Life is a Highway
Roadways as Platforms for Innovation

Steve Truebner – Sales Director, Black & Veatch
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Introductions

Black & Veatch is a global leader in building critical human infrastructure in Telecom, Energy, Water and Government Services. Since 1915, we have helped our clients improve the lives of people in over 100 countries. In 2021, Black & Veatch’s telecommunications business was Ranked 2nd in the Top 500 Telecommunications by Engineering News-Record.

Deloitte is the largest professional services firm in the world. Our Advisory Infrastructure & Capital Projects Practice includes 100+ engineers, planners, economists, financiers, and data scientists working across the project lifecycle. We support Federal, State and Local clients across the US and globally in sectors such as Transportation, Water, Broadband/5G, and Smart Infrastructure.
Introductions

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Roadways as Platforms for Innovation

- Replacing your Grandfather’s Infrastructure
- Federal Infrastructure Bill
- Urban and Rural Market Trends
- Case Studies
  - Pennsylvania Turnpike Commission
  - San Diego Association of Governments
  - Arizona Mobility Innovation Zone
- Q&A
U.S. infrastructure initiatives historically modernize critical systems to connect Americans, accelerate and the economy with the future.

From Lincoln to FDR to Eisenhower to Biden
"This is a once-in-a-lifetime opportunity to shape America's infrastructure future, to make sure we're competing and winning, when other countries are doing so much more than we are."

U.S. Secretary of Transportation - Pete Buttigieg (March 31, 2021)
## $2.3$ Trillion American Jobs Plan

<table>
<thead>
<tr>
<th>Amount</th>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$621B</td>
<td>Transportation Infrastructure</td>
<td>Fix highways, rebuild bridges, upgrade ports, airports, and transit systems</td>
</tr>
<tr>
<td>$311B</td>
<td>Utility Infrastructure</td>
<td>Delivery of clean drinking water, renewing the electric grid, increase access to high-speed broadband</td>
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<tr>
<td>$378B</td>
<td>Building Infrastructure</td>
<td>Build/retrofit homes &amp; commercial bldgs; modernize schools &amp; childcare facilities; upgrade vet hospitals &amp; federal bldgs</td>
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<tr>
<td>$400B</td>
<td>Care Economy Infrastructure</td>
<td>Create jobs and raise wages and benefits for essential home care workers</td>
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<tr>
<td>$480B</td>
<td>Manufacturing, Research &amp; Development</td>
<td>Revitalize manufacturing, secure U.S. supply chains, and invest in research &amp; development</td>
</tr>
<tr>
<td>$100B</td>
<td>Workforce Development</td>
<td>Create jobs while ensuring workers have appropriate wages and rights</td>
</tr>
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The proposed Biden Infrastructure Plan is funded through corporate taxes. The Republican alternative – focused on a more limited range of infrastructure – is funded through user fees and unspent Federal funds.
Urban Highway Market Trends

Safety & Connectivity
Intersections, highways, byways and tolling.

E-Commerce & Truck Platooning
Global trends, COVID and permanent behavior change.

Electric Vehicles & Renewables
New investment and partner opportunities continue to emerge.

Fiber as the Great Enabler
Fiber infrastructure critical to transportation and communications.
Rural Roadways Market Trends

**Rural Broadband**
Federal funding support, new technology, smart highways.

**Education**
Increased online learning, hybrid campus models, digital content.

**Healthcare**
Technology-enabled healthcare, delivery, and supply

**Precision Agriculture**
Analytics and drones to improve yields, limit waste.
Pennsylvania Turnpike Commission

- 220-mile fiber network (West and North of Philadelphia)
- Long-haul fiber communications network
- Automated tolling, ITS and emerging technologies
- Innovative micro-trenching technology
- Future commercial and revenue value
San Diego Association of Governments

• San Diego Forward: The 2021 Regional Plan
• New Master Plan to transform the way people + goods move throughout the region
• 5 Big Moves: Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets & Next OS
• The plan considers new technologies and capabilities reaching out to 2050
Arizona Mobility Innovation Zone (AZMIZ)

• MOU signed by AZPEI and Deloitte in April 2021
• Establishes a shared vision, infrastructure, and resource framework for connected mobility, AV/EV industry, and enterprises in the greater Phoenix and Tucson Metropolitan Regions (the Sun Corridor)
• Intended to collaborate with existing State of Arizona (ACA/IAM), Smart Highways, and other efforts
• A key objective is to enable the commercial opportunity, regional scale-up, and community impact of high-potential mobility projects, through Public-Private Partnerships, resulting in new investment and jobs
• The MOU participants/collaborators will be expanded over time
Questions?

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