

LOCAL TECHNICAL ASSISTANCE PROGRAM

DROP-IN

ASPHALT

PRESERVATION

TOOL – CAPE SEAL



MARCH 5, 2026



Pennsylvania
Department of Transportation

SESSION BEING RECORDED

This session is being recorded.

By participating in this session, you are consenting to the recording, retention, and use of this session.

Additionally, as a reminder by asking a question verbally you are also consenting to the recording, retention, and use of your statements.

PRESENTER(S)

Tim Montag

tjmontag@ptd.net

Rex Eberly, PAAMA Director

director@PAAMA.org

Doug Jones, Director of Public Works, Lower Salford Township,
Montgomery Co.

djones@lowersalfordtownship.org

Pennsylvania Local Technical Assistance Program

Providing:

Training

- In-Person & Virtual
- Road Shows

Technical Support Services

- Onsite
- Phone/email

- Website: www.gis.penndot.pa.gov/ltap

All Services are FREE.

The screenshot shows the Pennsylvania Department of Transportation Local Technical Assistance Program (LTAP) website. At the top is the logo for Pennsylvania Department of Transportation Local Technical Assistance Program. Below the logo is a navigation bar with links for Home, LTAP Tools, My Tools, Administrative Tools, Reports, Help, and Sign out. The main content area features six green boxes with white text, arranged in two rows of three. The top row includes: 'My Training Schedule' (Upcoming training, completed training and completion certificates), 'My Technical Assistance Requests' (Information on your current and past tech assist requests), and 'My User Data and Roads Scholar Status' (Update your user information, view Roads Scholar status, and print certificates). The bottom row includes: 'Register for Training' (Classes, Drop-Ins, Webinars and Workshops), 'Request Technical Assistance' (Have a technical expert evaluate your transportation issue and provide potential solutions), and 'Resources and Technical Information' (Resources to assist with safety and maintenance topics). Below these boxes is the text 'All services are free to municipalities'. Underneath is a section titled 'LTAP Programs' with a horizontal menu containing 'About LTAP', 'Roads Scholar Program', 'LTAP Resources', 'Training Descriptions', and 'Why do I need an Account?'. To the right of the main content is a photograph of a road construction site with a yellow roller and a white truck. Below the photo is a logo for 'BUILD A BETTER MOUSETRAP INNOVATION CHALLENGE' featuring a lightbulb with a road winding through it. At the bottom right is a section titled 'Upcoming Training' with a card for 'TRAFFIC SIGNALS BASICS (RS2-S33-D1) VIRTUAL PA' on '30 JAN'.







HANDOUTS ONLINE

- <https://gis.penndot.pa.gov/ltap/> - Training Descriptions
- Click on the course description and scroll to the bottom to download handouts.

Handout Upload: No file chosen

Course Handouts :

#	File Name	Date	Download	Delete
1	00.ClassWorkbook_2021-01-13.pdf	1/13/2021 10:23:00 AM		
2	01. Handout_ 1.pdf	1/13/2021 10:23:00 AM		

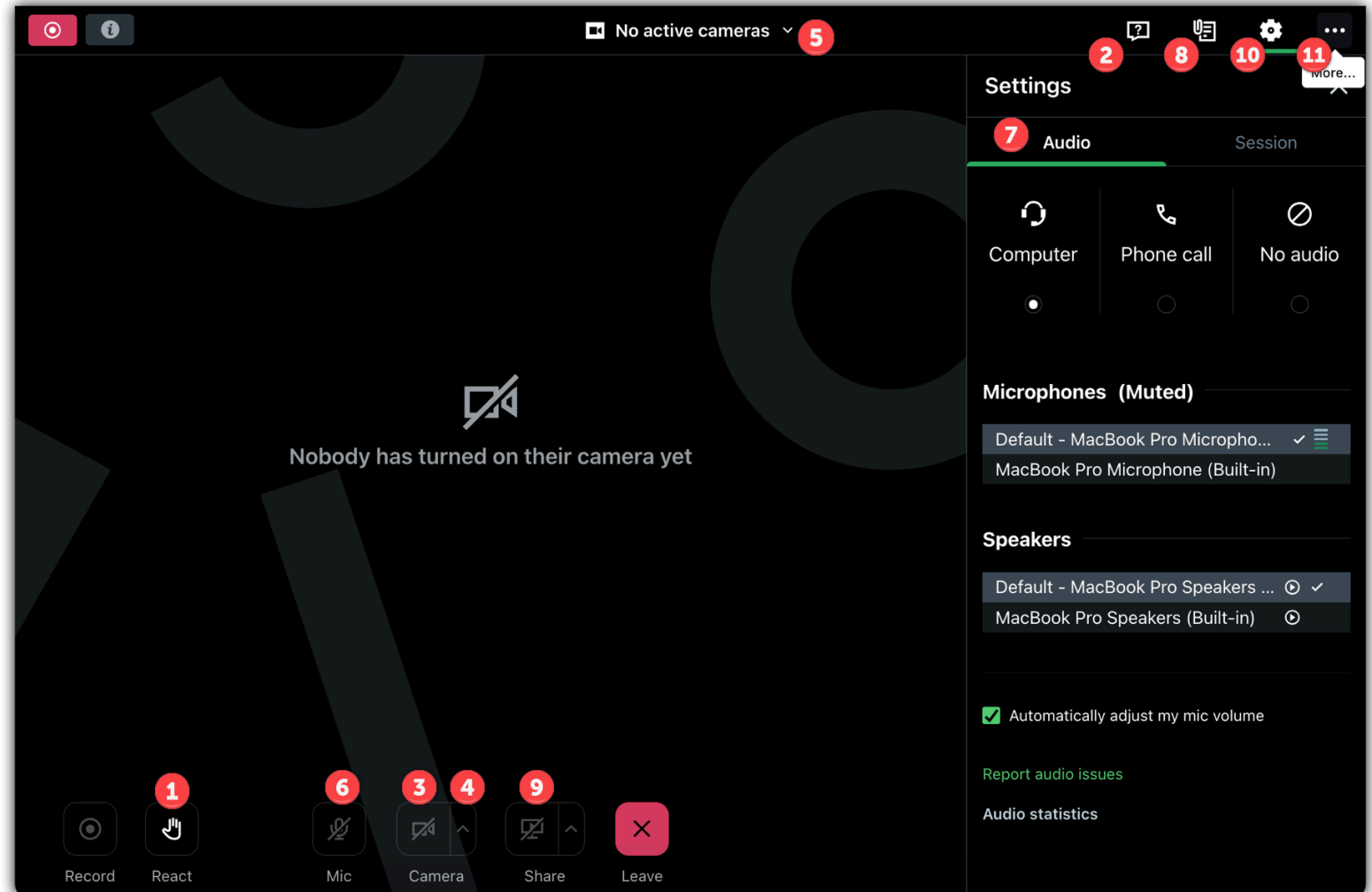
VIRTUAL IN-SESSION ATTENDEE GUIDE

Interact with the presenter/organizer:

(1) Reaction Emojis

(2) Use the Question/Chat icon to type your question/comment and send it to the staff/presenter.

(8) If materials have been shared such as handouts or PDF slides, you can access them through the Materials icon.



POLL QUESTION

Who is attending the drop-in today?

- a) Municipal Public Works Leadership
- b) Municipal Public Works Work Crew
- c) Elected Official
- d) PennDOT/County/MPO/RPO
- e) Other



POLL QUESTION

For the municipal audience:

Have you used **Cape Seal** as an asphalt pavement preservation tool?

- a) Yes, part of the normal maintenance cycle
- b) Yes, only once or a couple times
- c) No



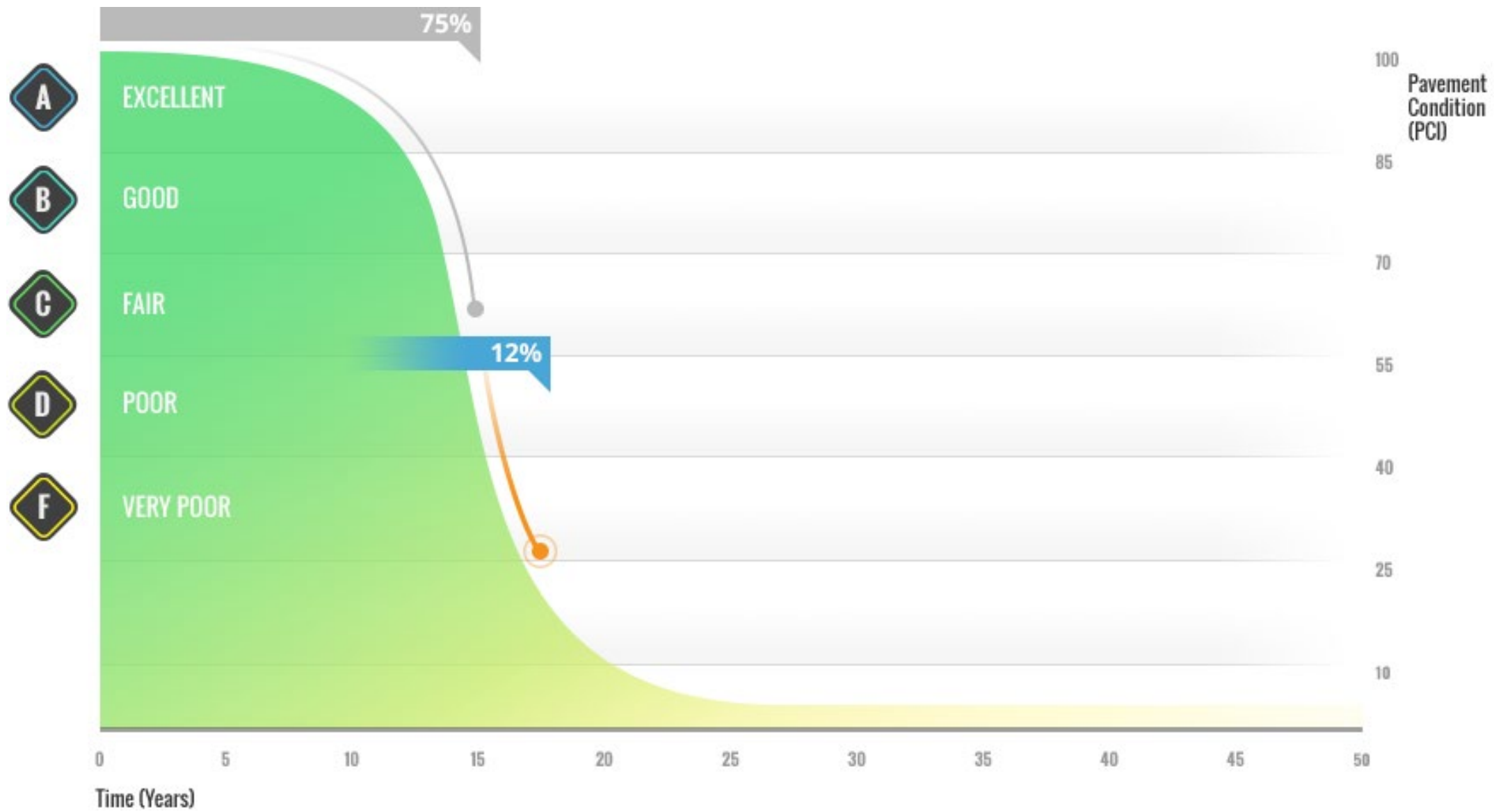
WHAT IS A CAPE SEAL?

Cape Seal definition:

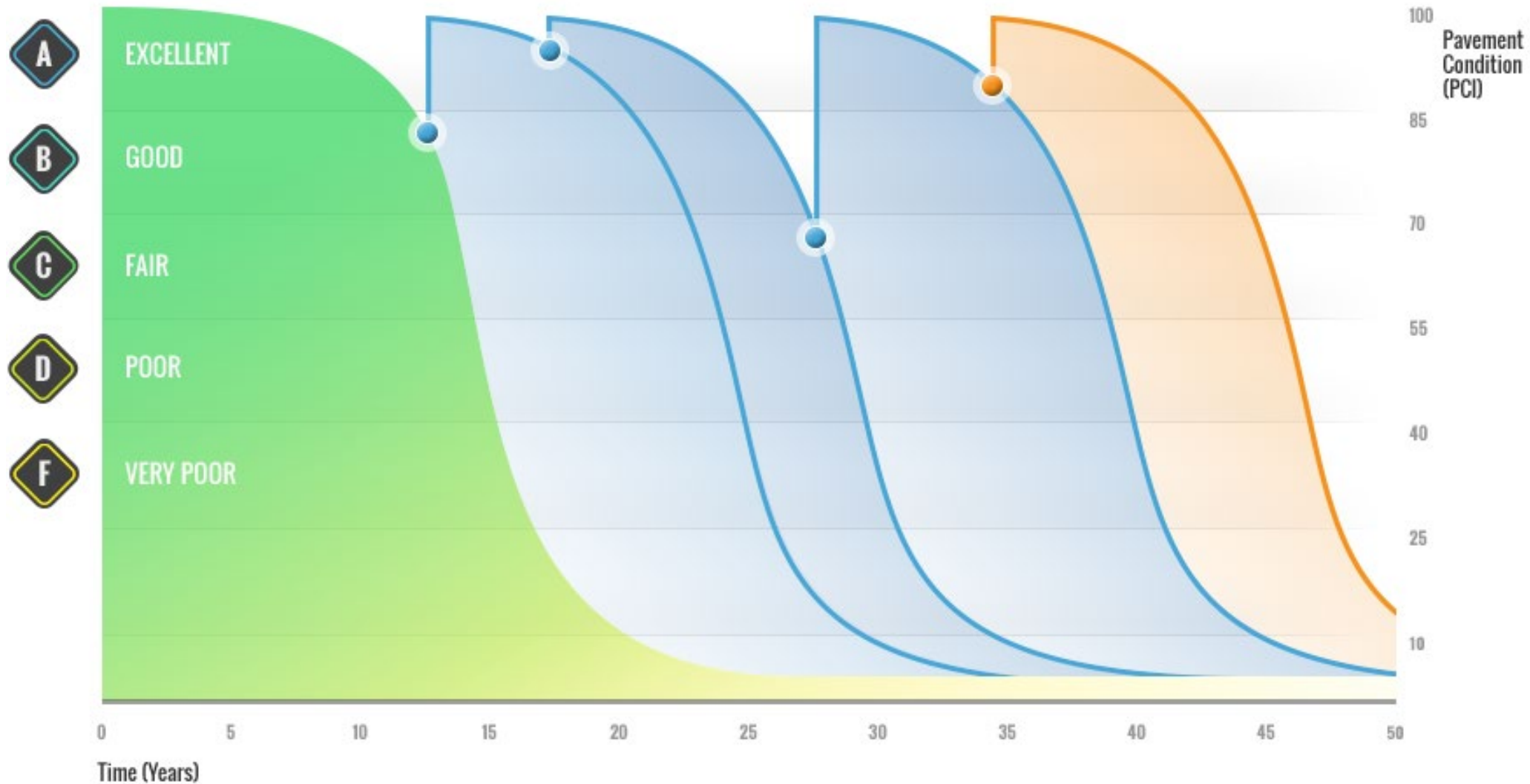
- A pavement preservation tool that can be applied to intermediate to low volume roadways that are structurally sound.
- The treatment is a two-step process. A seal coat is applied to the roadway followed by a slurry seal or micro surfacing. The treatment seals the surface extending the life of the pavement.



WHY USE CAPE SEAL?



WHY USE CAPE SEAL?



PENNDOT PUBLICATIONS

Pub. 408 Construction Standards



Pennsylvania
Department of Transportation
www.pa.gov/pennodot

Publication 408

Below are links to different versions of Publication 408 and their respective effective dates. Select by clicking on the version.

Version	Effective Dates
2000	April 3, 2000 to September 30, 2003
2003	October 1, 2003 to April 1, 2007
2007	April 2, 2007 to March 31, 2011
2011	April 1, 2011 to March 31, 2016
2016	April 1, 2016 to April 2, 2020
2020	April 10, 2020 to October 10, 2025
2026	April 10, 2026 to April 12, 2030

Seal Coat – Pub. 408, Section 470

Slurry Seal – Pub. 408, Section 482

Micro Surfacing – Pub. 408, Section 483

Pub. 447 Approved Products for Lower Volume Local Roads



Pennsylvania
Department of Transportation
www.pa.gov/pennodot

PUB 447 (1-20)

Bituminous Seal Coat – Pub. 447, MS-0340-0005

Cape Seal – Pub. 447, MS-0340-0010

CAPE SEAL

Cape Seal Specification- PennDOT Pub. 447

Purpose:

- Improve surface friction
- Fills ruts/ minor surface irregularities
- Seal pavement surface

Note: Recently added to the 447 and is liquid fuels eligible as one process.



ROADWAY SELECTION

Good Candidate

It has cracks, but the road does not have base damage.

The larger cracks were repaired prior to bituminous seal coat installation.

Photo: Lower Salford Township,
Montgomery County



STEP-1 SEAL COAT

The chips are being placed on top of the emulsion. This is the first step of the cape seal operation.

Note the minor cracks which will be sealed by this operation.

Photo: Ergon, Inc.



STEP-2 SLURRY SEAL OR MICRO SURFACING

A slurry seal is being placed over the chip seal (the second step in the cape seal process). The right side shows the slurry being placed and the left side shows the slurry seal cured and ready for traffic.

Photo: Asphalt Maintenance Solutions LLC)



STEP-2 SLURRY SEAL OR MICRO SURFACING

A micro surface was placed over the chip seal (the second step in the cape seal process).

The left side shows the micro surface after placement.

Photo: PennDOT



CAPE SEAL

This is a minor collector road in a residential area with a complete cape seal with pavement markings. The road has the appearance of being paved.

Photo: Asphalt Maintenance Solutions LLC



CAPE SEAL

Pub. 447, MS-0340-0010

Cape Seal

I. DESCRIPTION - This work is the application of a combination preservation treatment which consists of a Single Bituminous Seal Coat followed by either a Slurry Seal or Micro Surfacing.

II. MATERIALS.

- **A. Bituminous Seal Coat Bituminous Material.** Provide one of the following, as specified in Pub. 408, Section 702
- Class of material: RS-2, RS-2P, CRS-2, CRS-2P, HFRS-2, HFRS-2P

CAPE SEAL

Cape Seal Pub. 447

- **B. Bituminous Seal Coat Coarse Aggregate.** Satisfy requirements for Type A aggregates as specified in Pub. 408, Section 703.2 or Pub. 447, MS-0340-0005, with the SRL designated in the Contract Item.
- For all gradations, the amount of material passing No. 200 sieve shall not exceed 1.2 percent. Aggregates can be selected from the below table.
 - Seal Coat Aggregate
 - AASHTO #8
 - AASHTO #9
 - AS/2 – 1/4"
 - AS/3 – 1/4"

SEAL COAT

C. Mix Design –

1. **Seal Coat.** Design the Seal Coat in accordance with MS-0340-0005 Section II C.
2. **Slurry seal or Micro surfacing** – adhering to Pub. 408, Section 482.2e (Slurry seal) or 483.2f (Micro surfacing)

D. Emulsion (Slurry seal or Micro surfacing). Provide Emulsion adhering to Pub. 408, Section 482.2(a) (Slurry seal) or 483.2(a) Micro surfacing.

Slurry seal - SS-1H, CSS-1H, CQS-1H

Micro surfacing - CQS-1hpm

E. Slurry Seal or Micro Surfacing Aggregate

- Provide Aggregate adhering to Pub. 408, Section 482.2(b) (Slurry seal) or 483.2(b) (Micro surfacing).
- Slurry seal - Type I, Type II, Type III
- Micro surfacing - Type A, Type B

Note: Typically, the seal coat is covered with a Type II slurry or a Type A micro surfacing.

III. CONSTRUCTION - At least 2 weeks before the scheduled start date, submit seal coat and Slurry or Micro surfacing design for the Representative's review. If the source or gradation of aggregate changes or type of asphalt emulsion changes, submit a new design.

A. Seasonal Limitations.

- **Seal Coat** – comply with Pub. 447, MS 0340-0005, Section III (c)
- **Slurry Seal or Micro Surfacing** – comply with Section 413.3(b) (Slurry seal) or Section 483.3(b) (Micro Surfacing)

B. Temperature and Weather Limitations.

- **Seal Coat** – comply with Pub. 408, Section 483.3 (b)
- **Slurry Seal or Micro surfacing** – comply with Pub. 408, Section 482.3a (Slurry seal) or 483.3b (Micro surfacing)

C. Preparing Existing Surface.

- **Seal Coat** – comply with MS 0340-0005 Section III E
- **Slurry Seal or Micro Surfacing** – Sweep the completed chip seal with a pick-up style street sweeper to remove loose aggregate within two weeks of applying the seal coat. Sweeping shall continue until all loose aggregate is removed from the roadway and adjacent areas. Excess aggregate must be removed from project by the contactor and hauled to a suitable location for proper disposal. Ensure all loose aggregate is removed prior to placing slurry seal or micro surfacing.

D. Application of Materials –

Seal Coat – comply with Pub. 447, MS-0340-0005, Section III

Allow the Seal Coat to cure for at least **72 hours** before placing the Slurry seal or Micro surfacing.

Slurry or Micro Surfacing should be placed within 30 days of Seal Coat application unless additional time is permitted or requested by owner.

- **Slurry seal** – comply with Pub. 408, Section 482.3
- **Micro surfacing** – comply with Pub. 408, Section 483.3

CAPE SEAL

Preparing existing surface...

- Remove & dispose of unsuitable material
 - Cold patch, lawn clippings, leaves
- Use power broom to clean the surface
- Dust, dirt, debris
- Seal cracks
 - 1/4" to 1"
- Cracks larger than 1" use mastic







BUILD A BETTER MOUSETRAP

2025 Winner

Lower Salford Township
Montgomery County

Leveraging Technology to
Communicate with
Residents



CAPE SEAL

Lower Salford
Township, Montgomery
County



CAPE SEAL

Lower Salford
Township, Montgomery
County



CAPE SEAL

Lower Salford
Township, Montgomery
County



CAPE SEAL

Lower Salford
Township, Montgomery
County



STORIES TO SHARE

What Successes/Challenges you have had with Cape Seal?

Put your comments in the "Question Box".

CONTACT LTAP

Address :
Pennsylvania Department of Transportation
Bureau of Planning and Research
400 North Street, 6th Floor
Harrisburg, PA 17120



Pennsylvania
Department of Transportation
Local Technical Assistance Program
www.pa.gov/penndot

Website: <https://gis.penndot.pa.gov/ltap/>

Phone: 1-800-FOR-LTAP

Fax: 717-783-9152

Email: ltap@pa.gov

Copyright © 2026 by the Commonwealth of Pennsylvania. All rights reserved.