National Initiatives

Audrey Copeland, PhD, PE
President & CEO

60th Annual PAPA Conference
January 21, 2020
Hershey, Pennsylvania
A Modern Space Just Outside D.C.
Industry Values:
NAPA’s Strategic Goals

• Safeguard Longevity & Growth
• Advance Quality & Innovation
• National Advocacy & Smart Regulations
• Worker Health & Safety
• Workforce Development Resources & Support
• Member Opportunities & Engagement
Driving Excellence in Your Company

The Diamond Commendation Program documents and recognizes the use of best practices for asphalt plant operations, terminal operations, asphalt production, and paving.

The Awards Program honors companies and pavement owners who achieve excellence.

The Emerald Eco-Label is an affordable, easy-to-use tool developed to help companies report the potential environmental impacts of an asphalt mixture.

NAPA's Internal Traffic Control Program provides web-based asphalt-specific internal traffic control (ITC) training to asphalt industry workers.
U.S. Asphalt Pavement Tons Produced Annually

in million tons

- 2011: 359 million tons
- 2012: 360 million tons
- 2013: 351 million tons
- 2014: 352 million tons
- 2015: 365 million tons
- 2016: 375 million tons
- 2017: 379 million tons
- 2018: 389 million tons
Safeguard Longevity & Industry Growth

• Engage and educate stakeholders, such as pavement owners and policy makers, to advance asphalt as the pavement of choice for mobility solutions.

• Extensive resources and efforts among 41 Associations

• A trusted resource for asphalt knowledge and solutions.
Pavement Solutions

• PaveXpress for Design
• Life-Cycle Cost Analysis (LCCA)
• Rehabilitating Old Pavements
• Resiliency
What do you find most beneficial about PaveXpress?

“Simplicity…the interface!”

“The ability to switch easily between flexible and rigid pavement designs.”

“It is equivalent to Darwin.”

“Fast results saving me a lot of time.”

“Quick assembly of data allows multiple analyses.”

“Easy to design new roadways for local projects.”

“It is easy to understand and mathematically accurate.”

Quotes are from responses to a 2018 Survey of PaveXpress Users
The evolution of PaveXpress:

- New Flexible
- New Rigid
- Parking Lots
- Cost Module
- LEA Module
- UI/UX Update
- Overlay design
- Condition Survey
- NDT

Newest modules:
LCCA framework (i.e., RealCost)
Porous Asphalt Pavement Design
• **3rd Party Verification**
  • Gary Sharpe of Palmer Engineering
  • Compares PaveXpress to AASHTO
  • Program replicates AASHTO design with 95% accuracy
    • Deviations due to rounding and computations versus reading nomographs

• **Currently in Beta Testing**
  • Metrification
  • Simplified LCCA Module

• **Scheduled Beta Release**
  • PerRoad integration (February)
• Best Practices for Determining LCCA of Asphalt Pavements
  • Analysis Periods
  • Performance Periods
  • Initial Costs and Future Maintenance & Rehab Costs
  • Terminal Value
  • Discount Rate
  • User Costs

• End-of-Life Considerations (coming Summer 2020)
  • Survey & understand state practices
  • Develop data-driven guidance regarding pavement end of life, salvage value, and reconstruction
Asphalt: Proven for Providing Value

Data Driven LCCA Decisions Highlight Value of Asphalt: Case study examining Maryland’s Pavement Type Selection process. Maryland State Highway Administration (MSHA) estimates a 15-year performance period for asphalt pavements from initial construction to first rehabilitation. However, using project-specific data, NCAT researchers found that innovative mixtures, such as stone-matrix asphalt (SMA) or polymer-modified Superpave mixtures, placed on principal arterials in Maryland have an average service life of 32 years and 24 years respectively.

Asphalt Value Proposition: Data Driven LCCA Decisions Highlight Value of Asphalt

Every year, millions of dollars are invested in the maintenance and improvement of the nation’s roads and bridges. When choosing the most cost-effective design, construction materials, and products for a project, transportation agencies often use life-cycle cost analysis (LCCA), an economic decision-support tool, to help identify cost-effective project alternatives. However, challenges in collecting, storing, analyzing, and accessing pavement performance data and engineers and asset managers making assumptions for several significant LCCA inputs. According to the American Society for Civil Engineers (ASCE),nellip;it, 2015, LCCA is a tool to assess the cost-effectiveness of transportation investments. Maryland State Highway Administration (MSHA) estimates a 15-year performance period for asphalt pavements from initial construction to first rehabilitation. However, using project-specific data, NCAT researchers found that innovative mixtures, such as stone-matrix asphalt (SMA) or polymer-modified Superpave mixtures, placed on principal arterials in Maryland have an average service life of 32 years and 24 years respectively.
Knowing the Value at the End of Life: Salvage Value

Case study outlining Alabama DOT’s typical assumptions and LCCA procedure then applies a data-driven salvage value approach. The NCAT study determined that the asphalt pavement’s structure and materials provided a salvage value of $622,184 at the end of the performance period. Whereas, the concrete pavement had a value of $-74,112 at the end of its life because the agency would need to spend money removing the concrete pavement structure.

Asphalt: Proven for Providing Value
Pavement Smoothness: Specifying Smoothness for Cost Savings: Case study on Virginia DOT which estimates that incentivizing smoothness saves $1.3 million annually on maintenance, VDOT estimates when the incentive is fully implemented across its network the state could save an additional 15% on annual maintenance and rehabilitation costs.

Asphalt Value Proposition:

Pavement Smoothness
Specifying Smoothness for Cost Savings

When asked, highway agency leaders report that their No. 1 challenge is funding. (Edelman, 2018). As federal funding for infrastructure investment continues to remain inadequate compared to the need, many agencies are looking to specify pavement performance lifecycle cost analysis (LCCA), and pavement quality in their decision-making processes. Simply put, agencies want to ensure they get the most paviment life possible from each precious dollar of public money.

One data point commonly used to measure performance for both asphalt and concrete pavements is smoothness. Smoother pavements provide a quieter, more comfortable ride for drivers, and smoothness is a key factor in ensuring road user satisfaction (FHWA, 2003). Research has consistently shown that pavement smoothness has a significant influence on vehicle fuel economy for trucks and passenger cars (Molinari et al., 2015), yielding as much as a 4-5% improvement in fuel economy (Beebe et al., 2009). Beyond improved vehicle fuel economies, pavements that are smoother from the start require less maintenance, saving road owners $1.25B annually for every one-mile increase in smoothness (Molinari et al., 2009). One reason asphalt is the pavement of choice for engineers is the level of smoothness it provides. In fact, nearly 80% of pavement engineers and state highway agency officials say that asphalt provides the smoothest pavement (Edelman, 2018; Bechtle, 2015). Building high-quality smooth asphalt pavements positively impacts the bottom lines of both transportation agencies and the driving public.

Nearly 70% of state agencies’ LCCA processes reportedly do not account for the use of innovative practices that increase pavement service life (SAFAP, 2016). However, the Virginia Department of Transportation (VDOT) has looked at the economic advantages of specifying and constructing smoother pavements (Edelman & Miller, 2005) and used the data gained to validate maintenance and rehabilitation cycle to account for the impact of smoothness on service life and vehicle operations.

In 1996, VDOT implemented the Exponential Provision for Unusually Smooth Pavement (EPSUPP) to incentivize the construction of smoother asphalt pavements. Projects in the incentive program showed an average increase in material cost of $1.03 per ton of asphalt mixture. However, VDOT observed that these pavements won on average 8.5 miles smoother at initial construction. Over time, this increase in initial smoothness equates to an increase of seven years of functional life compared to the national average.

Asphalt: Proven for Providing Value

Asphalt Value Proposition: Smooth Pavement Smoothness
Specifying Smoothness for Cost Savings

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Asphalt: Proven for Providing Value
• The Issue

• Objectives
  • Evaluate benefits of rehabilitating concrete pavements with asphalt overlays
  • Compare slab fracturing methods to alternative concrete rehabilitation treatments

• LTPP SPS-6 Experiment
  • Long-term performance of rehab PCC pavements with asphalt overlays.

• Study Results
  • Good asphalt over bad pavements = fractured future
  • Rubblization is effective
    • Softer base modulus
  • Break & Seat and Crack & Seat have had success, with thicker overlays
Asphalt Pavement Resiliency

• A workshop was held on September 10-11, 2019 in Dallas, TX
  • Consisted of representatives from agency, industry, and academia

• The goal of the workshop was to discuss and define resilience as it relates to asphalt pavements and discuss case studies

• Multiple Topics & Case Studies:
  • Pavement flooding
  • Natural disaster response (hurricanes, earthquakes)
  • Designing for resilience to climate change
  • Sea Level Rise
Defining Resilience

“the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions”
- FHWA

Feedback from the group with respect to asphalt pavements:

<table>
<thead>
<tr>
<th>Prepare and Adapt</th>
<th>Withstand and Recover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perpetual pavement design</td>
<td>Fast construction</td>
</tr>
<tr>
<td>Adaptable materials for climate extremes</td>
<td>No cure time, open to traffic almost immediately</td>
</tr>
<tr>
<td>Porous asphalt systems</td>
<td>Resilient designs to protect critical corridors</td>
</tr>
<tr>
<td>Integrate resilience adaptations into long term</td>
<td>Recyclable (e.g., crushing old, damaged roadways and</td>
</tr>
<tr>
<td>maintenance schedules</td>
<td>reusing)</td>
</tr>
</tbody>
</table>
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• Advance Quality & Innovation
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• Worker Health & Safety
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Inside:

A Global Conversation
An SMA Overview
Superior Performance
The Latest Innovations
Sustainable Solutions
New Opportunities

www.AsphaltPavement.org/SMAConference
“If you can get 20 to 30 years out of pavement, that’s a heck of a value.” – Pete Rahn, former Secretary & Chairman, Maryland Transportation Authority
SMA Innovations

For the first 35 years of its existence, SMA remained unchanged. Engineers followed the tried and true method to ensure that the pavement would perform. However, over the past 15 years, roadway owners have wanted to modernize SMA to ensure the premium product for the asphalt industry embraces new technology and mix design methods. Research has been conducted to ensure that SMA is compatible with these new methods and materials and does not sacrifice performance.

Some of the innovations being considered include:

- Moderate to high reclaimed asphalt pavement (RAP) content
- Low levels of recycled asphalt shingles (RAS)
- Recycled tire rubber (RTR) in place of polymers in binder
- New and local aggregate sources
- New mineral fillers, such as fly ash
- Use of warm-mix asphalt (WMA) technologies to reduce temperature or possibly eliminate the need for fibers in the mixture to prevent draindown
- Incorporation of SMA into Balanced Mix Design.

Roadway owners want to modernize SMA to ensure this premium product from the asphalt industry embraces new technology and mix design methods.
• $17.1 billion saved in 7 years (since 2012)
• 99+% of old pavements are recycled
• 82.2 million tons of RAP used (2018)
  • 23 million barrels of oil
  • 78+ million tons of aggregate
  • $2.8 billion in savings
• Pennsylvania
  • 3.2 million tons of RAP used
  • Over $100 million saved
  • Average percent RAP used
    • 2017 – 14.7%
    • 2018 – 15.9%
• Developed because climate change
• 157.7 million tons of WMA (2018)
  • 40.5% of total market
• Pennsylvania
  • 76% of agency tons
  • 42% of commercial

Warm-Mix Asphalt
• FHWA Continues to support
• Recycle/WMA Survey
  • 2019 Construction Season Data
  • Available on SurveyMonkey @ https://www.surveymonkey.com/r/RMWMASurvey2019
• Report accuracy counts on strong industry support / participation
• The Issue
  • Media Buzz
  • Congressional Interest

• Plastics Industry Association
  • Conducted “literature review”
  • Conducted basic binder testing
  • Need for additional testing

• NAPA/Al Joint Task Force
  • What do we know?
  • What do we need to know?
  • Report Target – April 2020

• NCHRP/AASHTO Research
Federal Pavement Policy Review
Performance Engineered Mixture Design/Balanced Mixture Design
Pavement Research and Development
Cooperative Agreement Resources
Asphalt Principles Videos
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FEDERAL HIGHWAY FUNDING IN PLACE NEXT YEAR

$43.7b
$48.3b
$49.4b
$49.5b

2017 2018 2019 2020

Core Highway Program (FAST Act) BUILD Grants Supplemental Highway Investment (GF)

Congress Supports Highway Programs!

• Fully Funded FAST Act Thru 2020
• Added $12b more for highway programs since 2017 from the General Fund
AIRPORT FUNDING IN PLACE NEXT YEAR

Congress Supports Airport Programs!

- Fully Funded Airport Improvement Program
- Added $1.9b more for Airport Improvement Program since 2017
- $6 million for airfield pavement research
- 85 percent airfield pavements are asphalt

<table>
<thead>
<tr>
<th>Year</th>
<th>AIP</th>
<th>Supplemental AIP (GF)</th>
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<tbody>
<tr>
<td>2017</td>
<td>$3.35b</td>
<td>$3.35b</td>
</tr>
<tr>
<td>2018</td>
<td>$4.35b</td>
<td>$1b</td>
</tr>
<tr>
<td>2019</td>
<td>$3.85b</td>
<td>$500m</td>
</tr>
<tr>
<td>2020</td>
<td>$3.75b</td>
<td>$400m</td>
</tr>
</tbody>
</table>
NAPA’s Advocacy in 2019 Saved Your State’s Highway Funding!

State-by-state reduction amount of highway contract authority funding on 7/1/2020 if FAST Act mandated rescission was not repealed by Congress.
Senate Committee approved American Transportation Infrastructure Act

House Committee drafting bill

Votes expected early next year
NAPA IS WORKING ON THESE ISSUES PENDING IN THE HIGHWAY BILL
WHAT YOU CAN DO!

- Download this document
- Go to NAPA website to get messages
- Conduct in-district meetings
- Hold plant tours
- Support NAPA PAC
- Attend TCC Fly-in May 19-20, 2020
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What We’ve Done…

• NAPA Research and Education Foundation
  • Training and Education
    • The Endowment Fund, Kenyon Award
  • Future skilled industry professionals
    • The Scholarship Fund
  • Informing the Public
    • The Smithsonian Fund
  • NAPA CARE Emergency Benevolent Fund

• Industry Training - World of Asphalt: People, Plants, and Paving

• IMPACT Leadership Group

• National Workforce Survey – 2016

• Women of Asphalt

• FFA Partnership
Leading the Way
Asphalt Pavement Association of Indiana

- Partnering with Future Farmers of America (FFA, Indiana chapter)
- Paving FFA Leadership Center Parking Lot
  - Video – “Ag to Asphalt Day”
- Since 2009, over 40% FFA membership is female
  - 650,000 members – inclusion and diversity
  - Over 45 years of including women
Women of Asphalt - Our Focus

Mission Statement

• Women of Asphalt is a national coalition which supports women in all aspects of the asphalt industry through mentoring, education, and advocacy, and by encouraging women to seek careers in the asphalt industry.

Vision Statement

• We lead and inspire women in the asphalt industry.

Goals

• To foster and promote networking and mentoring opportunities for women in the asphalt industry
• To create professional development opportunities for women in asphalt through education and training
• To advocate for women in the asphalt industry
• To encourage other women to join the asphalt industry
WOMEN OF ASPHALT Board of Directors

Amy Miller, PE
President
National Director, Asphalt Pavement Alliance

Audrey Copeland, PhD, PE
Secretary
President, National Asphalt Pavement Association

Natasha Ozybko
Treasurer
Sales Manager, RoadScience, a Division of ArrMaz

Sheila Barkevich
Vice President,
Cullinan Industries, Inc.

Ashley Batson, JD
Executive Director,
SC Asphalt Pavement Association

Kirsten Pauley, PE
Executive Director,
Asphalt Pavement Association of IN

Tracie Schlich
Director of Marketing & Membership,
Asphalt Institute

Janelle Barrientos
Asphalt Distribution Manager,
Flint Hills Resources

Debbie Novak
Sales Representative,
Missouri Petroleum Products

Judy Pellicano
Vice President of Assets,
Colas USA

Kari Shiflett
Director of Human Resources,
Lakeside Industries
National Initiatives

Asphalt Industry internship program

Women in Transportation Initiative (WITI) is an academic off-campus, mentorship experience for junior, senior and graduate students in the asphalt industry. The Women & Girls in Transportation Initiative (WITI) is an academic off-campus, mentorship experience for junior, senior and graduate students in the asphalt industry. The program provides students with a unique opportunity to gain valuable industry experience while building their professional network. Participants receive guidance and support from experienced industry professionals, helping to develop their skills and knowledge. To earn academic credit and expand your career options, please call or email the Office of Small Business at DOT (303) 232-6522 or ask@womenofasphalt.com.
Defining the Issue

Lack of Unified, Industry Message!

• Challenges in recruiting and retaining workers

• Aging workforce (i.e. retirements) and lack of interest by young people or lack of knowledge of the industry opportunities

• Due to the demands on company resources and the perception of the industry, NAPA member companies could benefit from assistance with workforce development.
- Educate + Tell our story (contradict perception)
- Disciplined Message Strategy
- Industry Partnerships
- Great Job & Opportunities at all levels
- Research
- Knowledge transfer + Generational Transition

1) Create + Create a compelling positive in the
2) Build collaborative
3) 

Strategic Planning
Solutions 21
Developed team of members/SAPAs
Create and communicate with discipline a compelling story on the positive benefits and opportunities for career growth and advancement in the asphalt industry.

Build a comprehensive and collaborative network of partnerships with stakeholders inside and outside of the industry to recruit, retain, and develop the new asphalt workforce.

Help fulfill the promise made to those recruited into the asphalt industry by assisting member organizations in creating exceptional work environments rich with opportunities.
Committee Leadership

Chair: John Harper, CPI
Co-Chair: Brian Wood, PAIKY
Richard Willis

Committee Structure

Denotes NAPA Member
Denotes SAPA Executive
Denotes NAPA Staff Liaison

Committee Leadership

National Association of Pavementp Contractors

Chair: John Harper, CPI
Co-Chair: Brian Wood, PAIKY
Richard Willis

Communications Group Leadership

Producer Lead: Sheila Barkevich
SAPA Lead: Ashely Batson
Ester Magorka & T. Carter Ross

Members
Brian Crume, E&B Paving, Ind.
Bob Flowers, CWR Contracting Inc., Fla.
David Guillame, CRH Americas Materials, Ga.
Fred Marvel, Brannan Sand & Gravel Co., Colo.
Zachary Michael, King Asphalt Inc., S.C.
Alex Phelps, Pike Industries
Pat Weaver, Solterra Materials LLC, Ariz.
Brandon Strand, Wisconsin APA
Jim Warren, Texas Asphalt Pavement Assn.

Partnerships Group Leadership

Producer Lead: David White
SAPA Lead: Kirsten Pauley
Jay Hansen, Lori Wolking, & Ashley Jackson

Members
Jason Duininck, Duininck Inc., Minn.
Kevin Folkins, Pike Industries, N.H.
Phil Heimbecker, Delta Companies Inc.
 Vince Hafeli, Ajax Paving Ind., Fla.
Nancy Quinn, Vulcan Materials Co., Ariz.
Andrew Shelton, Barrett Industries, Pa.
Ryan Shotts, Brooks Construction Co., Ind.
Kevin Wall, Anderson Columbia Co., Fla.
David Wyant, SL Williamson Co., Va.
Jeff Graf, Maryland Paving Inc.
 Abbey Bryduck, Minnesota APA
Reed Ryan, Utah APA

Promise Group Leadership

Producer Lead: John-Paul Fort
SAPA Lead: Richard Willis & Melanie Richardson

Members
Michael Brown, Texas Materials Inc., Texas
Dan Ganoe, Lindy Paving, Pa.
Tim Gorman, Rogers Group Inc., Ark.
Curtis Hall, Allan Myers, Pa.
Jeffrey Hitchings, JSL Asphalt Inc., Conn.
Michael Mangum, FMI Corp., N.C.
Tanya Nash, Asphalt Testing Solutions, Fla.
Kari Shiflett, Lakeside Industries, Wash.
Chris Stricklin, Dunn Construction, Ala.
Susan Witt, Gerken Paving Inc., Ohio
Lawrence Kokkelenberg, Org. Trainers Consultants
Michael Arnemann, Mississippi APA
John Hickey, APA of Oregon

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Tim Gorman, Rogers Group Inc., Ark.
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Chris Stricklin, Dunn Construction, Ala.
Susan Witt, Gerken Paving Inc., Ohio
Lawrence Kokkelenberg, Org. Trainers Consultants
Michael Arnemann, Mississippi APA
John Hickey, APA of Oregon
In 2019, NAPA focused on a workforce development market research campaign. In order to anchor the messaging and campaign strategy to research, Golin (a public relations firm) was asked to pull together a research approach and methodology that would dive deeper into:

1. What Americans think about the asphalt pavement industry
2. Why they have misperceptions and certain beliefs about the industry
3. What would motivate them to consider the industry for jobs
4. How other people’s opinions impact their consideration set, and
5. What messages might help with retention and recruitment efforts.
Audience

The General Public

Nationally representative (with regard to age, gender, race/ethnicity, region etc.)

While target audiences are important, it is also imperative to understand who influences them and how

Influencers

Teachers and guidance counselors in Middle School and High School

Knowing that career choices are made while in school, it is important to understand how these influencers view the industry
<table>
<thead>
<tr>
<th>Phase</th>
<th>Purpose</th>
<th>Time Interval</th>
<th>Sample Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot Survey</td>
<td>Baseline of external perceptions of the Road Construction industry,</td>
<td>June 12 – June 24</td>
<td>N=1,500 General Public</td>
</tr>
<tr>
<td></td>
<td>compared to competitor industries.</td>
<td></td>
<td>N=250 Educators/Counselors</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Gen Pop Margin of Error: ±2.53 95 percent confidence level</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Educators Margin of Error: ±6.20 95 percent confidence level</td>
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<tr>
<td>Focus Groups</td>
<td>Explore underlying reasons for perceptions and assess what message</td>
<td>July 8 – July 16</td>
<td>10 focus groups:</td>
</tr>
<tr>
<td></td>
<td>themes would move perceptions and dispel misperceptions.</td>
<td></td>
<td>N=47 (Gen Pop)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=54 (Educators)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 research markets: Boston, Columbus, Atlanta, Denver and Phoenix</td>
</tr>
<tr>
<td>Robust Survey</td>
<td>Test messages and assess which are likely to change minds and</td>
<td>August 30 – September 1</td>
<td>N=3,018 General Public (16+)</td>
</tr>
<tr>
<td></td>
<td>favorability levels, willingness to recommend, and the attributes</td>
<td></td>
<td>N=1,006 Educators/Counselors (elementary to high school)</td>
</tr>
<tr>
<td></td>
<td>associated with the industry.</td>
<td></td>
<td>Gen Pop Margin of Error: ±1.78 95 percent confidence level</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Educators Margin of Error: ±3.09 95 percent confidence level</td>
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</tbody>
</table>
KEY FINDINGS

1. Americans aren’t negative towards road construction; they just don’t know enough about it.

2. Initial perceptions of road construction are that it is dirty, labor-intensive and dangerous.

3. After exposure to messages, road construction was more likely to be recommended and even considered as a career path.

4. Educators were especially receptive to the messages.

5. Parents and teachers are the most valuable resource: Create partnerships to strengthen reception.
The growth & opportunity message was cited as the most impactful message for both audiences.

<table>
<thead>
<tr>
<th>Message</th>
<th>Gen Pop</th>
<th>Educators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth &amp; Opportunity</td>
<td>19%</td>
<td>24%</td>
</tr>
<tr>
<td>Community Contribution</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>No College Debt</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>Diversity &amp; Equal Pay</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>Salary/Financial Security</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>Safety</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>Skills-based Career</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>Innovation</td>
<td>8%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Which of the following messages was most impactful for you? *Too much emphasis on college message and Community Contribution (for educators) were only shown to educators.
Growth & Opportunity

Building and maintaining roads involves a lot of different skills — both on the road and in the office — and there is always a path for career growth. Building America’s roads requires asphalt plant operators, construction laborers, equipment operators, maintenance crews, sales and marketing, accounting, engineers, IT professionals, and more. You can start anywhere and grow into a management role or follow your passion into other areas within the industry.
Recommendations

1. Meet different audiences on their own platforms.
2. Become more visible in the education system and create partnerships with teachers to increase knowledge and the opportunities available for students.
3. Create partnerships with parent organizations/groups to increase knowledge and showcase the growth, salary benefits, and future stability.
4. Messages should have a two-pronged approach: 1) focus on how the individual will grow and showcase the opportunities, and 2) focus on how working for the industry gives back to the local community.
5. Education efforts should focus on younger generations and educators.
Introduction

As stated at construction seminars, there is a growing labor shortage that tried of contractors to complete projects are paying large bonuses and employee turnover is a major concern. A 2019 U.S. Chamber of Commerce report similarly found that 94% of construction employers have difficulty finding qualified workers.

About GolINTEL

GolINTEL is Golin’s research hub team that provides insights with expert research to industry experts with a deep understanding of target audiences. Fix the qualitative, using in-depth, focus groups, or quantitative, as representative sampling, GolINTEL can help researchers improve data and methodology, design, creative, or qualitative guide instruments, collect, collect insights, and examine.

RECOMMENDATIONS

Based upon the findings of this multidisciplinary research effort, it is clear there are opportunities to educate the public about the many opportunities for well-paying, stable, jobs in the construction industry. However, 42% of all Contractor Members must enhance multiple strategies and approaches to be effective.

NAPA Contractors

• Create partnerships with parent organizations/groups to increase knowledge about the industry and showcase the growth, salary benefits, and job market stability for their membership.
• Messages should have a two-pronged approach. Focusing on how the individual career path and advancement opportunities within the industry, and (2) focus on how working in the industry contributes to the community.

CONTRACTORS

• Education efforts should focus on younger generations and educators. They are more receptive to what the messages and the industry offers. While parents show some changes in perceptions after enrolling they do not show the largest change.
• Become more visible in the educational system and create partnerships with teachers and school representatives to increase knowledge about the industry and the opportunities available for their students.

NAPA and Contractors

• Need different audiences on their own platforms. When communicating with younger audiences, use digital and targeted communications that increase awareness of the industry. For educators, we need to work closely with them and play a supportive role for message dissemination.

REFERENCES

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