

**NCHRP 20-68 – “US Domestic Scan Program”**  
**Scan 22-02 “Experiences in the Use of Digital Construction Management in the Highway Industry”**

Digital Construction Management (DCM) helps State Highway Agencies (SHA) and industry integrate electronic construction management processes to enhance efficiency and effectiveness of the highway construction. The integration of these various tools has occurred at various levels and with different SHA & industry partners to improve the efficiency and effectiveness of the highway industry. DCM builds upon existing 3D Modeling, e-Construction, Digital As-Builds, e-ticketing, Unmanned Aerials Systems (UAS), Smart Work Zone Project Coordination, and Strategic Workforce Development innovations. Documenting and communicating these best practices throughout the highway community will assist in the accelerated deployment of the individual technologies, techniques, and methods of integration for DCM.

By deploying DCM, agencies can expect considerable benefit from reduction or elimination of paper, accessing and processing project documents remotely with more security in real-time, improved security, increased presence of field staff on the job site, reduction in claims, and improved cash flow. Further integration of DCM with other core DOT systems, such as accounting and asset management systems would greatly enhance agency business practices.

Agencies looking to deploy DCM are facing several complex challenges. Some of these challenges are further complicated by existing business processes that may need to be considered such as ability to use paperless plans. The scan team will need to identify successful construction management processes utilized by states deploying innovative DCM practices to document how the DCM was adopted, governing architecture, value added, and how others may accelerate the adoption of the proven innovation. The domestic scan shall review the SHA and others involved in the process to effectively document the process. Potential agencies to be considered include Utah DOT, Iowa DOT, Wisconsin DOT, Florida DOT, California DOT and the City of Lincoln, Nebraska.

This scan will document best practices for state DOTs and others on how organizations have adopted, proven, and are now benefiting from deployment of DCM. The benefits of this domestic scan will be the identification and accelerated deployment of proven DCM configurations. As these best practices are deployed nationally, they will assist in having an equitable workforce to deliver a safe, timely, and quality highway construction program. The scan results are likely to be of interest to several AASHTO committees including the AASHTO Committees on Design, Construction, Maintenance, and Performance-Based Management.

**Original Scan Proposal Title(s):** Digital Construction Management

## Domestic Scan 22-02 Experiences in the Use of Digital Construction Management in the Highway Industry

### Team Roster

Bryan Cawley –Team co-chair  
Division Administrator,  
Wyoming Division Office,  
FHWA,  
Email: [bryan.cawley@dot.gov](mailto:bryan.cawley@dot.gov)

John Hancock –Team co-chair  
State Construction Engineer  
Georgia DOT  
One Georgia Center  
600 West Peachtree St NW, 11th Floor  
Atlanta, GA 30308  
(404) 631-1970  
[jhancock@dot.ga.gov](mailto:jhancock@dot.ga.gov)

Shawn Smith  
Senior project Manager  
Maine Department of Transportation  
24 Child Street, 16 SHS  
Augusta, ME 04333  
Phone: (207) 557-1663  
Fax: (207) 624-3491  
Email: [shawn.smith@maine.gov](mailto:shawn.smith@maine.gov)

Tyler Carlson  
Construction Systems IT Supervisor  
Nebraska DOT  
402-479-3821  
Email: [tyler.carlson@Nebraska.gov](mailto:tyler.carlson@Nebraska.gov)

Eric Chaston  
Director of Construction  
Utah Department of Transportation  
Email: [echaston@utah.gov](mailto:echaston@utah.gov)

Ramon Hopkins  
Chief, Division of Construction  
California Department of Transportation  
Cell: (916) 947-0057  
Email: [ramon.hopkins@dot.ca.gov](mailto:ramon.hopkins@dot.ca.gov)

John S Dunham  
Construction Administrator  
Connecticut Department of Transportation  
2800 Berlin Turnpike, Newington, CT 06131  
Office: 860.594.2680  
Mobile: 203.410.9632  
[john.s.dunham@ct.gov](mailto:john.s.dunham@ct.gov)

Damon Zeltinger  
Construction Specialist  
Office of Operations Support  
South Dakota DOT  
Phone: 605-773-3263  
[Damon.Zeltinger@state.sd.us](mailto:Damon.Zeltinger@state.sd.us)

Wei H. Johnson Ph.D., P.E.  
Construction Metrics Engineer  
Director of Construction Office  
South Carolina Department of Transportation  
Columbia, South Carolina  
Office: (803)737-2031  
[johnsonwh@scdot.org](mailto:johnsonwh@scdot.org)

Charles Bauer, PE  
Construction Staff Engineer  
Wyoming DOT  
307.777.4927  
[charlie.bauer@wyo.gov](mailto:charlie.bauer@wyo.gov)

Christopher (Chris) Newman – Subject Matter Expert  
725 Gist Avenue  
Silver Spring MD 20910  
cell phone: 301-706-3919  
[newmanchris888@gmail.com](mailto:newmanchris888@gmail.com)