C E N T R A L   F L O R I D A   E X P R E S S W A Y   A U T H O R I T Y

Agenda
Central Florida Expressway Authority
OPERATIONS COMMITTEE

October 19, 2015
10:30 a.m.
Pelican Conference Room 107

1. **CALL TO ORDER** – *Steve Fussell, Operations Committee Chairman*

2. **PUBLIC COMMENT**
Pursuant to Florida Statute 286.0114 (2013) the Operations Committee will allow public comment on any matter either identified on this meeting agenda as requiring action, or anticipated to come before the Committee for action in reasonable proximity to this meeting. Speakers shall be limited to three minutes per person and the assignment of one person's time to another or designation of group spokesperson shall be allowed at the discretion of the Committee Chairman.

3. **APPROVAL OF JULY 20, 2015 MINUTES** – *Steve Fussell, Operations Committee Chairman*

4. **UPDATE ON SYSTEM BUY** – *Laura Kelley, Executive Director*   (Info. Item)

5. **UPDATE ON CENTRALIZED CUSTOMER SERVICE SYSTEM (CCSS)** – *Laura Kelley, Executive Director*   (Info. item)

6. **FOLLOW-UP TO INTERNAL AUDIT REPORTS – OPERATIONS ISSUES –** (Laura Kelley, Executive Director)

7. **UPDATE ON TOLL SYSTEM REPLACEMENT PROJECT** – *Joann Chizlett, Director of IT Special Projects*   (Info. Item)

8. **UPDATE ON TOLL PHONE APPLICATION** – *Joann Chizlett, Director of IT Special Projects* (Info. Item)

9. **UPDATE ON ALL ELECTRONIC TOLL COLLECTION** – *David Wynne, Director of Toll Operations*   (Info. item)

10. **UPDATE ON WRONG WAY DRIVING PROJECT** – *Corey Quinn, Chief of Technology/ Operations   (Info. Item)*

11. **UPDATE ON PROJECT DEVELOPMENT & ENVIRONMENTAL (PD&E) STUDY FOR S.R. 408 EASTERN EXTENSION** – *Will Sloup, P.E., Metric Engineering*   (Info. Item)

12. **OTHER BUSINESS**

    ELECTRONIC AGENDA INTRODUCTION - Beginning in January 2016 the agenda materials for the Operations Committee meetings will be electronically posted on Diligent Boardbooks.

13. **ADJOURNMENT**

NEXT MEETING: JANUARY 25, 2016 AT 10:30 A.M.

TAB 1

APPROVAL OF JULY 20, 2015
MINUTES

MINUTES
CENTRAL FLORIDA EXPRESSWAY AUTHORITY
OPERATIONS COMMITTEE MEETING
July 20, 2015

Committee Members Present:
Charles Ramdatt, City of Orlando (Committee Chairman)
Steve Fussell, Seminole County
Jim Harrison, Orange County
Fred Schneider, Lake County

Committee Members Absent:
Hector Lizasuain, Osceola County

Also Present:
Laura Kelley, Executive Director
Joseph A. Berenis, Chief of Infrastructure
Michelle Maikisch, Chief of Staff/Chief of Public Affairs
Linda Brehmer Lanosa, Deputy General Counsel
David Wynne, Director of Toll Operations
Corey Quinn, Director of Expressway Operations
Joann Chizlett, Director of IT
Darleen Mazzillo, Recording Secretary/Executive Assistant

CALL TO ORDER

The meeting was called to order at 10:30 a.m. by Committee Chairman Charles Ramdatt.

PUBLIC COMMENT

There was no public comment.

APPROVAL OF FEBRUARY 19, 2015 MINUTES

A motion was made by Mr. Fussell and seconded by Mr. Schneider to approve the February 19, 2015 Operations Committee minutes as presented. The motion carried with 4 members present and voting AYE by voice vote; Mr. Lizasuain was not present.

ALL ELECTRONIC TOLL COLLECTION

Executive Director Laura Kelley reported that toll roads in South Florida and Tampa are currently utilizing all electronic toll collection (no cash lanes) on their systems. We have recently learned that the Florida Turnpike Enterprise is contemplating all electronic toll collection (ETC) to be implemented within the next five years in Central Florida.

She also reported that the Wekiva Parkway will operate with all electronic tolling. It will be CFX's first roadway with no cash lanes.

Ms. Kelley mentioned that we are currently looking into the possibility of buying portions of the SR 417 and SR 429 in Seminole and Osceola Counties, as well as the portion of SR 528 from I-4 to the Boggy Creek Interchange.

She asked for the committee members' thoughts regarding whether CFX should consider all electronic toll collection on its system.

The committee members discussed the following items to consider:

- Get feedback from other agencies that have done all ETC
- What segment is currently paying cash and how will it affect them?
- Cost to collect vs. expenses
- What risks are we willing to take?

Staff was directed to research the above items and report back at a later date.

OSCEOLA COUNTY'S TOLL COLLECTION

Ms. Kelley reported that we have collected tolls for Osceola County since 2007 to support O-PASS customers. Currently CFX charges Osceola County a transaction fee for electronic tolling, which equates to approximately $300,000 annually. Osceola County handles their own cash collections.

Now that Osceola County is a member of our Board, we are considering removing the fee. Ms. Kelley asked for the Committee's thoughts on amending our Interlocal Agreement with Osceola County to allow for transaction processing free of charge. The proposed amended Interlocal Agreement was provided to the committee members.

The committee members discussed the matter and asked questions, which were answered by staff.

At the committee's request, Ms. Kelley explained the relationship with Osceola County and the Osceola County Expressway Authority.

Mr. Harrison asked if this was requested by Osceola County. Ms. Kelley said they have not formally requested this; it came about in discussions with them regarding collection of tolls on the Poinciana Parkway. The Osceola County Expressway Authority is having a workshop at the end of July to discuss Poinciana Parkway toll collection, which CFX staff will be attending.

The committee members decided to delay action on this matter until a request is made by Osceola County and to see the outcome of the workshop.

UPDATE ON CENTRALIZED CUSTOMER SERVICE SYSTEM (CCSS)

Ms. Kelley reported that the second-ranked firm, Accenture has filed a formal protest on the award of the Centralized Customer Service System contract. In discussions with the Turnpike Executive Director Diane Scaccetti, she expects the protest to be formally resolved by the September time frame.

We have received a master agreement from the Turnpike. It still does not contain the essential components of a partnership. When we requested a meeting of the four toll agencies, we received a letter from FDOT Secretary Jim Boxold stating that they would not engage in a meeting. He also directed us to have our attorney work through their attorney for any suggestions or comments to the agreement.

The committee members outlined the following issues and asked staff to report back at the next meeting:
- What is the urgency and criticality?
- Proper relationship between the agencies needs to be established
- What are the customer service benefits?

INCIDENT SCANNING PROJECT

Director of Expressway Operations Corey Quinn talked about a pilot project to improve the data collection process at fatal accident scenes on our roadways.

Traffic fatalities are tragic events that require careful scene investigation. Lengthy road closures as a result of a fatal accident cause negative impacts to our customers and create an environment for secondary accidents. The Florida Highway Patrol has a shortage of Traffic Homicide Investigators and many times there is a significant wait time for the THI to arrive on the scene. It can take 4 to 8 hours for the road to be re-opened after a fatal accident.

We have been looking at incident scanning technology in order to improve the data collection process at accident scenes.

Incident Scanning Technology:
- Uses laser scanning (LIDAR) to collect millions of data points in 3D space
- Data is loaded into crash analysis software for use by investigators
- Data is collected quicker than by hand

We initially looked at eight (8) companies, which were narrowed down to two (2). Demonstrations were held with the two vendors, Riegl Laser Measurement Systems and Leica. This technology is being used in San Diego and London. Mr. Quinn presented a video of the vendor demonstrations.

Next steps:
- Complete final report: 7/31/15
- Determine product(s) and quantities: 8/14/15
- Determine procurement mechanism: 8/28/15
- Develop and execute procurement contract: 10/1/15
- Begin pilot project: 10/16/15

(Mr. Harrison left the meeting at this time.)

Discussion ensued by the committee members. Mr. Ramdatt suggested that we have a pool of Traffic Homicide Investigators under contract to handle incidents in the four counties and city of Orlando. Mr. Quinn will explore this option.

COMMITTEE CHAIR ANNUAL ROTATION

Per the Operations Committee Charter, the Chairman will serve on an annual, rotating basis. According to the order established in the Charter, the Seminole County representative, Steve Fussell, will serve as Chairman beginning in September.

OTHER BUSINESS

There was no other business to come before the Operations Committee.

ADJOURNMENT

The meeting was adjourned at 11:35 a.m.

Minutes approved on _____, 2015.

Pursuant to the Florida Public Records Law and CFX Records Management Policy, audio tapes of all Board and applicable Committee meetings are maintained and available upon request to the Records Management Liaison Officer at publicrecords@CFXWay.com or 4974 ORL Tower Road, Orlando, FL 32807. Additionally, video tapes of Board meetings commencing July 25, 2012 are available on the CFX website, www.CFXway.com.

TAB 2

FOLLOW-UP TO
INTERNAL AUDIT REPORTS

DRAFT

Internal Audit Observation	Internal Audit Recommendation	Management Response	Management Action Plan	Responsible Party	Due Date
7. Account Adjustment Approval Limits in TRIMS: Section IV B in the scope of services section of the ACS contract indicates that personal E-PASS account adjustments over $200 and commercial E-PASS account adjustments in excess of $500 must be approved by an ACS manager in TRIMS. Currently, TRIMS is not configured to prevent the approval of adjustments to personal E-PASS accounts in excess of $200 by CSC Supervisors. Internal Audit obtained all adjustments processed in TRIMS between August 1, 2009 and September 30, 2010 and noted that 93 of 140 adjustments to private accounts between $200 and $500 were approved in TRIMS by CSC Supervisors instead of a manager, as required. As a mitigating control, ACS indicated that all adjustments are reviewed by the Financial Analyst and Accounting Assistant, with the exception of voids, which should only be approved by CSC Managers in TRIMS. However, Internal Audit noted that 482 of 587 void adjustments were approved in TRIMS by CSC Supervisors. Furthermore, a CSC Manager or CSC Supervisor enters their PIN in TRIMS to approve adjustments; however, PINs are never changed which may result in the sharing of PINs between employees. Data analytics were performed related to the approval of adjustments in excess of $200 to personal E-PASS accounts and $500 to commercial E-PASS accounts and no adjustments were identified for additional follow-up; however, the strengthening of the controls related to the review and approval of adjustments in TRIMS may reduce the risk of fraud.	The Authority should utilize CSC Manager and CSC Supervisor passwords, rather than PINs, to approve adjustment transactions in TRIMS (passwords are required to be changed on a regular basis by the system).	The Authority concurs that moving to a password based approval is in its best interest. However, the change to a password based approval key would be a fairly significant change to the existing system. The current system is currently being reviewed for replacement as part of the Toll System Replacement (TSR) project. Making these changes now may be waste of valuable IT resources if the current system were to be disposed of in the near term. Based on the outcome of the TSR project the Authority would make this change as a part of a newly procured system or would be developed and implemented in the existing system once it was determined that we would be retaining the existing system.	Toll Operations will require passwords to be used for approvals in any new toll collection software procured by the Authority or its existing software if it is retained and that the password be changed on a regular basis by the system.	Rene Rodrigue, Director of IT David Wynne, Director of Toll Operations	Original: 12/31/13 Revised: 12/31/15 Revised: 3/31/16

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Internal Audit Observation	Internal Audit Recommendation	Management Response	Management Action Plan	Responsible Party	Due Date
6. Process Improvement: There is no process to pursue collections for habitually delinquent toll violators that exceed a certain number of transactions or a certain dollar threshold. Enhancing collection efforts could increase collection rates and associated revenue.	Management should determine if it is cost beneficial and within the business objectives of the Authority to turn over delinquent violators to a collection agency. The Authority should consider if the UTC is outstanding with the court. Additionally, the Authority should implement a policy containing a time and dollar threshold of how long a UTN or UTC violator should be outstanding before the Authority pursues collections, as well as, a dollar amount the UTN or UTC must reach prior to sending it to collections.	Concur	Director of Toll Operations will facilitate a review of potential revenue to be collected, possible collection rates, industry practices, legal ramifications and consideration of community perception.	David Wynne, Director of Toll Operations	Original: 1/1/13 Revised: 3/31/13 Revised: 1/1/14 Revised: 12/31/15

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Internal Audit Observation	Internal Audit Recommendation	Management Response	Management Action Plan	Responsible Party	Due Date
6. Potential Revenue Leakage: The potential extrapolated discrepancies in the toll collections audit highlighted above total approximately $1,000 for the six month period ended December 2012. A root cause of this appears to be the manual nature of the Attendant's Shift Record used as a reconciling item during toll collections audits, for which third party contractor auditors are required to make assumptions as to what is being communicated by the TSA. Additionally, during the review of the toll collections audit, Internal Audit found that system purges and reverse run through transactions, system functions used to reset the toll lane if the lane server is out of sync, generates an expected revenue amount. Also the description on the Unusual Occurrence report for these transactions have the same overclass description as small vehicle transactions that do not engage the toll lane treadles. The third party contractor uses the Unusual Occurrence report to reduce the expected revenue for the system purges and reverse run through transactions, while maintaining the expected revenue related to the smaller vehicles that do not engage the treadles. Internal Audit performed a review of the overclass transactions (excluding purges, re-syncs, and reverse run throughs) and found that the third party contractor reversed the expected revenue inappropriately in 4 out of 25 transactions tested, an error rate of 13%. The potential extrapolated variance when applied to all overclass transactions for the six month period ended December 31, 2012 is estimated to be approximately $700.	6. b) The Authority should also consider automating certain aspects of the Attendant's Shift Record log by integrating the unusual occurrence, violations, and insufficient fund transactions within the MLT system. This would reduce the subjectivity of the FTS auditor's interpretation of the manual ASR log.	Concur	The Authority currently has this recommendation as a function in the planned Toll System Replacement project that is currently ongoing at this time. The Authority would expect to have the new system in place and operating by July 1, 2015.	David Wynne, Director of Toll Operations	Original: 7/1/15 Revised: 4/30/16 Revised: 12/31/17

DRAFT

Internal Audit Observation	Internal Audit Recommendation	Management Response	Responsible Party	Due Date
1. Generic Key Access to Roadside Cabinets: A common key is used to lock the roadside cabinets that house ITS network equipment. There are over 300 roadside cabinets in the ITS environment, each containing computer equipment that supports the digital message boards, cameras, RFID readers and other ITS roadside equipment. These cabinets are accessed by ITS contractors and ITS staff to install, troubleshoot, and repair issues on the ITS network. This common key (termed "universal #2 key") used to lock the ITS roadside cabinets is also used by FDOT, CalTrans, and other state organizations. Potentially unauthorized access could be gained to the roadside cabinets because of the wide usage of the universal #2 keys that are used to lock them. Additionally, once these cabinets are unlocked, the computer equipment that supports the digital message boards and RFID readers can be accessed, as well as the rest of the ITS internal network. This, coupled with the risk described in Observation #2 of this report, could allow unwanted changes to the message boards that project travel times, and could allow Denial of Service attacks on the traffic pattern equipment in the environment. Also, because the universal #2 key is not assigned to a single person (but is given to anyone who needs to perform work on equipment in the cabinets), administrators may not be able to assign accountability to the person opening a roadside cabinet. Additionally, ITS cannot grant access to specific cabinets based on the work that is to be performed. This does not follow the principle of least privilege, in which a person is granted access to only those systems required based on their job duties.	Review the feasibility of deploying a stronger access control tool to the ITS network cabinets so only authorized personnel (ITS staff or ITS contractors) can access them. This tool should allow ITS to grant access to only those cabinets necessary (not all cabinets in the environment), and should be unique to the ITS environment.	Though ITS is not aware of unauthorized access occurring, we recognize the risk of utilizing a generic key. ITS will develop a plan to implement a five year project to address the risk of unauthorized access to the cabinets due to the use of a generic key.

Update July 21, 2015: Cyberlock will be installed as part of project 599-525. Estimated completion date is December 31, 2016. | Corey Quinn | 12/31/16 |

2. Default Credentials: The default user name and password are used on the digital message board controllers that give travelers an estimated time of arrival while travelling, as well as the RFID controllers that receive signals from E-pass or Sun-pass devices in traveler's vehicles. These passwords are quickly discoverable by analyzing vendor documentation or attempting commonly used defaults. Additionally, the default user name has the ability to modify configurations, add local users, view all data, or even disable those systems. The utilization of default credentials on both the digital message board controllers and the RFID controllers, coupled with the risk described in Observation #1 in this report, could allow an attacker to disable both the digital message boards and RFID controllers. This may not allow ITS to maintain its uptime requirements and may not allow ITS to give travelers accurate travel time estimates. A listing of these vulnerabilities has been provided to ITS in a separate document.	Change all current credentials which are default or easily guessable. Implement a requirement to change all vendor supplied credentials before moving a system to deployment as part of the ITS standard system build. Ensure that all passwords are changed at least every 90 days.	ITS will change the default credentials on the digital message board controllers where possible (the credentials are hard-coded in some models, and therefore cannot be changed). We will research the feasibility of changing these credentials every quarter, in addition to relying on our response outlined in Observation #1 (Devices that do not have remote password modification capabilities from the manufacturer must rely on the response outlined in Observation #1), and detective controls surrounding the cabinets. Update July 21, 2015: Where possible, RADIUS authentication technology will be used to subsume authentication under the normal CFX password requirements. Where RADIUS cannot be used due to functionality limitations, passwords will be rotated twice a year beginning November 2015.	Corey Quinn	11/30/15
4. Documented Policies and Procedures: Though ITS leverages CFX policies and procedures where possible, defined policies, procedures, and roles and responsibilities are not documented for operations specific to ITS, such as procedures for adding and removing user access and the incident response process. While there is very little change of users in the ITS environment, the process should be documented to prevent loss of knowledge should an ITS employee or long-term contractor leave the organization. Without strong governance over standard practices throughout the environment, current activities may not outline Management's current expectations.	Create a document for the ITS process to add and remove users, and document the ITS Incident Response Plan. Ensure all policies are reviewed at least annually to ensure each policy is still relevant.	ITS is currently creating a document outlining formalized security procedures to be implemented in the environment. The processes outline above will be included in this document. Additionally, ITS will work with CFX to determine a clear delineation of responsibility between the environments to ensure all processes at ITS, including those listed above, are formally documented. Update July 21, 2015: Development is complete, review to be completed by September 1, 2015.	Corey Quinn	9/1/15

6. Outdated Software: 44 applications utilized on 373 of the 1627 systems scanned have vulnerabilities that could lead to compromise due to missing patches or upgrades. The vulnerabilities in these applications could allow for denial of service attacks, arbitrary code execution, information disclosure, or authentication bypass. Each of these attacks affects the confidentiality, integrity or availability of the applications listed above, which may cause difficulties when conducting normal business operations or system and application maintenance. A listing of these vulnerabilities has been provided to ITS in a separate document.	Update these applications to the most recent version available from their vendors. Analyze their business use, and remove them should they be deemed unnecessary. Develop and deploy a formal vulnerability management process that includes periodic vulnerability scans to allow for the identification and application of all updates to systems which do not have the most recent patch level.	ITS will remove unnecessary applications, and then discuss the remaining outdated software with CFX IT to refine a process to keep these updated (currently, ITS systems do not have Internet access, and as such, updating these applications would require CFX's involvement and a manual process). Update July 21, 2015: Software update or removal will be completed by February 28, 2016.	Corey Quinn	2/28/16
7. Log Configuration: System and database logs within the ITS network are not secured, managed, correlated, or alerted upon. System, Application, and Security log configurations within the network remains at the default settings for systems, and are not moved off the system to a log aggregation tool. As a result, these logs will be lost after the default log size limit of 20 megabytes is reached, preventing ITS from performing investigative actions with these logs. Depending on the activity on the system, the default log size could be filled within a few days. Without centralizing, securing, correlating, and alerting upon all types of logs in the environment, unwanted, and potentially disruptive, actions may occur in the environment without management's knowledge. Logs which are not kept may limit ITS' ability to perform investigative actions.	Deploy a log aggregation tool to the environment and feed all logs into this tool so that they may be centralized, correlated and protected. Review these logs periodically to identify actions within the environment which are unwanted or unauthorized.	ITS will research the feasibility of including this functionality into the current logging system "What'sup Gold". Update July 21, 2015: Research complete. Implementation of Secure Information and Event Management solution pending upcoming organizational changes.	Corey Quinn	6/30/15

8. System Hardening: Procedures to enforce secure system configurations such as removing unnecessary services, disabling open shares, and other configuration weaknesses listed below have not been performed on 93 of the 1627 systems assessed during this project. System hardening is the process of identifying and remediating weaknesses in system configurations to prevent the possibility of compromise due to those weaknesses. The vulnerabilities in these configurations could allow for eavesdropping or impersonation attacks, information disclosure, or authentication bypass. Each of these attacks affects the confidentiality, integrity or availability of the applications listed above, potentially placing ITS' business processes and / or data at risk. A listing of these vulnerabilities has been provided to ITS in a separate document.	Define hardening procedures and incorporate them into a checklist format to be included in the current build guidelines for all systems. Modify the configuration settings on the above noted systems to ensure they are hardened against attack. The National Institute of Standards and Technologies (NIST) publication on server security is an industry standard regarding system hardening and can be found here: csrc.nist.gov/publications/nistpubs/800-123/SP800-123.pdf Implement a validation process within the current change control procedures to identify unauthorized modifications to systems in the environment to ensure that they remain configured as required by management. This validation process should be performed upon initial system build and at periodic intervals, and should not be performed by the employee who configured the changes to preserve the separation of duties principle.	ITS will research the feasibility of removing the functionality outlined above, and include system hardening in the "ITS security procedure" document. Update July 21, 2015: Reconfiguration or removal to be completed by March 31, 2016 pending upcoming organizational changes.	Corey Quinn	3/31/16
9. Insecure Services: The clear text protocols FTP (File Transfer Protocol), Telnet, and rlogin are utilized on 1131 of the 1627 systems scanned within the ITS environment. They require a user to enter a username and password for authentication to the remote system. This username and password and all other data are transferred between the client and server without encryption on the network. Since the username and password are unencrypted while on the network, there is a possibility that an unauthorized user could capture them for later use. Below are the number of systems running each service: • FTP (50 systems) • Telnet (1114 systems) • Rlogin (271 systems) A listing of the insecure services has been provided to ITS in a	Disable the services FTP, Telnet, and rlogin and use their secure alternatives SFTP (Secure File Transfer Protocol) and SSH (Secure Shell) 2.0. If disabling these services is not viable, consider applying compensating controls such as segmentation, Intrusion Prevention Systems, or Network Access Control technologies. Additionally, because Rlogin can be configured to allow users to login without providing a password, ITS and CFX should review the deployment of Rlogin on all systems in the environment to ensure that this service is not configured in this manner.	ITS will research the feasibility of removing the functionality outlined above, and include disabling insecure services in the "ITS security procedure" document (assuming this functionality is not needed). Update July 21, 2015: Research complete. Documented business justification for necessary clear text protocols will be added to the security manual, and the remaining items will be removed by April 30, 2016.	Corey Quinn	4/30/16

10. Default SNMP Strings: The default SNMP community string is utilized on 1538 of the 1627 systems scanned within the ITS network. SNMP utilizes community strings as a form of password to read and write to many types of network devices, appliances, switches, routers and firewalls. An attacker who is able to obtain either the SNMP read string or SNMP write string can view or modify the configuration of critical network devices. This could result in compromise of sensitive data through interception, modification of devices to allow additional malicious traffic through the network, or interruption of legitimate business processes. A listing of these vulnerabilities has been provided to ITS in a separate document.	Change the community strings of all devices within the network from the default values to avoid the possibility of unwanted information leakage or configuration changes. Additionally, disable legacy versions of SNMP (Versions 1 and 2), and utilize the current version of SNMP (Version 3).	ITS will develop a plan to modify the default SNMP strings in the environment. Update July 21, 2015: Research complete. Documented business justification for necessary SNMP strings will be added to the security manual, and the remaining items will be removed by July 31, 2016.	Corey Quinn	7/31/16
11. Dual-Factor Authentication: ITS users are not required to utilize dual-factor authentication for connecting remotely to the network. Dual-factor authentication within the environment is controlled by the CFX IT staff, and currently, only CFX employees are required to connect remotely using dual-factor authentication. Dual-factor authentication requires two (2) of these three (3) items to verify the identity of the user attempting to gain access to the network: • Something a user knows (a password) • Something a user has (a token) • Something a user is (biometrics) Without dual-factor authentication, the compromise of a password can potentially lead to the compromise of sensitive data due to the lack of an additional requirement to authenticate.	Leverage CFX dual-factor technology for all ITS contractors who need to connect to the ITS network remotely.	ITS will discuss adding contractors and those who need to connect to the ITS environment through the CFX technology with the CFX IT group. Update July 21, 2015: ITS will deploy trial with Atkins personnel to test the impact to personnel responsible for provisioning accounts by August 31, 2015.	Corey Quinn	8/31/15
12. SSL Weaknesses: The Secure Sockets Layer (SSL) deployment within the ITS environment has multiple weaknesses. There are 5559 related SSL vulnerabilities across 813 of the 1627 systems scanned within the environment. A full listing of the vulnerabilities has been provided in a separate document. Each of these vulnerabilities can allow for a man-in-the-middle attack, potentially leading to compromise of systems and data.	Test configurations changes for upgrading to TLS 1.2, deploying strong cipher suites, disabling SSL renegotiation and disabling compression. Should these configuration changes be successful without causing business disruption, deploy these changes to the environment. Generate new certificates for those that are self-signed, expired, have the wrong hostname, or have weak hashing algorithms.	ITS will research the feasibility of removing the functionality outlined above (assuming this functionality is not needed), and move to TLS 1.2 (if supported by ITS systems). Update July 21, 2015: SSL solution dependent on pending organizational changes.	Corey Quinn	10/31/15

| 13. Web Server Configuration Weaknesses: Two (2) web servers of the 1627 systems scanned within the environment has HTTP Trace and Track methods enabled. These features are installed to assist developers in debugging web page programming and are not necessary on production servers. A listing of these web servers has been provided in a separate document. Servers supporting this method are subject to cross-site-scripting attacks, dubbed XST for 'Cross-Site-Tracing', when used in conjunction with various weaknesses in browsers. Although difficult to exploit, an unauthorized user may use this flaw to trick legitimate web users into giving them their credentials. Security vulnerabilities are often identified in unnecessary server functionality that is enabled. | The Trace / Track method should be disabled or disallowed on identified web servers. Additionally, the PUT and/or DELETE method should be disabled or disallowed on identified web servers. ITS and CFX should also consider applying the principle of least privileges to these servers and remove all unnecessary HTTP Methods, unless there is a business critical need. | The system contractor (who administers this system) will be asked to research the feasibility of disabling this functionality when it is not being used, or find other functionality with less risk. | Corey Quinn | 12/31/15 |

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Internal Audit Observation	Internal Audit Recommendation	Management Response	Management Action Plan	Responsible Party	Due Date
The call center has a target Average speed of Answer (ASA) of 60 seconds. Currently the call center's ASA is approximately 128 seconds, which is consistent across all call types and skills. There are several factor that play a role in the prolonged ASAtimes. Call center agents spend approximately 50% of their time handling inbound calls while 30% of agent time is spent in various auxiliarystates, including After-Call-Work (ACW), which represents about 50% of agent auxiliary time on average.

The Authority's Avaya AutomaticCall Distribution ("ACD") systemisprogrammed to provide an automatic 20secondsof ACW at the end of each call for the call center agent to complete servicing the call, make notation on the customer's account, etc. The industry average ACW is between 12-15 seconds. Based on the 400 calls observed, there is not a great deal of after-call work activity | The Authority should consider making changes to the call center agent scheduling to leverage part-time staff and improve agent utilization to increase agent availability and lower average speed of answer to the call center's target of 60 seconds. There are several inexpensive staffing tools that can be utilized to effectively manage the call center schedule, such as ccModeler.

The Authority and third party vendor should also consider performing additional analysis into the factors that drive the ACW time to determine if the ACW time can be reduced in an effort to improve agent availability and improve the ASA. The analysis should include an evaluation of the actual time utilized to capture call servicing notations and other information after the call has ended, and evaluate the extent to which these activities are utilized to service customers or improve the efficiency of future calls. | Concur | The Authority will utilize the recommended ccModelerprogram to analyze the leverage call center resources more effectively and increase agent availability. The Authority will also adjust the After-Call-Work (ACW) timeto 15 seconds. | David Wynne, Director of Toll Operations, and Joann Chizlett, former Director of IT | 6/30/15 |

Each inbound call to the call center routes the customer to the Intelligent Voice Response ("IVR") system from which the customer selects service options from a prompt. The customer is then routed to the Vector Steps, which provides additional messaging and routes the call to an available call center agent. Within the IVR and Vector steps the following inconsistencies and duplicative information are delivered to the customer, which if corrected, could improve the overall customer call experience: 1.The call prompts utilize a mix of different male and female voices leading to an abrupt and inconsistent customer experience. 2.The inter-prompt and queue treatment consists of a mixed use of silence, ringing, messaging, and music while the customer is on-hold and as the customer transitions from one vector step to another. 3.E-PASS main menu has redundant options to "return to main menu" and "repeat options". The menu also allows callers to opt out to a customer service representative using option "0" which may lead to prolonged call handling times. 4.Hours of operation and locations are given to callers even though the center is open. This information would normally only be presented after-hours. 5.The center does not leverage Estimated Wait Time ("EWT") prompting to inform callers of wait times and potentially redirect callers to online servicing.	There are opportunities to improve the prompts and messaging delivered to customers contacting the Authority by improving prompt and call treatment consistency and attempting to direct more callers to online servicing. The Authority should consider the points above and conduct a thorough evaluation of vector programming and IVR prompting during the implementation of the centralized back office contact center IVR platform to ensure consistent treatment and the use of EWT to inform callers of high wait times and reinforce the use of online or other servicing options.	Concur	The Authority is in the process of procuring and implementing a new IVR system for E-PASS which will include back-up hardware, and the improvement recommendations will be taken to into account at that time. In addition, the Authority will provide the recommendations to the centralized back office contact center vendor for consideration during the development of any IVR technology, if the Authority were to agree to move forward with the centralized back office contact center.	Rene Rodrigue, Director of IT	6/30/16
The Avaya Phone system can provide reporting that would allow the Authority and the third party vendor to monitor the overall customer service experience and the effectiveness and efficiency of the call center operations. Currently, the Authority utilizes reports to assess the key metrics listed below. However, the Authority does not routinely monitor reporting that would give insight into the underlying factors that drive key metrics in order to achieve performance targets.	The Authority should use detailed reporting to more accurately measure and assess performance factors that drive key statistics. Internal Audit has partnered with the Authority to develop many of these reports as a part of this review. The Authority should use the reports to develop process improvements to improve the call center's operations and achieve the performance targets. Specific reports that should be leveraged include agent attendance and agent aux reports.	Concur	The Authority will track daily, weekly and monthly service level data to assess and improve the performance targets. Service Level is currently set at 80% and will be modified accordingly.	David Wynne, Director of Toll Operations	6/1/15

Aligning call quality attributes to a standardized call flow process enables an organization to assess, measure and address specific behaviors that are aligned to call handling performance objectives, such as call handle time and use of ACW. The standard segments of a call flow include Greeting, Caller Identification, Caller Validation, Service Identification, Service Delivery and Wrap up. The Authority's call center quality assurance program is aligned to measure quality in a generalized manner and is not aligned to a standardized call flow. The current call center quality assurance forms are made up of 29 Yes or No questions and 5 additional questions that are measured on a gradient of 1-3. The form does not include "automatic fail" questions/responses that would indicate the need for immediate re-training. As a leading quality assurance practice, all questions should be measured on a gradient whenever feasible. Aligning the quality form to a standardized call flow enables the use of gradients more easily because it allows the behaviors measured to be compared against a specific business process and related goals.	To improve the quality assurance process, the Authority should identify a standardized call flow for the types of calls handled by the call center and identify the specific behaviors and skills that should be measured within each segment of the call. This process would enhance the quality assurance process to allow for specific guidance to CSR's and align quality criteria to measurable business goals and objectives (e.g. reduction of call handle time).	Concur	The Authority will work with the third party call center vendor to revise the current quality assurance process to align with the call quality attributes to measure business objectives.	David Wynne, Director of Toll Operations	Original: 7/1/15 Revised: 11/30/15
While the messaging delivered to callers in both the IVR and Vector messaging reminds callers that unpaid toll notices can be paid online, the Authorities web presence could be improved to make the process of making payments online more intuitive. Links to unpaid toll payment options are not plainly visible and require additional navigation that we believe is deterring customers from utilizing the online service and instead placing calls into the center. In addition, throughout the course of the 400 call observations, there were only a handful of calls (fewer than 5) where the agent reminded the caller that purchasing a transponder or replenishing their account would allow them to avoid toll violations in the future. Also, the Authority's corporate phone number is often called when a customer is trying to contact the call center. These calls are received by the Authority's receptionist and transferred to the call center.	The Authority should consider launching an E-PASS product and services website, independent of the corporate website, that would focus on the customer experience and E-PASS activity. An E-PASS focused website would allow customers to navigate the site with ease and would help to deflect customer service activities, such as making unpaid toll notice payment and account replenishments, to the website. Also, call center agent training should also be considered to reinforce the importance of reminding customers to replenish their accounts and/or purchase a transponder in cases where an in-state customer is contacting the authority about a toll violation or citation. These improvements can deflect calls and reduce volume of calls received by the call center. The Authority should also consider adding prompts to the treatment provided on the main number to route callers to the call center in order to limit the number of call center calls received by the receptionist.	Concur	1.The Director of Toll Operation and IT will schedule a meeting with the CFX Communication Department to discuss the recommendations to the website and evaluate which recommendation can be implemented. 2.The call center scripts will be updated to include a reminder to customers to replenish and/or purchase a transponder at the end of each call. 3.The Authority will consider adding prompts to the treatment provided on the main number to route callers to the call center in order to limit the number of call center calls received by the receptionist.	1. David Wynne, Director of Toll Operations, and Joann Chizlett, former Director of IT 2. David Wynne, Director of Toll Operations 3. Joann Chizlett, former Director of IT	1. 8/1/15 2. Original: 6/1/15 Revised: 11/30/15 3. 8/1/15

The majority of calls handled by the Authority are payment related, including payment of Unpaid Pay Notices and Citations and account replenishment. During these calls, agents spend an average of 68 seconds identifying the caller and accessing their account. This represents approximately one-third of the total talk time of the call. A combination of call automation (attempting to identify the caller via the phone number that they are calling from) and agent training to obtain the information required to identify the customer and access their account as efficiently as possible could significantly reduce the handle time of calls.	The Authority should conduct further analysis to determine the percentage of inbound calling line ID's that can be linked to one or more existing accounts in the Authority's servicing applications. If this percentage is greater than 40-50%, this would indicate a substantial opportunity to automate inbound calls and thereby reduce overall handle times. In addition, the Authority should consider developing and conducting agent training to enable agents to take control of inbound calls and identify the information needed to access the caller's notifications, citations, and/or the caller's account as efficiently as possible.	Concur	1.Further analysis will be conducted to determine the percentage of inbound calls associated with active customer accounts. Based on results of the analysis, The Authority will determine if it is feasible to incorporate call automation based on strategic direction as it relates to the deployment and CFX involvement in centralized back office contact center. 2.The third party call center vendor will provide refresher training on "Call Control" and incorporate "Call Control" techniques into new agent training.	1. David Wynne, Director of Toll Operations, and Rene Rodrigue, Director of IT 2. David Wynne, Director of Toll Operations	1. Original: 7/1/15 Revised: 11/30/15 2. Original: 8/1/1/5 Revised: 11/30/15

TAB 3

UPDATE ON TOLL SYSTEM REPLACEMENT PROJECT

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

Operations Committee
Toll System Replacement Project

October 19, 2015

What is a Toll System?

CENTRAL FLORIDA EXPRESSWAY AUTHORITY
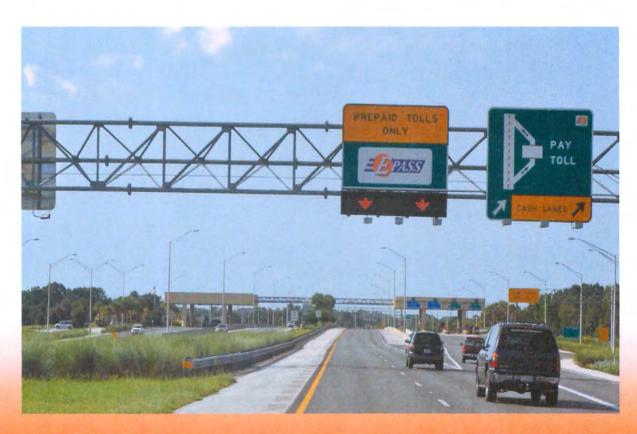
Major Functions

- Gathering/Tracking of Transactions
- Image Capture
- Image Review/Unpaid Tolls
- Customer Account Management
- Interoperability
- Plaza Operations
- Collector Operations
- Reporting
- Numerous External Interfaces
  - (other entities, banks, etc.)

Gathering/Tracking Transactions

- Tracking vehicles passing through a toll
- Did the vehicle have a valid transponder?
- How many axles did the vehicle have?
- Was payment received?
- Forwarding information

Image Capture

- An image is taken of every vehicle
- Image is discarded if payment is received

Image Review/Unpaid Tolls

- Image Review
- Retrieve Registered Owner Information
- Create Unpaid Toll Notices
- Create Uniform Traffic Citations
- Accept Payments
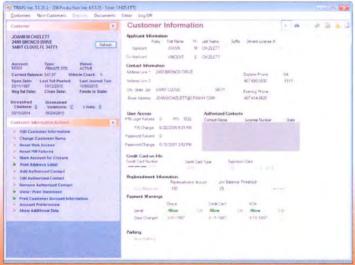
Customer Account Management

- E-PASS Customer Account Service
- Update Information
- Take Payments

>>> Interoperability
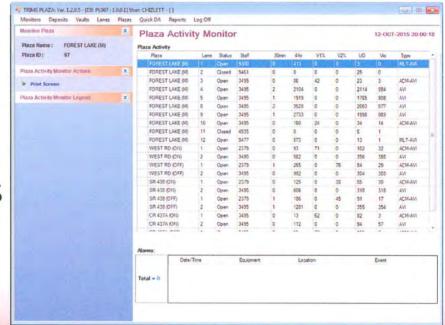
- We are transponder interoperable with SunPass and Lee County in Florida
- We are plate interoperable with Georgia and North Carolina

Plaza Operations

- Monitor
  - Plaza Activity
  - Alarms
  - Malfunctions
- Vaults/Deposits
- Reports

Collector Operations

- Classify vehicles
- Collect proper toll amount
- Provide change
- Provide receipts

Reporting
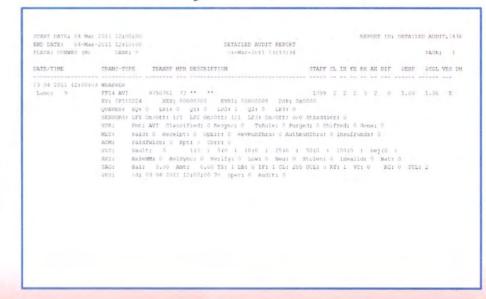
- Reports provided at every level of the system
  - Traffic
  - Financial
  - Operational
  - Transaction

External Interfaces

- Credit Card Processing
- Banks that process our cash
- Department of Highway Safety and Motor Vehicle

System Replacement Project Facts

- Prime contractor *TRANSCORE*
- $85,000,000 Project
- Part of the CFX 5 year work plan
- Current system went live in 1994
- Toll collection system upgrade and replacement of key components

What is Included

- Lane and Plaza hardware and software
- Centralized transaction server hardware and software
- Image processing system
- Transaction Video Audit System*
- Law Enforcement Notification System*
- Maintenance Management System
- Reporting

* New

What is NOT Included

- Readers/antennas
- Coin Machines
- Transponders
- Customer service system
- Customer service websites
- Customer communications
- Enforcement activities

Where Are We?

- Notice to proceed – June 2015
- Design Phase
- Planning
  - Transition
  - Master QA/QC
  - Configuration Management
  - Safety
  - Test
- Scheduling

Major Milestones

- Spring 2016
  - Conduct Factory Acceptance Test
- Late 2016/Early 2017
  - Complete System Initial End-To-End Test
- Fall 2019
  - Complete Final System Acceptance Test

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

Questions?

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

TAB 4

UPDATE ON TOLL PHONE APPLICATION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

Operations Committee
PayTollo Project Overview

October 19, 2015
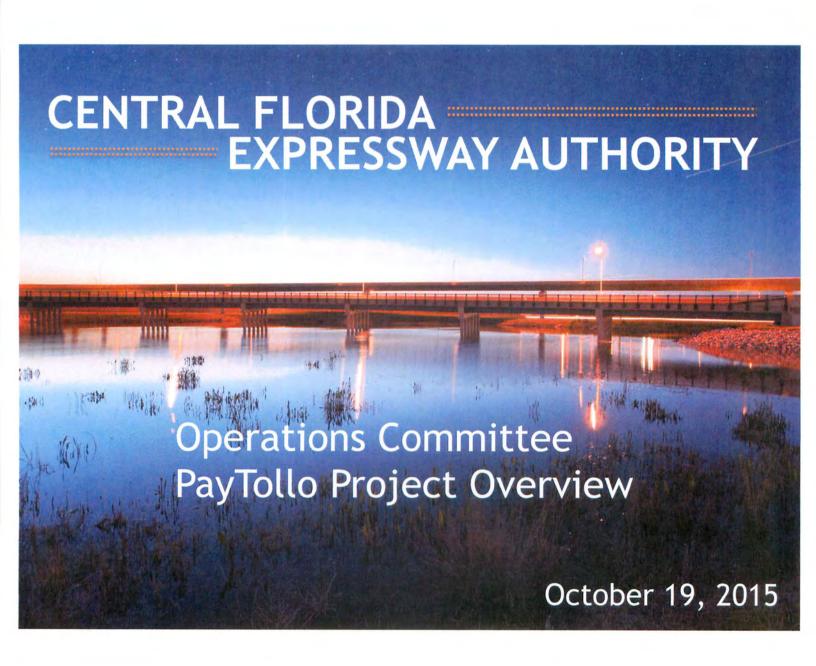
Who is PayTollo Inc.?

Abenezer Yohalashet
CEO & Co-Founder

Evan Wells
Chief Financial Officer

Francesco Alex Indaco
Chief Technology Officer

CFX and PayTollo

- Proof of Concept Pilot
- Current Tasks
  - Refining process flows
  - Working on test case scenarios
  - Coding

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

PAYTOLLO

What is PayTollo™?
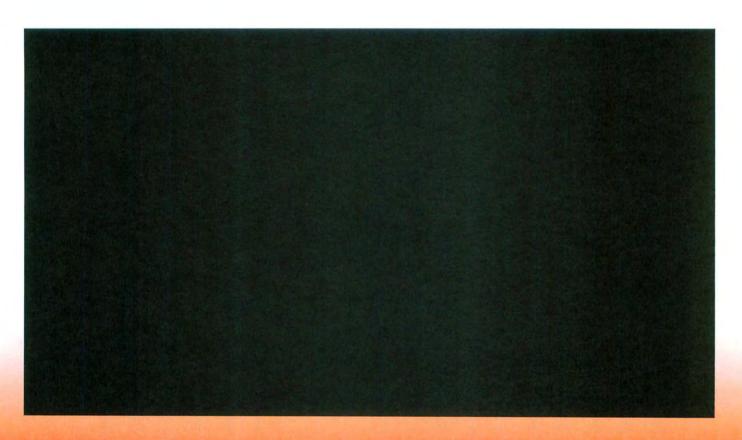
- Mobile toll payment platform
- Users download the PayTollo™ App
- Targets the infrequent toll customer
- Alternate to the cash lanes
- Potential to be nationwide

PayTollo™ Video

User Responsibility

- Download the App
- Create an account with PayTollo™
  - Driver Information
  - Vehicle Information
  - Payment Information
- Drive
  - Notified upon approach
  - Asked if want to pay toll
  - Can wait to say yes/no

PayTollo Responsibility

- Send all customer license plates to CFX
- Track all transactions from users
- Track whether user will pay or not
- Respond to CFX request for payment
- Forward tolls collected to CFX

CFX Responsibility

- Receive image due to unpaid toll
- Process image
- Identify plate/state of vehicle
- Request payment from PayTollo if plate matches PayTollo customer
- If PayTollo will pay - toll marked paid
- If no payment from PayTollo – continue CFX process

Customer Service

- Collaborative effort
- Scalable virtual call center – PayTollo
- PayTollo ™ Cares program and complaint management system

Upcoming Milestones

- **December 2015/January 2016**
  - Internal testing begins
- **January 2016**
  - Android App completed
- **February 2016**
  - Private beta testing begins
- **March 2016**
  - Soft launch begins
- **May 2016**
  - Full launch

Benefits to Customers

- Convenience
  - Pay tolls nationwide with a single account
- Peace of Mind
  - No worries about receiving notices/tickets
- Efficiency
  - Pay all tolls with a single device/cell phone

Benefits to CFX

- **Cost Savings**
  - No need to send out an invoice
  - No need to maintain customer accounts for infrequent users
- **Image Tolls Collected Faster**
  - Toll paid prior to any enforcement efforts
  - No waiting for invoice period
- **Convenience**
  - Could benefit visitors to the area
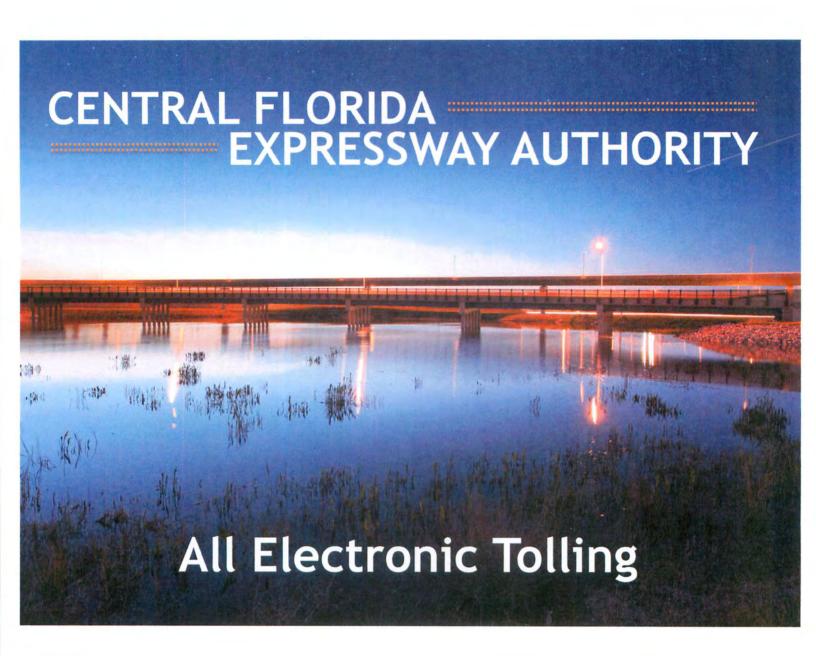
Questions?

TAB 5

UPDATE ON ALL ELECTRONIC TOLL COLLECTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

All Electronic Tolling

2010: ALL ELECTRONIC TOLLING
No Cash Accepted in lanes

407 Ontario

NW Parkway

E-470

NE Texas Regional Mobility Authority

TxDOT (Austin)

Harris County Toll Road

Miami Dade Expressway

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

2015: ALL ELECTRONIC TOLLING
No Cash Accepted in lanes

TI Corp — TransLink

WSDOT SR520

Golden Gate Bridge

NW Parkway

E-470

Bay Area Toll Authority

Transportation Corridor Agencies

North Texas Toll Authority

TxDOT (Austin)

Central Texas Regional Mobility Authority

Kentuckiana Planning & Development Agency

NE Texas Regional Mobility Authority

Harris County Toll Road

FDOT

407 Ontario

New York State Thruway

Mass DOT

Pennsylvania Turnpike

MD Transportation Authority

Dulles Toll Road

Metro Transportation Authority

Port Authority NY&NJ

South Norfolk Jordan Bridge

Delaware River Joint Toll Bridge Commission

NC Toll Authority

Elizabeth River Tunnels

CFX (Wekiva Pkwy)
OCX (Poinciana Pkwy)

Florida's Turnpike

Bay Harbor Islands

Miami Dade Expressway

Tampa Hillsborough Expressway

● AET Operations
● AET Planned

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ALL ELECTRONIC TOLLING
No Cash Process

I. E-PASS

II. Pay-by-Plate

    1. Camera captures license plate number of vehicle

    2. Back office processes this information, matches license number with address on file w/ DHSMV

    3. Invoice issued

    4. Estimated 30 day payment cycle

TREND: RETAIL CASH CHANNELS FOR CUSTOMERS

ALL ELECTRONIC TOLLING *BENEFITS*

⬇ Capital Costs

⬇ Right-of-Way

⬇ Traffic Congestion

⬇ Operations/Facility Cost

ALL ELECTRONIC TOLLING
Consideration

1. Increase in unknown collectibles
2. Increase cost for image processing
3. Customer experience and education
4. Conversion process of existing facilities

POINCIANA PARKWAY:
February 2016
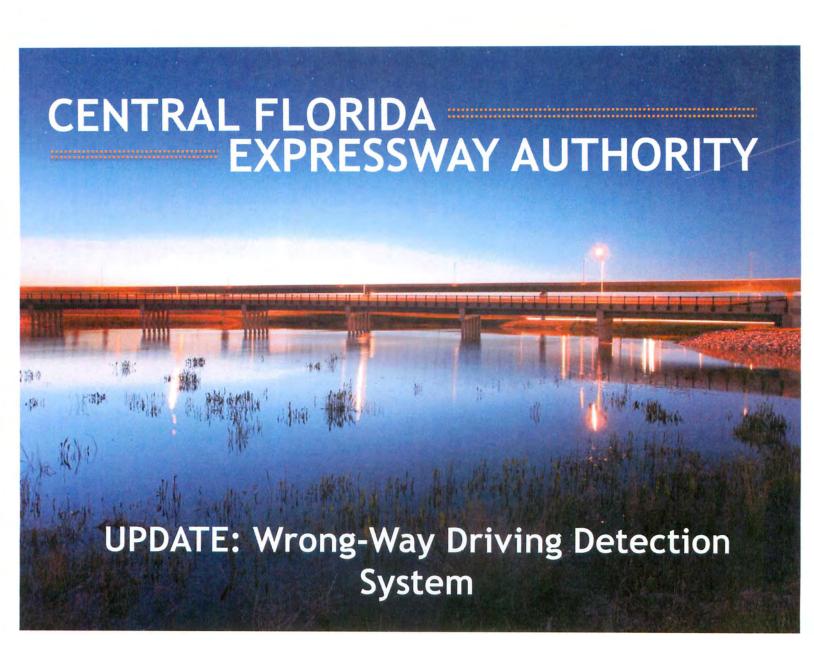
WEKIVA PARKWAY:
March 2017

>>> **NEXT STEPS**

Future Board Workshop to Discuss CFX
All Electronic Toll Options for the Existing
Expressway System

TAB 6

UPDATE ON WRONG WAY DRIVING PROJECT

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

UPDATE: Wrong-Way Driving Detection System

WWD DETECTORS

Initial Deployment
Additional Sites

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

RAMP DETECTION EQUIPMENT

Legend

→ Direction of Travel
⇒ Wrong-Way Arrows
⇗ Lane-Use Arrows
* Optional

Use stop line if STOP sign is installed

Entrance Ramp

DO NOT ENTER

STOP OR

ONE WAY

DO NOT ENTER

ONE WAY

STOP

WRONG WAY

Exit Ramp

WRONG WAY

Add top and bottom red RRFB to wrong-way signs at existing locations

WRONG WAY

WRONG WAY

ONE WAY

DO NOT ENTER

ONE WAY

Notes: Modify as appropriate for multi-lane crossroads

Add supplemental wrong-way signs and RRFB between existing wrong-way signs and the expressway mainline

CENTRAL FLORIDA EXPRESSWAY AUTHORITY
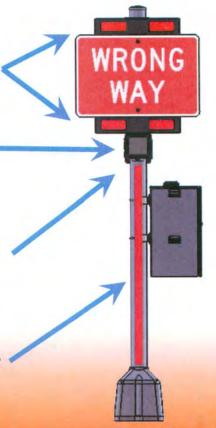
RAMP DETECTION EQUIPMENT

Red RRFB (two bars per sign)
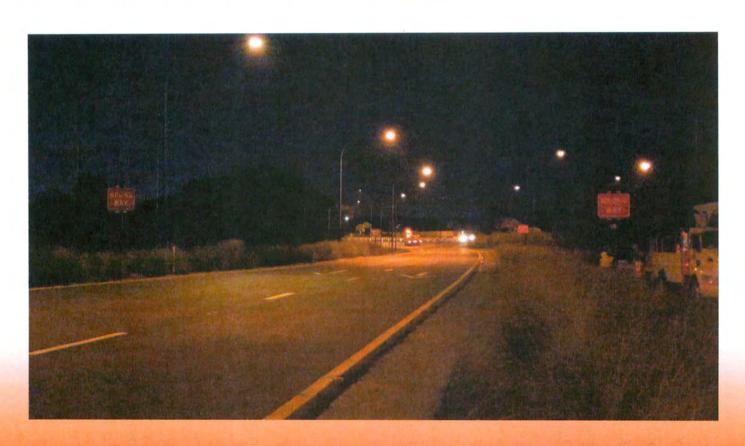
Radar (one forward-facing, one rear-facing)

Camera (one forward-facing, one side-facing)

Retroreflective red tape on pole

WRONG WAY

SR 408 TESTING

WRONG WAY DRIVER
REPORTED --- USE
EXTREME CAUTION

WRONG WAY
DRIVER
REPORTED

ACTUAL DETECTION, Example 1

Correct Traffic Flow:

BlinkLink))

System: SR 408 WB Exit 4 @ Hiawassee Rd Alert Time: 8/16/2015 7:52:08 PM   Powered by TAPCO

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ACTUAL DETECTION, Example 2

Vehicle Turn Around

Correct Traffic Flow:

BlinkLink))

System: SR 408 EB Exit 4 @ Hiawassee Rd Alert Time: 6/24/2015 6:33:58 AM   Powered by TAPCO

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ACTUAL DETECTION, Example 3

Correct Traffic Flow:

BlinkLink))

System: SR 408 WB Exit 4 @ Hiawassee Rd Alert Time: 9/12/2015 7:10:44 AM   Powered by TAPCO

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

Laser testing
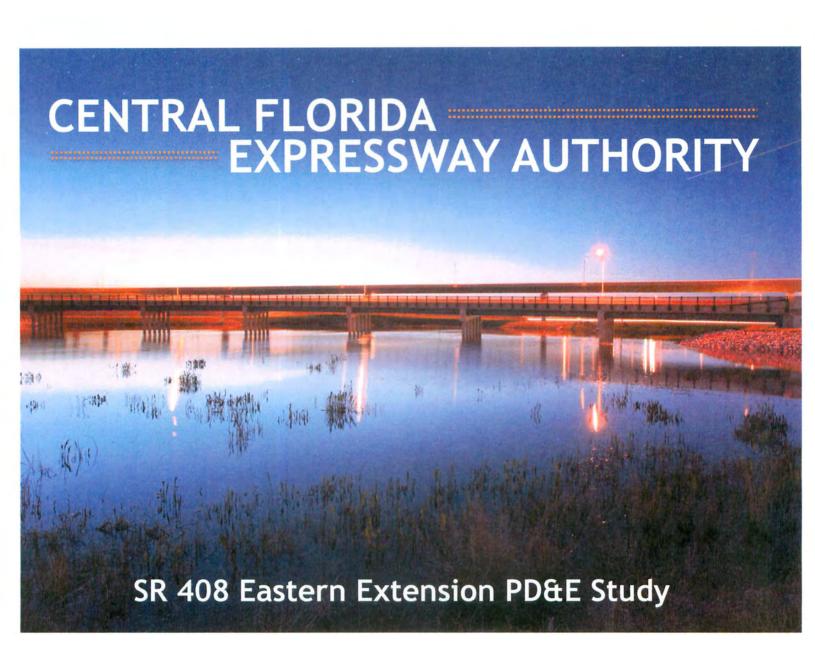
- Final 30 day test 10/16/15
- Sites that have geometric challenges
- Alternative detection method
- Improved accuracy

ONGOING ACTIVITY

- Posting messages to CFX dynamic message signs for right-way drivers
    - 22 WWD events February - September 2015
- Deploying additional locations
    - 19 Radar Design Complete
    - 7 Laser
    - 6 Under Construction
- Single Line DMS project
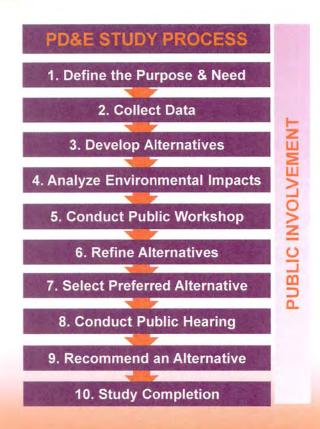
TAB 7

UPDATE ON PD&E STUDY FOR
SR 408 EASTERN EXTENSION PROJECT

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

SR 408 Eastern Extension PD&E Study

WHAT IS A PD&E?

- Process used to evaluate -
  - Engineering Alternatives
  - Environmental Impacts and Social, Cultural and Economic Impacts Associated with a Planned Transportation Project
  - Public Involvement
- The PD&E study entails the preparation of all preliminary engineering and environmental documentation
  - State Environmental Impact Report (SEIR)

PD&E STUDY PROCESS

1. Define the Purpose & Need
2. Collect Data
3. Develop Alternatives
4. Analyze Environmental Impacts
5. Conduct Public Workshop
6. Refine Alternatives
7. Select Preferred Alternative
8. Conduct Public Hearing
9. Recommend an Alternative
10. Study Completion

PUBLIC INVOLVEMENT

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PROJECT LOCATION

Extension of the SR 408 from its current eastern terminus to the SR 50/SR 520 Intersection

(Approximately 7 miles)

>>> PROJECT DESCRIPTION

– Purpose and Need

- o Provide additional capacity in the east-west direction to mitigate or eliminate capacity deficiencies

- o Provide additional emergency evacuation service to supplement the limited number of evacuation routes in this area of Central Florida

- o Provide improved transportation connectivity/linkage induced by the continued population growth and land use development reflected in various local comprehensive plans

- o Provide transit support

>>> STUDY OBJECTIVES

– Update and validate 2008 Corridor Report results

– Determine design year (2045) traffic demand

– Develop feasible alternatives for a tolled, limited access facility along the existing SR 50 corridor

– Present project alternatives and obtain public consensus;

– Determine environmental and community impacts

– Prepare engineering and environmental documentation (SEIR and other supporting documents)

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PROJECT HISTORY

- 2030 Orlando-Orange County Expressway Authority (OOCEA) Master Plan
- Concept Development and Evaluation Study Report completed in 2008
  - Evaluation of a new limited access facility between east Orange County and north Brevard County
  - Four (4) viable corridors were determined to meet the criteria and were further evaluated

  - **Corridor 3B (along SR 50)** meets the transportation need west of SR 520, providing the greatest relief of the existing and projected future traffic congestion along SR 50

>>> PROJECT HISTORY
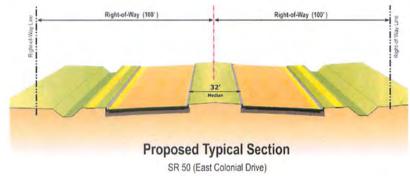
- **East Central Florida Corridor Task Force**
  - Executive Order 13-319
  - Evaluate and recommend future transportation corridors
  - Final Report completed in December 2014
    - B – Preserve and Enhance existing SR 50/405 Corridor
    - C – Preserve and enhance existing SR 520 corridor

A) Develop State Road 528 into Multimodal, Multi-Use "Super Corridor"
B) Preserve and Enhance Existing State Road 50/405 Corridor, including Multimodal Options
C) Preserve and Enhance Existing State Road 520 Corridor, including Multimodal Options
E) Preserve and Enhance Existing U.S. 192 Corridor, including Multimodal Options
G) Multimodal Improvements in Existing Narcoossee Road and State Road 417 Corridor

November 18, 2014

PROJECT HISTORY

- On-Going FDOT Projects to widen SR 50 from 4 to 6 lanes from SR 436 to SR 520

  1. FM #: 239203-4-52-01 – From Dean Road to Old Cheney Highway
  2. FM #: 433607-1-52-01 – Replacement of bridges over Econlockhatchee River
  3. FM #: 239203-7-52-01 Old Cheney Highway to Chuluota Road
  4. FM#: 239203-8-52-01 Chuluota Road to SR 520

Proposed Typical Section
SR 50 (East Colonial Drive)
Posted Speed 45 mph

- CFX team will coordinate with FDOT design teams throughout the PD&E Study

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CORRIDOR REEVALUATION ANALYSIS

- Analysis completed to determine the preferred corridor.
- Methodological Approach
  - Phase 1 – Data Collection
  - Phase 2 – Data Analysis/Evaluation
  - Phase 3 – Conclusions and Recommendations
  - Phase 4 - Coordination

CORRIDOR REEVALUATION ANALYSIS
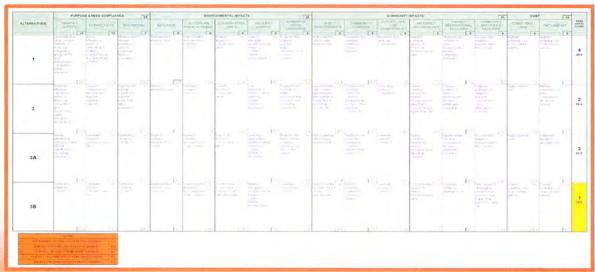
- Corridor Alternatives Reevaluated, potential impacts updated

*Source: Concept Development & Report, SR 408 East Extension, Orlando-Orange County Expressway Authority, July 28, 2008

*See Table in Handout

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CORRIDOR REEVALUATION ANALYSIS

- Generation of a weighting scheme for each of the evaluation parameters
- Involved a combination of both qualitative and quantitative values resulting in an overall score
- **Corridor 3B** clearly remains the superior alternative

*See Table in Handout

CORRIDOR REEVALUATION ANALYSIS

- Conclusions and Recommendations
  - Comparison of Concept Development and Evaluation Study Report completed in 2008 and the reevaluation
    - Proposed improvements along the existing SR 50 Corridor
      - Using majority of the existing SR 50 facility's Right of way
  - Corridor 3B is indeed the superior option

CORRIDOR OPTIONS	CRITERIA	ORIGINAL	UPDATED
1	Traffic Service	Relieves SR 50 and SR 419 Traffic Congestion	Least effective option in terms of SR 50 traffic congestion relief and trip attraction to proposed SR 408 extension
	Community Impacts	Significant potential impacts to residential areas	Generally similar results
	Environment Impacts	Significant potential impacts to environmentally sensitive lands	Generally similar results
	Controversy Potential	Community members and representatives are strongly opposed to this corridor	Community members and representatives are strongly opposed to this corridor
3	Traffic Service	Relieves SR 50 traffic congestion, especially in the segment from the current SR 408 terminus to SR 520	Provides significant congestion relief to SR 50 and affords transit linkage potential to support projected future population
	Community Impacts	Potential for relatively high community impact but it could be minimized depending on the eventual alignment chosen	Potential for relatively high community impact with highest potential of negative impacts to community services and facilities
	Environment Impacts	Potential for relatively high environmental impacts but they could be minimized based on the eventual alignment chosen	Generally similar results
	Controversy Potential	No significant controversy potential expected	No significant controversy potential expected
3A	Traffic Service	Relieves SR 50 traffic congestion, especially in the segment from the current SR 408 terminus to SR 520	Generally not as effective as alternatives 3 and 3B in terms of SR 50 traffic congestion relief
	Community Impacts	Significant potential impacts to Historical/Archaeological sites and high potential right-of-way requirements	Generally similar results
	Environment Impacts	Major environmental impacts	Major environmental impacts with high impacts to conservation lands, floodplain encroachment, and wetland impacts
	Controversy Potential	EAG members wanted this alternative removed as a viable option due to its very high environmental impacts	EAG members wanted this alternative removed as a viable option due to its very high environmental impacts
3B	Traffic Service	Attracted the greatest amount of traffic thus providing significant congestion relief to SR 50	Generally similar to corridor 3 but provides the greatest trip attraction to proposed SR 408 extension
	Community Impacts	Fewest negative community impacts of all viable corridors	Fewest negative community impacts with the least potential amount of right-of-way requirements
	Environment Impacts	Fewest negative environmental impacts of all viable corridors	Fewest negative environmental impacts of all viable corridors
	Controversy Potential	No significant controversy potential expected	No significant controversy potential expected

*See Table in Handout

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

>>> NEXT STEPS

- Next Project Advisory Group/ Environmental Advisory Group Meeting: January 2016

- Public Kick-off Meeting: October 22, 2015

- CFX Corridor Re-Evaluation Approval

- Alternatives Development

FOR MORE INFORMATION

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Public Information Officer
Media Relations Group
Phone: (941) 504-9440
Email: 408study@CFXway.com

www.cfxway.com

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

>>> QUESTIONS?

TAB 8
OTHER BUSINESS

ELECTRONIC AGENDA INTRODUCTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

MEMORANDUM

TO: Operations Committee Members

FROM: Darleen Mazzillo, Executive Assistant

DATE: October 12, 2015

SUBJECT: Diligent Boardbooks Introduction

Beginning with the January 25, 2016 Operations Committee meeting, the agenda materials will be posted electronically on Diligent Boardbooks. The Board has been using Diligent for several months and is very impressed with the product. We are now going to be implementing Diligent for all committee meetings.

I will be contacting your office in the next few weeks to schedule a short training session with a Diligent representative by phone. They will instruct you on downloading the application and provide training.

I will need to know whether you want CFX to provide you with a tablet to use for this purpose. If you want to use your own tablet, I will need to know the type.

In the meantime, I have attached user manuals for iPad and Windows for your review.

Attachments