

# Recurring Special Provisions

Division 300 – Aggregate Pavement and Bases

City of Fort Wayne

Public Works

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## SECTION 301 – AGGREGATE BASE

### CONSTRUCTION REQUIREMENTS

#### 301.03 Preparation of Subgrade

20 Subgrade shall be compacted in accordance with 207.04. Proofrolling will not be required in trench sections and other areas where proofrolling equipment cannot be used. If section is 100' or more in length, proofrolling will be performed by a fully loaded 20-ton tri-axle truck and approved by field inspector or Project Manager. If any portions fail, the Project Manager shall determine the next course of action: removal of poor material to a specified depth and replaced with #2 and/or #53 aggregate, with or without approved geotextile, as placed per 918.02.

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#### 301.04 Temperature Limitations

Aggregate shall not be placed when the air temperature is less than 35°F, unless the ground has been covered by approved concrete blankets while subgrade has not previously been frozen. Aggregate shall not be placed on a frozen subgrade. Frozen aggregate shall not be placed.

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#### 301.05 Spreading

30 The moisture content of dense graded aggregate shall be between 4% and the optimum moisture content when the aggregate is delivered to the project. Unless otherwise directed, water shall not be added to the aggregate on the grade.

The aggregate shall be spread in uniform lifts with a spreading and leveling device approved by the Engineer. The spreading and leveling device shall be capable of placing aggregate to the depth, width, and slope specified. The compacted depth of each lift shall be a minimum of ~~3 in.~~ 2 in. and a maximum of 6 in.

40 The aggregate shall be handled and transported to minimize segregation and the loss of moisture. In areas inaccessible to mechanical equipment, approved hand spreading methods may be used.

Aggregate base shall not be placed until a subgrade proof roll has been approved by either the field inspector or Project Manager. If aggregate base is not placed before a rain event after an approved proof roll, the area will then have to pass another proof roll in order for aggregate to be placed.

**301.09 Method of Measurement**

Compacted aggregate base will be measured by the ~~tons placed based on the theoretical volume to the neat line as shown on the plans.~~ Geotextiles will be measured in accordance with 616.12.

**301.10 Basis of Payment**

The accepted quantities of compacted aggregate base will be paid for at the contract unit price per cubic yard or tonnage, complete in place. Geotextiles will be paid for in accordance with 616.13.

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Payment will be made under:

100

<b>Pay Item</b>	<b>Pay Unit Symbol</b>
Compacted Aggregate, No. 2 .....	CYS <del>TON</del>
<del>Compacted Aggregate, No. 5 .....</del>	<del>CYS</del>
Compacted Aggregate, No. 8 .....	CYS <del>TON</del>
Compacted Aggregate, No. 53 .....	CYS <del>TON</del>
<del>Compacted Aggregate, No. 73 .....</del>	<del>TON</del>

**SECTION 302 – SUBBASE**

**302.01 Description**

This work shall consist of a foundation course of selected materials, placed and compacted on a prepared subgrade in accordance with 105.03.

Subbase for PCCP shall consist of a layer of ~~3 in. of coarse aggregate No. 8 as the aggregate drainage layer placed over a~~ 2 or 4 in. coarse aggregate No. 53 as the separation layer as noted per plans. Dense graded subbase shall consist of a 6 in. coarse aggregate No. 53.

10

**MATERIALS**

**302.02 Materials**

Materials shall be in accordance with the following:

- ~~Coarse Aggregate, Class B or Higher, Size No. 8.....~~904
- Coarse Aggregate, Class D or Higher, Size No. 53...904

20

~~Coarse aggregate No. 8 used as an aggregate drainage layer shall consist of 100% crushed stone or ACBF.~~

## CONSTRUCTION REQUIREMENTS

### 302.04 Temperature Limitations

Aggregate shall not be placed when the air temperature is less than 35°F, unless the ground has been covered by approved concrete blankets while subgrade has not previously been frozen.

30 Aggregate shall not be placed on a frozen subgrade. Frozen aggregate shall not be placed.

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### 302.05 Spreading

Aggregate shall be spread in uniform lifts with a spreading and leveling device approved by the Engineer. The spreading and leveling device shall be capable of placing aggregate to the depth, width, and slope specified. The compacted depth of each lift shall be a minimum of ~~3 in.~~ 2 in. and a maximum of 6 in.

40 Aggregate shall be handled and transported to minimize segregation and the loss of moisture. In areas inaccessible to mechanical equipment, approved hand spreading methods may be used.

The moisture content of the aggregate shall be between 4% and the optimum moisture content when the aggregate is delivered to the project. Water shall not be added to the aggregate on the grade.

Aggregate base shall not be placed until a subgrade proof roll has been approved by either the field inspector or Project Manager. If aggregate base is not placed before a rain event after an approved proof roll, the area will then have to pass another proof roll in order for aggregate to be placed.

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### 302.06 Compacting

Subbases shall be compacted as follows:

~~(a) Aggregate Separation Layers and Dense Graded Subbase~~  
Compaction shall be in accordance with 301.06.

50 All displacement or rutting of the aggregate separation layers shall be repaired prior to placing subsequent material.

**(b) Aggregate Drainage Layers**

~~Compaction shall consist of two passes with a vibratory roller before trimming, and one pass with the same roller in static mode after trimming. A vibratory roller shall be equipped with a variable amplitude system, a speed control device, and have a minimum vibration frequency of 1,000 vibrations per minute. A roller in accordance with 409.03(d)4 may be used.~~

60 ~~Construction traffic shall not be allowed on the aggregate drainage layer, except where placement of the PCCP is restricted. Exceptions shall be submitted for approval. All displacement or rutting of the aggregate drainage layers shall be repaired prior to placing subsequent material.~~

~~In areas inaccessible to standard size compacting equipment a specialty roller/compactor in accordance with 409.03(d)7 shall be used.~~

**302.08 Method of Measurement**

~~Subbase for PCCP or dense graded subbase will be measured by the cubic yard ton based on the theoretical volume to the neat lines as shown on the plans. The quantity shown in the Schedule of Pay Items will be adjusted if it is shown to be different by more than 2% of the measured quantity.~~

**302.09 Basis of Payment**

The accepted quantities of subbase for PCCP or dense graded subbase will be paid for at the contract unit price per cubic yard TON, complete in place.

Payment will be made under:

	<b>Pay Item</b>	<b>Pay Unit Symbol</b>
90	Dense Graded Subbase .....	CYS-TON
	Subbase for PCCP .....	CYS-TON

The cost of compacting, water, aggregate placed outside neat lines as shown on the plans, and necessary incidentals shall be included in the cost of the subbase.

**SECTION 303 – AGGREGATE PAVEMENTS OR SHOULDERS**

**MATERIALS**

**303.02 Materials**

10 Materials shall be in accordance with the following:

Recycled Asphalt.....	904
Coarse Aggregate, Class D or Higher, Size No. 53 .....	904
Coarse Aggregate, Class D or Higher, Size No. 73* .....	904

\* Surface courses only, when specified.

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**CONSTRUCTION REQUIREMENTS**

**303.03 Preparation of Subgrade**

Subgrade shall be compacted in accordance with 207.04. Proofrolling will not be required in trench sections where proofrolling equipment cannot be used.

**303.04 Temperature Limitations**

Aggregate shall not be placed when the air temperature is less than 35°F, unless the ground has been covered by approved concrete blankets while subgrade has not previously been frozen. Aggregate shall not be placed on a frozen subgrade. Frozen aggregate shall not be placed.

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**303.10 Basis of Payment**

The accepted quantities of compacted aggregate will be paid for at the contract unit price per ton, for the type specified, complete in place.

Payment will be made under:

	<b>Pay Item</b>	<b>Pay Unit Symbol</b>
70	Compacted Aggregate, No. 53 .....	TON
	Compacted Aggregate, No. 73 .....	TON
	Recycled Asphalt.....	TON

The cost of placing, compacting, water, and necessary incidentals shall be included in the costs of the compacted aggregate.

Payment will not be made for material placed outside of a 1:1 slope from the planned typical section.

Replacement or repair of pavement or shoulders damaged by the Contractor's operations shall be at no additional payment.

Recycled asphalt must be of acceptable quality, free from large or frozen material, wood, or other extraneous material.

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## SECTION 306 – MILLING

### CONSTRUCTION REQUIREMENTS

#### 306.02 General

10 Milling operations shall be described in the QCP in accordance with ITM 803. Where the milling operation in a partial-day closure results in a longitudinal vertical or near vertical face exceeding 2 in. in height, the adjacent lane shall be milled during the same day, the milled lane resurfaced during the same day, or the vertical face tapered at a 45° angle or flatter. Where located within 3 in. of a curb, surface material that cannot be removed by the cold-milling machine shall be removed by other approved methods.

20 Transverse milled vertical faces greater than 1 in. that are exposed to traffic shall be transitioned in an approved manner.

Castings located in milling areas that are not to be adjusted may remain in place during the milling, or may be removed and replaced at the Contractor's option. All castings, water valve boxes, detector housing, etc. shall be painted a bright color with marking paint, and/or a properly reflectorized construction barrel or cone placed over them, if not a hazard to the traveling public, until new asphalt is laid. The cost for these shall be included in the maintenance of traffic.

Any castings, water valves boxes, detector housings, drive approaches, etc. with a one inch (1") plus exposure shall be ramped with millings, or at the contractor's expense, use a rubber "Manhole Safety Ramp (American Highway Products, Model MSR26/28), or similar, as approved by the Project Manager. All ramps shall be maintained and in good working condition until such time that the paving operations take place. The cost for the ramps shall not be paid for separately, but included in the unit price for Surface Milling.



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### 306.03 Equipment

#### (d) ~~Straightedge~~

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##### 1. ~~Straightedge—16 ft~~

~~A 16 ft straightedge shall be a rigid beam mounted on two solid wheels on axles 16 ft apart. The straightedge has a mounted push bar to facilitate propelling the device along or across the pavement. Tolerance points are located at the 1/4, 1/2, and 3/4 points and may be composed of threaded bolts capable of being adjusted to the tolerance required.~~

##### 2. ~~Straightedge—10 ft~~

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~~A 10 ft straightedge is the same as a 16 ft straightedge except that the wheels are mounted 10 ft apart. A handheld rigid beam may be substituted.~~

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### 306.04 Asphalt or PCCP Scarification Milling

Milled traveled way areas left open to traffic for longer than ~~five~~ **seven (7)** work days will be assessed ~~\$1,600.00~~ **\$800** per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

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Milled non-traveled way areas such as auxiliary lanes and shoulders left open to traffic for longer than 10 work days will be assessed ~~\$800.00~~ **\$400.00** per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

Milled street surfaces shall be covered with their respective asphalt layers as expeditiously as weather allows. The proposed milled street segments shall have a minimum of one asphalt layer placed within seven (7) working days after the milling has been executed. If wet weather conditions cause a delay in paving, the streets may not be left unpaved for more than 14 working days. The contractor shall mill only those street segments that can be dutifully resurfaced within the seven-day limit. If this cannot be done, the contractor must request approval in writing from the Project Manager if delays may exceed the seven- and fourteen-day limits.

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### **306.05 Asphalt or PCCP Profile Milling to Correct Cross-Slope**

Milled traveled way areas left open to traffic for longer than ~~five~~ **seven (7)** work days will be assessed ~~\$1,600.00~~ **\$800.00** per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

- 140 Milled non-traveled way areas such as auxiliary lanes and shoulders left open to traffic for longer than 10 work days will be assessed ~~\$800.00~~ **\$400.00** per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

Milled street surfaces shall be covered with their respective asphalt layers as expediently as weather allows. The proposed milled street segments shall have a minimum of one asphalt layer placed within seven (7) working days after the milling has been executed. If wet weather conditions cause a delay in paving, the streets may not be left unpaved for more than 14 working days. The contractor shall mill only those street segments that can be dutifully resurfaced within the seven-day limit. If this cannot be done, the contractor must request approval in writing from the Project Manager if delays may exceed the seven- and fourteen-day limits.

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### **306.06 Approach Milling**

Approach milling shall not be performed at driveways unless it is required to meet a paved surface that continues beyond the construction limit. If the driveway is other than HMA or PCC beyond the construction limits, the approach milling is not required.

The transverse vertical cut face for commercial or public road approaches shall be transitioned at a rate of 24:1 or as approved.

This item shall not be considered approach material and shall also be painted with hot asphalt emulsion (tack). These items will be paid for at the corresponding unit bid prices in the contract.

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### **306.07 Asphalt or PCCP Milling to a Specified Average Depth**

- 200 Milled traveled way areas left open to traffic for longer than ~~five~~ **seven (7)** work days will be assessed ~~\$1,600.00~~ **\$800.00** per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.



The cost of all labor, equipment, materials and all incidental work shall be included in the cost of the pay item.

The cost for castings removed and replaced at the Contractor's option in accordance with 306.02 shall be included in the cost of the milling.

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**SECTION 309 RECYCLED CONCRETE**

**309.01 Description**

This work shall consist of placing aggregate on an approved subgrade in accordance with 105.03.

**309.02 Materials**

Approved materials shall be of acceptable quality, free from large or frozen lumps, wood, or other extraneous matter.

**309.03 Construction Requirements**

No. 53, No. 73, and No. 2 stone must be in accordance with gradation requirements of INDOT 904.03(e). Material must be tested by a certified Lab.

**309.04 Method of Measurement**

The Aggregate will have a printed weight ticket, in TON's.

**309.05 Basis of Payment**

The accepted Quantities Recycled Aggregate on the Schedule of Pay Items will be paid for at the contract unit price per Ton, complete in place.

Payment will be made under:

<b>Pay Items</b>	<b>Pay Unit Symbol</b>
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Compacted Aggregate Recycled NO. 53 .....	TON
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Compacted Aggregate Recycled NO. 73.....	TON
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Compacted Aggregate Recycled NO. 2.....	TON
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The cost of removal of the material, storage, incorporating it into the work, and necessary incidentals shall be included in the cost of the pay item.