e-Construction
PEER-TO-PEER EXCHANGE

Summary Report

Florida Department of Transportation and Maine Department of Transportation

Virtual Exchange on Digital Signatures
March 15, 2016
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1. Background
The Florida Department of Transportation (FDOT) and the Maine Department of Transportation (MDOT) participated in a virtual peer exchange on March 15, 2016. The focus of the peer exchange is on one particular component of e-Construction – specifically electronic document routing/approvals, electronic signatures, and digitally encrypted signatures in a secure environment. The event was sponsored by the Federal Highway Administration (FHWA).

The half-day event began with an introduction to e-Construction practices currently in use in Maine, such as pilot application of tablet devices in the field and some use of electronic signatures. Maine DOT also shared analysis of legislation that is currently in place to allow use of electronic and digital signatures on construction documentation. Florida DOT also described legislation in place in Florida that allows for use of digitally encrypted signatures on construction documents including change orders and reports. The group then discussed key items for application of digital signatures throughout all phases of project delivery, from design to construction to as-built documentation.

The Peer Exchange was the fifth in a series designed to assist States with implementation, while allowing peers to network and share information across State DOTs in a relatively small group setting. It was the first virtual exchange as part of this series focused on e-Construction.

Construction and Information Technology (IT) leaders, field personnel, and engineers from MDOT, FDOT, and FHWA Headquarters and the FHWA Maine Division Office participated in the event. The list of attendees, along with contact information for each, is provided as an appendix to this document.

Participants discussed the important issues and challenges, potential solutions, and e-Construction practices that have proven beneficial to agencies and contractors. Application of e-Construction in the field through portable devices, management of documentation through project collaboration sites, and the use of digital signatures and workflows (the primary focus of the event) were all focus areas of the peer exchange.

This report includes a summary of key findings from the event, along with the full notes from the discussions during the virtual exchange. To promote further networking and information sharing, a roster of participants along with contact information is included in Appendix A.

Links to the audio and visual presentation from the event are provided here, in two parts:
https://connectdot.connectsolutions.com/p1tyzf9lj47/ (part one)
https://connectdot.connectsolutions.com/p7k9uj6tkic/ (part two)

For more information, please contact:

Bryan Cawley, P.E.
Construction Management Team Leader
Office of Infrastructure, FHWA
202-366-1333
bryan.cawley@dot.gov

Kathryn Weisner, P.E.
Construction & Contract Administration Engineer
FHWA Resource Center
202-823-2267
Kathryn.weisner@dot.gov
2. e-Construction Implementation – Key Peer Exchange Findings

The peer exchange produced several relevant and practical “takeaways” identified by the group discussions. The following sections address the items that were highlighted by the group as a next step, implementation idea, document exchange, or focus area – all of which are designed to assist with future implementation of digital signatures. Where available, Web site links are provided for some of the practices currently in use by the agencies. In some cases, FDOT and MDOT discussed internal systems that do not currently have publicly available links, such as FDOT’s ProjectSolve project collaboration site.

**Maine uses an electronic payroll application** to perform payroll interviews and ensure compliance with the Davis-Bacon Act. Previous peer exchanges have included discussion on LCPTTracker, while this peer exchange outlined another software application named Elation that State DOTs can use to ensure compliance with payroll requirements on projects. For relatively low cost, this application can be downloaded to and used on mobile devices to document data gathered in the field while performing payroll interviews.

Link to mobile device application: [https://www.elationsys.com/elationsys/](https://www.elationsys.com/elationsys/)

**The State of Maine has published guidelines for application of digital signatures.** Information is also publically available on legislation that supports use of digital signatures and accepted vendors that provide digital certificates as noted in the links below.

Link to the State of Maine Digital Signature Act: [http://www.mainelegislature.org/legis/statutes/10/title10ch1053.pdf](http://www.mainelegislature.org/legis/statutes/10/title10ch1053.pdf)

Link to Maine Information Systems article on digital signatures: [http://maine.gov/newsletter/backissues/oct97/secbeat.htm](http://maine.gov/newsletter/backissues/oct97/secbeat.htm)


See Appendix C for State of Maine **Request for Acceptance of Digital Signature Product form.**

Both FDOT and MDOT are using an **application on the iPad for mark-ups of plans (creation of ash-built drawings) that also allows application of digital signatures.** FDOT uses an index sheet that outlines the specific pages that the signature applies to within the overall as-built plan sheets.


**FDOT shared a memorandum of understanding (MOU) between FDOT and the Florida contractor and consultant associations that established an agreement on the use of digital signatures.** This document helped make implementation of digital signatures easier by establishing early buy-in from these two key stakeholder groups outside of the DOT. Firewalls, access, acceptance, and business processes are all addressed in the MOU. Early completion of the MOU ensured that all key stakeholders were in agreement on the process.
FDOT highlighted the need to evaluate State statute wording for analysis of digital signature requirements. FDOT also shared information on the application process for third party digital certificate authorities (notary form, identification needs, and process description).

Link to FDOT acquisition guidelines:
http://www.dot.state.fl.us/construction/forms/ElectronicSubmit/AcquisitionGuidelines.shtm

FDOT developed an e-Construction specification for use on projects. The specification outlines the requirements for delivering projects electronically for contractors and consultants and the use of digital signatures to eliminate paper.

SCOPE OF THE WORK (ELECTRONIC SUBMITTAL OF DOCUMENTS).

<table>
<thead>
<tr>
<th>ARTICLE 4-1 is expanded by the following:</th>
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<tbody>
<tr>
<td>Upon execution of the contract, the Contractor and Department agree that all informational, contractual and other business required for this project will be through a system of paperless electronic means. When the specifications require a written submission of documentation, such documents must be submitted electronically.</td>
</tr>
</tbody>
</table>

All documents requiring a signature must be executed electronically by both parties in accordance with Chapter 668, Florida Statutes, and have the same force and effect as a written signature. The Department will provide a web-based collaboration site to facilitate the electronic document exchange. All persons requiring access to the collaboration site shall be identified during the preconstruction conference. **All persons that normally sign paper documents, and will be using the site, must acquire digital signature certificates.**

FDOT developed a white paper on digital signatures. The white paper outlines the use of third-party authentication and the various software packages that are in use for applying a digital signature to a document. FDOT also worked closely with the entity responsible for licensing professional engineers to develop a practice for use of a digital engineer of record seal in addition to the digital signature, along with a reference standard that lists the page numbers in plan sets that the signature applies to.

Link to FDOT digital certificates guide: http://www.dot.state.fl.us/construction/forms/electronicsubmit/digitalcertificatesguide.pdf

Link to FDOT guidelines on application of digital signatures:
http://www.dot.state.fl.us/construction/forms/ElectronicSubmit/AcquisitionGuidelines.shtm

FDOT and MDOT agreed that evaluation of the types of documents that need digital signatures is key to establishing a sound process for implementation. For example, contract documents may require digitally encrypted signatures, while some workflow approvals may be sufficient within project collaboration systems through less formal means. FDOT highlighted the importance of the digital equivalent of a notary for a hand-written signature, which meets the National Institute of Standards and Technology (NIST) level 3 requirements for digital signatures by using certificates.


The peer exchange allowed for information sharing and also captured responses to specific questions on how to implement digital signatures. These key takeaways will assist DOT's in analysis of legislation and further implementation of electronic and digital signatures so that they may realize the full benefits of e-Construction implementation.
3. Peer Exchange Discussion Notes

This section provides additional notes following the organization of the agenda. The full agenda for the Peer Exchange is included as an appendix to this document, along with a roster of participants with contact information for each participant. This report is designed to facilitate additional networking and discussion on the topics summarized from the event.

Kathryn Weisner from FHWA welcomed the group and provided some background information on activities to date including additional peer exchanges and the focus of this exchange. Participants provided brief introductions, including representatives from Maine DOT, Florida DOT, FHWA, and the consultant support team. Kat noted some detail on Florida practices observed at a 2015 in-person peer exchange, as they have multiple ways of dealing with signatures and forms, including working with legislation and leadership to ensure they are legally binding. This is the 6th peer exchange in this series, and the first virtual exchange overall.

The peer exchange design was then described – an informal forum where all should feel free to ask questions as we go or to add questions to the chat pod. We can get into a lot of detail on topics that are of great interest. This is Maine’s exchange, so use it to get as much out of it as you can. We were in Tampa on face-to-face exchanges to work with FDOT on their program, and we learned a lot about their use of digital signatures.

These peer exchanges have been very outcome-oriented – we will be capturing all the detail to put together a report we can share and publish. We have a concept we use called ‘key takeaways’ and we would like to put our hands on topics and items that can be shared with others. What can we do to help share these ideas and lessons learned with other states who want to improve their implementation/utilization.

Bryan Cawley from FHWA described the current EDC-3 e-Construction effort. He described current thinking on e-Construction and related it back to a time where electronic deposit and electronic banking became commonplace. And now we are getting to the point of delivering construction projects in a paperless environment.

Amy Tootle, State Construction Engineer at FDOT, and Doug Martin, State Construction Systems Engineer, introduced the Florida DOT approach to e-Construction. When Amy started on e-Construction a few years ago Doug Martin was already moving their paperless program forward to champion implementation throughout their state and districts.

Doug’s group promotes and assists all the districts throughout the state to adopt e-Construction tools and business application. July 2016 is the full implementation date for FDOT, with 98% ready to switch over to all digital. Dave Sadler, Director of Construction for FDOT, also spoke about implementation as well as FDOT’s interest in sharing information with other State DOTs on paperless construction.

Guy Berthiaume introduced the Maine DOT representatives and also provided opening remarks and background information on current practices to date in e-Construction in Maine. Brian Lawrence with FHWA’s Maine Division Office is the primary EDC-3 point of contact for the local Division Office. Included in the discussion was a group of bridge and highway engineers and project managers from Maine DOT as noted in the contact list in the appendix.
A previous in-person peer exchange was held during the summer of 2015 in Maine. Most of the people attending this event from Maine were part of that peer exchange. The previous event helped to get them thinking in those terms of moving toward e-Construction implementation. Utah and Iowa and a contractor from Michigan participated in discussion during the two-day event.

3.1 Background on Maine DOT and Current Practices in e-Construction

Guy Berthiaume provided information on current practices including use of field tablets on two projects in Maine. MDOT has used the iPad to supplement other devices for communication and information gathering and documentation such as desktops and smartphones. One engineer has been using the iPad to access plans in the field – including access to plans and specifications electronically. The same engineer has stopped using the paper plans in the field. Contractors have been impressed with the functionality.

MDOT noted use of Elation, a payroll processing app on the iPad that helps with wage interview documentation in the field. Cost saving and time savings have been noted as primary benefits of using the iPad application.

MDOT has also used Bluebeam Revu for as-builts, which has also become a very useful tool in the field. Inspectors can use this technology on site, while DOT engineers noted using the iPad for change order processing and other management tools.

MDOT also noted use of a Motion R12 tablet with a Windows operating system. This device does not have apps that are useful in the field similar to the ones for the iPad. Maine representatives noted that the Motion R12 device is extremely rugged – military grade, and also very heavy and difficult to physically handle. Cost of the device relate to the iPad or Windows-based tablet is also a key consideration.

Consultants begin using the iPads on a megaproject (bridge between New Hampshire and Maine), which was 100% paperless in construction. Use of the device has become an unintended pilot program. Signatures however are still ink signatures and being scanned. Maine has licenses for DocExpress and noted that documentation has also been managed through Constructware. MDOT is not using digital signatures on their workflows yet, especially beyond the contract signatures.

DocExpress is being set up but they have not yet officially used it. On the Sarah Mildred Long Bridge project, a contractor purchased a one-time license for Constructware software. This is not a department wide initiative. DocExpress gives them the opportunity to develop an automated signature/workflow system, but the functionality has not been tested. Some people use DropBox to share files, etc., but the software does not offer a signature function. Maine is going to try DocExpress – MDOT has been involved in discussions Iowa DOT and Michigan DOT within related national forums.

MDOT has licenses for ProjectWise, but Maine has not yet applied ProjectWise to the construction phase. The license is paid for, but the issue being reviewed is access from inside and outside the firewall. Discussions have begun to develop a process for implementation during construction.
3.2 Legislation for Use of Digital Signatures in Maine

When the digital signature act was implemented at the federal level, Maine also enacted State legislation. However, there are no strict guidelines mandating the use of digital signatures. The federal legislation outlines a process by which States determine whether to use digital signatures and to what extent. Maine DOT representatives also noted that the Maine Fire Marshal’s office is making use of electronic engineering stamps. If the plans are altered in any way the digital seal/signature goes away.

3.3 Analysis of Legislation Supporting Digital Signatures in Florida

Legislation in FL is geared toward Commerce – not to Construction specifically. It allows for both electronic authentication and digital authentication. In January 2015 FDOT implemented digital signatures on monthly progress estimates in line with requirements provided by the Florida Department of Financial Services.

Florida Statute 668 defines what a digital signature is. FDOT went by this definition to set their parameters. “Digital signature” means a type of electronic signature that transforms a message using an asymmetric cryptosystem such that a person having the initial message and the signer’s public key can accurately determine:

- Whether the transformation was created using the private key that corresponds to the signer’s public key.
- Whether the initial message has been altered since the transformation was made.

A “key pair” is a private key and its corresponding public key in an asymmetric cryptosystem, under which the public key verifies a digital signature the private key creates.

An “asymmetric cryptosystem” is an algorithm or series of algorithms which provide a secure key pair.

- System based on the US legislation put into place.

Florida Statute 668.50 - Uniform Electronic Transaction Act (UETA):

- Establishes the legal equivalence of electronic records and signatures with paper writings and manually-signed signatures.
- All States enacted except: Washington, Illinois and New York

Florida Statute 471.025(1):

- The board shall prescribe, by rule, one or more forms of seal to be used by licensees. Each licensee shall obtain at least one seal in the form approved by rule of the board and may, in addition, register his or her seal electronically in accordance with ss.
- …Drawings, specifications, plans, reports, final documents, or documents prepared or issued by a licensee may be transmitted electronically and may be signed by the licensee, dated, and sealed electronically with said seal in accordance with ss.
Florida Administrative Code [all refer back to Statute 668]
A professional engineer utilizing a digital signature to electronically sign and seal engineering plans, specifications, reports or other documents shall have their identity authenticated by a certification authority and shall assure that the digital signature is:

- Unique to the person using it;
- Capable of verification;
- Under the sole control of the person using it; and,
- Linked to a document in such a manner that the digital signature and correspondingly the document is invalidated if any data in the document is changed.

The Florida administrative code is constantly evolving – FDOT works hand in hand with the office to stay updated on adjustments. FDOT uses IdenTrust as a third party authenticator and licenses provide for unlimited use. Each license is $100 per user for a 2-year period. IdenTrust utilizes an application process – you must submit 2 forms of identification and notarized information and then IdenTrust sends back via postal service mail, a code for you to set up your digital signature.

FDOT representatives talked to their CADD development department who advised they were looking at pilot programs to help them determine what would help them meet the administrative code. They identified IdenTrust, which met the NIST level 3 security standard, the price of which did not get them past the threshold to do a bid/rfp. If they were doing it that way, they could not prescribe that contractors and consultants use the same. FDOT went to the Florida Office of Information Security (OIS) to have them do some research to find similar providers who meet the security requirements.

NIST 3 Level Authentication requires a notary signature to the application to authenticate the identity of the signer and gives the user precise identity control. FDOT felt it had enough security to make it secure for FDOT. It is also a Department of Defense standard as well.

A memorandum of understanding was signed by all parties – FDOT, contractors, and consultant associations. The document was designed to ensure the process was understood and that all stakeholders were committed to the digital signature implementation process. FDOT is being proactive to be transparent and publishing as much info as possible on their website to ensure public and partners have access to the information.

Most contractors were at district meetings, as well as attendance at many Florida industry conferences. FDOT went on a blitz to share the info about their intent for digital signatures. They were clear that the industry did not have to use IdenTrust but whatever they choose must meet the established criteria. Digital signature providers must purchase licenses through operating systems (i.e. Microsoft Windows).

Digital signatures must stay digital whereas ink signatures must stay in printed paper form in order to be official.

Q: In the field if they are going to be using digital or electronic, in reference to a contract modification – Maine DOT engineer has to sign it, contractor has to sign it, and then it has to go up a chain. Do all the signatures have to use the same software?
A: No – they are all compatible – it doesn’t matter which software package it’s being used within.

Portability: You can carry your credentials on a thumb drive and plug in to any computer to sign.
Authentication: When someone signs a document, the recipient of the signature can click on the signature and verify through web connection that the signature is authentic.

FDOT specifications include an Intent of Contract section. The intent of the Contract is to provide for the construction and completion in every detail of the work described in the Contract. Furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the Contract Documents.

FDOT stated in the specification book that if stakeholders want to do business with FDOT they must subscribe to the above listed requirements. FDOT went through the spec book to eliminate reference to paper copies, ink signatures, etc. They wanted to communicate with the industry that they are committed to this initiative and there is no looking back. They have done the leg work for the past 3 years and the challenge is for other parts within the agency are not getting left behind.

IdenTrust does not function on IOS operating system devices. So to digitally sign a document, they must be using a Windows or similar laptop or computer.

3.4 FDOT Construction Process Walkthrough – Application of Digital Signatures by Project Phase

Participants discussed various challenges associated with implementation of digital signatures on contract documents and for change orders and how to implement for the various portions of project delivery. FDOT outlined their process for implementation, and a question and answer session followed the discussion.

Bidding and Contract Award
FDOT uses AASHTOWare PreConstruction software and BidExpress. Pay items are imported and then projects are generated from the initial data.

Pre-Construction and Construction
Pay estimate is generated in SiteManager and converted to pdf. FDOT performed a demonstration of applying digital signature to pay estimate pdf and as-built drawings.

As-buils
Florida board does not require engineers to use a digital image of their seal. Administrative code says the digital signature is enough. They cannot use a wet ink seal over a picture of the seal.

Workflows
Certain documents/processes have built in workflows where signers are notified through ProjectSolve (SharePoint) where users apply a signature. Systems can be automated. Each author is responsible for their own section and must complete these sections and provide signatures. ProjectSolve is FDOT’s collaboration site that allows access from outside of the firewall through a SharePoint platform. FDOT went forth with Intent to Negotiate. A consultant responded and FDOT then
developed the ProjectSolve solution. FDOT is working to establish the standard template that will fully go live in July. FDOT provided a brief demonstration on ProjectSolve. FDOT advised that a consultant did the template set-up but FDOT staff did the entire technical project set up and is managing from that level. ProjectSolve is dynamically configurable and can be customized for each project.

Q: What happens to the original signatures?
A: FDOT maintains three folders where they hold originals, then revisions, then as-builts.

Q: Local agency projects – is FDOT involved with those?
A: FDOT does not administer those projects and they are not really involved in those projects. When an agency who is not FDOT applies to act as an authority to act as an FDOT extension, they must agree to certain terms, but the funding and administration is not controlled by FDOT at all.

Q: How can you sign through Blue Beam on iPad if Identrust does not work on iPad?
A: The iPad will not allow for signing PDF documents, so they work around that by saving the pdf and signing on their laptop.

### 3.5 Conclusions and Next Steps

For MDOT, the first step is getting together with a broad group of stakeholders to walk through the Office of Information Technology (OIT) requirements and develop a plan. MDOT will follow-up with development of a cohesive policy for application of electronic and digital signatures. They need to make some decisions on how to move forward and which types of documents require electronic signatures versus digital signatures. FDOT recommended discussing the process with OIT representatives and then with MDOT management to discuss whether certain processes or groups within the agency can move forward with simpler or less involved forms/processes.

Some items in Florida utilize electronic signatures – digital signatures are not required for all items. FDOT’s electronic signatures web page shows clear disclaimer that the policies are FDOT policies and the users are responsible for their own policies. FDOT also suggested looking at the types of documents that should require digital signatures and those where less formal approvals may be sufficient, as well as developing a homogenous system that can work with both. In addition, FDOT advised they could share some industry presentations with Maine.
Appendix A – e-Construction Peer Exchange Agenda

Florida/Maine e-Construction Peer Exchange on Digital Signatures

Virtual Peer Exchange Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenters / Facilitators</th>
</tr>
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<tbody>
<tr>
<td>8:30am – 8:45am</td>
<td>Peer Exchange Background and Overview</td>
<td>Bryan Cawley, FHWA</td>
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<tr>
<td></td>
<td></td>
<td>Kathryn Weisner, FHWA</td>
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<td></td>
<td></td>
<td>Tim Luttrell, Leidos</td>
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<td>Tom Zagorski, Michael Baker International</td>
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<tr>
<td>8:45am – 9:00am</td>
<td>Introductions and Expectations</td>
<td>Amy Tootle, Florida DOT</td>
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<td></td>
<td></td>
<td>Doug Martin, Florida DOT</td>
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<tr>
<td></td>
<td></td>
<td>Guy Berthiaume, Maine DOT</td>
</tr>
<tr>
<td>9:00am – 9:30am</td>
<td>Discussion on Maine DOT Current Practices in e-Construction and Digital Signatures</td>
<td>Guy Berthiaume, Maine DOT</td>
</tr>
<tr>
<td>9:30am – 10:30am</td>
<td>Discussion on Legislation for Digital Signatures, Third Party Authentication, and Usage Policies</td>
<td>Amy Tootle/Doug Martin, Florida DOT</td>
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<td></td>
<td></td>
<td>Guy Berthiaume, Maine DOT</td>
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<tr>
<td>10:30am – 10:40am</td>
<td>Break</td>
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</tr>
<tr>
<td>10:40am – 11:45am</td>
<td>Discussion on Project Phases and Application of Digital Signatures</td>
<td>Q&amp;A/Facilitated Discussion</td>
</tr>
<tr>
<td>11:45am – 12:00pm</td>
<td>Documentation Exchange Between States: Key Takeaways from the Peer Exchange</td>
<td>Tom Zagorski, Michael Baker International</td>
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<td>12:00pm</td>
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## Appendix B – e-Construction Peer Exchange Roster

<table>
<thead>
<tr>
<th>Name</th>
<th>Agency</th>
<th>Title</th>
<th>Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guy Berthiaume</td>
<td>Maine DOT</td>
<td>Contracts Section, Construction Support</td>
<td><a href="mailto:Guy.Berthiaume@maine.gov">Guy.Berthiaume@maine.gov</a></td>
</tr>
<tr>
<td>Scott Bickford</td>
<td>Maine DOT</td>
<td>Assistant Highway Program Manager</td>
<td><a href="mailto:Scott.Bickford@maine.gov">Scott.Bickford@maine.gov</a></td>
</tr>
<tr>
<td>Bryan Cawley</td>
<td>FHWA Headquarters</td>
<td>Construction Management Team Leader</td>
<td><a href="mailto:Bryan.Cawley@dot.gov">Bryan.Cawley@dot.gov</a></td>
</tr>
<tr>
<td>Travis Hamel</td>
<td>Maine DOT</td>
<td>Resident Engineer, Bridge Program</td>
<td><a href="mailto:Travis.Hamel@maine.gov">Travis.Hamel@maine.gov</a></td>
</tr>
<tr>
<td>Michele Horak</td>
<td>Michael Baker International</td>
<td>Construction Services Business Development</td>
<td><a href="mailto:mhorak@mbakerintl.com">mhorak@mbakerintl.com</a></td>
</tr>
<tr>
<td>Robbin Lanpher</td>
<td>Maine DOT</td>
<td>Resident Engineer, Bridge Program</td>
<td><a href="mailto:Robbin.Lanpher@maine.gov">Robbin.Lanpher@maine.gov</a></td>
</tr>
<tr>
<td>Brian Lawrence</td>
<td>FHWA Maine Division</td>
<td>Field Operations &amp; Safety Engineer</td>
<td><a href="mailto:Brian.Lawrence@dot.gov">Brian.Lawrence@dot.gov</a></td>
</tr>
<tr>
<td>Michael Lenko</td>
<td>Maine DOT</td>
<td>Resident Engineer, Highway Program</td>
<td><a href="mailto:Michael.Lenko@maine.gov">Michael.Lenko@maine.gov</a></td>
</tr>
<tr>
<td>Tim Luttrell</td>
<td>Leidos, Inc.</td>
<td>Project Manager/Engineer</td>
<td><a href="mailto:luttrellt@leidos.com">luttrellt@leidos.com</a></td>
</tr>
<tr>
<td>Doug Martin</td>
<td>Florida DOT</td>
<td>State Construction Systems Engineer</td>
<td><a href="mailto:Douglas.martin2@dot.state.fl.us">Douglas.martin2@dot.state.fl.us</a></td>
</tr>
<tr>
<td>David Sadler</td>
<td>Florida DOT</td>
<td>Director, Office of Construction</td>
<td><a href="mailto:David.sadler@dot.state.fl.us">David.sadler@dot.state.fl.us</a></td>
</tr>
<tr>
<td>Eric Shephard</td>
<td>Maine DOT</td>
<td>Assistant Bridge Program Manager</td>
<td><a href="mailto:Eric.Shephard@maine.gov">Eric.Shephard@maine.gov</a></td>
</tr>
<tr>
<td>Rebecca Snowden</td>
<td>Maine DOT</td>
<td>Contracts Section, Engineering Technician</td>
<td><a href="mailto:Rebecca.Snowden@maine.gov">Rebecca.Snowden@maine.gov</a></td>
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<td>Amy Tootle</td>
<td>Florida DOT</td>
<td>State Construction Engineer</td>
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<tr>
<td>Kathryn Weisner</td>
<td>FHWA Resource Center</td>
<td>Construction and Contract Administration Engineer</td>
<td><a href="mailto:Kathryn.weisner@dot.gov">Kathryn.weisner@dot.gov</a></td>
</tr>
<tr>
<td>Tom Zagorski</td>
<td>Michael Baker International</td>
<td>Senior Vice President</td>
<td><a href="mailto:tzagorski@mbakerintl.com">tzagorski@mbakerintl.com</a></td>
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Appendix C – State of Maine Request for Acceptance of Digital Signature Product Form
REQUEST FOR ACCEPTANCE OF DIGITAL SIGNATURE PRODUCT

- In order to request acceptance of a product for Digital Signature transactions involving a State Agency, this application must be completed in its entirety and submitted to the Maine State Chief Information Offer.
- The Digital Signature product vendor must explicitly certify that the product is in full compliance with the Rules established for Digital Signatures transactions involving a State Agency, in accordance with the Maine Digital Signature Act, 10 M.R.S.A., Chapter 1053, Part 13.
- This Request for Acceptance must be signed and dated by an individual legally authorized to certify on behalf of, and bind, the Digital Signature product vendor to enter into a contractual agreement with the State of Maine.
- The Digital Signature product vendor may cite and/or enclose additional information in support of their application.
- If approved by the Maine State CIO for Digital Signature transactions involving a State Agency, then the product vendor agrees to comply with all relevant Maine State procurement rules, procedures, terms, and conditions.

Product Vendor Details

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<thead>
<tr>
<th>Requirement</th>
<th>Compliance (Yes/No)</th>
<th>Additional Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentication</td>
<td></td>
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<tr>
<td>Signature Ceremony</td>
<td></td>
<td></td>
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<tr>
<td>Verification</td>
<td></td>
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<tr>
<td>Tamper Resistance</td>
<td></td>
<td></td>
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<tr>
<td>Based upon X.509 Public Key Infrastructure</td>
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<tr>
<td>Seamless integration with the PDF document format</td>
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</tbody>
</table>
## Requirement for Acceptance of Digital Signature Product

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<tr>
<td>Seamless integration with Microsoft Active Directory</td>
<td></td>
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<tr>
<td>The interface to the Signer must be either web-based or a free download</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The data center must be certified as either &quot;SSAE 16 Type II (American Institute of Certified Public Accounts)&quot; or &quot;FedRAMP compliant Cloud Service Provider (Federal General Services Administration)&quot;.</td>
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<tr>
<td>All transmission between the Signer's device and the data center must be encrypted to the AES-256 (National Institute of Standards and Technology) strength</td>
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<tr>
<td>The Verification and Tamper-Resistance elements must be embedded within the document, as well as stored in the data center.</td>
<td></td>
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</tr>
</tbody>
</table>

To the best of my knowledge all information provided in this application is complete and accurate at the time of submission.

Authorized Signature  Date  Name and Title (Typed)

The completed application could be mailed to: Enterprise Architect, SHS #145, Augusta, ME 04330.

Alternatively, the completed application could also be scanned, and emailed to: Enterprise.Architect@Maine.Gov.