



CHOICE PAVEMENT SYSTEMS BY ESRA  
2009/2010 CATALOG OF PRODUCTS



[www.choicepavement.com](http://www.choicepavement.com)





# WELCOME

Each year, billions are spent on road maintenance and replacement costs. Studies show most agencies lack credible estimates of road damage, especially as these relate to overweight trucks. Millions of dollars are wasted when these monies could be allocated toward other road safety needs.

Choice Pavement Systems™ by ESRA Consulting Corporation (ESRA) offers the solution. It is the only company dedicated to pavement damage estimation techniques in the world.

The *Straus Pavement Damage Estimation™ (SPDE™)*, a revolutionary family of tools used by several United States Departments of Transportation to quantify pavement damage, is now exclusively available from Choice Pavement Systems™. The *SPDE* offers numerous benefits. It also uniquely differentiates between legally and illegally overweight trucks and lorries.

The *SPDE* has been selected for inclusion in government publications and has been featured in a National Academy of Sciences presentation.

Low-cost and prompt road damage estimations are now and only available from Choice Pavement Systems™. The *SPDE* is ideal for companies, cities, counties, states, countries, and federal agencies that require independent and rapid estimates of pavement damage.

Choice Pavement also offers the only distinct truck only lane designs and the best truck lane consulting services available. One of these designs has also appeared in government publications and the National Academy of Sciences.

The *SPDE* is often headline news in the USA where road damage and replacement are now public safety priorities.

One road. Many roads. Choice caters to all of your needs.

*You're on the right road with Choice.*



# WELCOME

Benefits of *Choice Pavement Systems* <sup>TM</sup> products may include but are not limited to the following:

- increased safety and security.
- improved pavement design.
- significant pavement savings.
- permit fee development.
- load lifting or restricting.
- quantification of collisions.
- used by government agencies.

Relax. The professional support staff of ESRA uses the *in-house model, SPDE*, to do the estimation for you.



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## CHOICE PAVEMENT SYSTEMS



### SPDE PACKAGES (1- YEAR)

Choice Pavement Systems™ by ESRA is pleased to offer menus of its newest packages for the its one-of-a-kind technology, the *Straus Pavement Damage Estimation™ (SPDE™)*:

One	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
OVERWEIGHT TRUCKS *	OT-P1A	●			
	OT-P1B	●	●		
	OT-P1C	●	●	●	
	OT-P1D	●	●	●	●

\*Overweight Trucks: Trucks or lorries in excess of prescribed legal weight limits. These trucks may cause significant pavement damage and fatigue in short amounts of time. Some governments define overweight trucks as criminal activity subject to fines, penalties, and sanctions.

One	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
ALL OTHER TRUCKS	LT-P1A	●			
	LT-P1B	●	●		
	LT-P1C	●	●	●	
	LT-P1D	●	●	●	●

## CHOICE PAVEMENT SYSTEMS



One	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
AUTOMOBILES	AM-P1A	●			
	AM-P1B	●	●		
	AM-P1C	●	●	●	
	AM-P1D	●	●	●	●

"....This type of information has never been available to Vtrans but has always had great potential whether it be in development of permit fees or, specifically for our Section, in the design of new pavements. With the movement toward the Mechanistic-Empirical design approach there is strong potential for SPDE results to play a part in developing more efficient and reliable pavement structures. Based on the recently received deliverable .... all indications are this undertaking could pay dividends for Vtrans."

*-State of Vermont, Vermont Agency for Transportation, Pavement Management Section*

One	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
ALL VEHICLES (TRUCKS AND AUTOMOBILES)	AV-P1A	●			
	AV -P1B	●	●		
	AV -P1C	●	●	●	
	AV -P1D	●	●	●	●

# CHOICE PAVEMENT SYSTEMS



## SPDE PACKAGES (3- YEARS)

Three	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
OVERWEIGHT TRUCKS	OT-P3A	●			
	OT-P3B	●	●		
	OT-P3C	●	●	●	
	OT-P3D	●	●	●	●

"The calculated SPDE value is reasonably close to what we anticipated... The accompanying report is useful... We will use the SPDE and accompanying report to provide to our state agencies. We are satisfied with the SPDE results."

-Wyoming Highway Patrol

Three	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
ALL OTHER TRUCKS	LT-P3A	●			
	LT-P3B	●	●		
	LT-P3C	●	●	●	
	LT-P3D	●	●	●	●

## CHOICE PAVEMENT SYSTEMS



Three	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
AUTOMOBILES	AM-P3A	●			
	AM-P3B	●	●		
	AM-P3C	●	●	●	
	AM-P3D	●	●	●	●

"We value the information.... and will use it as a tool during our decision making process. Thank you!"

*-Program Development, Vermont Agency for Transportation*

Three	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
ALL VEHICLES (TRUCKS AND AUTOMOBILES)	AV-P3A	●			
	AV-P3B	●	●		
	AV-P3C	●	●	●	
	AV-P3D	●	●	●	●



## CHOICE PAVEMENT SYSTEMS



### SPDE PACKAGES (5- YEARS)

Five	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
OVERWEIGHT TRUCKS	OT-P5A	●			
	OT-P5B	●	●		
	OT-P5C	●	●	●	
	OT-P5D	●	●	●	●

"This report is more than excellent. You have some real researchers working on this. They have come up with some very helpful and innovative facts and figures. Thank you for that."

*-Arizona Department of Transportation*

Five	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
ALL OTHER TRUCKS	LT-P5A	●			
	LT-P5B	●	●		
	LT-P5C	●	●	●	
	LT-P5D	●	●	●	●

## CHOICE PAVEMENT SYSTEMS



Five	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
AUTOMOBILES	AM-P5A	●			
	AM-P5B	●	●		
	AM-P5C	●	●	●	
	AM-P5D	●	●	●	●

"We never estimated pavement damage due to overweight vehicles. The calculated SPDE value is useful. The accompanying report is useful. We will use the SPDE and accompanying report to provide to our federal agencies (FHWA and FMCSA)...."

*-State of Vermont, Department of Motor Vehicles*

Five	Year	Package			
Type	Package #CPS-SPDE-	SPDE™ road damage estimation	Annual report	Presentation	Quantification of collisions, injuries, and/or fatalities
ALL VEHICLES (TRUCKS AND AUTOMOBILES)	AV-P5A	●			
	AV -P5B	●	●		
	AV -P5C	●	●	●	
	AV -P5D	●	●	●	●

## CHOICE PAVEMENT SYSTEMS



### TRUCK ONLY LANE PRODUCTS AND SERVICES

Truck	Only	Lane	Consulting	Package	
Type	Package #CPS-SPDE-	Truck Lane Consulting	Truck Lane report	Presentation	Economic analysis
TRUCK LANE CONSULTING	TOL- 1A	•			
	TOL- 1B	•	•		
	TOL- 1C	•	•	•	
	TOL- 1D	•	•	•	•

Choice Pavement Systems™ now offers distinct truck only lane designs and consulting services.

Let the ESRA team evaluate or design the best truck lanes to improve road safety today.

Truck	Only	Lane	Design	Package	
Type	Package #CPS-SPDE-	Truck Lane Design	Truck Lane report	Presentation	Economic analysis
TRUCK LANE DESIGN	TOL- 2A	•			
	TOL- 2B	•	•		
	TOL- 2C	•	•	•	
	TOL- 2D	•	•	•	•

## CHOICE PAVEMENT SYSTEMS



### SPDE FREQUENTLY ASKED QUESTIONS (FAQS)

**1. What services are provided by Choice Pavement Systems by ESRA?**

ESRA provides pavement Choice Pavement System damage estimation products and services. ESRA also offers outstanding truck only lane designs and implementation. Each project varies according to the requirements of the client.

**2. Is the SPDE an asset management tool at the network level or for individual road segments?**

The SPDE pavement damage estimates are available at the network or individual road segment level or both.

**3. How does Choice Pavement Systems calculate the cost of the use of the SPDE tools?**

In an effort to provide the government and business community with state-of-the-art tools and technology in the area of pavement damage estimates, ESRA provides the most equitable approach to implement the program.

**4. What are the differences between the products offered by Choice Pavement?**

Products are available on a 1-year, 3-year, or 5-year basis. Road damage estimates are available for trucks, automobiles, or any combination of trucks and automobiles. Packages also vary according to presentation and calculation requests.

## CHOICE PAVEMENT SYSTEMS



### FREQUENTLY ASKED QUESTIONS (FAQS)

**5. What is included in the package?**

Each package includes an annual report concerning the details the client requests with respect to pavement damage due to cars, trucks, and/or overweight trucks.

**6. What other options are available?**

The client has the option for the Choice Pavement team to include a presentation to explain the report and the estimation of pavement damage. The client also has the option to include the quantification of collisions, injuries, and/or fatalities due to the estimated pavement damage. Finally, the client has the option to include any other parameters they would like to us to consider. (We welcome custom orders.)

**7. Is there a minimum number of roads required for use of the SPDE tools?**

No. The SPDE can be used to evaluate individual road segments or networks of roads.

**8. How can the SPDE report increase safety and security?**

There are many ways the SPDE can be used to improve safety and security. An SPDE report may be used to clamp down on certain activities that create hazardous conditions on the roads. Some government agencies have already successfully used their SPDE reports to increase the number of roving or mobile weight enforcement officers in different states and along the US borders.



## FREQUENTLY ASKED QUESTIONS (FAQS)

### 9. How can the SPDE report improve pavement design?

There is a worldwide movement toward the Mechanistic-Empirical (theoretical technique) pavement design approach. The SPDE results may therefore be used to develop more efficient and reliable pavement structures.

### 10. How can the SPDE report help with permit fee development?

The SPDE may allow governments to make more efficient decisions concerning the amount of permit fees necessary to cover the lack of or excess of pavement damage.

### 11. How can the SPDE report help with load lifting or restricting?

The SPDE may enable governments to determine if load lifting or restricting regulations are too lenient or restrictive. This would be a win-win situation for both government and truckers especially when weather conditions adversely impact trucking activities. The SPDE uniquely differentiates between legally and illegally overweight trucks.

### 12. How can the SPDE report quantify the number of collisions and how is this information helpful?

The SPDE may provide an agency with the cost or impact of certain collisions relative to pavement damage due to overweight trucks. Such information can be used to improve highway and road safety and fund associated programs.

## CHOICE PAVEMENT SYSTEMS



### FREQUENTLY ASKED QUESTIONS (FAQS)

**13. What are the data requirements, measurements, inputs and outputs of the SPDE models?**

The Choice Pavement teams utilize all products and provide all services under contract. We have exclusive use of the patents pending lines of the SPDE models.

**14. How frequent are measurements taken for use of the SPDE tools?**

The frequency of measurements collected varies according to the needs of the client. For example, in one place, an annual estimate may be preferred whereas in another location, bi-annual measurements may be requested. (This may be useful in those places where extreme weather conditions prevail.) Some clients may also require monthly reports to closely gauge and monitor road damage.

**15. Is a demo available for review?**

No demos are available due to the proprietary nature of the SPDE tools. Our software products are Completely utilized in-house.

**16. Where can I read testimonials?**

Testimonials are viewable online at:  
<http://www.choicepavement.com/testimonies.htm>  
and throughout this catalog.

**17. Is a client's report kept confidential?**

Yes. Choice Pavement ensures the confidentiality of all reports unless clients specifically authorize such release of information to a third party.