e-Construction Innovation Matrix by State Departments of Transportation

NOTE: Information in this table was obtained from publicly available sources (e.g. internet search and presentations). Information was last updated 04/30/2022. Any corrections or updates may be sent to Kathryn.Weisner@dot.gov

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State or U.S. Territory	Bid History Analysis	Bid Letting Management and Estimates	Bid Preparation and Analysis	Collaboration Portal	Construction Management System	Digital Signatures	Document Management System	Electronic As-Builts (GPS/GIS/PDF red-lining)	Electronic Bidding and Bid Bonds	e-Ticketing	Lab Inventory and Materials Management System	Mobile Devices for Inspection	Partnering	Project Management System	Project References (e.g. plans; standards; manuals)	Quantity Measurements (real-time verification)	Fleet Management	Queries and Reports	Virtual Meetings	Auto-Material Tracking (RFID/Bar-Coding)	Comments
Alabama	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO Expedite	Investigating Solutions	Custom Program (1)	Paper-based Methods	Investigating Solutions for Construction (2)	ArcGIS Collector; Unmanned Aircraft Systems	Bid Express	Earthwave Technology FleetWatcher (3)	Custom Program (1)	iPads	NPA	Oracle P6	Falcon DMS	Unmanned Aircraft Systems (4)	Equipment Watch	NPA	NPA	EPI	(1) Construction Administration Management System (CAMMS) is a custom developed program that is replacing SiteManager. (2) Exploring solutions. Falcon DMS is only used for design and archival system. (3) Piloting HMA e-ticketing. (4) Piloting UAS for progress quantities and evaluating technology for as-builts.
Alaska	AASHTO BAMS/DSS	AASHTO Preconstruction	AASHTO Bids	NPA	AASHTO CRLMS and SiteManager (1)	NPA	Custom EDMS (2)	NPA	Bid Express	NPA	NPA	Microsoft Surface Pro	ACM; CPP	NPA	NPA	NPA	NPA	NPA	NPA	EPI (3)	(1) Alaska is in the process of implementing AASHTOWare Project Suite as follows: Phase 1: Preconstruction; CRLMS; Bids and Bid Express by July 2018. Phase 2: Const. & Materials by July 2018-July 2019. Replaces SiteManager. Phase 3: Estimation by July 2019-July 2020. Phase 4: BAMS/DSS by July 2020-January 2021. (2) Custom EDMS for storm water documents and permits. (3) Evaluating RFID/bar code technology to track materials.
Arizona	NPA	NPA	AASHTO Expedite	Custom Program (1); eBuilder (2)	Custom Program (1); eBuilder (2)	NPA	Custom Program (1)	NPA	Bid Express; SurePath (3)	NPA	Custom Program (1)	Citrix; Windows Tablets	ACM; CPP	NPA	NPA	NPA	NPA	NPA	NPA	EPI	(1) Custom CMS with multiple modules called FAST used for electronic contracting management; partnering evaluation; estimated engineering construction costs; project tracking; repository for archived documents; system to track compliance for DBE certification and payroll reporting; etc. Lastly; the PEN module is used for entering daily diaries. (2) eBuilder and a custom program called ELVIS (short for Engineering and Laboratory Vital Information System) on alternative delivery projects as a project collaboration portal and construction management system. Evaluating RFID/bar code technology to track materials. (3) SurePath is used to verify bid bonds.
Arkansas	AASHTO BAMS/DSS	AASHTOWare Project Estimation, Preconstruction, and Bids	AASHTOWare Project Bids, Preconstruction	eBuilder	AASHTO SiteManager (1) ; eBuilder (2)	Doc Express	Doc Express; eBuilder (2)	NPA	Bid Express; SurePath (3)	EPI (6)	Custom Program	Windows Tablets and Laptops	NPA	P6, SmartPM	eBuilder	NPA	NPA	Custom Program (4)	Cisco Webex, MS Teams	EPI (5)	(1) ARDOT plans to implement the AASHTOWare Project CRLS, but have not done so yet. (2) eBuilder is being used for the alternative delivery projects; but ARDOT uses Doc Express as the official filing cabinet for design-bid-build construction projects. (3) SurePath to verify electronic bid bonds. (4) State also has two custom applications; one is called SARS to run queries and reports directly from SiteManager; and the second one is called COGS to manage change order documentation and approvals. Their SiteManager program is heavily customized to accomodate reporting needs. (5) Arkansas uses bar codes to track certain assets (e.g. signs). (6) ARDOT does not require e-Ticketing, but Contractors may request permission to use an e-Ticketing solution of their choice. The application is reviewed case-by-case to determine whether the app meets Dept requirements. Several e-ticketing solutions are or have been in use on ARDOT projects, but many Contractors still do not opt for e-Ticketing.
California	AASHTO BAMS/DSS	Evaluating Products (1)	AASHTO Expedite	NPA	Evaluating Products (1)	NPA	Falcon DMS (2)	NPA	Bid Express; SurePath (3); Surety 2000 (3)	NPA	NPA	Headlight (4); PlanGrid (4) and iPads	ACM; CPP	NPA	NPA	NPA	NPA	NPA	NPA	NPA	(1) Evaluating AASHTOWare Project Pre-Construction, Construction & Materials, and Civil Rights and Labor. (2) Falcon DMS is used for managing active structures documents; specifically engineering drawings; email; Microsoft Office; raster images and other types of documents. State also uses it for document retrieval system (e.g. roadway as-built plans; right-of-way; survey field notes; as-built structure plans; accident incident reports; etc.). (3) SurePath and Surety 2000 for verifying electronic bid bonds. (4) State is also piloting Headlight and PlanGrid on some alternative delivery projects.
Colorado	AASHTO BAMS/DSS	AASHTO Preconstruction(1)	AASHTO Bids	ProjectWise; SharePoint	AASHTO SiteManager (2)	Adobe Digital Signatures	ProjectWise; OnBase	Bluebeam Revu (3)	Bid Express; SurePath	NPA	AASHTO SiteManager (2)	ESRI Survey 123 (4)	ACM; CPP	PMWeb	NPA	NPA	NPA	Power BI	Google	NPA	(1) Estimation in the process of being implemented. (2) SiteManager is in the process of being replaced. (3) Bluebeam is being used for PDF red-lining and collaboration. (4) Survey 123 for Construction Inspection is being replaced.
Connecticut	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO Expedite	Bluebeam Revu	AASHTO SiteManager	DocuSign (change orders) and GlobalSign (internal documents)	ProjectWise	Bluebeam Revu	Bid Express	NPA	NPA	Mobile Inspector andDell Tablets	NPA	NPA	NPA	GPS Rovers with Trimble Business Center	NPA	NPA	NPA	NPA	None
Delaware	AASHTO BAMS/DSS	AASHTO Cost Estimation and PES/LAS	AASHTO Expedite	SharePoint	Primavera Unifier	Workflow based Unifier standard language	Unifier (Construction documentation) and ProjectWise (mainly for design files)	Paper based but Beginning discussions on PDF red lining	Bid Express	Haulhub	Multiple Individual Databases	iPads, Dell 2 in 1, Laptop	ACM; CPP	Oracle P6, but migrating to Unifier in May/June 2022	Paper-based Methods	Paper-based Methods	Paper-based Methods	Oracle BI Publisher, COGNOS, MS Power BI	MS Teams, Zoom, Webex	Paper-based Methods	None
Florida	AASHTO BAMS/DSS	AASHTO Preconstruction	AASHTO Bids	ProjectSolve; Bluebeam Revu	AASHTO SiteManager (1)	IdenTrust	Hummingbird (2); ProjectSolve (3)	NPA	Bid Express; SurePath (4)	Earthwave Technology FleetWatcher (5)	NPA	Autodesk BIM 360 Field; Citrix: iPads	ACM; CPP	NPA	Hummingbird; ProjectSolve (2)	NPA	NPA	NPA	NPA	EPI (6)	(1) FDOT is planning to migrate to AASHTOWare Project Construction and Materials in July 2019. (2) Hummingbird is used for document storage inside of the firewall. (3) Use ProjectSolve as their collaboration platform outside the firewall; but have an electronic document management system for final archival of project files for record retention purposes. (4) SurePath is used for verification of electronic bid bonds. (5) Piloting e-ticketing technology. (6) Piloting RFID/bar code technology to automatically track materials.
Georgia	AASHTO BAMS/DSS	AASHTO Preconstruction and Cost Estimation	AASHTO Bids	ProjectWise; e-Builder (1). and Custom Program (2)	AASHTO SiteManager AASHTOWare Project (June 2022)	DocuSign (3)	ProjectWise; e-Builder (1), and Custom Program (2)	Bluebeam Revu	Bid Express; SurePath (4)	eTicketing for Asphalt on all projects initiated April 2021	NPA	HP Tablets	ACM, CPP (5)	Custom Program (6)	ProjectWise (7); e-Builder (7); Web (7)	SiteManger/ AWP	NPA	Custom Program (6)	Video Conferencing; GoToMeeting	Paper-based Methods	(1) e-Builder is used for design-build and P3 projects only. (2) Contract Administration Tracking System (CATS) is used to manage contract documents signed electronically. (3) DocuSign is used to execute contracts and change orders. The Software is integrated with a custom financial application. (4) SurePath is used for verification of electronic bid bonds. (5) Formal partnering program in place for P3 projects and large design-build. Currently developing a partnering program for design-bid-build. (6) GDOT411 and GeoPI. (7) ProjectWise is used for storing plan sets for design-bid-build projects; e-Builder is used for storing plan sets for design-build and P3 projects; and all manuals and specifications are stored online.
Guam	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	None
Hawaii	Paper-based Methods	HANDS (1)	Paper-based Methods	Paper-based Methods	Investigating Solutions	Adobe Sign for Bid Documents	Paper-based Methods	Paper-based Methods	Paper-based Methods	Paper-based Methods	Paper-based Methods	Some tablets being used by consultants	NPA	Facsware for Project Management and Microsoft Project for Scheduling	Paper-based Methods	Paper-based Methods	Paper-based Methods	Paper-based Methods	In-person meetings	Paper-based Methods	(1) Hawaii Awards and Notices Data System (HANDS)

State or U.S. Territory	Bid History Analysis	Bid Letting Management and Estimates	Bid Preparation and Analysis	Collaboration Portal	Construction Management System	Digital Signatures	Document Management System	Electronic As-Builts (GPS/GIS/PDF red-lining)	Electronic Bidding and Bid Bonds	e-Ticketing	Lab Inventory and Materials Management System	Mobile Devices for Inspection	Partnering	Project Management System	Project References (e.g. plans; standards; manuals)	Quantity Measurements (real-time verification)	Fleet Management	Queries and Reports	Virtual Meetings	Auto-Material Tracking (RFID/Bar-Coding)	Comments
Idaho	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO	Bluebeam Revu (1)	AASHTOWare	NPA	ProjectWise (2)	NPA	Bid Express; SurePath (3)	NPA	NPA	AASHTO Mobile Inspector	ACM; CPP	NPA	ProjectWise	NPA	NPA	NPA	NPA	NPA	(1) Bluebeam Revu is used for preconstruction digital review of plans. (2) ProjectWise is used for all project related documentation. (3) SurePath is used for verification of electronic bid bonds.
Illinois	NPA	ExeVision	NPA	NPA	Exevision IPB Web	DocuSign	Exevision IPB Web	NPA	Exevision and SurePath (1)	EPI	Exevision	iPads	NPA	NPA	Website	EPI	NPA	Exevision, Power PI	WebEx, MS Teams	QR codes (2)	(1) Exevision is used for electronic submittal of bids and SurePath is used for verifying electronic bid bonds. (2) Will begin using QR codes in summer 2022. (3) ExeVision is used for electronic bidding - electronic bidding is encouraged; but not mandatory. (4) SurePath is used for verifying electronic bid bonds. (5) Headlight is being used by consultans providing construction services
Indiana	Tableau, Bid Tabs	AASHTO, Bid Express	AASHTO, Bid Express	Microsoft Teams	SiteManager current, AASHTOWare 2023	DocuSign & Adobe	Bentley Projectwise	PDF red-lining	Bid Express, Surety Wave, Surety2000	Haul Hub DOTportal, DOTslip	Materials Management System	Smartphones partial use, more full use future	no software use specified	SPMS	Adobe PDF	none in use	contractor's choice	Thoughtspot, Tableau	Microsoft Teams	not in use	None
Iowa	AASHTO BAMS/DSS	AASHTO PES/LAS	AASHTO Expedite	NPA	AASHTO FieldManager, AASHTO SiteXchange	Doc Express	Doc Express (2); ProjectWise	Collector for ArcGIS, Survey 123, GPS Outline (3); PDF Expert (4)	Bid Express; SurePath (5)	Earthwave Technology Fleetwatcher; i-Strada (6)	Custom Program	iPads	CPP	NPA	Custom Program (7)	NPA	NPA	NPA	Adobe Connect (8)	EPI	(1) Module that allows contractors to add subcontractor information post-award. (2) Doc Express is used for post-letting document management and digital signatures during the construction administration of a project, while ProjectWise is used for document management of engineering drawings during Preconstruction. (3) Implemented ArcGIS collector, Survey 123 and GPS Outline to document as-built location and conditions for culverts and a few other as-built features. (4) PDF expert for plan reading/markup and fillable forms on the iPads. (5) SurePath is used to verify electronic bid bonds. (6) Piloting e-ticketing for HMA and Concrete. (7) ERL system is an online room for specifications; manuals; road standards; materials; inventory materials; bridge standards; etc. (8) Adobe Connect is used for virtual meetings. (9) Bar codes are used to track certain field material samples (i.e. hot asphalt boxes).
Kansas	AASHTOWare Project Data Analytics & BAMS/DSS	AASHTOWare Project Preconstruction	AASHTOWare Project Bids & Preconstruction	Bluebeam Revu	AASHTOWare Project Construction and Materials	NPA	OnBase	Bluebeam Revu	AASHTOWare Project Bids & BidX	HaulHub Portal DOTslip	AASHTOWare Project Construction and Materials	Mobile Inspector; Field Interviewer; Mobile Tester	NPA	winCPMS & AASHTOWare Project	NPA	NPA	NPA	Crystal Reports, Webi, BI, SQL, Direct Query	Microsoft TEAMS	NPA	None
Kentucky	AASHTO BAMS/DSS	AASHTO Preconstruction; Estimator	AASHTO Bids	ProjectWise	AASHTO CRLMS; AASHTO SiteManager (1); AASHTO SiteXchange (2)	Paper-based Methods	ProjectWise (3); AgilePoint (3)	Varies (4)	Bid Express; SurePath (5)	Earthwaves Fleetwatcher (6)	NPA	Dell Tablets with Citrix; iPad wit Mobile Inspector	NPA	NPA	NPA	NPA	GPS Rovers and Robotic Total Stations	NPA	NPA	NPA	(1) In the process of upgrading SiteManger to Construction & Materials. (2) Module that allows contractors to enter subcontractor information post-award. (3) ProjectWise is used for document management; but AgilePoint, a Platform as a Service (PaaS), is used to automate the routing and approval process for change orders. (4) As-built records are documented using a variety of methods: redlined PDFs or CAD drawings, or redlined on paper. Bluebeam is available to each project office. Also, piloting Collector for ArcGIS for ADA asset inventory. (5) SurePath is used to verify electronic bid bonds. (5) Equipment is available for construction surveys. (6) Conducting pilot projects
Lousiana	AASHTO BAMS/DSS	AASHTO Preconstruction; Estimation	AASHTO Bids	Bluebeam Revu; Sharepoint	AASHTO CRLMS and SiteManager	IdenTrust; ePersona	ProjectWise, SharePoint, Falcon DMS (1)	NPA	Bid Express; SurePath (2)	NPA	NPA	Mobile Inspector, Headlight (3)	NPA	Custom Program (4)	NPA	NPA	NPA	Custom Program (4)	NPA	NPA	(1) Falcon DMS is used for accessing legacy documents with some level of integration. It is used to allow contractors to access released project bid-sets through the web. The system is integrated with other enterprise systems, and has been customized to allow interactive communication between project managers and contractors regarding bid sets. (2) SurePath is used to verify electronic bid bonds. (3) Headlight is being piloted to interface with SiteManager. (4) State has a custom program and project management system that tracks project time and cost. and produces reports.
Maine	AASHTO BAMS/DSS	AASHTO Estimator	AASHTO Expedite	Bluebeam Revu	AASHTO FieldManager	Doc Express	Custom Program (1); Doc Express	NPA	Bid Express; SurePath (2)	NPA	NPA	Mobile Inspector, iPads and Windows-based tablets	ACM	NPA	NPA	NPA	NPA	NPA	NPA	NPA	(1) Use a custom electronic document organization control system called TEDOCS as their electronic filing system. (2) SurePath is used to verify electronic bid bonds.
Maryland	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO Bids	Custom Program (1)	AASHTO CAS	NPA	ProjectWise	NPA	Bid Express; SurePath (2)	NPA	Custom Program (3)	NPA	ACM	NPA	Custom Program (1)	NPA	NPA	NPA	NPA	EPI (4)	(1) Project websites for sharing information. (2) SurePath is used to verify electronic bid bonds. (3) Materials Management System. (4) Evaluating RFID/bar code technology for automatically tracking materials.
Massachusets	NPA	NPA	AASHTO Expedite	NPA	Custom Program (1)	NPA	Custom Program; ProjectWise	NPA	Bid Express; SurePath (2)	NPA	NPA	NPA	CPP	Oracle P6	NPA	NPA	NPA	NPA	NPA	NPA	(1) Massachusets uses a custom construction management system that integrates with other existing system (EMS). The state has an environmental management system (EMS).
Michigan	AASHTO BAMS/DSS	AASHTO Preconstruction	AASHTO Bids	Bluebeam Revu	FieldManager and FieldNet	DocuSign	ProjectWise	NPA	Bid Express	NPA	NPA	iPads, Windows-based tablets, iPhones, and laptops; ProjectWise Edge (1); Mobile Inspector (2); PDF Expert; Bluebeam Vu (3)	ACM	NPA	ProjectWise	GPS Rovers	NPA	NPA	FaceTime	EPI (4)	(1) ProjectWise Edge is a modern interface used to access ProjectWise content for desktop and mobile devices. It allows users to download files before going to the field to work offline until they upload the files back to ProjectWise. (2) Mobile inspector currently being used and may replace the FieldBook module of the FieldManager CMS. (3) Bluebeam Vu is the free version of PDF viewer. (4) Using some RFID/bar code technology for automatically tracking materials.
Minnesota	AASHTO BAMS/DSS	AASHTO Preconstruction, Cost Estimation and Estimator	AASHTO Bids	SharePoint	AASHTO CRLMS, SiteManager (1)	Topaz Tablets (2)	Custom Program (3); ProjectWise and SharePoint	Collector for ArcGIS	Bid Express	2018-2025 pilot on asphalt. 2023/2024 pilot on concrete. 2025/2026 full deployment on asphalt (TBD for concrete). Full deployment waiting on completion of MDMS enhancements in Veta. Contractor selects system to use based on specification requirements.	AASHTO Construction and Materials (1)	Rovers, Smart Pads, Laptops, mobile inspector, Citrix	Vendors, Material Suppliers, Contractors, Associations (MAPA, CPA, AGC, ARM), other states via pooled funds	Oracle P6	Custom Program	Included in the MDMS specification. Data to be used by Contractors to assist with production rates, transit flow rates, and to support increased asphalt mat temperature/material uniformity as measured using the paver mounted thermal profile method. Data to be used by MnDOT to assist with estimated times of arrival of materials, review of designated haul routes, dump logs for correlation with remove and replace limits and connection to other intelligent construction technology (ICT), additional documentation of delivered loads, review of labor compliance items during project closeouts (e.g., prevailing wage, DOT numbers, driver names, civil rights items, etc.).	GPS Rovers (5); Unmanned Aircraft Systems (6)	NPA	Microsoft Teams	No, the RFID code in AASHTOWare Project is not a functional component in the system that has been developed. Possibly use this feature in the future after further enhancements. Currently tracking samples in AWP using sample numbers.	(1) In the process of upgrading to Construction & Materials module. (2) MnDOT uses Topaz Tablets and Software to capture; bind and authenticate eSignatures. This technology is typically used in other markets such as delivery services; but state is working toward implementing a solution with digitally encrypted signatures and electronic approval of supplemental agreements. (3) TRACS is an EDMS used extensively for design-build projects; and it is integrated to the LIMS for materials certification/management. MnDOT intends to replace this system with a commerical application. (4) Piloting Headlight on a project by project basis. (5) Using GPS rovers for real-time verification and measurement of quantities. (6) MnDOT is currently using UAS for bridge maintenance inspections in the metro district, and has not used the technology for construction applications.
Mississippi	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO Bids	Microsoft Teams	AASHTO CRLMS and SiteManager	NPA	ProjectWise	NPA	Bid Express	NPA	NPA	NPA	ACM	NPA	Agency Website	NPA	NPA	NPA	MS Teams and Zoom	NPA	None

State or U.S. Territory	Bid History Analysis	Bid Letting Management and Estimates	Bid Preparation and Analysis	Collaboration Portal	Construction Management System	Digital Signatures	Document Management System	Electronic As-Builts (GPS/GIS/PDF red-lining)	Electronic Bidding and Bid Bonds	e-Ticketing	Lab Inventory and Materials Management System	Mobile Devices for Inspection	Partnering	Project Management System	Project References (e.g. plans; standards; manuals)	Quantity Measurements (real-time verification)	Fleet Management	Queries and Reports	Virtual Meetings	Auto-Material Tracking (RFID/Bar-Coding)	Comments
Missouri	AASHTOWare Data Analytics	AASHTO Preconstruction and Estimator	AASHTO Bids	SharePoint	AASHTOWare Construction & Materials	Adobe Digital Signature, DocuSign	ProjectWise and SharePoint	Bluebeam Revu	Bid Express	Evaluating	NPA	Mobile Inspector, Smart Phones, Tablets and Laptops	ACM	NPA	SharePoint	GPS Rovers with Topcon MAGNET Field	Evaluating	Cognos	Video Conferencing, Microsoft Teams	NPA	1) Using a custom macro enabled spreadsheet system called CRE2O to allow contractors to submit documentation that automatically syncs with AASHTOWare. Cognos is used to run customized reports from various AASHTOWare products. (2) DocuSign is used for all contract execution and approvals and Adobe is used for any post-award signatures and approvals (e.g. change orders). (3) SharePoint is the official document management system for documentation related to all construction projects from cradle to grave with the exception of engineering drawings, which are stored in ProjectWise. The e-Project site hosts all internal documents while an external site was created to allow contractors to submit documentation. Also, MoDOT uses a third party application called Harmon.ie that allows integration between Outlook email client and the e-Project sites. Users can directly save attachments from email to e-Project site or open documents directly without ever leaving Outlook. (4) Evaluating Topcon MAGNET Site for office software. (5) Cognos is used to run various reports from AASHTOWare and any other ORACLE database system.
Montana	AASHTOWare Data Analytics	AASHTOWare Preconstruction, Project Estimation	AASHTOWare Bids	BIM360 (Piloting)	AASHTOWare Civil Rights & Labor , Construction & Materials	Docusign	Doc Express (Piloting) BIM360 (Pilot), PCMS (In House)	As-Built System (In-House)	Bid Express		AASHTOWare Construction & Materials	Cellular Enabled HandHelds	ACM / CCP	PPMS (In-House)	plans; standards; manuals	Mobile Inspector / Trimble Access (Piloting)	EVMMS (Agile Assets)	PLSQL; Jasper, End User Designer	Teams, Zoom	NPA	None
Nebraska	AASHTO BAMS/DSS	AASHTO Preconstruction	AASHTO Bids	NPA	AASHTO SiteManager; AASHTO SiteXchange (1)	DocuSign	OnBase; ProjectWise	NPA	Bid Express	NPA	NPA	Windows-based tablets	NPA	NPA	NPA	NPA	Equipment Watch	NPA	NPA	NPA	documentation that automatically syncs with
Nevada	NPA	NPA	NPA	NPA	AASHTO FieldManager	NPA	ProjectWise implementing Sharepoint	GIS/PDF red-lining	NPA	NPA	NPA	Mobile Inspector	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	AASHTOWare. Cognos is used to run customized reports
New Hampshire	iPD Web	iPD Web	iCX Web	NPA	iPD Web	Bluebeam		GIS/PDF red-lining	iCX	Haul Hub, Libra, other	iPD Web	iPAD	NPA	iPD Web	Bluebeam, internet with mobile devices	GNSS rovers	NPA	iPD Web	Teams/Zoom	NPA	None
New Jersey	AASHTO BAMS/DSS	AASHTO Preconstruction and Project Estimation	iCX Web	e-Builder	AASHTO CRLMS and SiteManager (1)	Paper-based Methods	Falcon DMS (2); ProjectWise (3); e-Builder	Paper-based Methods	Bid Express	Paper-based Methods	AASHTO SiteManager	Dell Tablets (4)	ACM	Custom Program (5)	e-Builder (6)	Paper-based Methods	Paper-based Methods	Custom Program (5)	NPA	Paper-based Methods	(2) DocuSign is used for all contract execution and
New Mexico	AASHTO BAMS/DSS	AASHTO Estimator and PES/LAS	AASHTO Expedite	Autodesk BIM 360, FTP and MS Office	AASHTO SiteManager and AASHTOWare Project Construction	Adobe Digital Signature	Autodesk BIM 360 (Docs) (1)	PDFs and CAD Drawings	Bid Express	EPI-Earthwave Technologies Fleetwatcher and Connex Command Alkon (2)	Internal Network	iPads (EPI) and Laptops	The Associated Contractors of America	AASHTOWare Project, SiteManager and Autodesk Build (EPI)	PDFs and paper-based specifications	GPS Rovers with Trimble Business Center	NPA	PDF	MS Teams and Zoom	NPA	(1) Autodesk BIM 360 modules used for engineering models and plan sheets.
New York	AASHTO BAMS/DSS	AASHTO Estimator and PES/LAS	AASHTO Bids	NPA	AASHTO SiteManager (1)	Paper-based Methods; User-based Authentication for Document Approval	ProjectWise (2); Doc Express (3)	Varies (4)	Bid Express	Paper-based Methods	NPA	HP Laptops, Dell Tablets; iPhone with Mobile Inspector	ACM	NPA	NPA	GPS Rovers with Leica Geosystems Captivate	NPA	NPA	NPA	NPA	approvals (e.g. change orders).
North Carolina	AASHTO BAMS/DSS	AASHTO Preconstruction	AASHTO Expedite	SharePoint	AASHTO CRLMS	NPA	SharePoint (1)	NPA	Bid Express	NPA	NPA	NPA	ACM	NPA	NPA	NPA	NPA	NPA	NPA	RFID for sample testing, material inspections, and other on-site data collection and tracking	(3) SharePoint is the official document management
North Dakota	Pacer	BidX	AASHTO Bids	NPA	Custom Program	DocuSign	FileNet	Paper-based methods transferred to PDF	Bid Express	EPI	NPA	iPads/iPhones	NPA	NPA	Trimble Business Center; UAS	NPA	NPA	Custom Program; Cognos	Microsoft Teams	NPA	None
Ohio	AASHTO BAMS/DSS	AASHTO Preconstruction, Cost Estimation and Estimator	AASHTO Bids	Bluebeam Revu; Sharepoint	AASHTO CRLMS; AASHTO SiteManager (1); AASHTO SiteXchange (2)	DocuSign	Falcon DMS (3); SharePoint (4)	ArcGIS Collector	Bid Express	NPA	NPA	Custom Program (5); HP 2 in 1 Elite laptops and iPhones	ACM; CPP	Oracle P6	NPA	NPA	Equipment Watch	NPA	NPA	NPA	projects from cradle to grave with the exception of
Oklahoma	AASHTOWare Project Data Analytics	AASHTOWare Project 'PreConstruction'	AASHTOWare Project Bids	Microsoft TEAMS	AASHTOWare Project SiteManager	Adobe Sign	Document Vault	N/A at this time	Bid Express	Haul Hub	AASHTOWare Project SiteManager	N/A at this time	AASHTOWARE, Bentley	Custom In-House solution	ProjectWise	N/A at this time	Agile Assets	PL/SQL Crystal, Active Reports, and BI	Microsoft TEAMS / Zoom	N/A at this time	We are in production with AASHTOWare PreConstruction and partially with AASHTOWare Civil Rights and Labor , Moving to AASHTOWare Construction and Materials
Oregon	AASHTO BAMS/DSS	AASHTO Estimator, TRACER and PES/LAS	AASHTO Bids	NPA	Planning implementation of new system (1)	Doc Express	Doc Express (2) and ProjectWise (3)	NPA	Bid Express	NPA	NPA	iPads, dynamic electronic forms, Adobe Acrobat DC	ACM	NPA	NPA	GPS Rovers; MicroSurvey Genius Field Software; Unmanned Aircraft Systems	NPA	NPA	NPA	EPI (4)	The e-Project site hosts all internal documents while an
Pennsylvania	NPA	NPA	Custom Program (2)	Custom Program (1)	Custom Program (2)	DocuSign	Custom Program (1)	Collector for ArcGIS (3)	Custom Program (1)	Earthwave Technology Fleetwatcher; HaulHub; Zonar GPS System; Libra Systems;Custom Program (6)	Custom Program (4)	Custom Program (6); iPads	ACM; CPP	NPA	Custom Program (1) (4)	Custom Program (6)	NPA	NPA	NPA	EPI (7)	(1) SharePoint based system called PennDOT Project Collaboration Center (PPCC) for active construction document management (external and internal access), and Engingeering Document Management System for document archive. (2) Engineering Construction Management System (ECMS) and Construction Documentation System version 3 (CDSv3). (3) ArcGIS being used to collect specific assets and update maintenance database. (4) Electronic Construction and Materials Management System (ECAMMS). (5) Multiple Mobile Computing (MC) applications for iOS. (6) Mobile application for computing regular and irregular shape volumes. (7) Evaluating e-ticketing technology and has implemented RFID/bar code technology to automatically track materials.
Puerto Rico	Custom Program	Custom Program, PMIS (1)	Custom Program, PMIS (1)	Sharepoint, PMIS (1)	Custom Program, Oracle Unifier PMIS (1)	Paper based methods	Oracle UniferPMIS (1)	Paper based methods	Oracle Unifier (1)	Evaluating E-ticketing technology (2)	SpectraQEST	Ipad's	Paper-based methods	Oracle Unifier (1)	Oracle Unifier (1)	Paper-based methods	Paper-based methods	Custom Program, Oracle Unifier (1)	Teams, Webex, Zoom	Paper-based methods	(1) PRHTA currently piloting PMIS and Oracle Unifier for Project delivery from planning to closing. (2) Evaluating E-ticketing technology
Rhode Island	NPA	NPA	NPA	NPA	NPA	NPA	Falcon DMS; ProjectWise; SharePoint ; Bluebeam Revu	NPA	NPA	NPA	NPA	PlanGrid (2)	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	application called Harmon.ie that allows integration
South Carolina	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO Bids	NPA	AASHTO Construction & Ma	Adobe Co-Sign	Falcon DMS; ProjectWise; SharePoint ; Bluebeam Revu	PDF revisions via Bluebeam/Adobe	Bid Express	Initial Spec in 2022, no specific software	AASHTOWare Materials full implementation in 2024	Windows Tablets	ACM; CPP	NPA	NPA	GPS Rovers	NPA	NPA	Teams	NPA	None
South Dakota	NPA	NPA	NPA	SharePoint; Bluebeam Revu	Custom Program	Adobe Sign	Custom Program; FileDirector	NPA	Custom Program; SurePath; Surety 2000	Piloted - Contractor used FleetWatcher	Custom Program	iPhones; iPads; Windows based Laptops	NPA	Primavera	Website	GPS Rovers; Trimble	Custom Program	Website	Teams; Zoom	NPA	None
Tennessee	AASHTO BAMS/DSS	AASHTO Preconstruction	AASHTO Expedite	NPA	AASHTO CRLMS; AASHTO SiteManager; AASHTO SiteXchange (1)	NPA	NPA	NPA	Bid Express	NPA	NPA	PlanGrid (2)	ACM	NPA	NPA	NPA	NPA	NPA	NPA	NPA	leaving Outlook.
Texas	AASHTO BAMS/DSS	AASHTO Estimator	NPA	NPA	AASHTO SiteManager	DocuSign	ProjectWise	NPA	Bid Express	NPA	NPA	iPads; Headlight; Mobile Inspector; Citrix	ACM; CPP	Oracle P6	NPA	NPA	Equipment Watch	NPA	NPA	NPA	(4) Evaluating Topcon MAGNET Site for office software.
U.S. Virgin Islands	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	(5) Cognos is used to run various reports from
Utah	NPA	NPA	NPA	Bentley OpenRoads Navigator; Interchange	Aurigo Masterworks	EPI	ProjectWise and Interchange	Unmanned Aircraft Systems	Bid Express	Discussing technology (1)	NPA	iPads; Aurigo Masterworks Mobile Inspection App	ACM	NPA	NPA	GPS Rovers; lidar; Unmanned Aircraft Systems (2)	NPA	NPA	NPA	NPA	AASHTOWare and any other ORACLE database system.
Vermont	None	AASHTO Estimator	AASHTO Expedite (1)	Doc Express	AASHTO FieldManager and SiteManager (2)	Paper-based Methods for Contract Execution; Doc Express	Doc Express	Investigating Technology (3)	Bid Express	Paper-based Methods	AASHTO SiteManager (2)	Mobile Inspector (2)	ACM; CPP	NPA	NPA	NPA	NPA	NPA	NPA	NPA	(1) Transitioning to AASHTOWare Project Bids, but does not have bid analysis software. (2)transitioning to a new construction management system: ExeVision. (3) Looking at Survey 123.

State or U.S. Territory	Bid History Analysis	Bid Letting Management and Estimates	Bid Preparation and Analysis	Collaboration Portal	Construction Management System	Digital Signatures	Document Management System	Electronic As-Builts (GPS/GIS/PDF red-lining)	Electronic Bidding and Bid Bonds	e-Ticketing	Lab Inventory and Materials Management System	Mobile Devices for Inspection	Partnering	Project Management System	Project References (e.g. plans; standards; manuals)	Quantity Measurements (real-time verification)	Fleet Management	Queries and Reports	Virtual Meetings	Auto-Material Tracking (RFID/Bar-Coding)	Comments
Virginia	AASHTO BAMS/DSS	AASHTO Preconstruction and Estimator	AASHTO Expedite	Bluebeam Revu (1)	AASHTO CRLMS and SiteManager	IdenTrust (2), Bluebeam or Adobe Digital Signatures	Falcon DMS (3), CADAC (4); ProjectWise (5); SharePoint	NPA	Bid Express	NPA	NPA	Citrix, PlanGrid (6), Headlight (7), iPads	ACM: CPP	NPA	NPA	NPA	NPA	NPA	NPA	NPA	(1) Bluebeam Revu and Studio software are used for Preconstruction collaboration, constructability reviews, and/or markup of as-built plans. (2) State Construction Engineer has authorized the use of IdenTrust for contractors to sign documents electronically, but it is not used very often because the State does not pay for the licensing. Internally, the agency uses Bluebeam or Adobe ID signatures. (3) Virginia uses Falcon DMS for accessing active project documents, such as: CADD drawings; email; reports; spreadsheets; and raster images. The state is also using Falcon DMS for storing and retrieving as-built plans. (4) Agency uses a program called CADAC (SharePoint-based) for design-build projects. Also, agency is building a new document management system similar to CADAC, but not as sophisticated. (5) Design is currently upgrading to ProjectWise from Falcon DMS. ProjectWise will be used for document management of design/cad files. (6) Piloting PlanGrid. (7) Piloting Headlight.
Washington	NPA	NPA	AASHTO Expedite	SharePoint and Unifier	Unifier	Adobe Acrobat	Unifier and SharePoint	NPA	Bid Express	NPA	NPA	Unifier	ACM	Unifier	NPA	NPA	NPA	NPA	Teams	NPA	Statewide implementation of Oracle's Unifier
Washington D.C.	NPA	NPA	AASHTO Expedite	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	NPA	None
West Virginia	NPA	NPA	NPA	SharePoint; Bluebeam Revu	Custom Program	Adobe Sign	Custom Program; FileDirector	NPA	Custom Program; SurePath; Surety 2000	Piloted - Contractor used FleetWatcher	Custom Program	iPhones; iPads; Windows based Laptops	NPA	Primavera	Website	GPS Rovers; Trimble	Custom Program	Website	Teams; Zoom	NPA	None
Wisconsin	AASHTOWare Project BAMS/DSS and Data Analytics	AASHTOWare Project Preconstruction and Estimator	AASHTOWare Project Bids	Autodesk BIM 360 (Glue and Docs); Bluebeam Revu; SharePoint	AASHTOWare Project Construction	DocuSign	OnBase and SharePoint	NPA	Bid Express	NPA	NPA	Autodesk BIM 360 Field; iPhones; iPads; Mobile Inspector; Windows-based tablets (1)	ACM	Oracle P6	NPA	NPA	NPA	NPA	NPA	NPA	None
Wyoming	Oman Systems bid tabs	Exevision iPD	Exevision iPD and iCX	NPA	Exevision iPD and iCX	Adobe sign - in some instances	Falcon DMS (1); ProjectWise (2); Exevision (3)	Adobe pdf	Exevision iPD/iCX for bidding	EPI	NPA; Exevision iPD for materials testing	Laptop w/ Exevision E-fieldbook	EPI	Primavera	QwestCDN; Falcon DMS;Google drive-manuals	GPS collection	Agile Assets Fleet management	NPA	Google meets and Zoom	NPA	(1) Uses Falcon DMS for accessing active project documents, such as: reports; spreadsheets; and raster images. The state is also using Falcon DMS for storing and retrieving as-built plans. The state uses this system in numerous departments. (2) ProjectWise is used for design CAD files. (3) Exevision is used for construction documentation .

Legend	
ACM	Alternative Contracting Methods
NPA	Information Not Publicly Available
EPI	Innovation Being Evaluated, Piloted, or Implemented, but no product was specified in the literature.
CPP	Construction Partnering Program