill, good earth, sand or gravel and shall be free from large rocks or hard lumpy materials. Large rocks shall be defined as any larger than 3 inches in diameter. No materials of perishable, spongy or otherwise unsuitable nature shall be used in backfilling. It is essential that the entire backfill operation be done in such a manner as to prevent voids in the backfill. The use of granular material for backfill in the pipe zone shall constitute a pay item only when so directed by the ENGINEER.

C. Backfilling To Springline:

Place trench backfill material at approximately the same rate along both sides of the pipe and compact by tamping in layers not to exceed eight inches loose fill up to the horizontal centerline (Springline) of the pipe. Compaction shall achieve 98% of standard proctor density. The CONTRACTOR shall place the backfill to cradle the pipe so that the full length is uniformly supported on firm bedding and the weight of the pipe and backfill is borne uniformly by the lower half of the pipe barrel. Special attention should be given to the backfilling and tamping procedures to insure that no voids or un-compacted areas occur beneath the pipe and that no settlement occurs after the backfilling operation is completed. The CONTRACTOR shall utilize whatever methods and equipment may be necessary to accomplish this. Where trench boxes, shoring, or other trenching procedures are utilized, the CONTRACTOR shall utilize

the trench boxes, etc., in a safe manner and in compliance with OSHA standards and regulations to allow tamping to proceed continuously from the wall of the pipe to the native trench wall. It shall not be allowable to compact the lift while the trench box is contained in the lift, unless the entire width of each lift is re-compacted in lifts after the trench box is moved. In all cases, the trench width must be sufficient to allow the thorough tamping of the stone beneath the haunches of the pipe. Where a trench box is not utilized, there shall be sufficient clearance between both trench walls and the pipe (one-foot minimum unless a larger width is indicated by the plans or other places in these specifications) to allow for mechanized tamping equipment to be effectively utilized. If a trench box is utilized, there shall be sufficient clearance between both the inside walls of the trench box and the outside of the pipe (one-foot minimum unless a larger width is indicated by the plans or other places in these specifications) to allow for mechanized tamping equipment to be effectively utilized. Where a trench box is utilized, the clearance between the outside of the trench box and the trench walls shall be kept to a minimum, generally no more than three inches maximum on either side, and this area shall also be properly compacted. Regardless of whether a trench box is utilized, sufficient clearance must be available on both sides of the pipe for the entire trench depth, to allow for proper compaction. The CONTRACTOR shall comply with all OSHA regulations and provide safe working conditions for all aspects of the work. After this, fill and compact the trench as specified below, depending upon the location of the work and danger from subsequent settlement.

D. Backfilling Above Springline:

The CONTRACTOR shall comply with all OSHA regulations and provide safe working conditions for all aspects of the work.

1. Backfilling in Unimproved or Future Improvement areas:

Backfill may be placed from the centerline of the pipe to six inches below the ground by any suitable equipment, but shall be tamped or rolled in layers not to exceed 8 inches loose depth to a density of 95% standard proctor density for unimproved areas, or 98% standard proctor density for improved areas as shown on trench details. The top 6 inches of backfill shall be topsoil free from rocks, roots, and other debris.

2. Backfilling Across and Beneath Streets, Driveways, Parking Lots, Sidewalks and Other Minor Structures:

All backfill material shall be as designated on trench details of construction plans with compaction requirements as specified on such details. Additional compaction shall be provided as necessary to prevent any settlement of the backfill. No backfilling operations shall occur unless the ENGINEER'S observer is present at the backfilling operation or unless prior arrangements have been made. If settlement occurs after paving, the CONTRACTOR shall take the appropriate measures to re-level the street in a professional manner and overlay the entire street with one-inch minimum paving at no expense to the OWNER including any asphalt milling as deemed necessary by the ENGINEER.

E. All backfilling shall be done in such a manner that will not disturb or injure the pipe or structure over or against which it is being placed or any other structure in the vicinity of the pipelaying operation. Any pipe, utility, or structure injured, damaged, or moved from its proper line or grade during backfilling operations, shall be replaced or repaired and then re-backfilled as herein specified, at the expense of the CONTRACTOR.

F. These contents are intended as minimum requirements. The CONTRACTOR shall perform pipe laying, backfilling and tamping in such a manner as to prevent detectable settlement or movement and/or damage to the pipe.

- G. During the initial stages of the project, the CONTRACTOR shall place the backfill in the required lifts and compact with the equipment he plans to use for compaction until the density is obtained. The tamping equipment utilized shall be in first class condition and capable of effectively tamping the backfill. If the ENGINEER feels the proposed tamping equipment is inadequate, the CONTRACTOR shall provide tamping equipment satisfactory to the ENGINEER at no extra cost to the OWNER. The density shall be verified by tests.

The number of passes required by this equipment shall be used as the minimum number of passes required throughout the job. If a different type of equipment is used, then another trial section shall be performed. If there is any doubt on behalf of the ENGINEER regarding the test or conditions of the test, the CONTRACTOR shall make as many passes as necessary to satisfy the ENGINEER that the required compaction is being achieved. Regardless of the equipment used, a minimum of three passes per 8-inch lift shall be made over each square inch of the backfill.

3.07 Cleaning:

- A. The CONTRACTOR shall thoroughly clean all areas damaged during construction of excess fill, construction debris, etc.
- B. All gutters and adjacent curbing shall be swept clean in accordance with Section 01800.

3.08 Protection:

The CONTRACTOR shall protect the newly constructed pipeline from damage until final acceptance of the work.

END OF SECTION 02249

SECTION 02433 - STORM SEWERS

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SECTION 02433 - STORM SEWERS

PART 1 - GENERAL

1.01 Section Includes:

This section shall cover the work of furnishing and constructing storm sewers of the kind, strength, and size pipe provided in the proposal in accordance with the requirements of these specifications and installing such sewers at the location shown on the plans or designated and in conformity with established lines and grades.

1.02 Related Sections:

- A. Section 02246 - Site Construction
- B. Section 02249 - Trenching, Backfill & Compaction for Utility Trenches

1.03 Unit Prices:

Measurement and Payment for storm sewers shall be by the linear foot. Measurements shall be made of the actual pipe laid and rounded to the nearest whole foot. Payment shall include materials, excavations, backfill, compaction, and other items considered incidental to the work.

1.04 References:

Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition.

PART 2 - PRODUCTS

2.01 Materials:

- A. All concrete pipe shall be reinforced concrete pipe, Class III or Class V as designated on plans, and conform to ASTM C-76 and the Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition, Section 854.
- B. All box culverts shall be reinforced concrete and conform to ASTM 1433, HS-20 Loading and the Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition, Section 524.
- C. All corrugated metal pipe shall be coated, smoothlined corrugated metal pipe conforming to the Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition, Section 854.
- D. All HDPE storm sewer pipe shall be of high density polyethylene double wall smooth inner wall pipe with bell and spigot joints and rubber o-ring gaskets conforming to ASTM F-477.
- E. All PVC storm sewer pipe shall be SDR 26 conforming to ASTM D3034.

PART 3 - EXECUTION

3.01 Trenches:

- A. Trenching, backfill and compaction shall conform to Section 02249 of these specifications. Additionally, all other requirements of the Contract Documents shall apply.
- B. The trench shall be excavated beginning at the outlet end and proceed upgrade true to the established line and grade. Trenches shall be properly sheeted and braced wherever needed and conform to Section 02249 of these specifications.

3.02 Foundation:

Foundation of the trench shall be so formed and treated as to prevent subsequent settlement. If the foundation is in rock, the foundation backfill consisting of a 6" cushion of well-compacted sand, fine gravel, broken stone or other approved materials shall be placed upon the rock. If the excavation has been made deeper than necessary, proper bearing shall be secured by means of a layer of fine gravel or other suitable material. In all cases, recesses shall be formed to receive the bell or hub so that the full length of the pipe barrel will rest on the trench bottom.

3.03 Pipe Laying:

The laying of pipes and finished trenches shall be started at the outlet end and proceed upgrade so that the spigot or groove ends point in the direction of the flow. All pipe shall be laid with ends abutting and with not more than one inch variation from established alignment at the vertical center line or from grade at the flow line. The bottom of the trench shall be shaped accurately to the outside surface of the pipe for a depth of at least 1/10 of the outside diameter. The pipe shall be fitted and matched so that when laid in the work, they will form a sewer with a smooth uniform invert. Hubs or bells shall be carefully cleaned before pipes are lowered into the trenches. Pipes shall be so lowered as to avoid damage and unnecessary handling in the trench.

3.04 Box Culvert Laying:

The laying of box culverts and finished trenches shall be started at the outlet end and proceed upgrade so that the spigot or groove ends point in the direction of the flow. All box culverts shall be laid with ends abutting and with not more than one inch variation from established alignment at the vertical center line or from grade at the flow line. The bottom of the trench shall be excavated accurately to the outside surface of the box culvert, including required bedding material. The box culvert shall be fitted and matched so that when laid in the work, they will form a sewer with a smooth uniform invert. Joints shall be carefully cleaned before box culverts are lowered into the trenches. Box culverts shall be so lowered as to avoid damage and unnecessary handling in the trench. Trench excavation, bedding material, and backfilling of box culverts shall be considered incidental to the linear foot cost of box culvert.

3.05 Sealing Joints:

Joints shall be sealed with mortar, bituminous plastic cement, rubber type gaskets or other type sealers that may be approved. Joints shall be thoroughly cleaned before being sealed and shall be sealed for the full circumference of the joint unless otherwise directed.

3.06 Backfilling:

All trenches and excavation shall be backfilled as per Section 02249. Backfilling shall not begin until mortar joints have cured or until backfilling is authorized by the ENGINEER. The material shall be carefully deposited simultaneously on both sides of the pipe in uniform layers not to exceed 8 inches in compacted thickness, solidly tamped around with the proper tools so as not to injure or disturb the pipe. Compaction and density requirements shall meet those as shown on the construction drawings.

END OF SECTION 02433

SECTION 02500 – BITUMINOUS CONCRETE PAVING

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SECTION 02500 - BITUMINOUS CONCRETE PAVING

PART 1 - GENERAL

1.01 Section Includes:

- A. This Section of Specifications covers material and installation requirements for an bituminous concrete paving across the entire paving width as required in the plan assembly.
- B. This Section of Specifications covers the material and installation requirements for bituminous concrete patching over excavated trenches in roads, parking lots and driveways.

1.02 Related Sections:

Section 02246 - Site Construction

1.03 Unit Prices:

- A. Payment for this item shall be per the Bid Schedule.
- B. The average weight per square yard of plant mix to be placed will be specified by the plans. The ENGINEER may direct in writing that the designated weight be increased or decreased in certain areas. It shall be the CONTRACTOR'S responsibility to place and spread the material uniformly to such thickness as will produce the specified average weight per square yard, separately for each layer of base, binder, and surface, and to maintain a continuing check on tonnage and yardage throughout the day's operation to insure uniform specified weight.

If the average weight per square yard of any unit is found deficient by more than 10 percent of the specified average weight per square yard, the ENGINEER will determine (1) whether the CONTRACTOR shall remove and replace the deficient unit without payment for the removal or the material removed, or (2) whether the CONTRACTOR may leave the deficient unit in place and cover it with a layer of the same mix of adjusted maximum size aggregate, of not less than 80 pounds per square yard average. In case (2), the surface layer shall not be feather-edged at the end of the overlay layer, but a sufficient amount of the surface beyond the ends of the deficient unit shall be removed, to a neat line across the pavement, to allow placing the full 80 pounds per square yard and make a joint that will meet the surface requirements. The CONTRACTOR will be paid for the deficient layer plus as much of the 80 pound overlay as is needed to bring the total up to the designated average weight per square yard for that unit.

If the average weight per square yard placed for any unit is more than ten (10) percent in excess of the weight specified by the ENGINEER, the amount over 110% shall not be paid for.

Measurement shall be taken from the actual width of paving in feet times the length of paving in feet and divided by 9 to obtain a square yardage.

1.04 References:

Alabama Department of Transportation Standard Specifications for Highway Construction, Latest ed.

1.05 Quality Assurance:

- A. The work of bituminous concrete paving shall be accomplished by skilled workmen experienced in the laying of bituminous concrete.

- B. All equipment shall be of a design and size to successfully accomplish the work.

1.06 Project Conditions:

- A. The CONTRACTOR shall comply with all environmental laws and requirements pertaining to the work.
- B. The CONTRACTOR shall take adequate measures to control dust in the work area.
- C. The CONTRACTOR shall thoroughly inspect the roadway base and assure himself that proper laying conditions exist.
- D. The CONTRACTOR shall provide and maintain adequate and safe traffic control.

PART 2 - PRODUCTS

2.01 Materials:

- A. Prime Coat:
 - 1. Prime Coat shall be emulsified bituminous concrete, Type AE-P, tar types RT2 or RT3, or cutback bituminous concretes MC 250, RC70 or RC250 as defined in Section 401 of the Alabama Department of Transportation Standard Specifications.
 - 2. Prime Coat shall be applied at the rate of 0.22 to 0.25 gallons per square yard over the entire area to be treated with bituminous concrete.
- B. Tack Coat:
 - 1. Tack coat shall be emulsified bituminous concrete type SS-1, SS-1h, or RS-2 or Bituminous concrete Cement Grade AC-10 or AC-20 as defined in Section 405 of the Alabama Department of Transportation Standard Specifications.
 - 2. Tack Coat shall be applied at a rate not to exceed a rate of 0.05 -0.1 gallons per square yard.
- C. Bituminous concrete Patch:
 - 1. Bituminous concrete paving used in patching shall be Improved Bituminous Concrete Binder as defined in Section 429 of the Alabama Department of Transportation Standard Specifications.
 - 2. Materials shall meet the requirements of Article 429.02 of the above mentioned specifications.
 - 3. The CONTRACTOR shall refer to the Bid Proposal or Drawings for the quantity of material to be applied per square yard.
- D. Bituminous concrete Paving:
 - 1. Bituminous concrete paving shall be Improved Bituminous Concrete Plant Mix meeting the specification outlined in Section 429 of the Alabama Department of Transportation Specifications.

2. Final layer of bituminous concrete placed in streets and parking lots shall be Improved Bituminous Concrete Wearing Surface, Mix "A" with all materials conforming to Section 429 of the Alabama Highway Department specifications.
- E. Before overlaying the street, the CONTRACTOR shall raise or lower all valve boxes, manholes and other embedded items, including items that have previously been paved over. No extra payment will be made for these adjustments.

2.02 Equipment:

- A. Equipment used in bituminous concrete patching and/or bituminous concrete paving shall meet the requirements of Article 410.03a of the Alabama Department of Transportation Specifications.
- B. Equipment used in the application of Prime Coat and Tack Coat shall comply with Article 401.03a of the above mentioned Specifications.

2.03 Temperature and Weather Requirements:

- A. Prime and Tack Coat:
 1. Bituminous materials shall not be placed on wet surfaces or when the air temperature is below 60-degrees F.
 2. Bituminous materials shall not be placed when the temperature is expected to fall below freezing during the night regardless of the daytime temperature.
- B. Bituminous concrete Patching and Overlay:
 1. The bituminous concrete mixture shall be placed only upon an approved underlying course that is dry.
 2. Bituminous concrete layers of 200-pounds per square yard or less shall not be placed when the air temperature is below 40-degrees F. The air temperature must be 40-degrees F. and rising before the spreading operation is started and the spreading operation shall be stopped when the air temperature is 45-degrees F. and falling.
 3. For bituminous concrete layers over 200-pounds per square yard, the above temperatures shall be lowered by 5-degrees.

PART 3 - EXECUTION

3.01 Execution:

- A. Prime and Tack Coat:
 1. All loose material, dust and foreign material shall be removed from the surface. Cleaning shall be continued until all caked and loose dirt and dust are removed.
- B. Bituminous concrete Patching:
 1. All designated areas to be patched shall be trimmed to neat vertical lines to the depth of patch specified. All loose material shall be removed. A prime or tack coat shall be applied as specified above. The bituminous concrete shall be placed and compacted to a degree that further consolidation of the patch is not anticipated.

2. Any patched areas that do consolidate shall be replaced or additional material brought in to bring the patch up to the surrounding level.
3. All bituminous concrete or concrete streets, parking areas and drives shall be patched the same day they are cut. Temporary or cold patch material may be used until the permanent patch can be placed; however, no extra payment will be made for temporary patching.

The CONTRACTOR shall adequately protect his work and the public. Where unpaved or rough areas may exist, the CONTRACTOR shall provide adequate warning signs. The signs shall be equipped with flashing lights if the condition exists after darkness.

3.02 Application:

A. Prime and Tack Coat:

1. Prime and Tack Coat shall be uniformly applied at the rate specified by pressurized distributors.
2. All areas to be treated with an bituminous concrete surface treatment shall be primed and/or tacked.

B. Bituminous concrete Paving and Patch:

1. Bituminous concrete Patching may be applied with spreaders, by hand, or with motorgraders. All areas inaccessible to large equipment shall be spread by hand.
2. Bituminous concrete patching shall be thoroughly compacted through the use of steel wheeled rollers and/or rubber tired rollers. Density shall be as specified on the drawings in the Bid Proposal or in the Alabama Department of Transportation Standard Specifications.
3. Bituminous concrete paving shall be applied with spreaders; except in inaccessible areas spreading may be done by hand, uniformly placing the desired rate per square yard over the underlying surface.
4. As soon as the mixture has set sufficiently to prevent cracking, the mixture shall be rolled with steel wheel and rubber-tired rollers to compact the mixture. Density shall be as specified on the drawings or in the Bid Proposal.
5. All patching, including any temporary patching, shall be done in a professional manner, shall be smooth, and shall blend smoothly with adjacent paving.
6. Generally, unless called out differently elsewhere, the bituminous concrete paving shall not be placed until the project has satisfactorily passed all tests and all construction activities are complete, and there is no need for any further construction traffic in the affected areas. However, the CONTRACTOR shall adequately maintain the patched areas for the safety of the public.

3.03 Testing and Surface Requirements:

- A. Testing of the bituminous concrete mixtures shall be performed at the discretion of the ENGINEER. Testing shall include but not be limited to density tests and extraction tests as outlined in the Alabama Department of Transportation Standard Specifications Latest ed.

- B. The finished surface of bituminous concrete overlays shall be checked with string, level and/or straightedge. The finished surface shall not vary more than 1/4" from the required sections as measured at right angles to the roadway centerline. The finished surface shall not vary more than 3/8" in any 25-foot section measured parallel to the centerline at the following locations: one foot inside of the edges of pavement, at the centerline and at other points as designated.

3.04 Maintenance:

The CONTRACTOR shall maintain and protect the newly laid bituminous concrete until final acceptance of the work.

END OF SECTION 02500

SECTION 02600 - DUCTILE IRON PIPE AND FITTINGS FOR WATER MAINS

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SECTION 02600 - DUCTILE IRON PIPE AND FITTINGS FOR WATER MAINS

PART 1 - GENERAL

1.01 Section Includes:

- A. This Section of specifications covers materials and installation for ductile iron water mains, sanitary sewers, and force mains.
- B. This Section of specifications covers materials and installation for ductile iron fittings.

1.02 Related Sections:

- A. Section 02249 - Trenching, Backfill and Compaction for Utility Trenches
- B. Section 02660 - Water System

1.03 Unit Prices:

A. Water Mains:

1. Payment for pipe shall be per linear foot for each size and class pipe delineated in the Bid Schedule. Determination of pay quantities shall be by tape measure, horizontally along the pipe centerline and rounded to the nearest foot with no deduction for fittings.
2. Payment for ductile iron fittings shall be made per pound of fittings installed when delineated in the Bid Schedule. Otherwise fittings shall be considered incidental to the pipe. Payment shall be made for all bends, tees, crosses, couplings, special items, etc., necessary for the complete installation of the pipe as shown on the drawings not specifically listed in the Bid Schedule. Payment shall be compensation in full for all costs associated with the furnishing and installation of the ductile iron fittings, including concrete thrust blocks, bolts, Meg-a-Lug retainer glands (or approved equal), and other miscellaneous hardware. Determination of pay quantities shall be made based on the manufacturer's published weights for the type fitting installed, excluding the weights of bolts, Meg-a-Lug retainer glands (or approved equal), and accessories, to the nearest pound.
3. An appropriate portion of the pipe price may be withheld, in addition to the standard retainage established in the General Conditions, until flushing, testing, cleanup, etc., are satisfactorily completed.

1.04 References:

- A. ANSI/AWWA C104/A21.4 American National Standard for Cement Mortar Lining for Ductile Iron Pipe and Fittings for Water.
- B. ANSI/AWWA C110/A21.10 American National Standard for Gray- Iron and Ductile-Iron Fittings, 3 in. through 48 in. for Water and Other Liquids.
- C. ANSI/AWWA C111/A21.11 American National Standard for Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.
- D. ANSI/AWWA C150/A21.50 American National Standard for the Thickness Design of Ductile-Iron Pipe.
- E. ANSI/AWWA C151/A21.51 American National Standard for Ductile- Iron Pipe, Centrifugally Cast, for Water or Other Liquids.

F. ANSI/AWWA C600 AWWA Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances.

1.05 Design and Performance Requirements:

A. Ductile Iron Pipe:

Ductile iron water pipe wall thicknesses shall conform to the requirements of ANSI/AWWA C150/A21.50 for the Standard Pressure Classes and Special Thickness Classes as delineated in the Bid Schedule.

B. Ductile Iron Fittings:

1. All fittings 24 in. and smaller in diameter shall be ductile iron and be pressure rated for 350 psi.
2. All fittings 30 in. and larger in diameter shall be ductile iron and be pressure rated for 250 psi.
3. All bolts and nuts for fittings shall be furnished by the same company as the pipe manufacturer and shall be American made. Bolts shall be corrosion resistant alloys as recommended by the pipe manufacturer. Corten steel bolts and nuts shall be utilized for below ground installations.

1.06 Submittals:

The CONTRACTOR shall supply copies of the manufacturer's test reports, manufacturer's installation recommendations and manufacturer's certification that materials provided meet their specifications.

1.07 Quality Assurance:

- A. All ductile iron pipe and fittings shall be of the sizes, classes, and joint types as indicated on the drawings or in the Bid Schedule.
- B. All ductile iron pipe and all fittings shall be new and unused.
- C. Each joint of pipe shall be plainly marked at the site of manufacture to indicate the class, thickness and strength.
- D. The CONTRACTOR shall submit test certificates on all pipe and fittings.

1.08 Delivery, Storage and Handling:

- A. All ductile iron pipe and fittings are subject to inspection at delivery and other times as deemed necessary by the ENGINEER. Any pipe and/or fittings damaged during delivery shall be promptly removed from the job site.
- B. Ductile iron pipe shall be stored off the ground supported by timbers, railings or concrete supports and shall be of sufficient size to avoid contact with the ground or adjacent piping. Supports shall have chocks to prevent movement. Stacking shall be low enough to provide a safe condition especially in neighborhoods and accessible areas.
- C. Pipe and fittings shall be stored to prevent damage to the interior or exterior linings. The interior of all pipe and fittings shall be kept free of dirt and debris. Ductile iron pipe shall not be stacked higher than specified in Table 1 of ANSI/AWWA C600.

- D. Pipe and fittings shall be loaded and unloaded by hoists or skids to avoid sudden impact to the material. In no case shall the pipe or fittings be dropped. Slings, hooks, or pipe tongs shall be padded to avoid damage to the interior or exterior linings.
- E. Gaskets for mechanical joint and push-on joint pipe and fittings shall be stored in a cool dry place out of direct sunlight. Contact with petroleum based substances is prohibited.

PART 2 - PRODUCTS

2.01 Approved Manufacturers:

- A. American Cast Iron Pipe Company
- B. U. S. Pipe
- C. Others as approved by the ENGINEER

2.02 Materials:

A. Ductile Iron Pipe:

1. All ductile iron pipe shall conform to the requirements of ANSI/AWWA C151/A21.51. Joints shall be the type shown on the drawings and delineated in the Bid Schedule.
2. Rubber-gasket joints for ductile iron pipe shall conform to ANSI/AWWA C111/A21.11.
3. Mechanical joint retaining glands shall be ductile iron and shall conform to the requirements of ANSI/AWWA C111/A21.11.
4. All ductile iron pipe shall be cement mortar lined in accordance with ANSI/AWWA C104/A21.4 and sealed with an asphaltic material.
5. Restrained joint pipe shall be ductile iron manufactured in accordance with the requirements of ANSI/AWWA A21.51/C151. Pipe thickness shall be in accordance with ANSI/AWWA A21.50/C150, Class as specified in Bid Schedule. Pipe shall be U.S. Pipe TR FLEX pipe, or approved equivalent.

B. Ductile Iron Fittings:

1. All fittings for ductile iron pipe shall be ductile iron conforming to the requirements of ANSI/AWWA C110/A21.10 and/or A21.53/C153. Joints shall be the type as shown on the drawings.
2. Rubber-gasket joints for ductile iron fittings shall conform to ANSI/AWWA C111/A21.11.
3. Mechanical joint retaining glands for ductile iron fittings shall conform to the requirements of ANSI/AWWA C111/A21.11.
4. All ductile iron fittings shall be cement mortar lined in accordance with ANSI/AWWA C104/A21.4 and sealed with an asphaltic material.
5. Restrained joint fittings shall be ductile iron in accordance with applicable requirements of ANSI/AWWA A21.10/C110 and/or A21.53/C153 with the exception of the manufacturer's proprietary design dimensions. Push-on joints for such fittings shall be in accordance with ANSI/AWWA A21.11/C111. Fittings shall be U.S. Pipe TR FLEX fittings, or approved equivalent.

6. Retaining gaskets used in restraining gasket pipes shall conform to ANSI/AWWA C111/A21.11. Gaskets shall be U.S. Pipe "FIELD LOC" gaskets, or approved equivalent.

2.03 Markings:

Ductile iron pipe for the sanitary sewer force main installation shall be continuously marked by a three (3) inch wide, bright pink/purple line painted along the top of the main as installed. The pipe shall be previously factory painted and shall be installed in such a way to form a continuous mark along the top of the pipe. The color shall be approved by the ENGINEER.

PART 3 - EXECUTION

3.01 Examination:

- A. The CONTRACTOR shall examine the site, trench and surrounding conditions to assure proper installation of the pipe and associated fittings.
- B. The CONTRACTOR shall examine the pipe and fittings for any scratches or abrasions to the coating or linings, or other physical damage prior to its installation.
- C. Trenches shall be inspected for proper alignment and grade. Check trench bottom to assure proper clearance from other utilities, pipelines or existing structures.
- D. Any bedding required by the drawings or specifications shall be installed prior to pipe placement.
- E. Existing water mains at connections may or may not be standard outside dimensions. CONTRACTOR shall verify dimensions to ensure the tapping sleeve, as well as other connections and fittings, will fit properly.

3.02 Installation:

- A. Every care shall be taken in the handling, cutting and laying of pipe and fittings to avoid damaging the interior or exterior coating. Damaged or defective areas shall be repaired or replaced to the satisfaction of the ENGINEER.
- B. Each section of ductile iron pipe shall be placed in the prepared trench with the full length of the barrel resting upon the pipe bed and with the pipe bell over a bell hole excavated at the proper location to accommodate the bell. No temporary supports under the pipe, such as bricks, rocks, etc. shall be permitted.
- C. Any pipe found defective shall be replaced at the CONTRACTOR'S expense. Cracked pipe may be cut if authorized by the ENGINEER.
- D. Pipeline shall be laid with bells in direction of laying unless it is necessary to do otherwise to make connections to existing pipe. Where pipe is to be laid on a slope, the direction of laying shall be from downstream to upstream.
- E. All lumps, blisters, and excess coating shall be removed from the socket and plain end of each pipe, and the outside of the plain end and the inside of the bell shall be wiped clean and dry and be free from dirt, sand, grit, or any foreign material before the pipe is laid. Foreign material shall be prevented from entering the pipe while it is being placed in the trench. During laying operations, no debris, tools, clothing, or other materials shall be placed in the pipe.
- F. As each length of pipe is placed in the trench, the joint shall be assembled and the pipe brought to correct line and grade as shown on the drawings.

- G. Assembly of ductile iron push-on joints and mechanical joints shall be in accordance with ANSI/AWWA C600, Section 3.4. The CONTRACTOR shall use particular care in cleaning the socket, plain end and gasket. Mechanical joint bolts shall be tightened to the proper torques shown in Table 4, ANSI/AWWA C600.
- H. Deflections of ductile iron pipe having mechanical joints, if authorized by the ENGINEER, shall not exceed the deflection limits shown in Table 5, ANSI/AWWA C600. All bolts and set screws shall be checked immediately before backfilling.
- I. Deflections for push-on joint pipe shall conform to Table 4 of ANSI/AWWA C600.
- J. At times when pipe laying is not in progress, the open ends of pipe shall be closed by the use of pipe plugs or other methods approved by the ENGINEER to keep mud, water and other debris out of pipe.
- K. Pipe cutting for the insertion of valves and fittings shall follow the manufacturer's recommendations. No torch cutting shall be allowed.
- L. Trenches shall be backfilled according to Section 02250, Trenching, Backfill and Compaction for Water Mains, Gravity, etc.
- M. During the course of the work, all existing pipe, fittings, etc., that are removed and salvageable shall remain the property of the OWNER and shall be delivered to the OWNER'S Shop by the CONTRACTOR.

3.03 Protection:

After a completed installation, the CONTRACTOR shall take measures to protect the newly installed pipeline from damage until final acceptance by the OWNER.

END OF SECTION 02600

SECTION 02601 - PVC PIPE FOR WATER MAINS

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SECTION 02601 - PVC PIPE FOR WATER MAINS

PART 1 - GENERAL

1.01 Section Includes:

This section of specifications covers materials and installation for PVC water pipe.

1.02 Related Sections:

- A. Section 02249 - Trenching, Backfill and Compaction for Utility Trenches
- B. Section 02602 - Ductile Iron Pipe and Fittings
- C. Section 02603 - Gate Valves
- D. Section 02660 - Water System

1.03 Payment:

A. Water Mains:

1. Payment for pipe shall be per linear foot for each size and class pipe delineated in the Bid Schedule. Determination of pay quantities shall be by tape measure, horizontally along the pipe centerline and rounded to the nearest foot with no deduction for fittings.
2. Payment for ductile iron fittings shall be made per pound of fittings installed when delineated in the Bid Schedule. Otherwise fittings shall be considered incidental to the pipe. Payment shall be made for all bends, tees, crosses, couplings, special items, etc., necessary for the complete installation of the pipe as shown on the drawings not specifically listed in the Bid Schedule. Payment shall be compensation in full for all costs associated with the furnishing and installation of the ductile iron fittings, including concrete thrust blocks, bolts, Meg-a-Lug retainer glands (or approved equal), and other miscellaneous hardware. Determination of pay quantities shall be made based on the manufacturer's published weights for the type fitting installed, excluding the weights of bolts, Meg-a-Lug retainer glands (or approved equal), and accessories, to the nearest pound.
3. An appropriate portion of the pipe price may be withheld, in addition to the standard retainage established in the General Conditions, until flushing, testing, cleanup, etc., are satisfactorily completed.

1.04 References:

- A. ASTM A2241, ASTM Standard for Polyvinyl Chloride (PVC) Plastic Pipe (SDR-PR).
- B. ASTM A1784, Specification for Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compound.
- C. ASTM D2152, Test for Quality of Extruded Polyvinyl Chloride (PVC) Pipe by Acetone Immersion.

1.05 Submittals:

- A. The CONTRACTOR shall submit to the ENGINEER in accordance with Section 01301 of these Specifications the following items:

1. Product Data (catalog cuts, manufacturing data, etc).
2. Manufacturer's certification as to compliance with all tests as outlined in ASTM D2241.
3. Manufacturer's installation instructions.

1.06 Delivery, Storage and Handling:

- A. The CONTRACTOR shall check all PVC piping for damage during shipment prior to unloading. All pipe shall be completely covered during transportation.
- B. The CONTRACTOR shall rotate stored piping so that old piping is used first.
- C. All piping shall be handled with care to avoid damage to piping.
- D. Piping split, cracked or otherwise damaged shall be removed from the jobsite.

PART 2 - PRODUCTS

2.01 Materials:

- A. PVC water pipe shall conform to ASTM D1784 and be manufactured from PVC compounds that equal or exceed classes PVC 12454-B, PVC 12454-C, or PVC 14333-D as defined in ASTM D1784.
- B. Gaskets shall conform to ASTM D1869.
- C. Detector Wire, T.W. 12 gauge solid copper.

2.02 Manufacture:

- A. All PVC water pipe shall be manufactured according to ASTM D1784.
- B. All PVC pipe shall be acetone tested in accordance with ASTM D2152.
- C. All PVC pipe larger than 2" shall be rated for a hydrostatic pressure of 250 psi with a SDR of 17, or 200 psi with a SDR of 21, or 160 psi with a SDR of 26 as designated on the plans
- D. All PVC water pipe shall be manufactured in the United States.
- E. All PVC pipe shall be marked in accordance with ASTM D-2241 to indicate manufacturer's name, material designation code, nominal pipe size, SDR, pressure rating in psi for water at 73 degrees F., ASTM Designation D-2241, and the National Sanitation Foundation Stamp of Approval for use in potable water systems.
- F. All PVC pipe for use in sizes 1", 1 ½" and 2" shall be Schedule 40 with solvent weld fittings. This pipe will be used only when approved by the ENGINEER or when specified on plans.

2.03 Manufacturer's Testing:

- A. All PVC piping shall be subject to the sustained pressure test, burst pressure test and flattening test as defined in ASTM D2241.

- B. Test specimens shall come from the same lot and same manufacture run as the pipe being furnished.
- C. Certified copies of all test reports shall be submitted to the ENGINEER.

PART 3 - EXECUTION

3.01 Examination:

- A. The CONTRACTOR shall examine all piping and inspect for damage prior to pipe placement.
- B. The CONTRACTOR shall examine the pipe trench for rocks, stones, and other objects that would damage the piping.

3.02 Installation:

- A. Trenching, backfill and compaction shall conform to Section 02250 of these specifications and to ASTM D 2774.
- B. The trench bottom shall be excavated for pipe bells.
- C. Pipe shall be inspected and all dirt and debris removed prior to joining.
- D. Spigot ends of pipe shall be cleaned and lubricated with lubricant supplied by the manufacturer.
- E. The spigot end shall be inserted into the bell end to the reference mark.
- F. Fittings for use with PVC pipe shall be Ductile Iron in accordance with Section 02602 Ductile Iron Pipe and Fittings.
- G. A detector wire shall be installed in the same trench with all PVC pipe for use as pipe detection. Wire shall be 12-gauge TW solid copper. Wire shall be joined by wire nuts and connected to all valves to form a continuous circuit. Detector wire shall be installed 18" above the pipe.
- H. Thrust blocking shall be as indicated in the standard details.
- I. All taps shall be made using a saddle.

END OF SECTION 02601

SECTION 02603 - GATE VALVES

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SECTION 02603 - GATE VALVES

PART 1 - GENERAL

1.01 Summary:

This Section covers materials, installation and performance criteria for gate valves to be used in water service.

1.02 Related Sections:

- A. Section 02660 - Water System
- B. Section 02643 - Valve Boxes
- C. Section 02249 - Trenching, Backfill & Compaction for Utility Trenches

1.03 Unit Prices:

Payment shall be included for each as indicated in the unit price bid schedule. Payment shall be based on a complete, installed and operable valve with valve box and concrete support considered incidental to the installation of gate valves. This payment shall include compensation for all appurtenances, thrust restraints, concrete, bolts, materials, labor, etc., necessary to complete the Work.

1.04 References:

- A. AWWA C509-94, AWWA Standard for Resilient-Seated Gate Valves for Water Supply Service.
- B. AWWA C600-93, AWWA Standard for Installation of Ductile Iron Water Mains and Their Appurtenances.

1.05 Submittals:

The CONTRACTOR shall furnish detail assembly drawings, specifications, catalog data and dimensions, and three (3) sets of operating instructions for all gate valves.

1.06 Quality Assurance:

- A. The CONTRACTOR shall supply to the ENGINEER an affidavit from the manufacturer that all gate valves three (3") inches and larger conform to AWWA C500 Standards for Water Works Distribution Valves, that all tests specified therein have been performed, and that all test requirements have been met. All valves 12" and smaller shall have a minimum working pressure of 200 psi and a minimum test pressure of 400 psi. All valves 14" and larger shall have a minimum working pressure of 150 psi and a minimum test pressure of 300 psi.
- B. The CONTRACTOR shall supply to the ENGINEER an affidavit of compliance from the manufacturer that all gate valves two (2") inches and smaller conform to Federal Specification WW-V-54, and have a working pressure rating of 150 psi minimum.

1.07 Delivery, Storage and Handling:

A. Packing and Shipping:

1. Markings shall be cast on the bonnet or body of each valve conforming to AWWA C509, Section 7.1.

2. Valves shall be packaged for shipment to avoid damage during shipping and handling. All gate valves shall be completely drained and closed prior to shipment.

B. Acceptance at Site:

1. Gate valves shall be thoroughly checked at the site prior to unloading. Any valves found Defective or damaged during shipment will be rejected.
2. The CONTRACTOR shall provide adequate lifting equipment to unload large valves. In no case shall valves be dropped.
3. Chains, hoists or other lifting devices shall not be fastened around bypasses, yokes, gearing, motors, stems or hand wheels. No valves shall be lifted by the stem in any way.

C. Storage and Protection:

1. Valves shall be stored in a closed position and protected from rain, dirt and debris by covering or storing indoors. In freezing weather the CONTRACTOR shall take steps to ensure that valves do not freeze.
2. Rubber gaskets for joints shall be stored in a cool, dry place out of direct sunlight. Avoid contact between petroleum based substances and rubber gaskets.
3. Valves shall be handled, stored and installed per the appendix to AWWA C509.

1.08 Scheduling:

The CONTRACTOR shall schedule deliveries of gate valves to ensure that the proper materials are on hand prior to the installation of the Work.

PART 2 - PRODUCTS

2.01 Approved Manufacturers:

- A. American Cast Iron Pipe
- B. Clow
- C. US Pipe
- D. Mueller
- E. M & H Valve Company
- F. Others as approved by the ENGINEER

2.02 Equipment:

- A. Gate Valves two (2") inches and smaller:
 1. Gate valves shall be all brass.
 2. Gate valves shall conform to Federal Specification WW-V-54, and have a working pressure rating of 150 psi.

3. Operating nuts shall have iron hand wheel (minimum 4" in diameter) for opening and closing of valves. Valves shall operate counterclockwise to open the valve.
 4. All discs shall be tapered solid wedges and be completely out of line of flow when open.
 5. Valves shall be as manufactured by Stockham, or approved equal.
- B. Gate valves three (3") inches through forty-eight (48") inches:
1. Gate valves shall conform to AWWA C509.
 2. Gate valves shall be iron bodied, have epoxy coated interior and exterior surfaces and non-rising stem, of a resilient wedge seat type with O-ring seals unless otherwise noted. The stem shall be capable of being removed without disassembling of the valve or with valve fully open and while subject to full rated working pressure. Stems shall be sealed by three o-rings, with the top of two o-rings, also replaceable with valve fully open and subject to full rated working pressure.
 3. Operating nuts shall be two (2") inches in size and operate counterclockwise to open the valve.
 4. Gate valves shall be mechanical joint if buried, and flange joint if located inside or attached to structures. Mega-Lug Retainer glands, or approved equal, shall be used with mechanical joints unless otherwise specified. If specifically called for on the Plans, flanged valves may be used in some underground locations.
 5. The gate valve wedge shall be ductile iron encapsulated with EPDM rubber.
 6. Operating stems for valves twenty-four inches (24") and larger shall be horizontal.
 7. All gate valves twenty-four (24") inches and larger shall have gearing.
 - a. Gears shall be smooth running, accurately cut and made from ASTM A26 Grade U-60-30 steel.
 - b. Gears shall ride on a bronze pinion shaft operating in bronze or permanently sealed bearings.
 - c. Gear ratios shall conform to Table 7 of AWWA C500.
 - d. Fully enclosed gear cases designed for underground use shall be provided.
 8. Bypasses shall be provided for all valves twenty-four (24") inches and larger.
 - a. Bypass sizing shall conform to Table 8 of AWWA C500, but in no case shall be smaller than four inches (4").
 - b. Valves used for bypasses shall be non-rising stem gate valves of the same size as specified in Table 8 above.
 - c. Valves used for bypasses shall conform to these Specifications.

2.03 Fabrication:

- A. Valves shall be fabricated and assembled to be well-fitted, and to operate smoothly.

- B. Parts shall be designed and manufactured to be interchangeable between manufacturers of the same type and size.
- C. Castings shall be sound and free from defects.

2.04 Source Quality Control:

- A. Each gate valve shall be subjected to an operation test and hydrostatic test at the place of manufacture.
- B. The CONTRACTOR shall supply to the ENGINEER an affidavit of compliance as specified in 1.06.A and B of these Specifications.
- C. Operation and hydrostatic testing shall conform to Section 5 of AWWA C500.

PART 3 - EXECUTION

3.01 Examination:

- A. Prior to the installation of the gate valve, the valve should be examined and inspected for compliance with these Specifications and proper operation.
- B. Valves that fail to comply with these Specifications or to operate properly shall be removed from the job site without compensation.
- C. All gate valves shall be operated through one complete cycle by the CONTRACTOR in the presence of the ENGINEER to verify proper operation.

3.02 Preparation:

- A. Prior to installation of the valve, the CONTRACTOR shall prepare the area for valve installation by supporting the associated piping to align the valve.
- B. The CONTRACTOR shall determine that proper materials are on hand for a complete valve installation.
- C. The CONTRACTOR shall review the manufacturers' installation instructions to ascertain that no unusual installation procedures are required. Should the CONTRACTOR find any unusual procedures, he shall promptly report them to the ENGINEER.

3.03 Installation:

- A. All gate valves installed underground shall be installed in a closed position.
- B. Gate valves shall be installed on a firm footing and temporarily supported until a permanent concrete support can be poured. Pipe ends shall be supported to minimize bending to the valve end connections.
- C. A valve box or vault shall be installed around all gate valves. The CONTRACTOR shall refer to the Drawings for any special vaults to be constructed. If no special vault is specified a valve box shall be installed.
- D. Valve boxes and vaults shall be installed to avoid traffic and other surface loadings being transmitted to the valve.
- E. Valve boxes shall be centered over the operating nut with the top flush to the surrounding finished elevations.

- F. Large valves installed with bypasses shall have a second valve box installed, centered over the smaller bypass valve operating nut.
- G. Valves installed in deep trenches with the operating nut located six (6') feet below the finished surface shall have stem risers provided for operation with a six (6') foot key. The stem riser shall be furnished by the valve supplier.
- H. All valves installed with non-enclosed gearing shall be protected by a vault as specified in Section 15070.
- I. Gate valves installed aboveground shall be supported to avoid excessive stress and bending to the valve end connections.
- J. All valves and fittings installed within 20' in any direction shall be tie rodded together with all thread tie rods. All tie rods and bolt shall be coated with coal tar Tapecoat CT. The price for installation shall be considered incidental to valve and fitting installation.

3.04 Field Quality Control:

- A. After installation, but prior to pressure testing, all bolts shall be checked with a torque wrench for proper torque.
- B. Gate valves shall be left uncovered during hydrostatic testing to check for leaks, unless test pressures are great enough to cause unstable conditions at the valve.
- C. Gate valves shall not be tested at pressures greater than twice the rated working pressure of the valve.

3.05 Records:

- A. The CONTRACTOR shall sufficiently mark all gate valve locations and record the size, make, date of installation, and number of turns necessary to open. The CONTRACTOR shall furnish the ENGINEER with three (3) copies of such records.
- B. The CONTRACTOR shall not backfill any valve until the ENGINEER has had an opportunity to inspect the valve, photograph it and record its location.

3.06 Protection:

The CONTRACTOR shall protect all gate valves from damage until final acceptance of the Work.

END OF SECTION 02603

SECTION 02605 - SERVICE CONNECTIONS

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SECTION 02605 - SERVICE CONNECTIONS

PART 1 - GENERAL

1.01 Section Includes:

This Section of Specifications covers materials and installation requirements for the construction of service lines from a water main to water meters/pressure reducing valves.

1.02 Related Sections:

- A. Section 02600 - Ductile Iron Pipe & Fittings for Water Mains
- B. Section 02250 - Trenching, Backfill and Compaction for Water Mains

1.03 Unit Prices:

- A. Payment for installed service connections, meters, pressure reducing valves, and reduced pressure principle backflow preventers for domestic service shall be paid per each as indicated in the Bid Schedule. A service connection shall consist of the labor and materials required to install an operable domestic service and shall include corporation cocks, curb stops, meter boxes, check valves, all necessary fittings and couplings. Service tubing shall be paid for by Unit Price per installed linear footage and shall not be included in the Bid Price for service connections. No additional payment will be made for the location of services which require installation under a paved County Road or paved highway.
- B. Payment for relocation of existing services shall be paid per each as indicated in the bid schedule. Relocation shall include any and all replacements of meter boxes (if damaged), connections to existing service mains, relocation of meter assemblies, new corporation cocks, curb stops, valves, etc. as necessary to provide an operable service connection.

1.04 References:

- A. AWWA C800-89, AWWA Standard for Underground Service Line Valves and Fittings.
- B. ANSI B.1.1, American National Standard for Unified Inch Screw Threads.
- C. ANSI B.1.20.3, Dry Seal Pipe Threads.
- D. ASTM B88, ASTM Standard for Seamless Copper Water Tube.
- E. ASTM B584, ASTM Standard for Copper Alloy Sand Castings for General Applications.
- F. AWWA C511-92, AWWA Standard for Reduced-Pressure Principle Backflow Prevention Assembly, (RPPBP).

1.05 Submittals:

The CONTRACTOR shall submit in accordance with Section 01003 the following items:

- A. Product data including catalog cuts and manufacturing data.
- B. Test reports as outlined in Section 3 of AWWA C800.
- C. Manufacturer's Affidavit of Compliance with AWWA C800.

1.06 Quality Assurance:

The CONTRACTOR shall comply with all local, state and federal codes, requirements and regulations.

1.07 Delivery, Storage and Handling:

- A. The manufacturer's name or trademark shall be cast on the bodies of all valves and fittings.
- B. The CONTRACTOR shall thoroughly inspect all valves, fittings and service lines for damage and defects prior to and again after installation.
- C. The CONTRACTOR shall store all service lines, valves and fittings in a clean, dry area, and protect the same from freezing and other damages.

PART 2 - PRODUCTS

2.01 Materials:

- A. Valve and Fitting Castings shall be made from Copper Alloy No. C83600 in accordance with ASTM B62 or ASTM B584.
- B. Seals, threads, and packing shall be made from materials recommended by the manufacturer that are compatible with the valve or fitting.
- C. Service Line:
Type "K" soft copper Federal Specification WW-T-799.

2.02 Manufactured Units:

- A. Water Meter - Positive Displacement (5/8" - 2" Displacement):

Meters shall be magnetic drive, sealed register, positive displacement oscillating piston type cold water meters.

Must conform to American Water Works Standard C-700 as most recently revised.

All meters must have a non-corrosive Water Works bronze (minimum 75% copper content) outer case with a separate measuring chamber which can be easily removed from the case. All meters shall have cast on them, in raised characters, the size, model and direction of flow through the meter. Bronze bottoms shall be provided on 5/8", 3/4", and 1". 1 1/2" and 2" shall be the split cast type with bronze lower and upper shell assemblies. All maincases shall be guaranteed against defects in materials and workmanship for ten (10) years from date of shipment. The manufacturer's serial number must be permanently affixed to the maincase to aid in identification.

Encoder Register

Must conform to American Water Works Standard C-707 as most recently revised. The register must be of the straight reading type and have a full test dial on the face and register. It shall read in cubic feet and be capable of direct visual reading by a meter transceiver unit for use with an automatic meter reading system. All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material.

The register shall be attached to the meter utilizing a bronze register box. The register shall be secured to the maincase by means of a tamper-resistant locking screw so that the register cannot be removed by non-utility personnel. The register must be field replaceable by utility personnel with the use of a manufacturer-supplied field tool. The field tool must not be commercially available.

The meter register shall be provided with three terminal connections. The connection between the meter register and the meter transceiver unit shall be accomplished with the use of all three meter connections. The register shall transmit the meter reading and register identification number directly to the interrogation device through the meter transceiver unit when interrogated by an automatic meter reading system.

When the meter is to be installed in a vault or pit set installation, the terminal connections shall be permanently factory sealed to three wire interconnection cable with an environmentally approved epoxy to prevent moisture penetration and eliminate the need for field sealing requirements.

The register output data format shall be 7-bit ASCII (American Standard Code for Information Interchange) digital, plus and even parity bit. Upon interrogation with a touchpad or automatic meter reading, the register will transmit a 4-digit or 6 digit odometer reading (customer specified) and an 8-digit register identification number. The register identification number is to be factory set and nonprogrammable so as to protect the integrity of the system by eliminating possible programming duplication of the identification number in the field. The 4-digit or or 6-digit meter reading is to be interrogated from the register by direct contact of the register's odometer wheels to a circuit board which encodes the meter reading to the interrogation device. Data is to be positive true. The register's ASCII digital output is to be capable of interfacing directly to an automatic meter reading transponder to transmit data via radio signal to an automatic meter reading system.

The register must be of the straight reading type and have a large test or sweep hand. It shall read in cubic feet units of volume. All reduction gearing shall be contained in a permanently sealed, tamperproof enclosure secured to the upper maincase by means of a locking device. The lid shall overlap the register box to protect the lens. The register cup shall be stainless steel to prevent corrosion and be covered with a tempered glass lens, to minimize breakage. The encoder register shall be guaranteed against defects in materials and workmanship for ten (10) years from date of shipment.

The measuring chamber shall be of Water Works bronze (minimum 85% copper content) or a suitable synthetic polymer and shall not be cast as part of the maincase. All piston assemblies shall be interchangeable in all measuring chamber assemblies of the same size. The chamber's division plate shall be stainless steel with a bonded rubber coating. The chamber shall be held in place without the use of fasteners. The measuring chamber piston shall operate against a replaceable control or thrust roller, allowing for measuring chamber repair to AWWA Standards. The control roller shall rotate on a stainless steel pin to provide added strength, wear, resistance and corrosion resistance. There shall be an elastomeric seal or seals between measured and unmeasured water, preventing leakage around the measuring element.

Meter shall conform to current AWWA C-700, current revision, test flows and accuracy standards.

Meters shall operate up to working pressure of 150 pounds per square inch, without leakage or damage to any parts. The accuracy shall not be affected when operating at this pressure due to possible distortion. Accuracy shall not be affected by variations in pressure up to 150 psi.

Quotations shall be accepted only from those companies who are actively engaged in the manufacturing of their meters in the United States of America (Continental U.S., Alaska and Hawaii) and who have a minimum of five years of satisfactory operating experience with the model being quoted. All meters will be guaranteed against defects in materials and workmanship for a period of one (1) year from the date of shipment. In addition, the manufacturer must provide a meter maintenance plan in writing and submit a program to guarantee meter performance for fifteen (15) years of 1,500,000 gallons in the case of a 5/8" meter. Equivalent programs must also be provided for 3/4" and 1" meters.

B. Meter Boxes:

Boxes shall be Alliance 1500 Series 12" Jumbo Rectangular Box with cast iron lid, or approved equivalent.

C. Double Check Valves and Backflow Preventers:

1. Double check valves for domestic services shall conform to A.S.S.E. No. 1024 for three-quarter (3/4") inch and one (1") inch sizes. The check valves shall be Watts No. 7 Dual Check Valve, or approved equivalent.
2. Double check valves for domestic services shall conform to A.S.S.E. No. 1015, AWWA C511-92 for one and one-half (1-1/2") inches and two (2") inches sizes. The check valves shall be Watts No. 709 Valve, or approved equivalent.
3. Reduced pressure principle backflow preventer (RPPBP) for use as specified by the ENGINEER shall conform to A.S.S.E. No. 1013, AWWA C506 for three-quarter (3/4") inch through ten (10") inches. The RPPBP shall be a Watts No. 909, or approved equivalent. The quantity and size of the RPPBP shall be specified in the Bid Schedule.

D. Pressure Reducing Valve for Domestic Service:

1. Pressure reducing valve for domestic services shall be three-quarter (3/4") inch to two (2") inches in size. The operating range shall be from 200 psi to 30 psi, and shall be equipped with a built-in strainer and cleanout plug.
2. The valves shall be Watts No. U5B, or approved equivalent.
3. All domestic services with pressures greater than 70 psi will be provided with pressure reducing valves.

E. Corporation Stops/Curb Stops:

1. Corporation stops shall be compression type for use with copper tubing. Corporation stops shall be Mueller H15008, or approved equivalent.
2. All corporation stops shall be manufactured with the overall body dimensions complying with Table 2 of AWWA C800.
3. Corporation stops shall be manufactured to be compatible with water up to 100 °F and 100 psi for one (1") inch, and 100 °F and 80 psi for sizes up to and including two (2") inches. All corporation stops shall be manufactured with the inside diameter large enough to accommodate the drill sizes shown in Table 1 of AWWA C800.
4. Corporation stops shall have full port openings.

F. Curb Stops shall be Mueller Mark H14350 or Ford B43-232W, provided with locking wing, or approved equivalent. Curb stops shall have full port openings.

G. All taps shall be full size. Taps larger than one (1") inch shall use a double strap saddle. Taps one (1") inch in size shall use Mueller threads CC tapered.

H. Threads for flared copper connections shall conform to ANSI B1.1.

- I. All corporation stops, curb stops, fittings and service lines shall conform to AWWA C800 unless otherwise noted in these Specifications.

2.03 Fabrication:

- A. All service line valves and fittings shall be manufactured to be first class in every respect.
- B. Valves and fittings shall be free of metal chips, filings and excess lubricants.
- C. Castings shall be clear and sound without defects.

PART 3 - EXECUTION

3.01 Installation:

- A. Corporation stops shall be installed at the ten o'clock and two o'clock positions.
- B. Corporation stops shall be tapped directly to the carrier pipe on ductile iron and with a saddle on PVC.
- C. Taps shall be staggered around the pipe circumference not less than twelve (12") inches apart.
- D. Service lines shall run in the shortest and straightest possible course to the meter installation.
- E. A curb stop shall be placed at the end of all service lines.

END OF SECTION 02605

SECTION 02608 - FIRE HYDRANTS

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SECTION 02608 - FIRE HYDRANTS

PART 1 - GENERAL

1.01 Section Includes:

This specification covers material and installation specifications for fire hydrants and related accessories.

1.02 Related Sections:

- A. Section 02249 - Trenching, Backfill and Compaction for Utility Trenches
- B. Section 02602 - Ductile Iron Pipe and Fittings
- C. Section 02660 - Water System
- D. Section 02603 - Gate Valves
- E. Section 02643 - Valve Boxes and Vaults

1.03 Unit Prices:

- A. Payment for fire hydrants shall be per each and include the hydrant, valve, couplings, spool, all extensions required for the actual depth of bury, concrete, excavation, labor and equipment for the proper installation, testing and other miscellaneous requirements of fire hydrants according to these specifications from the main to the hydrant.
- B. Payment for relocation of existing hydrants shall be per each and include any and all couplings, spools, extensions, etc. necessary to relocate such hydrant. Payment shall also include repainting of such fire hydrants.

1.04 References:

- A. AWWA C502, AWWA Standard for Dry Barrel Fire Hydrants.
- B. AWWA C600, AWWA Standard for Installation of Ductile-Iron Water Mains and Appurtenances.

1.05 Submittals:

- A. The CONTRACTOR shall submit to the ENGINEER in accordance with Section 01301 of these specifications the following items:
 - 1. Design data showing the loss of head and how this test was conducted.
 - 2. Test reports of the mechanical test and hydrostatic test as defined in Section 5 of AWWA C502.
 - 3. Product Data.
 - 4. Manufacturer's Affidavit of Compliance According to Section 5.4 of AWWA C502.
- B. The manufacturing process and testing shall be open to and subject to inspection and observation by the OWNER'S representative.

1.06 Delivery, Storage and Handling:

- A. Hydrants shall be complete with all required accessories when shipped. The manufacturer shall prepare hydrants so that they will not be damaged during shipment. Hydrants shall be completely drained and closed prior to shipment.
- B. The CONTRACTOR shall use extreme care when unloading hydrants. Hydrants shall be inspected prior to unloading and checked for damage during shipment. Any hydrant damaged during this unloading or shipping process shall be rejected and removed from the job.
- C. The CONTRACTOR shall provide a dry, suitable area for storage of hydrants. Hydrants shall be protected from freezing and other damages during storage.

PART 2 - PRODUCTS

2.01 Manufacturers:

- A. Mueller Company
- B. M & H Valve Company
- C. American-Darling Valve
- D. Others as approved by the ENGINEER

2.02 Manufactured Units:

- A. All fire hydrants shall consist of a hydrant, ductile iron spools and associated accessories and be considered as a unit.
 - 1. Hydrant:
 - a. Fire hydrants shall conform to AWWA C502.
 - b. Fire hydrants shall have a working pressure of 150 psi and be tested at 300 psi.
 - c. Fire hydrants shall have a minimum 4-1/2-inch valve opening.
 - d. Fire hydrants shall be equipped with two 2-1/2-inch nozzles (thread NOZ GA NS) and one 4-1/2-inch nozzle (thread MOZ GA 4-556).
 - e. Fire hydrants shall open counter clockwise and be equipped with a 1-1/2-inch bronze pentagonal operating nut.
 - f. Fire hydrants shall be equipped with a 6-inch mechanical joint shoe complete with gland and rubber gaskets.
 - g. Fire hydrants shall be equipped with a break away safety flange, brass safety stem coupling and brass safety sleeve.

- h. Fire hydrants shall be equipped with double drain valves and double drain openings, "O" ring seals, bronze seat ring with compression type main valve, an oil filled reservoir and a positive stop stem.
- i. Nozzle caps shall be provided with non-kinking chains.
- j. All fire hydrants shall be manufactured in the United States.

2. Ductile iron spools shall comply with Section 02602 of these specifications.

2.03 Painting:

- A. Fire hydrant interiors shall be painted to conform with AWWA C502 with an asphalt varnish.
- B. Fire hydrant exteriors shall be painted to conform with AWWA C502 and in addition shall be painted with red enamel.

2.04 Manufacturer's Test:

- A. Fire hydrants shall be subjected to the mechanical test and hydrostatic tests as outlined in Section 5 of AWWA C502.
- B. Copies of these tests shall be furnished to the ENGINEER.

PART 3 - EXECUTION

3.01 Examination:

- A. All fire hydrants shall be inspected prior to installation for direction of opening, operating nut dimensions, tightness of all bolts, cleanliness of inlet and all defects or damage during shipping and handling.
- B. Defective hydrants shall be removed from the jobsite.

3.02 Installation:

- A. Fire hydrants shall be installed as shown on the plans or directed by the ENGINEER.
- B. Fire hydrants shall be installed with a 6" valve with valve box
- C. All hydrants shall be installed plumb with the 4-1/2 inch pumper nozzle facing the street or alley.
- D. Fire hydrants where placed behind curbing shall be set back a sufficient distance to avoid car bumpers as the cars pull to the curb. Fire hydrants shall be placed 2-feet from side walks and parkways to provide safety for pedestrians.
- E. Hydrants shall be set with the breakaway flange not less than 2-inches or more than 6-inches above finished grade.
- F. Fire hydrants shall be connected to a supply line 6-inches in diameter or larger.
- G. A drainage pit 2-feet x 2-feet x 2-feet shall be excavated below the hydrant and filled with coarse graded stone or gravel to 6-inches above the hydrant opening. The drainage pit shall not be connected to or be near any sewer.

- H. Hydrants and the valve shall be anchored by thrust blocking and tie rods. Thrust blocking shall conform to Section 02660, Water System. Tie rods shall be installed from the hydrant to the main. All tie rods shall be 3/4 inch in diameter and have a tensile strength of 9000 psi. All rods and accessories shall be coated with bituminous coating.
- I. All hydrants shall be carefully and thoroughly backfilled.

3.03 Cleaning and Protection:

- A. The CONTRACTOR shall clean the area of any construction debris, excess backfill and other items.
- B. The CONTRACTOR shall carefully check hydrant for proper operation in the presence of the ENGINEER.
- C. The CONTRACTOR shall maintain hydrants from damage until final acceptance of the work.
- D. When it is necessary to take existing fire hydrants out of service, the CONTRACTOR shall notify the fire department at least 24-hours in advance and work continuously until the hydrant is back in service and then notify the fire department again. New fire hydrants that are installed but are not yet in service shall be covered so they will not be considered in operation.

END OF SECTION 02608

SECTION 02609 – TAPPING SLEEVE AND VALVE

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SECTION 02609 - TAPPING SLEEVE AND VALVE

PART 1 - GENERAL

1.01 Summary:

This section covers materials, installation, and performance criteria for tapping sleeves and valves to be used in water service.

1.02 Related Sections:

- A. Section 02660 - Water System
- B. Section 02603 - Gate Valves
- C. Section 02643 - Valve Boxes and Vaults
- D. Section 02249 - Trenching, Backfill and Compaction for Utility Trenches

1.03 PAYMENT:

Payment shall be included for each as indicated in the unit price bid schedule. Payment shall be based on a complete, installed and operable sleeve, valve with valve box and concrete support considered incidental to the installation of tapping sleeve and valves. This payment shall include compensation for all appurtenances, thrust restraints, concrete, bolts, materials, labor, etc., necessary to complete the Work.

1.04 References:

- A. AWWA C207 Class D, AWWA Standard for Steel Pipe Flanges for Water Works Service.
- B. AWWA C213, AWWA Standard for Fusion - Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines.
- C. AWWA C509, AWWA Standard for Resilient - Seated Gate Valves for Water Supply Service.
- D. AWWA C600, AWWA Standard for Installation of Ductile Iron Water Mains and Their Appurtenances.

1.05 Submittals:

The CONTRACTOR shall furnish detail assembly drawings, specifications, catalog data, and dimensions, and three (3) sets of operating instructions for tapping sleeve and valve.

1.06 Delivery Storage and Handling:

A. Packing and Shipping:

Tapping sleeves and valves shall be packaged for shipment to avoid damage during shipping and handling. Tapping sleeves and valves shall be completely drained and closed prior to shipment.

B. Acceptance at Site:

Tapping sleeves and valves shall be thoroughly checked at the site prior to unloading. Any tapping sleeve and valve found defective or damaged during shipment will be rejected.

C. Storage and Protection:

1. Tapping sleeves and valves shall be protected from rain, dirt and debris by covering or storing indoors. In freezing weather the CONTRACTOR shall take steps to ensure that tapping sleeves and valves do not freeze.
2. Rubber gaskets shall be kept cool, dry and out of direct sunlight. Avoid contact between petroleum based substances and rubber gaskets.

1.07 Scheduling:

The CONTRACTOR shall schedule deliveries of tapping sleeves and valves to ensure that the proper materials are on hand prior to the installation of the Work.

PART 2 - PRODUCTS

2.01 Approved Manufacturers:

- A. Romac
- B. JCM Industries, Inc.
- C. Mueller
- D. Others as Approved by ENGINEER

2.02 Manufactured Units:

A. Valves:

1. Tapping valves for water mains shall be iron bodied, bronze mounted, non-rising stem, double disc, parallel seat type with o-ring seals.
2. All valves shall conform to AWWA C-500 and shall be Mueller Series H-667, or approved equivalent.

B. Tapping Sleeve (4" through 24" cast or ductile iron)

1. Mechanical joint tapping sleeves for 4" through 24" cast iron or ductile iron water mains shall be made of Class "B" grey iron and shall be designed for a working pressure to 200 psi.
2. Tapping sleeve shall be Mueller Series H-615, or approved equivalent.

C. Tapping Sleeve (6" through 12" PVC)

1. Mechanical joint tapping sleeves for 6" through 12" PVC water mains shall be made from A-36 fabricated steel and shall have 8-10 mils epoxy coating.
2. Sleeve bolts and nuts shall be 304 stainless steel.
3. Tapping sleeve shall be Romac FTS419, or approved equivalent.

PART 3 - EXECUTION

3.01 Examination:

- A. Prior to the installation of the tapping sleeve and valve it shall be examined and inspected for compliance with these specifications and proper operation.**
- B. Taping sleeves and valves that fail to comply with these specifications or to operate properly shall be removed from the job site without compensation.**

3.02 Preparation:

- A. Prior to installation of the tapping sleeve and valve the CONTRACTOR shall prepare the area for installation by ensuring that the existing water main to be tapped is properly supported.**
- B. The CONTRACTOR shall determine that the proper materials are on hand for a complete tapping sleeve and valve installation.**
- C. The CONTRACTOR shall review the manufacturer's installation instructions to ascertain that no unusual installation procedures are required. Should the CONTRACTOR find any unusual procedures, he shall promptly report them to the ENGINEER.**

3.03 Installation:

- A. The CONTRACTOR shall notify the OWNER through the ENGINEER or his representative, seventy two (72) hours in advance of installation of any tapping sleeve and valve.**
- B. The CONTRACTOR shall check all bolts prior to beginning tap to ensure that a snug fit exists between the tapping sleeve and the existing water main.**
- C. The CONTRACTOR shall take all precautions necessary in order to ensure the existing water main does not split or crack during the tapping procedure.**
- D. The CONTRACTOR shall supply the ENGINEER, or his representative, with the "coupon" from the tap for visually inspection.**
- E. The CONTRACTOR and the ENGINEER, or his representative, shall visually inspect the tapping sleeve to ensure that a drip-tight seal exists between the tapping sleeve and the existing water main.**
- F. In the event that a leak or failure occurs during the installation of the tapping sleeve and valve, the CONTRACTOR shall use any and all means necessary to repair the leak or failure. The water main shall not be backfilled until all leaks or drips have been repaired to the satisfaction of the ENGINEER, or his representative.**

3.04 Protection:

The CONTRACTOR shall protect and maintain tapping sleeves and valves until final acceptance of the Work.

END OF SECTION 02609

SECTION 02620 - EXISTING UTILITIES

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SECTION 02620 - EXISTING UTILITIES

PART 1 - GENERAL

1.01 Payment:

There shall be no separate payment for this item. The cost shall be incidental to the cost of the other work.

PART 2 - EXECUTION

2.01 Execution:

- A. The CONTRACTOR shall be responsible for and shall protect existing utilities. Where existing utilities are interrupted, damaged, or taken off line for connection to other facilities, or are taken out of service for any reason associated with the work, the CONTRACTOR shall work expeditiously and continuously (including through meals and around the clock) to return the utility to service as soon as possible. Where the CONTRACTOR plans to remove existing utilities from service with the prior expressed approval of the utility and the OWNER, the CONTRACTOR shall coordinate with persons, businesses, or parties that may be affected by the temporary loss of service.
- B. Any adjustments (temporary or otherwise), protection, support, removal, relocation, or repairs, etc. to utilities shall be performed by the utility (at the expense of the CONTRACTOR). Alternatively, if the utility desires, such activity shall be performed by the CONTRACTOR at his expense in a manner meeting the approval of the utility.

END OF SECTION 02620

SECTION 02643 – VALVE BOXES

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SECTION 02643 - VALVE BOXES

PART 1 - GENERAL

1.01 Summary:

This section of specifications covers materials, installation and other incidentals pertaining to valve boxes installed around valves.

1.02 Related Sections:

- A. Section 02249 - Trenching, Backfill and Compaction for Utility Trenches
- B. Section 02660 - Water System

1.03 Payment:

No separate payment shall be made as the cost of this item shall be incorporated in the various unit pricing of the work.

1.04 Submittals

A. Valve Boxes:

1. The CONTRACTOR shall submit product data including catalog cuts, manufacturer's data and other incidental information on valve boxes.

1.05 Quality Assurance

A. Valve Boxes:

1. Valve boxes shall be cast by a foundry with at least five years experience in the casting of valve boxes and covers.

PART 2 - PRODUCTS

2.01 Manufacturers

- A. Clow Corporation, Model No. F-2452
- B. Opelika Foundry
- C. Acheson Foundry
- D. Mueller Company, Model No. E-2702

2.02 Materials

A. Valve Boxes and Covers:

1. Valve boxes and covers shall be of cast-iron manufactured as a unit with all associated extensions and bases.
2. Valve boxes shall be 2 piece, screw type, with a 5-1/4" shaft.
3. Covers shall be cast with the word "Water" or "Sewer" onto the cover, whichever is appropriate.

PART 3 - EXECUTION

3.01 Examination

Valve boxes shall be inspected prior to installation for any defects, cracks, and that all necessary parts are on hand.

3.02 Installation

Valve Boxes:

1. Valve boxes shall be installed plumb, centered over the operating nut on a firm and compacted base and carefully and thoroughly backfilled.
2. Valve boxes shall be installed so as to not induce stress to the valve.
3. Valve boxes shall be installed with the top no more than 2-inch above finished grade. Valve boxes shall be installed with the top flush with the finished paving.

3.03 Protection

- A. Valve boxes shall be protected from damage until final acceptance of the work.
- B. Any valve box damaged prior to final acceptance of the work shall be removed and replaced with all costs borne by the CONTRACTOR.

END OF SECTION 02643

SECTION 02660 - WATER SYSTEM

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SECTION 02660 - WATER SYSTEM

PART 1 - GENERAL

1.01 Section Includes:

This section of specifications shall cover the testing, disinfection and general installation requirements for a potable water system and/or line.

1.02 Related Sections:

- A. Section 02249 - Trenching, Backfill and Compaction for Utility Trenches
- B. Section 02600 - Ductile Iron Pipe and Fittings for Water Mains
- C. Section 02603 - Gate Valves
- D. Section 15070 - Valve Boxes and Vaults
- E. Section 02644 - Fire Hydrants

1.03 Unit Prices:

Payment for flushing, testing, disinfection or other items specified in this section shall be included in the unit price bid for the associated water main unless a specific unit price is shown in the Bid Schedule.. Ten per cent (10%) of the price bid per linear foot of pipe shall be deducted from partial pay estimates by the OWNER until flushing, testing and disinfection has been completed if so desired. This retainage shall be in addition to any other retainages held as per terms of the contract. All costs associated with this section shall be considered incidental to the pipe unless a specific unit price is shown in the Bid Schedule.

1.04 References:

- A. AWWA B300-92 AWWA Standard for Hypochlorites
- B. AWWA B301-92 AWWA Standard for Liquid Chlorine
- C. AWWA C600-93 AWWA Standard for the Installation of Ductile Iron Water Mains and Their Appurtenances.
- D. AWWA C651-92 AWWA Standard for Disinfecting Water Mains
- E. AWWA C900 AWWA Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 inch through 12 inch, for Water

1.05 System Requirements:

- A. The CONTRACTOR shall furnish a complete and operable water system, installed according to the standards and accepted practices for waterline construction. These specifications and references specifically called for in these specifications shall be considered minimum, other incidental items may be necessary to construct a complete and operable water system.

- B. The water system shall be free of leakage as defined in Section 02660, Part 3.02, Paragraph B.6 and ready for use by the OWNER upon final acceptance.

1.06 Regulatory Requirements:

The CONTRACTOR shall familiarize himself with the regulatory requirements of the following governing agencies. Any deviations specified in these specifications from these agency requirements shall be promptly brought to the attention of the ENGINEER.

1. Alabama Department of Environmental Management (ADEM).
2. Alabama Department of Transportation (ALDOT).
3. American Water Works Association (AWWA).

1.07 Site Conditions:

- A. The CONTRACTOR shall familiarize himself with the existing conditions and special site requirements of the job.
- B. Any street cuts or crossings shall be coordinated with the appropriate transportation authority. Any and all traffic control measures specified shall be incorporated by the CONTRACTOR.
- C. Street cuts or crossings along or across State of Alabama Highway Department Right-of-Way shall follow the Highway Department Guidelines and requirements of the Alabama Manual on Uniform Traffic Control Devices.
- D. The CONTRACTOR shall contact the OWNER through the ENGINEER concerning the use of water to be used in the flushing, pressure testing, and disinfection.
- E. The CONTRACTOR shall take appropriate measures to control the disposal of water used in the testing, flushing and disinfection of water lines. The CONTRACTOR shall adequately protect streets and adjacent property from the discharge of this water. Any damages shall be borne by the CONTRACTOR. Water used for disinfection may contain high concentrations of chlorine. Any environmental damage to lakes or streams shall be the responsibility solely of the CONTRACTOR.
- F. The CONTRACTOR shall coordinate with the ENGINEER and water works officials on the timing of all tests, flushing and disinfection of all water lines.
- G. The CONTRACTOR shall coordinate with the ENGINEER and water works officials on all tie-ins to existing system lines and valves.

PART 2 - PRODUCTS

2.01 Manufacturers:

All manufacturers of equipment used in the water line and/or system shall be experienced in the manufacture of such equipment for the water industry.

2.02 Equipment and Materials:

- A. All equipment used in the water system shall be new and unused, first quality and from established manufacturers.
- B. Equipment shall meet the requirements of the related sections of these specifications.

2.03 Testing Equipment:

The CONTRACTOR shall have on hand proper testing apparatus and associated accessories prior to beginning any tests. All fittings, piping, pressure gauges and pumps shall be in proper working order.

PART 3 - EXECUTION

3.01 Thrust Blocking:

- A. All pressure pipe two (2") inches in diameter and over shall be provided with thrust restraints. Thrust restraints shall consist of concrete thrust blocks and/or mechanical restraining rods and attachments shall be furnished at all hydrants, valves, fittings, plugs, and pipe bends.
- B. The bearing area for concrete thrust blocking shall conform to Table "A". Special blocking detailed in the drawings shall supersede these requirements.
- C. Concrete used in thrust blocking shall have a minimum compressive strength of 3000 psi in twenty eight (28) days.
- D. The concrete blocking shall be placed in such a way to contain the thrust force and still maintain accessibility of the pipe and fittings for repair. Nuts, bolts, glands, etc. shall be free of concrete. No separate payment shall be made for concrete blocking or thrust restraint.
- E. Fire hydrants shall be restrained as detailed on the drawings.
- F. All restraining rods, clamps, and accessories shall be coated with an asphalt-base emulsion as per ASTM D1187, Type A, before and after installation. The surface shall be cleaned thoroughly and the coating applied as per manufacturer's recommendations.

3.02 Testing:

A. General:

Testing, including flushing, hydrostatic pressure testing and disinfection, shall be accomplished such that all portions of the system are flushed, tested and disinfected according to these requirements. Prior to conducting any work on the project, the CONTRACTOR shall submit his written plan demonstrating in detail his proposed schedule and sequence for the various work elements including flushing, testing and disinfection.

B. Flushing:

1. Prior to beginning the pressure test, the water line shall be flushed to remove any dirt and debris trapped in the line. All valves shall be partially opened and closed during the flushing process.

2. All mains shall be flushed with a velocity of at least 2.5 feet per second as specified by the Alabama Department of Environmental Management.

C. Hydrostatic Pressure Test:

1. The CONTRACTOR shall coordinate with the OWNER and slowly fill the section of line to be tested with water. The line shall then be pressurized to 1.5 times the working pressure of the line, but in no case less than 150 psi. The working pressure shall be as defined by the OWNER.
2. Trapped air shall be expelled at all valves and hydrants. High points in the line without access to a valve or hydrant shall be tapped and a corporation stop installed. Upon completion of the test, the corporation stop shall be left in place. A copper line shall be installed from the corporation stop to a curb stop and a meter box installed.
3. Upon complete removal of all air entrapped in the line, the line shall be again filled with water and pressurized and testing begun. Duration of the test shall be two hours for uncovered pipe and six hours for covered pipe. The test pressure shall not vary by + or - 5 psi during the duration of the test.
4. A recording pressure gauge shall be installed and pressure fluctuations recorded for the duration of the test. Test charts and records shall be available to the ENGINEER during and at the end of each test, and ENGINEER shall retain test charts following operations. The pressure recording chart shall be a 24-hour, 0-300 psi recorder.
5. All visible leaks or evidence of apparent leaks encountered during testing shall be repaired.
6. Leakage shall not be greater than determined by the following formula:

$$L = \frac{SDP^{1/2}}{148,000}$$

L = Leakage in gallons per hour

S = Length of tested pipe (ft.)

D = Diameter of pipe (in.)

P = Average test pressure during the duration of the test (P.S.I.)

7. Leakage in excess of that determined by the above formula shall be repaired at the expense of the CONTRACTOR. The leakage test shall then be repeated until the project complies with the allowable leakage.

D. Disinfection:

1. After a successful pressure test has been achieved, the waterline shall be chlorinated for the purpose of disinfection.
2. The CONTRACTOR shall use the hypochlorite continuous feed method for chlorine application as specified in AWWA Standard C651.
3. Chlorine solution shall be introduced to achieve a concentration of at least 50 mg/l in all parts of the line. Disinfection shall be accomplished in such a manner that every portion of new work on other affected appurtenances shall receive the 50 mg/l of the chlorine solution.

4. The chlorine solution shall be allowed to remain in the pipe for a period of not less than 24-hours at which time the chlorine concentration shall be not less than 25 mg/l in any part of the new system.
5. All pipe and appurtenances shall be flushed with clean water until the chlorine residual is reduced to 1 mg/l or less until compatible with the existing system. The CONTRACTOR shall not flush any lines unless the OWNER and/or ENGINEER is present, unless prior arrangements have been made.
6. Bacteriological samples shall be collected by the OWNER and tested by a laboratory chosen by the OWNER. All costs associated with laboratory testing shall be borne by the CONTRACTOR
7. The OWNER shall perform the water analysis. All costs associated with the disinfection shall be borne by the CONTRACTOR.
8. The water line and appurtenances shall not be placed in service until an acceptable laboratory analysis has been completed.
9. If the initial disinfection fails to produce satisfactory samples, disinfection as required above shall be repeated by the CONTRACTOR at his expense until satisfactory samples have been obtained.

3.03 Existing Utility Crossings:

- A. Water mains paralleling existing sanitary sewers shall be positioned a minimum of five (5') feet horizontally from the sewer.
- B. If insufficient space is available to maintain the five (5') foot separation, the bottom of the waterline shall be placed a minimum of eighteen (18") inches above the top of the sewer.

3.04 Main Connection:

The CONTRACTOR shall anticipate that existing valves may not seal when closed. It shall be the CONTRACTOR'S responsibility to plan for this condition when making tie-ins to existing systems. The CONTRACTOR shall provide necessary pumps, equipment, and labor required to complete the tie-in in a timely manner. The unit price bid per each by the CONTRACTOR for main connection shall include all necessary equipment, pumps, materials and an adequate work force to insure the tie-in is made in a timely manner.

3.05 Protection:

The CONTRACTOR shall maintain and protect the completed water line until final acceptance by the OWNER. Any damages to the line shall be repaired by the CONTRACTOR prior to acceptance.

3.06 Minimum Cover:

All water mains shall have a minimum cover over the top of the pipe of 36" unless otherwise indicated elsewhere in the contract documents.

END OF SECTION 02660

SECTION 02664 - MANHOLES

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SECTION 02664 - MANHOLES

PART 1 - GENERAL

1.01 Section Includes:

This section of specifications covers the requirements for furnishing and installing precast concrete manholes.

1.02 Products Installed but Not Furnished Under This Section:

Gravity Sewer Pipe, Storm Sewer.

1.03 Related Sections:

A. Section 02249 – Trenching, Backfill and Compaction for Utility Trenches

B. Section 02433 – Storm Sewer

1.04 Payment:

Payment for manholes shall be as indicated on the unit price bid schedule.

1.05 Submittals:

The CONTRACTOR shall submit product data for each component specified under this Section.

PART 2 - PRODUCTS

2.01 Materials:

A. Manholes:

1. All precast manholes shall be new, unused manholes delivered directly from the manufacturer to the job site. The date of manufacturer, name or trademark of the manufacturer, CONTRACTOR name, and manhole identification number shall be clearly marked on the outside of each section or barrel.
2. Manholes shall be constructed of reinforced precast concrete and shall conform to the requirements of ASTM Specification C-478, latest revision. In addition, the fine aggregate used shall be natural silica sand. The concrete when tested in compression shall be not less than 4000 psi and absorption shall not exceed 9%. Minimum wall thickness of the manhole riser sections shall be as follows:

48" I.D. - 5"

60" I.D. - 6"

72" I.D. - 7"

Cone sections shall be eccentric, and shall be made with a 5" minimum wall at the bottom and an 8" wall thickness at the top. The minimum thickness of the bottom shall be 6" for all manhole diameters unless indicated otherwise on the plans. Manhole diameters to be used shall be as indicated on the plans.

3. Manholes shall be assembled with the fewest number of sections to make up the required height, thereby reducing the number of joints. The use of more than one (1) riser section per each of 16 inches or less shall not be allowed for sanitary sewer manholes unless approved otherwise by the City of Tuscaloosa prior to installation.

4. All manhole sections shall have offset tongue and groove joints and be made water tight with pre-lubricated O-ring rubber gaskets or preformed butyl sections and shall meet the requirements of ASTM Specification C-443, latest revision, with a nominal clearance of not more than 1/16 inch. Gaskets shall be Tylox Superseal, or approved equivalent. Where the O-ring joint is used, there shall be a suitable rectangular recess cast into the tongue of each manhole component to contain the rubber gasket, so that when the joint is made the rubber will be confined on all four sides. The tongue length shall not be less than the wall thickness. The rubber shall be installed on the manhole section as follows:
 - a. Clean pipe ends and all joint surfaces.
 - b. Lubricate the recess and the gasket thoroughly with an approved lubricant.
 - c. Snap gasket into the recess and equalize the rubber in tension by running a screwdriver shaft or other suitable tool around the section under the gasket.
 - d. Thoroughly lubricate the sliding surfaces of both the gasket and the inside surface of the bell. Tylox lubricant is recommended.
 - e. When gasket is properly installed, and all sliding surfaces are lubricated, the manhole sections can be coupled immediately.
5. Two lift holes shall be cast into each cone or riser section for purposes of handling and placement.
6. Openings for inlet and discharge sewer pipes shall be provided in the manhole base section and in the riser section for drop-manholes. Openings shall be at positions and elevations as indicated on the plans or predetermined in the field, and may be cast into the manhole wall or mechanically cored on completed sections. All openings shall be sized to accommodate the flexible manhole sleeve specified for the project.
 - a. Cast in place flexible manhole sleeves shall comply with the requirements of ASTM Specification C923 and be as manufactured by the Lock Joint Division of the Interpace Corporation unless otherwise approved.
 - b. Flexible manhole connectors suitable for use in pre-cast or cored openings utilizing premolded shapes positioned with expansion rings shall comply with the requirements of ASTM C923 and be as manufactured by KOR-N-SEAL Co., Press Seal Gasket Corp., or the Lock Joint Products Division of the Interpace Corp. Flexible connectors shall be installed as recommended by the manufacturer.
7. All manholes with one or more 24-inch diameter pipes shall be 5-foot diameter. All manholes with one or more 30-inch diameter pipes shall be 6-foot diameter. Manholes shall have eccentric transition risers.
8. Manhole steps shall be Copolymer Polypropylene Plastic Coating over ½" minimum Grade 60 steel reinforcing, 12" wide minimum, with slip resistant surface. Manhole steps shall be M.A. Industries PS1-PF or approved equal, reinforced plastic step complying with the requirements of ASTM-C478.

9. Manhole Frame and Cover:

- a. Manhole frames and covers shall be cast iron and shall conform to ASTM A48, Class 30. Frame and covers shall be stamped with words "STORM SEWER". Manhole frames and covers shall be close-grained, free of blisters, blowholes, and other defects.
- b. All frames and covers shall be made in the United States, and clearly marked with the manufacturer's name, product catalog number, and 'Made in the U.S.A.' cast in letters.
- c. All frames and covers shall be rated for a minimum of H-20 loading, and shall be cast with two non-penetrating type pick holes. Covers shall not have vent holes.
- d. Frame: 7-inches high, 20 1/2-inches clear opening, not less than 250 pounds
- e. Cover: 22-3/4-inches in diameter, 2-inches thick at the rim and 2-3/4" thick at the center, not less than 150 pounds. Frame and Cover shall be East Jordan Iron Works, Inc., Catalog Number V-1344-1 for standard installations, or equivalent.

PART 3 - INSTALLATION

3.01 General:

- A. All manholes shall be placed on a foundation of compacted ALDOT Section 801 No. 57 crushed limestone, placed a minimum of 12-inches thick, consolidated in-place with vibratory compaction equipment.
- B. Manhole inverts shall be constructed of cement mortar and shall have the same cross-section as the invert of the sewers which they connect. The manhole invert shall be carefully formed to the required size and grade by gradual and even changes in sections. Changes in direction of flow through the sewer shall be made to a true curve with a large a radius as the size of the manhole will permit. A bench with a slope of one inch per foot shall be constructed of non-shrink grout on either side of the flow channel.
- C. After the precast manholes are set in place, the cast iron frame for the cover shall be carefully set at the required elevation and properly bonded to the masonry with cement grout. Where manholes are constructed in paved areas, the top surface of the frame and cover shall be adjusted and tilted so as to conform to the exact slope, crown and grade of the pavement adjacent thereto.
- D. Any new openings required in manholes, including existing manholes shall be core drilled and have flexible manhole sleeves/connectors on pipes at the core drilled openings according to the manufacturer's recommendation.

END OF SECTION 02664

SECTION 02800 - TRAFFIC CONTROL

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SECTION 02800 - TRAFFIC CONTROL

PART 1 - GENERAL

1.01 Section Includes:

This section of specifications covers the materials, installation and requirements for handling traffic through the work and construction and maintenance areas.

1.02 Related Sections:

- A. Section 01060 - Regulatory and Safety Equipment
- B. Section 01301 - Submittals

1.03 Payment:

No separate payment shall be made as the cost of this item shall be incorporated in the various unit pricing of the work.

1.04 Reference:

- A. State of Alabama Highway Department Standard Specifications for Highway Construction, latest edition.
- B. Manual on Uniform Traffic Control Devices, latest edition.
- C. OWNER'S Department of Transportation or division of government having jurisdiction.

1.05 Submittals:

None required.

1.06 Delivery, Storage and Handling:

The CONTRACTOR shall deliver and store or have readily available traffic control devices of the correct type and sufficient number far enough in advance not to delay the progress of the work.

PART 2 - PRODUCTS

2.01 Materials:

- A. All signs, barricades, etc., used along the project shall be in accordance with the provisions of the Manual Uniform Traffic Control Devices, latest edition, as a minimum and shall also conform to the requirements of the OWNER'S Department of Transportation.
- B. All reflectorization of barricades, signs, drums or other devices shall be in accordance with the Manual on Uniform Traffic Control Devices, latest edition, plan details, and/or the requirements of the OWNER'S Department of Transportation.

PART 3 - EXECUTION

3.01 Installation:

- A. No road or section of road shall be closed to traffic and no construction shall be started until adequate provisions have been made to detour or by-pass the traffic in safety and convenience. Traffic control shall be maintained as long as necessary.**
 - 1. In cases where road closings require detours, the CONTRACTOR shall provide an area map indicating the location of the closing, detour routing, and signage locations to the following:**
 - a. ENGINEER**
 - b. OWNER**
 - c. Police and/or Sheriff's Department**
 - d. Fire Department**
 - e. 911 Service and/or other Emergency Service Coordinator(s)**
 - f. Department of Transportation having jurisdiction.**
 - 2. Notification shall be given not less than 48 hours prior to detouring traffic.**
 - 3. Notification is to be given for information only and does not relieve the CONTRACTOR of its responsibility to execute the work in a manner which protects the work, its personnel, and the general public.**
- B. In cases where roads are allowed to be closed, access shall be maintained at all times for emergency vehicles, local residents, mail delivery, etc.**
- C. When the CONTRACTOR performs any operations after daylight hours, all traffic control devices need to be left in place, and the CONTRACTOR shall provide and maintain, at his expense, sufficient artificial lighting to permit proper construction and inspection and to provide proper safety precautions.**
- D. Flagmen shall utilize "STOP-SLOW" paddles in addition to flags.**

3.02 Maintenance:

- A. All damaged, defaced or dirty signs or barricades shall be repaired or replaced immediately.**
- B. All signs, posts, drums, etc. used throughout the job shall be uniform in size and color.**
- C. The maintaining of traffic may require the use of flagmen in some areas. All flagmen shall wear an approved uniform as required by the Alabama Highway Department Standard Specifications, 2002 edition and the Manual on Uniform Traffic Control Devices, latest edition.**

END OF SECTION 02800

SECTION 02834 – CHAIN LINK FENCING

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SECTION 02834 – CHAIN LINK FENCING

PART 1 - GENERAL

1.01 Scope:

The CONTRACTOR shall furnish all necessary labor, equipment, and materials to complete the construction of the fencing as shown on the plans and specifications, foundations, signs, and all elements for a completed installation.

1.02 Payment:

No separate payment shall be made as the cost of this item shall be incorporated in the various unit pricing of the work.

PART 2 - MATERIALS

2.01 Materials:

- A. Fabric shall be 2" mesh, 9 gauge wire with a zinc coat Class I per ASTM Specification A 392 66 T, with black polyester coating, or approved equal.
- B. Top rail shall be minimum 1 5/8" O.D. Std. by 0.111" wall thickness.
- C. Line post shall be minimum 2 3/8" O.D. by 0.130" wall thickness.
- D. End, corner and pull posts shall be minimum 2 7/8" O.D. by 0.160" wall thickness.
- E. All posts, rails, and appurtenances shall receive a 1.2 oz. hot dipped, zinc coating per ASTM Specification A123 and shall be coated with black polyester coating, or approved equal. Pipe posts to have tops which exclude moisture.

PART 3 - EXECUTION

3.01 Execution:

- A. The area, as designated on the plans, shall be fenced. The fence shall be per the height shown in the plans with top rail and bottom tension wire.
- B. Fabric shall be connected to: line post with 9 gauge wire clips every 14"; top rail with 9 gauge wire every 24"; terminal, corner and gate posts by using 1/4" x 3/4" tension bars tied to the post every 14" with 11 gauge 7/8" wide steel bands and 5/16" diameter bolts and nuts; tension wire with 11 gauge hog rings every 24".
- C. Top rail shall pass through intermediate post tops forming a continuous brace within each stretch of fence and securely fastened to terminal posts.
- D. Each post is to be set in a concrete foundation of 3,000 psi, 28-day compressive strength, having a minimum diameter and depth as indicated on the construction plans. Space line posts every 10' or less apart.

END OF SECTION 02834

SECTION 02911 - TRAFFIC STRIPE, MARKINGS AND LEGENDS

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SECTION 02911 - TRAFFIC STRIPE, MARKINGS AND LEGENDS

PART 1 - GENERAL

1.01 Scope:

The work under this section shall cover the striping of all streets and parking lots as indicated on the construction plans. The work shall include the layout of all parking spaces, legends, markings and roadway stripe.

1.02 Related Sections:

Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition.

1.03 Payment:

- A. Payment for permanent striping, markings, legends, shall be as indicated in the bid schedule.
- B. No separate payment shall be made for temporary striping as the cost of this item shall be incidental to the permanent striping.

1.04 Performance Requirements:

- A. The CONTRACTOR shall allow newly placed bituminous concrete plant mix to cure for fourteen (14) days prior to any application of traffic stripe.
- B. Cleaning of pavement shall be in accordance with Section 701.03(b) of the Alabama Department of Transportation Standard Specifications for Highway Construction, Latest ed.
- C. The CONTRACTOR shall be required to prepare site for striping purpose. The work shall include but not limited to sweeping of pavement and removal of grass from top of curbs prior to paint application.

1.05 Construction Staking:

Layout of parking will be the same as that shown on plans. The CONTRACTOR will be responsible for parking layout. The OWNER will provide control points for parking layout.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. All striping, arrows, legends, markings, etc. shall conform to Section 856.02 of the Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition.
- B. All traffic marking for stop bars and crosswalks shall be ALDOT Class 2, Type A thermoplastic with a non-slip additive.
- C. All traffic striping along the City Walk shall be ALDOT Class 2T, Type A with a non-slip additive.

END OF SECTION 02911

SECTION 02930 - CAST IN PLACE CONCRETE

PART 1 - GENERAL

1.01 Section Includes:

- A. Provide cast-in-place concrete, including formwork and reinforcement where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- B. Work including, but not limited to, concrete street replacement, curb and gutter, sidewalks, thrust blocking, pipe supports, walls and boxes, and retaining walls.

1.02 Related Sections:

- A. Section 02246 - Site Construction
- B. Section 02433 - Storm Sewers

1.03 Unit Prices:

The CONTRACTOR shall refer to the Bid Schedule for appropriate unit pricing for concrete work. All items not specifically listed in the Bid Schedule shall be incidental to the pipe.

1.04 References:

- A. ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete".
- B. ACI 318 "Building Code Requirements for Reinforced Concrete".
- C. Concrete Reinforcing Steel Institute, "Manual of Standard Practice".

1.05 Submittals:

Shop Drawings (Reinforcement): Submit shop drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" showing bar schedules, stirrup spacing, diagrams of bent bars, arrangement of concrete reinforcement. Include special reinforcement required and openings through concrete structures.

1.06 Quality Assurance:

Codes and Standards: Comply with provisions of following codes, specifications and standards, except where more stringent requirements are shown or specified:

1. ACI 301 "Specifications for Structural Concrete for Buildings".
2. ACI 318 "Building Code Requirements for Reinforced Concrete".
3. Concrete Reinforcing Steel Institute, "Manual of Standard Practice".

PART 2 - PRODUCTS

2.01 Materials:

A. Form Materials:

1. **Forms for Exposed Finished Concrete:** Unless otherwise indicated, construct formwork for exposed concrete surfaces with plywood, metal, metal-framed plywood faced or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings. Provide form material with sufficient thickness to withstand pressure of newly placed concrete without bow or deflection.
2. **Forms for Unexposed Finish Concrete:** Form concrete surfaces which will be exposed in finished structure with plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.
3. **Form Coatings:** Provide commercial formulation form-coating compounds that will not bond with, stain nor adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.

B. Reinforcing Materials:

1. **Reinforcing Bars:** ASTM A615, Grade 60, deformed.
2. **Steel Wire:** ASTM A82, plain, cold-drawn, steel.
3. **Welded Wire Fabric:** ASTM A185, welded steel wire fabric.
4. **Welded Deformed Steel Wire Fabric:** ASTM A497.
5. **Supports for Reinforcement:** Provide supports for reinforcement including bolsters, chairs, spacers, and other devices for spacing, supporting and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI specifications, unless otherwise approved by the ENGINEER in advance.

C. Concrete Materials:

1. **Portland Cement:** ASTM C150, Type I or II low alkali, unless otherwise acceptable to the ENGINEER.
2. Use one brand of cement throughout project, unless otherwise acceptable to the ENGINEER.
3. **Fly Ash:** ASTM C 618, Type C or Type F.

Limit use fly ash to not exceed 25% of cement content by weight.
4. **Normal Weight Aggregates:** ASTM C 33, and as herein specified. Provide aggregates from a single source for exposed concrete.
 - a. For exterior exposed surfaces, do not use fine or coarse aggregates containing spalling-causing or deleterious substances.

- b. Local aggregates not complying with ASTM C 33 but which have shown by special test or actual service to produce concrete of adequate strength and durability may be used when acceptable to ENGINEER.
5. Water: Drinkable.
 6. Air-Entraining Admixture: ASTM C260.
 - a. Products: Subject to compliance with requirements, provide one of the following:
"Sika Aer"; Sika Corp.
"MB-VR or MB-AE"; Master Builders
"Dorex AEA"; W.R. Grace
"Edoco 2001 or 2002"; Edoco Technical Products.

2.02 Mixes:

A. Proportioning and Design of Mixes:

1. Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301. If trial batch method is used, use an independent testing facility acceptable to ENGINEER for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing unless otherwise acceptable to ENGINEER.
2. Submit written reports to ENGINEER of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until mixes have been reviewed by ENGINEER.
3. Design Mixes to provide normal weight concrete with the following properties, as indicated on drawings and schedules:
 - a. 3000 psi 28-day compressive strength; W/C ratio, 0.58 maximum (non-air-entrained), 0.46 maximum (air entrained).
4. Use air-entraining admixture in exterior exposed concrete, unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content as required.
5. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:
 - a. Ramps, slabs, and sloping surfaces: Not more than 3".
 - b. Reinforced Foundation Systems: Not less than 1" and not more than 3".
 - c. Concrete Containing HRWR Admixture (Super Plasticizer): Not more than 8" after addition of HRWR to verified less than 3" slump concrete.
 - d. Other Concrete: Not more than 4".

B. Concrete Mixes:

1. Ready-Mix Concrete: Comply with requirements of ASTM C94, and as herein specified.

- | | | |
|----|--------------------------------|---|
| 2. | Air Temperature..... | Maximum allowable combined mixing, delivery and placement time. |
| | Less than 85-degrees..... | Per ASTM C94 unless a shorter time is necessary due to the job conditions, but 1-1/2 hours maximum. |
| | 85-degrees - 90-degrees F..... | 75 Minutes |
| | Greater than 90-degrees F..... | 60 Minutes |
- a. When air temperature is between 85-degrees F. and 90-degrees F. reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90-degrees F., reduce mixing and delivery time to 60-minutes.

PART 3 - EXECUTION

3.01 Preparation:

A. Formwork:

1. Design, erect, support, brace and maintain formwork to support vertical and lateral loads that might be applied until such loads can be supported by concrete structures. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation and position.
2. Design formwork to be readily removable without impact, shock or damage to cast-in-place concrete surfaces and adjacent materials.
3. Construct forms to sizes, shapes, lines and dimensions shown, and to obtain accurate alignment, location, grades, level and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features required in work. Use selected materials to obtain required finishes. Solidly butt joints and provide back-up at joints to prevent leakage of cement paste.
4. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces where slope is too steep to place concrete with bottom forms only. Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and for easy removal.
5. Provide temporary openings where interior area of formwork is inaccessible for cleanout, for inspection before concrete placement, and for placement of concrete. Securely brace temporary openings and set time to forms to prevent loss of concrete mortar. Locate temporary openings on forms at inconspicuous locations.
6. Chamfer exposed corners and edges as indicated, using wood, metal, PVC or rubber chamfer strips fabricated to produce uniform smooth lines and tight edge joints.
7. Form Ties: Factory-fabricated, adjustable-length, removable or snapoff metal form ties, designed to prevent form deflection, and to prevent spalling concrete surfaces upon removal.
 - a. Unless otherwise indicated, provide ties so portion remaining within concrete after removal is 1" inside concrete and will not leave holes larger than 1" diameter in concrete surface.

8. **Cleaning and Tightening:** Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before concrete is placed. Retighten forms and other debris just before concrete is placed. Retighten forms and bracing after concrete placement is required to eliminate mortar leaks and maintain proper alignment.

B. Placing Reinforcement:

1. Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars", for details and methods of reinforcement placement and supports, and as herein specified.
2. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials which reduce or destroy bond with concrete.
3. Accurately position, support and secure reinforcement against displacement by formwork, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers and hangers, as required.
4. Place reinforcement to obtain at least minimum coverages for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.
5. Install welded wire fabric in as long lengths as practicable. Lap adjoining pieces at least one full mesh and lace splices with wire. Offset end laps in adjacent widths to prevent continuous laps in either direction.

C. Joints:

1. **Construction Joints:** Locate and install construction joints as indicated or, if not indicated, locate so as not to impair strength and appearance of the structure, as acceptable to ENGINEER.
2. Provide keyways at least 1-1/2" deep in construction joints in walls, slabs and between walls and footings; accepted bulkheads designed for this purpose may be used for slabs.
3. Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints or as noted on Drawings.
4. **Control Joints in Slabs or Ground:** Construction contraction joints to form panels as directed. Tool slab edges round on each side of contraction joint.

D. Installation of Embedded Items:

1. **General:** Set and build into work anchorage devices and other embedded items required for other work that is attached to, or supported by, cast-in-place concrete. Use setting drawings, diagrams, instructions and directions provided by suppliers of items to be attached thereto.

E. Preparation of Form Surfaces:

1. Clean re-used forms of concrete matrix residue, repair and patch as required to return forms to acceptable surface conditions.
2. Coat contact surfaces of forms with a form-coating compound before reinforcement is placed.
3. Thin form-coating compounds only with thinning agent of type, and in amount, and under conditions of form-coating compound manufacturer's directions. Do not allow excess form-coating material to accumulate in forms or to come into contact with in-place concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions.

4. Coat steel forms with a non-staining, rust-preventative form oil or otherwise protect against rusting. Rust-stained steel formwork is not acceptable.

3.02 Concrete Placement:

- A. No concrete shall be placed without the approval of the ENGINEER. The CONTRACTOR shall give the ENGINEER at least 48 hours advance notice prior to placing any concrete. Concrete shall be placed in one continuous operation from construction joint to construction joint. Construction joints in slabs and beams and vertical construction joints in walls shall be formed. Location of all construction joints shall be approved by the ENGINEER. All concrete shall be thoroughly compacted and worked around all reinforcements and embedded items and into the corners of the forms. Compaction shall be accomplished by internal vibration supplemented by hand spading in the corners and angles of forms and along form surfaces. Vibration shall not continue long enough to cause segregation. When placing concrete under formwork, air holes shall be drilled into the form to prevent air pockets from forming.
- B. Concrete shall not be allowed to drop freely a distance greater than 5 feet. If concrete is to be placed greater than 5 feet below the concrete bucket, the CONTRACTOR shall provide tremies or other approved means for depositing the concrete.
- C. Chutes shall not be used to deposit concrete unless specifically authorized by the ENGINEER. If chutes are approved for use, they shall be fabricated of metal with rounded bottoms, end baffles and shall be sloped adequately to prevent segregation of materials.
- D. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6" into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix. Remove all debris, dirt, water, trash, etc. form forms prior to placing concrete.
- E. Placing Concrete Slabs: Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed.
- F. Bring slab surfaces to correct level with straightedge and strikeoff. Use bull floats or darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.
- G. Maintain reinforcing in proper position during concrete placement operations.
- H. Concrete shall be placed only when the ambient temperature is 40-degrees F. and rising. In freezing weather, concrete shall only be poured with the approval of the ENGINEER. The CONTRACTOR shall be responsible for protecting newly poured concrete from freezing and shall maintain newly poured concrete at a temperature of at least 50-degrees F. for 72 hours after pouring.
- I. The CONTRACTOR is responsible for protecting all concrete structures from damage due to excavation, blasting, etc. Any damaged structure shall be repaired or replaced by the CONTRACTOR as directed by the ENGINEER.
- J. When concrete is to be placed in wall forms either in the initial pour against a slab or secondary lifts on previous wall sections, the CONTRACTOR shall place a 6-inch deep layer of cement grout against the old concrete. The grout shall be a design mix as strong or stronger than the wall to be poured.
- K. Metal ties or anchorages within the forms shall be equipped with cones, she-bolts or other devices that permit their removal to a depth of at least one inch without injury to the concrete. She holes shall be filled with an epoxy grout or patching mortar as per the manufacturer's recommendations.

3.03 Concrete Finishes:

- A. **Rough Form Finish:** For formed concrete surfaces not exposed to view in the finish work or by other construction, unless otherwise indicated. This is the concrete surface having texture imparted by form facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4" in height rubbed down or chipped off.
- B. **Smooth Form Finish:** For formed concrete surfaces exposed-to-view, or that are to be covered with a coating material applied directly to concrete, or a covering material applied directly to concrete, such as waterproofing, damp-proofing, painting or other similar system. This is as-cast concrete surface obtained with selected form facing material, arranged orderly and symmetrically with a minimum of seams. Repair and patch defective areas with voids, fins or other projections, completely removed and smoothed.
- C. **Broom Finish:** Apply broom finish to sidewalks, curb and gutters and other areas as directed.
 - 1. Immediately after trowel finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route.

3.04 Concrete Curing:

- A. **General:** Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
 - 1. Start curing as soon as free water has disappeared from concrete surface after placing and finishing. Keep continuously moist for not less than 7 days.
- B. **Curing Methods:** Perform curing of concrete by curing and sealing compound, by moist curing, by moisture-retaining cover curing, and by combinations thereof, as herein specified.
- C. **Provide moisture control by one of the following methods:**
 - 1. Keep concrete surface continuously wet by covering with water.
 - 2. Continuous water-fog spray.
 - 3. Covering concrete surface with specified absorptive cover, thoroughly saturating cover with water and keeping continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges with 4" lap over adjacent absorptive covers.
 - 4. Coat concrete with curing and sealing compound as per manufacturer's recommendations.

3.05 Field Quality Control:

- A. The OWNER will employ a testing laboratory to perform tests and to submit test reports. However, the OWNER is not obligated to perform the test for the convenience of the CONTRACTOR.
- B. Sampling and testing for quality control during placement of concrete may include the following, as directed by ENGINEER. The CONTRACTOR shall conduct tests as necessary to ensure that the concrete meets all requirements of the Specifications.
- C. **Sampling Fresh Concrete:** ASTM C172; except modified for slump to comply with ASTM C94.
 - 1. **Slump:** ASTM C143; one (1) test at point of discharge for each delivery of each type of concrete; additional tests when concrete consistency seems to have changed.

2. **Air Content:** ASTM C173; volumetric method for lightweight or normal weight concrete; ASTM C231 pressure method for normal weight concrete; one (1) for each day's pour of each type of air entrained concrete.
 3. **Concrete Temperature:** Test hourly when air temperature is 40° F and below and when 80° F and above; and each time a set of compression test specimens are made.
 4. **Preparation of Concrete Cylinders:** ASTM C31; one (1) set of three (3) for each day's pour exceeding five (5 c.y.) cubic yards, plus additional sets for each additional twenty-five (25 c.y.) cubic yards of each concrete class placed in any one (1) day.
 5. **Compressive Strength Tests:** ASTM C39; one (1) specimen tested at seven (7) days, one (1) specimen tested at twenty-eight (28) days, and one (1) specimen retained in reserve for later testing if required.
- D. **Acceptance of Concrete:** Concrete may be accepted on the basis of construction cylinders that meet the required compressive strength specified for the design mix. The concrete will be acceptable provided one (1) cylinder of each set breaks at or above the twenty-eight (28) day design strength. In the event that the cylinders tested do not meet the above criteria, then the reserve cylinder shall be tested. Should the reserve cylinder fail to break at or above the design strength, additional testing may be required as specified in 3.05.E of this Section.
- E. **Questionable Concrete:** Failure to measure up to any of the specified conditions shall constitute questionable concrete and additional tests shall be made at the expense of the CONTRACTOR. The ENGINEER may also require additional tests to be made at the CONTRACTOR'S expense when individual compressive tests below specified strengths are identified as having been made from concrete placed in positions of critical structural importance. Additional tests shall be in accordance with "Methods of Securing, Preparing, and Testing Specimens from Hardened Concrete for Compressive and Flexural Strengths (ASTM C42). Cores shall be 4-inches in diameter and a minimum of 7-1/2" long before capping. If the core tests fail to demonstrate strength satisfactory to the ENGINEER, then the unsatisfactory portion and adjacent area of the structure shall be removed and reconstructed to meet the requirements of the Drawings and Specifications and in a manner acceptable to the ENGINEER.

3.06 Protection:

The CONTRACTOR shall protect all freshly poured concrete from damage until final acceptance of the work.

3.07 Contractor's Responsibility:

The ENGINEER'S acceptance of tests and methods shall in no way relieve the CONTRACTOR of his responsibility to perform a complete job in accordance with these specifications. The CONTRACTOR is solely responsible for testing, placing, curing, etc., the concrete to insure its acceptability to the OWNER regardless of tests performed or not performed by the OWNER.

END OF SECTION 02930

SECTION 12800 - LANDSCAPING

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SECTION 12800 LANDSCAPING

PART 1 - GENERAL

1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General Conditions and Division-1 Specifications Sections shall apply to, and form part of this Section.

1.2 Description of Work

- A. The extent of landscape development is shown on the drawings.
- B. The work covered under this section shall consist of furnishing all labor, materials, tools, tests, royalties, services and other incidentals as may be required for the good and proper completion of planting operations.
- C. The Contractor is responsible for notes on the drawings which call attention to particular requirements or conditions. The fact that these requirements or conditions are not called out in the specifications does not relieve the Contractor of responsibility for these requirements or conditions.
- D. Maintenance of Site During Planting
 - 1. Sidewalks, roads and other paving adjacent to planting operations shall be kept clean and free of obstruction, mud and debris at all times. Wheels of vehicles used in work shall be cleaned if necessary. Sidewalks shall be protected from damage and marking from wheels of vehicles used in the work.
 - 2. Flushing of streets or disposal of dirt or debris into sewers or drainage ditches will not be permitted.
 - 3. Dust shall be controlled by approved means to the satisfaction of the Landscape Architect.
- E. The Contractor will be responsible for removal of all tree guy wires. When making inspections of the plant material during the Guarantee Period, it will be up to the Contractor to determine when to remove guy wires to prevent girdling to tree trunks. The contractor will re-guy trees (in a fashion which will properly support the tree) if the tree is not yet mature enough to support its own weight, or not enough root growth has occurred to anchor it firmly.

If damage occurs to trees from girdling of the trunks, or removal of guy wires too early (or not properly positioned) the Contractor will replace all such material at no charge to the Owner. Guarantee periods for this material shall be as described in Paragraph 1.04(F).

1.3 Quality Assurance

- A. Provide at least one person who shall be present at all times during execution of this portion of the work, who shall be thoroughly familiar with the type of materials being installed and the proper materials and methods for their installation, and who shall direct all work performed under this Section.
- B. All workmen shall have sufficient skill and experience to perform properly the work assigned to them. Workmen engaged in special work or skilled work shall have the sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactory.
- C. The selection of all materials and execution of all preparations required under the drawings and specifications shall be subject to the approval of the Landscape Architect. The Landscape Architect shall have the right to reject any and all materials, any and all work, which in his opinion does not meet with the requirements of the specifications at any stage of the operations. All rejected materials shall be removed from the site by the

Contractor at his expense. Rejected work shall be replaced with work of the specified quality or corrected as directed by the Landscape Architect at no additional cost to the Owner.

- D. All plants and planting material shall meet or exceed the specifications of Federal, State, and County laws requiring inspection for plant disease and insect control.
- E. Quality and size shall conform with the current edition of "Horticulture Standards" for number one grade nursery stock as adopted by the American Association of Nurserymen.
- F. All plants shall be true to name. One of each bundle or lot shall be tagged with the name and size of the plants in accordance with the standards of practice of the American Association of Nurserymen. In all cases, botanical names shall take precedence over common names.
- G. Plant materials nomenclature to conform to Hortus Third, A Concise Dictionary of Plants Cultivated in the United States and Canada by MacMillian Publishing Company, Inc., New York.

1.4 Guarantee Period And Replacements

- A. The guarantee period shall begin at the time of Final Acceptance as defined in Paragraph 3.06(B).
- B. All plant material shall be guaranteed by the Contractor for a period of one year from the date of Final Acceptance, to be in good, healthy and flourishing condition.
- C. The Contractor shall make periodic inspections, at no extra cost to the Owner, during the guarantee period to determine what changes, if any, should be made in the Owner's maintenance program. All such recommended changes shall be submitted, in writing, to the Owner.
- D. The Contractor shall replace, without cost to the Owner, and as soon as weather conditions permit, all dead plants and all plants not in a vigorous, thriving condition, as determined by the Landscape Architect during and at the end of the guarantee period. The plants shall be free of dead branches and dead branch tips, and shall bear foliage of a normal density, size and color. Replacements shall closely match adjacent specimens of the same species. Replacements shall be subject to all requirements stated in this specification.
- E. The Contractor shall make all necessary repairs to grades, mulch or plant materials required because of plant replacements. Such repairs shall be done at no extra cost to the Owner.
- F. The guarantee of all replacement plants shall extend for an additional period of one year from the date of their acceptance after replacement or for the guarantee period, whichever time period is greater. In the event that a replacement plant is not acceptable during or at the end of the said extended guarantee period, the Owner may elect either subsequent replacement or credit for each item.
- G. The guarantee does not include losses due to Acts of Nature, Vandalism, or Owner neglect as determined by the Landscape Architect.

PART 2 - PRODUCTS

2.1 Soil Mix

- A. Soil mix furnished shall be fertile, friable, sandy loam soil mix complying with the following quantitative analysis:**
- | | |
|-------------------------------------|-------------------|
| 1. Decomposed organic matter | 5% to 8% |
| 2. Silt | 10% to 30% |
| 3. Sand | 25% to 75% |
| 4. Clay | 5% to 10% |
| 5. pH | 5.0 to 6.5 |
- B. Soil mix shall not contain any substance or material inhibitory to plant growth, and shall be without admixture of clay, hardpan, mulch, marl, shale or other material which in the opinion of the Landscape Architect shall render it unsuitable for use under this Contract. Soil mix shall also be free of stones, lumps, noxious weeds or their seeds, grasses or their seeds, other plants or their roots, branches, sticks, or other extraneous material larger than 2 inches in diameter. Soil mix found to contain any of the above-listed items shall be chemically or mechanically treated or removed from the project at the discretion of the Landscape Architect.**
- C. The Contractor shall be required to have tests run on the soil mix he proposes to use to determine the soil mix's compliance with the above-listed quantitative analysis. In addition to the above tests, the Contractor shall be required to have tests run for soluble salt, nitrogen, phosphorus, potassium, calcium, and magnesium content, for percent organic matter, and pH. tests shall be conducted by the Soils Testing Laboratory at Auburn University, Auburn, Alabama, phone: (334) 844-4741.**
- D. Following initial soil testing and approval of soil mix for use, soil mixes placed on the project shall be sampled and tested as specified above at random as directed by the Landscape Architect at no additional cost to the Owner.**
- E. Additions of fertilizer and/or lime to the soil mix furnished as may be recommended by the Soil Test Report issued by the Soil Testing Laboratory of Auburn University and approved by the Landscape Architect shall be done by the Contractor as part of the work under this Contract. No additions of fertilizer, lime, conditioning or placement of soil mix shall be done prior to furnishing in writing to the Landscape Architect all initial soil test results and obtaining his approval of soil mixes tested.**

2.2 Fertilizer

- A. Fertilizer shall be a commercially available material conforming to Alabama Fertilizer Laws, Title 2, Section 202-300, Alabama Code of 1940, as amended. Fertilizer shall be uniform in composition, dry and free flowing, and shall be delivered to the site in the original unopened containers, each bearing the manufacturer's guaranteed analysis. Any fertilizer which becomes caked or otherwise damaged, making it, in the opinion of the Landscape Architect, unsuitable for use, will not be accepted. Provide commercial balanced fertilizer of analysis 13-13-13 for use in soil mixture conditioning.**

2.3 Lime

- A. Lime shall be crushed or ground so that 90 percent passes a 10-mesh screen and not less than 50 percent will pass a 60-mesh screen. All lime shall have a neutralizing value of 90 percent calcium carbonate or better. Lime which has become caked or otherwise damaged, making it, in the opinion of the Landscape Architect, unsuitable for use, will not be accepted.**
- B. Lime shall be applied at the rate specified by the soil test reports.**

2.4 Water

- A. Potable water for use under this Contract shall be furnished by the Owner. The Contractor shall make, at his expense, whatever arrangements may be necessary to insure an adequate supply of water to meet the needs of this Contract. He shall also furnish all necessary hose, equipment, attachments and accessories as may be necessary to complete the work specified.

2.5 Organic Matter

- A. Provide Klumb's decomposed pine bark soil conditioner for use in plant pit mix.

2.6 Sand

- A. Provide clean sharp builder's sand for use in plant pit mix.

2.7 Soil Mix

- A. All soil mix used in tree and shrub pits for planting operations as specified shall be prepared and conditioned as follows: Mix one part by volume of decomposed shredded pine bark, one part sand, and four parts by volume of soil mix specified and add 2 pounds of 13-13-13 fertilizer to each cubic yard of the mixture.

2.8 Plant Materials

- A. Provide all plant materials as indicated on the plan and/or listed in the plant schedule.

1. General:

- a. Unless otherwise specifically permitted, plant materials shall be nursery-grown in accordance with the best modern horticultural practices.
- b. Plant materials shall comply with State and Federal laws relating to inspection for diseases and insect infestation. Inspection certificates shall be filed with the Owner.
- c. Substitutions of plant materials will not be permitted unless authorized in writing by the Landscape Architect. If proof is submitted that any plant size specified is unobtainable, a proposal will be considered for use of the nearest equivalent size or variety.
- d. Durable, legible labels stating the correct plant name and size, specified in the Plant Schedule shall be securely attached to plants, bundles and/or containers of plant material delivered to the planting site for the purpose of inspection and plant identification.

2. Quality and Inspection:

- a. Plant materials shall conform to the requirements set forth in ANSI 260.1 Standard for Nursery Stock and shall be of standard quality, true to name and type and first-class representatives of their species and variety. B&B materials shall have been root pruned within the last two years. Container grown plants shall have been grown in the delivery container for one growing season.
- b. Plant materials shall have normal, well-developed branches and vigorous fibrous root systems. They shall be healthy, vigorous plants free from defects, decay, disfiguring roots, sun-scald injuries, abrasions of the bark, diseases, insect pests or their eggs, borers and any other form of infestation or objectionable disfigurements.

Plants lacking compactness or proper proportions, plants which are weak or thin, trees which have a damaged or crooked leader or multiple leaders unless specifically specified, or plants injured by too close planting in nursery rows will be rejected. Plant materials which have been cut back from larger grades to meet certain requirements will not be accepted. Plants shall not be pruned prior to delivery to the point of planting.

- c. All plants shall be subject to inspection and approval by the Landscape Architect at any place and at any time. Part of the plants required for the work may be inspected at the place of growth, but inspection at the place of growth shall not in any way impair the right of rejection at the site.

3. Measurements:

- a. Plants shall be measured when branches are in their normal position. Height and spread dimensions specified refer to the main body of the plant and not from tip to tip.
- b. Caliper measurements shall be taken at a point on the trunk 6 inches above natural ground line for trees up to 4 inches in caliper. Caliper measurements for trees specified as greater than 4 inches in caliper shall be taken at a point on the trunk 12 inches above the natural ground line.
- c. If a range of size is given, no plant shall be less than the minimum size and not less than 50% of the plants shall be as large as the maximum size acceptable and are the measurements after pruning, where pruning is necessary.
- d. Plants that meet the measurements specified, but do not possess a normal balance between height and spread, shall be rejected.
- e. Plants larger than those specified and of equal quality to those specified may be accepted at no additional cost to the Owner.

4. Balled Plants:

- a. Plants designated "B&B" in the Plant Schedule shall be adequately balled with firm, natural balls of soil in sizes as set forth in ANSI 260.1 Standard for Nursery Stock. Balls shall be firmly wrapped with jute burlap weighing not less than 7.2 ounces per square yard or other approved strong cloth of equal strength and resistance to tearing and laced with a suitable heavy jute twine. No balled plant shall be planted if the ball is cracked or broken before or during the process of planting or if the plant is loose in the ball.

5. Container-Grown Plants:

- a. Plants designated "container-grown" in the Plant Schedule shall be furnished in sound containers of the size specified. The plant materials contained therein shall conform to the requirements set forth in ANSI 260.1 Standard for Nursery Stock for container-grown plants. No container-grown plant shall be planted if the root and soil mass is cracked or broken either before or during the process of planting. Root bound container-grown stock will not be accepted. Containers shall be free of weeds and grasses. Containers found to contain objectionable weeds and/or grasses will be rejected.

6. Delivery, Handling and Temporary Storage:

- a. Plants designated "B&B" shall be freshly dug at the time of delivery. All plant materials shall be dug and/or handled with skill and care so as to prevent injuries to the trunk, branches and roots and shall be packed in an approved manner to ensure arrival at the project site in good condition.
- b. Plants shall not be bound with wire or rope at any time in such a manner that injury to the plants results. Plants shall be handled and lifted from the bottom of the ball or from the container only.

- c. Provide protective covering for the plants during delivery and while in storage awaiting planting.
- d. Until planted, protect plant materials from excessive moisture loss and/or freezing by covering the root balls with sawdust or other approved mulch material. Provide adequate water to all plant materials while in storage at the site.

2.9 Pine Straw

- A. Provide clean pine straw, free of weed seeds, moss, stones, sticks, cones, or other debris. Pine straw shall not contain materials or toxic substances which may adversely influence plant growth.

2.10 Antitranspirant

- A. Provide 'wilt-proof' antitranspirant or other approved wilt-proofing agent for all plant materials in leaf.

2.11 Staking And Guying

- A. Provide materials for staking and guying of trees as called for by the planting details.
- B. Removal of guy wires will be the responsibility of the Contractor, as stated in Paragraph 1.02(E).

PART 3 - EXECUTION

3.1 Site Preparation

- A. Remove all construction debris from the subgrade surface before beginning landscape operations. Subgrade shall be free of all brick, concrete, mortar, gravel, asphalt, lumber, sheetrock, and any other materials which would adversely influence plant growth.
- B. Install a minimum 4 inch depth of approved soil mix over all areas to receive sod. Provide and install additional soil mix as needed to provide positive surface drainage off of the site.
- C. Grade areas uniformly and free of low spots or other irregularities. Obtain the approval of the Landscape Architect before proceeding with planting operations.

3.2 Tree And Shrub Installation

- A. Lay out locations of plants and outlines of plant areas and obtain the approval of the Landscape Architect before planting is begun. The Landscape Architect may adjust the locations of plant materials prior to planting.
- B. Examine existing site conditions before work is begun. Notify the Landscape Architect of any unsatisfactory conditions. Do not perform work until such conditions are satisfactory and acceptable.
- C. Inform the Landscape Architect in writing prior to planting of existing conditions which could be detrimental to the successful planting and subsequent growth and health of any plant material, including but not limited to: subsurface drainage conditions, underground utility locations, and other subgrade conditions.
- D. All pits shall be circular in outline; all excavations shall have vertical sides. The depths and widths shall be as specified on planting details.

E. Setting Plants:

1. Set plants uniformly 2"-4" higher than the surrounding grade or as necessary to provide adequate drainage away from the roots.
2. Prepare planting pits as specified and as shown on the drawings, prior to inserting plants. Use specified soil mixture to backfill plant pits. When plant pits have been backfilled approximately 2/3 full, water thoroughly before installing remainder of soil to top of pit.
3. Set plant plumb and brace rigidly in position until the planting soil has been tamped solidly around the ball and roots.
4. Cut rope or strings from top of ball after plant has been set. Leave burlap or cloth wrapping intact around balls. Turn under and bury portions of burlap exposed at top of ball.
5. Form shallow saucers capable of holding water about each plant by placing a mound of soil mix around the edge of each filled-in pit.
7. Water all plants thoroughly by hose immediately after planting.
8. Mulch plant saucer uniformly with a two inch layer of mulch.
9. Guy trees over two inches in caliper with a minimum of three guy wires spaced evenly around the tree. Attach each guy wire to tree with a single loop through a hose with an angle of 60 degrees to the tree trunk. Attach the guy wire in accordance with planting details. Keep guy wires taut. Removal of guy wires will be the responsibility of the Contractor, as stated in Paragraph 1.02(E).

- F. All plant materials shall be pruned as necessary at the site in accordance with standard modern horticultural practice as approved by the Landscape Architect. Cuts over 1/2" in diameter shall be painted with flat black oil based enamel paint. Pruning shall be done with clean, sharp tools.

3.3 Site Maintenance

- A. During the course of executing of the work under this Contract, excess and waste materials shall be continuously and promptly removed and disposed of as specified herein and all reasonable precaution taken to avoid damage to existing structures.
- B. When all work has been completed in an area, the area shall be cleaned up to the satisfaction of the Landscape Architect. Debris, rubbish, subsoil, soil mix and other waste material shall be cleaned up and removed from the project site.

3.4 Protection Of The Work And The Public

- A. The Contractor shall furnish and place to his satisfaction, suitable and sufficient barricades, warning signs, lanterns, red flags, torches or approved reflectors to adequately protect the work under construction from damage and to protect the work under construction from damage and to protect the public from accident and unnecessary inconvenience.
- B. In the event that pavement, structures, walls, sidewalks, curbs, substructures, or utilities are disturbed or damaged by the Contractor during execution of the work under this Contract, the Contractor shall make repairs, at no additional cost to the Owner, according to the following:
 1. If the damaged item is owned or operated by one of the several public utilities, repair shall be accomplished as directed by the utility.

2. If the damaged item is the property of the Owner, repair shall be made in a manner acceptable to the Landscape Architect and shall conform to the requirements of applicable Federal Government or local codes.

3.5 Landscape Maintenance

- A. Maintenance shall begin immediately after each plant is planted and shall continue with the following requirements:
 1. Maintenance of new planting shall consist of pruning, mowing, trimming, water, cultivating, weeding, mulching, resetting of plants to proper grades of upright position, restoration of the planting saucer, and furnishing and applying such sprays as are necessary to keep the planting free of insects and diseases. This will be required until Final Acceptance of the work.
 2. Planting areas and plants shall be protected at all times against trespassing damage of any kind for the duration of the maintenance period. If any plants become damaged or injured, they shall be treated or replaced as directed by the Landscape Architect at no additional cost to the Owner. No work shall be done within, adjacent to, or over any plant or planting area without proper safeguards and protection to the plant material.
 3. The Contractor shall be responsible during the contract period for keeping all planting and work incidental thereto in good condition by planting replacement plants, watering, weeding, cultivating, pruning and spraying, and by performing all other necessary operations of care for promotion of root growth and plant life so that all work is in a satisfactory condition at the termination of the maintenance period.
 4. Mow all turf areas as needed so that no more than one-third of the total growth is removed at one time. Mow all turf areas at a height of one and one-half inches. Turf areas shall be mowed with equipment which will collect and bag the clippings. All clippings shall be removed and properly disposed off of the site.
 5. Trim all curbs, walks, and bed areas each time the turf is mowed to provide a crisp, clean appearance.
 6. Remove all leaves, litter, gravel, or other debris from all landscaped areas at weekly intervals until Final Acceptance. Collect and properly dispose of such materials off the site.
 7. The root system of all plants shall be watered at such intervals as will keep the surrounding soil in best condition for promotion of root growth and plant life.

3.6 Inspection And Final Acceptance

- A. The Landscape Architect shall inspect all work for Final Acceptance upon written request of the Contractor. The request shall be received at least seven days before the anticipated date of inspection.
- B. Upon completion of all repairs or renewals (which may appear to be necessary in the judgment of the Landscape Architect at the time of Final Inspection), the Landscape Architect shall certify in writing as to the Final Acceptance of the project.
- C. The Contractor's responsibility for maintenance (exclusive of replacement) shall terminate the day after Final Acceptance of the work.

PART 4 - MEASUREMENT AND PAYMENT

Measurement and payment for plant materials will be complete and in place per each plant material. This shall include, but may not be limited to: the plant material item, all topsoil, soil mixes, lab testing and reports for both topsoil and soil mixes, fertilization and liming as called for in topsoil/soil mix reports, herbicide treatment, nursery tagging and associated trips, staking and guying per construction details, mulches, shipping/freight costs, taxes, warranties, watering, labor and equipment used for installation, storing and protection of plant material both on-site and off, and maintenance of the installed material until final acceptance.

END OF SECTION 12800

SECTION 12810 – UNDERGROUND IRRIGATION SYSTEM

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SECTION 12810 UNDERGROUND IRRIGATION SYSTEM

PART 1 - GENERAL

1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General Conditions, and Division-1 Specification Sections shall apply to and form a part of this Section.

1.2 Description Of Work

- A. Unless otherwise specified or indicated on the drawings, the construction of the sprinkler system shall include the furnishing, installing, and testing of all mains, laterals, risers, and fittings, the furnishing and installing of sprinkler heads, quick coupling valves, gate valves, controller and all necessary specialties and accessories, the removal and/or restoration of existing improvements, excavation and backfill, and all other work in accordance with the plans and specifications as required for a complete system.
- B. The work consists of installing a complete underground irrigation system as shown on the drawings and as hereinafter specified, including the furnishing of all labor, plant, equipment, appliances, and materials and in performing all operations in connection with the construction of the irrigation system. It shall include furnishing and installing all plastic pipe and fittings, automatic control valves, pressure relief valves, check valves, valve access boxes, valve marker, manual drain valves, sprinkler heads, electric or hydraulic controllers, electric wire, hydraulic lines, etc., as required for complete system as shown on the drawings, called for in these specifications or as may be required for proper operation of the system.
- C. Sidewalks, roads and other paving adjacent to planting operations shall be kept clean and free of obstructions, mud and debris at all times. Wheels of vehicles used in work shall be cleaned if necessary. Sidewalks shall be protected from damage and marking from wheels of vehicles used in the work.
- D. Flushing of streets of disposal of dirt or debris into sewers or drainage ditches will not be permitted.

1.3 Quality Assurance

- A. All local, Municipal and State Laws and Rules and Regulations governing or relating to any portion of this work are hereby incorporated into and made a part of these specifications and their provisions shall be carried out by the Irrigation Subcontractor. Anything contained in these specifications shall not be construed to conflict with any of the above mentioned Rules, Regulations or requirements and where a conflict may occur, the Rules, Regulations or requirements of the governing code shall be adhered to. However, when these specifications and/or drawings call for or describe materials, workmanship or construction of better quality, higher standard or larger size, these specifications and/or drawings call for or describe materials, workmanship or construction of a better quality, higher standard or larger size, these specifications and/or drawings shall take precedence over the requirements of said Rules, Regulations or Codes.
- B. In addition to complying with all pertinent codes and regulations, comply with the latest rules of the National Electric Code and local city and county Electrical Codes for all electrical work and materials.
- C. Provide at least one person who shall be present at all times during execution of this portion of the Work and who shall be thoroughly familiar with the type of materials being installed and the materials manufacturers' recommended methods of installation and who shall direct all work performed under this Section.
- D. All workmen shall have sufficient skill and experience to perform properly the work assigned to them. Workmen engaged in special work or skilled work shall have the sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactorily.

- E. All materials to be incorporated in this system shall be new and without flaws or defects and of quality and performances as specified and meeting the requirements of the system.

1.4 Scope Of Work

- A. The irrigation system shall be constructed using the sprinklers, valves, piping, fittings, controllers, wiring, etc. of sizes and types shown on the drawings and as called for in these specifications or approved equals. The system shall be constructed to grades and conform to areas and locations as shown on the drawings.
- B. It is the intention of these specifications, together with the accompanying drawings, to accomplish the work of installing a sprinkler system which will operate in an efficient and satisfactory manner according to the workmanlike standards established for the sprinkler operation. Notwithstanding is the fact that these specifications and drawings may be deficient in setting forth a complete detailed description of the work to be done.
- C. It shall be the Contractor's responsibility to ensure and guarantee coverage of the areas shown on the drawings to be irrigated. He shall also guarantee the satisfactory operation of the entire system and the workmanship and restoration of the area. The entire system shall be guaranteed for a period of one year from the date of its acceptance, and he hereby agrees to repair or replace any such defects occurring within that year, free of expense to the Owner.
- D. The Contractor shall be responsible for coordination with the local water authority and shall be responsible for any and all permits, fees, tapping charges and other costs required to make the irrigation system completely operational.
- E. The Contractor shall coordinate the work of this Section with that of the other trades.

1.5 Guarantee - Warranty

- A. The Guarantee period begins at the date of final acceptance of the work of this Section and extends for one calendar year from that date.
- B. All work called for by this Section of the specifications shall be free of defects of workmanship and materials for a period of one (1) year from the date of final acceptance of this work. The Contractor shall repair or replace all such defective work and all other work damaged by these repairs or replacements to the satisfaction of the Landscape Architect at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 Plastic Pipe

- A. Plastic pipe shall be rigid unplasticized PVC, extruded from virgin parent material of the type specified on the drawings. The pipe shall be homogenous throughout and free from visible cracks, holes, foreign materials, blisters, deletions, wrinkles and dents.
- B. All pipe shall be continuously and permanently marked with the manufacturer's name and trademark, size schedule and type of pipe, working pressure at 73 degrees Fahrenheit and National Sanitation Foundation (N.S.F.) approval.
- C. All plastic pipe fittings to be installed shall be molded fittings manufactured of the same material as the pipe and shall be suitable for solvent weld, or screwed connections. No fittings made of other materials shall be used except as hereinafter specified.

D. For joining, use a solvent complying with ASTM D2564 and recommendations of the manufacturer of the plastic pipe used.

E. For cleaning, use cleaner complying with plastic pipe manufacturer's recommendations.

2.2 Sprinkler Heads

A. Sprinkler heads shall be of the types and sizes with the diameter or radius of throw, pressure, discharge and any other designations necessary to determine the type and sizes, as indicated on the drawings. They shall be Rainbird or approved equal model sprinkler. All heads of a particular type and for a particular function in the systems shall be of the same manufacturer and shall be marked with the manufacturer's name and identification, in such a position that they can be identified without being removed from the system.

2.3 Electric Remote Control Valves

A. All electric remote control valves shall be of the type and size called for by the drawings and shall be Rainbird (no substitutions). Valves shall be twenty-four (24) volt with epoxy-sealed solenoid coils, manual flow control stem and 200psi rated.

2.4 Automatic Controller

A. Automatic controller shall be of the type called for on the drawings or approved equal. Controller shall be as defined on the irrigation plans and details.

2.5 Sprinkler Risers

A. All sprinkler risers shall be a 'swing joint' composed of three street joints and a one (1) inch schedule 80 PVC pipe riser.

2.6 Double Check Valve

A. Double check valve shall be 2" Watts model 007QT or approved equal and shall meet the following standards: ASSEE No. 1015; AWWA C506-78; CSA B64. Valves shall meet all local regulations.

2.7 Other Materials

A. All other materials, not specifically described but required for a complete and proper irrigation system installation, shall be new, first quality of their respective kinds and subject to the approval of the Landscape Architect.

PART 3 - EXCAVATION

3.1 Excavation And Backfill

A. Trenches for plastic pipe sprinkler lines shall be excavated of sufficient depth and width to permit proper handling and installation of the pipe and fittings, or the piping may be installed by any other method that the Contractor may desire, if approved by the Landscape Architect and the pipe manufacturer.

B. The backfill shall be thoroughly compacted and evened off with the adjacent soil level. Selected fill dirt or sand shall be used if soil conditions are rocky. In rocky areas the trenching depth shall be two (2) inches below normal trench depth to allow for this bedding. The fill dirt or sand shall be used in filling four (4) inches above the pipe. The remainder of the backfill shall contain no lumps or rocks larger than three (3) inches. The top six (6) inches of the backfill shall be free of rocks over one (1) inch, subsoil or trash.

- C. Unless otherwise indicated on the drawings or required, all plastic pipe main lines shall be installed with a minimum cover of eighteen (18) inches based upon finished grades. All lateral lines shall be installed with a minimum of twelve (12) inches of cover.
- D. The Contractor and Owner shall agree upon the amount of additional payment at the time any rocky condition may be encountered. Failure of the Contractor to get an agreement in writing from the Owner at the time rock is encountered and his progressing with any such trenching shall be at the Contractor's expense.
- E. Layout of piping and heads is approximate. Adjust locations to avoid planting and other obstructions.

3.2 Pipe Installation

- A. Sprinkler lines shown on the drawings are essentially diagrammatic. Locations of all sprinkler heads, valves, piping, wiring, etc., shall be established by the Contractor at the time of construction. Spacing of the sprinkler heads or quick coupling valves are shown on the drawings and shall be exceeded only with the permission of the Landscape Architect.
- B. Layout of piping and heads is approximate. Adjust locations to avoid planting and other constructions.
- C. Pipe sizes shall conform to those shown on the drawings. No substitutes of smaller pipe sizes will be permitted, but substitutions of larger sizes may be approved. All pipe damaged or rejected because of defects shall be removed from the site at the time of said rejection. In the event the pipe sizes are not shown on the drawings, the contractor shall size the pipes to ensure that head to head irrigation coverage is provided by the system.
- D. Where piping on the drawings is shown under paved areas but running parallel and adjacent to planted areas or turf areas, the intent of the drawings is to install the piping of the planted or turf areas.
- E. Generally, piping under concrete or asphalt shall be installed by jacking, boring, or hydraulic driving. Where any cutting or breaking of sidewalks, concrete work and/or asphalt is necessary, it shall be removed and replaced by the Contractor. Permission to cut or break sidewalks, concrete work and/or asphalt shall be obtained from those having proper jurisdiction.
- F. Plastic pipe shall be installed in a manner so as to provide for expansion and contraction as recommended by the manufacturer.
- G. Plastic pipe shall be cut with a standard pipe cutter or in a manner so as to ensure a square cut. Burrs at cut ends shall be removed prior to installation so that a smooth unobstructed flow will be obtained.
- H. All plastic to plastic joints shall be solvent-weld joints. Only the solvent recommended by the pipe manufacturer shall be used. All plastic pipe and fitting shall be installed as outlined and instructed by the pipe manufacturer and it shall be the Contractor's responsibility for the correct installation.
- I. The solvent-weld joints shall be made in the following manner:
 1. Thoroughly clean the mating pipe and fitting with a clean cloth and liquid cleaning agent.
 2. Apply a uniform coat of solvent to the outside of the pipe with an approved applicator.
 3. Apply solvent to the fitting in a similar manner.
 4. Re-apply a light coat of solvent to the pipe and quickly insert it into the fitting.

- D. For joining, use a solvent complying with ASTM D2564 and recommendations of the manufacturer of the plastic pipe used.
- E. For cleaning, use cleaner complying with plastic pipe manufacturer's recommendations.

2.2 Sprinkler Heads

- A. Sprinkler heads shall be of the types and sizes with the diameter or radius of throw, pressure, discharge and any other designations necessary to determine the type and sizes, as indicated on the drawings. They shall be Rainbird or approved equal model sprinkler. All heads of a particular type and for a particular function in the systems shall be of the same manufacturer and shall be marked with the manufacturer's name and identification, in such a position that they can be identified without being removed from the system.

2.3 Electric Remote Control Valves

- A. All electric remote control valves shall be of the type and size called for by the drawings and shall be Rainbird (no substitutions). Valves shall be twenty-four (24) volt with epoxy-sealed solenoid coils, manual flow control stem and 200psi rated.

2.4 Automatic Controller

- A. Automatic controller shall be of the type called for on the drawings or approved equal. Controller shall be as defined on the irrigation plans and details.

2.5 Sprinkler Risers

- A. All sprinkler risers shall be a 'swing joint' composed of three street joints and a one (1) inch schedule 80 PVC pipe riser.

2.6 Double Check Valve

- A. Double check valve shall be 2" Watts model 007QT or approved equal and shall meet the following standards: ASSEE No. 1015; AWWA C506-78; CSA B64. Valves shall meet all local regulations.

2.7 Other Materials

- A. All other materials, not specifically described but required for a complete and proper irrigation system installation, shall be new, first quality of their respective kinds and subject to the approval of the Landscape Architect.

PART 3 - EXCAVATION

3.1 Excavation And Backfill

- A. Trenches for plastic pipe sprinkler lines shall be excavated of sufficient depth and width to permit proper handling and installation of the pipe and fittings, or the piping may be installed by any other method that the Contractor may desire, if approved by the Landscape Architect and the pipe manufacturer.
- B. The backfill shall be thoroughly compacted and evened off with the adjacent soil level. Selected fill dirt or sand shall be used if soil conditions are rocky. In rocky areas the trenching depth shall be two (2) inches below normal trench depth to allow for this bedding. The fill dirt or sand shall be used in filling four (4) inches above the pipe. The remainder of the backfill shall contain no lumps or rocks larger than three (3) inches. The top six (6) inches of the backfill shall be free of rocks over one (1) inch, subsoil or trash.

- C. Unless otherwise indicated on the drawings or required, all plastic pipe main lines shall be installed with a minimum cover of eighteen (18) inches based upon finished grades. All lateral lines shall be installed with a minimum of twelve (12) inches of cover.
- D. The Contractor and Owner shall agree upon the amount of additional payment at the time any rocky condition may be encountered. Failure of the Contractor to get an agreement in writing from the Owner at the time rock is encountered and his progressing with any such trenching shall be at the Contractor's expense.
- E. Layout of piping and heads is approximate. Adjust locations to avoid planting and other obstructions.

3.2 Pipe Installation

- A. Sprinkler lines shown on the drawings are essentially diagrammatic. Locations of all sprinkler heads, valves, piping, wiring, etc., shall be established by the Contractor at the time of construction. Spacing of the sprinkler heads or quick coupling valves are shown on the drawings and shall be exceeded only with the permission of the Landscape Architect.
- B. Layout of piping and heads is approximate. Adjust locations to avoid planting and other constructions.
- C. Pipe sizes shall conform to those shown on the drawings. No substitutes of smaller pipe sizes will be permitted, but substitutions of larger sizes may be approved. All pipe damaged or rejected because of defects shall be removed from the site at the time of said rejection. In the event the pipe sizes are not shown on the drawings, the contractor shall size the pipes to ensure that head to head irrigation coverage is provided by the system.
- D. Where piping on the drawings is shown under paved areas but running parallel and adjacent to planted areas or turf areas, the intent of the drawings is to install the piping of the planted or turf areas.
- E. Generally, piping under concrete or asphalt shall be installed by jacking, boring, or hydraulic driving. Where any cutting or breaking of sidewalks, concrete work and/or asphalt is necessary, it shall be removed and replaced by the Contractor. Permission to cut or break sidewalks, concrete work and/or asphalt shall be obtained from those having proper jurisdiction.
- F. Plastic pipe shall be installed in a manner so as to provide for expansion and contraction as recommended by the manufacturer.
- G. Plastic pipe shall be cut with a standard pipe cutter or in a manner so as to ensure a square cut. Burrs at cut ends shall be removed prior to installation so that a smooth unobstructed flow will be obtained.
- H. All plastic to plastic joints shall be solvent-weld joints. Only the solvent recommended by the pipe manufacturer shall be used. All plastic pipe and fitting shall be installed as outlined and instructed by the pipe manufacturer and it shall be the Contractor's responsibility for the correct installation.
- I. The solvent-weld joints shall be made in the following manner:
 1. Thoroughly clean the mating pipe and fitting with a clean cloth and liquid cleaning agent.
 2. Apply a uniform coat of solvent to the outside of the pipe with an approved applicator.
 3. Apply solvent to the fitting in a similar manner.
 4. Re-apply a light coat of solvent to the pipe and quickly insert it into the fitting.

in such a position that they can be identified without being removed from the system.

2.3 Electric Remote Control Valves

- A. All electric remote control valves shall be of the type and size called for by the drawings and shall be Rainbird (no substitutions). Valves shall be twenty-four (24) volt with epoxy-sealed solenoid coils, manual flow control stem and 200psi rated.

2.4 Automatic Controller

- A. Automatic controller shall be of the type called for on the drawings or approved equal. Controller shall be as defined on the irrigation plans and details.

2.5 Sprinkler Risers

- A. All sprinkler risers shall be a 'swing joint' composed of three street joints and a one (1) inch schedule 80 PVC pipe riser.

2.6 Double Check Valve

- A. Double check valve shall be 2" Watts model 007QT or approved equal and shall meet the following standards: ASSIEM No. 1015; AWWA C506-78; CSA B64. Valves shall meet all local regulations.

2.7 Other Materials

- A. All other materials, not specifically described but required for a complete and proper irrigation system installation, shall be new, first quality of their respective kinds and subject to the approval of the Landscape Architect.

PART 3 - EXCAVATION

3.1 Excavation And Backfill

- A. Trenches for plastic pipe sprinkler lines shall be excavated of sufficient depth and width to permit proper handling and installation of the pipe and fittings, or the piping may be installed by any other method that the Contractor may desire, if approved by the Landscape Architect and the pipe manufacturer.
- B. The backfill shall be thoroughly compacted and leveled off with the adjacent soil level. Selected fill dirt or sand shall be used if soil conditions are rocky. In rocky areas the trenching depth shall be two (2) inches below normal trench depth to allow for this bedding. The fill dirt or sand shall be used in filling four (4) inches above the pipe. The remainder of the backfill shall contain no lumps or rocks larger than three (3) inches. The top six (6) inches of the backfill shall be free of rocks over one (1) inch, subsoil or trash.

3.2 Pipe Installation

- A. Sprinkler lines shown on the drawings are essentially diagrammatic. Locations of all sprinkler heads, valves, piping, wiring, etc., shall be established by the Contractor at the time of construction. Spacing of the sprinkler heads or quick coupling valves are shown on the drawings and shall be exceeded only with the permission of the Landscape Architect.
- B. Layout of piping and heads is approximate. Adjust locations to avoid planting and other constructions.
- C. Pipe sizes shall conform to those shown on the drawings. No substitutes of smaller pipe sizes will be permitted, but substitutions of larger sizes may be approved. All pipe damaged or rejected because of defects shall be removed from the site at the time of said rejection. In the event the pipe sizes are not shown on the drawings, the contractor shall size the pipes to ensure that head to head irrigation coverage is provided by the system.
- D. Where piping on the drawings is shown under paved areas but running parallel and adjacent to planted areas or turf areas, the intent of the drawings is to install the piping of the planted or turf areas.
- E. Generally, piping under concrete or asphalt shall be installed by jacking, boring, or hydraulic driving. Where any cutting or breaking of sidewalks, concrete work and/or asphalt is necessary, it shall be removed and replaced by the Contractor. Permission to cut or break sidewalks, concrete work and/or asphalt shall be obtained from those having proper jurisdiction.
- F. Plastic pipe shall be installed in a manner so as to provide for expansion and contraction as recommended by the manufacturer.
- G. Plastic pipe shall be cut with a standard pipe cutter or in a manner so as to ensure a square cut. Burrs at cut ends shall be removed prior to installation so that a smooth unobstructed flow will be obtained.
- H. All plastic to plastic joints shall be solvent-weld joints. Only the solvent recommended by the pipe manufacturer shall be used. All plastic pipe and fitting shall be installed as outlined and instructed by the pipe manufacturer and it shall be the Contractor's responsibility for the correct installation.
 - I. The solvent-weld joints shall be made in the following manner:
 1. Thoroughly clean the mating pipe and fitting with a clean cloth and liquid cleaning agent.
 2. Apply a uniform coat of solvent to the outside of the pipe with an approved applicator.
 3. Apply solvent to the fitting in a similar manner.
 4. Re-apply a light coat of solvent to the pipe and quickly insert it into the fitting.

- J. Install concrete thrust blocks on main on turns of forty-five (45) degrees and greater.
- K. All material overages at the completion of the installation are the property of the Contractor and are to be removed from the site.

- L. Install pipe in dry weather when the air temperature is forty (40) degrees Fahrenheit or greater.

3.3 Electric Wiring

- A. All control lines (electric wiring or hydraulic tubing) shall be laid in same trench as plastic pipe.

3.4 Sprinkler Heads

- A. Unless otherwise specified or designated on the drawings, the installation of sprinkler heads shall include the excavation and backfill, the furnishing, installing and testing of risers, fittings and sprinkler heads and the removal and/or restoration of existing improvements and all other work in accordance with the plans and specifications.
- B. All sprinkler heads shall be set perpendicular to the finished grades unless otherwise designated on the drawings or otherwise specified by the Landscape Architect. Sprinkler heads shall be located flush with the surrounding finished grades whether that grade is a soil level or the top of installed sod.
- C. Sprinkler heads adjacent to existing walls, curbs and other paved areas, shall be set to grade unless the plan shows the head to be placed on a riser. Adjust riser height as needed after planting operations.
- D. Make minor adjustments to head locations after planting operations to ensure optimum coverage.

3.5 Electric Remote Control Valves

- A. Install electric remote control valves in the manner and location called for by the plan and drawings. Installation to comply with applicable codes and to be done in a workmanlike manner.

3.6 Automatic Controller

- A. Install the automatic controller in the location called for by the drawings and in accordance with the manufacturer's recommendations. Installation to comply with applicable codes and to be done in a workmanlike manner.
- B. Contractor shall provide adequate lighting and power surge protection for the automatic controller and electric valve solenoids.

- D. Should repairs or adjustments to the irrigation system be required, the Contractor shall backfill any excavation with sandy-loam topsoil. Any landscaping disturbed by these repairs shall be repaired to meet original landscaping specifications. All surrounding landscaped areas shall be protected from excavated materials during the repair process. Sod, grass, or shrubs damaged by excavated material or equipment shall be replaced at the Contractor's expense.

3.8 Instructions

- A. Attach a typewritten legend inside each controller door stating the areas covered by each remote control valve and station on the controller.
- B. After the system has been completed, inspected and approved, instruct the Owner's maintenance personnel in the operation and maintenance of the irrigation system and demonstrate the contents of the manual furnished.

3.9 Inspection And Final Acceptance

- A. The Landscape Architect shall inspect all work for Final Acceptance upon written request of the Contractor. The request shall be received at least seven (7) days before the anticipated date of inspection.
- B. Upon completion of all repairs or renewals which may appear at that time to be necessary in the judgment of the Landscape Architect, the Landscape Architect shall certify in writing to the Owner as to the Final Acceptance of the project.
- C. The Final Acceptance of the work of this Section shall constitute the beginning of the Guarantee Period for this portion of the work.
- D. The Contractor shall anticipate having the irrigation subcontractor available to assist the City with final adjustment and operation of the irrigation system following the installation of all landscape, plantings, sod, etc., including, but not necessarily limited to, adjustment of irrigation heads, valves, timers, control panel, etc. Such work shall be coordinated with and at the discretion of the City of Tuscaloosa, and shall include a maximum of one (1) - eight hour work.

3.10 Warranty

- A. Guarantee that all work, products, materials, equipment and workmanship shall remain free of defects for one calendar year from the date of Final Acceptance of the work of this Section.
- B. During the Guarantee period, immediately replace all work not functioning correctly; make adjustments as necessary to maintain complete coverage: make good any other damage, loss, destruction, or failure; at no cost to the Owner.

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PART 2 - ACCEPTANCE AND CONTRACTOR RESPONSIBILITY 2
PART 3 - MEASUREMENT AND PAYMENT 2



(NOTE: SPECIFICATIONS GIVEN IN THIS SECTION APPLY ONLY TO AREAS WHERE IMPROVEMENTS WOULD BE REQUIRED AND TO FERTILIZERS FROM THE EXISTING SITE IS USED).

1.2 Equipment and Materials

A. General: The Contractor shall furnish all labor, material and equipment required to complete the work described herein in strict accordance with the drawings and/or terms of the contract.

B. Materials: Soil tests shall be made to determine the exact requirements for any amendments. A reputable laboratory hired by the Contractor shall conduct soil tests.

1.3 Fertilizers

A. All fertilizers shall be uniform in composition, free flowing and suitable for application with approved equipment. Fertilizers shall be delivered to the site fully labeled according to applicable state fertilizer laws and shall bear the name, trade name or trade-mark and warranty of the producer/manufacturer.

B. Fertilizer application rates shall be determined by soil tests. Minimum 1 soil test sample per every 10,000 square feet. Tests shall then be combined and averaged for determining application rates.

C. Fertilizer shall be distributed uniformly over the entire area to be sodded.

1.4 Lime

A. Low pH Correction Materials: Lime material shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Ground limestone shall be ground to such fineness that at least 50% will pass through a 100-mesh sieve and 98% to 100% will pass through a 20-mesh sieve.

1. Lime application rates shall be determined by soil tests. Minimum of 1 soil test sample per every 10,000 square feet. Tests shall then be combined and averaged for determining application rates.

2. Lime shall be distributed uniformly over the entire area to be sodded.

B. High pH Correction Materials: Materials and application rates shall be determined by appropriate soil tests performed by a reputable laboratory. If leaching or special management is necessary, final grading will be delayed as specified.

1.5 Grading

A. Tillage: Soil amendments such as lime and fertilizer shall be uniformly mixed into the top four inches of soil by disking, harrowing or other approved method.

PART 2 - ACCEPTANCE AND CONTRACTOR RESPONSIBILITY

Acceptance shall be given by the Landscape Architect upon satisfactory completion of the entire project. The Contractor shall be responsible for maintaining the project until final acceptance is given.

PART 3 - MEASUREMENT AND PAYMENT

There shall be no separate measurement or payment for this work, as it shall be considered incidental to and an inclusive part of both the sodding, grass seeding and plant material installation for this project.

END OF SECTION 12820

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1.04 Sod Harvesting and Material Quality 2

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PART 2 - ACCEPTANCE AND GUARANTEE 2

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2.02 Disclaimer 3

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PART 3 - MEASUREMENT AND PAYMENT 3

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1.2 Labor, Materials, and Equipment

- A. General: The Contractor shall furnish all labor, material and equipment required to complete the work described herein in strict accordance with the drawings and/or terms of the contract.
- B. Grading: All previously established grades shall be maintained in conformance with the drawings and/or other specifications.

C. Materials:

- 1. Class of the turfgrass shall be Certified Turfgrass Sod.
- 2. This turfgrass sod shall be composed of Empire Zoysia grass. The Empire Zoysia sod shall be used in all sodded areas along the Streetscape.
- D. Topsoil: All areas of the project to receive turfgrass sod over existing soils, shall first receive a 4 inch in-place depth of tested and approved topsoil. Submit 3 copies of topsoil test report (from a reputable testing laboratory hired by the Contractor) from topsoil to be used on this project, to the Landscape Architect for approval. Application of topsoil does not relieve the Contractor from responsibilities herein described for improving existing soils and surface conditions. See Section 02820 Fertilization & Soil Preparation.

1.3 Certification Standards

- A. Provide three copies of the state certification inspection certificate of the turfgrass to be used on the project to the Landscape Architect. State certification inspection assures satisfactory genetic identity and purity, overall high quality and freedom from noxious weeds as well as excessive amounts of other crop and weedy plants at time of harvest.
- B. All seed used or original plant material used in turfgrass quality sod must be certified.
- C. The turfgrass sod must meet the published state standards for certification.

1.4 Sod Harvesting and Material Quality

- A. Thickness of Cut: Turfgrass sod shall be machine cut at a uniform soil thickness of 5/8 inch, plus or minus 1/4 inch, at the time of cutting. Measurement for thickness shall exclude top growth and thatch.
- B. Pad Size: Individual pieces of turfgrass sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus one-half inch on width and plus or minus five percent on length. Broken pads and torn or uneven ends will not be acceptable.
- C. Strength of Sod Selection: Standard size sections of sod shall be strong enough that when grasped at one end, it can be picked up and handled without damage.

- G. Thatch: Turfgrass sod shall be relatively free of thatch, up to ½ inch allowable (uncompressed).
- H. Diseases, Nematodes and Insects: Turfgrass sod shall be reasonably free of diseases, nematodes, and soil-borne insects. State nursery and/or plant materials laws require that all sod entering inter-state commerce be inspected and approved for sale. The inspections and approval must be made by the state agricultural department, office of the entomologist.
- I. Weeds as Applicable to Nursery Grown Turfgrass Sod: Sod shall be free of objectionable grassy and broadleaf weeds. Turfgrass sod shall be considered free of such weeds if less than five such plants are found per 100 square feet of area. Turfgrass sod will not be acceptable if it contains any of the following weeds: common bermudagrass (wiregrass), quackgrass, johnson grass, poison ivy, nutsedge, nimblewill, Canada thistle, bindweed, bentgrass, wild garlic, ground ivy, perennial sorrel, and bromegrass.
- J. Inspection: The grower will submit to the purchaser prior to delivery, information as to the field location, species and percentage of purity of the turfgrass sod he intends to deliver.

1.5 Transplanting

- A. Moistening the Soil: During periods of higher than optimal temperature for the species being specified and after all unevenness in the soil surface has been corrected, the soil shall be lightly moistened immediately prior to laying the turfgrass sod.
- B. Starter Strip: The first row of turfgrass sod shall be laid in a straight line with subsequent rows placed parallel to and tightly against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Care shall be exercised to insure that the pieces are not stretched or overlapped and that all joints are butted tightly to prevent voids that would cause air drying of the roots.
- C. Sloping Surfaces: On 1:3 or greater slopes, turfgrass sod shall be laid across the angle of the slope, with staggered joints and secured by tamping, pegging or other approved methods of temporarily securing each piece.
- D. Watering and Rolling: Contractor shall water the turfgrass sod immediately after transplanting to prevent excessive drying during the progress of the work. As sodding is completed in any one section, the entire area shall be lightly rolled. It shall then be thoroughly watered to a depth sufficient that the underside of the new sod pad and soil immediately below the pad are thoroughly wet. The General Contractor shall be responsible for having adequate water available at the site prior to and during installation.

PART 2 - ACCEPTANCE AND GUARANTEE

2.1 Acceptance

- A. Acceptance of the transplanted turfgrass sod shall be on the completion of the entire project.

turfgrass sod shall be within in color, soil water and above ground density and of turfgrass sod imperfections at the time of acceptance. And the Contractor shall further guarantee the turfgrass sod against any imperfections resulting from improper installation techniques or soil preparation for a period of one year, with the beginning of the guarantee period beginning upon the date of final acceptance by the Landscape Architect.

PART 3 - MEASUREMENT AND PAYMENT

Payment for sod installation shall be per square yard installed.

END OF SECTION 12830



1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with UL 467 for grounding and bonding materials and equipment.

PART 2 - PRODUCTS

2.1 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
 - 1. Solid Conductors: ASTM B 3.
 - 2. Stranded Conductors: ASTM B 8.
 - 3. Tinned Conductors: ASTM B 33.
 - 4. Bonding Cable: 28 kmil, 14 strands of No. 17 AWG conductor, 1/4 inch in diameter.
 - 5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
 - 6. Bonding Jumper: Copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.
 - 7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

2.2 CONNECTORS

- A. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.
- B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts.

PART 3 - EXECUTION

3.1 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated.
- B. Underground Grounding Conductors: Install bare copper conductor, No. 3/0 AWG minimum. Bury at least 24 inches below grade.
- C. Isolated Grounding Conductors: Green-colored insulation with continuous yellow stripe. On feeders with isolated ground, identify grounding conductor where visible to normal inspection, with alternating bands of green and yellow tape, with at least three bands of green and two bands of yellow.
- D. Conductor Terminations and Connections:
 - 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
 - 2. Underground Connections: Welded connectors, except at test wells and as otherwise indicated.
 - 3. Connections to Ground Rods at Test Wells: Bolted connectors.
 - 4. Connections to Structural Steel: Welded connectors.

3.2 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
 - 1. Feeder circuits.
 - 2. Single-phase motor and appliance branch circuits.
 - 3. Three-phase motor and appliance branch circuits.
 - 4. Flexible raceway runs.
 - 5. Armored and metal-clad cable runs.
- B. Metal Poles Supporting Outdoor Lighting Fixtures: Install grounding electrode and a separate insulated equipment grounding conductor in addition to grounding conductor installed with branch-circuit conductors.

3.3 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

- F. Ground Rods: Drive rods until tops are 2 inches below finished floor or final grade, unless otherwise indicated.
 - 1. Interconnect ground rods with grounding electrode conductor below grade by means of irreversible exothermic weld. Make connections without exposing steel or damaging coating, if any.
 - G. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.
 - 1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
 - 2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install so vibration is not transmitted to rigidly mounted equipment.
 - H. Grounding and Bonding for Piping:
 - 1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes, using a bolted clamp connector or by bolting a lug-type connector to a pipe flange, using one of the lug bolts of the flange. Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
 - 2. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.
 - 3. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.
- 3.4 FIELD QUALITY CONTROL
- A. Perform the following tests and inspections and prepare test reports:
 - 1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
 - 2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at ground test wells.
 - a. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
 - b. Perform tests by fall-of-potential method according to IEEE 81.
 - B. Install ground rods in quantity to provide a maximum of 5 ohms ground resistance.

NOVEMBER 2013

CITY WALK AT UNIVERSITY PLACE & FOREST LAKE
SECTION 16060

- A. This Section includes the following:
 - 1. Electrical equipment coordination and installation.
 - 2. Sleeves for raceways and cables.
 - 3. Sleeve seals.
 - 4. Common electrical installation requirements.
- 1.2 QUALITY ASSURANCE
 - A. Test Equipment Suitability and Calibration: Comply with NETA ATS, "Suitability of Test Equipment" and "Test Instrument Calibration."
- 1.3 COORDINATION
 - A. Coordinate arrangement, mounting, and support of electrical equipment:
 - 1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
 - 2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
 - 3. To allow right of way for piping and conduit installed at required slope.
 - 4. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.
 - B. Coordinate installation of required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.
 - C. Coordinate location of access panels and doors for electrical items that are behind finished surfaces or otherwise concealed. Access doors and panels are specified in Division 8 Section "Access Doors and Frames."
 - D. Coordinate electrical testing of electrical, mechanical, and architectural items, so equipment and systems that are functionally interdependent are tested to demonstrate successful interoperability.
 - E. Coordination submittals shall consist of a 3-D building model (3D DWG File compatible with REVIT 2010). The model shall indicate coordination of space allocation between mechanical, electrical and plumbing for pieces of equipment occupying a volume larger than 3 cubic feet. The model shall include coordination of underground utilities also.

- B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- C. Coordinate sleeve selection and application with selection and application of firestopping specified in Division 7 Section "Through-Penetration Firestop Systems."

2.2 SLEEVE SEALS

- A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.
 - 1. Sealing Elements: EPDM interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
 - 2. Pressure Plates: Plastic. Include two for each sealing element.
 - 3. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating of length required to secure pressure plates to sealing elements. Include one for each sealing element.

PART 3 - EXECUTION

3.1 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

- A. Comply with NECA 1.
- B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.
- C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.
- D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.
- E. Right of Way: Give to raceways and piping systems installed at a required slope.

3.2 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Electrical penetrations occur when raceways, cables, wireways, cable trays, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.

- D. Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies openings compatible with firestop system used at fabricated during construction of floor or wall.
- E. Extend sleeves installed in floors 2 inches above finished floor level.
- F. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and raceway or cable unless sleeve seal is to be installed.
- G. Seal space outside of sleeves with grout for penetrations of concrete and masonry and with approved joint compound for gypsum board assemblies.
- H. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Refer to Division 7 Section "Joint Sealants" for materials and installation.
- I. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at raceway and cable penetrations. Install sleeves and seal raceway and cable penetration sleeves with firestop materials. Comply with Division 7 Section "Through-Penetration Firestop Systems."
- J. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.
- K. Aboveground, Exterior-Wall Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- L. Underground, Exterior-Wall Penetrations: Install cast-iron "wall pipes" for sleeves. Size sleeves to allow for 1-inch annular clear space between raceway or cable and sleeve for installing mechanical sleeve seals.

3.3 FIRESTOPPING

- A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 7 Section "Through-Penetration Firestop Systems."

END OF SECTION 16050



1. Identification for conductors and communication and control cables.
2. Warning labels and signs.
3. Equipment identification labels.

1.2 QUALITY ASSURANCE

- A. Comply with ANSI A13.1.

1.3 COORDINATION

- A. Coordinate identification names, abbreviations, colors, and other features with requirements in the Contract Documents, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual, and with those required by codes, standards, and 29 CFR 1910.145. Use consistent designations throughout Project.

PART 2 - PRODUCTS

2.1 CONDUCTOR AND COMMUNICATION- AND CONTROL-CABLE IDENTIFICATION MATERIALS

- A. Marker Tape: Vinyl or vinyl -cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.

2.2 WARNING LABELS AND SIGNS

- A. Comply with NFPA 70 and 29 CFR 1910.145.
- B. Self-Adhesive Warning Labels: Factory printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment, unless otherwise indicated.
- C. Baked-Enamel Warning Signs: Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application. 1/4-inch (6.4-mm) grommets in corners for mounting. Nominal size, 7 by 10 inches (180 by 250 mm).
- D. Metal-Backed, Butyrate Warning Signs: Weather-resistant, non-fading, preprinted, cellulose-acetate butyrate signs with 0.0396-inch (1-mm) galvanized-steel backing; and with colors, legend, and size required for application. 1/4-inch (6.4-mm) grommets in corners for mounting. Nominal size, 10 by 14 inches (250 by 360 mm).
- E. Fasteners for Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 APPLICATION

- A. **Auxiliary Electrical Systems Conductor and Cable Identification:** Use marker tape to identify field-installed alarm, control, signal, sound, intercommunications, voice, and data wiring connections.
1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and cable pull points. Identify by system and circuit designation.
 2. Use system of designations that is uniform and consistent with system used by manufacturer for factory-installed connections.
- B. **Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting:** Comply with 29 CFR 1910.145 and apply baked-enamel warning signs. Identify system voltage with black letters on an orange background. Apply to exterior of door, cover, or other access.
1. **Equipment with Multiple Power or Control Sources:** Apply to door or cover of equipment including, but not limited to, the following:
 - a. Power transfer switches.
 - b. Controls with external control power connections.
 2. **Equipment Requiring Workspace Clearance According to NFPA 70:** Unless otherwise indicated, apply to door or cover of equipment but not on flush panelboards and similar equipment in finished spaces.
- C. **Equipment Identification Labels:** On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.
1. **Labeling Instructions:**
 - a. **Indoor Equipment:** Self-adhesive, engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch- (13-mm-) high letters on 1-1/2-inch- (38-mm-) high label; where 2 lines of text are required, use labels 2 inches (50 mm) high.
 - b. **Outdoor Equipment:** Engraved, laminated acrylic or melamine label, drilled for screw attachment.
 - c. **Elevated Components:** Increase sizes of labels and legend to those appropriate for viewing from the floor.

- A. Verify identity of each item before installing identification products.
- B. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
- C. Apply identification devices to surfaces that require finish after completing finish work.
- D. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.
- E. Attach nonadhesive signs and plastic labels with screws and auxiliary hardware appropriate to the location and substrate.
- F. Color-Coding for Phase Identification, 600 V and Less: Use the colors listed below for ungrounded service, feeder, and branch-circuit conductors.
 - 1. Color shall be factory applied.
 - 2. Colors for 120/208-V Circuits:
 - a. Phase A: Black.
 - b. Phase B: Red.
 - c. Phase C: Blue.
 - 3. Colors for 277/480-V Circuits:
 - a. Phase A: Brown.
 - b. Phase B: Orange.
 - c. Phase C: Yellow.

END OF SECTION 16075



1. BUILDING Wires and Cables Table 700.1 - Table 700.1
2. Connectors, splices, and terminations rated 600 V and less.
3. Sleeves and sleeve seals for cables.

1.2 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

- A. Copper Conductors: Comply with NEMA WC 70.
- B. Conductor Insulation: Comply with NEMA WC 70 for Types THHN-THWN and SO.

2.2 CONNECTORS AND SPLICES

- A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

2.3 SLEEVES FOR CABLES

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- C. Coordinate sleeve selection and application with selection and application of firestopping specified in Division 7 Section "Through-Penetration Firestop Systems."

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Service Entrance: Type THHN-THWN, single conductors in raceway.
- B. Exposed Feeders: Type THHN-THWN, single conductors in raceway.
- C. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspace: Type THHN-THWN, single conductors in raceway.
- D. Feeders Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in raceway.
- E. Exposed Branch Circuits, Including in Crawlspace: Type THHN-THWN, single conductors in raceway.
- F. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Metal clad cable in cable tray, see drawings.
- G. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in non-metallic raceway.
- H. Cord Drops and Portable Appliance Connections: Type SO, hard service cord with stainless-steel, wire-mesh, strain relief device at terminations to suit application.
- I. Class 1 Control Circuits: Type THHN-THWN, in raceway.
- J. Class 2 Control Circuits: Power-limited cable, concealed in building finishes.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

- A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.
- B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- D. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- E. Support cables with approved hangers to prevent laying on ceiling grid or any other structure.

3.4 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Coordinate sleeve selection and application with selection and application of firestopping specified in Division 7 Section "Through-Penetration Firestop Systems."
- B. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- C. Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall.
- D. Extend sleeves installed in floors 2 inches above finished floor level.
- E. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and cable unless sleeve seal is to be installed.
- F. Seal space outside of sleeves with grout for penetrations of concrete and masonry and with approved joint compound for gypsum board assemblies.
- G. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and cable, using joint sealant appropriate for size, depth, and location of joint according to Division 7 Section "Joint Sealants."
- H. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at cable penetrations. Install sleeves and seal with firestop materials according to Division 7 Section "Through-Penetration Firestop Systems."
- I. Roof-Penetration Sleeves: Seal penetration of individual cables with flexible boot-type flashing units applied in coordination with roofing work.
- J. Aboveground Exterior-Wall Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Size sleeves to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- K. Underground Exterior-Wall Penetrations: Install cast-iron "wall pipes" for sleeves. Size sleeves to allow for 1-inch annular clear space between cable and sleeve for installing mechanical sleeve seals.

3.5 SLEEVE-SEAL INSTALLATION

- A. Install to seal underground exterior-wall penetrations.

Systems."

3.7 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
- B. Tests and Inspections:
 - 1. Perform each visual and mechanical inspection and electrical test stated in NIETA Acceptance Testing Specification. Certify compliance with test parameters.
- C. Remove and replace malfunctioning units and retest as specified above.

END OF SECTION 16120

1.2 SUBMITTALS

- A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 METAL CONDUIT AND TUBING

- A. Rigid Steel Conduit: ANSI C80.1.
- B. IMC: ANSI C80.6.
- C. EMT: ANSI C80.3.
- D. FMC: Zinc-coated steel.
- E. LFMC: Flexible steel conduit with PVC jacket.
- F. Fittings for Conduit (Including all Types and Flexible and Liquidtight), EMT, and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.
 - 1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886.
 - 2. Fittings for EMT: Steel or die-cast, compression type.

2.2 NONMETALLIC CONDUIT AND TUBING

- A. ENT: NEMA TC 13.
- B. RNC: NEMA TC 2, Type EPC-40-PVC, unless otherwise indicated.
- C. LFNC: UL 1660.

B. Fittings and Accessories: Include couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

C. Wireway Covers: As indicated.

D. Finish: Manufacturer's standard enamel finish.

2.4 NONMETALLIC WIREWAYS

A. Description: PVC plastic extruded and fabricated to size and shape indicated, with snap-on cover and mechanically coupled connections with plastic fasteners.

B. Fittings and Accessories: Include couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

2.5 SURFACE RACEWAYS

A. Surface Metal Raceways: Galvanized steel with snap-on covers. Manufacturer's standard enamel finish in color selected by Architect.

B. Surface Nonmetallic Raceways: Two-piece construction, manufactured of rigid PVC with texture and color selected by Architect from manufacturer's standard colors.

2.6 BOXES, ENCLOSURES, AND CABINETS

A. Sheet Metal Outlet and Device Boxes: NEMA OS 1.

B. Cast-Metal Outlet and Device Boxes: NEMA FB 1, ferrous alloy, Type FD, with gasketed cover.

C. Nonmetallic Outlet and Device Boxes: NEMA OS 2.

D. Metal Floor Boxes: Cast metal, fully adjustable, rectangular.

E. Nonmetallic Floor Boxes: Nonadjustable, round.

F. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

G. Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, galvanized, cast iron with gasketed cover.

H. Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous-hinge cover with flush latch, unless otherwise indicated.

- A. **Conduits. Apply raceway provisions as specified covering, unless otherwise indicated:**
 - 1. Exposed Conduit: IMC.
 - 2. Concealed Conduit, Aboveground: IMC.
 - 3. Underground Conduit: RNC, Type EPC-40-PVC, direct buried.
 - 4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
 - 5. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R.

- B. Comply with the following indoor applications, unless otherwise indicated:
 - 1. Exposed, Not Subject to Physical Damage: EMT.
 - 2. Exposed, Not Subject to Severe Physical Damage: EMT.
 - 3. Concealed in Ceilings and Interior Walls and Partitions: EMT.
 - 4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FM/C, except use LFMC in damp or wet locations.
 - 5. Damp or Wet Locations: IMC.
 - 6. Raceways for Optical Fiber or Communications Cable: EMT.
 - 7. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4, stainless steel in damp or wet locations.
 - 8. Type MC cable assemblies may be used concealed in drywall construction. Convert to EMT conduit for home runs and extended plenum space horizontal runs.

- C. Minimum Raceway Size: 1/2-inch (14-mm) trade size.

- D. Raceway Fittings: Compatible with raceways and suitable for use and location.
 - 1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.

3.2 INSTALLATION

- A. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.
- B. Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- C. Complete raceway installation before starting conductor installation.
- D. Support raceways as specified in Division 16 Section "Electrical Supports and Seismic Restraints."
- E. Arrange stub-ups so curved portions of bends are not visible above the finished slab.

3. Change from E¹NT to RNC, Type EPC-40-PVC, rigid steel conduit, or IMC before rising above the floor.
- I. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.
- J. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire.
- K. Raceways for Optical Fiber and Communications Cable: Install as follows:
 1. 3/4-Inch (19-mm) Trade Size and Smaller: Install raceways in maximum lengths of 50 feet (15 m).
 2. 1-Inch (25-mm) Trade Size and Larger: Install raceways in maximum lengths of 75 feet (23 m).
 3. Install with a maximum of two 90-degree bends or equivalent for each length of raceway unless Drawings show stricter requirements. Separate lengths with pull or junction boxes or terminations at distribution frames or cabinets where necessary to comply with these requirements.
- L. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
 1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
 2. Where otherwise required by NFPA 70.
- M. Expansion-Joint Fittings for RNC: Install in each run of aboveground conduit that is located where environmental temperature change may exceed 30 deg F (17 deg C), and that has straight-run length that exceeds 25 feet (7.6 m).
 1. Install expansion-joint fittings for each of the following locations, and provide type and quantity of fittings that accommodate temperature change listed for location:
 - a. Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F (70 deg C) temperature change.
 - b. Outdoor Locations Exposed to Direct Sunlight: 155 deg F (86 deg C) temperature change.
 - c. Indoor Spaces: Connected with the Outdoors without Physical Separation: 125 deg F (70 deg C) temperature change.
 - d. Attics: 135 deg F (75 deg C) temperature change.
 2. Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F (0.06 mm per meter of length of straight run per deg C) of temperature change.
 3. Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at the time of installation.

A. Direct-Buried Conduit:

1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom as specified in Division 2 Section "Earthwork" for pipe less than 6 inches (150 mm) in nominal diameter.
2. Install backfill as specified in Division 2 Section "Earthwork."
3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches (300 mm) of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction as specified in Division 2 Section "Earthwork."
4. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through the floor.
 - a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches (75 mm) of concrete.
 - b. For stub-ups at equipment mounted on outdoor concrete bases, extend steel conduit horizontally a minimum of 60 inches (1500 mm) from edge of equipment pad or foundation. Install insulated grounding bushings on terminations at equipment.
5. Warning Planks: Bury warning tape approximately 12 inches (300 mm) above direct-buried conduits.

3.4 FIRESTOPPING

- A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 7 Section "Through-Penetration Firestop Systems."

END OF SECTION 16130



A. THIS SECTION INCLUDES THE FOLLOWING:

1. Exterior luminaires with lamps and ballasts.
2. Luminaire-mounted photoelectric relays.
3. Poles and accessories.

B. See Division 16 Section "Interior Lighting" for exterior luminaires normally mounted on exterior surfaces of buildings.

1.2 STRUCTURAL ANALYSIS CRITERIA FOR POLE SELECTION

- A. Dead Load: Weight of luminaire and its horizontal and vertical supports and supporting structure, applied as stated in AASHTO LTS-4.
- B. Ice Load: Load of 3 lb/sq. ft. (143.6 Pa), applied as stated in AASHTO LTS-4.
- C. Wind Load: Pressure of wind on pole and luminaire, calculated and applied as stated in AASHTO LTS-4.
 1. Wind speed for calculating wind load for poles 50 feet (15 m) or less in height is 110 mph (177 km/h).

1.3 SUBMITTALS

- A. Product Data: For each luminaire, pole, and support component, arranged in order of lighting unit designation. Include data on features, accessories, and finishes.
- B. Shop Drawings: Include anchor-bolt templates keyed to specific poles and certified by manufacturer.

1.4 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with IEEE C2, "National Electrical Safety Code."
- C. Comply with NFPA 70.

PART 2 - PRODUCTS

CITY WALK AT UNIVERSITY PLACE & FOREST LAKE
SECTION 02249

NOVEMBER 2013

manufacturers specified.

3. Basis of Design Product: The design of each item of exterior luminaire and its support is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

2.2 LUMINAIRES, GENERAL REQUIREMENTS

- A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.
- B. Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.
- C. Metal Parts: Free of burrs and sharp corners and edges.
- D. Sheet Metal Components: Corrosion-resistant aluminum, unless otherwise indicated. Form and support to prevent warping and sagging.
- E. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.
- F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses. Designed to disconnect ballast when door opens.
- G. Exposed Hardware Material: Stainless steel.
- H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
- I. Light Shields: Metal baffles, factory installed and field adjustable, arranged to block light distribution to indicated portion of normally illuminated area or field.
- J. Reflecting surfaces shall have minimum reflectance as follows, unless otherwise indicated:
 1. White Surfaces: 85 percent.
 2. Specular Surfaces: 83 percent.
 3. Diffusing Specular Surfaces: 75 percent.
- K. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

2.3 LUMINAIRE-MOUNTED PHOTOELECTRIC RELAYS

- A. Comply with UL 773 or UL 773A.
- B. Contact Relays: Factory mounted, single throw, designed to fail in the on position, and factory set to turn light unit on at 1.5 to 3 feet (16 to 32 inches) and off at 4.5 to 10 feet (48 to 108 inches) with 15-second minimum time delay.
 - 1. Relay with locking-type receptacle shall comply with NEMA C136.10.
 - 2. Adjustable window slide for adjusting on-off set points.

2.4 FLUORESCENT BALLASTS AND LAMPS

- A. Low-Temperature Ballast Capability: Rated by its manufacturer for reliable starting and operation of indicated lamp(s) at temperatures 0 degrees F (minus 18 degrees C) and higher.
- B. Ballast Characteristics:
 - 1. Power Factor: 90 percent, minimum.
 - 2. Sound Rating: A.
 - 3. Total Harmonic Distortion Rating: Less than 10 percent.
 - 4. Electromagnetic Ballasts: Comply with ANSI C82.1, energy-saving, high power factor, Class P, automatic-reset thermal protection.
 - 5. Case Temperature for Compact Lamp Ballasts: 65 degrees C, maximum.
 - 6. Transient-Voltage Protection: Comply with IEEE C62.41 Category A or better.
- C. Low-Temperature Lamp Capability: Rated for reliable starting and operation with ballast provided at temperatures 0 degrees F (minus 18 degrees C) and higher.
- D. Fluorescent Lamps: Low-mercury type. Comply with the EPA's toxicity characteristic leaching procedure test; shall yield less than 0.2 mg of mercury per liter when tested according to NEMA LL 1.

2.5 BALLASTS FOR HID LAMPS

- A. Comply with ANSI C82.4 and UL 1029 and capable of open-circuit operation without reduction average life. Include the following features, unless otherwise indicated:
 - 1. Ballast Circuit: Constant-wattage autotransformer or regulating high-power-factor type.
 - 2. Minimum Starting Temperature: Minus 22 degrees F (Minus 30 degrees C).
 - 3. Normal Ambient Operating Temperature: 104 degrees F (40 degrees C).

- a. Restrike Range: 105- to 130-V ac.
 - b. Maximum Voltage: 250-V peak or 150-V ac RMS.
2. Minimum Starting Temperature: Minus 40 deg F (Minus 40 deg C).

2.6 HID LAMPS

- A. High-Pressure Sodium Lamps: ANSI C78.42, CRI 21 (minimum), color temperature 1900 K, and average rated life of 24,000 hours, minimum.
- B. Metal-Halide Lamps: ANSI C78.1372, with a minimum CRI 65, and color temperature 4000 <Insert value> K.
- C. Pulse-Start, Metal-Halide Lamps: Minimum CRI 65, and color temperature 4000 K.
- D. Ceramic, Pulse-Start, Metal-Halide Lamps: Minimum CRI 80, and color temperature 4000 K.

2.7 POLES AND SUPPORT COMPONENTS, GENERAL REQUIREMENTS

- A. Structural Characteristics: Comply with AASHTO LTS-4.
 - 1. Wind-Load Strength of Poles: Adequate at indicated heights above grade without failure, permanent deflection, or whipping in steady winds of speed indicated in Part 1 "Structural Analysis Criteria for Pole Selection" Article, with a gust factor of 1.3.
 - 2. Strength Analysis: For each pole, multiply the actual equivalent projected area of luminaires and brackets by a factor of 1.1 to obtain the equivalent projected area to be used in pole selection strength analysis.
- B. Luminaire Attachment Provisions: Comply with luminaire manufacturers' mounting requirements. Use stainless-steel fasteners and mounting bolts, unless otherwise indicated.
- C. Mountings, Fasteners, and Appurtenances: Corrosion-resistant items compatible with support components.
 - 1. Materials: Shall not cause galvanic action at contact points.
 - 2. Anchor Bolts, Leveling Nuts, Bolt Caps, and Washers: Hot-dip galvanized after fabrication, unless stainless-steel items are indicated.
 - 3. Anchor-Bolt Template: Plywood or steel.
- D. Concrete Pole Foundations: Cast in place, with anchor bolts to match pole-base flange. Concrete, reinforcement, and formwork are specified in Division 3 Section "Cast-in-Place Concrete."

2.8 STEEL POLES

- A. Poles: Comply with ASTM A 500, Grade B, carbon steel with a minimum yield of 46,000 psig (317 MPa); 1-piece construction up to 40 feet (12 m) in height with access handhole in pole wall.
 - 1. Shape: Square, straight.
 - 2. Mounting Provisions: Butt flange for bolted mounting on foundation or breakaway support.
 - B. Steel Mast Arms: Single-arm type, continuously welded to pole attachment plate. Material and finish same as pole.
 - C. Brackets for Luminaires: Detachable, cantilever, without underbrace.
 - 1. Adapter fitting welded to pole and bracket, then bolted together with stainless-steel bolts.
 - 2. Cross Section: Tapered oval, with straight tubular end section to accommodate luminaire.
 - 3. Match pole material and finish.
 - D. Pole-Top Tenons: Fabricated to support luminaire or luminaires and brackets indicated, and securely fastened to pole top.
 - E. Steps: Fixed steel, with nonslip treads, positioned for 15-inch (381-mm) vertical spacing, alternating on opposite sides of pole; first step at elevation 10 feet (3 m) above finished grade.
 - F. Grounding and Bonding Lugs: Welded 1/2-inch (13-mm) threaded lug, complying with requirements in Division 16 Section "Grounding and Bonding," listed for attaching grounding and bonding conductors of type and size listed in that Section, and accessible through handhole.
 - G. Cable Support Grip: Wire-mesh type with rotating attachment eye, sized for diameter of cable and rated for a minimum load equal to weight of supported cable times a 5.0 safety factor.
 - H. Prime-Coat Finish: Manufacturer's standard prime-coat finish ready for field painting.
 - I. Galvanized Finish: After fabrication, hot-dip galvanize complying with ASTM A 123/A 123M.
 - J. Factory-Painted Finish: Comply with NAAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Color shall be as selected by Architect.
- 2.9 ALUMINUM POLES
- A. Poles: Seamless, extruded structural tube complying with ASTM B 429, Alloy 6063-T6 with access handhole in pole wall.

1. Tapered oval cross section, with straight tubular end section to accommodate luminaire.
 2. Finish: Same as pole.
- E. Prime-Coat Finish: Manufacturer's standard prime-coat finish ready for field painting.
- F. Aluminum Finish: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Color shall be as selected by Architect from manufacturer's full range.

2.10 POLE ACCESSORIES

- A. Duplex Receptacle: 120 V, 20 A in a weatherproof assembly complying with Division 16 Section "Wiring Devices" for ground-fault circuit-interrupter type.
1. Recessed, 12 inches (300 mm) above finished grade.
 2. Nonmetallic polycarbonate plastic or reinforced fiberglass cover, that when mounted results in NEMA 250, Type 3R enclosure.
 3. With cord opening.
 4. With lockable hasp and latch that complies with OSHA lockout and tag-out requirements.
- B. Minimum 1800-W transformer, protected by replaceable fuses, mounted behind access cover.
- C. Base Covers: Manufacturers' standard metal units, arranged to cover pole's mounting bolts and nuts. Finish same as pole.

PART 3 - EXECUTION

3.1 LUMINAIRE INSTALLATION

- A. Install lamps in each luminaire.
- B. Fasten luminaire to indicated structural supports.
 1. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.
- C. Adjust luminaires that require field adjustment or aiming.

1. Fire Hydrants and Storm Drainage: 15 feet (3 m).
2. Water, Gas, Electric, Communication, and Sewer Lines: 10 feet (3 m).
3. Trees: 15 feet (5 m).

C. Concrete Pole Foundations: Set anchor bolts according to anchor-bolt templates furnished by pole manufacturer. Concrete materials, installation, and finishing requirements are specified in Division 3 Section "Cast-in-Place Concrete."

D. Foundation-Mounted Poles: Mount pole with leveling nuts, and tighten top nuts to torque level recommended by pole manufacturer.

1. Use anchor bolts and nuts selected to resist seismic forces defined for the application and approved by manufacturer.
2. Grout void between pole base and foundation. Use nonshrink or expanding concrete grout firmly packed to fill space.
3. Install base covers, unless otherwise indicated.
4. Use a short piece of 1/2-inch- (13-mm-) diameter pipe to make a drain hole through grout. Arrange to drain condensation from interior of pole.

E. Embedded Poles with Tamped Earth Backfill: Set poles to depth below finished grade indicated on Drawings, but not less than one-sixth of pole height.

1. Dig holes large enough to permit use of tampers in the full depth of hole.
2. Backfill in 6-inch (150-mm) layers and thoroughly tamp each layer so compaction of backfill is equal to or greater than that of undisturbed earth.

F. Embedded Poles with Concrete Backfill: Set poles in augered holes to depth below finished grade indicated on Drawings, but not less than one-sixth of pole height.

1. Make holes 6 inches (150 mm) in diameter larger than pole diameter.
2. Fill augered hole around pole with air-entrained concrete having a minimum compressive strength of 3000 psi (20 MPa) at 28 days, and finish in a dome above finished grade.
3. Use a short piece of 1/2-inch- (13-mm-) diameter pipe to make a drain hole through concrete dome. Arrange to drain condensation from interior of pole.
4. Cure concrete a minimum of 72 hours before performing work on pole.

G. Poles and Pole Foundations Set in Concrete Paved Areas: Install poles with minimum of 6-inch- (150-mm-) wide, unpaved gap between the pole or pole foundation and the edge of adjacent concrete slab. Fill unpaved ring with pea gravel to a level 1 inch (25 mm) below top of concrete slab.

H. Raise and set poles using web fabric slings (not chain or cable).

3.3 BOLLARD LUMINAIRE INSTALLATION

A. Align units for optimum directional alignment of light distribution.

A. Install on concrete base with top 4 inches (100 mm) above finished grade or surface at luminaire location. Cast conduit into base, and finish by troweling and rubbing smooth. Concrete materials, installation, and finishing are specified in Division 3 Section "Cast-in-Place Concrete."

3.5 CORROSION PREVENTION

- A. Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.
- B. Steel Conduits: Comply with Division 16 Section "Raceways and Boxes." In concrete foundations, wrap conduit with 0.010-inch- (0.254-mm-) thick, pipe-wrapping plastic tape applied with a 50 percent overlap.

3.6 GROUNDING

- A. Ground metal poles and support structures according to Division 16 Section "Grounding and Bonding."
1. Install grounding electrode for each pole, unless otherwise indicated.
2. Install grounding conductor pigtail in the base for connecting luminaire to grounding system.
- B. Ground nonmetallic poles and support structures according to Division 16 Section "Grounding and Bonding."
1. Install grounding electrode for each pole.
2. Install grounding conductor and conductor protector.
3. Ground metallic components of pole accessories and foundations.

END OF SECTION 16521

1.03 Material and Storage Equipment 1
1.04 Damage to Existing Roadways 1
1.05 Adjustment of Light Fixtures 1
1.06 Easements and Right-of-Way 1



1.02 Existing Roadways and Drives:

All private drives shall be accessible at all times. During construction it may be necessary to temporarily close an existing drive. The drive shall be reopened as soon as possible.

No existing drive shall remain closed at the end of a work day and/or for an 8 hour period unless specific authorization is granted in advance by the owner.

Existing roadways and drives shall remain clean of dirt and debris associated with the project at the end of each work day. Payment for this work is incidental to the project and further discussed in Section 01701 "Contract Closeout" and Section 01800 "Cleaning and Maintenance".

1.03 Material and Storage Equipment:

No equipment or materials shall be stored on public rights-of-way.

1.04 Damage to Existing Roadways:

Any damage to existing roadways shall be repaired in a timely manner to prevent complaints as directed by the Owner's representative and shall be at the expense of the CONTRACTOR.

1.05 Adjustment of Light Fixtures:

CONTRACTOR shall include as part of the project a combined forty (40) hours of crew and appropriate equipment (bucket truck, lifts, etc.) to assist OWNER with adjustment and fine tuning of all street/pedestrian lighting fixtures and/or associated appurtenances. This shall include, but not necessarily be limited to, adjustment of angle, tilt, projection of lights, operation of lights, etc. Such work shall be coordinated with the OWNER/OWNER'S REPRESENTATIVE at the end of the project after all lights are in place and in operation. CONTRACTOR shall anticipate work to be after hours (dark), if necessary, and potentially occur over multiple days and/or nights.

1.06 Easements and Right-of-Way:

There shall be no material or equipment storage, any stockpiling, access, vehicular parking, construction workers access, or any other construction activity outside of any of the existing or acquired easements / rights-of-way on the project without written permission from the property owners.

END OF SECTION 20000

10474 Highway 82 East
Duncanville AL 35456

INSURER C :
INSURER D :
INSURER E :
INSURER F :

COVERAGES CERTIFICATE NUMBER: 21494811 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDITIONAL INSURANCE (IND. W/O.D.)	POLICY NUMBER	POLICY EFF. DATE (MM/DD/YYYY)	POLICY EXP. DATE (MM/DD/YYYY)	LIMITS	
						EACH OCCURRENCE	PER STATUTE
	COMMERCIAL GENERAL LIABILITY						
	CLAIMS-MADE						
	GEN'L AGGREGATE LIMIT APPLIES PER:						
	POLICY	PROJ	LOC				
	OTHER:						
	AUTOMOBILE LIABILITY						
	ANY AUTO		SCHEDULED AUTOS				
	ALL OWNED AUTOS		NON-OWNED AUTOS				
	HIRED AUTOS						
	UMBRELLA LIAB						
	EXCESS LIAB						
	DED.		RETENTION \$				
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		WGD14-2014-AL	1/1/2014	1/1/2015		
B	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)		SP4049865	1/1/2014			
	If yes, describe under DESCRIPTION OF OPERATIONS below						
	DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 104, Additional Remarks Schedule, may be attached if more space is required)						

Regarding effective and expiration, both days are at 12:01 Standard Time at the insured's address. Coverage under this program is limited to the Alabama Workers Compensation Act. Assoc. General Contractors SIF #0100R is rated by A.M. Best & their rating is A+ XII Safety National Corp. is rated by A.M. Best & their rating is A+ XII
Re: City Walk at University Place & Forest Lake City Project No. A12-1413 / A12-0993
Waiver of Subrogation in favor of Certificate Holder

CERTIFICATE HOLDER

City of Tuscaloosa
2201 University Boulevard
Tuscaloosa AL 35401

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Debbie Grimm





GPL Construction Inc.
 P.O. Box 87
 Duncanville, AL 35456

INSURER C : HARTFORD Fire Insurance Company
 INSURER D :
 INSURER E :
 INSURER F :

COVERAGES CERTIFICATE NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

REVISION NUMBER:

MSR LTR	TYPE OF INSURANCE	ADDITIONAL MSR LTR	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS			
						EACH OCCURRENCE	AGGREGATE		
A	GENERAL LIABILITY		CL90607852	10/01/2013	10/01/2014	EACH OCCURRENCE	\$1,000,000		
	COMMERCIAL GENERAL LIABILITY					DAMAGE TO RENTED PREMISES (ea occurrence)	\$100,000		
	CLAIMS-MADE	<input checked="" type="checkbox"/>				MED EXP (Any one person)	\$5,000		
						PERSONAL & ADV INJURY	\$1,000,000		
						GENERAL AGGREGATE	\$2,000,000		
						PRODUCTS - COMP/PROP AGG	\$2,000,000		
							\$		
GEN'L AGGREGATE LIMIT APPLIES PER: POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC									
A	AUTOMOBILE LIABILITY		AU90607852	10/01/2013	10/01/2014	COMBINED SINGLE LIMIT (ea accident)	\$1,000,000		
		<input checked="" type="checkbox"/>				ANY AUTO		BODILY INJURY (Per person)	\$
		<input checked="" type="checkbox"/>				ALL OWNED AUTOS		BODILY INJURY (Per person)	\$
		<input checked="" type="checkbox"/>				HIRED AUTOS	<input checked="" type="checkbox"/>	SCHEDULED AUTOS NON-OWNED	
							\$		
B	UMBRELLA LIAB		L5094626682	10/01/2013	10/01/2014	EACH OCCURRENCE	\$5,000,000		
		<input checked="" type="checkbox"/>				EXCESS LIAB		AGGREGATE	\$5,000,000
		<input checked="" type="checkbox"/>				RETENTION \$10,000			\$
C	Rented Equipment		21MSK05793	10/01/2013	10/01/2014	E.L. EACH ACCIDENT	\$		
						E.L. DISEASE - EA EMPLOYEE	\$		
						E.L. DISEASE - POLICY LIMIT	\$		
						AGGREGATE	\$500,000 per item 2,500,000 Aggregate		

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
 Re: City Walk at University Place & Forest Lake, City Project No. A12-14131A12-0993. In regard to this project and General Liability and Auto Liability. The City of Tuscaloosa, its officers, agents and employees are named as Additional Insured and Waiver of Subrogation in and on behalf of the City of Tuscaloosa, its officers, agents, employees and Program Coordinator. 30 days notice of cancellation provided to Certificate Holder.

CERTIFICATE HOLDER

City of Tuscaloosa
 P.O. Box 2089
 Tuscaloosa, AL 35403

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Arland Davis



This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. The following provision is added to SECTION II - WHO IS AN INSURED

1. Any person(s) or organization(s) (referred to below as additional insured) with whom you are required in a written contract or agreement to name as an additional insured for the "products-completed operations hazard", but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work", at the location or project designated and described in the contract or agreement, performed for that additional insured and included in the "products-completed operations hazard".

A person's or organization's status as an additional insured under this endorsement ends when the obligation to provide additional insured status for the "products-completed operations hazard" in the written contract or agreement ends.

B. With respect to insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

1. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings, designs and specifications; and

2. Supervisory, inspection, architectural or engineering activities.

C. The limits of insurance applicable to the additional insured are those specified in the written contract or agreement or in the Declarations for this policy, whichever are less. These limits of insurance are inclusive of and not in addition to the limits of insurance shown in the Declarations.

D. With respect to the coverage provided by this endorsement, SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS, Paragraph 4. Other Insurance, Subparagraph a. Primary Insurance, is deleted and replaced by the following:

a. Primary Insurance

This insurance is primary except when Paragraph b. below applies. If this insurance is primary, our obligations are not affected unless any of the other insurance is also primary. Then, we will share with all that other insurance by the method described in Paragraph c. below, except:

(1) If a written contract or agreement that requires any person(s) or organization(s) to be an additional insured also requires this insurance to be primary and noncontributory, then this insurance is primary over any other insurance in which the additional insured is a Named Insured. We will not seek contribution from any other liability policy in which the additional insured is a Named Insured.

71 1145 0909

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This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. The following provision is added to SECTION II - WHO IS AN INSURED

1. Any person(s) or organization(s) (referred to below as additional insured) with whom you are required in a written contract or agreement to name as an additional insured, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

(1) Your acts or omissions; or

(2) The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location or project described in the contract or agreement.

A person's or organization's status as an additional insured under this endorsement ends when your operations for that additional insured are completed.

B. With respect to insurance afforded to these additional insureds, the following additional exclusions apply:

1. This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

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a. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings, designs and specifications; and

b. Supervisory, inspection, architectural or engineering activities.

2. This insurance does not apply to "bodily injury" or "property damage" occurring after:

a. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or

b. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as part of the same project.

C. The limits of insurance applicable to the additional insured are those specified in the written contract or agreement or in the Declarations for this policy, whichever are less. These limits of insurance are inclusive of and not in addition to the limits of insurance shown in the Declarations.



primary. Then, we will share with all that other insurance by the method described in Paragraph c. below, except;

(1) If a written contract or agreement that requires any person(s) or organization(s) to be an additional insured also requires this insurance to be primary and noncontributory, then this insurance is primary over any other insurance in which the additional insured is a Named Insured. We will not seek contribution from any other liability policy in which the additional insured is a Named Insured.

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Schedule

Each Pollution Incident Limit

\$ 100,000

(Defense Costs are included within the Each Pollution Incident Limit)

I. Damage To Your Work

The following is added to Section I - Coverages, Coverage A Bodily Injury and Property Damage Liability, Paragraph 1. Insuring Agreement:

f. Damages because of "property damage"

include damages the insured becomes legally obligated to pay because of "property damage" to "your work" and shall be deemed to be caused by an "occurrence", but only if:

(1) The "property damage" is the result of work performed on your behalf by a subcontractor(s) that is not a Named Insured;

(2) The work performed by the subcontractor(s) is within the "products-completed operations hazard"; and

(3) The "property damage" is unexpected and unintended from the standpoint of the insured.

For the purposes of this coverage, the definition of "Occurrence" in SECTION V - DEFINITIONS is replaced with the following:

13. "Occurrence" means an accident, including continuous or repeated exposure to substantially the same general harmful conditions. An accident shall include "property damage" to other than "your work" arising from "your work".

II. Limited Product Withdrawal Expense Coverage

A. The following is added to Section I - Coverages

LIMITED PRODUCT WITHDRAWAL EXPENSE COVERAGE

1. Insuring Agreement

a. We will reimburse you for "product withdrawal expenses" incurred by you because of a "product withdrawal" to which this insurance applies.

The most we will reimburse you for the sum of all "product withdrawal expenses" incurred for all "product withdrawals" initiated during the policy period is \$10,000.

b. This insurance applies to a "product withdrawal" only if the "product withdrawal" is initiated in the "coverage territory" during the policy period because:

(1) You determine that the "product withdrawal" is necessary; or

(2) An authorized government entity has ordered you to conduct a "product withdrawal".

c. We will reimburse "product withdrawal expenses" only if:

(1) The expenses are incurred within one year of the date the "product withdrawal" was initiated;

(2) The expenses are reported to us within one year of the date the expenses were incurred.



you or is requested by a third party; or

(2) When you first received, orally or in writing, notification of an order from an authorized government entity to conduct a "product withdrawal".

e. "Product withdrawal expenses" incurred to withdraw "your products" which contain the same or substantially similar "defects" will be deemed to have arisen out of the same "product withdrawal".

2. Exclusions

This insurance does not apply to "product withdrawal expenses" arising out of:

a. **Breach Of Warranty And Failure To Conform To Intended Purpose**

Any "product withdrawal" initiated due to the failure of "your product" to accomplish their intended purpose, including any breach of warranty of fitness, whether written or implied. This exclusion does not apply if such failure has caused or is reasonably expected to cause "bodily injury" or physical damage to tangible property other than "your product".

b. **Infringement Of Copyright, Patent, Trade Secret, Trade Dress Or Trademark**

Any "product withdrawal" initiated due to copyright, patent, trade secret, trade dress or trademark infringements.

Profit Or Redesign

The costs of regaining goodwill, market share, revenue or "profit" or the costs of redesigning "your product".

e. **Expiration Of Shelf Life**

Any "product withdrawal" initiated due to expiration of the designated shelf life of "your product".

f. **Known Defect**

A "product withdrawal", initiated because of a "defect" in "your product" known to exist by the Named Insured or the Named Insured's "executive officers", prior to the date when this Coverage Part was first issued to you or prior to the time "your product" leaves your control or possession.

g. **Otherwise Excluded Products**

A recall of any specific products for which "bodily injury" or "property damage" is excluded under Coverage A Bodily Injury And Property Damage Liability by endorsement.

h. **Governmental Ban**

A recall when "your product" or a component contained within "your product" has been:

(1) Banned from the market by an authorized government entity prior to the policy period; or

(2) Distributed or sold by you subsequent to any governmental ban.



(1) Request, demand, order, statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants", or

(2) Claim or suit by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to, or assessing the effects of, "pollutants".

B. For the purposes of this coverage, the following condition is added to Section IV - Commercial General Liability Conditions:

Concealment Or Fraud

We will not provide coverage to you, or any other insured, who at any time:

1. Engaged in fraudulent conduct; or
2. Intentionally concealed or misrepresented a material fact concerning a "product withdrawal" or "product withdrawal expenses" incurred by you.

C. The following definitions are added to Section

V - Definitions:

1. "Defect" means a defect, deficiency or inadequacy that creates a dangerous condition.
2. "Product tampering" is an act of intentional alteration of "your product" which has caused or is reasonably expected to cause "bodily injury" or physical injury to tangible property other than "your product".

tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

3. "Product withdrawal" means the recall or withdrawal:

- a. From the market; or
- b. From use by any other person or organization;

of "your products", or products which contain "your products", because of known or suspected "defects" in "your product", or known or suspected "product tampering", which has caused or is reasonably expected to cause "bodily injury" or physical injury to tangible property other than "your product".

For the purposes of this insurance, electronic data is not tangible property.

As used in this definition, electronic data means information, facts or programs stored as or on, created or used on, or transmitted to or from computer software, including systems and applications software, hard or floppy disks, CD-ROMS, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

4. "Product withdrawal expenses" means those reasonable and necessary extra expenses, listed below, paid and directly related to a "product withdrawal":

- a. Costs of notification;
- b. Costs of stationery, envelopes, production of announcements and postage or facsimiles;



products", or products that contain "your products", that cannot be reused, not exceeding your purchase price or your cost to produce the products.

5. "Profit" means the positive gain from business operation after subtracting for all expenses.

III. Limited Pollution Liability

a. Subject to the Each Pollution Incident Limit, the following is added to exclusion f. (1) under paragraph 2. Exclusions of Section I - Coverages, Coverage A Bodily Injury And Property Damage:

Paragraph (1)(d) does not apply to a "pollution incident" as defined in this coverage.

1. "Pollution incident" means an unexpected, unintended, abrupt, and instantaneous discharge, dispersal, seepage, migration, release or escape of "pollutants" which is demonstrated by the insured as having commenced at a specific date and time during the policy period, and became known to the insured within 72 hours thereafter.

2. This coverage does not apply to a "pollution incident" resulting from the insured's willful and intentional violation of any governmental statute, rule or regulation.

3. The insured has taken all reasonable steps necessary to mitigate the "pollution incident".

This insurance does not modify coverage provided by the exceptions to exclusion (1)(d) contained in paragraphs d(i), (ii), and (iii).

limited to the Each Pollution Incident Limit.

(2) Our right and duty to defend end when we have used up the applicable limit of insurance in the payment of judgments, settlements or "defense costs".

2. Supplementary Payments - Coverages A And B are deleted and replaced by the following:

We will pay, with respect to any claim we investigate or settle, or any "suit" against an insured we defend:

(1) Prejudgment interest awarded against the insured on that part of the judgment we pay. If we make an offer to pay the applicable limit of insurance, we will not pay any prejudgment interest based on that period of time after the offer.

(2) All interest on the full amount of any judgment that accrues after entry of the judgment and before we have paid, offered to pay, or deposited in court the part of the judgment that is within the applicable limit of insurance, or before we have paid or offered to pay "defense costs" within the applicable limit of insurance.

3. Section III - Limits Of Insurance Paragraph's 4 through 7 are deleted and replaced by the following:

4. Subject to 2. or 3. above, the most we will pay for the sum of:

- a. Damages under Coverage A;
- b. Medical expenses under Coverage C; and
- c. "Defense costs"



6. Subject to 5. above, the Medical Expense Limit is the most we will pay under Coverage C for all medical expenses because of "bodily injury" sustained by any one person.

7. "Defense costs" afforded by this insurance are part of and not in addition to the limits of insurance.

d. The following is added to Section V - Definitions:

"Defense costs" means reasonable and necessary expenses that result from investigating, settlement or defense of a specific claim including attorney fees and expenses, cost of legal proceedings, all reasonable expenses that an insured incurs at our request while helping us investigate a claim. "Defense costs" also include all costs taxed against the insured in a "suit", cost of appeal bonds, cost of bonds to release property being used to satisfy a legal obligation (but only for bond amounts within the limit of coverage that applies) but we have no obligation to provide such bonds. "Defense costs" do not include salaries or expenses of our employees or employed attorney's salaries or expenses of your employees, expenses of independent adjusters or post judgment interest.

e. The Each Pollution Incident Limit is \$100,000 unless a higher limit is shown in the Schedule of this endorsement.

IV. Non-Owned Watercraft

a. Exclusion g. Paragraph (2) of Section 1 - Coverages, Coverage A Bodily Injury And Property Damage Liability is deleted and replaced by the following:

to loss covered under this provision, whether the other insurance is primary, excess, contingent or on any other basis. In that case, this Provision IV. does not provide any insurance.

d. Paragraph IV.c. does not apply to a policy written to apply specifically in excess of this policy.

V. Consolidated Insurance (Wrap - Up) Program

The following exclusion is added to Paragraph 2. Exclusions of Section 1 - Coverages, Coverage A Bodily Injury And Property Damage Liability:

This insurance does not apply to "bodily injury" or "property damage" arising out of either your ongoing operations or operations included within the "products-completed operations hazard" if such operations were at any time subject to a "consolidated insurance (wrap-up) program".

This exclusion applies whether or not the "consolidated insurance (wrap-up) program" provided:

(1) Coverage identical to that provided by this Coverage Part;

(2) Limits adequate to cover all claims; or

(3) Coverage that remains in effect.

This exclusion applies regardless of whether such operations are or were conducted by you or on your behalf.

This exclusion does not apply to your operations away from a "consolidated insurance (wrap-up) program" project site incidental to the support of such a project and not included within the "consolidated insurance (wrap-up) program".



owner-continued or similar insurance program, under which some or all of the contractors working on a specific project or specific projects, are required to participate in a program to obtain insurance that:

(1) Includes same or similar insurance as that provided by this Coverage Part; and

(2) Is issued specifically for "bodily injury" or "property damage" arising out of such project or projects.

VI. Supplementary Payments Increased Limits

In the Supplementary Payments - Coverages A And B provision of Section I - Coverages:

a. The limit for the cost of bail bonds is changed from \$250 to \$2000.

VII. Broad Form Named Insured

a. Section II - Who Is An Insured is amended to include as an insured any organization or subsidiary thereof, other than a partnership, joint venture, or limited liability company, which is a legally incorporated entity of which you own a financial interest of more than 50 percent of the voting stock on the effective date of this endorsement.

b. Paragraph VII.a. does not apply to injury or damage with respect to which an insured under this policy is also an insured under another policy or would be an insured under such policy but for its termination or upon the exhaustion of its limits of insurance.

c. Paragraph VII.b. does not apply to a policy written to apply specifically in excess of this policy.

VIII. Newly Formed or Acquired Organizations

In Paragraph 3.a. of Section II - Who Is An Insured, 90th day is changed to 180th day.

Section II - Who Is An Insured is amended to add:

a. The Lessor of Leased Equipment from whom you lease equipment when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured on your policy. Such person or organization is an insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your maintenance, operation or use of equipment leased to you by such person or organization.

A person's or organization's status as an additional insured under this insurance ends when their contract or agreement with you for such leased equipment ends. With respect to the insurance afforded to these additional insureds, this insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

b. The Grantor of Franchise when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured on your policy. Such person or organization is an insured only with respect to their liability as grantor of a franchise to you. A person's or organization's status as an additional insured under this insurance ends when their contract or agreement with you for such franchise ends.



This insurance does not apply to:

(1) Any "occurrence" which takes place after you cease to be a tenant in that premises.

(2) Structural alterations, new construction or demolition operations performed by or on behalf of the manager or lessor of premises.

d. The Mortgagee, Assignee, or Receiver when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured on your policy. Such person or organization is an insured only with respect to their liability as mortgagee, assignee, or receiver and arising out of the ownership, maintenance or use of the premises by you.

A person's or organization's status as an additional insured under this insurance ends when their contract or agreement with you for such premises ends.

This insurance does not apply to structural alterations, new construction and demolition operations performed by or for that person or organization.

e. The Vendor when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured on your policy. Such person or organization is an insured only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business, subject to the following additional exclusions:

the product made intentionally by the vendor;

(d) Repackaging, except when unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;

(e) Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;

(f) Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;

(g) Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor; or

(h) "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:

(i) The exceptions contained in Sub-paragraphs (d) or (f); or



The General Aggregate Limit under this Section III - Limits Of Insurance applies separately to each of your:

a. Projects away from premises owned by or rented to you;

b. "Locations" owned by or rented to you.

"Location" means premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.

XII. Electronic Data Liability

a. Exclusion 2.p. of Coverage A Bodily Injury And Property Damage Liability in Section I - Coverages is deleted and replaced by the following:

2. Exclusions

This insurance does not apply to:

p. Electronic Data

Damages arising out of the loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate "electronic data" that does not result from physical injury to tangible property.

b. The following paragraph is added to Section III - Limits Of Insurance:

Subject to 5. above, the most we will pay under Coverage A for "property damage" because of all loss of "electronic data" is \$15,000 each "occurrence" subject to \$15,000 aggregate for the policy period.

c. Paragraph XII.b. does not apply to "property damage" arising out of damage to "electronic data" on embedded controllers used to operate or maintain building equipment.

the following:

17. "Property damage" means:

a. Physical injury to tangible property, including all resulting loss of use of that property. All such loss of use shall be deemed to occur at the time of the physical injury that caused it;

b. Loss of use of tangible property that is not physically injured. All such loss of use shall be deemed to occur at the time of the "occurrence" that caused it; or

c. Loss of, loss of use of, damage to, corruption of, inability to access, or inability to properly manipulate "electronic data", resulting from physical injury to tangible property. All such loss of "electronic data" shall be deemed to occur at the time of the "occurrence" that caused it.

For the purposes of this insurance, "electronic data" is not tangible property.

XIII. Duties in the Event of Occurrence, Claim or Suit Redefined

a. The requirement in Condition 2.a. of Section IV - Commercial General Liability Conditions that you must see to it that we are notified of an "occurrence" only applies when the "occurrence" or offense is known to:

- (1) You, if you are an individual;
- (2) A partner, if you are a partnership; or
- (3) An officer of the corporation or insurance manager, if you are a corporation.



The following is added to 8. Transfer Of Rights Of Recovery Against Others To Us condition in Section IV - Commercial General Liability Conditions:

We waive any right of recovery we may have against any person(s) or organization(s) because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person(s) or organization(s) and included in the "products-completed operations hazard". This waiver applies only to the person(s) or organization(s) with whom you have agreed in a written contract or agreement to waive your right of recovery.

XV. Bodily Injury Redefined

The definition of "bodily injury" in Section V - Definitions is deleted and replaced by the following:

3. "Bodily injury" means bodily injury, sickness or disease sustained by a person including mental anguish or death resulting from any of these.

XVI. Mobile Equipment Redefined

Paragraph 12.f. subparagraph (1) of Section V - Definitions does not apply to self-propelled vehicles of less than 1000 pounds gross vehicle weight.

XVII. Unintentional Errors or Omissions

We will not deny coverage under this Coverage Part because of the unintentional omission of, or unintentional error in, any information provided by you. However, this provision does not affect our right to collect additional premium or exercise our right of cancellation or non-renewal.

or to property over which an insured is, for any purpose, exercising physical control;

2. the "voluntary property damage" arises out of operations away from the premises owned by, rented to, or controlled by the Named Insured; and

3. the "property damage" coverage of the policy would extend to the operation causing the loss.

b. The insurance under this coverage does not apply to "voluntary property damage" to property:

1. while being transported by, or caused by the ownership, maintenance, operation, use, loading or unloading of any automobile, watercraft or aircraft; or

2. rented to any Named Insured.

c. This insurance will apply only to loss that is in excess of \$250 for each "occurrence."

d. The most we will pay under this coverage is \$1,000 for each "occurrence" subject to \$2,000 aggregate for the policy year.

e. Payment under this coverage will not include any prospective profit or overhead charges of any nature.

f. "Voluntary property damage" as used in this coverage means physical injury to tangible property and does not include disappearance, abstraction or loss of use.

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The following is added to Section II - Liability Coverage paragraph A.1. - Who Is An Insured:

d. (1) Any organization or subsidiary thereof which is a legally incorporated entity of which you own a financial interest of more than 50 percent of the voting stock on the effective date of this endorsement.

(2) Paragraph I.d.(1) does not apply to "accident" or "loss" with respect to which an "insured" under this policy is also an "insured" under another policy or would be an "insured" under such policy but for its termination or upon the exhaustion of its limits of insurance.

(3) Paragraph I.d.(2) does not apply to a policy written to apply specifically in excess of this policy.

e. (1) Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company and over which you maintain ownership or majority interest, will qualify as a Named Insured if there is no other similar insurance available to that organization.

(2) Coverage under paragraph I.e.(1) is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier. Coverage does not apply to an "accident" or "loss" that results from an "accident" that occurred before you acquired or formed the organization.

II. Additional Insured By Contract, Permit Or Agreement

Any person or organization with whom you agree in a written contract, agreement or permit, to name as an insured for Liability Coverage, but only to the extent

under the Who Is An Insured provision contained in Section II of the Coverage Form.

This insurance does not apply unless the written contract or agreement has been executed or the permit has been issued prior to the "bodily injury" or "property damage".

III. Personal Effects Coverage

The following is added to Section III - Physical Damage Coverage paragraph A. - Coverage:

5. We will pay up to \$400 for loss to wearing apparel and other personal effects which are:
- a. owned by an "insured", and
 - b. in or on your covered "auto".

This coverage applies only in the event of a total theft of your covered "auto".

No deductibles apply to this coverage.

IV. Towing and Labor Coverage

Section III - Physical Damage Coverage, Paragraph A.2, is deleted and replaced with the following:

2. We will pay \$75 plus the amount shown in the Declarations for towing and labor costs incurred each time a covered "auto" of the private passenger type is disabled. However, the labor must be performed at the place of disablement.

V. Rental Reimbursement

Section III - Physical Damage Coverage is amended by adding the following:

We will pay for rental reimbursement expenses incurred by you for the rental of an "auto" because of loss to a covered "auto". Payment applies in addition



to you for your operations.

Our payment will be limited to the period of time reasonably required to repair or replace the covered "auto". We will pay up to \$30 per day to a maximum of \$650.

If "loss" results from the total theft of a covered "auto" we will pay under this coverage only that amount of rental reimbursement expenses which are not already provided under the Physical Damage Coverage Extension.

VI. Replacement Cost Coverage – Private Passenger Autos

Section III – Physical Damage Coverage, C. Limit Of Insurance is amended by addition of the following:

4. Paragraph C.1, C.2. and C.3. do not apply to private passenger "autos" described in the Schedule, purchased new and not previously titled.

The most we will pay for any covered "loss" will be the lesser of:

- a. The cost of a new "auto" of the same make, size including the same equipment; or
- b. The cost of repairing with parts of like kind and quality.

minus the deductible shown in the Schedule.

This coverage does not apply to loss caused by fire, theft, larceny or vandalism.

This coverage applies for five years from the date of purchase of the private passenger "auto".

VII. Extended Coverage – Airbags

Section III – Physical Damage Coverage, B. Exclusions, paragraph 3. is amended by addition of the following:

b.(3) Electronic equipment designed solely for receiving or that transmits audio, visual or data signals and is permanently installed in the covered "auto" or the equipment is removable from a housing unit which is permanently installed in the covered "auto" at the time of the "loss" and such equipment is designed to be solely operated by use of the power from the "auto's" electrical system, in or upon the covered "auto".

(a) If a "loss" occurs solely to the audio, visual or data electronic equipment, then for each covered "auto" our obligation to pay for, repair, return or replace the damaged or stolen property will be subject to a \$250 deductible.

(b) In the event that there is more than one applicable deductible, only the highest deductible will apply. In no event will more than one deductible apply.

IX. Waiver Of Subrogation

The following is added to A.5. Transfer Of Rights Of Recovery Against Others To Us condition in Section IV - Business Auto Conditions

We waive any right of recovery we may have against any person or organization because of payments we make for "bodily injury" or "property damage" arising out of the operation of a covered "auto" when you have assumed liability for such "bodily injury" or "property damage" under an insured contract.

X. Duties in the Event of Occurrence, Claim or Suit Redefined

a. The requirement in Loss Conditions 2.a. of Section IV – Business Auto Conditions that you must see to it that we are notified of an



breach occurs after such claim or "suit" is known to:

- (1) You, if you are an individual;
- (2) A partner, if you are a partnership; or
- (3) A member, if you are a limited liability company; or
- (4) An executive officer or insurance manager, if you are a corporation.

XI. Supplementary Payments Increased Limits

Section II – Liability Coverage, 2.a. Supplementary Payments, paragraphs a.(2) and a.(4) are replaced by the following:

- (2) Up to \$3000 for cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.
- (4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earning up to \$300 a day because of time off from work.

XII. Unintentional Errors or Omissions

We will not deny coverage under this Coverage Part because of the unintentional omission of, or unintentional error in, any information provided by you. However, this provision does not affect our right to collect additional premium or exercise our right of cancellation or non-renewal.

XIII. Physical Damage - Transportation Expense

In Section III – Physical Damage Coverage, paragraph A.4.a., the amount we will pay is increased to \$60 per day to a maximum limit of \$1,800.

for that coverage subject to the following limit:

- (1) The most we will pay for "loss" to any hired "auto" is the lesser of:
 - a. \$50,000; or
 - b. The actual cash value of the damaged or stolen property at the time of the "loss"; or
 - c. The cost of repairing or replacing the damaged or stolen property.

A \$500 deductible applies to "loss" caused by other than fire or lightning.

- (2) Subject to (1)a.,b. and c. above, we will provide coverage equal to the broadest physical damage coverage applicable to any covered "auto" shown in the Declarations.
- (3) When you are required by a written contract to indemnify a lessor for actual financial loss due to a loss of use of a hired "auto" resulting from a covered "accident" or "loss", we will pay up to \$65 per day subject to a maximum limit of \$750.

If a premium entry is shown in Item Four – Schedule Of Hired Or Borrowed Covered Auto Coverage And Premiums – Physical Damage Insurance, this Provision does not provide any insurance.

XVI. Auto Loan/Lease Gap Coverage

The Physical Damage Coverage Section is amended by addition of the following:

In the event of a total "loss" to a covered "auto" shown in the Schedule Of Covered Autos You Own, we will pay any unpaid amount due on the lease or loan for a covered "auto", less

1. The amount paid under the Physical Damage Coverage Section of the policy; and

insurance, Health, Accident or Disability insurance purchased with the loan or lease; and

- e. Carry-over balances from previous loans or leases.

Auto Loan/Lease Gap Coverage will only apply when no provision for this or similar coverage is included in the original lease agreement written on the covered loaned/leased "auto."

XVII. Bodily Injury Redefined

Section V. Definitions - "Bodily injury" is amended as follows:

"Bodily injury" means bodily injury, sickness or disease sustained by a person including mental anguish, mental injury or death resulting from any of these.

