

ASPHALT
THE SMOOTH QUIET RIDE



2016 Local Roads Workshop

PaveXpress Update



MICHIGAN RIDES ON US

Asphalt.

PaveXpress

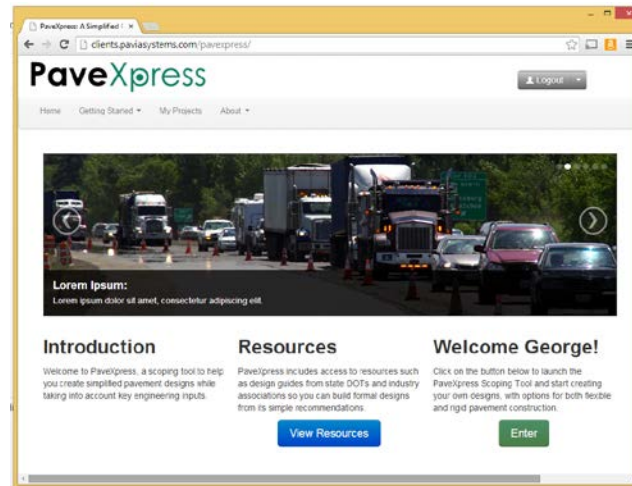
A Simplified Pavement Design Tool



Brief Overview

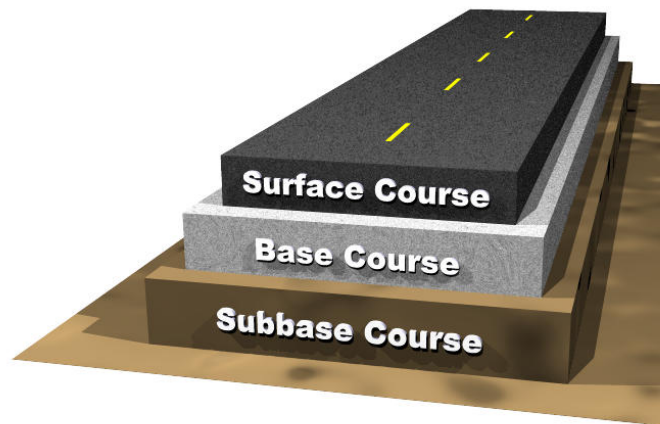
PaveXpress

- Why PaveXpress?
- What Is PaveXpress?
- Overlay Design Module
- Overlay Design scenarios using *PaveXpress*



PaveXpress

AASHTO has been developing MEPDG for high volume roads, but a gap has developed for local roads and lower volumes



PaveXpress

What is it?

A free online tool to help you create simplified pavement designs using key engineering inputs, based on the AASHTO 1993 and 1998 supplement pavement design process.

- Accessible via web and mobile
- Free, no cost to use
- Based on AASHTO pavement design equations
- User-friendly
- Share, save, and print project designs
- Interactive help and resource links

Potential Application Users

- Local Government Agencies
- A/E/C Firms
- Engineering Students
- State Transportation Agencies
- FHWA
- Foreign Companies and Governments



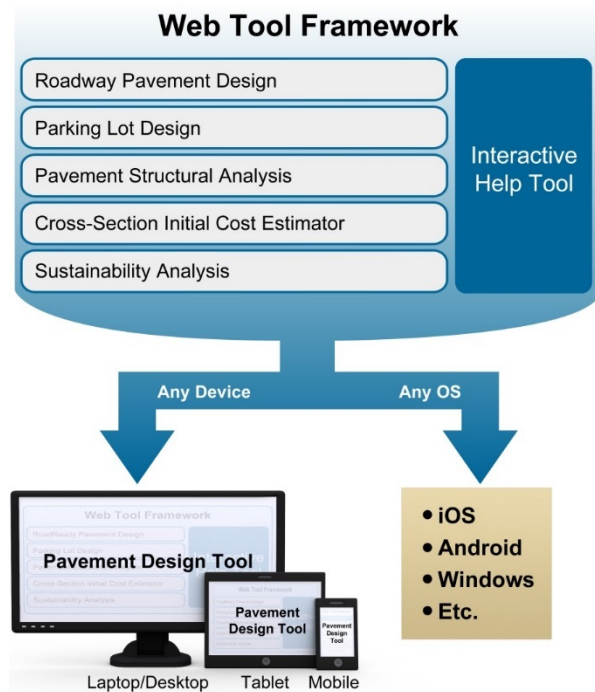
Guiding Principles for Application

- Provide accurate un-biased results...**be a trusted resource**
- Only ask the user for what is required to perform a technically sound design
- Where appropriate suggest industry accepted defaults to minimize user input
- Provide context sensitive help and guidance

Approach: Technical

- Provide technically sound designs using:
 - Flexible: AASHTO '93
 - Rigid: AASHTO '93 w/ '98 Supplement
 - Parking lot guidance (Flexible only)
- Use industry accepted standards and guidance
- Linkages to State and Local guidance
- Linkages to Pavement Interactive

Approach: Web Delivery



- Browser based delivery
- Available via the web
- Supports all kinds of devices/OS
 - Desktops
 - Laptops
 - Tablets (7" – 10" - includes iPad Mini on up).
 - Handheld device capabilities
- Easily scalable and updatable

Roadmap for **PaveXpress**

A framework to continue to build upon:

- **Version 1.0:** Basic AASHTO 93/98 for flexible and rigid
 - Launched late 2014
- **Version 1.1:** Layer Protection
 - Launched March 2015
- **Version 2.0:** Overlay Design (empirical)
 - Launched July 2015
- **Version 3.0:** Simplified mechanistic design for both new construction and overlays

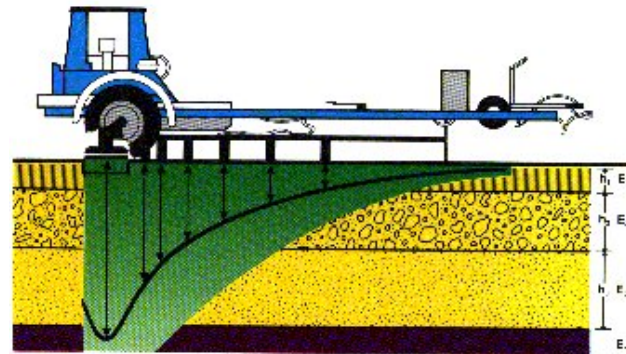
Highlights of Version 2.0

- New AC and PCC Pavement Design
- **AC Overlay Design for Pavement Rehabilitation**



Highlights of Version 2.0

- New AC and PCC Pavement Design
- AC Overlay Design for Pavement Rehabilitation
- **Evaluation Methods for Existing AC Pavement**
 - **Condition Survey**
 - **Non-Destructive Deflection Testing**



Highlights of Version 2.0

- New AC and PCC Pavement Design
- AC Overlay Design for Pavement Rehabilitation
- Evaluation Methods for Existing AC Pavement
 - Condition Survey
 - Non-Destructive Deflection Testing
- **Includes Questions of Coring and Milling**
 - **Delamination/Stripping**
 - **Top-Down or Bottom-Up Cracking**



Highlights of Version 2.0

- New AC and PCC Pavement Design
- AC Overlay Design for Pavement Rehabilitation
- Evaluation Methods for Existing AC Pavement
 - Condition Survey
 - Non-Destructive Deflection Testing
- Includes Questions of Coring and Milling
 - Delamination/Stripping
 - Top-Down or Bottom-Up Cracking
- **Adjustment to Existing Pavement Layer Coefficients**

Screen 1 – Project Information

Training - AC New Design

Save Print

- 1 Project Information**
Location, Roadway Classification and Pavement Type
- 2 Pavement Layers**
Pavement Layer(s) Information
- 3_a Condition Survey**
Visual Assessment
- 3_b Layer Coefficients**
Structural Parameters Information
- 4 Design Parameters**
Specific Design Variables
- 5 Traffic & Loading**
Traffic and Loading Data
- Design Guidance**

Project Information

Project Name

Project Description

Estimated Completion Year ⓘ

State ⓘ

Roadway Classification ⓘ

Pavement Design

Project Type ⓘ

Structural Evaluation Method ⓘ

Next

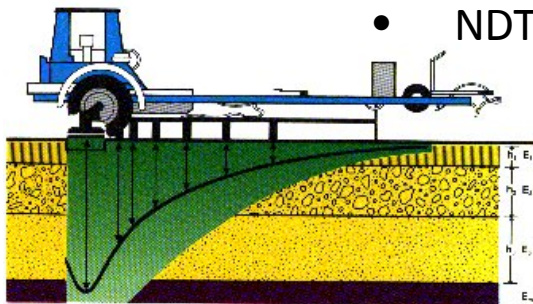
Screen 1

1 Project Information

*Location, Roadway Classification and
Pavement Type*

7) Structural Evaluation Method - This drop-down box allows the user to indicate the type of approach used to evaluate the existing pavement following one or two approaches in the 1993 Guide:

- Condition Survey
- NDT



Screen 2 – Pavement Layers

Training - AC New Design

Save Print

- 1 Project Information
Location, Roadway Classification and Pavement Type
- 2 Pavement Layers**
Pavement Layer(s) Information
- 3_a Condition Survey
Visual Assessment
- 3_b Layer Coefficients
Structural Parameters Information
- 4 Design Parameters
Specific Design Variables
- 5 Traffic & Loading
Traffic and Loading Data
- Design Guidance

Existing Pavement Layers

Layer Type	Thickness	Action?
Click on 'Add Layer' button below to add the top most pavement layer		

Add Layer

Subgrade

Subgrade Soil Type

Subgrade Modulus (M_R) psi

New AC Overlay

Layer Coeff. (a)

Minimum Thickness

Previous Next

Screen 2 – Pavement Layers

2 Pavement Layers *Pavement Layer(s) Information*

1) Add Existing Layer: For the rehabilitation of an pavement, the existing pavement structure must be input. All like materials are grouped into a single layer. For example, all asphalt layers are combined. For each layer, the total thickness must be included. Layer types include:

- Asphalt – Dense Graded
- Asphalt – Open Graded
- Aggregate Base
- Cement Treated Base
- Bituminous Treated Base
- Asphalt Stabilized Base
- Subbase

The screenshot shows a dialog box titled "Add Existing Layer" with a close button (X) in the top right corner. The dialog contains two input fields: "Layer Type" with a dropdown menu showing "Layer Type" and an information icon (i) to its right; and "Thickness" with a text input field and a unit selector set to "in", also with an information icon (i) to its right. At the bottom right, there are two buttons: "Cancel" and "Add Layer".

Screen 2 – Pavement Layers

2 Pavement Layers Pavement Layer(s) Information

2) Subgrade Soil Type – Following the input of the pavement structure, subgrade information is needed. The user can use the AASHTO classifications for the project. These classifications are used to compare the expected subgrade modulus with the user input value. If the user value is higher or lower than the expected value for that classification, a warning is given to the user.

PaveXpress

Home Getting Started ▾ My Projects About ▾

Training - AC New Design

Save Print

1 Project Information
Location, Roadway Classification and Pavement Type

2 Pavement Layers
Pavement Layer(s) Information

3_a Condition Survey
Visual Assessment

3_b Layer Coefficients
Structural Parameters Information

4 Design Parameters
Specific Design Variables

5 Traffic & Loading
Traffic and Loading Data

Design Guidance

Existing Pavement Layers

Layer Type	Thickness	Action?
Asphalt - Dense Graded	8 in.	🔗 🗑️
Aggregate Base	6 in.	🔗 🗑️

Add Layer

Subgrade

Subgrade Soil Type

Subgrade Modulus (M_s)

New AC Overlay

Layer Coeff. (a)

Minimum Thickness

Select a Soil Type ▾

- A-1-a
- A-1-b
- A-2-4
- A-2-5
- A-2-6
- A-2-7
- A-3
- A-4
- A-5
- A-6
- A-7-5
- A-7-6

psi Calculate

Previous Next

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Screen 2 – Pavement Layers

2 Pavement Layers Pavement Layer(s) Information

- 3) Subgrade Modulus – As with the new design of an Asphalt pavement, the overall structure needed to support the anticipated loading is very dependent on subgrade strength. The user can enter a design modulus based on lab testing or a correlation with CBR or R-Values

The screenshot shows the Pavexpress software interface for 'Training - AC New Design'. The interface includes a navigation menu on the left with five main sections: 1 Project Information, 2 Pavement Layers (highlighted), 3a Condition Survey, 3b Layer Coefficients, 4 Design Parameters, 5 Traffic & Loading, and Design Guidance. The main content area is titled 'Existing Pavement Layers' and contains a table with the following data:

Layer Type	Thickness	Action?
Asphalt - Dense Graded	8 in.	✓ ✕
Aggregate Base	6 in.	✓ ✕

Below the table is an 'Add Layer' button. The 'Subgrade' section includes a dropdown for 'Subgrade Soil Type' (set to 'A-1-a'), a text input for 'Subgrade Modulus (M_s)' (set to '9000') with a unit selector 'psi', and a 'Calculate' button. The 'New AC Overlay' section includes a text input for 'Layer Coeff. (a)' (set to '0.44') and a text input for 'Minimum Thickness' (set to '1'). The interface also features a 'Logout' button in the top right, 'Save' and 'Print' buttons, and 'Previous' and 'Next' buttons at the bottom right. The footer contains copyright information for Pavia Systems Inc. 2014 and links for Disclaimer, Privacy Policy, and Terms of Service.

Screen 2 – Pavement Layers

2 Pavement Layers *Pavement Layer(s) Information*

- 4) New AC Overlay – For the calculation of overlay thickness, two inputs regarding the asphalt material must be input. First, what layer coefficient to use. A standard value is 0.44, but it can be altered by the designer. The second input is the minimum lift thickness for the AC overlay. With most asphalt mixes, this depends on the top stone size. This value should reflect the common asphalt overlay material used.

The screenshot shows the PaveXpress software interface for a 'Training - AC New Design' project. The interface is divided into several sections:

- Navigation:** Home, Getting Started, My Projects, About, and a Logout button.
- Project Information:** Location, Roadway Classification and Pavement Type.
- Pavement Layers:** The current section, showing 'Pavement Layer(s) Information'.
- Condition Survey:** Visual Assessment.
- Layer Coefficients:** Structural Parameters Information.
- Design Parameters:** Specific Design Variables.
- Traffic & Loading:** Traffic and Loading Data.
- Design Guidance:** A grid icon representing design guidance.

The 'Existing Pavement Layers' section contains a table:

Layer Type	Thickness	Action?
Asphalt - Dense Graded	8 in.	✓ 🔗
Aggregate Base	6 in.	✓ 🔗

Below the table is an 'Add Layer' button. The 'Subgrade' section includes a dropdown for 'Subgrade Soil Type' (set to 'A-1-a'), a 'Subgrade Modulus (M_s)' input field (set to 9000 psi), and a 'Calculate' button. The 'New AC Overlay' section has two input fields: 'Layer Coeff. (a)' (set to 0.44) and 'Minimum Thickness' (set to 1). Information icons (i) are present next to several fields. At the bottom, there are 'Previous' and 'Next' buttons, and a footer with copyright information and links for Disclaimer, Privacy Policy, and Terms of Service.

Screen 3a – Condition Survey

Training - AC New Design

Save Print

- 1 Project Information
Location, Roadway Classification and Pavement Type
- 2 Pavement Layers
Pavement Layer(s) Information
- 3a Condition Survey
*Visual Assessment***
- 3b Layer Coefficients
Structural Parameters Information
- 4 Design Parameters
Specific Design Variables
- 5 Traffic & Loading
Traffic and Loading Data
- Design Guidance

Condition Survey

Alligator Cracking

Low	Medium	High
0 %	0 %	0 %



Transverse Cracking

Low	Medium	High
0 %	0 %	0 %



Cores

Were cores taken on the roadway? No



Were cores of cracks taken? No



Distressed Pavement

Mill/Remove Distressed Asphalt? Yes



Depth to remove 0 inches



Previous Next

Screen 3a – Condition Survey



1) Condition Survey – This approach to assessing the existing pavement’s structural capacity relies on a visual condition survey. Two distress types are evaluated and used in PaveXpress. For each distress type, a percentage by condition type (Low, Medium and High) is recorded:

Alligator Cracking

Transverse Cracking

While rutting is considered in Chapter 5 of the 1993 Guide, it is highly recommended to mill surfaces that experience rutting.

Condition Survey

Alligator Cracking



Transverse Cracking



Screen 3a – Condition Survey

3_a Condition Survey Visual Assessment

- 2) Cores – In addition to a visual assessment of the pavement, coring is critical. Coring will aid in confirming the existing pavement structure and retrieving material for lab testing. Just as importantly, the cores can be used to determine the direction of cracking along with the presence of delamination or stripping. The depths of cracks and location of the stripping/delamination is used by PaveXpress to guide the user in determining depth of milling



Cores

Were cores taken on the roadway?

Yes ▾



Were cores of cracks taken?

Yes ▾



Crack Type

Top-Down Only ▾



Depth of cracks (max)

2 inches



Delamination/Stripping?

Yes ▾



Depth of distress (max)

2 inches



Screen 3a – Condition Survey

3_a Condition Survey Visual Assessment

- 3) Distressed Pavement– In many cases, the existing pavement surface is distressed and should be removed prior to placement of a new AC overlay. The designer must define the depth of existing pavement to be removed. This material that is removed will impact the existing structural capacity.



Distressed Pavement

Mill/Remove Distressed Asphalt?

Yes ▾



Depth to remove

2

inches



Screen 3b – Layer Coefficients

Training - AC New Design

Save Print

- 1 Project Information
Location, Roadway Classification and Pavement Type
- 2 Pavement Layers
Pavement Layer(s) Information
- 3_a Condition Survey
Visual Assessment
- 3_b Layer Coefficients**
Structural Parameters Information
- 4 Design Parameters
Specific Design Variables
- 5 Traffic & Loading
Traffic and Loading Data
- Design Guidance

Layer Coefficients

Layer Type	Existing Thickness	AASHTO Recommendation	Layer Coef. (a)	Drainage Coef. (m)	SN
Asphalt - Dense Graded	8"	0.14 to 0.20	<input type="text" value="0"/>	<input type="text" value="1"/>	0.0
Aggregate Base	6"	0.10 to 0.20	<input type="text" value="0"/>	<input type="text" value="1"/>	0.0

SN_{eff} 0.0

⚠ You have elected to remove 2 inches of pavement from the surface. This may impact the layer coefficient you select.

Previous Next

Screen 3b – Layer Coefficients

3_b Layer Coefficients Structural Parameters Information

Layer Coefficients – Based on the existing condition of the pavement’s surface, AASHTO provide recommendations for adjusted layer coefficients. If the existing surface will be removed and the associated distresses, then “sound” or common layer coefficients from the remaining layers should be used. If the entire pavement structure is distressed, then a value from the AASHTO Recommendation range should be entered by the user.

Layer Coefficients

Layer Type	Existing Thickness	AASHTO Recommendation	Layer Coef. (a)	Drainage Coef. (m)	SN
Asphalt - Dense Graded	8"	0.14 to 0.20	<input type="text" value="0.44"/>	<input type="text" value="1"/>	3.5
Aggregate Base	6"	0.10 to 0.20	<input type="text" value="0.14"/>	<input type="text" value="1"/>	0.8

SN_{eff} 4.4

 You have elected to remove 2 inches of pavement from the surface. This may impact the layer coefficient you select.

Screens 4 and 5 – Design Parameters, Traffic & Loading

The information on these screens are the same as for a new pavement design.

One main area for consideration is the Design Period. For most AC overlays, a design life of 10 to 20 years is common. The period is generally in line with the expected life of the asphalt surface mix.

PaveXpress Logout

Home Getting Started My Projects About

Training - AC New Design

Save Print

1 Project Information <i>Location, Roadway Classification and Pavement Type</i>	Design Parameters
2 Pavement Layers <i>Pavement Layer(s) Information</i>	Design Period: 15 years
3_a Condition Survey <i>Visual Assessment</i>	Reliability
3_b Layer Coefficients <i>Structural Parameters Information</i>	Reliability Level (R): 85 $Z_R = -1.037$
4 Design Parameters <i>Specific Design Variables</i>	Combined Standard Error (S_0): 0.5
5 Traffic & Loading <i>Traffic and Loading Data</i>	Serviceability
Design Guidance	Initial Serviceability Index (p_i): 4.5
	Terminal Serviceability Index (p_t): 2
	Change in Serviceability (ΔPSI): 2.5

Previous Next

Screen – Design Guidance

Overlay – Once the existing pavement information, PaveXpress uses the AASHTO equations to calculate the existing or effective structural number (SN) of the pavement. From the design and loading information, the required SN to support the loadings over the design life is calculate. The difference in the required SN and the existing SN is converted to an overlay thickness. If this thickness is less than minimum thickness input on Screen 2 or the required SN is less than the existing SN, then PaveXpress will report the minimum overlay thickness value.

The screenshot displays the PaveXpress web application interface. At the top, the logo "PaveXpress" is visible, along with a "Logout" button. Below the logo is a navigation bar with links for "Home", "Getting Started", "My Projects", and "About". The main heading is "Training - AC New Design", with "Save" and "Print" buttons to its right. A sidebar on the left contains a list of steps: 1 Project Information, 2 Pavement Layers, 3a Condition Survey, 3b Layer Coefficients, 4 Design Parameters, and 5 Traffic & Loading. The "Design Guidance" step is highlighted in green. The main content area is titled "Scoped Design" and shows a cross-section of pavement layers: "Overlay" (Asphalt - Dense Graded), "Aggregate Base", and "Subgrade". To the right of the cross-section, the "Layer Thicknesses (in)" are listed: Overlay: 1.2, Asphalt - Dense Graded: 6, and Aggregate Base: 6. A link for "See Calculation Details" is provided. Below the cross-section is a "Design Notes" section with a text area containing the note: "You have removed 2 inches from the surface of the pavement prior to the overlay in this design." A "Resources" section is at the bottom, and a "Previous" button is located in the bottom right corner.

Screen 3 – Nondestructive Testing (NDT)

Training - AC Overlay NDT

Save Print

- 1 Project Information
Location, Roadway Classification and Pavement Type
- 2 Pavement Layers
Pavement Layer(s) Information
- 3 Nondestructive Testing (NDT)**
Structural Parameters Information
- 4 Design Parameters
Specific Design Variables
- 5 Traffic & Loading
Traffic and Loading Data
- Design Guidance

Backcalculation Results

Design Subgrade Modulus (M_r) 

SN_{eff} 

Cores


Were cores taken on the roadway? 

Were cores of cracks taken? 

Distressed Pavement

Mill/Remove Distressed Asphalt? 

Depth to remove inches 

Estimated Structural Coefficient (a) 

Previous Next

Screen 3 – Nondestructive Testing (NDT)

3 Nondestructive Testing (NDT) *Structural Parameters Information*

- 1) Backcalculation Results: Design Subgrade Modulus – The subgrade modulus value is very important to the required structural capacity of the pavement. PaveXpress allows for direct entry of a modulus based on deflection testing and backcalculation. If the user has not performed backcalculation, then raw deflection data can be entered (Calculate button). It is suggested the user enter data from the 18", 24" or 36" sensor when using this approach. Please note, the Design Subgrade Modulus and the Subgrade Modulus on Screen 2 may not be equal. PaveXpress uses the Design Subgrade Modulus with the NDT method for calculating overlay designs.

The screenshot shows a dialog box titled "Calculate Subgrade Modulus" with a close button (X) in the top right corner. The dialog contains several input fields and a "Calculate" button. The fields are:

- Applied Load (P) [input field] lbs [unit selector] [info icon]
- Radial Distance (r) [input field] in [unit selector] [info icon]
- Deflection of radial distance (d_r) [input field] in [unit selector] [info icon]
- C-value [input field] .33 [info icon]
- Subgrade Modulus (M_R) [input field] psi [unit selector]

At the bottom right, there are two buttons: "Cancel" and "Set MR and Close".

Screen 3 – Nondestructive Testing (NDT)

3 Nondestructive Testing (NDT) *Structural Parameters Information*

- 1) Backcalculation Results: SN_{eff} – The effective structural number is used to characterize the condition of the pavement. PaveXpress allows for direct entry of a SN_{eff} based on deflection testing and backcalculation. If the user has not performed backcalculation, then raw deflection data can be entered (Calculate button). Using the total pavement structure and the Design Subgrade Modulus, SN_{eff} is computed.

The screenshot shows a dialog box titled "Calculate Effective Strength using Deflection" with a close button (X) in the top right corner. The dialog contains several input fields, each with a unit and an information icon (i):

- Deflection (d_o): [] in
- Contact Pressure (p): [] psi
- Load Plate Radius (a): [] in
- Pavement Thickness (D): 14 in
- Design Subgrade Modulus (M_R): 7500 psi
- (E_p): [] psi
- (SN_{eff}): []

At the bottom of the dialog, there are two buttons: "Cancel" and "Set SN_{eff} and Close".

Screen 3 – Nondestructive Testing (NDT)

3 Nondestructive Testing (NDT) *Structural Parameters Information*

- 2) Cores – In addition to a visual assessment of the pavement, coring is critical. Coring will aid in confirming the existing pavement structure and retrieving material for lab testing. Just as importantly, the cores can be used to determine the direction of cracking along with the presence of delamination or stripping. The depths of cracks and location of the stripping/delamination is used by PavExpress to guide the user in determining depth of milling

Cores

Were cores taken on the roadway?

Yes ▾



Were cores of cracks taken?

Yes ▾



Crack Type

Top-Down Only ▾



Depth of cracks (max)

2 inches



Delamination/Stripping?

Yes ▾



Depth of distress (max)

2 inches



Screen 3 – Nondestructive Testing (NDT)

3

Nondestructive Testing (NDT)

Structural Parameters Information

- 3) Distressed Pavement– In many cases, the existing pavement surface is distressed and should be removed prior to placement of a new AC overlay. The designer must define the depth of existing pavement to be removed. This material that is removed will impact the existing structural capacity. Unlike the condition survey method, the designer must assign a layer coefficient for the distress material being removed. This value should correspond to the distress present following the AASHTO Condition Survey recommendations.

Distressed Pavement

Mill/Remove Distressed Asphalt?

Yes ▾



Depth to remove

2

inches



Estimated Structural Coefficient (a)

0.25



Screens 4 and 5 – Design Parameters, Traffic & Loading

The information on these screens are the same as for a new pavement design.

One main area for consideration is the Design Period. For most AC overlays, a design life of 10 to 20 years is common. The period is generally in line with the expected life of the asphalt surface mix.

PaveXpress Logout

Home Getting Started My Projects About

Training - AC New Design

1 Project Information
Location, Roadway Classification and Pavement Type

2 Pavement Layers
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3_a Condition Survey
Visual Assessment

3_b Layer Coefficients
Structural Parameters Information

4 Design Parameters
Specific Design Variables

5 Traffic & Loading
Traffic and Loading Data

Design Guidance

Design Parameters

Design Period: 15 years

Reliability

Reliability Level (R): 85 $Z_R = -1.037$

Combined Standard Error (S_0): 0.5

Serviceability

Initial Serviceability Index (p_i): 4.5

Terminal Serviceability Index (p_t): 2

Change in Serviceability (ΔPSI): 2.5

Save Print

Previous Next

Screen – Design Guidance

Overlay – Once the existing pavement information, PaveXpress uses the AASHTO equations to calculate the existing or effective structural number (SN) of the pavement. From the design and loading information, the required SN to support the loadings over the design life is calculate. The difference in the required SN and the existing SN is converted to an overlay thickness. If this thickness is less than minimum thickness input on Screen 2 or the required SN is less than the existing SN, then PaveXpress will report the minimum overlay thickness value.

The screenshot displays the PaveXpress web application interface. At the top, the logo "PaveXpress" is visible, along with navigation links for Home, Getting Started, My Projects, and About. A user profile icon and "Logout" button are in the top right corner. Below the navigation bar, the page title is "Training - AC Overlay NDT".

The main content area is divided into two columns. The left column is a vertical navigation menu with five items: 1 Project Information (Location, Roadway Classification and Pavement Type), 2 Pavement Layers (Pavement Layer(s) Information), 3 Nondestructive Testing (NDT) (Structural Parameters Information), 4 Design Parameters (Specific Design Variables), and 5 Traffic & Loading (Traffic and Loading Data). The "Design Guidance" item is highlighted in green.

The right column contains the "Scoped Design" section, which includes a diagram of the pavement structure and associated data. The diagram shows four layers: Overlay (dark grey), Asphalt - Dense Graded (dark grey), Aggregate Base (orange), and Subgrade (orange). To the right of the diagram, the "Layer Thicknesses (in)" are listed: Overlay: 2.3, Asphalt - Dense Graded: 6, and Aggregate Base: 6. A link "See Calculation Details" is provided. Below the diagram, the "Design Notes" section contains the text: "You have removed 2 inches from the surface of the pavement prior to the overlay in this design." and a text input field. The "Resources" section is currently empty.

At the bottom right of the interface, there is a "Previous" button.

PaveXpress for AC Overlay Design

Go to Web Application for
Software Demonstration

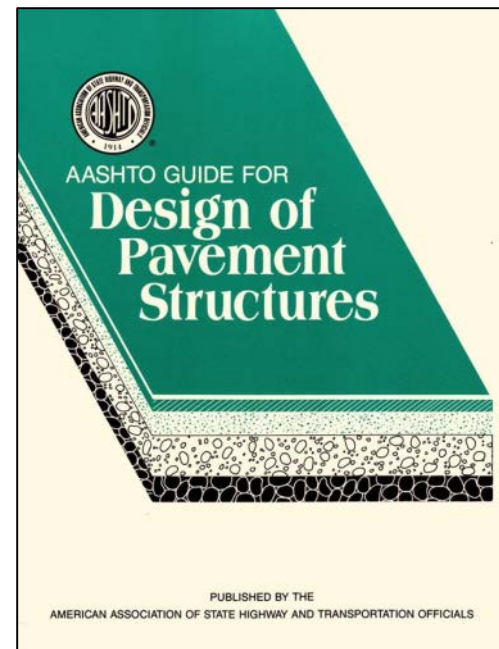
Future of *PaveXpress*

A framework to continue to build upon:

- Simplified mechanistic design for Asphalt Pavements
- Pavement costing module
- Porous pavement design tool
- And more

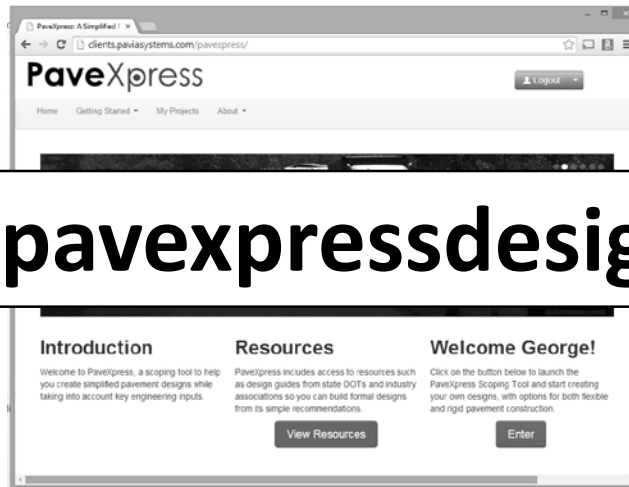
QUESTIONS?

PaveXpress



PaveXpress

A Simplified Pavement Design Tool



www.pavexpressdesign.com