Societal Benefits of Pavement Preservation

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Social and Economic Impacts

Topic Outline

- Social Impacts
- Economic Impacts
- Social & Economic Benefits of Pavement Preservation
- Market the Preservation Potential
The effect of an activity on the social fabric of communities and well-being of individuals and families.
Social Impacts of Our Highway System

- **Democratization of Mobility**
  Expanded options to travel within and between their communities.

- **Expanded Residential Freedom**
  People have reduced travel time and broader options in residential locations from their work.
Social Impacts of Our Highway System

- **Expanded Employment Options**
  People can pursue employment across far larger areas.

- **Lower Retail Prices**
  Travel and shop wherever they like for bargains and larger selections.
Social Impacts of Our Highway System

- **Leisure Activities & Vacations**
  People take longer trips on weekends and vacations.

- **National Defense**
  Provides ‘modal redundancy’ for the mobilization of troops and equipment.
Economic Impacts

- The effect on commerce, employment, or incomes produced by a decision, event, or policy.
Economic Impacts of Our Highway System

- **Increased Economic Growth**
  Lower transportation costs encourages job creation and promotes commercial expansion.

- **Higher Work Productivity**
  Improves travel time and reliability of workers.
Economic Impacts of Our Highway System

• **More Trade and Exchange**
  Expands the number of potential customers who can be reached.

• **Lower Business Costs**
  Lowers transport costs, increases reliability, and the exchange of goods and services.
ROUGH ROAD AHEAD
THE ECONOMIC IMPACT OF AMERICA’S FAILING TRANSPORTATION INFRASTRUCTURE BY 2020

Families have a LOWER STANDARD OF LIVING.

- American families would earn $700 less each year.
- And spend $360 more each year.

Total impact on each family’s budget: $1,060 per year.

American businesses and workers PAY A HEAVY PRICE.

- America would lose 877,000 jobs.
- Another 234,000 jobs exist only if many more workers agree to paycuts.

Between now and 2020 transportation costs increase $430B.

AMERICA LOSES GROUND in the global economy.

- U.S. exports would drop by $28 billion.
- Exports drop in 79 of 93 different tradable commodities.

America’s gross domestic product underperforms by $3.1 trillion.

FOR AN ADDITIONAL INVESTMENT OF $94B PER YEAR WE CAN:

- Create millions of jobs
- Protect another 1.1 million jobs
- Save 180 million hours in travel time
- Save each family $1,060 per year
- Add $10,000 in GDP for every person in the U.S.
Social & Economic Benefits

- Financial Viability
- Social Impact
Social & Economic Benefits

It's Preservation

BIG NEWS
Social & Economic Benefits of Pavement Preservation

- Opportunities -

- Development of **Asset Management Plans** to:
  - Preserve asset and minimize whole life cost;
  - Operate in a financially sustainable manner; and,
  - Create a framework to improve performance on a long-term basis.
Social & Economic Benefits of Pavement Preservation

- **Lower Frequency of Construction**

  Reconstruction is the most expensive intervention and can totally consume an agency’s budget.

  Preserving the pavement reduces the need for costly reconstruction.
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- **Increased Level of Service**

  Pavement condition is a measure of service for the motoring public.

  Agencies can achieve the best LOS by preserving their highway network.
Higher Average RSL
(RSL = remaining service life)

Increasing network RSL is similar to banking resources and creating a funding reserve.

A mix of fixes that includes pavement preservation will improve the RSL.
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Cost of Delaying Pavement Preservation

Cost Per Lane Mile

Expenditure on Preservation

Road User

Good
Fair
Poor
Social & Economic Benefits of Pavement Preservation

• Lower Road User Costs

   Roads in poor condition cause damage and wear to vehicles.

   Poor roads result in reduced vehicle speed, negatively affecting fuel consumption.
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- **Higher Travel Time Reliability**

  Roads preserved in good condition are more likely to provide a reliable travel time.

  Reconstruction or rehabilitation require closures and detours, which can severely degrade travel time reliability.
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- Reduced Travel Delays
  Specific examples include:
  - Reduced queues
  - Decreased congestion
  - Eliminated detours
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- **Less Energy Required**

  Pavement preservation treatments require substantially less energy than for reconstruction or rehabilitation.

Saving Energy and Money
Social & Economic Benefits of Pavement Preservation

- Recycling

  Agencies can save costs by avoiding new materials and disposing of the present deteriorated pavement.
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- **Greater Sustainability**

  Allows the agencies to move closer to closing the gap between costs and resources.
Social Benefits of Pavement Preservation

- **Diminished Vehicle Crashes**

  Less work zone time results in reduced injuries and deaths, that are intangible benefits to individuals, families and society.
Social Benefits of Pavement Preservation

- **Decreased Noise Duration**

  Apart from being a general nuisance, excessive noise can pose health problems especially with nighttime construction.

  Noise may violate compliance of local ordinances.
Social Benefits of Pavement Preservation

- **Less Greenhouse Gases**

  Preservation generates less CO$_2$ emissions than reconstruction and rehabilitation.
More Job Creation

Greater portion of preservation dollars reach the employees, because less materials are used.

Reconstruction and rehabilitation target a higher percentage of dollars for material costs.
Market the Benefits of Preservation

- After 3 Days People Remember
  - 10% what they hear
  - 20% what they see
  - 65% what they hear & see
Market the Benefits of Preservation

- Develop a Marketing Strategy that:
  - Associates with the person’s location or emotions
  - Links a chain of memories that connects one point with another
  - Builds through repetition
The social and economic benefits of pavement preservation offer a great story to tell.
Questions
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