

**REQUEST FOR BID**

**DRIVING SURFACE AGGREGATE (DSA)**

Sackett Hollow – T373

Prospect Hollow – T377

Kent Hollow – T383

(ROAD NAME(S) & ID #)

McKean

(COUNTY)

**1. SCOPE OF WORK:**

McKean County Conservation District, (hereinafter referred to as "Owner"), requires services to, make approximately **4070** tons of **DSA**, to be available at the owners request between **June 15 and October 15, 2018** to be used in two municipalities in McKean County, PA.

**2. CONTRACT TASKS:**

A. Work shall include, but is not necessarily limited to, the furnishing of materials, tools and equipment, miscellaneous items and performing all work necessary to complete all making of the DSA to the satisfaction of, and subject to the approval of, the Owner

**3. DSA SPECIFICATIONS:**

A. All components of the aggregate mix are to be derived by crushing parent rock material. Contractors **must provide a properly executed SCC DSA Certification Form (attached)** at the time their bid is submitted committing that they can provide DSA material that meets the following criteria. This does not include material from gravel pits.

B. **Materials:** Material to be used on the project shall be tested **prior to delivery** by an independent lab that has no affiliation with the source quarry. Samples shall be obtained by Conservation District (CD) Staff, Center for Dirt and Gravel Road Studies (CDGRS) staff or otherwise approved by the SCC. Material must meet the following requirements:

C. **Gradation:** The required amounts and allowed ranges, determined by weight, for various size particles are:

<u>Passive Sieve</u>	<u>Lower %</u>	<u>High %</u>
1 1/2 inch	100%	---
3/4 inch	65%	95%

#4	30%	65%
#16	15%	30%
#200	10%	15%

- D. Abrasion Resistance: The loss of mass (LA Abrasion) shall be less than 40%. Determine the resistance to abrasion using the Los Angeles Abrasion test, ASTM C131.
- E. pH: Aggregate shall be in the range of pH 6 to pH 12.45 as measured by ASTM D4972.
- F. Moisture: Upon delivery to the site, material shall be well mixed and placed at optimum moisture content or up to 2% below that value as determined for that particular source. The optimum percentage moisture is to be determined using Proctor Test ASTM D698, Procedure C, Standard. Aggregate provider is encouraged to perform moisture testing prior to loading material for delivery.
- G. Plasticity: Material shall not exceed a Plasticity Index (PI) of 6. The laboratory test required for these results is ASTM D4318 – Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- H. Soundness: Determine the percentage of mass (weight) loss of each fraction of the coarse aggregate after five cycles of immersion and drying using a sodium sulfate solution according to PTM No. 510. The maximum weighted percent loss allowed is 20%.
- I. Aggregate: All DSA shall be derived from natural rock formations that meet program specification for abrasion resistance, pH and freedom from contaminants.
- J. Fines: If fines need to be added to the aggregate to meet DSA gradation requirements, the added material passing the #200 sieve must be derived from rock material that conforms to program specifications. No mineral clay or silt soil may be added. The amount of particles passing the #200 sieve shall be determined using the washing procedures specified in PTM No. 100.
- K. Mixing: DSA shall be properly mixed and at the proper moisture content before it is loaded onto the transport vehicles.

The Conservation District (CD), the Center for Dirt and Gravel Road Studies (CDGRS) or the State Conservation Commission's (SCC) designated representatives shall perform quality assurance / quality control visits to the quarry to inspect the DSA before the project. This will include sampling and testing of the DSA stockpile for that project to ensure that it meets specifications. The Contractor shall provide transportation or escort the staff to the DSA load site over the duration of the project.

The Contractor is hereby informed that any DSA material, utilized for the purposes of this contract that does not meet specifications as determined by the Owner shall be rejected. Contractor will not receive payment for rejected loads.

**4. CONTRACT TERM:**

A. The Contractor who receives the Notice of Award/Purchase Order through this bid process ("Selected Contractor") will make deliveries to meet the requirements of the Owner for the time period commencing on the Selected Contractor's receipt of a Notice of Award/Purchase Order, and expiring on October 15, 2018. Selected Contractors prices shall remain firm through this period.

**5. ISSUING OFFICE:**

A. This Bid is issued by the Owner. The Issuing Office is the sole point of contact for this bid. Please refer all inquiries to:

Name: McKean County Conservation District

Address: 17137 Route 6, Smethport, PA 16749

Telephone: 814-887-4001

Fax: 814-887-3234

Contact: Sandy Thompson

**6. DATE AND TIME FOR SUBMISSION OF BIDS:**

To be considered, a bid must be received by the Owner by 4:00 PM on April 18, 2018.  
(Date & Time)

**7. SUBMISSION OF BID:**

A. Bids are requested for the items described on the bid form, in accordance with the terms and conditions included in this bid. Contractors must complete the Bid Form including: name and address of contractor; contractor contact person; telephone and fax number; e-mail and web address; Source Quarry location; and Bid prices. The Bid Form must be signed by an authorized representative of the Contractor. Bids must be mailed or hand delivered to the address noted under Section 5. Envelope must be labeled with bid name and date and time of opening.

B. Submission of Bids. It is the responsibility of each Contractor to ensure that the Owner receives the bid prior to the Date and Time for Submission of Bids, noted under Section 6. No bid shall be considered if it was sent or received after the Date and Time for Submission of bids.

C. Bids must be firm. If a bid is submitted with conditions or exceptions or not in conformance with these terms and conditions, it shall be rejected. The bid shall also be rejected if the items offered by the contractor are not in conformance with the specifications as determined by the Owner.

- D. Contractors must provide a properly executed SCC DSA Certification Form (attached) at the time their bid is submitted committing that they can provide DSA material that meets the specification requirements.
- E. For any bids in excess of \$25,000.00, prevailing wage rates may apply.
- F. The Owner reserves the right to reject any and all bids and to waive any technical defects, if it determines that it is in the best interest of the Owner.
- G. No responsibility will be attached to any employee of the Owner for the premature opening of or the failure to open, a bid not properly addressed and identified, or for any reason whatsoever.

**8. BID AWARD:**

- A. Bids will be awarded to the lowest responsible bidder, as determined by the Owner. The Owner reserves the right to reject any or all bids, and/or cancel the bid for any reason.
- B. Quantities are estimated and may be increased or decreased to meet the requirements of the Owner.
- C. Contractor shall be paid for actual quantities used, as determined by the price per ton provided on the Bid Form.

**9. PAYMENT TERMS:**

- A. Payment shall be made upon satisfactory completion of project for actual services performed, which includes meeting the DSA aggregate specification.

**10. SERVICE SLIPS:**

- A. To insure prompt payment, the Contractor must provide the service slip(s) (including tonnage) to the Owner after the completion of the project.

**11. INVOICES:**

- A. All invoices for this contract **MUST** be sent to the responsible municipality once DSA is received. (See Appendix 1)

**12. MINIMUM WAGE SPECIFICATION**

- A. Requirements - The Contractor shall comply with the provisions of the Act of August 15, 1961 (P.L. 9 87), as amended, known as the "Pennsylvania Prevailing Wage Act" and the Regulations issued pursuant thereto by the Department of Labor and Industry. The Contractor shall include these requirements in all subcontracts for the project.

**Attachments:**

- Quote Form
- SCC DSA Certification Form

**QUOTE FORM**

**DRIVING SURFACE AGGREGATE (DSA)**

Sackett Hollow – T373

Prospect Hollow – T377

Kent Hollow – T383

(ROAD NAME(S) & ID #)

McKean

(COUNTY)

**PROJECT LOCATION:**

- 1.) Sackett Hollow; Norwich Township (41.686324, -78.387390)
- 2.) Prospect Hollow; Keating Township (41.803418, -78.394864)
- 3.) Kent Hollow; Keating Township (41.851699, -78.383411)

*(Project Location – describe exact location of placement)*

**SUBMISSION DEADLINE (RFQ SECTION 6): April 18, 2018 4:00 p.m.**

*(Date & Time)*

**By Contractor**

Contractor:

Mailing Address:

Contractor Contact Person:

Telephone Number:

Fax Number:

E-Mail and Web Address:

Source Quarry Location:

**PROJECT REQUIREMENTS:**

<u>Material</u>	<u>Tonnage</u>	X	<u>Price per Ton</u>	=	<u>Total Price</u>
DSA	<u>4070</u>		\$ <u>          </u>		\$ <u>                    </u>

Signature of Contractor: \_\_\_\_\_

Contractor's Name & Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

## Appendix 1

- 1. Norwich Township**  
**3853 West Valley Road**  
**Smethport PA 16749**  
**814-887-2732**

Project Location 1:

Sackett Hollow – T373  
Length ~ 1410`  
41.686324, -78.387390  
~ 700 Tons of DSA

- 2. Keating Township**  
**7160 Route 46**  
**East Smethport PA 16730**  
**814-887-9921**

Project Location 2:

Upper Section  
Prospect Hollow – T377  
Length ~ 854`  
41.806248, -78.384498  
~ 410 Tons of DSA

Lower Section  
Prospect Hollow – T377  
Length ~ 1782`  
41.803418, -78.394864  
~ 960 Tons of DSA

Project Location 3:

Kent Hollow – T383  
Length ~ 4,000`  
41.848913, -78.382586  
~ 2,000 Tons of DSA

# PA State Conservation Commission

## Driving Surface Aggregate Standard and Specification

- I. **Definition** - This document is for the purchase and placement of Driving Surface Aggregate (DSA) for the Pennsylvania State Conservation Commission's Dirt, Gravel, and Low-Volume Road Maintenance Program (DGLVRMP). DSA is an aggregate mixture of crushed stone designed specifically as a surface-wearing course for unpaved roads. DSA provides a durable road surface with longer maintenance cycles than conventional road surface aggregates.
- II. **Use** - For the purposes of funding under the DGLVRMP, DSA must be used in areas where it will have an environmental benefit (reduced erosion, reduced runoff). DSA shall only be placed after drainage and subgrade issues have been addressed by utilizing practices that promote Environmentally Sensitive Maintenance. DSA was originally designed to reduce erosion and runoff on road segments close to streams where drainage improvements were limited. Surface aggregate is not required on every project.
- III. **Material** - DSA to be used on DGLVRMP projects shall be tested prior to delivery by an independent lab that has no affiliation with the source quarry. Samples shall be obtained by Conservation District (CD) staff, Center for Dirt and Gravel Road Studies (CDGRS) staff, or otherwise approved by the SCC. Material must meet the following requirements:

- A. **Gradation:** The required sieve sizes and allowed ranges, determined by weight, for DSA components are shown in Table 1.

Sieve Size	Percent Passing
1.5"	100
0.75"	65 – 95
#4	30 – 65
#16	15 – 30
#200	10 – 15

Table 1 – DSA Gradations

- B. **Abrasion Resistance:** The loss of mass (LA Abrasion) shall be less than 40%. Determine the resistance to abrasion using the Los Angeles Abrasion test, ASTM C131.
- C. **pH:** Aggregate shall be in the range of pH 6 to pH 12.45 as measured by ASTM D4972.
- D. **Moisture:** Upon delivery to the site, material shall be well mixed and placed at optimum moisture content or up to 2% below that value as determined for that particular source. The optimum percentage moisture is to be determined using Proctor Test ASTM D698, Procedure C, Standard. Aggregate provider is encouraged to perform moisture testing prior to loading material for delivery.

- E. **Plasticity:** Material shall not exceed a Plasticity Index (PI) of 6. The laboratory test required for these results is ASTM D4318 – Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- F. **Soundness:** Determine the percentage of mass (weight) loss of each fraction of the coarse aggregate after five cycles of immersion and drying using a sodium sulfate solution according to PTM No. 510. The maximum weighted percent loss allowed is 20%.
- G. **Aggregate:** All DSA shall be derived from natural rock formations that meet program specification for abrasion resistance, pH and freedom from contaminants.
- H. **Fines:** If fines need to be added to the aggregate to meet DSA gradation requirements, the added material passing the #200 sieve must be derived from rock material that conforms to program specifications. No mineral clay or silt soil may be added. The amount of particles passing the #200 sieve shall be determined using the washing procedures specified in PTM No. 100.
- I. **Mixing:** DSA shall be properly mixed and at the proper moisture content before it is loaded onto the transport vehicles.

#### IV. Delivery and Placement

- A. **Preparation of Subgrade:** Unsatisfactory drainage and subgrade conditions shall be corrected prior to placement by scarifying, reshaping, and re-compacting, or by replacing or importing subgrade/sub-base. The subgrade/subbase shall be crowned or sidesloped to  $\frac{1}{2}$  to  $\frac{3}{4}$  inch per foot (4%-6% slope). Beginning and ending of DSA placements shall include a paving notch across the width of the subgrade. The paving notch shall have a minimum depth equal to the compacted DSA placement, and a sufficient length to facilitate transition into existing road surface, or a minimum of 4' in length.
- B. **Transport:** Tarps shall be used to cover 100% of the load's exposed surface from the time of loading until immediately before placement.
- C. **Certification:** A properly executed SCC DSA Certification Form shall be provided at the time of initial delivery and subsequent certification forms shall be provided if quarry conditions change. This Certification Form is to apply to the specific stockpile of DSA material being delivered from the source. The form certifies that the DSA material meets all of the specifications and requirements.
- D. **Placement:** The use of a motorized paver is highly recommended for all DSA placements. For projects and/or contracts including over 1,000 tons of DSA, a motorized paver is required. A track mounted paver is preferred. DSA placements should be placed in a single pass across the width of the road. The crown or cross slope must range from  $\frac{1}{2}$  to  $\frac{3}{4}$  inch per foot (4-6%). Material shall be placed in a single 6-8 inch loose lift or layer. This lift is to be compacted with a vibratory roller as specified in Section V Compaction. If freezing temperatures or precipitation are forecast that may cause the material to freeze, or prevent the material from drying out, placement shall be postponed at the discretion of the road owner, Conservation District, or aggregate supplier.



## v. **Compaction**

- A. **Vibratory Roller:** After placement, the material shall be compacted using a minimum ten-ton vibratory roller. DSA shall be compacted to a minimum of 95% of the dry-mass (dry-weight) density according to ASTM D698, Procedure C, Standard as determined by pre-sampling (refer to Materials, Section III.D). The road owner, or its designated representative, reserves the right to determine the in-place moisture and density according to ASTM D6938.

- vi. **Maintenance** - Properly placed and compacted DSA provides a durable road surface with longer maintenance cycles than traditional aggregates, but it is not maintenance free. Refer to the Center for Dirt and Gravel Roads "Driving Surface Aggregate Handbook" for additional guidance on DSA maintenance.

## vii. **References:**

- A. State Conservation Commission Driving Surface Aggregate Certification Form.  
[http://www.dirtandgravel.psu.edu/sites/default/files/General%20Resources/DSA/SCC\\_DSA\\_Spec\\_2014.pdf](http://www.dirtandgravel.psu.edu/sites/default/files/General%20Resources/DSA/SCC_DSA_Spec_2014.pdf)
- B. Penn State Center for Dirt and Gravel Road Studies "Driving Surface Aggregate Handbook"  
<http://www.dirtandgravel.psu.edu/general-resources/driving-surface-aggregate-dsa>
- C. ASTM C131 [AASHTO T96] - Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.  
<http://www.astm.org/Standards/C131>
- D. ASTM D4972 - Standard Test Method for pH of Soils. <http://www.astm.org/Standards/D4972>
- E. ASTM D698, Procedure C, Standard [AASHTO T99] – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)).  
<http://www.astm.org/Standards/D698>
- F. ASTM D4318 [AASHTO T89/90] – Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.  
<http://www.astm.org/Standards/D4318>
- G. Pennsylvania Test Method No. 100. - Method of Test for amount of material finer than 75 µm (no. 200) sieve in aggregate.  
[http://www.dot.state.pa.us/public/pdf/BOCM\\_MTD\\_LAB/PUBLICATIONS/PUB\\_19/PTM-100.pdf](http://www.dot.state.pa.us/public/pdf/BOCM_MTD_LAB/PUBLICATIONS/PUB_19/PTM-100.pdf)
- H. Pennsylvania Test Method No. 510 – Method of Test for soundness of aggregate by use of sodium sulfate.  
[http://www.dot.state.pa.us/public/pdf/BOCM\\_MTD\\_LAB/PUBLICATIONS/PUB\\_19/PTM-510.pdf](http://www.dot.state.pa.us/public/pdf/BOCM_MTD_LAB/PUBLICATIONS/PUB_19/PTM-510.pdf)
- I. ASTM D6938 [AASHTO T310] – Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).  
<http://www.astm.org/Standards/D6938>



5/2016

# PA State Conservation Commission Driving Surface Aggregate Certification Form

Company: \_\_\_\_\_

Plant Location: \_\_\_\_\_

Parent Stone Type: \_\_\_\_\_

Tonnage Represented: \_\_\_\_\_

Project: \_\_\_\_\_

This record is to certify that the aggregate shipped to the above-referenced job site meets all PA State Conservation Commission specifications and quality requirements.

Sieve Size	Specification Range % passing	Gradation for This Lot % passing
1.5"	100	
0.75"	65 – 95	
#4	30 – 65	
#16	15 – 30	
#200	10 – 15	

pH: \_\_\_\_\_ L.A. Abrasion: \_\_\_\_\_ Plasticity Index: \_\_\_\_\_ Opt. Moisture %: \_\_\_\_\_

Authorizing Agent Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name of Authorizing Agent: \_\_\_\_\_

Print Title of Authorizing Agent: \_\_\_\_\_

**Note:** The authorizing agent or responsible party should sign their name and print their name below their signature. If the signatory is a Penn-DOT certified Aggregate Technician, add the certification number on title line and no notary is required.

Sworn and subscribed before me:

This day: \_\_\_\_\_

Notary Public

My commission expires: \_\_\_\_\_