



**TOWN OF COLLIERVILLE**  
GENERAL SERVICES DEPARTMENT  
500 POPLAR VIEW PARKWAY  
COLLIERVILLE, TENNESSEE 38017

**DIVISION 1**

## SECTION 01010

### SUMMARY OF WORK

#### 1.01 WORK COVERED BY CONTRACT DOCUMENTS REQUIREMENTS INCLUDED

##### A. Project Description

The WORK covered by this Contract comprises repairs to the Town of Collierville Shelton Road WWTP outfall line. Work includes, but may not be limited to, the following major components:

1. Excavation and removal of unsuitable soils
2. Place, compact and shape of fill soils.
3. Prepare slope for placement of concrete block armoring.
4. Placement of concrete block armoring with underlayment as recommended by armoring manufacturer.
5. Placement of rubble stone rip-rap with non-woven filter cloth underlayment.
6. Removal of existing manhole and 36" DIP outfall pipe.
7. Removal and relocation of existing concrete endwall with pipe stub and flapper valve.
8. Installation of 36" DIP outfall pipe and connection to pipe stub from concrete endwall.
9. Temporary piping, pumps, or other facilities required to maintain continuous flow of effluent from the WWTP.
10. Seeding, erosion and sediment control, and other items required in permit documents.
11. All other items required for a complete, functional project.

#### 1.02 SCOPE OF SERVICE

- A. Provide all items of work, labor and materials as called for in the contract documents.
- B. Submit shop drawings and receive approval of all materials from Town, prior to use in project.
- C. Submit construction schedule at pre-construction conference and list all items with long lead times.
- D. Insure that all work is clear of encroachment into property, outside of easements or right-of-ways.
- E. Do not close off public use of facilities until completion of one stage of construction or provide alternative usage approved by the Town.
- F. Contractor is to assume full responsibility for the safety and protection of all persons, property and materials associated with his/her work.

### **1.03 Use of Premises**

- A. Co-ordinate use of premises under the Town's Resident Inspector.
- B. Obtain and pay for additional storage or work areas if needed.
- C. Work Site is to be kept clean of trash and no mud will be allowed in existing roadways.

### **1.04 Additional Requirements**

- A. Any erosion control required will be furnished and installed as per Town's specification Section 2200 and standard details.
- B. All submittals shall be approved prior to contractor commencing work.
- C. Any additional specifications can be found on the Town's web site at [www.collierville.tn.com](http://www.collierville.tn.com).
- D. No Saturday or Sunday work will be allowed.
- E. Bypass pumping requires 24 hour monitoring.

END OF SECTION

**SECTION 01045**  
**CUTTING AND PATCHING**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall be responsible for all cutting, fitting and patching, including attendant excavation and backfill, required to complete the Work or to:
  - 1. Make its several parts fit together properly.
  - 2. Uncover portions of the Work to provide for installation and ill-timed work.
  - 3. Remove and replace defective work.
  - 4. Remove and replace work not conforming to requirements of Contract Documents.
  - 5. Remove samples of installed work as specified for testing.
  - 6. Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.

1.02 RELATED DOCUMENTS

- A. Section 01010: Summary of Work.
- B. Section 02210: Excavating and Backfilling

1.03 SUBMITTALS

- A. Submit a written request to Engineer well in advance of executing any cutting or alteration which affects:
  - 1. Work of the Owner or any separate contractor.
  - 2. Structural value of integrity of any element of the Project.
  - 3. Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
  - 4. Efficiency, operational life, maintenance or safety of operational elements.
  - 5. Visual qualities of sight-exposed elements.
- B. Request shall include:
  - 1. Identification of the Project.
  - 2. Description of affected work.
  - 3. Necessity for cutting, alteration or excavation.
  - 4. Effect on work of Owner or any separate contractor, or on structural or weatherproof integrity of Project.
  - 5. Description of proposed work:
    - a. Scope of cutting, patching, alteration, or excavation.
    - b. Trades who will execute the work.
    - c. Products proposed to be used.

- d. Extent of refinishing to be done.
  - 6. Alternatives to cutting and patching.
  - 7. Cost proposal, when applicable.
  - 8. Written permission of any separate contractor whose work will be affected.
- C. Should conditions of Work or the schedule indicate a change of products from original installation, Contractor shall submit request for substitution.
- D. Submit written notice to Engineer designating the date and the time the work will be uncovered.

## **PART 2 PRODUCTS**

### 2.01 MATERIALS

- A. Comply with specification and standards for each specific product involved.

## **PART 3 EXECUTION**

### 3.01 INSPECTION

- A. Inspect existing conditions of Project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect conditions affecting installation of Products, or performance of work.
- C. Report unsatisfactory or questionable conditions to Engineer in writing; do not proceed with work until Engineer has provided further instructions.

### 3.02 PREPARATION

- A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of work.
- B. Provide devices and methods to protect other portions of Project from damage.
- C. Provide protection from elements for that portion of the Project which may be exposed by cutting and patching work, and maintain excavations free from water.

### 3.03 PERFORMANCE

- A. Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods which will prevent settlement or damage to other work.

- C. Employ original Installer or Fabricator to perform cutting and patching for:
  - 1. Weather-exposed or moisture-resistant elements.
  - 2. Sight-exposed finished surfaces.
- D. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- E. Restore work which has been cut or removed; install new products to provide completed Work in accord with requirements of Contract Documents.
- F. Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
- G. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
  - 1. For continuous surfaces, refinish to nearest intersection.
  - 2. For an assembly, refinish entire unit.

END OF SECTION

**SECTION 01050**  
**FIELD ENGINEERING**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Provide and pay for field engineering services required for the Project.
  - 1. Survey work required in execution of Project.
  - 2. Civil, structural or other professional engineering services specified, or required to execute Contractor's construction methods.
- B. Owner's Representative will identify existing control points and property line corner stakes indicated on the drawings, as required.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract
- B. Section 01010: Summary of Work
- C. Section 01720: Record Documents

1.03 QUALIFICATIONS OF SURVEYOR OR ENGINEER

- A. Qualified engineer or registered land surveyor, acceptable to Contractor and Owner.
- B. Registered professional engineer of the discipline required for the specific service on the Project, if required, licensed in the state in which the project is located.

1.04 SURVEY REFERENCE POINTS

- A. Existing basic horizontal and vertical control points for the Project are those designated on drawings.
- B. Locate and protect control points prior to starting site work, and reserve all permanent reference points during construction.
  - 1. Make no changes or relocations without prior written notice to Engineer.
  - 2. Report to Engineer when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
  - 3. Require surveyor to replace project control points, which may be lost or destroyed.
    - a. Establish replacements based on original survey control.

1.05 PROJECT SURVEY REQUIREMENTS

- A. Establish a minimum of two permanent benchmarks on site, when not present, referenced to data established by survey control points.
  - 1. Record locations, with horizontal and vertical data, on Project Record Documents
- B. Establish lines and levels, locate and layout, by instrumentation and similar appropriate means:
  - 1. Site improvements
    - a. Stakes for grading, fill and topsoil placement.
    - b. Utility slopes and invert elevations.
  - 2. Batter boards for structures.
- C. From time to time, verify layouts by same methods.

#### 1.06 RECORDS

- A. Maintain a complete, accurate log of all control and survey work, if required, as it progresses.

#### 1.07 SUBMITTALS

- A. Submit name and address of Surveyor and professional engineer to Engineer.
- B. On request of Engineer, submit documentation to verify accuracy of field engineering work.
- C. Submit certificate signed by registered engineer or surveyor certifying that elevations and locations of improvements are in conformance, or non-conformance, with Contract Documents.

### **PART 2 PRODUCTS**

(Not Used)

### **PART 3 EXECUTION**

(Not Used)

END OF SECTION



**SECTION 01090**  
**REFERENCE STANDARDS**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Abbreviations and acronyms used in Contract Documents to identify reference standards.

1.02 QUALITY ASSURANCE

- A. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents or applicable codes establish stricter standards.
- B. Publication Date: The publication in effect on the date of issue of Contract Documents, except when a specific publication date is specified.

1.03 ABBREVIATIONS, NAMES, AND ADDRESSES OF ORGANIZATIONS

- A. Obtain copies of referenced standard direct from publication source, when needed for proper performance of Work, or when required for submittal by Contract Documents.

AASHTO American Association of State Highway and Transportation Officials  
444 North Capitol Street, N.W.  
Washington, D.C. 20001

ANSI American National Standards Institute  
(Formerly American Standards Association – ASA)  
1430 Broadway  
New York, New York 10018

AREA American Railroad Engineering Association  
2000 "L" Street, N.W.  
Washington, D.C. 20036

ASCE American Society of Civil Engineers  
345 East 47<sup>th</sup> Street  
New York, New York 10017

ASTM American Society for Testing and Materials  
1916 Race Street  
Philadelphia, Pennsylvania 19103

AWWA American Water Works Association  
6666 W. Quincy Avenue  
Denver, Colorado 80235

FHWA Federal Highway Administration  
Federal Building, U.S. Courthouse  
Nashville, Tennessee 37202

FSS Federal Specification and Standards  
General Services Administration  
Specifications and Consumer Information Distribution Section (WFSIS)  
Washington Navy Yard, Building 197  
Washington, D.C. 20407

TDOT Tennessee Department of Transportation  
James K. Polk Building  
505 Deaderick Street  
Nashville, Tennessee 37219  
TDEC

**PART 2 PRODUCTS ADA & ADAAG  
MUTCD**

(Not Used)

**PART 3 EXECUTION**

(Not Used)

END OF SECTION

**SECTION 01150  
MEASUREMENT AND BASIS OF PAYMENT**

**PART 1 – GENERAL**

**1.01 GENERAL**

A. For the information and guidance of bidders, the following explanation of the Bid Form items is made. The omission of reference to any item in this description shall not, however, alter the intent of the Bid Form or relieve the Contractor of the necessity of furnishing such as part of the Contract(s). The quantities set forth in the Bid Form are approximate and are given to establish a uniform basis for the comparison of Bids. The Town reserves the right to increase or decrease the quantity of any class or portion of the work during the progress of construction in accordance with the terms of the Contract. Unit prices are used as a means of computing the final figures for Bid and Contract purposes, for periodic payments for work performed, for determining the value of additions or deletions and wherever else as is reasonable.

B. Payment will be made based on Work actually performed completing each item in the Contract, such work including, but not limited to, the furnishing of all necessary labor, materials, equipment, transportation, clean up, and all other appurtenances to complete the construction, installation, testing and commissioning of the work to the configuration and extent as shown on the Project Plans and as described in the Specifications.

C. Notwithstanding any other Sections, paragraphs, sentences, or words in the Contract Documents, payments shall not be made for work not performed, materials not supplied and/or any other item/items for which the Town does not receive the benefit described or intended.

D. Clearing and Grubbing - No separate payment shall be made for clearing and grubbing. The price for clearing and grubbing shall be included in the price of other items in the Bid Form.

**1.02 PAY ITEMS**

**I. MOBILIZATION - ITEM 1**

A. Mobilization to the job site is a Lump Sum pay item. Cost to include all contractors incurred mobilization and demobilization costs associated with the Project. Payment under this item is limited to the Unit Price Bid or 3.00% of the Project Bid Total, whichever is less. Payment shall be made at one-half the Bid price for mobilization and one-half of the Bid price for demobilization.

B. If the contractor is required to pull all personnel and equipment off the job at the request of the Town and is subsequently required to re-mobilize, then contractor would be paid the lump sum price for mobilization a second time in two payments as outlined in "A" above.

## II. SITE GRADING TO INCLUDE EXCAVATION AND BORROW – ITEM 2

A. Payment for Excavation and Grading shall be at the Contract Lump Sum Price and shall be considered full compensation for the full excavation, including rock, and finish grading of the project as shown and described on the Plans and Specifications.

B. No separate payment shall be made for hauling, storage and disposal of excavated earth, nor for any sheeting, shoring, pumping, bailing, draining, backfilling, borrow excavation, removal and/or disposal of vegetative growth, debris or waste material, or similar work.

C. No separate measurement or payment will be made for trench excavation for storm drains and other pipelines, nor for any other appurtenant facilities such as foundations, manholes, inlets, outlets, headwalls, collars, saddles, piers, and pipe protection or encasement. Payment for all such excavation shall be included in the unit prices bid per item or per linear foot of pipe laid as provided for in the contract Bid Form

D. Payment shall include excavation, fill, and compaction required to prepare the stream bank for placement of the armoring materials.

## III. UNSUITABLE MATERIAL REMOVAL AND REPLACEMENT – ITEM 3

A. No geotechnical investigation was performed as part of the contract documents or plans. Therefore, the Town of Collierville is unaware of the subgrade conditions at the project site. Unsuitable material may or may not exist on this project, as such the unit price for unsuitable material removal and replacement is an allowance for this work. This amount serves primarily as a budgetary placeholder and will be adjusted to a specific value as the requirements for removal or replacement are known. For the purposes of 01150 – Item 3, measurement and

payment, payment for the removal and replacement of unsuitable material, as determined by the Town's representative, shall consist of removal and replacement of unsuitable soils as directed by the Town's representative.

B. Payment for unsuitable material removal and replacement shall be at Contract Unit Price per cubic yard, and shall be considered full compensation for all materials, equipment, labor, hauling, storage, disposal, etc., necessary to complete the excavation, grading, and/or finish grading.

III. INSTALL 8 L.F. 36" DUCTILE IRON PIPE (DIP), INCLUDING BENDS AND COUPLINGS – ITEM 4

A. Payment for the installation of 8 L.F. of 36" ductile iron pipe, including bends and couplings shall be at the Contract Lump Sum Price and shall include all necessary labor, materials, and equipment for furnishing and laying of the pipe; dewatering if required; special restrained joints as required; clamps; harnessing; adapters; excavation of all material encountered including rock; backfill with suitable material, temporary fencing, other temporary controls and barricades; replacement of grass or sod; clean up.

IV. DEMOLITION OF 21 L.F. 24" ABANDONED PIPE, EXISTING MANHOLE, AND 20 L.F. EXISTING 36" DIP – ITEM 5

A. Payment for demolition and disposal shall be at the Contract Lump Sum Price for demolition and disposal of all material pertaining to the 21 L.F. of 24" abandoned pipe, the existing manhole and 20 L.F. of existing 36" DIP to be removed. The price shall include furnishing all labor, material, and equipment required to complete the work as detailed on the Plans.

B. Disposal of the removed materials shall be in accordance with all federal, state, and local requirements.

V. RELOCATION OF EXISTING HEADWALL TO INCLUDE COUPLINGS, EXISTING PIPE, EXISTING HEADWALL, AND EXISTING FLAPPER CHECK VALVE – ITEM 6

A. Payment for the relocation of the existing headwall shall be at the Contract Lump Sum Price and shall include couplings, existing headwall, and existing flapper check valve. The price shall include furnishing all labor, material, and equipment required to complete the work as detailed on the Plans.

B. Price shall include cutting the existing pipe to facilitate coupling to the new pipe, removal and relocation of the headwall and flapper valve as a unit, connection to the new pipe, bedding and backfill. 01150 – V.

VI. INSTALL RIVERBANK ARMOR, MATTING, AND UNDERLAYMENT – ITEM 7

A. Payment for riverbank armor shall be at the Contract Unit Price per square yard (SY) for furnishing and installation of the armoring. Payment shall be compensation for all armor material, matting, and any other underlayment materials required to form a complete, functional system.

B. The price shall include furnishing all labor, material, and equipment required to complete the work as detailed on the Plans and further described in the Specifications.

VII. RIPRAP TRANSITION TRENCH – ITEM 8

A. Payment for the installation of riprap transition trench shall be at the Contract Unit Price per installed trench. The price for each trench shall include trench excavation, riprap material, geofabric and connections to the armoring underlayment materials. The price shall include furnishing all labor, material, and equipment required to complete the work as detailed on the Plans.

VIII. SITE RESTORATION TO INCLUDE SEEDING – ITEM 9

A. Payment for site restoration and seeding shall be made at the Contract Lump Sum Price and shall be considered full compensation for final restoration and seeding. Payment shall be compensation for cleanup of all areas of the Work and fine grading and seeding all disturbed areas with seeding types as listed in the Specifications for the areas and seasons as appropriate as the Work progresses. All areas where poor vegetation cover has been noted by April 1st of the year following the initial seeding shall be fine graded and re-seeded.

IX. EROSION AND SEDIMENT CONTROL – ITEM 10

A. Payment to the contractor for erosion and sediment control devices shall be at the Contract Lump Sum Price for the erosion control system as shown on the drawings and/or, as required to prevent erosion and sediment transport to the adjacent and downstream drainage-ways during construction activities and, until vegetation is established. The price shall include furnishing all labor, material, and equipment required to install a functional erosion control system.

B. Payment shall include furnishing, operating, and maintaining an effective erosion control system in accordance with Tennessee "Erosion and Sediment Control Handbook" latest edition.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

## SECTION 01340

### SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. Submit Shop Drawings, Product Data and Samples required by Contract Documents.

##### 1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract: Definitions, and Additional Responsibilities of Parties.
- B. Section 1090: Reference Standards
- C. Section 01720: Record Documents
- D. Designate in the construction schedule, or in a separate coordinated schedule, the dates for submission and the dates that reviewed Shop Drawings, Product Data and Samples will be needed.

##### 1.03 SHOP DRAWINGS

- A. Drawings shall be presented in a clear and thorough manner.
  - 1. Details shall be identified by reference to sheet and detail, schedule or room numbers shown on Contract Drawings.
- B. Minimum sheet size: 8 ½" x 11".

##### 1.04 PRODUCT DATA

- A. Preparation:
  - 1. Clearly mark each copy to identify pertinent products or models.
  - 2. Show performance characteristics and capacities.
  - 3. Show dimensions and clearances required.
  - 4. Show wiring or piping diagrams and controls.
- B. Manufacturer's standard schematic drawings and diagrams:
  - 1. Modify drawings and diagrams to delete information which is not applicable to the Work.
  - 2. Supplement standard information to provide information specifically applicable to the Work.

##### 1.05 SAMPLES



- A. Office samples shall be of sufficient size and quantity to clearly illustrate:
  - 1. Functional characteristics of the product, with integrally related parts and attachment devices.
  - 2. Full range of color, texture and pattern.

#### 1.06 CONTRACTOR RESPONSIBILITIES

- A. Review Shop Drawings, Product Data and Samples prior to submission.
- B. Determine and verify:
  - 1. Field measurements
  - 2. Field construction criteria
  - 3. Catalog numbers and similar data
  - 4. Conformance with specifications
- C. Coordinate each submittal with requirements of the Work and of the Contract Documents.
- D. Notify the Engineer in writing, at time of submission, of any deviations in the submittals from requirements of the Contract Documents.
- E. Begin no fabrication or work, which requires submittals until return of submittals with Engineer approval.

#### 1.07 SUBMISSION REQUIREMENTS

- A. Make submittals promptly in accordance with approved schedule, and in such sequence as to not cause a delay in the Work or in the work of any other contractor.
- B. Number of submittals required:
  - 1. Shop Drawings: Submit the number of opaque reproductions, which the Contractor requires, plus two copies which will be retained by the Engineer.
  - 2. Product Data: Submit the number of copies, which the Contractor requires, plus two, which will be retained by the Engineer.
  - 3. Samples: Submit the number stated in each specification section.
- C. Submittals shall contain:
  - 1. The date of submission and the dates of any previous submissions.
  - 2. The project title and number.
  - 3. Contract identification.
  - 4. The names of:
    - a. Contractor
    - b. Supplier
    - c. Manufacturer
  - 5. Identification of the project, with the specification section number.

6. Field dimensions, clearly identified as such.
7. Relation to adjacent or critical features of the Work or materials.
8. Applicable standard, such as ASTM or Federal Specification numbers.
9. Identification of deviations from Contract Documents.
10. Identification of revisions on resubmittals.
11. An 8 in. x 3 in. blank space for Contractor and Engineer stamps.
12. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the Work of Contract Documents.
13. MSDS Product Data

#### 1.08 RESUBMISSION REQUIREMENTS

- A. Make any corrections or changes in the submittals required by the Engineer and resubmit until approved.
- B. Shop Drawings and Product Data:
  1. Revise initial drawings or data, and resubmit as specified for the initial submittal.
  2. Indicate any changes which have been made other than those requested by the Engineer.
- C. Samples: Submit new samples as required for initial submittal.

#### 1.09 DISTRIBUTION

- A. Distribute reproductions of Shop Drawings and copies of Product Data, which carry the Engineer stamp of approval to:
  1. Job site file
  2. Record Documents file
  3. Other affected contractors
  4. Subcontractors
  5. Supplier or fabricator
- B. Distribute samples, which carry the Engineer stamp of approval as directed by Engineer.

#### 1.10 ENGINEER DUTIES

- A. Review submittals with reasonable promptness and in accord with schedule.
- B. Affix stamp and initials or signature, and indicate requirements for resubmittal, or approval of submittal.
- C. Return submittals to Contractor for distribution, or for resubmission.

**PART 2 PRODUCTS**

(Not Used)

**PART 3 EXECUTION**

(Not Used)

END OF SECTION

## **SECTION 01530**

### **BARRIERS**

#### **PART 1 GENERAL**

##### **1.01 REQUIREMENTS INCLUDED**

- A. Furnish, install and maintain suitable barriers as required to prevent public entry, and to protect the Work, existing facilities, trees and plants from construction operations; remove when no longer needed, or at completion of Work.

##### **1.02 RELATED REQUIREMENTS**

- A. Section 01010: Summary of Work
- B. Section 01520: Construction Aids
- C. Section 01580: Signs

#### **PART 2 PRODUCTS**

##### **2.01 MATERIALS, GENERAL**

- A. Materials must not violate requirements of applicable codes and standards.

##### **2.02 FENCING**

- A. Minimum fence height 6 feet.

##### **2.03 BARRIERS**

- A. Materials to Contractor's option, as appropriate to serve required purpose.

#### **PART 3 EXECUTION**

##### **3.01 GENERAL**

- A. Install facilities of a neat and reasonable uniform appearance, structurally adequate for required purposes.
- B. Maintain barriers during entire construction period.
- C. Relocate barriers as required by progress of construction.

### 3.02 FENCES

- A. Prior to start of work at the Project site, install enclosure fence with suitable locked entrance gates.
  - 1. Locate as shown on drawings.

### 3.03 TREE AND PLANT PROTECTION

- A. Preserve and protect existing trees and plants at site, which are designated to remain, and those adjacent to site.
- B. Consult with Engineer and remove agreed-on roots and branches, which interfere with construction.
  - 1. Employ qualified tree surgeon to remove, and to treat cuts.
- C. Provide temporary barriers to a height of four feet, around each, or around each group, of trees and plants.
- D. Protect root zones of trees and plants:
  - 1. Do not allow vehicular traffic or parking.
  - 2. Do not store materials or products.
  - 3. Prevent dumping of refuse or chemically injurious materials or liquids.
  - 4. Prevent puddling or continuous running water.
- E. Carefully supervise excavating, grading and filling, and subsequent construction operations, to prevent damage.
- F. Replace, or suitably repair, trees and plants designated to remain, which are damaged or destroyed due to construction operations.

### 3.04 REMOVAL

- A. Completely remove barricades, including foundations, when construction has progressed to the point that it is no longer needed and when approved by the Engineer.
- B. Clean and repair damage caused by installation, fill and grade areas of the site to required elevations and slopes, and clean the area.

END OF SECTION

## SECTION 01580

### PROJECT IDENTIFICATION AND SIGNS

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. Furnish, install and maintain project identification sign.
- B. Provide temporary on-site informational signs to identify key elements of construction facilities.
- C. Remove signs on completion of construction.
- D. Allow no other signs to be displayed.

##### 1.02 RELATED REQUIREMENTS

- A. Section 01010: Summary of Work
- B. Section 01510: Temporary Utilities
- C. Section 01570: Traffic Regulation

##### 1.03 PROJECT IDENTIFICATION SIGN

- A. One painted sign, of not less than 32 square feet area, with painted graphic content to include:
  - 1. Title of Project
  - 2. Name of Owner
  - 3. Names and titles of Owner's officials
  - 4. Names and titles of:
    - a. Engineer
    - b. Professional Consultants
  - 5. Prime Contractor
  - 6. Major Subcontractors
  - 7. Funding Agency, if other than Owner
- B. Graphic design, style of lettering, and colors: As designated by Project Engineer and approved by Planning Department.
- C. Erect on the site at a lighted location of high public visibility, adjacent to main entrance to site, as approved by permit.

##### 1.04 INFORMATIONAL SIGNS

- A. Painted signs with painted lettering, or standard products.
  - 1. Size of signs and lettering: as required by regulatory agencies, or as appropriate to usage.
  - 2. Colors: as required by regulatory agencies, otherwise of uniform colors throughout Project.
- B. Erect at appropriate locations to provide required information.

#### 1.05 QUALITY ASSURANCE

- A. Sign Painter: Professional Experience in type of work required.
- B. Finishes, Painting: Adequate to resist weathering and fading for scheduled construction period.

### **PART 2 PRODUCTS**

#### 2.01 SIGN MATERIALS

- A. Structure and Framing: May be new or used, wood or metal, in sound condition structurally adequate to work and suitable for specified finish.
- B. Sign Surfaces: Exterior softwood plywood with medium density overlay, standard large sizes to minimize joints.
  - 1. Thickness: As required by standards to span framing members, to provide even, smooth surface without waves or buckles.
- C. Rough Hardware: Galvanized
- D. Paint: Exterior quality.
  - 1. Use Bulletin colors for graphics.
  - 2. Colors for structure, framing, sign surfaces and graphics: As selected by Engineer.

### **PART 3 EXECUTION**

#### 3.01 PROJECT IDENTIFICATION SIGN

- A. Paint exposed surfaces of supports, framing and surface material; one coat of primer and one coat of exterior paint.
- B. Paint graphics in styles, sizes and colors selected.

#### 3.02 INFORMATIONAL SIGNS

- A. Paint exposed surfaces: one coat of primer and one coat of exterior paint.

- B. Paint graphics in styles, sizes and colors selected.
- C. Install at a height for optimum visibility, on ground-mounted poles or attached to temporary structural surfaces.

### 3.03 MAINTENANCE

- A. Maintain signs and supports in a neat, clean condition; repair damages to structure, framing or sign.
- B. Relocate information signs as required by progress of the work.

### 3.04 REMOVAL

- A. Remove signs, framing, supports and foundations at completion of project.

END OF SECTION



## SECTION 01600

### MATERIAL AND EQUIPMENT

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

- A. Material and equipment incorporated into the Work:
  - 1. Conform to applicable specification and standards.
  - 2. Comply with size, make, type and quality specified, or as specifically approved in writing by the Engineer.
  - 3. Manufactured and Fabricated Products:
    - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
    - b. Manufacture like parts of duplicate units to standard sizes and gages, to be interchangeable.
    - c. Two or more items of the same kind shall be identical, by the same manufacturer.
    - d. Products shall be suitable for service conditions.
    - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
  - 4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

##### 1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract
- B. Section 01010: Summary of Work
- C. Section 01340: Shop Drawings, Product Data & Samples
- D. Section 01710: Cleaning

##### 1.03 REUSE OF EXISTING MATERIAL

- A. Except as specifically indicated or specified, materials and equipment removed from the existing structure, if any, shall not be used in the completed work.
- B. For material and equipment specifically indicated or specified to be reused in the Work:
  - 1. Use special care in removal, handling, storage and reinstallation, to assure proper function in the completed Work.
  - 2. Arrange for transportation, storage and handling of products that require off-site storage, restoration or renovation. Pay all costs for such work.

#### 1.04 MANUFACTURER'S INSTRUCTIONS

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two copies to Engineer.
  - 1. Maintain one set of complete instructions at the job site during installation and until completion.
- B. Handle, install, connect, clean, condition and adjust products in strict accord with such instruction, consult with Engineer for further instructions.
  - 1. Should job conditions or specified requirements conflict with manufacturer's instruction, consult with Engineer for further instructions.
  - 2. Do not proceed with work without clear instructions.
- C. Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

#### 1.05 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of Products in accord with construction schedules, coordinate to avoid conflict with work and conditions at the site.
  - 1. Deliver Products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
  - 2. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that Products are properly protected and undamaged.
- B. Provide equipment and personnel to handle Products by methods to prevent soiling and damage to Products or packaging.

#### 1.06 STORAGE AND PROTECTION

- A. Store Products in accord with manufacturer's instructions with seals and labels intact and legible.
  - 1. Store products subject to damage by the elements in weather tight enclosures.
  - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
- B. Exterior Storage
  - 1. Store fabricated products above the ground, on blocking or skids, prevent soiling or staining. Cover products which are subject to deterioration with impervious sheet coverings, provide adequate ventilation to avoid condensation.

2. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- C. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored Products to assure that Products are maintained under specified conditions, and free from damage or deterioration.

#### 1.07 SUBSTITUTIONS AND PRODUCT OPTIONS

##### A. Products List:

1. Within 30 days after Contract Date, submit to Engineer a complete list of major products proposed to be used, with the name of the manufacturer and the installing subcontractor.

##### B. Contractor's Options

1. For Products specified only by reference standard, select any product meeting that standard.
2. For Products specified by naming one or more Products or manufacturers, select any one of the products or manufacturers named, which complies with the specifications.
3. For Products specified by naming one or more Products or manufacturers and "or equal", Contractor must submit a request as for substitutions for any Product or manufacturer not specifically named.
4. For Products specified by naming only one Product and manufacturer, there is no option.

##### C. Substitutions

1. For a period of 30 days after Contract Date, Engineer will consider written requests from Contractor for substitution of Products.
2. Submit a separate request for each Product, supported with complete data, with drawings and samples as appropriate, including:
  - a. Comparison of qualities of the proposed substitution with that specified.
  - b. Changes required in other of the work because of the substitution.
  - c. Effect on the construction schedule.
  - d. Cost data comparing the proposed substitution with the Product specified.
  - e. Any required license fees or royalties.
  - f. Availability of maintenance service, and source of replacement materials.
3. Engineer shall be the judge of the acceptability of the proposed substitution.

##### D. Contractor's Representation

1. At the request for a substitution constitutes a representation that Contractor:
  - a. Has investigated the proposed Product and determined that it is equal to or superior in all respects to that specified.
  - b. Will provide the same warranties or bonds for the substitution as for the Product specified.

- c. Will coordinate the installation of an accepted substitution into the Work, and make such other changes as may be required to make the Work complete in all respects.
  - d. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.
- E. Engineer will review requests for substitutions with reasonable promptness, and notify Contractor, in writing, of the decision to accept or reject the requested substitution.

**PART 2 PRODUCTS**

(Not Used)

**PART 3 EXECUTION**

(Not Used)

END OF SECTION

## **SECTION 01710**

### **CLEANING**

#### **PART 1 GENERAL**

##### **1.01 REQUIREMENTS INCLUDED**

- A. Execute cleaning, during progress of the Work, and at completion of the Work, as required by General Conditions.

##### **1.02 RELATED REQUIREMENTS**

- A. Conditions of the Contract
- B. Section 01560: Temporary Controls
- C. Each Specification Section: Cleaning for specific Products or work.
- D. Section 02200 Erosion Control

##### **1.03 DISPOSAL REQUIREMENTS**

- A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

#### **PART 2 PRODUCTS**

##### **2.01 MATERIALS**

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

#### **PART 3 EXECUTION**

##### **3.01 DURING CONSTRUCTION**

- A. Execute daily cleaning to keep Work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.

- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

### 3.02 DUST CONTROL

- A. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
- B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.

### 3.03 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- D. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify that the entire Work is clean.

END OF SECTION

**SECTION 01720**  
**PROJECT RECORD DOCUMENTS**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Maintain at the site for the Owner one record copy of:
  - 1. Drawings
  - 2. Specifications
  - 3. Addenda
  - 4. Change Orders and other Modifications to the Contract
  - 5. Engineer Field Orders or written instructions
  - 6. Approved Shop Drawings, Product Data and Samples
  - 7. Field Test records
  - 8. Construction photographs
  - 9. SWPPP
  - 10. Erosion Control Inspection Reports

1.02 RELATED REQUIREMENTS

- A. Section 01340: Shop Drawings, Product Data and Samples
- B. Section 1600: Materials and Equipment

1.03 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
  - 1. Provide files and racks for storage of documents.
  - 2. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI/CSC format.
- C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by Engineer.

1.04 MARKING DEVICES

- A. Provide felt tip marking pens for recording information in the color code designated by Engineer.

1.05 RECORDING

A. Label each document "PROJECT RECORD" in neat large printed letters.

B. Record information concurrently with construction progress, asbuilts, etc.

1. Do not conceal any work until required information is recorded.

**1.06 SUBMITTAL**

A. At Contract closeout, deliver Record Documents to Engineer for the Owner.

B. Accompany submittal with transmittal letter in duplicate, containing:

1. Date

2. Project title and number

3. Contractor's name and address

4. Title and number of each Record Document

5. Signature of Contractor or his authorized representative

**PART 2 PRODUCTS**

(Not Used)

**PART 3 EXECUTION**

(Not Used)

END OF SECTION