

SECTION 02231

AGGREGATE BASE COURSE

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Aggregate Base.
- B. Gravel Road.

1.2 RELATED SECTIONS

- A. Section 02211 - Rough Grading.
- B. Section 02223 - Backfilling.
- C. Section 02225 - Trenching.

1.3 REFERENCES

- A. AASHTO M147-65 - Materials for Aggregate and Soil-Aggregate.
- B. ASTM C136 - Sieve Analysis of Fine and Coarse Aggregates.
- C. MDOT Standard Specifications for Construction, current edition.
- D. ASTM D4318 - Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300 – Submittals.
- B. Samples: Submit a 5 gallon sample of each type of aggregate to testing laboratory as directed by Engineer.

1.5 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Aggregate Base:
  - 1. Basis of Measurement: At the unit price bid per square yard or included in unit price bid for bituminous road restoration or included in the unit price bid for drain crossings, as stated in the proposal.
  - 2. Basis of Payment: Includes all labor, equipment, and material, necessary to place, compact, and grade aggregate base course to the elevations indicated in the plans and specifications.
- B. Gravel Road:
  - 1. Basis of Measurement: At the unit price bid per square yard as stated in the proposal.
  - 2. Basis of Payment: Includes equipment, material, and labor to place, grade, and compact gravel necessary for construction.

## 2. PART 2 PRODUCTS

### 2.1 MATERIALS

- A. MDOT 22A Dense Graded Aggregate – for bituminous pavement aggregate.
- B. MDOT 23A Dense Graded Aggregate – for gravel road surface course, road shoulder, and gravel drive surface course.

## 3. PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify subbase and/or subgrade has been inspected, gradients and elevations are correct, and are dry.

### 3.2 AGGREGATE PLACEMENT

- A. Spread aggregate over prepared base to a total compacted thickness as indicated on the drawings and specifications.
- B. Level and contour surfaces to elevations, depths, and gradients as indicated on the plans and in the specifications.
- C. Compact placed aggregate materials to a minimum of 95 percent of its maximum dry density as determined by modified proctor method.
- D. If necessary, add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
- E. Place 8 inch gravel road to the width as shown on the plans and compact to a minimum 98 percent of the materials maximum dry density according to the modified proctor method.
- F. Use mechanical vibrating tamping in areas inaccessible to compaction equipment.
- G. See plans for required aggregate depths.

### 3.3 TOLERANCES

- A. Flatness: Maximum variation of 3/8 inch measured with 10-foot straight edge.
- B. Scheduled Compacted Thickness: Within 1/4 inch.
- C. Variation from True Elevation: Within 1/2 inch.

### 3.4 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01400 – Quality Control.
- B. Gradation of Aggregate: In accordance with ASTM C136.
- C. Furnish material certification from Supplier as required by the Engineer.

- D. Compaction testing will be performed in accordance with MDOT Standard Requirements and with Section 01400 – Quality Control.
- E. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.
- F. Frequency of Tests: As directed by the Engineer.

END OF SECTION