

839 - RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT

SECTION 839

RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT

839.1 DESCRIPTION

Rubblize the existing PCCP, and compact the broken PCCP in place as shown in the Contract Documents.

BID ITEMS

Crushed Stone for Backfill
Removal of Asphalt Material
Rubblized Concrete

UNITS

Cubic Yard
Square Yard
Square Yard

839.2 MATERIALS

Provide crushed stone for backfill that complies with **DIVISION 1100**.

Provide HMA that complies with **DIVISION 600**.

839.3 CONSTRUCTION REQUIREMENTS

Before starting the rubblizing of the PCCP, remove and dispose of all asphalt overlays and patches. Replace the asphalt patches with crushed stone for backfill.

Use an impact hammer, resonant breaker or other equipment to break the pavement into the specified sizes without displacing the rubblized material into the base or subgrade. Use equipment capable of delivering enough energy to rubblize the PCCP. Where needed, use a breaker with a plate-type shoe designed to prevent penetration into the existing surface. Provide a watering system to suppress dust generated by the rubblizing operation. Provide a shield to prevent flying chips of pavement produced by the rubblizing operation.

Rubblize the PCCP full depth and full panel width to produce broken reinforcement, or the loss of concrete to steel bond. The majority of the rubblized PCCP shall be:

- 12 inches or smaller in size, with 80 to 100% less than 12 inches.
- 95% of the fragments greater than 6 inches.
- The maximum size is 15 inches.

Do not displace the concrete vertically (before rolling) more than ± 1 inch.

Construct a test section to demonstrate compliance with the rubblizing specification. The Engineer will determine the location of the test section. Provide equipment to verify compliance with the sizing requirements. Vary the energy and striking patterns of the pavement breaker, and, when necessary, make repeated passes with the equipment until the specified rubblization is achieved.

Seat and uniformly compact the rubblized concrete. Use a steel wheel roller (10 tons) or a steel wheel vibratory roller to seat and compact the rubblized PCCP. Make a minimum of 2 one-way passes with the roller. Do not roll in a manner that will disperse the outside edge of the rubblized PCCP. Do not cause rutting, pumping or densification of the rubblized PCCP by over-compaction. If compaction is not achieved with the steel wheel roller, the Engineer may allow the use of a larger pneumatic roller.

The Engineer will determine, by visual inspection, if satisfactory rubblization is achieved.

Use the procedures established in the test section to rubblize, seat and compact the existing PCCP. If during the course of the work, the rubblizing requirements are not achieved, the Engineer may require another test section be constructed.

If soft spots are detected during the compaction operations, remove the unstable subgrade material and backfill with suitable material to the top of the subgrade. Fill from the subgrade to the top of the adjacent rubblized PCCP with crushed stone for backfill.

After the PCCP is rubblized and compacted, the Engineer may designate areas that require leveling. If the leveling course is placed directly on the rubblized and compacted PCCP, use either crushed stone for backfill or HMA base material. If HMA base material is used for leveling between succeeding lifts of the HMA base, complete the leveling before the final lift of the HMA base is placed. The material used for leveling (HMA or crushed stone for backfill) may be spread with a motor grader.

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Overlay the rubblized and compacted PCCP with a HMA base course as soon as possible, within 24 hours of the rubblizing operations. If the rubblized PCCP is not covered with the HMA base within 24 hours, the Engineer will direct the Contractor to suspend all rubblizing operations until the previously rubblized PCCP is overlaid.

Do not allow traffic (other than necessary construction traffic) on the rubblized PCCP until a minimum of 4 inches of HMA base is placed on the rubblized PCCP.

839.4 MEASUREMENT AND PAYMENT

The Engineer will measure the crushed stone for backfill by the cubic yard.

The Engineer will measure the removal of asphalt material by the square yard.

The Engineer will measure rubblized PCCP by the square yard. The Engineer will measure the actual width of the existing PCCP, along the centerline of the roadway or ramp.

Payment for "Crushed Stone for Backfill", "Removal of Asphalt Material" and "Rubblized Concrete" at the contract unit prices is full compensation for the specified work.

Measurement and payment for HMA materials are as provided in the Contract Documents.