

# **Stream Construction Specifications**

**For The Procurement  
Of Services for Water Resource  
Construction Including:**

**Hydraulic Excavator  
Low Ground Pressure Dozer  
Tractor w/ Pull Pan  
Off-Highway Haul Truck  
Supervisor  
Skilled Laborers**

May 2021

**Sponsor:**

**West Tennessee River Basin Authority**

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## Bid Information

This contract consists of procuring the services of a Hydraulic Excavator, a Low Ground-Pressure Dozer, a 4-Wheel Drive Tractor and Dirt Pan, a 6-wheel drive articulated dump truck, construction supervisor, skilled general laborers, construction survey, and incidental allowances to be employed in water resource construction activities including installation and maintenance of erosion control practices in West Tennessee. The work shall be carried out in conformance with permits issued to the West Tennessee River Basin Authority (WTRBA) for construction of water resource projects. The point of contact for this project shall be Mr. David Blackwood at the offices of the West Tennessee River Basin Authority Offices in Humboldt, Tennessee, (731) 784-8173.

Estimated quantities are as follows:

Description	Estimated Quantity	Unit
Hydraulic Excavator and Operator Hourly Rate	1400	Hours
Low Ground Pressure Dozer and Operator Hourly Rate	600	Hours
4WD Tractor and Dirt Pan	500	Hours
6 Wheel Drive Articulated Dump Truck and Operator Hourly Rate	200	Hours
Site to Site Mobilization Rate Heavy Equipment	2000	Miles
Construction Supervisor	400	Hours
Skilled Laborer	400	Hours
Construction Survey Team	400	Hours
Equipment Rental Allowance	\$75,000	Allowance
Service Allowance	\$100,000	Allowance
Materials Allowance	\$100,000	Allowance

Copies of specifications and contract documents are on file in the office of the **West Tennessee River Basin Authority**, at 3628 East End Drive, Humboldt, Tennessee 38343, and are open for public inspection. A set of such documents may be obtained from the West Tennessee River Basin Authority.

**2021 PREVAILING WAGE RATES  
FOR HIGHWAY AND BRIDGE CONSTRUCTION**



<b>CLASSIFICATION</b>	<b>CRAFT NUMBER</b>	<b>2021</b>
Blaster	1	24.20
Bricklayer	2	17.45
Carpenter/Leadsperson	3	21.44
Class "A" Operators	4	23.42
Class "B" Operators	5	20.89
Class "C" Operators	6	21.81
Class "D" Operators	7	20.35
Concrete Finisher	8	19.60
Drill Operator (Caisson)	9	36.31
Electrician	10	34.79
Farm Tractor Operator (Power Broom)	11	16.52
Ironworkers Reinforcing	12	19.93
Ironworkers (Structural)	13	20.67
Large Crane Operator	14	25.61
Mechanic (Class I) Heavy Duty	15	26.26
Mechanic (Class II) Light Duty	16	24.80
Painter/Sandblaster	17	32.26
Skilled Laborer	18	18.76
Survey Instrument Operator	19	26.56
Sweeping Machine (Vacuum) Operator	20	19.20
Truck Driver (2 axles)	21	19.42
Truck Driver (3/4 axles)	22	18.25
Truck Driver (5 or more axles)	23	21.36
Unskilled Laborer	24	16.26
Worksite Traffic Coordinator	25	21.93

Effective 01/01/2021

## **General Specifications**

### **1. Explanation**

The Specifications are divided into General Specifications and Detail Specifications. The General Specifications pertain, for the most part, to the relations between the Contractor and the State. The Detail Specifications describe each class of construction work, define and classify materials involved in the work, and explain the manner in which each class of work shall be done and how it will be measured and paid for.

### **2. Definitions**

Whenever the words herein defined or pronouns used in their stead occur in the Contract and Specifications, they shall have the meaning here given. The word "State" shall mean Department of General Services as related to bid and award and the **West Tennessee River Basin Authority** as related to work performance and payment. The word "Commissioner" shall mean either the Commissioner of General Services or the Executive Director of the West Tennessee River Basin Authority or their properly authorized agents acting severally within the scope of the particular duties entrusted to them as described under the above definition of "State". The word "Engineer" shall mean West Tennessee River Basin Authority or its authorized representative.

The word "Contractor" shall mean the person, partnership or corporation entering into a contract for the performance of work or the agent appointed to act for the Contractor in the performance of the work.

The word "Surety" or "Sureties" shall mean the corporation or corporations which have executed a Surety Bond for the Contractor, and whose signatures are affixed to the Bond.

The words "Directed," "Required," "Ordered," "Instructed," "Considered Necessary," or words of like import, shall mean that the direction, requirement, order, instruction, etc., of the Engineer is intended; similarly the words "Approved," "Acceptable," "Satisfactory," or words of like import, shall mean approved or acceptable or satisfactory to the Engineer.

Whenever the figures are given in the Specifications after the word "Elevation" or where figures representing elevations are given, they shall mean distance in feet above the U. S. Geological Survey Sea Level Datum or a locally established job site datum, if so noted on the plans.

### **3. Examinations and Investigations**

The offering of a bid by the Contractor for the work under this Contract shall constitute a good and sufficient declaration on the part of the Contractor that he has examined, to his complete satisfaction, the nature of the work, and the various means of approach to the work, and has made all necessary investigations in order to inform himself thoroughly as to the character and magnitude of all work involved in the complete execution of the Contract, and also of the facilities for delivering and handling materials, and that he has familiarized himself with all local conditions and other circumstances that may be encountered in the performance of the work. The offering of the bid shall be a waiver on the part of the Contractor of all claims for extra compensation as a result of his failure to make such examinations and investigations.

### **4. Completeness of Estimated Quantities**

See Terms and Conditions Section of the Contract Documents

### **5. Equipment**

The Contractor shall employ equipment of such size and character that a rate of progress can be maintained that will insure the completion of the work within the time specified in the contract and that will insure a satisfactory quality of work. The approval of the Engineer of the Contractor's equipment shall not relieve the Contractor of his obligation to maintain the required rate of progress, in the event the equipment proves to be inadequate.

The Contractor shall not sell or remove equipment or materials that have been installed and that may be necessary for the completion of the work without the written consent of the Engineer.

### **6. Modification of Equipment and Methods**

See Terms and Conditions Section of the Contract Documents

### **7. Direction of Work**

Prior to the start of construction, the Contractor shall call a pre-construction conference, including his Project Superintendent and his Foreman, the Engineer, and others as the Engineer may direct. The purpose of this meeting is to review the requirements of the Contract, Permit and Construction

Documents to assure complete understanding of the specific responsibilities of each participant and his relationship with the others involved.

The Engineer shall have the right to direct the manner in which all work is to be conducted insofar as may be necessary to secure the proper progress and quality of the work, and all directions and instructions of the Engineer, or any of his inspectors or other agents shall be carried out by the Contractor. In order to insure the proper completion of the Contract, the Engineer may, if necessary, determine the order of precedence in which any part of the work shall be commenced and carried on.

The Contractor agrees that notwithstanding the general supervisory control that may be exercised by the Engineer and State over the work to be done under the terms of this contract and the specifications, that his responsibilities and liabilities are those of an independent Contractor.

**8. Inspection of Work**

All work and material furnished shall be subject at all times to a thorough and minute inspection by the Engineer. The Contractor shall permit access at all times to every part of the work and to all points where materials to be used in the work are manufactured, procured or stored.

**9. Lines and Grades**

See Terms and Conditions Section of the Contract Documents

**10. Determination of Quantities and Measurements**

The Engineer shall determine all quantities and amounts of work performed.

**11. Interpretation and Correction of Plans**

See Terms and Conditions Section of the Contract Documents

**12. Changes and Alterations**

The State reserves the right to make any alterations, eliminations or additions that it may deem necessary in the work to be done, or any part thereof, and to make any variations on the quantity of work to be done, provided that any such alterations, eliminations, and additions shall not materially alter the general character of work as a whole.



If such changes diminish the quantity of work to be done, they shall not constitute a claim for damages for loss of anticipated profits on the work already done or material already furnished or used in the work. The State shall make payment to the Contractor for such work or materials at the unit price stipulated in the Contract. If by reason of changes the amount of work is increased, such increase shall be paid for according to the quantities actually done, and at the unit price established for such work under the contract.

### **13. Defective Work and Materials**

If the work should be damaged in any way, or if any defects not readily detected by inspection develop before the final acceptance of the whole work, unless hereinafter otherwise specified, the Contractor shall correct such damage or defect without additional compensation. If the Contractor shall fail to reconstruct any defective or damaged work after reasonable notice, the Engineer may cause such work to be reconstructed and the expense thereof shall be deducted from the amount to be paid to the Contractor.

If upon any work that is defective or damaged, the imperfection, in the opinion of the Engineer, is not sufficiently important to require reconstruction, the State shall have the right to make such deductions as the Engineer may determine to be just and reasonable, from the amounts due or to become due the Contractor instead of requiring the imperfect part to be reconstructed.

### **14. Time and Order of Completion**

Determination as to whether the required rate of progress is being maintained may be made at any time after the work has started, by comparing the value at the contract price of the amount of work done, with the value at the Contract price of the amount of work necessary to have been accomplished during such period in order to have maintained the prescribed rate of progress. In determining progress; the work shall be assumed to have begun at the date of the Purchase Order, and proper consideration shall be given to any extensions of time that may have been granted. Any failure to maintain the required rate of progress, after taking into consideration extensions of time that have been granted, shall be a breach of contract, just as would be a failure to complete the entire work within the specified time.

Completion time and actual contract term may not coincide. Contract term is for fiscal and payment purposes only and does not alter stated time for completion.

Contract term may be extended for final inspection and fiscal reasons without comment, but extension of contract term to alter completion times must be requested in writing to the **West Tennessee River Basin Authority** and a copy of this request signed by the director and forwarded to the state contract administrator.

Assessment of damages shall be the sole responsibility of the engineer and the Director of the Authority.

**15. Extension of Time**

Delays due to causes beyond the control of the Contractor, other than those that, in the opinion of the Engineer, reasonably would be expected to occur in connection with the performance of the work, may entitle the Contractor, to an extension of time for completing the work sufficient to compensate for such delay. No extension of time shall be granted, however, unless the Contractor shall, within fifteen (15) days from the beginning of the delay, notify the Engineer in writing of such delay, and of the time of beginning and the cause of the same. After work is resumed, the Engineer will determine the extension of time, if any, that shall be allowed the Contractor, and his decision shall be binding and conclusive on both parties.

**16. Hindrances and Delays**

The Contractor shall bear all loss or damage for hindrances or delays, from any cause, during the progress of any part of the work under the Contract and also all loss or damage arising out of the nature of the work to be done, or from the action of the elements, or from any unforeseen conditions encountered in connection with the work, or from any other cause whatever. No charge other than that included in the Contract price for the work shall be made by the Contractor against the State for such loss or damage.

**17. Payment Determinations**

During the progress of the work, and about once a month, the Engineer will make an estimate of the amount and value of the work done and materials incorporated into the work by the Contractor. The Engineer may, at his discretion, defer a current estimate until the value of the work done and materials incorporated into the work since the preceding estimate is in excess of \$500.

As soon as practicable after a current estimate is made by the Engineer, the State shall pay the Contractor 100 percent of the value, at the unit price or prices stipulated in the Contract, of the work done and the materials incorporated into the work since the preceding estimate.

**18. Final Payment**

As soon as practicable after the work covered by the Contract has been completed in a manner satisfactory to the Engineer and the State, the Engineer will prepare a final determination showing the total amount of work done under the Contract and value thereof and the amount due the Contractor under such final determination. Final payment will be made at that time by the State. All prior estimates and payments shall be superseded by and shall be subject to correction in the final determination. Final payment will be held by the State until the Contractor furnishes the State with an affidavit as to payment of labor and material bills furnished and used on this Contract, and acceptance and approval of payment has been received by the State from the Bonding Company or Surety. Thereupon the State shall release the Contractor's bond and any contractual responsibilities attached thereto. Final acceptance of the work, and release of the Contractor's bond, shall also be a release to the State from all claims against the State on account of this Contract.

**19. Defense of Suits and Claims**

See Terms and Conditions Section of the Contract Documents

**20. Labor and Material Claims and Liens**

See Terms and Conditions Section of the Contract Documents

**21. Patents**

See Terms and Conditions Section of the Contract Documents

**22. Assignment**

See Terms and Conditions Section of the Contract Documents

**23. Abandonment, Assignment, Delay or Violation of Contract**

See Terms and Conditions Section of the Contract Documents

**24. Completion of Work by the State**

See Terms and Conditions Section of The Contract Documents

**25. Reserved**

**26. Conduct of Work**

The work to be performed under these Specifications consists for the most part of constructing water resource projects in West Tennessee. This contract consists of procuring the services (including skilled operators) of a large excavator, a low ground pressure dozer, a tractor with “pull” pan, an articulated dump truck, and laborers to be employed in construction activities including the installation and maintenance of drainage and erosion control measures. The work shall be carried out in conformance with permits issued to the West Tennessee River Basin Authority (WTRBA) for construction of water resource projects. It is desired that all work be carried on in such a manner as to interfere to as small a degree as possible with the adjacent wetlands. The Contractor shall be required to carry on work in a manner to accomplish the desired end. The Contractor assumes full liability for any damage to persons, land, crops or property caused by his failure to carry out the work as herein required.

**27. Contractor's Representative and Workman**

The Contractor shall designate to the Engineer a representative in each construction force to receive and carry out the Engineer's instructions and orders.

**28. Employer's Liability Insurance**

See Terms and Conditions Section of the Contract Documents.

## **Detailed Specifications**

### **1 --- Description of Work**

The work to be performed under these Specifications consists for the most part of constructing stream restoration projects in West Tennessee. This contract consists of procuring the services of a Hydraulic Excavator, a Low Ground-Pressure Dozer, a 4-Wheel Drive Tractor and Dirt Pan, a 6-wheel drive articulated dump truck, construction supervisor, skilled general laborers, construction survey, and incidental allowances to be employed in water resource construction activities including installation and maintenance of erosion control practices in West Tennessee. The work shall be carried out in conformance with regulatory permits issued to the West Tennessee River Basin Authority (WTRBA) for construction of water resource projects. The Contractor will have an allowance for incidental construction materials, specialty equipment, and services such as erosion control. Materials that are provided by the WTRBA such as silt fence, rip rap, straw wattles, erosion control matting, etc. will be delivered to the work area by the WTRBA or third-party delivery prior to initiation of construction activities. It is desired that all work be carried on in such a manner as to interfere to as small a degree as possible with adjacent wetlands and other natural resources. The Contractor shall be required to carry on work in a manner to accomplish the desired end. The Contractor assumes full liability for any damage to persons, land, crops or property caused by his failure to carry out the work as herein required.

### **2 --- Quality Control**

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction. A copy of these records and tests, as well as the records of corrective action taken, shall be furnished to the Engineer.

### **3 --- Right-of-Way**

#### **3.1 General**

The lands, easements, and rights-of-way for work under the Contract will be provided without cost to the Contractor. However, the Contractor shall make his own arrangements with the appropriate owners or organizations for transporting his equipment across, over or under, highways, bridges, private property, and utility lines and shall provide at his own expense any additional rights-of-way or easements required to effect such crossings, including insurance requirements of owners.

#### **3.2 Utility Lines in Right-of-Way**

The Contractor shall make his own arrangements with the owners of utility lines if located within the right-of-way for re-routing or altering of power and communication lines as may be necessary

to provide clearance for the construction of the work adjacent thereto. No separate payment, as such, will be made for the alternation of these utility lines and the costs in connection therewith will be considered as an incidental expense to the Contractor. The Contractor shall exercise special care in working in the vicinity of the utility lines to prevent damage thereto or injury to the Contractor's employees or others. Any damage to the utility lines or interruption of service occasioned by the Contractor's operations shall be repaired and the service restored promptly at his expense.

## Special Specifications

All the work covered under this contract shall be performed as specified in the following standard specifications; unless ordered different by the Engineer.

Payment for all work covered under this contract shall be made under nine (11) bid items: Hydraulic Excavator Hourly Rate, Amphibious Excavator Hourly Rate, Low Ground Pressure Dozer Hourly Rate, Tractor with "Pull Pan" Hourly Rate, 6-Wheel Drive Articulated Dump Truck Hourly Rate, Site Supervisor Hourly Rate, Skilled Laborer Hourly Rate, Construction Survey Team Hourly Rate, Site to Site Oversize Equipment Mobilization, Construction Materials Allowance, Erosion Control Allowance. Payment, at the contract unit price, for these items shall constitute full compensation for furnishing all equipment (including operators) and performing all labor for the performance of the work specified herein.

### **Hydraulic Excavator Hourly Rate**

Shall be paid to the contractor as compensation for the actual number of hours spent actively completing the work specified herein.

### **Low Ground Pressure Dozer Hourly Rate**

Shall be paid to the contractor as compensation for the actual number of hours spent actively completing the work specified herein.

### **6 Wheel Articulated Dump Truck Hourly Rate**

Shall be paid to the contractor as compensation for the actual number of hours spent actively completing the work specified herein.

### **6 Wheel Drive Articulated Dump Truck Hourly Rate**

Shall be paid to the contractor as compensation for the actual number of hours spent actively completing the work specified herein.

### **Laborer Hourly Rate**

Shall be paid to the contractor as compensation for the actual number of hours spent actively completing the work specified herein.

### **Site-To-Site Mobilization Rates**

Shall be paid to the contractor at the contract unit rate per mile per each equipment unit as compensation for mobilizing his equipment and forces, from a completed individual work site, to another proposed work site designated by the WTRBA. If the WTRBA does not have a designated work site identified at the time the Contractor completes work at a, the Contractor will be paid the Site to Site Mileage to a mutually agreeable storage location until such time the WTRBA identifies another work site. For the initial Mobilization, the contractor shall be paid at the contract unit rate per mile as compensation for mobilizing his equipment and forces from his/her facility to the work site.

The Contractor shall commence work within 30 days of written Notice to Proceed, and shall continue to work at a reasonable rate of progress as determined by the “Engineer”. The Contractor shall keep detailed records of hours worked, along with starting and stopping time, “downtime” for maintenance or weather and the nature of such “downtime”, and the progress made in relation to Stations and Grade Stakes at the end of each workday. Copies of these records shall be submitted along with requests for payment. Maintenance, fueling, repairs and lunch breaks are not considered normal production hours, and will not be paid as such.

## **Construction Specifications**

### **A- Stream Construction**

#### **A-1 General**

The purpose of this contract shall be to procure for the West Tennessee River Basin Authority (WTRBA), a division of the Tennessee Department of Environment and Conservation, the services of an Amphibious Excavator, a Hydraulic Excavator, a Low Ground Pressure Dozer, a 6 wheel drive Articulated Dump Truck and Laborers to be employed in stream restoration activities including installation and maintenance of erosion control measures. A skilled operator must be provided for each piece of equipment. The work shall be carried out in conformance with permits issued to the West Tennessee River Basin Authority (WTRBA) for construction of stream restoration projects. It is desired that all work be carried on in such a manner as to interfere to as small a degree as possible with the adjacent wetlands and other natural resources. The Contractor shall be required to carry on work in a manner to accomplish the desired end. The Contractor assumes full liability for any damage to persons, land, crops or property caused by his failure to carry out the work as herein required. Said provider shall perform operations for a stipulated hourly rate.

## **A-2 Hydraulic Excavator Specifications**

- a. Cat 320 or John Deere 210G, or equivalent machine.
- b. The trackhoe bucket shall have a minimum of a 1-3/4 cubic yard bucket.
- c. The Contractor shall provide a skilled operator, fuel, and any required maintenance.

## **A-3 Low Ground Pressure Dozer Specifications**

- a. Caterpillar D5 LGP, or equivalent
- b. The Dozer shall have a 6-way blade.
- c. The contractor shall provide a skilled operator, fuel, and any required maintenance.

## **A-4 4-Wheel Drive Tractor with Dirt Pan**

- a. Tractor capable of pulling dirt pan with minimum 10 cubic yard capacity.
- b. The contractor shall provide a skilled operator, fuel, and any required maintenance.

## **A-5 6-Wheel Articulated Dump Truck**

- a. 6 Wheel Drive Articulated Dump Truck. Volvo A30 or Caterpillar 730, or equivalent
- b. Contractor may substitute Hydrema 22T style truck for difficult terrain.
- c. The contractor shall provide a skilled operator, fuel, and any required maintenance.

## **A-6 Construction Survey**

- a. Two-person survey crew capable of data collection, feature verification, and construction staking as needed to support water resource projects.
- b. Surveyor shall be licensed and in good standing with the State of Tennessee.
- c. Costs for preparation of plats, easements, and as-built surveys shall be completed under the services allowance.

## **A-7 Construction Supervisor**

The contractor shall provide, as required by the Engineer, a site supervisor to manage complex construction activities with two or more pieces of heavy equipment and/or multiple contracted services onsite at one time. This employee shall not also be counted as the operator of a piece of heavy equipment during the time they are performing duties of a construction supervisor.



## **A-8 Laborers**

The contractor shall provide laborers as necessary appropriate to install silt fence and erosion control materials (including erosion control matting, straw wattles, and filter fabric), perform seeding/mulching, miscellaneous construction tasks, and to clear of brush in accordance with project plans.

## **A-9 Construction Allowances**

The contract includes allowances for miscellaneous and ancillary materials, equipment, or services required to complete an assigned project task order. The contractor will bill direct cost and an additional amount of 10% for equipment and materials and 5% for services to provide for administration and carrying costs prior to reimbursement.

## **A-10 Work Area**

The equipment with operator and all necessary support personnel may be required to work anywhere west of the Tennessee River, within the state of Tennessee.

## **A-11 Contract Duration**

See Terms and Conditions Section of The Contract Documents

## **A-12 Unit Prices**

See Terms and Conditions Section of The Contract Documents

## **A-13 Vendor Liability**

- a. The vendor/contractor shall assume all responsibility for the operation and risk associated with the execution of the project, as outlined in the specifications, or as directed by the WTRBA and/or it's duly appointed agent(s).

## **A-14 Method of Payment**

- a. Payment shall be made at the contract unit prices. Such payments will constitute full compensation for all labor, materials, equipment, including, operation, maintenance, fuel costs, all personnel costs, including per diem, mobilization, and all miscellaneous, and incidental costs necessary for the completion of the work specified.

## **A-15 Working Conditions**

The WTRBA specifically advises potential contractors, that during the term of the contract, flood waters or excessive soil moisture depths in the working area may well prevent the Contractor from completing construction activities. **Downtime due to excessive water depths will not be paid for.**