

**01220**

**Measurement and Payment**

**SECTION 01220  
MEASUREMENT AND PAYMENT**

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Administrative and procedural requirements for measurement and payment.
- B. Related sections include the following:
  - 1. Section 01001 – General Administrative Requirements for information on processing of pay requests and related information.
  - 2. Section 01210 – Allowances, where applicable, for procedures for using unit prices to adjust quantity allowances.

## 1.2 DEFINITIONS

- A. Lump Sum (LS): The total amount for a defined component, system, or structure of the Project, complete. Lump sum prices may be further allocated based on an approved Schedule of Values.
- B. Each (EA): A Unit Price Pay Item for each of several similar or identical defined components or structures of the Project, complete.
- C. Pay Item: A specifically described unit of work for which a price is provided in the contract.
- D. INDOT SS: Indiana Department of Transportation Standard Specifications.

## 1.3 SUBMITTALS

- A. Action Submittals
  - 1. Submit three (3) signed original copies of Contractor's Application for Payment on forms provided.

**B. Informational Submittals****1. Labor Standards Documentation**

- a. Certified Payroll for period of pay request.
- b. Other documentation required by the Labor Standards provisions.

**2. Stored Materials**

- a. Bill of Sale, Invoice, or other documentation warranting the Owner has received the materials and equipment free and clear of all Liens.
- b. If stored off Project site:
  - 1) Evidence of receipt of materials and equipment by Contractor and that product is suitably stored.
  - 2) Evidence that the materials and equipment are covered by appropriate property insurance.

**1.4 USE CHARGES**

A. General: Cost or use charges for temporary facilities shall be included in the Contract Price. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Engineer, occupants of Project, testing agencies, and authorities having jurisdiction.

B. Sewer Service: Pay sewer service use charges for sewer usage by all entities for construction operations where not available from Owner's existing sewer system.

1. For plant and water storage tankage filling, testing, and startup, sewer service use charges from Owner's existing sewer system shall be waived for volumes equal to one and one-half of the tank volume. Additional volumes shall be paid at Owner's standard charges.

C. Water Service: Pay water service use charges for water used by all entities for construction operations where not available from Owner's existing water system.

1. For plant and water storage tankage filling, testing, and startup, water service use charges from Owner's existing water system shall

be waived for volumes equal to one and one-half of the tank volume. Additional volumes shall be paid at Owner's standard charges.

- D. Electric Power Service: Pay electric power service use charges for electricity used by all entities for construction operations where not available from Owner's existing electric system.
- E. Owner's Sewer Service: Sewer service from Owner's existing sewer system, where available, shall be provided to Contractor for use without payment of use charges.
- F. Owner's Water Service: Water from Owner's existing water system, where available, shall be provided to Contractor for use without metering and without payment of use charges.
- G. Owner's Electric Power Service: Electric power from Owner's existing system, where available, shall be provided to Contractor for use without metering and without payment of use charges.

## 1.5 PROCEDURES

- A. Pay Items include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
- B. Pay Items include all Work necessary or incidental to the satisfactory completion and commissioning of the facility or structure, including as applicable but not limited to:
  - 1. Management and supervision of the Work.
  - 2. Construction engineering.
  - 3. Clearing and grubbing.
  - 4. Site preparation.
  - 5. Sediment and erosion control.
  - 6. Dust control.
  - 7. Weather protection.

8. Temporary fencing, signage, supports, working platforms, and barricades.
9. Temporary shoring and structure support.
10. Excavation, including rock excavation, unless specifically classified by a pay item.
11. Excavation and trench protection.
12. Dewatering, unless specifically classified by a pay item.
13. Bedding and foundation or trench bottom support.
14. Backfill, unless specifically classified by a pay item.
15. Unauthorized excavation, as well as remedial work directed by Engineer.
16. Utility services and connections.
17. Deposits and delivery, fuel, setup, and similar charges.
18. Site utilities, including application and connection fees, unless specifically classified as a pay item.
19. Site and surface restoration, unless specifically classified by a pay item.
20. Testing and commissioning.
21. Demonstration and training.
22. All other Work not otherwise included as a Pay Item incidental or necessary to the completion of the Work.
23. All other Work not otherwise included as a Pay Item incidental or necessary to the completion of the Work.

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION

## 3.1 LIST OF PAY ITEMS

## A. Pay Item No. 1.001 – Mobilization/Demobilization

1. Pay Item Type: Lump Sum.
2. Description: Payment for:
  - a. Purchase of required insurance and bonds.
  - b. Plan of work and other preliminary project coordination.
  - c. Coordination with suppliers and subcontractors.
  - d. Coordination with property owners for temporary use of property.
  - e. Identification of fill material and disposal sites.
  - f. Preliminary construction engineering prior to moving onto project site.
  - g. Pre-construction and post-construction audio-video surveys.
  - h. Movement of workers and equipment to and from the Site.
3. Unit of Measurement: No measurement.
4. Payment: Mobilization/Demobilization shall not exceed five percent (5%) of the Base Bid.
  - a. Bonds and mobilization shall be paid in the amount of sixty percent (60%) of the Pay Item amount with the first Pay Estimate.
  - b. Demobilization shall be paid in the amount of forty percent (40%) of the Pay Item amount with the Pay Estimate at Substantial Completion.

## B. Pay Item No. 1.002 – Erosion Control

1. Pay Item Type: Lump Sum.
2. Description: Provide erosion control measures as outlined in the project plans during execution of the Work.
3. Unit of Measurement: No measurement.

4. Payment: Payment will be made based on the proportion of time the Erosion Control is provided in relation to the scheduled time adjusted by the progress of the work necessitating Erosion Control, as revised by any change orders.
- C. Pay Item No. 1.003 – Maintenance of Traffic
1. Pay Item Type: Lump Sum.
  2. Description: Maintenance of Traffic during execution of the Work.
  3. Unit of Measurement: No measurement.
  4. Payment: Payment will be made based on the proportion of time the Maintenance of Traffic is provided in relation to the scheduled time adjusted by the progress of the work necessitating Maintenance of Traffic, as revised by any change orders.
- D. Pay Item No. 2.002 – Flowable Backfill
1. Pay Item Type: Unit Price.
  2. Description: Installation of flowable backfill in lieu of soil in utility trenches, classified by:
    - a. Utility type.
    - b. Pipe size and depth increment, where indicated.
  3. Unit of Measurement: Lineal foot, measured:
    - a. For length, by measurement along the centerline of the pipe from end of flowable backfill area to end of flowable backfill area.
    - b. For size, by nominal pipe size.
    - c. For depth, by the average segment depth of the utility pipe under the flowable backfill.
  4. Payment:
    - a. Structure Backfill shall be paid in the amount of eighty percent (80%) of the unit price amount upon completion of underlying utility and structure backfill installation.
    - b. Structure Backfill shall be paid in the amount of twenty percent (20%) of the unit price amount upon completion of underlying utility testing.

- E. Pay Item No. 3.001, 3.002, 3.003, 3.013 & 3.023 – Water Mains
1. Pay Item Type: Unit Price.
  2. Description: Installation of water mains or water casing pipe, classified by:
    - a. Nominal pipe size.
    - b. Installation method (open cut, horizontal directional drill, horizontal directional drill with casing pipe, etc.).
  3. Unit of Measurement: Lineal foot, measured:
    - a. Along the centerline of the pipe from center to center of fittings.
  4. Payment:
    - a. Water Mains shall be paid in the amount of eighty percent (80%) of the unit price amount upon completion of water main and backfill installation.
    - b. Water Mains shall be paid in the amount of twenty percent (20%) of the unit price amount upon completion of water main testing.
- F. Pay Item No. 3.083 & 3.084 – Valves
1. Pay Item Type: Unit Price, each.
  2. Description: Installation of water main valves, including valve boxes and appurtenances, classified by:
    - a. Valve type.
    - b. Valve size.
  3. Unit of Measurement: Individual valves.
  4. Payment:
    - a. Valves shall be paid in the amount of eighty percent (80%) of the unit price amount upon completion of valve and backfill installation.
    - b. Valves shall be paid in the amount of twenty percent (20%) of the unit price amount upon completion of water main and valve testing.
- G. Pay Item No. 3.100 – Hydrants
1. Pay Item Type: Unit Price, each.

2. Description: Installation of hydrants, classified by type, including connecting tees, leads, lead valves and boxes, restraint, and drain sumps.
  3. Unit of Measurement: Individual hydrants.
  4. Payment:
    - a. Hydrants shall be paid in the amount of eighty percent (80%) of the unit price amount upon completion of hydrant and backfill installation.
    - b. Hydrants shall be paid in the amount of twenty percent (20%) of the unit price amount upon completion of water main and hydrant testing.
- H. Pay Item No. 3.101 – Hydrant Removal
1. Pay Item Type: Unit Price, each.
  2. Description: Removal of hydrants & abandonment of hydrant valve and service.
  3. Unit of Measurement: Individual hydrant removals.
  4. Payment: Upon successful completion of hydrant abandonment and removal.
- I. Pay Item No. 3.106, 3.107, 3.108 & 3.119 – Water Main Connections
1. Pay Item Type: Unit Price, each.
  2. Description: Installation of water main connections, including valves and fittings where applicable, classified by:
    - a. Connection type.
    - b. Connection sizes.
  3. Unit of Measurement: Individual connections.
  4. Payment: Upon completion of installation and successful testing of water main connection.
- J. Pay Item No. 3.128 – Close Valve, Remove Valve Box
1. Pay Item Type: Unit Price, each.

2. Description: Abandonment of valve and removal and backfill of valve box.
  3. Unit of Measurement: Individual valve abandonment and valve box removals.
  4. Payment: Upon successful completion of valve abandonment and valve box removal.
- K. Pay Item No. 3.129, 3.130, 3.131 & 3.132– Line Stops, Caps, & Valve Plugs
1. Pay Item Type: Unit Price, each.
  2. Description: Installation of water main line stops, caps, & valve plugs where applicable, classified by:
    - a. Cap/plug type.
    - b. Cap/plug size.
  3. Unit of Measurement: Individual caps/plugs.
  4. Payment:
    - a. Caps shall be paid in the amount of eighty percent (80%) of the unit price amount upon completion of cap and backfill installation.
    - b. Caps shall be paid in the amount of twenty percent (20%) of the unit price amount upon completion of water main and cap testing.
- L. Pay Item No. 3.141 & 3.142 – Water Services
1. Pay Item Type: Unit Price.

Description: Installation of water service lines, including saddles, corporation stops, curb stops, and fittings, structure backfill over services, and surface restoration over services, including bases, pavement repairs, sidewalk repairs, curb repairs, and lawns and grasses where applicable, classified by:

    - a. Service line size.
    - b. Installation method.
  2. Unit of Measurement: Lineal foot, measured in a straight line from the connection at the water main to the end of the installation at the meter connection or connection to existing service line.

3. Payment: Upon completion of installation and successful testing of water service.
- M. Pay Item No. 3.159 – Water Meters
1. Pay Item Type: Unit Price, each.
  2. Description: Installation of water meters, including meter boxes, fittings and valves, where applicable, classified by:
    - a. Meter sizes.
  3. Unit of Measurement: Individual meters.
  4. Payment: Upon completion of meter installation.
- N. Pay Item No. 3.161 – Remove Existing Meter Pit
1. Pay Item Type: Unit Price, each.
  2. Description: Removal and backfill of meter pit.
  3. Unit of Measurement: Individual meter pit removals.
  4. Payment: Upon successful completion of meter pit removal.
- O. Pay Item No. 9.002 – Compacted Aggregate Base
1. Pay Item Type: Unit Price.
  2. Description: Repair of existing road aggregate base due to construction of water mains, gravity sanitary sewers, and gravity storm sewers (including gravity storm sewer branch lines), classified by:
    - a. Utility type.
    - b. Depth increment for gravity sanitary sewers and gravity storm sewers.
    - c. Road type and material.

Pay item does not include pavement repairs over water services, sewer laterals, sewer force mains, low pressure sewers, or other pay items in which pavement repair are included in the pay item description.
  3. Unit of Measurement: Ton.

4. Payment: Upon completion of installation and successful testing of:
    - a. Underlying pipe, and
    - b. Aggregate repair area.
- P. Pay Item No. 9.017 – Pavement Removal
1. Pay Item Type: Unit Price.
  2. Description: excavation and removal of existing pavement on site and within right-of-way.
  3. Unit of Measurement: Square yard.
  4. Payment: Upon successful completion of pavement removal.
- Q. Pay Item No. 9.032 – 6" HMA Patching
1. Pay Item Type: Unit Price.
  2. Description: Repair of existing roads and drives due to construction of water mains, gravity sanitary sewers, and gravity storm sewers (including gravity storm sewer branch lines), classified by:
    - a. Utility type.
    - b. Depth increment for gravity sanitary sewers and gravity storm sewers.
    - c. Road type and material.
- Pay item does not include pavement repairs over water services, sewer laterals, sewer force mains, low pressure sewers, or other pay items in which pavement repair are included in the pay item description.
3. Unit of Measurement: Ton.
  4. Payment: Upon completion of installation and successful testing of:
    - a. Underlying pipe, and
    - b. Pavement repair area.
- R. Pay Item NO. 10.001 – Site Clearing and Grubbing
1. Pay Item Type: Lump Sum.
  2. Description: Clearing for waterline and service installation.

3. Unit of Measurement: in accordance with accepted Schedule of Values.
  4. Payment: In approximate proportion to the percent of Work completed in accordance with the accepted Schedule of Values.
- S. Pay Item No. 10.002 – Lawns and Grasses
1. Pay Item Type: Unit Price.
  2. Description: Establishment of lawns and grasses at completion of work in an area, categorized by method of establishment.  
  
Pay item does not include lawns and grasses over water services, sewer laterals, sewer force mains, low pressure sewers, or other pay items in which lawns and grasses are included in the pay item description.
  3. Unit of Measurement: Square yards.
  4. Payment: Upon acceptable establishment of vegetation.

### 3.2 OTHER MATTERS

- A. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.
- B. Where rock excavation is not specifically included as a pay item, all excavation shall be unclassified.
- C. Where rock excavation is a pay item, excavation shall be classified. Rock excavation shall include the removal and satisfactory off-site disposal of rock materials. The Contract Sum will be adjusted for rock excavation according to unit prices included in the Contract Documents. Changes in the Contract time may be authorized for rock excavation.
- D. Where underground storage tanks or hazardous environmental conditions are shown or indicated to be removed, the removal and disposal of materials or contents, removal of tanks, assessments, and tank closures shall be without additional compensation where not specifically included as a pay item.

- E. INDOT SS: Where INDOT SS are referenced, the intent of the reference is not to incorporate or apply INDOT SS measurement requirements or pay items into these Contract Documents.
- F. Overdue or Non-Compliant Submittals
  - 1. Owner will retain 25 percent of the amount due on any pay application during each period in which Contractor fails to submit any of the required submittals or fails to comply with the submittal requirements, as determined by the Engineer.
    - a. On subsequent pay applications in which the submittal non-conformance continues, the percentage the Owner will retain will be increased for each pay application by the rate of 25 percent per pay application.
  - 2. Retainage for this non-conformance will be released during payment for the next pay application following the date the submittal information is brought back into compliance.
  - 3. Retainage due to this non-conformance shall be in addition to all other retainages.

END OF SECTION 01220