

ESI PROJECT NO.:
T23-415

DATE:
November 2023

CONTRACT DOCUMENTS
AND
SPECIFICATIONS
FOR
MEDICAL PARK CIRCLE
PIPE REPLACEMENT
FOR THE
CITY OF TUPELO, MISSISSIPPI
(BID # 2023-059PW)



CONTRACT DOCUMENTS AND SPECIFICATIONS

FOR

**MEDICAL PARK CIRCLE
PIPE REPLACEMENT**

FOR THE

CITY OF TUPELO, MISSISSIPPI

MUNICIPAL OFFICIALS

**MAYOR:
TODD JORDAN**

**CHIEF OPERATIONS OFFICER:
DON LEWIS**

**CITY ENGINEER:
DENNIS BONDS**

**CITY COUNCIL:
NETTIE DAVIS, PRESIDENT
CHAD MIMS
LYNN BRYAN
TRAVIS BEARD
BUDDY PALMER
JANET GASTON
ROSIE JONES**

**CITY ATTORNEY:
BEN LOGAN**

**CHIEF FINANCIAL OFFICER:
KIM HANNA**

**CONTRACT DOCUMENTS AND ASSEMBLY OF SPECIFICATIONS
MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

Contract Documents and Assembly of Specifications
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**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI
ADVERTISEMENT FOR BIDS
BID # 2023-059PW**

Sealed or electronic bids for the construction of MEDICAL PARK CIRCLE PIPE REPLACEMENT will be received by the City of Tupelo, Mississippi at City Hall, 71 East Troy St., 1st Floor Purchasing Office, Attn: Traci Dillard, until 10:00 A.M., on Wednesday, December 20, 2023, and then publicly opened and read aloud at the Tupelo City Hall Conference Room B. Electronic bids will be received until the date and time via electronic online submission through www.tupelomsbids.com.

Contract Documents, including Drawings and Specifications, may be viewed and/or purchased at www.tupelomsbids.com. Any questions regarding the website or obtaining bid documents should be directed to PH Bidding Group at 662-407-0193. Contract Documents, including Drawings and Specifications, may also be examined at the Tupelo City Hall (address above) or at Engineering Solutions, Inc. located at 1324 N Veterans Tupelo, MS.

This work consists of the replacement of approximately 300 feet of failed and undersized storm drain pipe culvert and drainage structures near Medical Park Circle. The work will include but is not limited to earthwork, storm drainage and concrete pavement. Defined quantities to be bid are specified in the Contract Documents.

Each bid submitted must be marked on the outside "Bid for MEDICAL PARK CIRCLE PIPE REPLACEMENT". Any bid in excess of \$50,000 must contain on the outside of the envelope the contractor's current certificate of responsibility number, and no bid shall be opened or considered unless this number appears on the outside of the envelope or unless a statement is included on the outside of the envelope indicating that the bid enclosed does not exceed \$50,000.

A satisfactory Bid Bond executed by the Bidder and an accepted Surety, a certified check, or bank draft payable to the City of Tupelo, Mississippi, on negotiable U.S. Government Bonds (at par value), shall be submitted with each bid in an amount equal to five percent (5%) of the total bid.

In the letting of public contracts, 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 Mississippi public contracts only on the same basis as the nonresident bidder's state awards contracts to Mississippi contractors bidding under similar circumstances; and resident contractors actually domiciled in Mississippi, be they corporate, individuals, or partnerships, are to be granted preference over nonresidents in awarding of contracts in the same manner and to the same extent as provided by the laws of the state of domicile of the nonresident. When a nonresident contractor submits a bid for a public project, he shall attach thereto a copy of his resident state's current law pertaining to such state's treatment of nonresident contractors.

Minority and Woman Owned Business Enterprises are solicited to bid on this contract as prime contractors and are encouraged to make inquiries regarding potential subcontracting opportunities, equipment, material and/or supply needs.

The City of Tupelo is an Equal Opportunity Employer, and hereby notifies all Bidders will be afforded the full opportunities to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, sex, national origin, age, disability, sexual preference, marital or veteran status, or any other legally protected status in consideration for an award.

Bids may be held up to 90 days from the date of opening for review of bids and qualifications of bidders prior to Contract award. The City of Tupelo, MS reserves the right to reject any or all bids or to waive any informalities in the bidding.

TODD JORDAN
Kim Hanna, Chief Financial Officer

11-21-2023 and 11-28-2023

American Rescue Plan Act (ARPA) Mandatory Addendum (6-5-2023)

Compliance with Federal Law, Regulations and Executive Orders

This is an acknowledgement that federal assistance from the US Department of Treasury under the American Rescue Plan Act (ARPA) will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, ARPA implementing regulations and any correlating regulations established by the Treasury Department, including but not limited to the following conditions:

Equal Opportunity Clause

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, sexual orientation, gender identity, 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, sexual orientation, gender identity, or national origin. 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 compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination 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, sexual orientation, gender identity, or national origin.
- (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) The contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) 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.
- (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and

- accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further 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 Secretary of Labor, or as otherwise provided by law.
- (8) The contractor will include the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of 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 by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided*, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

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 administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Minority and Women Business Enterprises

This contract was procured by the OWNER taking affirmative steps to assure that women and minority businesses are utilized when possible as sources of supplies, equipment, construction and services. Contractor hereby agrees to comply with the following, or when otherwise applicable:

The requirements of Executive Orders 11625 and 12432 (concerning Minority Business Enterprise), and 12138 (concerning Women's Business Enterprise).

Contractor hereby agrees to take affirmative steps to assure that women and minority businesses are utilized when possible as sources of supplies, equipment, construction and services. Affirmative steps shall include the following:

- 1) Including qualified women's business enterprises and small and minority businesses on solicitation lists;
- 2) Assuring that women's enterprises and small and minority businesses are solicited whenever they are potential sources;
- 3) When economically feasible, dividing total requirements into smaller tasks or quantities so as to permit maximum participation by small and minority business, and women's business enterprises;
- 4) Where the requirement permits, establishing delivery schedules which will encourage participation by women's business enterprises and small and minority business;
- 5) Using the services and assistance of the Small Business Administration, and the U.S. Office of Minority Business Development Agency of the Department of Commerce; and for the purposes of these requirements, a Minority Business Enterprise (MBE) is

defined as an enterprise that is at least 51 percent owned and controlled in its daily operation by members of the following groups: Black, Hispanic, Asian or Pacific Islander, American Indian, or Alaskan Natives. A Women Business Enterprise (WBE) is defined as an enterprise that is at least 51 percent owned and controlled in its daily operation by women.

- 6) If any subcontracts are to be let, requiring the prime Contractor to take the affirmative steps in a through e above.

Entities and contractors were previously required to provide proof of compliance to 2 CFR 200.321 by providing proof of submitting solicitation to the Mississippi Procurement Technical Assistance Program (MPTAP) *and* proof of targeted solicitation to DBE firms/vendors. Guidance from MDEQ dated May 1, 2023 requires awardees to show proof of compliance *by one of the two methods*, or both should they choose to. An email detailing the project should be sent to Agency Bid Bank agencybidbank@mississippi.org You should receive a confirmation to retain in order to demonstrate proof of compliance.

Copeland “Anti-Kickback” Act

Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

Contract Work Hours and Safety Standards Act

Contracts that are in excess of \$100,000 and involve the employment of mechanics or laborers must include provisions requiring compliance with the Contract Work Hours and Safety Standards Act as follows:

- (1) Overtime requirements: No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such a workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such a workweek.
- (2) Violation: liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the

sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

- (3) Withholding for unpaid wages and liquidated damages. The OWNER shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.
- (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower-tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

Clean Air Act and Federal Water Pollution Control Act

Clean Air Act

- (1) The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- (2) The contractor agrees to report each violation to the OWNER and understands and agrees that the OWNER will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.
- (3) The contractor agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with American Rescue Plan Act funding.

Federal Water Pollution Control Act

- (1) The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
- (2) The contractor agrees to report each violation to the OWNER and understands and agrees that the OWNER will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.
- (3) The contractor agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with American Rescue Plan Act funds.

Debarment and Suspension

This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

This certification is a material representation of fact relied upon by OWNER. If it is later

determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to OWNER, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

Cities cannot award a contract to parties listed on the government-wide exclusions in the System for Award Management (SAM) listed at www.sam.gov.

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 who in turn will forward the certification(s) to the awarding agency.

A Byrd Anti-Lobbying Certification is attached to these supplemental general conditions and execution is required for this contract.

Procurement of Recovered Materials

In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired: Competitively within a timeframe providing for compliance with the contract performance schedule; meeting contract performance requirements; or at a reasonable price.

Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site,

<https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

Access to Records

The Contractor agrees to provide OWNER and the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

OWNER and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the Comptroller General of the United States.

No Obligation by Federal Government

The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

Program Fraud and False or Fraudulent Statements or Related Acts

The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract.

Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment (Huawei and ZTE)

Contractor is prohibited from obligating or expending loan or grant funds to:

- (1) Procure or obtain;
- (2) Extend or renew a contract to procure or obtain; or
- (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115–232, section 889, covered telecommunications equipment is telecommunications equipment produced by **Huawei Technologies Company or ZTE Corporation** (or any subsidiary or affiliate of such entities).
 - (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
 - (ii) Telecommunications or video surveillance services provided by such entities or using such equipment.
 - (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Publications

Any publications produced with funds from this award must display the following language: “This project is being supported in whole or in part by the American Rescue Plan Act (ARPA), federal award number [enter project FAIN] awarded to The City of Tupelo, Mississippi by the U.S. Department of the Treasury.”

Increasing Seat Belt Use in the United States

Pursuant to Executive Order 13043, 62 FR 19217 (Apr. 18, 1997), Contractor is encouraged to adopt and enforce on-the-job seat belt policies and programs for your employees when operating company-owned, rented or personally owned vehicles.

Reducing Text Messaging While Driving

Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Contractor is encouraged to adopt and enforce policies that ban text messaging while driving, and establish workplace safety policies to decrease accidents caused by distracted drivers.

BYRD ANTI-LOBBYING AMENDMENT

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 who in turn will forward the certification (s) to the awarding agency.

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING – REQUIRED FOR CONTRACTS OVER \$100,000

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form- LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than

\$10,000 and not more than \$100,000 for each such failure.

The Contractor Patton Construction, LLC, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Knex Y. Patton III

Signature of Contractor's Authorized Official

Knex Y. Patton III Manager

Name and Title of Contractor's Authorized Official

12/20/23

Date

Mandatory Addendum to
All City of Tupelo Contracts
October 28, 2022

The City of Tupelo (TUPELO), despite any contrary provision contained in any contract to which TUPELO is a party, does not waive any rights, benefits, or prohibitions that may be provided under any law, statute(s), regulation(s), or policies. All provisions to the contrary in any contract to which TUPELO is a party are hereby null, void and deleted. Not intended to be an exhaustive list, the following are examples of such matters and shall be exceptions to any contrary provision(s) in any contract to which TUPELO is a party.

1. TUPELO does not indemnify or hold harmless any party.
Miss. Const. Art. 4, § 100; Miss AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002).
2. TUPELO does not make any warranty.
Miss. Const. Art. 4, § 100; Miss AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002).
3. TUPELO does not waive any claim; past, present, or future.
Miss. Const. Art. 4, § 100; Miss AG Op.; Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002).
4. TUPELO does not waive its sovereign immunity. TUPELO shall only be responsible for liability resulting from the actions of its officers, agents, and employees acting within the course and scope of their official duties.
Miss. Code Ann. § 11-46-1, et seq.
5. TUPELO does not waive its Constitutional Eleventh (11th) Amendment immunity.
U.S. Const. Amend. XI.
6. TUPELO does not agree to the application of laws of another state.
U.S. Const. amend XI; Miss. Code Ann. 11-11-3; Miss. Code Ann. 11-45-1; *City of Jackson v. Wallace*, 196 So. 223 (1940)
7. TUPELO does not limit the tort liability of another party to the amount of the contract or to any other set amount.
Miss. Const. Art. 4, § 100; Miss AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002); Miss. AG Op., Hathorn (May 28, 1992); Miss. AG Op., Davis (March 3, 1993).
8. TUPELO does not agree to waive warranties of merchantability, fitness for a particular purpose, or any common law warranties to which TUPELO is entitled.
Miss. Const. Art 4, § 100; Miss Code Ann. § 75-2-719; Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002).

9. TUPELO does not agree that a party may represent, prosecute or defend legal actions in the name of TUPELO.
10. TUPELO may not and does not agree to the payment of attorney fees of a “prevailing party” unless specifically authorized by statute. E.g. Miss. Code Anno. § 31-7-309 (1972 as amended) payment of interest on outstanding invoice. Miss AG Op., Nowak, 2009 WL 367665 (Miss.A.G.).
11. Provisions that limit the time for TUPELO to pursue legal actions are deleted and void.
Miss. Const. Art. 4, § 104; Miss. Const. Art. 4, § 100; Miss Code Ann. § 15-1-5; Miss AG Op; Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct, 18, 2002).
12. TUPELO does not agree to submit to binding arbitration.
Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002).
13. TUPELO will make payments for all amounts owed under a contract agreement in accordance with state law.
Miss. Code Ann. § 31-7-305.
14. TUPELO advises for all contracts entered into, the provisions of the contract which will contain the commodities purchased or the personal or professional services provided, the price to be paid, and the term of the contract shall not be deemed to be a trade secret or confidential commercial or financial information, and shall be available for examination, copying or reproduction.
Miss. Code § 25-61-9 (7).
15. TUPELO must comply with Mississippi public records law. Records furnished to public bodies by third parties which contain trade secrets or confidential commercial or financial information shall not be subject to inspection, examination, copying or reproduction until notice to said third parties has been given, but such records shall be released within a reasonable period of time unless the said third parties shall have obtained a court order protecting such records as confidential.
Miss. Code § 25-61-9 (1).
16. Data processing software obtained by TUPELO under a licensing agreement that prohibits its disclosure and which software is a trade secret as defined in Miss. Code Section 75-26-3, and data processing software produced by a public body which is sensitive must not be subject to inspection, copying or reproduction under Mississippi public records law. “Sensitive” means only those portions of data processing software, including the specifications and documentation, used to:
(a) Collect, process, store, and retrieve information which is exempt; (b) Control

and direct access authorizations and security measures for automated systems; (c) Collect, process, store, and retrieve information disclosure of which would require a significant intrusion into the business of the public body.

17. TUPELO is prohibited from binding its successors in office to contracts, including leases, which result in taking away the successors' rights and powers conferred by law, unless there is specific statutory authority to enter into such contract. In the absence of specific statutory authority, such contracts are voidable by the successors in office.
MS AG Ops., Barton (January 8, 2014) and Barton (July 15, 2011)(both relying on Biloxi Firefighters Assoc. v. City of Biloxi, 810 So.2d 589 (Miss. 2002).


18. TUPELO does not have the power to grant to any person, firm or corporation any exclusive franchise or any exclusive right to use or occupy the streets, highways, bridges, or public places in such municipality for any purpose. TUPELO cannot grant, renew, or extend any such franchise, privilege or right, without compensation or for any longer period than twenty-five years.
Miss. Code Anno. 21-27-1

19. All contracts must be approved by the City Council of TUPELO, subject to the veto power of the Mayor of TUPELO.
MS AG Ops. 2012-00013

20. All payments shall be made by TUPELO within forty-five (45) days of invoice, unless disputed. In the case of a bona fide dispute, TUPELO shall pay only the amount of the invoice not disputed. Interest shall be paid at a rate of one and one-half percent (1- ½ %) per month or portion thereof on the unpaid balance from the expiration of such forty-five-day period until such time as the warrant or check is mailed or otherwise delivered to the vendor.
Miss. Code Anno. §31-7-305 (1972 as amended)

Acknowledged and agreed:

CITY
Date:



CONTRACTING PARTY
Date: 12/20/23

INFORMATION FOR BIDDERS

1. RECEIPT AND OPENING OF BIDS

The City of Tupelo, Mississippi, (hereinafter called the "OWNER"), invites Bids on the forms attached hereto. Bids will be received by the OWNER at City Hall, 71 East Troy St., 1st Floor Purchasing Office, Attn: Traci Dillard until the time specified in the ADVERTISEMENT FOR BIDS, and then publicly opened and read aloud at the Tupelo City Hall Conference Room B. The envelope containing the Bids must be sealed and addressed to: CITY OF TUPELO, MISSISSIPPI, and designated as Bid for: MEDICAL PARK CIRCLE PIPE REPLACEMENT along with the additional required information as set forth in the Preparation of Bid section contained herein.

Contract Documents, including Drawings and Specifications, may be viewed and/or purchased at www.tupelomsbids.com. Any questions regarding the website or obtaining bid documents should be directed to PH Bidding Group at 662-407-0193. Contract Documents, including Drawings and Specifications, may also be examined at the Tupelo City Hall (address above) or at Engineering Solutions, Inc. located at 1324 N Veterans Tupelo, MS.

Should a bidder choose to submit a bid electronically in place of a sealed bid, it may be submitted at www.tupelomsbids.com. Any questions regarding electronic bidding should be directed to PH Bidding Group at 662-407-0193.

Each bid submitted must be marked on the outside "Bid for MEDICAL PARK CIRCLE PIPE REPLACEMENT". Any bid in excess of \$50,000 must contain on the outside of the envelope the contractor's current certificate of responsibility number, and no bid shall be opened or considered unless this number appears on the outside of the envelope or unless a statement is included on the outside of the envelope indicating that the bid enclosed does not exceed \$50,000. When bidders chose to submit bids electronically, the requirement for including a certificate of responsibility, or a statement that the bid enclosed does not exceed Fifty Thousand Dollars (\$50,000.00), on the exterior of the bid envelope shall be deemed in compliance by including the same information as an attachment with the electronic bid submittal.

The OWNER may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all Bids. Any Bid may be withdrawn prior to the above-scheduled time for the opening of Bids or authorized postponement thereof. Any Bid received after the time and date specified shall not be considered. No Bidder may withdraw a Bid within ninety (90) days after the actual date of the opening thereof.

When a non-resident contractor submits a Bid for a Mississippi public project, he shall attach thereto a copy of his resident State's current law pertaining to such State's treatment of non-resident contractors as required by House Bill Number 850, Chapter Number 527, Laws of 1988. Bidders residing in the states having no contractor preference law shall so state in a letter on contractor's letterhead attached to his bid.

2. PREPARATION OF BID

Each bid must be submitted on the prescribed form. All blank spaces for Bid prices must be filled in (in ink or typewritten) and the foregoing certification must be fully completed when submitted. Should the Bidder fail to correctly submit a Unit Price for Each item, his Bid will be classed as irregular. Failure to properly sign Proposals shall disqualify same.

Each Bid must be submitted in a sealed envelope bearing on the outside the name of the Bidder, his address, his Certificate of Responsibility Number, his State License Number, and the name of the Project for which the Bid is submitted. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to the OWNER as specified herein.

3. REJECTION OF PROPOSAL

Proposals may be rejected in the case of any omission, alterations of forms, additions or conditions not called for, unauthorized alternate Bids, incomplete Bids, erasures or irregularities of any kind. **CONDITIONAL BIDS WILL NOT BE ACCEPTED.** Proposals in which the prices obviously are unbalanced may be rejected. The Owner reserves the right to waive any informalities or reject any and all bids.

4. TELEGRAPHIC MODIFICATION

Any Bidder may modify his Bid by telegraphic communication at any time prior to the scheduled closing time for receipt of Bids, providing such telegraphic communication is received by the OWNER prior to the closing time, and provided further, the OWNER is satisfied that a written confirmation of the telegraphic modification over the signature of the Bidder was mailed prior to the closing time. The telegraphic communication should not reveal the Bid Price, but should provide the addition or subtraction or other modification so that the final prices or terms will not be known by the OWNER until the sealed Bid is opened. If written confirmation is not received within two (2) days from the closing time, no consideration will be given to the telegraphic modification.

5. METHOD BIDDING

The OWNER invites only one Bid with alternates thereto, if any. Each Bidder must present a complete Proposal for all of the work as only one Contract will be awarded.

6. QUALIFICATIONS OF BIDDER

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

7. BID SECURITY

Each Bid must be accompanied by cash, Certified Check of the Bidder, or a Bid Bond prepared on the form of Bid Bond attached hereto, duly executed by the Bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of five percent (5%) of the Bid. Such cash, checks or Bid Bond will be returned to all except the three lowest Bidders after the opening of Bids. The remaining cash, checks or Bid Bonds will be returned after the OWNER and accepted Bidder have executed the Contract. If no award has been made within ninety (90) days after the date of the opening of Bids, upon demand of the Bidder at any time thereafter, his Bid will be returned by the OWNER so long as the Bidder has not been notified of the acceptance of his Bid.

8. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

The successful Bidder, upon his failure or refusal to execute and deliver the Contract and Bonds required within (15) days after he has received notice of the acceptance of his Bid, shall forfeit to the OWNER (as liquidated damages for such failure or refusal) the security deposited with his Bid.

9. TIME OF COMPLETION AND LIQUIDATED DAMAGES

The Bidder must agree to commence work on or before a date specified in a written NOTICE TO PROCEED of the OWNER and to fully complete the project within the Contract Time stated in the Agreement and/or Bid Proposal. The Bidder must also agree to pay (as liquidated damages) the sum stated in the Bid Proposal for each working day thereafter as hereinafter provided in the General Conditions.

10. CONDITIONS OF WORK

Each Bidder must inform himself fully of the conditions relating to the construction of the project and employment of labor thereon by conducting site visits and becoming thoroughly familiar with the Contract Documents. Failure to do so will not relieve a successful Bidder of his obligation to furnish all materials and labor necessary to carry out the provisions of his Contract. Insofar as possible, the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

11. ADDENDA AND INTERPRETATIONS

No interpretations of the meaning of the Plans, Specifications or other pre-bid documents will be made to any Bidder orally.

Every request for such interpretations should be in writing, addressed to:

ENGINEERING SOLUTIONS, INC., 1324 N. VETERANS BLVD. TUPELO, MS 38804

and, to be given consideration, must be received at least five (5) days prior to the date fixed for the opening of Bids. Any and all such interpretations and any supplemental instructions will be in the form of written Addenda to the Specifications, which, if issued, will be mailed, to all prospective Bidders (at the respective addresses furnished for such purposes) prior to the date fixed for the opening of Bids. Failure of any Bidder to receive any such Addenda of interpretation shall not relieve such Bidder from any obligation under his Bid as submitted. All addenda so issued shall become part of the Contract documents.

12. SECURITY FOR FAITHFUL PERFORMANCE

Simultaneously with his delivery of the executed Contract, the Contractor shall furnish a Surety Bond or Bonds as security for faithful performance of this Contract and furnishing materials in compliance with this Contract as specified in the General Conditions included herein. The surety on such Bond or Bonds shall be a duly authorized surety company satisfactory to the OWNER.

13. POWER OF ATTORNEY

Attorneys-in-fact who sign Bid Bonds or Contract Bonds must file with each Bond a certified and effectively dated copy of their Power of Attorney.

14. LAWS AND REGULATIONS

The Bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though written out in full.

15. METHOD OF AWARD

If, at the time this Contract is to be awarded, the lowest Base Bid or lowest Base Bid plus any combination of alternates (at the owners discretion) submitted by a responsible Bidder does not exceed the amount of funds then estimated by the OWNER as available to finance the Contract; the Contract will be awarded to the lowest qualified Bidder. If such Bid exceeds such amount, the OWNER may reject all Bids.

16. OBLIGATION OF BIDDER

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site and a review of the drawings and specifications including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done. At the time of the opening of Bids, each Bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Plans and Contract Documents (including all Addenda). The failure or omission of any Bidder to examine any form, instrument or document shall in no way relieve any Bidder from any obligation in respect to his Bid.

17. SAFETY STANDARDS AND ACCIDENT PREVENTION

With respect to all work performed under this contract, the Contractor shall

- A. Comply with the safety standards provisions of applicable laws, building and construction codes.
- B. Exercise every precaution at all times for the prevention of accidents and protection of persons (including employees) and property.
- C. Maintain at his/her office or other well-known place at the job site, all articles necessary for giving first aid to the injured and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees), who may be injured on the job site.

18. SCOPE OF WORK

The Bidder agrees to perform all the work described in the Contract Documents and to construct the work, complete in place and ready to use.

19. PRECEDENCE OF DOCUMENTS

The various Contract Documents shall be given precedence, in case of conflict, error or discrepancy in the following order: Addenda, General Specifications, Technical (Item) Specifications, Construction Plans, Information for Bidders, Special Conditions and General Conditions

20. FUEL ADJUSTMENTS

There will be no fuel adjustments for this project.

21. ATTACHMENT C - TERMS AND CONDITIONS

The Contractor shall meet the terms and conditions of the following Attachment C – Subaward Terms and Conditions for Contracted Parties:

**ATTACHMENT C
SUBAWARD TERMS AND CONDITIONS
FOR CONTRACTED PARTIES**

1. AUTHORITY TO PARTICIPATE IN THIS AGREEMENT

The Contracted Party certifies that (a) it is either a 1) state agency, 2) a validly organized business that is authorized to do business in the state of Mississippi, 3) a nongovernmental organization, or 4) a political subdivision of the state of Mississippi with valid authority to enter into this agreement and; (b) entry into and performance under this agreement is not restricted or prohibited by any loan, security, financing, contractual, or other agreement of any kind; and (c) notwithstanding any other provision of this Agreement to the contrary, that there are no existing legal proceedings, either voluntary or otherwise, which may adversely affect its ability to perform its obligations under this agreement.

2. DEBARMENT AND SUSPENSION

Contractor/Contracted Parties certifies to the best of its knowledge and belief, that it:

A. is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transaction by any federal department or agency or any political subdivision or agency of the State of Mississippi;

B. has not, within a three (3) year period preceding this Agreement, been convicted of or had a civil judgment rendered against it for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction;

C. has not, within a three (3) year period preceding this Agreement, been convicted of or had a civil judgment rendered against it for a violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

D. is not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any of these offenses enumerated in Article 2.B. and Article 2.C., above; and,

E. has not, within a three (3) year period preceding this Agreement, had one or more public transactions (federal, state, or local) terminated for cause or default. This agreement is subject to 31 C.F.R. Part 19.

3. INDEMNIFICATION

To the extent allowed by state law, Contracted Party agrees to indemnify and save, release and hold harmless the State of Mississippi, the Commission on Environmental Quality, MDEQ, all of their employees and officers, and the Department's contractors from and against any and all claim, demand, cause of action, liability, loss, damage, injury, suit, judgment, debt and cost, including attorney's fees or expenses on the part of any Contracted Party, their agents or employees or any other parties arising out of or incident to, any and all Work under the terms of this Agreement.

4. RELATIONSHIP STATUS

The Contracted Party acknowledges and agrees that MDEQ is not a party, in any manner whatsoever, to any contract between the SUBRECIPIENT and the construction contractor(s), engineer(s), attorney(s), equipment supplier(s), contractor(s), or between any other parties of any kind whatsoever (hereinafter collectively referred to as “vendor”). The SUBRECIPIENT and Contracted Party also acknowledge and agree that any benefit to vendors contracting with the SUBRECIPIENT or Contracted Parties arising from or associated with this Agreement is strictly incidental and all such vendors are not and are not intended to be considered as third-party beneficiaries under any agreement between MDEQ and the SUBRECIPIENT. Upon execution of any contract between the SUBRECIPIENT and any other party in regard to the project, MDEQ does not assume any authorities, duties, responsibilities, or liabilities under such contract. The SUBRECIPIENT and Contracted Party shall not have any authority to bind or otherwise obligate MDEQ, directly or indirectly, under any contract or agreement between the SUBRECIPIENT and any other party. The SUBRECIPIENT, Contracted Party and its vendors acknowledge and agree that any action taken by MDEQ in its role of grantor, or in its separate and distinct role as regulator shall not in any way change or alter its position as that of grantor. MDEQ does not have any authority, duty, responsibility, or liability in contract claims or dispute identification, negotiation, resolution, or any other actions regarding contract claims under the contract(s) between the SUBRECIPIENT and any other party. The SUBRECIPIENT and the Contracted Party acknowledge and agree that MDEQ is not obligated to review, comment on, approve, or discuss the merits of any contract claims presented by or to any party. Any MDEQ reviews, approvals, observations, presence at meetings, written communications, verbal communications or other actions are not to be interpreted as addressing the merits of any claims, nor are they to be construed as interpreting the contract between the SUBRECIPIENT and the Contracted Party or any other parties.

5. ACCESS TO RECORDS

Provided Contracted Party is given reasonable advance written notice and such inspection is made during normal business hours of Contracted Party, then the Government Accountability Office, MDEQ, the State or any duly authorized representatives shall have unimpeded, prompt access to any of Contracted Party’s books, documents, papers, and other records which are maintained or produced as a result of the Project for the purpose of making audits, investigations, examinations, excerpts, transcriptions, and copies of such documents. This right also includes timely and reasonable access to the Contracted Party’s personnel for the purpose of interview and discussion related to such documents. All records related to this Agreement shall be retained by Contracted Party for a minimum of ten (10) years after final payment is made under this Agreement and all pending matters are closed; however, if any audit, litigation or other action arising out of or related in any way to this Project is commenced before the end of the ten (10) year period, the records shall be retained for one (1) year after all issues arising out of the action are finally resolved or until the end of the ten (10) year period, whichever is later. Contracted Party is not required to retain the above-mentioned records for the ten (10) year period prescribed in this Section and the “Right to Audit” provision only if all of the following conditions are satisfied:

- A. Contracted Party has provided all of the documents described above and in the “Right to Audit” provision to MDEQ prior to the expiration of the ten (10) year retention period and a certification stating the same is simultaneously provided in writing to MDEQ;
- B. No audit, litigation or other action arising out of or related in any way to this Project is commenced before Contracted Party provides the records and corresponding certification to MDEQ, in which case, Contracted Party shall retain the records until all issues arising out of the action are finally resolved; and
- C. Contracted Party provides MDEQ a minimum of thirty (30) days written notice before providing the above-mentioned records and corresponding certification.

6. RECORD RETENTION AND RIGHT TO AUDIT

The Contracted Party shall maintain and retain books, documents, papers, financial records and other records, including electronic records, as may be prescribed by the MDEQ or by applicable federal and state laws, rules, and regulations. Contracted Party shall retain these records for a period of ten (10) years after final payment. These records shall be made available during the term of the Agreement and the subsequent ten (10) year period for examination, transcription, and audit by MDEQ, the Mississippi State Auditor's Office, its designees, or other authorized bodies, including the Office of Inspector General. If any litigation, claim, investigation, or audit relating to this Agreement or an activity funded under the Agreement is started before the expiration of the ten (10) year period, the records must be retained until all litigation, claims, investigations, or audit findings involving the records have been resolved and final action taken.

7. RIGHT TO INSPECT WORK; SITE ACCESS

MDEQ and their representatives, invitees, and consultants shall have access and the right to conduct announced and unannounced onsite and offsite physical visits to inspect all Work hereunder. Upon request by MDEQ, Contracted Party shall provide MDEQ and its representatives, invitees, and consultants with the opportunity to participate in site inspections, meetings, and/or teleconferences, as appropriate, related to the performance of the Work.

8. CONFLICT OF INTEREST

The Contracted Party covenants that he presently has no interest and shall not acquire any interest direct or indirect in the Project that is the subject to this Agreement or any parcels therein, where applicable, or any other interest which would conflict in any manner or degree with the performance of his services hereunder. The Contracted Party further covenants that, in the performance of this agreement, no person having any such interest shall be employed. The Contracted Party agrees to establish safeguards to prohibit employees from using positions for a purpose that is or gives the appearance of being motivated by a desire for private gain for themselves or others, particularly those with whom they have a family, business, or other tie.

9. COOPERATION AND EVALUATION

The Contracted Party agrees to assist and cooperate with the MDEQ or its duly designated representatives in the monitoring of the Project(s) to which the Agreement relates, and to provide in form and manner approved by MDEQ such monitoring reports, progress reports, and the like as may be required and to provide such reports at the times specified. Further, the Contracted Party agrees to cooperate with MDEQ or its duly designated representatives by providing timely responses to all reasonable requests for information to assist in evaluation of the accomplishments of the Project and the agreement for a period of ten (10) years after the date on which the Final Reports are provided.

**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

BID PROPOSAL (# 2023-059PW)

Proposal of Patton Construction, LLC (hereinafter called “BIDDER”), organized and existing under the laws of the State of Mississippi, doing business as a limited liability company.*

To the CITY OF TUPELO, MISSISSIPPI, (hereinafter called “OWNER”).

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK for MEDICAL PARK CIRCLE PIPE REPLACEMENT within the time set forth herein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the CONTRACT DOCUMENTS of which this Proposal is a part.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto certifies as to his own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence work under this contract on or before a date specified in the NOTICE TO PROCEED and to fully complete the project within 60 consecutive calendar days. BIDDER further agrees to pay as liquidated damages, the sum of \$500 for each working day after applicable completion dates per each phase of work as provided in the General Conditions.

BIDDER acknowledges receipt of the following ADDENDUM:

None

*Insert “a corporation”, “a partnership”, or “an individual” as applicable

**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

BID PROPOSAL (# 2023-059PW)

The BIDDER agrees to perform all WORK for the construction of **MEDICAL PARK CIRCLE PIPE REPLACEMENT** as described in the CONTRACT DOCUMENTS and shown on the Construction Plans for the following Unit Prices within the times specified in the Contract Agreement subsequent to the date specified in the NOTICE TO PROCEED.

CONTRACT – MEDICAL PARK CIRCLE PIPE REPLACEMENT

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE IN WORDS AND FIGURES	TOTAL PRICE
1.	Mobilization	1 L.S.	<u>\$15,000.00</u> <u>Fifteen thousand dollars</u>	<u>\$ 15,000.00</u>
2.	Clearing and Grubbing	1 L.S.	<u>\$5,000.00</u> <u>Five thousand dollars</u>	<u>\$ 5,000.00</u>
3.	Removal of Concrete Pavement	260 S.Y.	<u>\$ 5.00</u> <u>Five Dollars</u>	<u>\$ 1,300.00</u>
4.	Removal of Concrete Curb	163 L. F.	<u>\$5.00</u> <u>Five Dollars</u>	<u>\$ 815.00</u>
5.	Removal of Pipe (All Type)	299 L. F.	<u>\$10.00</u> <u>Ten dollars</u>	<u>\$ 2,990.00</u>
6.	Removal of Drainage Structures	3 Each	<u>\$500.00</u> <u>Five Hundred Dollars</u>	<u>\$ 1,500.00</u>
7.	Removal of Sewer Line	140 L. F.	<u>\$20.00</u> <u>Twenty dollars</u>	<u>\$ 2,800.00</u>
8.	Removal and Salvage of Business Sign	3 Each	<u>\$500.00</u> <u>Five hundred dollars</u>	<u>\$ 1,500.00</u>
9.	Erosion Control Measures	1 L.S.	<u>\$2,500.00</u> <u>Two thousand five hundred dollars</u>	<u>\$ 2,500.00</u>

10.	Structure Excavation	1,075 C.Y.	\$16.00 Sixteen dollars	\$ 17,200.00
11.	Select Borrow Material	1,100 C.Y.	\$18.00 Eighteen dollars	\$ 19,800.00
12.	Crushed Stone	200 C.Y.	\$100.00 One hundred dollars	\$ 20,000.00
13.	88"x54" Concrete Arch Pipe	280 L.F.	500.00 Five hundred dollars	\$ 140,000.00
14.	88"x54" Concrete Flared End Section	1 EA.	\$7,500.00 Seven thousand five hundred	\$ 7,500.00
15.	88"x54" Headwall	1 EA.	\$10,000.00 Ten thousand dollars	\$ 10,000.00
16.	Slotted Inlet	1 EA.	\$10,000.00 Ten thousand dollars	\$ 10,000.00
17.	Junction Box with Grate Inlet	1 EA.	\$10,000.00 Ten thousand dollars	\$ 10,000.00
18.	Concrete Paving	270 S.Y.	\$85.00 Eighty-five dollars	\$ 22,950.00
19.	Concrete Curb	161 L.F.	\$30.00 Thirty dollars	\$ 4,830.00
20.	Sewer Manhole	2 EA.	\$4,500.00 Four thousand five hundred dollars	\$ 9,000.00
21.	8" Ductile Iron Sewer Pipe	110 L.F.	\$85.00 Eighty-five dollars	\$ 9,350.00
22.	Solid Sodding	2,000 S.Y.	\$4.50 Four dollars and fifty cents	\$ 9,000.00
23.	200# Rock Rip Rap	125 Ton	\$80.00 Eighty dollars	\$ 10,000.00

24.	Construction Fencing	550 L.F.	<u>\$8.00</u> <u>Eight dollars</u>	<u>\$ 4,400.00</u>
25.	Maintenance of Traffic	1 L.S.	<u>\$2,000.00</u> <u>Two thousand dollars</u>	<u>\$ 2,000.00</u>

TOTAL OF BID ITEMS (1-25) \$ 339,435.00

\$ Three hundred thirty-nine thousand four hundred thirty-five dollars
(TOTAL IN WORDS)

NOTE: BIDS shall include sales tax and all other applicable taxes and fees.

In case of discrepancies between unit price words and figures, words shall govern. In the case of discrepancies between the total price listed and the total price computed using Quantity multiplied by Unit Price (in words), the computed price as tabulated by the Engineer shall govern in determining the lowest base bid.

Bidder agrees that Bids may not be withdrawn within ninety (90) days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period; the time may be extended by mutual agreement between the Owner and the Bidder.

RESPECTFULLY SUBMITTED:

Company Patton Construction, LLC
Signature *Knox Y. Patton III*
Title Manager
Address P.O. Box 1074
Pontotoc, MS 38863

Attest: _____
SEAL (if Bid is by a Corporation)

**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

BID BOND

Know all men by these presents, that we, the undersigned, _____,
as Principal, and _____
as Surety, are hereby held and firmly bound unto THE CITY OF TUPELO, MISSISSIPPI, as OWNER in the Penal
sum of _____ for the payment of which,
well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____ day of _____, 20____.

The Condition of the above obligation is such that whereas the Principle has submitted to THE CITY OF TUPELO, MISSISSIPPI, a certain Bid, attached hereto and hereby made a part of to enter into contract in writing, for the construction of:

MEDICAL PARK CIRCLE PIPE REPLACEMENT

Now, therefore,

- (a) If said BID shall be rejected, or in the alternate,
- (b) If said BID shall be accepted and the Principle shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection there with, and shall in all other respects perform the agreement created by the acceptance of said BID,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

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

In Witness whereof, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

(Principal) (L.S.)

(Surety)

By: _____

IMPORTANT - Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS that

a _____, hereinafter called PRINCIPAL

and _____ (Name of Surety)

hereinafter called SURETY, are held and firmly bound unto THE CITY OF TUPELO, MISSISSIPPI, 71 East Troy St. Tupelo, MS 38804, hereinafter called OWNER, and unto all persons, firms, and corporations, who or which may furnish labor, or who furnish materials to perform as described under the contract and to their successors and assigns in the total aggregate penal sum of _____ in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the _____ day of _____, 20____, a copy of which is hereto attached and made part hereof for the construction of:

MEDICAL PARK CIRCLE PIPE REPLACEMENT

NOW, THEREFORE, if the PRINCIPAL shall promptly make payment to all persons, firms, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extensions or modifications thereof, including all amounts due for materials, lubricants, oil, gasoline, coal, and coke, repairs on machinery, equipment, and tools, consumed or used in connection with the construction of such WORK, and for all labor cost incurred in such WORK including that by a SUBCONTRACTOR, and to any mechanic or material man lien holder whether it acquired its lien by operation of State or Federal law; then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, that beneficiaries or claimants hereunder shall be limited to the SUBCONTRACTORS, and persons, firms, and corporations having a direct contract with the PRINCIPAL or its SUBCONTRACTORS.

PROVIDED, FURTHER, that the said SURETY for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed there under or the SPECIFICATIONS accompanying the same shall in any way effect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no suit or action shall be commenced hereunder by any claimant: (a) Unless claimant, other than one having a direct contract with the PRINCIPAL, shall have given written notice to any two of the following: the PRINCIPAL, the OWNER, or the SURETY above named within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the PRINCIPAL, OWNER, or SURETY, at any place where an office is regularly maintained for the transaction of business, or served in any manner which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer. (b) After the expiration of one (1) year following the date of which PRINCIPAL ceased work on said CONTRACT, it being understood, however, that if any limitation embodied in the BOND is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

PROVIDED, FURTHER, that it is expressly agreed that this BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the Contract as so amended. The term "Amendment", wherever used in this BOND and whether referring to this BOND, the contract, or the Loan Documents shall include any alteration, addition, extension, or modification of any character whatsoever.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in FOUR (4) counter parts, each one of which shall be deemed an original, this the _____ day of _____, 20__.

ATTEST:

 (Principal) Secretary
 (SEAL)

 Principal
 By: _____

 Witness as to Principal
 Address

 Address

ATTEST:

 Witness as to Surety
 Address

 Surety
 By: _____
 Attorney-In-Fact
 Address

NOTE 1: Date of Bond must not be prior to date of Agreement. If Contractor is Partnership, all partners should execute Bond. Surety Companies executing bonds must appear on the Treasury Department's Circular 570 (most current) and be authorized to transact business in the state where the project is located.

**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS that

a _____, hereinafter called PRINCIPAL

and _____(Name of Surety)
hereinafter called SURETY, are held and firmly bound unto THE CITY OF TUPELO, MISSISSIPPI, 71 East Troy St. Tupelo, MS 38804, hereinafter called OWNER, in the total aggregate penal sum of _____ in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the _____ day of _____, 20____, a copy of which is hereto attached and made part hereof for the construction of:

MEDICAL PARK CIRCLE PIPE REPLACEMENT

NOW, THEREFORE, if the PRINCIPAL shall well, truly, and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER with or without notice to the SURETY and during one year guaranty period and if the PRINCIPAL shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said security, for value receive hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or the WORK to be performed thereunder or the SPECIFICATIONS accompanying same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that it is expressly agreed that this BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faith full performance of the Contract as so amended. The term "Amendment", wherever used in this BOND and whether referring to this BOND, the contract, or the Loan Documents shall include any alteration, addition, extension, or modification of any character whatsoever.

PROVIDED, FURTHER, that no final settlement between the OWNER and the PRINCIPAL shall abridge the right of the other beneficiary hereunder, whose claim may be unsatisfied. The OWNER is the only beneficiary hereunder.

IN WITNESS WHEREOF, this instrument is executed in FOUR (4) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20____.

ATTEST:

(Principal) Secretary

Principal

(SEAL)

By: _____

Witness as to Principal

Address

ATTEST:

Witness as to Surety

By: _____
Attorney-In-Fact

Address

Address

NOTE 1: Date of Bond must not be prior to date of Agreement. If Contractor is Partnership, all partners should execute Bond. Surety Companies executing bonds must appear on the Treasury Department's Circular 570 (most current) and be authorized to transact business in the state where the project is located.

COUNTERSIGNED BY:

Resident Mississippi Agent

**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

AGREEMENT

This AGREEMENT, made this ____ day of _____, 20__ by and between THE CITY OF TUPELO, MISSISSIPPI, hereinafter called "OWNER" and _____, doing business as (an individual,) or (a partnership,) or (a corporation,) hereinafter called "CONTRACTOR".

WITNESSETH: That for and consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of MEDICAL PARK CIRCLE PIPE REPLACEMENT.
2. The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the project described herein.
3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS on or before the date of the NOTICE TO PROCEED and will complete the same within 60 consecutive calendar days unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.
4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS for the sum of _____, being the amount of the accepted proposal and subject to proper additions and/or deductions at the unit prices as stated in the proposal or otherwise provided for by modification.
5. The term "CONTRACT DOCUMENTS" means and includes the following:
 - (A) Advertisement for Bids
 - (B) Information for Bidders
 - (C) Bid Proposal
 - (D) Bid Documents
 - (E) Bid Bond
 - (F) Agreement
 - (G) Certificate of Owner's Attorney
 - (H) General Conditions
 - (I) Special Conditions
 - (J) Payment Bond
 - (K) Performance Bond
 - (L) Notice of Award
 - (M) Notice to Proceed
 - (N) Change Order
 - (O) Drawings, specifications, and addenda prepared by Engineering Solutions, Inc.
6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

AGREEMENT (CONT.)

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns. IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this agreement in four copies, each of which shall be deemed an original on the date first written.

OWNER:

CITY OF TUPELO, MISSISSIPPI

BY: _____
Name: _____
Title: _____

ATTEST:

BY: _____
Name: _____
Title: _____

OWNER'S SEAL

CONTRACTOR:

BY: _____
Name: _____
Title: _____

ATTEST:

BY: _____
Name: _____
Title: _____

CORPORATE SEAL

NOTE: If CONTRACTOR is a corporation, secretary should attest.

**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____, the duly authorized and acting legal representative of THE CITY OF TUPELO, MISSISSIPPI, do hereby certify as follows:

I have examined the attached contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions, and provisions thereof.

NAME: _____

DATE: _____

NOTE: Delete phrase "performance and payment bond(s)" when not applicable.

GENERAL CONDITIONS

1. Definitions
2. Additional Instructions and Detail Drawings
3. Schedules, Reports, and Records
4. Drawings and Specifications
5. Shop Drawings
6. Materials, Services, and Facilities
7. Inspection and Testing
8. Substitutions
9. Patents
10. Surveys, Permits, Regulations
11. Protection of Work, Property, Persons
12. Supervision by Contractor
13. Changes in Work
14. Changes in Contract Price
15. Time for Completion and Liquidated Damages
16. Correction of Work
17. Subsurface Conditions
18. Suspension of Work, Termination, and Delay
19. Payments to Contractor
20. Acceptance of Final Payment as Release
21. Insurance
22. Contract Security
23. Assignments
24. Indemnification
25. Separate Contracts
26. Subcontracting
27. Engineer's Authority
28. Land and Rights-of-Way
29. Guaranty
30. Taxes
31. Environmental Requirements
32. Record Drawings
33. Claims for Delays
34. Fuel, Energy, and Water
35. Street Maintenance
36. Cleaning Up

DEFINITIONS

- 1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated and shall be applicable to both the singular and plural thereof:
- 1.2 ADDENDA - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications, or corrections.
- 1.3 BID - The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.
- 1.4 BIDDER - Any person, firm or corporation submitting a BID for the WORK.
- 1.5 BONDS - Bid, Performance, and Payment Bonds and other instruments of surety, furnished by the CONTRACTOR and the CONTRACTOR'S surety in accordance with the CONTRACT DOCUMENTS.
- 1.6 CHANGE ORDER - A written order to the CONTRACTOR authorizing an addition, deletion, or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.
- 1.7 CONTRACT DOCUMENTS - The contract, including Advertisement for BIDS, Information for BIDDERS, BID, BID BOND, Agreement, Payment BOND, Performance BOND, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, and ADDENDA.
- 1.8 CONTRACT PRICE - The total monies payable to the CONTRACTOR under the conditions and terms of the CONTRACT DOCUMENTS.
- 1.9 CONTRACT TIME - The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.
- 1.10 CONTRACTOR - The person, firm, or corporation with whom the OWNER has executed the Agreement.
- 1.11 DRAWINGS - The parts of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.
- 1.12 ENGINEER - The person, firm, or corporation named as such in the CONTRACT DOCUMENTS.

- 1.13 FIELD ORDER - A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.
- 1.14 NOTICE OF AWARD - The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.
- 1.15 NOTICE TO PROCEED - Written communication issued by the OWNER to the CONTRACTOR authorizing him/her to proceed with the WORK and establishing the date for commencement of the WORK.
- 1.16 OWNER - A public or quasi-public body or authority, corporation, association, partnership, or an individual for whom the WORK is to be performed.
- 1.17 PROJECT - The undertaking to be performed as provided in the CONTRACT DOCUMENTS.
- 1.18 RESIDENT PROJECT REPRESENTATIVE - The authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.
- 1.19 SHOP DRAWINGS - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.
- 1.20 SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.
- 1.21 SUBCONTRACTOR - An individual, firm, or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.
- 1.22 SUBSTANTIAL COMPLETION – Substantial Completion shall be defined as when all portions of the Contract are completed in accordance with all requirements of the Contract Documents.
- 1.23 SPECIAL CONDITIONS – Information or conditions imposed as a part of the Contract Documents, or requirements that may be imposed by applicable state laws at the time of Project letting.
- 1.24 SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.
- 1.25 WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

- 1.26 WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at their last given address, or delivered in person to said party or their authorized representative on the WORK.
- 1.27 STANDARDS - The following words, symbols, letters, or abbreviations shall be deemed to have the following meaning and shall refer to the latest current revision of said standard or specification applicable in effect of the date of opening bids:

AASHTO-American Association of State Highway and Transportation Officials

ACI -American Concrete Institute

AIA -American Insurance Association (formerly National Board of Fire Underwriters)

ANSI -American National Standards Institute

ASME -American Society of Mechanical Engineers

ASTM -American Society for Testing and Materials

AWWA -American Water Works Association

NEMA -National Electrical Manufacturer's Association

SBH -State Board of Health

MDOT -Mississippi Department of Transportation

2.0 ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

- 2.1 The CONTRACTOR may be furnished additional instructions and detail drawings, by the ENGINEER, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.
- 2.2 The additional drawings and instructions thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

3.0 SCHEDULES, REPORTS AND RECORDS

- 3.1 The CONTRACTOR shall submit to the OWNER such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the CONTRACT DOCUMENTS for the WORK to be performed.
- 3.2 Prior to the first partial payment estimate the CONTRACTOR shall submit construction progress schedules showing the order in which the CONTRACTOR proposes to carry on the WORK, including dates at which the various parts of the WORK will be started, estimated date of completion of each part and, as applicable:
- 3.2.1 The dates at which special detail drawings will be required; and

- 3.2.2 Respective dates for submission of SHOP DRAWINGS, the beginning of manufacture, the testing and the installation of materials, supplies and equipment.
- 3.3 The CONTRACTOR shall also submit a schedule of payments that the CONTRACTOR anticipates will be earned during the course of the WORK.

4.0 DRAWINGS AND SPECIFICATIONS

- 4.1 The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.
- 4.2 In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over general DRAWINGS.
- 4.3 Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

5.0 SHOP DRAWINGS

- 5.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall review all SHOP DRAWINGS. The ENGINEER'S review of any SHOP DRAWINGS shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. .
- 5.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.
- 5.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been reviewed by the ENGINEER. A copy of each SHOP DRAWING and each sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

6.0 MATERIALS, SERVICES AND FACILITIES

- 6.1 It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.
- 6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.
- 6.3 Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.
- 6.4 Materials, supplies, and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.
- 6.5 Materials, supplies, or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

7.0 INSPECTION AND TESTING

- 7.1 All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.
- 7.2 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCUMENTS.
- 7.3 The CONTRACTOR shall provide at the CONTRACTOR'S expense the testing and inspection services required by the CONTRACT DOCUMENTS.
- 7.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.
- 7.5 Inspections, tests, or approvals by the ENGINEER or others shall not relieve the CONTRACTOR from the obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

- 7.6 The ENGINEER and the ENGINEER'S representatives will at all times have access to the WORK. In addition, authorized representatives and agents of any participating Federal or State or Local agency shall be permitted to inspect all work, materials, payrolls, records or personnel, invoices of materials, and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection or testing thereof.
- 7.7 If any WORK is covered prior to notification, or contrary to the instructions of the ENGINEER it must, if requested by the ENGINEER, be uncovered for the ENGINEER'S observation and replaced at the CONTRACTOR'S expense.
- 7.8 If the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER'S request, will uncover, expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, if, however, such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate CHANGE ORDER shall be issued.

8.0 SUBSTITUTIONS

- 8.1 Whenever a material, article, or piece of equipment is identified on the DRAWINGS or SPECIFICATIONS by reference to brand name or catalog numbers, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalog number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

9.0 PATENTS

- 9.1 The CONTRACTOR shall pay all applicable royalties and license fees, and shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design, or product of a particular manufacturer or manufacturers is specified, however, if the CONTRACTOR has reason to believe that the design, process, or product specified is an infringement of a patent, the CONTRACTOR shall be responsible for such loss unless the CONTRACTOR promptly gives such information to the ENGINEER.

10.0 SURVEYS, PERMITS AND REGULATIONS

- 10.1 From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pipe locations and other working points, lines, elevations and cut sheets.
- 10.2 The CONTRACTOR shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, shall be charged with the resulting expense and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance. All points of reference (existing or set) shall be checked and verified by the Contractor prior to commencement of work.
- 10.3 Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL GENERAL CONDITIONS. Permits, licenses, and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance therewith, the CONTRACTOR shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in the Section pertaining to, CHANGES IN THE WORK.

11.0 PROTECTION OF WORK, PROPERTY, AND PERSONS

- 11.1 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR will take all necessary precautions for the safety of, will provide the necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- 11.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. The CONTRACTOR will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. The CONTRACTOR will notify owners of adjacent utilities when prosecution of the WORK may affect them. The CONTRACTOR will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone of whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER, of the ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.
- 11.3 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instructions or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury or loss. The CONTRACTOR will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

12.0 SUPERVISION BY CONTRACTOR

- 12.1 The CONTRACTOR will supervise and direct the WORK. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

13.0 CHANGES IN THE WORK

- 13.1 The OWNER may at any time, as the need arises, order changes within the scope of the WORK without invalidating the Agreement. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in the time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER.
- 13.2 The ENGINEER, also, may at any time, by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles the CONTRACTOR to a change in CONTRACT TIME or PRICE, or both, in which event the CONTRACTOR shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after receipt of the ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

14.0 CHANGES IN CONTRACT PRICE

- 14.1 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:
- a. Unit prices previously approved.
 - b. An agreed lump sum.
- 14.2 The quantities of Unit Pay Items listed in the Proposal forms are to be considered approximate only. The Engineer reserves the right to make such alterations in the Plans or in the extent of the work as he may consider desirable or necessary during the progress of the work to satisfactorily complete the proposed construction.
- 14.3 The Owner may, under this reservation, increase or decrease any or all of the quantities of Pay Items as set forth in the Proposal, or delete certain items of work from the Contract. Increased or decreased quantities of items will be paid for at the unit bid price.
- 14.4 It is understood that variations in quantities, within the above limitations, shall not be considered as a waiver of any conditions of the Contract, nor invalidate the Contractor's Proposal and the Contractor shall perform the work as increased or decreased from the Unit Contract Prices as bid.

15.0 TIME FOR COMPLETION AND LIQUIDATED DAMAGES

- 15.1 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.
- 15.2 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

During the process of determining the workforce effort necessary for completion of the work within the Contract Time, the Contractor shall consider the Normal Adverse Weather Days for the type of work and the seasonal period of the work being performed. The number of normal adverse weather days to be included in these considerations shall be as follows:

Jan. – 21	Feb. – 17	March – 12	April – 9	May – 9	June – 9
July – 9	Aug. – 8	Sept. – 7	Oct. – 5	Nov. – 11	Dec. – 17

Normal adverse weather days as shown above are defined by the National Weather Service as being those with temperatures of 32 degrees or less, or precipitation of 0.1 inches or more, based on a 6 day work week. If the Contractor fails to complete the Work within the Contract Time, the Adverse Weather Days in excess of those shown above for each month, may be considered for an extension of the Contract Time.

- 15.3 If the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, the Contractor does hereby agree, as a part consideration for the awarding of this contract, to pay to the Owner the amount specified in the contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each working day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS for completing the work. The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would in sustain and said amount shall be retained by the Owner from current periodical estimates.

For the purpose of determining the number of working days considered for liquidated damages, a working day shall be defined as a day in which the weather and soil conditions permit the Contractor to proceed with work operations on the controlling item or items of work in progress at that time, for a period of not less than six (6) hours. The number of working days shall be based on a five-day workweek exclusive of state recognized legal holidays, or days on which delays are attributed to the Owner, governmental authorities, catastrophic events, or time periods awaiting the vegetative growth and coverage of plant growth, or the curing of asphalt or concrete.

- 15.4 The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.

15.4.1 To any preference, priority or allocation order duly issued by the OWNER.

15.4.2 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 OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather.

15.4.3 To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

15.4.4 Interim completion dates may be required by the CONTRACT DOCUMENTS to support owner occupancy or subsequent construction by other contractors. If interim completion dates are specified, the contractor shall complete the work required for that activity as indicated in the CONTRACT SPECIFICATIONS and shown in the CONTRACT DRAWINGS within the specified time. All contract provisions relating to time for completion and liquidated damages shall apply to interim completion dates.

16.0 CORRECTION OF WORK

- 16.1 The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

- 16.2 All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

17.0 SUBSURFACE CONDITIONS

- 17.1 It is the responsibility of the CONTRACTOR to become familiar with the project site, the construction process, and the nature of the physical ground as to the extent necessary for the completion of the WORK as specified in the CONTRACT DOCUMENTS, prior to bidding the project. If during construction, conditions are encountered that differ from those normally encountered during projects of similar nature or location, the CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the OWNER by WRITTEN NOTICE of unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the CONTRACT DOCUMENTS.
- 17.2 The OWNER shall promptly investigate the conditions, and if it is found that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the WORK, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless the required WRITTEN NOTICE has been given; provided that the OWNER may, if the OWNER determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.
- 17.3 The existence of, and location of some of the known utilities and obstructions are indicated on the plans but are not guaranteed. The Contractor shall make sufficient investigation and inspections, at the site of the work, to enable him to determine the existence of and exact nature and location of all such drainage structures, underground and overhead obstructions, fences, and public and private utilities that will be disturbed in the prosecution of the work. The Contractor shall repair or replace such utilities and improvements, which are damaged by his operations so as to function properly, at his own expense and in a manner and condition equal to that of such utilities and improvements prior to damage. Fences which must be crossed shall be repaired to an "as was" condition.

18.0 SUSPENSION OF WORK, TERMINATION, AND DELAY

- 18.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, which shall fix the date on which WORK shall be resumed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.

- 18.2 If the CONTRACTOR is adjudged a bankrupt or insolvent, or makes a general assignment for the benefit of its creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of its property, or if CONTRACTOR files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment or disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK or disregards the authority of the ENGINEER, or otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and its surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take possession of the PROJECT and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, or secure the services of another Contractor and finish the WORK by whatever method the OWNER may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.
- 18.3 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.
- 18.4 After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the CONTRACT. In such case the CONTRACTOR shall be paid per contract unit price for all WORK completed in accordance with the Contract Documents.

- 18.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER terminate the CONTRACT and recover from the OWNER payment for all WORK executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to make any payment as aforesaid, the CONTRACTOR may upon ten (10) days written notice to the OWNER and the ENGINEER stop the WORK until paid all amounts then due, in which event and upon resumption of the WORK CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of the WORK.
- 18.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

19.0 PAYMENT TO CONTRACTOR

- 19.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. The submitted progress payment shall be accompanied by a monthly certification to the Engineer indicating payments to subcontractors. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER'S title to the material and equipment and protect the OWNER'S interest therein, including applicable insurance. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing approval of payment, and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing the reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within thirty (30) days of presentation of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of approved partial payment estimate less retainage. The retainage shall be an amount equal to five percent (5%) until the work is at least fifty percent (50%) complete, on schedule, and satisfactory in the Engineer's opinion, at which time fifty percent (50%) of the retainage held to date shall be returned to the Prime Contractor for distribution to the appropriate subcontractors and suppliers. Future retainage shall be withheld at the rate of two and one-half percent (2-1/2%). Upon substantial completion of the work, any amount retained may be paid to the CONTRACTOR. When the WORK has been substantially completed except for WORK which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the OWNER are valid reasons for non-completion, the OWNER may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the WORK still to be completed.
- 19.2 Prior to SUBSTANTIAL COMPLETION, the OWNER, with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or partially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.
- 19.3 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the OWNER.

- 19.4 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the approved final payment request that the WORK has been accepted under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retainage percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK. In no event shall said final payment due the Contractor be made until the Engineer is provided with the following: 1) Written certification from the Contractor that all suppliers and subcontractors have been paid. 2) Written consent of Final Payment from the Contractor's Surety.
- 19.5 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out of the lawful demand of SUBCONTRACTORS, laborers, workmen, mechanics, material, men, and furnishers of machinery and part thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed in accordance with the terms of the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, the CONTRACTOR'S Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

20.0 ACCEPTANCE OF FINAL PAYMENT AS RELEASE

- 20.1 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final otherwise, shall not release the CONTRACTOR or its sureties from any obligations under the CONTRACT DOCUMENTS or the Performance and Payment BONDS.

21.0 INSURANCE

- 21.1 The CONTRACTOR shall purchase and maintain such insurance as will protect it from claims set forth below which may arise out of, or result from, the CONTRACTOR'S execution of the WORK, whether such execution be by the CONTRACTOR, any SUBCONTRACTOR, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:
- 21.1.1 Claims under workmen's compensation, disability benefit and other similar employee benefit acts;
 - 21.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of employees;
 - 21.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than employees;
 - 21.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other person; and
 - 21.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting there from.
- 21.2 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates shall contain a provision that coverages afforded under the policies will not be canceled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the OWNER.
- 21.3 The CONTRACTOR shall procure and maintain, at the CONTRACTOR'S own expense, during the CONTRACT TIME, Liability insurance as hereinafter specified:
- 21.3.1 CONTRACTOR'S General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting the CONTRACTOR from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by the CONTRACTOR or by any SUBCONTRACTOR employed by the CONTRACTOR or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR employed by the CONTRACTOR. Insurance shall be written with a limit of liability of not less than \$1,000,000 for all damages arising out of bodily injury, including death, at any time resulting there from, sustained by any one person in any one accident; and a limit of liability

of not less than \$1,000,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than \$500,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than \$500,000 aggregate for any such damage sustained by two or more persons in any one accident.

- 21.3.2 The CONTRACTOR shall acquire and maintain, if applicable, Fire, Flood and Extended Coverage insurance value thereof for the benefit of the OWNER, the CONTRACTOR, and SUBCONTRACTORS as their interest may appear. This provision shall in no way release the CONTRACTOR or CONTRACTOR'S surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.
- 21.4 The CONTRACTOR shall procure and maintain, at the CONTRACTOR'S own expense, during the CONTRACT TIME, in accordance with the provisions of the laws of the state in which the WORK is performed, Workmen's Compensation Insurance, including occupational disease provisions, for all of the CONTRACTOR'S employees at the site of the PROJECT and in case any WORK is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions 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 hazardous work under this contract at the site of the PROJECT is not protected under Workmen's Compensation statute, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of its employees not otherwise protected.
- 21.5 The CONTRACTOR shall secure, if applicable, "All Risk" type Builder's Risk Insurance for WORK to be performed. Unless specifically authorized by the OWNER, the amount of such insurance shall not be less than the CONTRACT PRICE totaled in the BID. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, flood, and smoke during the CONTRACT TIME, and until the WORK is accepted by the OWNER. The policy shall name as the insured the CONTRACTOR, and the OWNER.

22.0 CONTRACT SECURITY

- 22.1 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNER with the Performance BOND and a Payment BOND in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS.

Such BONDS shall be executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the state in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a surety on any such BOND is declared a bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal Bonds, CONTRACTOR shall within ten (10) days after notice from the OWNER to do so, substitute an acceptable BOND (or BONDS) in such form and sum and signed by such other surety or sureties as may be satisfactory to the OWNER. The premiums on such BOND shall be paid by the CONTRACTOR. No further payment shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable BOND to the OWNER.

23.0 ASSIGNMENTS

23.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of any right, title or interest therein, or any obligation there under, without written consent of the other party.

24.0 INDEMNIFICATION

24.1 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the WORK, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR or SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

24.2 In any and all claims against the OWNER or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type or damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under Workmen's Compensation acts, disability benefit acts or other employee benefits acts.

24.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, its agents or employees arising out of the preparation of approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs, or SPECIFICATIONS.

25.0 SEPARATE CONTRACT

- 25.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate the WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.
- 25.2 The OWNER may perform additional WORK related to the PROJECT or the OWNER may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if the OWNER is performing the additional WORK) reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate the WORK with theirs.
- 25.3 If the performance of additional WORK by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, WRITTEN NOTICE thereof shall be given to the CONTRACTOR prior to starting any additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves it in additional expense or entitles it to an extension of the CONTRACT TIME, the CONTRACTOR may make a claim thereof as provided in Sections 14 and 15.

26.0 SUBCONTRACTING

- 26.1 The CONTRACTOR may utilize the services of specialty SUBCONTRACTS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.
- 26.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(S), in excess of fifty (50%) percent of the CONTRACT PRICE, without prior written approval of the OWNER.
- 26.3 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of its SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as the CONTRACTOR is for the acts and omissions of persons directly employed by it.

- 26.4 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTORS and give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provision of the CONTRACT DOCUMENTS.
- 26.5 Nothing contained in this CONTRACT shall create any contractual relationship between any SUBCONTRACTOR and the OWNER.

27.0 ENGINEER'S AUTHORITY

- 27.1 The ENGINEER shall act as the OWNER'S representative during the construction period, shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed, and shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER will make periodic visits to the site to determine if the WORK is proceeding in general accordance with the CONTRACT DOCUMENTS.
- 27.2 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship, and execution of the WORK. Inspections may be at the factory or fabrication plant of the source of material supply.
- 27.3 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.
- 27.4 The ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS.

28.0 LAND AND RIGHTS-OF-WAY

- 28.1 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.
- 28.2 The OWNER shall provide to the CONTRACTOR information, which delineates and describes the lands owned and rights-of-way acquired.
- 28.3 The CONTRACTOR shall provide at its own expense and without liability to the OWNER any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

29.0 GUARANTEE

29.1 The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of the damage of other parts of the system resulting from such defects. The OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

30.0 TAXES

31.1 The CONTRACTOR will pay all sales, consumer, use, and other similar taxes required by the laws of the place where the WORK is performed.

31.0 ENVIRONMENTAL REQUIREMENTS

The CONTRACTOR, when constructing a project involving trenching and/or other related earth excavation, shall comply with the following environmental constraints.

32.1 WETLANDS - The CONTRACTOR, when disposing of excess, spoil, or other construction materials on public or private property, WILL NOT FILL IN or otherwise CONVERT WETLANDS.

32.2 HISTORIC PRESERVATION - Any excavation by the CONTRACTOR that uncovers an historical or archaeological artifact shall be immediately reported to the PROJECT ENGINEER. Construction shall be temporarily halted pending the notification process and further directions issued after consultation with the State Historic Preservation Officer (SHPO).

32.3 ENDANGERED SPECIES - The CONTRACTOR shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of the CONTRACTOR, the CONTRACTOR will immediately report this evidence to the PROJECT ENGINEER. Construction shall be temporarily halted pending the notification process and further directions issued after consultation with the U.S. Fish and Wildlife Service.

32.0 RECORD DRAWINGS

33.1 The Contractor shall make a record of all changes in the contract drawings and specifications and shall change the contract drawings and specs to reflect all changes made. The Engineers will furnish a set of reproducible drawings to the Contractor on which changes shall be made. Additional sheets shall be drawn on mylar film as required. Record drawings and specifications shall be completed and furnished to the Engineers prior to the submission of the request for final payment. Keep records current and do not cover or conceal any work until the required information has been recorded.

The following items shall be recorded on the record drawings:

1. Depths of various elements in relation to datum.
2. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
3. Location of internal appurtenances concealed in construction referenced to visible and accessible features of the work.
4. Field changes of dimension and detail.
5. Changes made by Change Order.
6. Details not on original Contract Drawings.
7. Locations of plugged openings for future connections.

Specifications and Addenda shall be legibly marked up to record:

1. Manufacture, trade name, catalog number and supplier of each product and item of equipment actually installed.
2. Changes made by Change Order.
3. Other matters not originally specified.

33.2 Shop Drawings shall be maintained as record documents and legibly annotate drawings to record changes made after review.

33.0 CLAIMS FOR DELAY

34.1 No claim for delay damages will be allowed the Contractor resulting from change orders executed by him.

34.0 FUEL, ENERGY, AND WATER

35.1 The Contractor shall furnish all fuels, electric power and other energies, water and other consumables used in the prosecution of the work including testing and trial operations until in the opinion of Engineers, the work or part thereof, is substantially complete and in use by the Owner, at which time the Owner will begin paying power bills for that part. Arrangements shall be made in advance of need with utilities involved.

35.0 STREET MAINTENANCE

- 36.1 The Contractor, at his own expense, shall be required to maintain the streets and thoroughfares disturbed, in a passable condition, providing means of ingress and egress to persons residing and conducting business thereon where possible.
- 36.2 The Contractor shall provide additional earth backfill or adding surfacing materials for excavation and/or trenches in streets or thoroughfares, if and when the shrinkage sets in and shall shape and re-shape and grade and re-grade as in the opinion of the Engineers is necessary to maintain all thoroughfares disturbed in good condition from the time of initial excavation to the date of final acceptance. All streets and alleys shall be left in a good and satisfactory condition. In general, the Contractor shall not be required to construct or maintain detours, or to maintain streets disturbed beyond the date of final acceptance of the other work.
- 36.3 The Contractor shall provide facilities on a 24 hours, 7 day basis for pulling vehicles bogged down due to his operations.
- 36.4 The Contractor shall at locations where streets and public thoroughfares have been disturbed by excavations, or his equipment or operations, at all times while the work is in progress, take precautions for the protection of the public by placing and maintaining adequate flagmen, barricades, red flags and/or lights.

36.0 CLEANING UP

- 37.1 As each portion of the work is completed, the Contractor shall clean up and remove from the site all rubbish and old and unused materials and fill all holes and cavities made for his convenience, and shall leave the site in a neat, presentable and usable condition, restored to original or better condition.
- 37.2 Cleaning up is considered to be an integral, important and necessary function of each item of work. Where work on unit price items are substantially complete but lack clean-up and/or corrections ordered by the Engineer, amounts shall be deducted from unit prices in partial payment estimates to amply cover such clean-up and corrections.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

SPECIAL CONDITIONS

1. Safety – The Contractor shall bear the full responsibility for Safety on the project site for the duration of the project.
2. Maintenance of Traffic - The Contractor is solely responsible for all safety devices necessary for insuring the safety of traffic through the construction zone and for compliance with the MUTCD part VI. The traffic control plan, if made a part of the contract documents, is considered a minimum amount of traffic control required, and does not relieve the Contractor from providing additional components conforming to the MUTCD as necessary for the safe travel of traffic through the construction zone. A competent, trained, and experienced Traffic Safety Officer capable of reviewing and maintaining construction zone safety shall be designated by the Contractor prior to the commencement of the project.
3. Construction Surveying – Construction staking for the project will be the responsibility of the Contractor from bench marks, control points, or reference lines provided by the owner. The CONTRACTOR shall carefully preserve such bench marks, reference points and stakes and, in case of willful or careless destruction, shall be charged with the resulting expense and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance. All points of reference (existing or set) shall be checked and verified by the Contractor prior to commencement of work.
4. Construction Testing - The CONTRACTOR shall retain the services of a qualified testing laboratory to make tests and determine acceptability of materials for use in embankments, base construction, concrete structures, and pavements. The testing laboratory retained by the Contractor will also be responsible for providing field quality control as specified in the Standard Specifications. The Engineer on behalf of the Owner will provide quality assurance testing as necessary to verify the accuracy of the quality control testing.
5. There will be no fuel adjustments for this project.
6. The Contractor shall supply and maintain rest room facilities (Port-A-Johns) at appropriate locations in the vicinity of the work area(s). Periodic moving of these facilities will be required as the work area progresses along the project.
7. Any utility mains or service lines damaged by the Contractors operations shall be repaired or replaced by the Contractor immediately. Prior to commencement of work in the vicinity of utility mains or service lines, the Contractor shall have appropriate resources available to make needed repairs without undue length of service outage to local property owners and businesses. The location of all valves necessary for isolation of the area under construction shall be determined prior to commencement of work.
8. Any sprinkler systems in the way of construction shall be removed, relocated, or replaced as necessary to function as before. Any sprinkler system damaged during construction shall be repaired or replaced as necessary to function as before. There shall be no separate payment for this work.

**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

NOTICE OF AWARD

To: _____

Project: **MEDICAL PARK CIRCLE PIPE REPLACEMENT**

The OWNER has considered the BID submitted by you dated _____, for the above-described work in response to its Advertisement for Bids and Information for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$_____.

You are required to execute the Agreement and furnish the required Contractor's Performance Bond and Payment Bond within (15) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said bonds within (15) days from the date of this notice, said OWNER will be entitled to consider all your rights arising out of the OWNER's acceptance of your BID as abandoned and as a forfeiture of your Bid Bond. The OWNER will be entitled to such rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.
Dated this _____ day of _____, 20__.

CITY OF TUPELO, MISSISSIPPI

Owner _____
By: _____

Title:

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by _____ this the _____ day of _____, 20__.

By: _____

Title: _____

**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

NOTICE TO PROCEED

To: _____

Date: _____

Project: **MEDICAL PARK CIRCLE PIPE REPLACEMENT**

You are hereby notified to commence work in accordance with the Agreement dated _____, on or before _____, 20____, and you are to complete all WORK within 60 consecutive calendar days thereafter.

The date of completion of all WORK is therefore _____, 20____.

CITY OF TUPELO, MISSISSIPPI

Owner

By: _____

Title:

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____ this the _____ day of _____, 20____.

By: _____

Title: _____

**MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

CHANGE ORDER

Order No.: _____

Date: _____

Agreement Date: _____

Project: **MEDICAL PARK CIRCLE PIPE REPLACEMENT**

OWNER: CITY OF TUPELO, MISSISSIPPI

The following changes are hereby made to the CONTRACT DOCUMENTS:

Justification:

ORIGINAL CONTRACT PRICE \$ _____

CURRENT CONTRACT PRICE adjusted by previous CHANGE ORDER: \$ _____

The CONTRACT PRICE due to this CHANGE ORDER will be decreased by: \$ _____

The new CONTRACT PRICE including this CHANGE ORDER will be: \$ _____

The CONTRACT TIME will be (increased)(decreased) by _____ calendar days.

The date for completion of all work will be _____.

Approvals required:

Requested by (OWNER): _____

Recommended by (ENGINEER): _____

Accepted by (CONTRACTOR): _____

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**TECHNICAL SPECIFICATIONS
MEDICAL PARK CIRCLE PIPE REPLACEMENT
CITY OF TUPELO, MISSISSIPPI**

SCOPE OF WORK

1. **GENERAL:** The work to be performed under this Contract shall consist of furnishing all labor, tools, equipment and materials and performing all work necessary for the complete construction of all facilities depicted by the Contract Drawings and specified herein.
2. **LOCATION:** The project site is located on Lots 7 & 8 of the Med-Center II Subdivision on the west side of Medical Park Circle within the City limits of Tupelo, MS.
3. **STANDARDS:** Any reference to a specification or designation of the American Society for Testing and Materials (ASTM), American Water Works Association (AWWA), American Standards Association (ASA), Commercial Standards (CS), National Sanitation Foundation (NSF), Federal Specifications, Mississippi Standard Specifications for State Aid Road and Bridge Construction, Mississippi Standard Specifications for Road and Bridge Construction, Mississippi Department of Transportation Roadway Design Standard Drawing or other standards, codes, or orders refers to the most recent or latest specification or designation and any issued addenda. Where names of specific products may be designated in these specifications, or in the details appearing on the Contract Drawings, the intent is to state the general type or quality of product desired without ruling out the use of other products of equal type and quality, provided that use of such other products of equal type and quality has been approved in writing by the Engineer prior to installation.

STANDARD SPECIFICATIONS: Applicable portions of the most current edition of “MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION”, and the most current edition of “MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION” are made a part of this specification fully and completely as if attached hereto except where superseded by Special Provisions or amended by revisions. All references to Standard Specifications shall mean the most current edition of the Mississippi Standard Specifications for Road and Bridge Construction, unless otherwise indicated. Special Provisions and Revised Specifications adopted and approved are made a part hereof fully and completely as if attached hereto.

It shall be the responsibility of the Bidder to acquire a copy of these Specifications and become familiar with all applicable Sections and Subsections. Copies of these documents may be obtained from the Mississippi Department of Transportation, Post Office Box 1850, Jackson, Mississippi 39215-1850.

5. **LAYOUT AND CONSTRUCTION STAKING:** The Engineer will provide benchmarks, control points, or reference lines as necessary for the location of the principal components of the project. From this information, the Contractor shall be responsible for performing the necessary computations, installing, and maintaining all necessary slope stakes, batter boards, grade stakes (including sub-grade and surface-grade stakes), and additional control points as necessary for the construction of the project.

It shall be the responsibility of the Contractor to check and prove all measurements prior to use during construction.

The Contractor shall be held responsible for the preservation of all stakes and marks, and if any of the construction stakes or marks have been carelessly or willfully destroyed or disturbed by the Contractor, the cost of replacing them will be charged against him and will be deducted from the payment for the work.

6. **QUALITY CONTROL:** The Contractor shall be responsible for providing materials which meet the requirements of the specifications contained herein. Test Reports and/or Certification by the manufacturer or material supplier, properly notarized, shall be furnished to the Contractor and the Engineer for all materials supplied for the project.

The Owner reserves the right to withhold payment for any work or materials which have not been approved by the Engineer, or certified in accordance with the specifications, contained herein.

7. **UNDERGROUND UTILITIES:** The approximate location of known underground utilities is shown on the Construction Plans. In addition to the utilities shown, there may also be additional underground utilities, which have not been detected. It shall be the responsibility of the Contractor to notify the Owner and all utility companies with underground utilities and give notification of intent to excavate in the area of the project, and to contact the Mississippi One-Call utility locator service at 1-800-227-6477 prior to excavation activities. Failure by the Contractor to notify the Owner and said utility companies shall make the Contractor liable under State law for any damage incurred to underground utilities.

The Contractor assumes all responsibility for any damage to underground utilities.

8. **GUARANTEE:** The Contractor shall guarantee all work done under these Contract Documents for a period of one year from the date of substantial completion. This guarantee shall include the repair, without cost to the Owner, of any defect due to design, materials, and/or workmanship. Performance and payment bonds shall remain in effect during the Warranty Period. Inspection will be held by the owner to ascertain any defects prior to release and final acceptance.

MOBILIZATION

1. **DESCRIPTION:** Mobilization shall consist of moving all labor, equipment, supplies, and incidentals to the project site and removing same after other work under the contract has been completed. It shall also include all mobilization pre-construction costs which are necessary direct costs to the project and are of a general nature rather than directly attributable to other pay items.

2. **MEASUREMENT:** Measurement for payment will be in accordance with the following schedule:
 - (1) When five (5) percent of the original contract amount is earned from other bid items (exclusive of those listed as dependent items), fifty (50) percent of the amount bid for mobilization, or five percent of the original contract amount, whichever is lesser, will be paid.

 - (2) When ten (10) percent of the original contract amount is earned from other bid items (exclusive of those listed as dependent items), one hundred percent of the amount bid for mobilization, or ten (10) percent of the original contract amount, whichever is lesser, will be paid.

 - (3) Upon completion of all work, payment of any amount bid for mobilization in excess of ten (10) percent of the original contract amount will be paid.

3. **BASIS OF PAYMENT:** Mobilization will be paid for at the contract lump sum price, which shall be full compensation for completing the work specified.

MAINTENANCE OF TRAFFIC

- 1. DESCRIPTION:** This work shall consist of maintaining local traffic at all times, except as provided herein or in other contract documents. It shall consist of constructing, maintaining in good condition, and removing temporary structures, approach roads, and other facilities required for maintenance of traffic and the furnishing of temporary materials therefore, unless otherwise indicated in the contract.

This work shall include furnishing, erecting, maintaining in good condition, and removing all required construction signs, barricades, and temporary traffic stripe unless indicated on the plans or in the contract specifications.

The applicable material requirements set out in the 700 sections of the Standard Specifications and the minimum requirements of the Manual on Uniform Traffic Control Devices (MUTCD) shall apply to all materials used in the maintenance of traffic.

The Contractor shall at all times so conduct his work as to insure the least possible obstruction to traffic. The Contractor shall provide for the safety and convenience of the general public and the residences along the road and the protection of persons and property.

The Contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices; shall provide qualified flagmen where necessary to direct the traffic; and shall take all necessary precautions for the protection of the work and the safety of the public. Roads or parts of the work closed to traffic shall be protected by effective barricades and obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to properly control and direct traffic.

The Contractor shall erect warning signs in advance of all places on the project where operations may interfere with the use of the road by traffic, and at all intermediate points where the new work crosses or coincides with existing traveled roads. Such warning signs shall be constructed and erected in accordance with the provisions of the contract.

All barricades, warning signs, lights, temporary signals, other protective devices, flagmen and signaling devices shall conform with the minimum requirements contained in the MUTCD published by the U.S. Government Printing Office current at the time bids are received.

On all sections of a project which are coincident with an existing highway, road, or street and are open to traffic, the Contractor shall be fully responsible for the protection, maintenance, and replacement of all signs, route markers, traffic control signals, and other traffic service features existing on the work from the beginning of contract time or beginning of work, whichever occurs earlier, until final completion of work.

Prior to performing work on the project, the Contractor shall make the necessary arrangements to prevent damage or loss of signs or other traffic control devices by providing adequate protection, or by removing those which cannot be left in their existing positions, protecting them from damage, and reinstalling them at locations so that they will provide maximum traffic service. As soon as work, which conflicted with the original position of each device, has been performed, the devices shall be immediately reinstalled at their original positions or modified positions.

The Contractor is solely responsible for all safety devices necessary for ensuring the safety of traffic through the construction zone and for compliance with the MUTCD part VI.

A competent, trained, and experienced Traffic Safety Officer capable of reviewing and maintaining construction zone safety shall be designated by the Contractor prior to the commencement of the project. The Contractor's Traffic Safety Officer's duties shall include the following:

1. Understand the requirements of the MUTCD and contract provisions.
2. Be responsible for assuring compliance of the Contractor's maintenance and protection of traffic relative to the requirements of the contract provisions.
3. Be responsible for maintaining current documentation of deficiencies with respect to the Contractor's maintenance and protection of traffic operations.
4. Be responsible for maintaining documentation on how and when the deficiencies were corrected.
5. Hold Contractor's traffic safety meetings.
6. Be responsible for assuring that all deficiencies are corrected.
7. Be responsible for coordinating maintenance of traffic operations with the Engineer.
8. Be responsible for reviewing Contractor's equipment location storage and operation relative to traffic safety and operation as required by the contract provisions.
9. Be responsible for reviewing Contractor's material location storage and handling of materials relative to traffic safety and operations.
10. Be responsible for maintaining current documentation of deficiencies and corresponding corrections relative to equipment operation, equipment storage, and material handling and storage pertaining to traffic safety and operations.

The Contractor shall also provide a suitable traffic vehicle, adequately marked and equipped, for the use of the Traffic Safety Officer. The Engineer shall be furnished with the telephone numbers where the Contractor's Traffic Safety Officer and a substitute authorized to act in his absence, may be reached at all times when not on the project.

Within three weeks' time, the Contractor shall provide the Engineer with a copy of each accident report for those accidents occurring within the limits of the project. In the event no accident report is available, the Contractor and the Engineer shall jointly attempt to describe the accident from sources or information that may be available. The Engineer or other appropriate personnel as required will analyze these reports to determine if corrective action is needed.

In the event corrective action is indicated, the contractor shall proceed immediately with the same.

The Contractor shall construct, erect, and maintain in good order all barricades and danger and warning signs specified or ordered. Flagmen shall be stationed at such points as may be deemed necessary. Movable construction signs shall be moved from each section as their use becomes inapplicable.

Such signs and all other signs and devices of a temporary nature shall be in accordance with the plans, and the MUTCD, as applicable.

2. **MEASUREMENT:** Progress payment will be made corresponding to the percent of construction completion as shown on the approved monthly estimate and verified by the Engineer. Specific traffic control devices for which there is a pay item listed will be measured and paid for per the unit specified.
3. **BASIS OF PAYMENT:** Maintenance of Traffic will be paid for at the contract lump sum price, which shall be full compensation for completing the work specified.

CLEARING AND GRUBBING

1. **DESCRIPTION:** Work under this section shall consist of, clearing, grubbing, removing and disposing of all things, including but not limited to, trees, concrete rubble, sidewalks, pipes, junction boxes, manholes, pipe, inlets, curb and gutter of all types, and existing pavements of all types and thickness within the limits of the project construction which require removal in order for the project to be constructed in accordance with the Contract Drawings and Specifications contained herein.

2. **CONSTRUCTION REQUIREMENTS:** All objects, materials and all trees, vegetation, stumps, roots and other protruding or underground objects in the way of construction, and not designated to remain shall be cleared and grubbed. The Engineer must be notified prior to commencement of the clearing and grubbing operations. The Engineer may permit sound stumps to remain outside of the construction limits or in the area to be rounded at the top of cut backslopes provided they are cut off flush with or below the surface of the finish ground line. Stump holes and other holes from which obstructions are removed, except, in areas to be excavated, shall be backfilled with suitable material and thoroughly compacted as specified. All operations shall be conducted in such a manner as to prevent injury to anything that is designated to remain on site or damage to adjacent property. All clearing and grubbing must be completed and approved by the Engineer prior to the commencement of grading operations.

3. **REMOVAL AND DISPOSAL:** All materials, including existing pavements of all types and thickness, and debris, in the way of construction and designated to be removed, shall be removed from the construction site. Areas required for disposal shall be acquired by, and shall be the responsibility of the Contractor, unless the disposal area is provided by the Owner. Burning shall not be permitted without prior notification and approval of the City of Tupelo.

The Contractor shall be responsible for accomplishing this work in full conformance with the requirements of local officials and the Mississippi Department of Environmental Quality (MDEQ).

4. **MEASUREMENT:** Measurement for Clearing & Grubbing will be made corresponding to the percent of the item completed and approved by the Engineer. Individual items designated for removal for which there is a pay item shall be measured and paid for per the unit specified.

5. **BASIS OF PAYMENT:** Clearing and Grubbing and removal of individual items shall be paid for as specified per each item, which price shall be full compensation for completing the work as specified.

EARTHWORK

1. **DESCRIPTION:** The work covered by this section shall consist of the preparation of the embankment or excavation area, excavating, hauling excavation, spreading, compacting and finish dressing all areas to the alignment, grades and cross sections as shown on the Contract Drawings or established by the Engineer.

All suitable excavated material shall be placed by the Contractor in full embankment sections along the proposed centerline as shown on the plan profile sheets and constructed in accordance with these specifications. All clearing and grubbing necessary for the completion of this work shall be done in accordance with the clearing and grubbing specification.

2. **GENERAL:** Excavation and embankment construction may begin after the required clearing and grubbing has been completed and approved by the Engineer, and after drainage structures required in advance of grading operations have been completed.

Embankments will be constructed with suitable materials taken from the excavation areas, or from materials brought onto the site from an approved off-site source. Unsuitable materials or perishable materials such as rubbish, sod, brush, roots, loose stumps, logs, heavy vegetation, etc., shall not be incorporated or buried in any embankment. Any material encountered that is deemed to be unsuitable for use in the work shall be removed and disposed of. The unsuitable material as defined in Section 203.03.7 of the Standard Specifications shall be removed and disposed of, as specified in Section 203.03.7 of the Standard Specifications. The area will then be backfilled with a suitable material, and compacted until the requirements, as specified herein, are achieved. Areas specified in the plans to be undercut will be assumed to be unsuitable and are to be disposed of by the Contractor.

All areas of the site, which will receive embankment material, shall be completely broken up by plowing, scarifying, or disc-harrowing to a minimum depth of six (6) inches. Areas discovered to be soft and yielding shall be brought to the attention of the Engineer. These areas shall be processed and compacted to a firm and unyielding layer. If adequate compaction cannot be obtained on this material, it shall be removed and replaced with suitable material.

After an area has been fully and completely prepared to receive embankment material, the embankment shall be constructed of suitable materials placed in successive layers, parallel to the finished grade. Each layer is to be not more than eight (8) inches of loose material, before compaction, for the full width of the cross section. Each layer of excavated material, so placed, shall be satisfactorily spread and compacted so as to construct an embankment which, after full compaction and shrinkage, will conform within reasonable tolerance to the lines, grades and cross sections as shown on the plans or otherwise designated.

All excavation and embankment construction shall be carried on in such a manner as to insure adequate drainage in case of unexpected rainfall, and shall conform to the provisions of the Erosion Control specification.

3. **COMPACTION OF EMBANKMENTS AND SUBGRADES:** Compaction of embankment material shall comply with Section S-203.09.4 of the Mississippi Standard Specifications for State Aid Road and Bridge Construction. This section is copied in its entirety as follows:

“S-203.09.4—Compaction of Embankments. All embankments material shall be at the moisture content determined to be proper for the particular material being placed so that the resulting work will be both dense and stable.

It shall be the Contractor’s responsibility to maintain the proper moisture content during compaction operations, and the Engineer may require moistening or drying as necessary, without additional compensation to the Contractor.

The material shall be compacted until the required density, determined in accordance with S-700.03 and S-700.04 has been attained and the embankment is stable.

The specified value (SV) for density of basement soils is ninety-four (94) percent, and the specified value (SV) for density of design soils is ninety-six (96) percent.

The unit of deviation (UD) will be one percentage point.

If the contract does not include a layer of material above the subgrade, or if the top portion of the design soil is to be chemically or mechanically stabilized under the contract, the (SV) for density of the top six inches of the design soil is ninety-four (94) percent.

The Contractor shall make allowances for shrinkage and compaction in the construction of embankment.”

4. **TOLERANCES:** The allowable vertical tolerances for earthwork will be plus or minus one-tenth foot in elevation and plus or minus five-tenths foot horizontally.
5. **METHOD OF MEASUREMENT:** Structure Excavation will be measured by the cubic yard final measure (FM) in accordance with Subsection 109.01 of the Standard Specifications. Select Borrow shall be computed for payment per cubic yard as measured along neat lines of all in-place and accepted work completed as shown on the construction details or as directed by the Engineer. Undercut areas shall be computed for payment per cubic yard (CY) as measured along neat lines of all in-place and accepted work completed as shown on the construction details or as directed by the Engineer.
6. **BASIS OF PAYMENT:** Excavation and embankment, when completed and approved, will be paid for at the contract unit price per cubic yard, which shall be full compensation for completing the work as specified regardless of the material encountered.

SELECT BORROW MATERIAL

1. **DESCRIPTION:** Select Borrow Material shall be composed of a natural or manufactured mixture of soil binder and granular material. The soil binder shall be clay or silt or other materials, or combinations thereof having satisfactory cementing qualities. The mixture shall be homogenous in character and reasonably free of clay balls, vegetative material, or other deleterious substances that cannot be classified as serviceable, and shall be such that when properly compacted will form a dense mass.

The gradation of the select borrow material shall be as follows:

Sieve Size	Percentage Passing
No. 10	100
No. 40	20-100
No. 60	15-85
No. 200	6-40

The material passing the No. 40 Sieve shall have a maximum plasticity index of 10 and a maximum liquid limit of 30.

2. **TESTING:** All sampling and testing shall be made in accordance with applicable standard methods of AASHTO in effect on the date of advertisement for bids.
3. **APPROVAL OF SOURCE:** Approval of sources for materials must be obtained prior to placement of materials on the project. Samples may be required.
4. **BASIS OF PAYMENT:** This is a material reference specification. Payment for Select Borrow shall be made as specified under Earthwork specification.

GRANULAR MATERIAL (CRUSHED STONE)

1. **DESCRIPTION:** This work shall consist of furnishing and constructing a Granular Material Crushed Stone base on a prepared foundation in reasonably close conformity with the lines, grades, and cross sections shown on the plans or established by the Engineer.
2. **MATERIALS:** The Granular Material Crushed Stone shall consist of hard, durable particles free from adherent coatings, soft or disintegrated pieces, vegetation, or other deleterious matter. The gradation of the Granular Material Crushed Stone shall be as follows:

	Sieve Size	Percentage Passing
(Crusher Run)	1”	100
	3/8”	50-85
	No. 4	35-65
	No. 10	25-50
	No. 40	15-30
	No. 200	5-15
(Bedding Type 1)	4”	100
	3-1/2”	90-100
	2-1/2”	25-60
	1-1/2”	0-15

3. **CONSTRUCTION:** Construction operation requirements of the Granular Material Crushed Stone base shall be in accordance with Section S-304 of the Standard Specifications.

The density of the completed Granular Material Crushed Stone base shall be equal to or exceed 99% of the Standard Proctor Density.

4. **METHOD OF MEASUREMENT:** Granular Material Crushed Stone shall be computed for payment per cubic yard (CY) as measured along neat lines of all in-place and accepted work completed as shown on the construction details or as directed by the Engineer.
5. **BASIS OF PAYMENT:** Accepted quantities of granular material shall be paid for at the contract bid price per cubic yard (CY), which shall be full compensation for completing the work specified. No separate payment will be made for water necessary for the processing of the granular material.

TEMPORARY EROSION AND SEDIMENT CONTROL

1.0 DESCRIPTION: The work covered by this section includes temporary slope protection, erosion, and sediment control.

1.1 ENVIRONMENTAL REQUIREMENTS: The Contractor shall comply with all rules and regulations governing the elimination and control of pollutants in stormwater discharges associated with construction activities as regulated by the Environmental Protection Agency and set forth in the National Pollutant Discharge Elimination System (NPDES) permit requirements.

The Contractor is advised that he or his company, as the case may be, is responsible for compliance with all applicable State and Federal laws. The Contractor shall submit a C.N.O.I to the Mississippi Department of Environmental Quality and shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The Contractor agrees to maintain inspection records, file required maintenance inspection report submittals, perform any required repairs, maintenance or additions to the erosion controls and requests that any previous contractor be released from the terms of the SWPPP. Any additional required phasing plans shall be submitted to the State by the Contractor prior to the start of construction.

The Contractor shall obtain a Notice of Coverage from the State prior to beginning any construction activities if required.

1.2 REPORTING AND RECORD KEEPING REQUIREMENTS: The Contractor shall maintain records of checks and repairs on site. Erosion control procedures shall provide that all erosion controls are inspected at least once every seven calendar days or as required by State regulations. Records shall be maintained on site and submitted to the State as required.

The Contractor shall also maintain records of the following:

- 1) The dates when major grading activities occur.
- 2) The dates when construction activities, temporary or permanent, cease on a portion of the site.
- 3) The dates when stabilization measures are initiated.

2.0 MATERIALS

- A. Mulches: Oat or wheat straw, fiber mats, netting, bark, wood chips, or other suitable material reasonably clean and free of harmful weeds or materials.
- B. Silt Barriers: Riprap berms or Hay or wheat straw bales free of harmful weeds.
- C. Synthetic Filter Fabric: Pervious sheet of woven propylene, nylon, polyester, ethylene yarn, 700x minimum, certified by manufacturer or supplier to be in compliance with applicable federal, state and local regulations.

- D. Wire Fence Reinforcing for Silt Fence: Minimum 24" height, 6" x 6" by 14 gauge.
- E. Posts for Silt Fences: 1-1/2" x 1-1/2" wood or 1.33 pounds per linear foot steel with minimum length of 48". Steel posts shall have projections for fastening wire.
- F. Stakes for Silt Barriers: 1" x 2" wood or equivalent metal by 36" long.

3.0 SLOPE PROTECTION AND EROSION CONTROL

- A. Do not burn-off ground cover.
- B. Before existing soils are disturbed, provide erosion and sediment control.
- C. Protect slopes immediately after completing rough grading. Coordinate erosion and sediment control with earthwork so as to minimize duration of exposure of unprotected soils.
- D. Temporary Protection of Erodible Soils: Use methods necessary to prevent erosion and to control sediment, including any or all of methods listed below.
- E. Mechanical Retardation & Runoff Control: Mechanically retard and control rate of runoff from construction site. Use temporary diversion ditches and berms to retard and divert runoff to protected drainage courses.
- F. Sediment Basins: When required, sediment basins shall be designed, constructed and maintained in accordance with best management practice standards found in the USDA Planning and Design Manual for the control of erosion, sediment and stormwater.
- G. Borrow is not allowed in areas where suitable environmental controls are not possible.
- H. Vegetation & Mulch: Provide temporary protection on slopes when rough grading is completed or when enough soil is exposed to require protection to prevent erosion. Protect soil by accelerated growth of permanent vegetation, temporary vegetation, mulching or netting. For slopes too steep for stabilization by other means, stabilize by hydroseeding, mulching anchored in place, covering with anchored netting, sodding, or combination of these and other necessary methods for effective erosion control.
- I. Silt Barriers: Place rows of barriers, or install silt fencing securely anchored, or both to prevent soil erosion.

3.1 MAINTENANCE:

- A. Check and repair, as necessary, all control measures weekly during dry periods and within 24 hours after rainfall of 0.5" or greater. During prolonged rainfall, check daily and repair damage.

B. Maintain records of checks and repairs.

A. Maintain erosion and sediment control features until Final Completion.

3.2 CLEANING:

A. When the Work is complete, immediately remove materials used to aid erosion and sediment control.

PERMANENT EROSION CONTROL

1. **DESCRIPTION:** Work under this section shall consist of the **establishment of permanent live vegetation or furnishing and placing of solid sod on all areas disturbed by construction**, and the protection of downstream and adjacent property from siltation and sediment build up caused by grading operations and construction under this Contract.

The rates listed in the vegetation schedule are minimum application rates. It shall be the Contractors responsibility to apply additional quantities as necessary to obtain sufficient plant growth.

The major items of work covered are ground preparation, the furnishing and incorporation of fertilizers and agricultural limestone, the furnishing and planting of grass seed, the furnishing and placement of vegetative materials for mulch, and/or the furnishing and placement of solid sod, and the **maintenance and/or watering of this item until the project is accepted by the Owner.**

2. **TEMPORARY EROSION AND SEDIMENT CONTROL:** Temporary erosion control measures shall be furnished, installed, maintained, and removed if necessary for the purpose of removing suspended soil particles from the water passing through in accordance with the Contract Drawings and the Temporary Erosion and Sediment Control specifications contained herein.

The Contractor shall maintain the erosion checks until sufficient vegetation is established to control erosion. Measures, which are destroyed or deteriorate prior to adequate vegetation coverage, shall be replaced as necessary. Unless otherwise specified, all erosion checks shall be removed or used elsewhere prior to acceptance of the project.

3. **GROUND PREPARATION AND FERTILIZER:** Ground preparation and the furnishing of fertilizer and agricultural limestone shall be accomplished in accordance with Sections 212 & 213 of the Standard Specifications. This item of work shall be accomplished on all areas, which have been disturbed and which will require seeding, solid sodding, or sprigging. Ground preparation will not be measured for separate payment. Such construction shall be considered a necessary part of the work in completing the various planting and seeding items and is a responsibility to be assumed by the Contractor in accordance with such respective pay items.
4. **SEEDING:** Seeding shall be accomplished on all designated areas which do not have adequate vegetation to prevent erosion or which have been disturbed during construction of the herein described work. Seeding shall be accomplished in accordance with Section 214 of the Standard Specifications. Seeding mixtures and rates of application shall be as shown in the vegetation schedule, or as directed by the Engineer. Seeding in front of established businesses or residences shall be accomplished by incorporating common bermuda grass seed at a rate of 50 lb. per acre. It shall be the responsibility of Contractor to maintain the seeds and establish a full coverage of live growth.
5. **MULCHING:** Vegetative material for mulch shall be applied on all areas required to stabilize seeding during the maintenance and growing period. This item shall be accomplished in accordance with Section 215 of the Standard Specifications.

6. **SOLID SOD:** Sod shall be supplied from an approved source capable of providing well-rooted, healthy sod, free of diseases, nematodes and soil borne insects. Sod shall be uniform in color, texture, density, and free of weeds, undesirable grasses, stones, roots, thatch, and extraneous material: viable and capable of growth and development when planted. Approved Solid Sod shall be delivered to the site and placed as shown or directed to provide complete coverage of areas disturbed during Construction.

The sod shall be cut transported and placed within 24 hours and shall be protected from sun, wind and dehydration prior to installation. Sod showing signs of deterioration or distress will not be allowed for use. Voids remaining between the sections of sod shall be filled to insure a smooth surface after completion of the solid sodding process.

Areas to receive sod shall be graded to a smooth, free draining surface with a loose, uniformly fine texture. Where necessary, sod shall be staked (using approved methods) in drainage swales or on slopes greater than 3:1. Sod shall be laid to form a solid mass with tightly fitted joints. Joints in successive rows of sod shall be staggered. After placement, sod shall be rolled with proper equipment to provide a smooth surface free of irregularities and voids. Sod placed adjacent to existing lawn areas shall be recessed to provide a level and flush condition between new and existing lawn areas.

Sod areas shall be maintained, including water, spot weeding, mowing, application of herbicides, fungicides, insecticides, and resodding until a full uniform stand of grass free of weed, undesirable grass species, disease, and insects is achieved.

The type of solid sod used shall match that of existing sod located adjacent to the project work, unless otherwise directed.

Fertilizers or agriculture limestone will not be required for solid sod but may be applied at the discretion of the Contractor to insure satisfactory plant establishment and growth.

7. **TOPSOILING:** Topsoiling shall be accomplished in accordance with Sections 211 of the Standard Specifications.

STORM DRAINAGE

1. **DESCRIPTION:** This Section of the work shall consist of furnishing and laying all pipe and flared end sections to be used as storm drains to the lines and grades as shown on the Contract Drawings and specified herein.
2. **MATERIALS:** All storm drain materials shall be as indicated on the Construction Plans or approved by the Engineer.

2.1 Reinforced Concrete Pipe – All reinforced concrete pipe of twelve (12) inch diameter (or equivalent arch) and larger shall be Class III, standard strength, conforming to Section S-708.02.2 of the Standard Specifications.

2.2 Reinforced Concrete Flared-End Section: - All reinforced concrete flared –end sections shall conform to Section S-708.04 of the Standard Specifications.

2.3 High Performance Polypropylene Pipe- All high performance polypropylene pipe covered by these specifications shall be Advanced Drainage Systems HP –Storm Dual Wall or approved equal.

2.4 High Density Polyethylene Pipe – All high density polyethylene pipe covered by these specifications shall be Advanced Drainage Systems N-12 Dual Wall or approved equal.

2.5 Precast Concrete Box Culvert - All precast concrete box culverts and headwalls shall conform to the design and dimensions shown on the plans, and the materials and manufacture of box sections shall meet the requirements of AASHTO M259 or M273, as applicable.

3. PIPE INSTALLATION:

3.1 Excavation - Trenches shall be excavated in whatever material encountered, to the line and grade as shown on the Contract Drawings or as staked by the Engineer in the field. The width shall be sufficient to properly join the pipe and provide thorough compaction of the bedding and backfill material under and around the pipe.

The bottom of the completed trench shall be firm for its full length and width and shall be carefully graded, formed, and aligned before the pipe is laid. The bottom of the trench shall be rounded under each joint of the pipe to conform to the shape of the pipe, and the bell holes shall be cut so as to allow the body of the pipe uniform contact and support throughout its entire length.

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavation, 29 CFR, part 1926, Subpart P". This document and subsequent updates were issued to better insure the safety of workmen entering trenches or excavations. It is mandated by this federal regulation that excavations whether they be utility trenches, basement excavations or footing excavations, be constructed in accordance with the new OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the contractor could be liable for substantial penalties.

The Contractor is solely responsible for designing and constructing stable, temporary excavations and the shoring, sloping, or benching of the sides of the excavations as necessary to maintain stability of both the excavation sides and bottom. The contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations.

3.2 Sheeting, Bracing and Shoring - The Contractor shall be responsible for all bracing, sheeting, and shoring, necessary to perform and protect all excavations as required for safety. Materials used for this purpose shall be carefully withdrawn during backfill operations in such a manner as not to damage the pipe or move it from its correct line and grade.

3.3 Dewatering - The Contractor shall perform all pumping and well pointing necessary to maintain the excavation in a dry state until the backfill operation is complete.

3.4 Bedding - Bedding for all concrete pipe shall be a minimum of Class C conforming to the requirements of section S-603.04 of the Standard Specifications. For High Density Polyethylene Pipe, the bedding shall conform to the requirements of ASTM D-2321.

3.5 Pipe Laying - The bottom of the trench shall be shaped as to give substantially uniform circumferential support to the lower fourth of each pipe. Pipe laying shall proceed upgrade with the spigot ends of bell-and spigot pipe pointing in the direction of the flow. Each pipe shall be laid true to line and grade in such manner as to form a close concentric joint with the adjoining pipe and to prevent sudden offsets of the flow line. As the work progresses, the interior of the pipe shall be cleaned of all dirt and superfluous material of every description. Where cleaning after laying is difficult because of small pipe diameter, a suitable swab or drag shall be kept in the pipe and pulled forward past each joint immediately after the jointing has been completed. Trenches shall be kept free of water and pipe shall not be laid when the condition of the trench or the weather is unsuitable for such work.

3.6 Jointing - Reinforced concrete pipe joints shall be sealed with bituminous plastic cement supplied by the pipe manufacturer. Joining ends shall be wiped clean and dry and the bituminous plastic compound shall be applied cold to the entire surface of tongues and grooves or the entire surface of bells and spigots. Sections of concrete pipe shall be forced together with excess compound extruding both inside and outside the pipe. Excess compound shall be removed from interior surfaces, and the exterior shall be furnished reasonably flush.

High Density Polyethylene pipe joints shall be assembled according to the manufacturer's recommendations. Fittings shall not reduce the inside diameter of the tubing being joined by more than 5% of the nominal inside diameter. Reducer fittings shall not reduce the cross-sectional area of the smaller size pipe.

4. **MEASUREMENT:** Pipe shall be measured per actual linear foot (LF) of pipe used for storm drain applications (pipe joint nominal length multiplied by number of joints, minus cutoffs).
5. **BASIS OF PAYMENT:** Payment will be made under for each type of storm drain pipe specified per linear foot (LF).

MINOR STRUCTURE CONCRETE

1. **DESCRIPTION:** The work under this section shall consist of the construction of reinforced concrete storm inlets, pipe collars, paved flumes, junction boxes, and other concrete minor structures including inlet grates.

2. **MATERIALS:** Materials under this section shall conform to the following specifications:
 - 2.1 **Concrete** - All concrete used for construction of concrete minor structures shall be Class "B" Concrete as specified in Section 804 of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction. A mix design for Class "B" concrete shall be submitted to the Engineer for approval prior to commencement of concrete construction.

 - 2.2 **Reinforcing Steel** - All reinforcing steel used in construction under this section shall conform to Section 602 and Sections 711 and 805.02 of the Standard Specifications.

 - 2.3 **Grey Iron Casting** - Grates and manholes for surface and storm inlets shall be grey iron castings, Neenah or approved equal.

 - 2.4 **Precast Concrete Inlets** - Precast concrete inlets meeting the above specifications may be used in place of poured-in-place concrete inlets.

3. **CONSTRUCTION:** Construction of all minor structures shall be in accordance with the locations, dimensions and details as shown in the Construction Plans or as directed. All construction shall be in full accordance with specified sections as set forth above under materials specifications.

CONCRETE PAVEMENT

1. **DESCRIPTION:** The work under this section shall consist of the construction of concrete paved flumes, island paving, and driveways on a prepared foundation in accordance with the specifications, and in reasonably close conformance with the lines, grades, thickness and typical sections shown on the plans or established by the Engineer.

2. **MATERIALS:** Materials under this section shall conform to the following specifications:
 - 2.1 **Concrete** - All concrete used for concrete sidewalks, island paving, and driveways shall be Class "B" Concrete as specified in Section 804 of the Mississippi Standard Specifications for Road and Bridge Construction. A mix design for Class "B" concrete shall be submitted to the Engineer for approval prior to commencement of concrete construction.

 - 2.2 **Reinforcement** - Concrete paved flume, island paving, and driveways shall be reinforced with 6"x6" 10 gauge wire mesh unless stated otherwise. All reinforcing steel used in construction under this section shall conform to Section 602 and Section 711 and 805.02 of the Mississippi Standard Specifications for Road and Bridge Construction.

 - 2.3 **Concrete Expansion Joints** - ½ inch preformed expansion joint material required at locations as shown in the plans, or as directed by the Engineer.

3. **CONSTRUCTION:** Construction of all concrete paved flumes, island paving, and driveways shall be in accordance with the locations, dimensions and details as shown in the Construction Plans.
 - 3.1 **Foundation** – The foundation shall be shaped and compacted according to the Earthwork and Granular Material (Crushed Stone) specifications to a level surface conforming to the lines, grades and sections shown on the plans or established by the Engineer. All soft or unsuitable materials encountered shall be removed and replaced with acceptable material at no additional cost.

 - 3.2 **Forms** – Forms shall be wood or metal and free of bulges, warps, and knots. They shall set to the required line and grade and rigidly held in place by stakes or braces.

 - 3.3 **Placing Concrete** – The concrete mixture shall be placed on the prepared foundation to the depth required to complete the pavement in one course. It shall then be vibrated and/or tamped and struck off with an approved straight-edge resting on the side forms and drawn forward with a sawing motion. The surface shall be given a Class 6 float finish as set out in Section 804 of the Mississippi Standard Specifications for Road and Bridge Construction. Edges shall be rounded with an edging tool having a radius of ¼ inch unless otherwise specified.

 - 3.4 **Joints** – Joints shall be of the type and dimensions and at the locations specified in the plans.

3.5 Protection and Curing – Concrete shall be protected from premature drying by covering with wetted burlap covered by polyethylene, spraying with approved white pigmented curing membrane or other approved methods. The contractor shall protect the concrete from both public traffic and traffic caused by the contractor’s employees or agents. Any damage to the pavement prior to final acceptance shall be repaired or the pavement replaced.

3.6 Cleanup – After completion of any section of sidewalk, island paving, and driveways, all forming material and any protruding edges of expansion material and concrete shall be removed. Backfill material shall be placed flush to the top edge of the structure (2” lower for areas receiving solid sod) and dressed to provide positive drainage. After initial settlement of backfill material has occurred, additional material shall be placed flush with top edge of structure (2” lower for areas receiving solid sod) prior to commencement of erosion control measures.

4. **MEASUREMENT:** Concrete Pavement will be computed for payment per square yard as measured along neat lines.

Reinforcing Steel will not be measured for separate payment.

5. **BASIS OF PAYMENT:** Payment for Concrete Pavement will be made at the contract unit price per square yard (SY), complete in place, which shall be full compensation for all materials, labor, and incidentals necessary for completing the work specified.

Reinforcing Steel will not be paid for separately.

Required backfill material will not be paid for separately.

SANITARY SEWERS

PART 1 - GENERAL REQUIREMENTS

1.1 SCOPE

The Contractor shall furnish all work, services, materials, and related items necessary to complete the work as shown on the construction drawings and described in detail by these specifications.

1.2 LOCATION OF LINES

The locations of all lines are indicated on the construction drawings. In general, lines will be located on private property and installation will be made in accordance with easements granted by the landowners for this work. If work is on private property, a signed easement shall be obtained before crossing private property. The Owner is responsible for obtaining said easements, but it is the responsibility of the Contractor to ensure easements are in hand prior to proceeding across private property.

Existing power lines, telephone lines, trees, shrubbery, fences, water mains, gas mains, sewers, cables, conduits, ditches, embankments, buildings, outdoor signs, and other structures in the vicinity of the work, not authorized to be removed, shall be supported and protected from injury by the Contractor during the construction and until completion of the work affecting them. The Contractor shall be liable for all damages done to such existing facilities and structures and he shall save the Owner harmless from any liability or expense for injuries, damages, or repairs to such facilities.

Any delay, additional work, or extra cost to the Contractor caused by existing underground installations and above ground utilities and structures shall not constitute a claim for extra work, additional payment, or damages.

The Contractor shall use maximum care to avoid damage to any facility, which is to remain in service in its existing location. Any work required to maintain in service shall be done at the Contractor's expense.

The Owner reserves the right to change locations of pipelines as shown on the construction plans and to add or delete items of work. Work performed at new locations or changes in construction plans shall be performed at unit prices indicated in the Contractor's Bid Proposal.

Clearing and grubbing required to facilitate any item of work shall be performed. Cleared and grubbed materials shall be disposed of by removing from the site. Alternate means of disposal must be approved by the Owner and Engineer. The Contractor shall assume all responsibility for the satisfactory disposal of all cleared and grubbed materials and no extra payment will be made for clearing and grubbing or the removal of materials.

All fences cut in constructing the sewers shall be repaired in a timely manner to the original condition and appearance, or better, by the Contractor. Where fences confine animals,

construct temporary fences as required and take the necessary measures to keep the animals safely confined during construction. No extra payment will be made for fence removal and reconstruction and temporary fencing since these items are considered to be incidental to the sewer pipe work.

1.3 MATERIALS AND WORKMANSHIP

All materials and workmanship shall be of the highest quality possible. Any defects in materials will cause such materials to be rejected by the Engineer. Contractor shall notify supplier and Engineer of any defective materials at the time of discovery.

1.4 PERMITS AND CODES

All work shall comply with local codes, ordinances, and regulations.

All lines placed within the right-of-way of County, State-Aid, State Highway, or Railroads, shall be laid according to the instructions issued with the permit granted for this work by the governing authority.

1.5 EXISTING IMPROVEMENTS

The Contractor shall maintain in operating condition all active utilities, sewers, and existing improvements encountered in the construction of this project. He shall repair to the satisfaction of the Owner any surface or subsurface improvement damaged during the course of work, whether or not such improvement is shown on the construction drawings.

1.6 SAFETY REQUIREMENTS

The Contractor shall provide and maintain all barricades, signs, and safety devices necessary to warn the public of the dangers of construction in progress.

1.7 GUARANTY

The Contractor shall guarantee all material and work for a period of one year from the date of final acceptance of his work. The Contractor shall remove, replace, and repair all defective work during this period of time at no cost to the Owner.

PART 2 – GRAVITY SEWER PIPE LINES AND CONSTRUCTION

2.1 SCOPE

The work in this section consists of furnishing all materials, accessories, equipment, tools, transportation, services, labor and performing all operations necessary to complete and place into use the sanitary pipe lines.

2.2 MATERIALS

Except where ductile iron pipe is indicated on the plans, gravity sewer lines and fittings shall be SDR 35 PVC sewer pipe up to 15" diameter. Gravity sewer lines greater than 15" diameter shall be SDR 26 PVC. Ductile iron pipe may be substituted for PVC pipe materials.

- A. PVC Sewer Pipe and fittings shall be rigid poly vinyl chloride pipe in accordance with ASTM Specification D-1784, cell classification 1245-B, and ASTM D-3034. No PVC pipe will be installed at a depth greater than 20 feet. All PVC pipe used shall be formed with a bell for elastomeric gasket joints per ASTM 3212. The seals shall be per ASTM F-477. All fittings and accessories shall have bell and spigot configurations identical to that of the pipe. Wye and tee saddles will not be permitted without written authority from the Engineer for each specific instance.
- B. All Ductile Iron Pipe shall be centrifugally case, manufactured in accordance with the American National Standards Institute/American Water Works Association Standards C151/C150 of Ductile Case Iron and shall be Class 50 minimum in accordance with ASTM A746. All pipes shall have cement lining in accordance with AWWA C-104. Except as otherwise specified or indicated, all ductile iron pipe shall have gasketed joints. Where specified, all ductile iron mechanical joint pipe shall conform to ANSI/AWWA C111/A24.11 and C110-A21.10. Where connected to flange type valves, ductile iron pipe shall have flanged ends.

All ductile iron fittings shall conform to the AWWA Standards, be of the same manufacturer as the ductile iron pipe and shall have a minimum 250 psi pressure rating plus a 100 psi surge allowance.

Gate valves for low pressure applications (i.e. lagoon discharge structures) shall be American-Darling AFC 00 double disc gate valves or approved equal. Shear gates shall be M&H Type 44 or approved equal.

Fittings for ductile iron pipe shall be AWWA C-153 Compact Fittings and have either coal-tar epoxy lining in accordance with AWWA C-210 or cement lining in accordance with AWWA C-104 and bituminous coating outside, with mechanical joint ends in accordance with ANSI/AWWA C111/A24.11 unless specified differently on the Contract Drawings.

2.3 INSTALLATION

PVC sewer pipe shall be installed in accordance with ASTM Standard D-2321 unless otherwise directed. PVC pipe shall be installed within one year of the date of manufacture indicated on the pipe.

Ductile iron pipe shall be installed in accordance with ASTM Standard D-2321, unless otherwise directed.

Contractor shall provide safety fencing or other barricades as required to prevent public access to open trenches.

2.3.1 ALIGNMENT

The Contractor shall use a commercial grade laser specifically manufactured for setting a line and grade for the gravity sewer by using the laser beam coaxially through the center of the sewer being laid. The laser beam projector is to be rigidly mounted to its support platforms, with a two-point suspension, or equivalent, assuring that all ground and equipment vibrations are kept to an absolute minimum. The Contractor shall furnish all equipment, including equipment necessary to control atmospheric conditions in the pipe to keep line and grade to acceptable standards of accuracy. Competent experienced people who have been properly trained to operate the equipment used must operate the laser beam system.

2.3.2 LABORATORY TESTS

All pipe and fittings used shall bear the stamp of approval of an approved testing laboratory as required by the Engineer. Certification of each truckload of material may be required.

2.3.3 GENERAL REQUIREMENTS

The Contractor shall excavate all trenches to the required depth for proper installation of the sewers at the locations and grades indicated on the drawings and staked in the field. Trenches should be only of sufficient width to provide a free working space on each side of the pipe. Trenches excavated deeper than shown on the drawings shall be backfilled with an approved material and tamped solidly in place at no cost to the Owner.

In paved areas prior to trenching, cut the pavement neatly on both sides of the trench to a width not greater than 12" wider than the trench width, 6" on each side. Remove the surfacing for this width during excavation. Ordinarily tunneling will not be allowed. Cut bituminous paving with pavement cutter or other approved method. Cut concrete paving by sawing. Provide the necessary equipment to load and haul away excavation as it is taken from the trench. No stockpiling of Excavated Material will be permitted where the trench is to be filled with Select Borrow Material or Crushed Stone.

Trenches shall be sheeted and braced as necessary to protect workmen and adjacent structures. Water shall be prevented from entering the trench while construction is in progress. Under no circumstances shall the pipes be laid in water. The Contractor shall pump or bail water from bell holes to permit proper jointing of pipes.

The pipe shall have uniform grade and support. Final grading of trench bottoms shall be by hand tools to insure proper soil bearing for the pipe. When in place, the pipe shall be checked for alignment and any section of the pipe found to have settled will be removed and re-laid at no cost to the Owner.

Lay all sewer pipe, under all conditions in a dry trench, on an even, firm bed throughout the full length of the pipe, so that no uneven stress is placed on the pipe. See Section 2.3.5 for bedding material requirements.

Begin laying the pipe at the lowest point in the system and lay the pipe with bell end upstream. Test each pipe for soundness, and then clean the interior and joint surfaces before lowering the pipe into the ground. Lay the pipe in straight lines and on uniform grades between points where changes in alignment or grade are shown. All types of pipe shall be joined in accordance with the manufacturer's recommendations. If flexible pipe is chosen, it shall be laid according to ASTM D-2321-74.

Whenever possible, water mains shall be laid at least ten feet (10'), horizontally from any existing or proposed sewer. Should local conditions prevent a lateral separation of 10 feet, a water main may be laid closer if:

- 1) It is laid in a separate trench.
- 2) It is laid in the same trench with the sewer, provided that the water main is located on an undisturbed earth shelf located on one side of the sewer.
- 3) In either case the elevation of the bottom invert of the water main is at least eighteen inches (18") above the top of the sewer.

When it is impossible to obtain proper separation, both the water main and the sewer shall be constructed with watertight joints and pressure tested to assure water-tightness before backfilling. Pipe shall be located such that joints are a maximum distance from the water line.

Where pipe is installed in encasements, suitable casing skids shall be attached to ensure proper line and grade. Skids shall be fastened securely to the pipe with steel strappings, cables, or clamps, and shall be a minimum of 4 – 18" long and located at intervals necessary to prevent deflection of the carrier pipe. A minimum of 4 skid assemblies shall be used per encasement.

2.3.4 CONNECTIONS

The Contractor shall make all required connections to existing sewers, including manholes and service lines. He shall carefully check the invert elevations of existing sewers to which connections are to be made to be sure they are free of debris and mud. Connections shall be watertight and shall be tightly plugged at the ends of open lines.

2.3.5 BACKFILLING OF SEWERS

Backfilling of trenches shall be started after piping joints have been inspected and approved. The backfilling of sewer pipe shall conform to the Trench Detail and Pipe Bedding Detail provided in the Construction Plans.

Trenching and excavation backfilling shall begin promptly after the pipe is laid. The bedding and haunching shall extend to the springline of the pipe. This material shall be brought up and tamped equally along each side of the pipe in such a manner as to avoid displacement of or damage to the pipe. Material required for bedding and haunching is covered under the standard details in the Construction Plans. The remainder of the backfill shall be as follows:

Backfilling of the pipe trench where paving is not required, shall be accomplished by the placing of loose material free from large lumps, clods, rock or other objectionable material, which could cause large voids, in 12" lifts. The final grade of the backfill material shall be of sufficient height above the pipe to allow for settlement. As settlement occurs, additional blading shall be required to fill in settled areas as needed.

In graveled areas, the top 6 inches of backfill shall be crushed stone placed the full width of the trench. As settlement occurs, additional blading and placement of crushed stone shall be required to fill in settled areas as needed.

In areas to be paved, the backfill material (above bedding & haunching) shall be select granular material as specified in the Select Borrow Material Specification. Backfill shall be accomplished by placing and spreading material in lifts not to exceed 12" and compacted to 95 % Standard Proctor Density. Backfill shall be performed to 15" below the paved surface. The remaining trench depth shall be filled with Crushed Stone as set out in the Granular Material (Crushed Stone) specification, and compacted to 95 % Standard Proctor Density. This material shall be maintained by blading as required for a smooth temporary riding surface. For final trench repair in asphalt areas, the crushed stone shall be excavated for a depth of 3 inches, or to a depth matching the surrounding asphalt (whichever is greatest) and filled with bituminous pavement and compacted. The finished surface shall be smooth and continuous with the existing asphalt. For final trench repair in concrete areas, the crushed stone shall be excavated for a depth of 6 inches and filled with concrete with a compressive strength of not less than 3000 lbs at 28 days. The finished surface shall be smooth and continuous with the existing asphalt.

2.4 TRENCH STABILIZATION

In areas where pipe trench subgrade is determined by the Engineer to be unstable, Contractor shall undercut to a depth as directed by the Engineer and backfill with crushed stone to the trench grade.

2.5 MAINTENANCE OF STREETS AND TRENCHES

The Contractor shall be required to maintain for one year all trenches that cross or run under rigid type paving, after the project is completed and accepted by the Owner. Driveways, regardless of the type, shall be maintained for traffic at all times.

2.6 CLEAN UP

The Contractor shall remove all silt, trash and debris from manholes and sewer as soon as pipe lying between manholes is completed and shall restore the site to a condition acceptable to the Owner. Fertilizing and seeding shall be done in areas designated by the Engineer after settlement has occurred per the Erosion Control specification.

2.7 INSPECTION

When the sewer system is completed the Engineer, the Owner, and the Contractor or his representative shall inspect it. All defective materials and workmanship shall be replaced at no cost to the Owner.

The interior of the pipes shall be free from silt, trash, debris and other foreign material. The pipe shall be checked for uniform alignment and grade by flashing a light from manhole to manhole or from manhole to cleanout. If the view through the line does not show a vertical axis in full pipe diameter and the horizontal axis in at least $\frac{3}{4}$ -pipe diameter, the pipe shall be removed and re-laid as necessary to make these requirements.

If the flexible pipe is used, a deflection test will be performed. The test shall be conducted after backfill and trench settlement (but not less than 30 days after installation) with an approved go/no-go 5% deflection testing mandrel. The mandrel shall be pulled by hand without mechanical pulling devices.

Test pipelines for infiltration/exfiltration using the air test method described in ASTM F1417, "Standard Testing Method for Installation Acceptance of Plastic Gravity Sewer Lines using Low-Pressure Air."

The air test procedure shall be as follows:

1. Clean the section of pipe to be tested using an approved method.
2. Plug all pipe outlets with suitable test plugs. Brace each one securely.
3. The seal at one end of the pipe section being tested shall have an orifice through which air can be injected into the pipe. The air supply line shall contain an on-off air valve and a pressure gauge. The pressure gauge shall have minimum division of 0.10 psi and shall have an accuracy of +5%.
4. If the pipe section being tested is submerged in water, insert a pipe probe, by boring or jetting, into the backfill material adjacent to the center of the pipe and determine the pressure in the probe when air passes slowly through it, which is the back pressure due to ground water submergence. Increase all gauge pressures in the test by this amount. Alternately, if the depth of pipe submergence below the ground water is known, gauge pressures may be adjusted by adding 0.433 psi for each foot of submergence.
5. Add air slowly to the portion of the pipe installation under test until the internal air pressure is relaxed to 4.0 psi.
6. Check exposed pipe and plugs for abnormal leakage by coating with a soap solution. If any failures are observed, bleed off air and make necessary repairs.
7. After an internal pressure of 4.0 psi is obtained, allow at least two minutes for air temperature to stabilize, adding only the amount of air required to maintain pressure.

8. After the two-minute period, disconnect air supply.
9. When pressure decreases to 3.5 psi, start stopwatch. Determine the time in seconds that is required for the internal air pressure to reach 2.5 psi. These time intervals should then be compared with the time required by specification in the Low Pressure Air Sewer Test table in these specifications.
10. If the time lapse is greater than that specified, the section undergoing test shall have passed, and the test may be discontinued at that time. If the time is less than that specified, the line has not passed the test and the Contractor will be required to repair and prepare the line for retest.
11. See following chart:

GRAVITY SEWER PIPE LEAKAGE TEST

Pipe Diameter (in.)	Minimum Time (min:sec)	Length for Minimum Time (ft)	Time for Longer Length (sec)	Specified Minimum for Length (L) Shown (min:sec)								
				100 ft	150 ft	200 ft	250 ft	300 ft	350 ft	400 ft	450 ft	
4	3:46	597	.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520 L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24	
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48	
12	11:20	199	3.418 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38	
15	14:10	159	5.342 L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04	
18	17:00	133	7.692 L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41	
21	19:50	114	10.470 L	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31	
24	22:40	99	13.674 L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33	
27	25:30	88	17.306 L	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48	
30	28:20	80	21.366 L	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15	
33	31:10	72	25.852 L	43:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53	
36	34:00	66	30.768 L	51:17	76:55	102:34	128:12	153:50	179:29	205:07	230:46	
42	39:48	57	41.883 L	69:48	104:42	139:37	174:30	209:24	244:19	279:13	314:07	
48	45:34	50	54.705 L	91:10	136:45	182:21	227:55	273:31	319:06	364:42	410:17	

SPECIFICATION TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP FOR SIZE AND LENGTH OF PIPE INDICATED FOR $Q = 0.0015$, WHERE Q IS THE ALLOWABLE LEAKAGE RATE IN CU. FT./MIN/FT² OF INSIDE SURFACE AREA OF PIPE.

2.8 FLUSHING

The completed gravity sewer lines shall be free of all mud, siltation, and other foreign matter deposited or collected during construction. The lines shall be flushed prior to testing. Flushing shall be started at the upstream end of the completed system and shall not be permitted to enter into the system but shall be collected and disposed of in an approved manner. Also mud and other solids shall be similarly collected and disposed of.

2.9 METHOD OF MEASUREMENT

Sewer pipe line lengths shall be measured from the inside wall of the manhole, with the depth to be measured from existing grade to the pipe invert.

When cutting paved areas, Crushed Stone backfill, Select Borrow Material, and Resurfacing Material will be measured in place, and paid for at the contract unit price.

Trench stabilization shall be measured in cubic yards, and shall be based on the actual dimensions (depth, trench pay width, and length) excavated.

2.10 BASIS OF PAYMENT

Sewer Pipe Lines shall be paid for at the bid price per linear foot, and according to size. Material used for making repairs to paved surfaces shall be field measured when installed. The Contractor's bid price shall be full compensation for completing the work as specified.

Payment will be made under:

Sewer Pipe Line – per LF
Crushed Stone – per CuYd
Select Borrow Material – per CuYd
Bituminous Resurfacing – per SqYd
Concrete Resurfacing – per SqYd

PART 3 - MANHOLES

3.1 SCOPE

This specification includes materials, equipment, and work necessary to construct sanitary sewer manholes at the depth, grade and location indicated on the drawings.

3.2 MATERIAL REQUIREMENTS

Manholes shall be poured-in-place concrete or precast concrete manholes as indicated on the construction drawings. Either type material may be selected and shall be used throughout the project.

Precast manhole sections shall conform to ASTM Specification C-478. Where required, the Contractor shall furnish laboratory test reports for precast sections used, showing that they conform to all requirements of these specifications.

Mortar for masonry in sewer structures shall be a 1:3 cement-lime mix, provided that hydrated lime may be substituted for not to exceed 10 per cent, by weight of the cement.

Manholes in non-traffic areas shall have a cast iron rim and cover assembly which meets the requirements of AWWA A-48. The cover shall have two non-penetrating pick holes and shall not be sealed. The casting shall be gray iron casting, free from defects affecting their strength

and appearance. The clear opening shall be a minimum of twenty-one inches (21") in diameter and the cover and ring shall be machined to fit snug and not rattle.

Street manholes (i.e., manholes in roadways subject to vehicular traffic) shall be Neenah Pattern R-1765 or equal, weighing approximately 365 pounds. The casting shall be gray iron casting, free from defects affecting their strength and appearance. The clear opening shall be a minimum of twenty-one inches (21") in diameter and the cover and ring shall be machined to fit snug and not rattle.

The manhole steps shall be made of injection molded copolymer polypropylene encapsulating a 1/2" diameter grade 60 steel reinforcing rod. The steps shall be of such cross-sectional area and configuration that they will withstand a single concentrated live load of 300 pounds.

They shall be in conformance with ASTM Standard C-478. Manhole steps shall be as manufactured by M.A. Industries, Inc., Peachtree City, GA, Press Seal Gasket Corp., or equal.

Rubber gaskets shall be "O"-Ring or flat ring as manufactured by Press Seal Gasket Corp., Fort Wayne, IN; Hamilton-Kent Manufacturing Co., or equal, and shall conform to the requirements of the latest edition of ASTM Designation C-443. Lubricants shall be as recommended by the gasket manufacturer.

Manhole pipe seal gaskets for precast manhole units shall be "Kor-N-Seal" as manufactured by Kor-N-Seal Co., Milford, NH; "PSX" by Press Seal Gasket Corp., or equal.

Preformed joint compound shall be "EZ Stik" as manufactured by Concrete Products Supply Co., Fort Wayne, IN; "Kent Seal No. 2"; or equal. Primer, when required for use with the preformed joint compound, shall be as recommended by the manufacturer of the preformed joint compound. Install joint compound according to the manufacturer's instruction.

Sealer compound shall be "Drycon" as manufactured by IPA Systems, Inc., Philadelphia, PA; Tamm's "Tamoseal"; or equal. Sealer shall be field applied after construction.

Cold joint bonding agent shall be "Octoblen" as manufactured by IPA Systems, Inc., Philadelphia, PA; "Tamm's Tammsbond"; or equal.

Patching material shall be "Octocrete" as manufactured by IPA Systems, Inc., Philadelphia, PA; "Tamm's Speed Crete Blue Line"; or equal.

3.3 MANHOLE CONSTRUCTION

Precast concrete sections shall be laid so that the axis of the manhole is vertical, and shall be constructed in accordance with the manufacturer's recommendations.

The standard sizes for manhole bottoms, as shown on the plans, are based on a soil bearing pressure of 2000 psf; should a more yielding soil be encountered, the base shall be stabilized with sufficient bedding of coarse crushed stone to obtain the required bearing.

Construct precast manholes as shown on the plans of precast units with a concrete bottom. Excavate hole and set bottom unit, leveling carefully. Make joints between sections using preformed joint compound. Joints shall be watertight. Fit manhole cover frames in place on an adequate grout or grout beds and bricks riser. Joints in brick risers shall not exceed 5/8" in thickness. Plaster the brick exterior surface with a coat of plaster not less than 1/2" thick. For pipe 30" in diameter and less make connection to manholes using manhole pipe seal gaskets.

Install the manhole steps at 16" o.c. vertically. The deepest step shall be located not more than 24" above the manhole invert.

Install the cast iron frames and covers to the grade shown on the plans, set in a grout bed. Lap grout up on ring vertical to one inch (1") from the top. In streets, set the manhole covers to one inch (maximum) above the street grade parallel to the plane of the street.

Wherever concrete is applied to an existing concrete or masonry surface, apply a cold joint bonding agent between the surfaces according to the manufacturer's instructions.

Where necessary to fill voids, repair breaks, make patches, etc., clean and moisten the surfaces and use a suitable combination of patching agent and cold joint bonding agent with grout or concrete. The use of brick or chunks of concrete will not be permitted.

All visible leaks in manhole bottoms, barrels, and connections shall be stopped.

Manhole walls shall be sealed against leaking by the application, on the complete interior and exterior surfaces, of a waterproofing coat. Precast manholes shall also be sealed at ring joints. Pipe connections shall have a flexible connector for waterproofing; after pipe connections are made the flexible connector shall be grouted with non-shrink grout.

The cast iron rings and covers shall be set at the exact finish grade indicated on the drawings. Manholes located out of yards shall extend to a minimum of 2 feet above the finished ground surface unless otherwise indicated on the plans. Steps shall be set inside the manholes at sixteen inches (16") on center.

The Contractor shall construct the manhole flow channels of concrete, of semi-circular section conforming to the inside diameter of the connection sewers. The Contractor shall provide such channels for all connection sewers to each manhole. Drop inlets shall be constructed as an integral part of the manhole as construction progresses.

No backfilling of manhole excavation, above the top of the interior concrete fill, shall be performed until the waterproof coating has been cured for at least twenty-four hours and has been inspected and approved by the Engineer. All defective coverage and leaks shall be corrected and improved as directed prior to backfilling.

As the backfill material is placed around the manhole it shall be carefully tamped to prevent excessive settlement.

3.4 MANHOLE ABANDONMENT: Contractor shall plug all pipes entering and existing the manhole with concrete. Then remove the cone section of the manhole and fill/compact with select backfill to the existing ground level.

3.5 BASIS OF PAYMENT: Sewer Manholes and Manhole Abandonment shall be paid for at the bid price per each, per size, which price shall be full compensation for completing the work as specified.

Payment will be made under:
48" Manholes – per EA
Abandon Existing MH – per EA

ROCK RIPRAP

1. **DESCRIPTION:** This work shall consist of furnishing and placing a protective covering of rock riprap where shown on the plans or as directed by the Engineer.
2. **MATERIALS:** Aggregate for loose riprap shall consist of unhewn quarry stone as nearly rectangular in section as is practicable. The stone shall be dense, free of clay or shale seams, resistant to the action of air and water, and suitable in all other respects for the purpose intended.

The gradation of the Rock Riprap shall be as follows:

<u>Stone Weight</u>	<u>Cumulative Percent Lighter By Weight</u>
200	100
80	50-85
40	15-50
10	0-15

Geotextile fabric for use under riprap shall be Type V in accordance with Section 714.13.5 of the latest edition of the Mississippi Standard Specifications for Road and Bridge Construction.

3. **CONSTRUCTION:** Prior to the placement of the rock riprap, the subgrade surface shall be shaped to the lines and grades indicated on the plans, or as directed and shall be approved by the Engineer or his representative. The rock riprap shall be installed to the full course thickness in one operation and in such a manner as to avoid serious displacement of the underlying materials. The rock riprap shall be placed in a manner that will ensure that the riprap in-place shall be reasonably homogenous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks and spalls filling the voids between the larger rocks.

Dumping of the riprap onto the placement surface will not be allowed. Orange peel buckets, gradalls or other similar approved equipment shall be used in placement of the rock riprap and this equipment shall be operated so that the maximum drop of the rock onto the placement area is 3 feet.

Geotextile fabric shall be installed in accordance with Section 815 of the Mississippi Standard Specifications for Road and Bridge Construction.

4. **REMOVAL AND RESETTING OF EXISTING RIPRAP:** Existing riprap that is noted for removal shall be reset in areas designated for proposed rip rap. Removed riprap shall be carefully stockpiled on site and cleaned of any and all dirt and debris accumulation prior to resetting. Care shall be taken during removal and cleaning operations to ensure that materials do not escape the project limits through siltation or getting deposited in ditches or other water flow areas. Once the riprap is satisfactorily cleaned it may be placed in areas to receive riprap. Reset riprap shall be placed as set out above for new riprap and may be placed in combination with the new riprap. Geotextile fabric is required in all areas to receive riprap.

5. **BASIS OF PAYMENT:** Rock Riprap shall be paid for at the contract unit price per ton by actual weight. The Contractor shall furnish to the Engineer, a statement-of-delivery ticket (Mississippi State Bureau of Weights and Measures certified scale) showing the weight to the nearest 0.1 ton for computing actual weight of placed and approved Rock Riprap. Such payment shall be considered full compensation for all materials, labor, equipment and incidentals necessary for completing the work as specified. Removal and resetting of riprap will be measured and paid for by the square yard of existing riprap area prior to removal. Geotextile fabric for use under riprap will not be paid for separately but will be included in the bid price for Rock Riprap.

Payment will be made under:

Rock Riprap (Size 200) – per TON

RECORD DRAWINGS

1. **DESCRIPTION:** The Contractor shall be responsible for maintaining one (1) set of record or “as-built” drawings documenting any changes or additions to the plans and specifications, as well as the locations of all utility service connections. These record drawings shall be returned to the Engineer as part of the project closeout procedures.

No separate payment will be made for Record Drawings.