

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 DESCRIPTION

- A. This Section describes the methods for Measurement and Payment for the Work of this Contract.
- B. As noted below, Measurement and Payment of Work will be made, and payment for Work will be taken to be included in, and covered by, the Contract unit prices and lump sum payment methods for the various bid items listed in CONTRACTOR's Bid Schedule.
- C. CONTRACTOR shall provide necessary transportation, tools, equipment, labor, materials (where identified), Construction Quality Control testing, and survey personnel as required.
- D. Alternate Work Items shall be performed by the CONTRACTOR at the direction of the OWNER as determined at the time of Contract award. Pricing shall be submitted for each Alternate Item in order for the Bid to be considered responsive.

1.02 ENGINEER'S ESTIMATE OF QUANTITIES

- A. Bid items and estimated quantities are identified in CONTRACTOR's Bid Schedule of the Contract Documents. The estimated quantities for unit price pay items are approximate only and are included solely for the purpose of comparison of Bids. OWNER does not expressly or by implication agree that the nature of the materials encountered below the surface of the ground or the actual quantities of material encountered or required will correspond with the estimated quantities.

1.03 PAYMENT FOR STORED MATERIAL

- A. Where identified under Part 1.04 (Bid Items) below, CONTRACTOR may request payment for stored materials provided CONTRACTOR delivers and stores the material on-site. Storage shall conform to applicable Specifications and Manufacturer recommendations.
- B. Payment shall be based on submittal of supplier invoices for stored materials. No mark-up of supplier invoices shall be allowed.

- C. No more than 50 percent of the total Bid Price may be paid for stored materials. The remaining Bid Price shall be paid upon completion and acceptance of the Work pursuant to the Drawings.
- D. CONTRACTOR is responsible for protection of stored materials. Any materials that are lost or damaged during storage shall be replaced by CONTRACTOR at no cost to OWNER.

1.04 BID ITEMS

- A. Bid Item Number 1: Mobilization/Demobilization
 - 1. Measurement for payment will not be made for this item.
 - 2. Payment of the lump sum listed in the Bid Form for this Bid Item will be prorated as follows for work covered by each payment request submitted by the CONTRACTOR: 50% for the first invoice and 30% per month thereafter to a maximum of 80% of the item total. The remaining 20% shall be held and payable with CONTRACTOR's final payment.
 - 3. The lump sum price shall include and cover the furnishing of all materials, labor, tools, and equipment necessary for CONTRACTOR to mobilize the necessary operations to the project site, including: the initial movement of personnel and equipment to the project site; application, fee payment, and acquisition for all necessary permits; the establishment and preparation, as needed, of CONTRACTOR's shops, plants, storage areas, laydown areas, field office, temporary water, electrical, telephone, sanitary and other temporary facilities; and all office overhead and administrative expenses required for the Work included in this Contract.
 - 4. The lump sum price shall include, but not be limited to:
 - a. preparation of a Site-Specific Health and Safety Plan;
 - b. preparing and maintaining all project safety and other records required by this Contract;
 - c. preparation of a Dam Face Preparation Work Plan as detailed in the drawings;
 - d. preparation of a Shotcrete Application Work Plan and submittal package as detailed in the drawings;
 - e. the cost of CONTRACTOR's insurance requirements for the duration of the Work; and
 - f. the cost of furnishing and maintaining performance and payment bonds as required in the Project Specifications for the duration of the Work.
 - 5. The lump sum price shall include and cover demobilizing all materials, labor, tools, and personnel and equipment from the project site; dismantling of CONTRACTOR's shops, plants, storage areas, field office, temporary water, electrical, telephone, sanitary, and all other activities required for the project closeout.
 - 6. Mobilization/Demobilization may not be more than 20% of the total bid price.

B. Bid Item Number 2: Project Surveying

1. Measurement for payment will not be made for this item.
2. Payment of the lump sum price listed in the Bid Form for this Bid Item will be prorated based on the actual work accomplished by the Surveyor for work covered by each payment request submitted by CONTRACTOR. CONTRACTOR shall submit proof of survey work performed through survey work products.
3. The lump sum price shall include and cover the furnishing of all labor, materials, tools, supervision, transportation, and equipment necessary to perform surveying work as specified in the drawings for all portions of the project including establishing and maintaining survey control points, providing survey control during construction, providing required working drawings, and providing survey support for payment applications. Work includes, but is not limited to:
 - a. pre-construction survey of dam surface, including existing stormwater piping;
 - b. survey of the dam surface and toe following removal of deteriorated RCC material;
 - c. survey of the toe-drain pipe; and
 - d. survey of the completed dam surface.
 - e.

C. Bid Item Number 3: Working Pad

1. Measurement for payment will not be made for this item.
2. Payment of the lump sum price listed in the Bid Form for this Bid Item will be prorated based on the contract schedule as agreed to between OWNER and CONTRACTOR.
3. The lump sum price shall include and cover the furnishing of all labor, materials, tools, supervision, transportation, and equipment necessary to construct and maintain the working pad as shown on the Drawings.
4. The lump sum price also includes materials supply and delivery to the site, proper protection, and storage until placement.
5. No payment will be made for stored materials.

D. Bid Item Number 4: Site Preparation / Restoration

1. Measurement for payment will not be made for this item.
2. Payment of the lump sum price listed in the Bid Form for this Bid Item will be prorated based on actual work as accomplished for work covered by each Application for Payment.
3. The lump sum bid price shall include all labor, tools, equipment, supervision, and materials necessary to prepare the site for rehabilitation of the downstream face of the dam. Work includes, but is not limited to:
 - a. E&S Controls as shown on the Drawings;
 - b. Removal and reinstallation of the chain link fence fabric on the downstream crest of the dam;

- c. Removal and reinstallation of the existing stormwater piping and appurtenant fixtures from the face of the dam; and
 - d. Installation and maintenance of a temporary stormwater pump around for the duration of the project or until the existing stormwater piping has been reinstalled.
 4. No payment will be made for stored materials.
- E. Bid Item Number 5: RCC Dam Face Preparation
 1. Measurement for payment will be made on an in-place, square foot basis.
 2. Payment of the unit price listed in the Bid Schedule for this Bid Item will be based on the as-built area as listed in the Bid Schedule and shall be measured based on the surface area of the dam prepared for shotcrete installation.
 3. The per square foot bid price shall include all labor, tools, equipment, supervision, and materials necessary to prepare the face of the dam for shotcrete installation by removing loose and unsuitable material from the downstream face of the dam in accordance with the drawing specifications. Work includes, but not be limited to:
 - a. performing a demonstration of the face preparation activities;
 - b. dust control during dam face preparation; and
 - c. management, loading, transporting, and stockpiling of material removed from the face of the dam, to a location at the Reich's Ford Landfill Site, as identified by the County.
 4. No payment will be made for stored materials.
- F. Bid Item Number 6: RCC Dam Shotcrete Cover – As-Shot Gun Finish
 1. Measurement for payment will be made on a per square foot basis.
 2. Payment of the unit price listed in the Bid Form for this Bid Item will be based on the as-built area of actual work accomplished as listed in the Bid Schedule.
 3. The per square foot bid price shall include all labor, tools, equipment, supervision, materials, and testing necessary to install the dam shotcrete cover as shown on the Drawings. Work includes, but is not limited to:
 - a. installation of welded wire fabric reinforcement;
 - b. placement of shotcrete cover;
 - c. finishing of the shotcrete cover; and
 - d. application of crack sealant at the top of the dam.
 4. Payment shall not be made for waste, overlap, or repairs.
 5. Payment may be requested for stored materials.
- G. Bid Item Number 7: Rebar Anchor Installation
 1. Measurement for payment will be made on a unit rate basis for each rebar anchor installed.
 2. Payment will be made at the unit rate listed in the Bid Schedule for this Bid Item.

3. The unit rate bid price shall include all labor, tools, equipment, supervision, and materials necessary to install the rebar anchors as shown on the Drawings. Work includes, but is not limited to:
 - a. drilling the holes for the rebar anchors;
 - b. cleaning the debris from the drilled holes;
 - c. placement of epoxy adhesive within the holes; and
 - d. installation of rebar anchors.
4. No payment will be made until after the rebar anchors are installed pursuant to the locations required in the Drawings. No payment will be made for stored materials.

H. Bid Item Number 8: Toe Drain

1. Measurement for payment will be made on a per linear foot basis and will be measured from the end of pipe.
2. Payment of the unit price listed in the Bid Form for this Bid Item will be based on the as-built length of actual work accomplished.
3. The per linear foot price shall include all labor, materials, tools, supervision, transportation, and equipment necessary to install the toe drain as shown on the Drawings. Work includes, but is not limited to:
 - a. excavation;
 - b. geotextile separator;
 - c. coarse aggregate;
 - d. drain pipe; and
 - e. common fill.
4. Payment will be made after the piping is completed and accepted pursuant to the Drawings. No payment will be made for replacement of materials damaged during installation or during storage on site. No payment will be made for stored materials.

I. Bid Item Number 9: Drain Strips

1. Measurement for payment will be made on a per linear foot basis.
2. Payment of the unit price listed in the Bid Form for this Bid Item will be based on the as-built length of actual work accomplished.
3. The per linear foot price shall include all labor, materials, tools, supervision, transportation, and equipment necessary to install the Drain Strips as shown on the Drawings.
4. Payment will be made after the Drain Strip installation is complete and accepted pursuant to the Drawings. No payment will be made for replacement of materials damaged during installation, waste materials, overlaps, or repairs. No payment will be made for stored materials.

1.05 ALTERNATE BID ITEMS

A. Bid Item Number A1: Install New Chain Link Fence Fabric

1. Measurement for payment will be made on a per linear foot basis.

2. Payment of the unit price listed in the Bid Form for this Bid Item will be based on the as-built length of actual work accomplished as listed in the Bid Schedule.
 3. The per linear foot price shall include all labor, materials, tools, supervision, transportation, and equipment necessary to install new chain link fence fabric at the OWNER's request.
 4. Payment will be made after the fabric is completed and accepted pursuant to the Drawings. No payment will be made for replacement of materials damaged during installation or during storage on site. No payment will be made for stored materials.
- B. Bid Item Number A2: Install New Stormwater Piping
1. Measurement for payment will not be made for this item.
 2. Payment of the lump sum price listed in the Bid Form for this Bid Item will be prorated based on actual work as accomplished for work covered by each Application for Payment.
 3. The lump sum price shall include all labor, materials, tools, supervision, transportation, and equipment necessary to install new stormwater piping at the OWNER's request.
 4. Payment will be made after the stormwater piping is completed and accepted pursuant to the Drawings. No payment will be made for replacement of materials damaged during installation or during storage on site. No payment will be made for stored materials.
- C. Bid Item Number A3: RCC Dam Shotcrete Cover – Knife Finish
1. Measurement for payment will be made on a per square foot basis.
 2. Payment of the unit price listed in the Bid Form for this Bid Item will be based on the as-built area of actual work accomplished as listed in the Bid Schedule.
 3. The per square foot bid price shall include all labor, tools, equipment, supervision, materials, and testing necessary to install the dam shotcrete cover as shown on the Drawings. Work includes, but is not limited to:
 - a. installation of welded wire fabric reinforcement;
 - b. placement of shotcrete cover;
 - c. finishing of the shotcrete cover; and
 - d. application of crack sealant at the top of the dam.
 4. Payment shall not be made for waste, overlap, or repairs.
 5. Payment may be requested for stored materials.
- D. Bid Item Number A4: RCC Dam Shotcrete Cover – Trowel Finish
1. Measurement for payment will be made on a per square foot basis.
 2. Payment of the unit price listed in the Bid Form for this Bid Item will be based on the as-built area of actual work accomplished as listed in the Bid Schedule.
 3. The per square foot bid price shall include all labor, tools, equipment, supervision, materials, and testing necessary to install the dam shotcrete cover as shown on the Drawings. Work includes, but is not limited to:

- a. installation of welded wire fabric reinforcement;
 - b. placement of shotcrete cover;
 - c. finishing of the shotcrete cover; and
 - d. application of crack sealant at the top of the dam.
4. Payment shall not be made for waste, overlap, or repairs.
 5. Payment may be requested for stored materials.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.01 APPLICATION FOR PAYMENT FORM

- A. CONTRACTOR shall use the Application for Payment Form provided in this Specification Section or ENGINEER approved equivalent.

3.02 SUPPORT DOCUMENTATION FOR APPLICATIONS FOR PAYMENT

- A. CONTRACTOR is responsible to obtain and submit all support documentation (surveyed quantities, bills of lading, subcontractor invoices, etc.) required for verification of pay applications. ENGINEER shall verify payment quantities based on the information provided.
- B. Should ENGINEER determine that insufficient data has been submitted to accurately verify a pay application, ENGINEER shall notify CONTRACTOR of deficiencies. CONTRACTOR shall address identified deficiencies prior to further review and payment processing of the item(s) in question on the pay application.
- C. If data provided by CONTRACTOR is not sufficient to determine actual pay quantity and the status of Work prevents additional data from being obtained, ENGINEER shall attempt to reasonably estimate the pay quantity based upon available information. ENGINEER's estimate shall be final.

**APPLICATION FOR PAYMENT
REICHS FORD ROAD LANDFILL
RCC DAM REHABILITATION**

CONTRACTOR: _____ CONTRACT DESCRIPTION:

Agreement by and between

and the Northeast Maryland Waste Disposal Authority
as thereafter amended or changed pursuant to the terms
and conditions of such Agreement (herein referred to as
the "Agreement") for the satisfactory performance of
all necessary and/or related Work to properly complete
construction of the project at the Site.

OWNER: Frederick County Department of
Solid Waste Management

PROJECT: Reichs Ford Road Landfill – RCC Dam Rehabilitation
Contract Number _____

PERIOD: From: _____ To: _____

AGREEMENT PRICE SUMMARY:

ORIGINAL AGREEMENT PRICE	\$ _____
Net change by Change Orders	\$ _____
REVISED AGREEMENT PRICE	\$ _____

PAYMENT CALCULATION:

TOTAL COMPENSATION FOR WORK COMPLETED TO DATE (completed work is detailed in this application)	\$ _____
LESS: RETAINAGE (10 %)	\$ (_____)
TOTAL COMPENSATION AMOUNT	\$ _____
LESS: Amounts previously paid by OWNER	\$ (_____)
LESS: Previous approved Payment Applications which have not yet been paid by OWNER (_____)	\$ _____
LESS: Disputed amounts	\$ (_____)
CURRENT PAYMENT APPLICATION AMOUNT	\$ _____

Supplemental Information:

SUBCONTRACTOR'S VALUE OF WORK

Total Value of All Subcontractor's Work Completed to Date	\$ _____
Total Value of All Subcontractor's Work for this Payment Application	\$ _____

CERTIFICATION:

Contractor certifies that the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by Contractor to its subcontractors, materialmen, and suppliers for Work for which previous Applications for Payment were submitted by Contractor, and that all information provided in this Application for Payment is true and correct.

CONTRACTOR:

By: _____ STATE OF _____)

Printed Name: _____ COUNTY OF _____)

Title: _____

Subscribed and sworn to before me this _____
day of _____, 20__.

Notary Public:
My commission expires:

**APPLICATION FOR PAYMENT
 ITEMIZED PAYMENT SUMMARY**

Bid Items

Item No.	Description	Units	Unit Price (\$)	Completed This Period	\$ Requested This Period	Completed To Date	\$ Completed to Date
1	Mobilization / Demobilization	LS					
2	Project Surveying	LS					
3	Working Pad	LS					
4	Site Preparation / Restoration	LS					
5	RCC Dam Face Preparation	SF					
6	RCC Dam Shotcrete Cover – As-Shot Gun Finish	SF					
7	Rebar Anchor Installation	EA					
8	Toe Drain	LF					
9	Drain Strips	LF					

Alternative Bid Items

Item No.	Description	Units	Unit Price (\$)	Completed This Period	\$ Requested This Period	Completed To Date	\$ Completed to Date
A1	Install New Chain Link Fence Fabric	LF					
A2	Install New Stormwater Piping	LS					
A3	RCC Dam Shotcrete Cover – Knife Finish	SF					
A4	RCC Dam Shotcrete Cover – Trowel Finish	SF					

END OF SECTION