

Mobile Inspector™

Digital Data Collection with Mobile Apps Status Update and Agency Perspective

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What is the Mobile Inspector software?

- Daily reporting inspection app for smart phones and tablets
 - iOS and Android
 - Same look and feel
 - General site conditions, contractor workforce, item postings, and attachments*
- Works with a Construction Management System (CMS)
 - AASHTOWare Project FieldManager™ software
 - AASHTOWare Project SiteManager™ software

(*only AASHTOWare Project FieldManager)

Mobile Inspector goals

- Keep it simple
 - Reliable, zero configuration, easy to install
 - Invisible synchronization to CMS
 - Minimal training, if any
 - Focus on main daily reporting use case
- On- and off-line
 - No difference to the user

How does everything work?

- Mobile Inspector: Inspector app in the field
 - Same app for multiple CMS
- Two “invisible” components manage it
 - Bridge program
 - AASHTOWare Project SYNC Service™

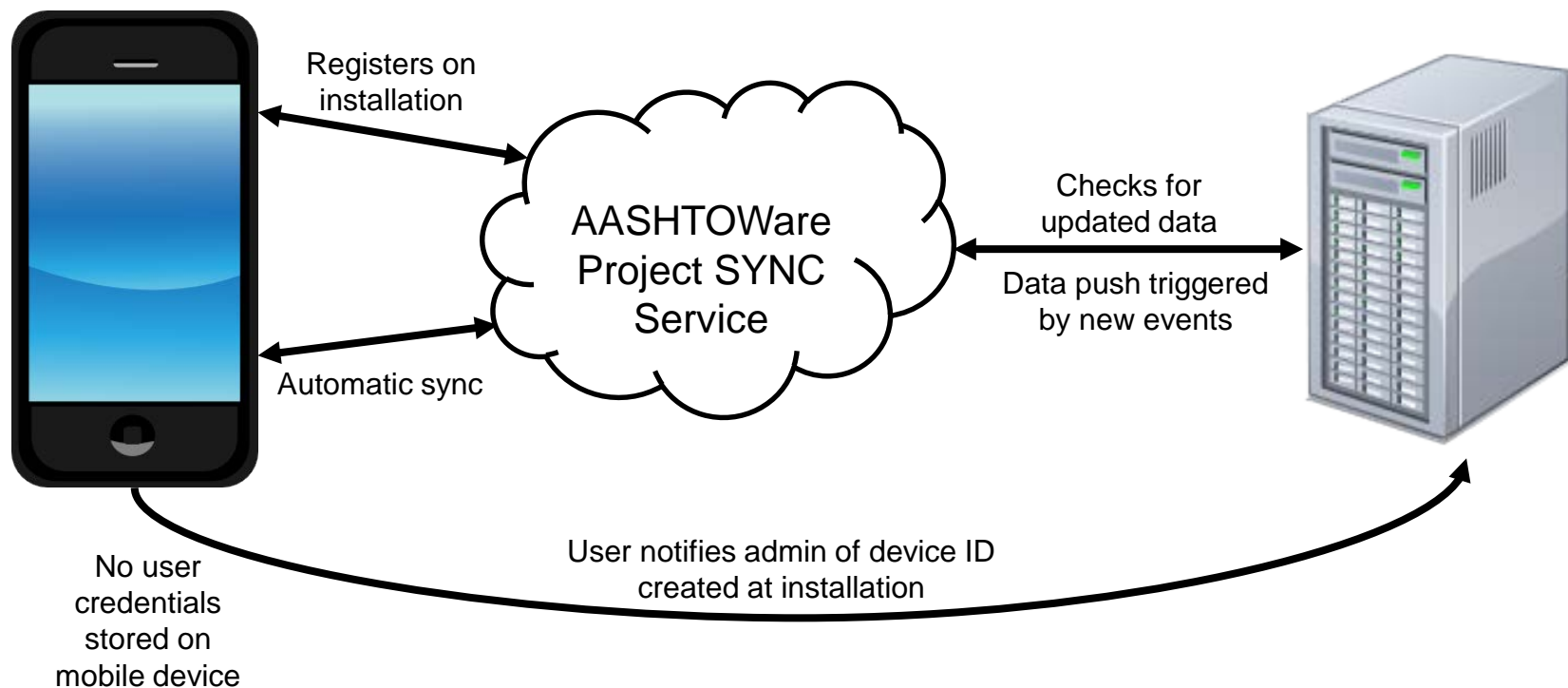
Bridge program

- Connects the CMS to the AASHTOWare Project SYNC Service
 - Monitors the CMS for contract data changes
 - Sends updated contract data when needed
 - Checks SYNC Service for incoming reports
 - Loads the incoming reports into the CMS
- Unique to each kind of CMS
 - Must understand CMS's data model and business rules
 - Needs access to CMS database

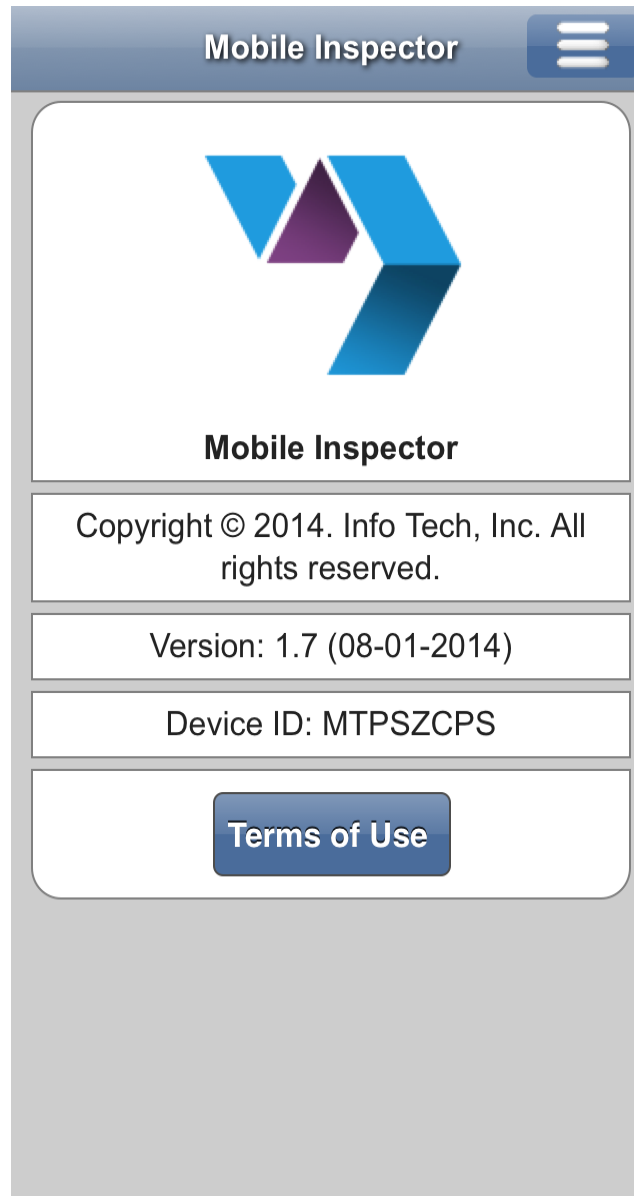
AASHTOWare Project SYNC Service

- Helps CMS and the Mobile Inspector app connect
- Advantages over direct connections:
 - Automatic configuration of mobile app
 - No firewall or VPN issues for users
 - No user credentials on mobile device

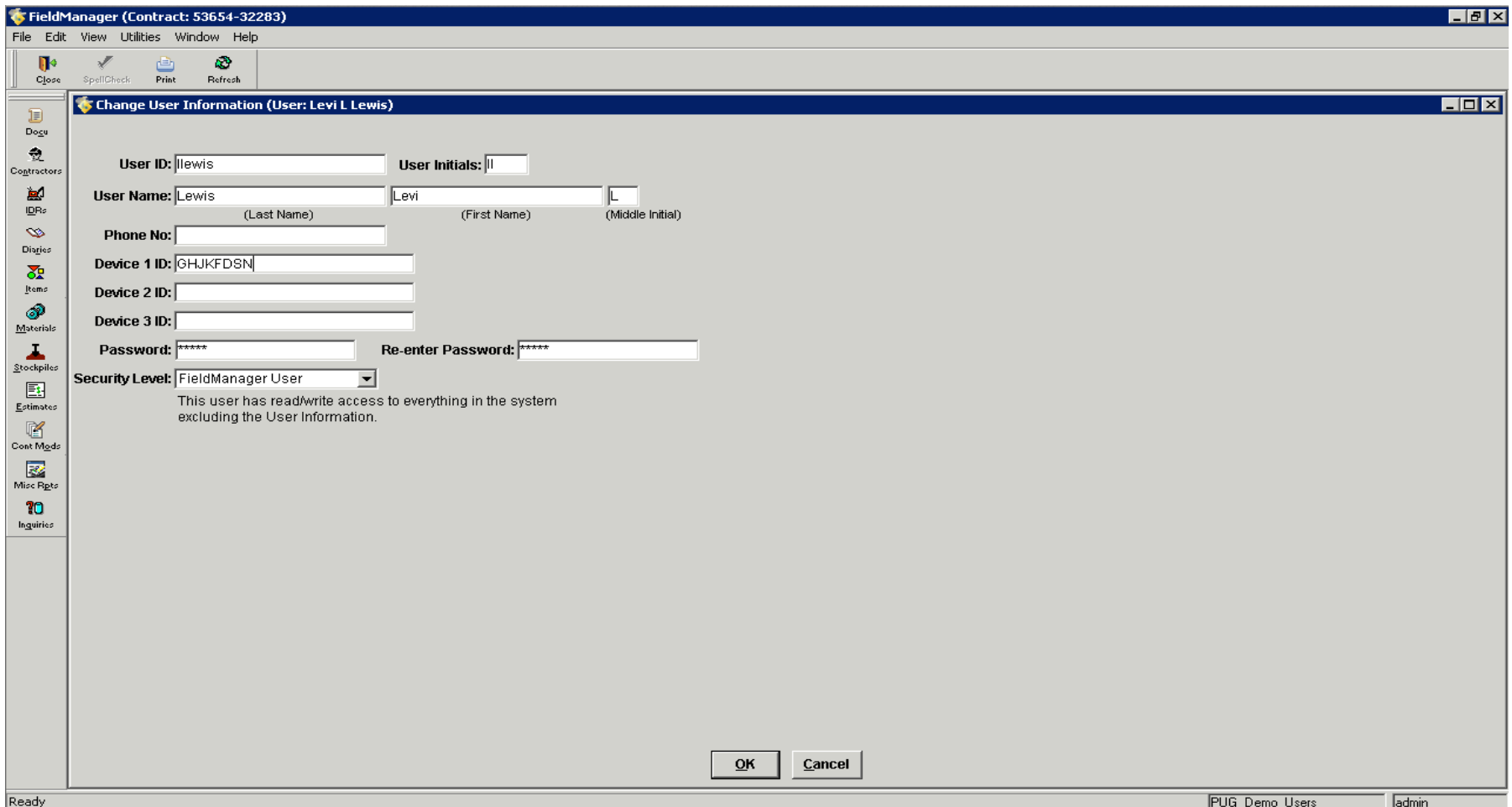
Invisible synchronization and authentication



Device ID on 'about' screen



User set up in the AASHTOWare Project FieldManager software



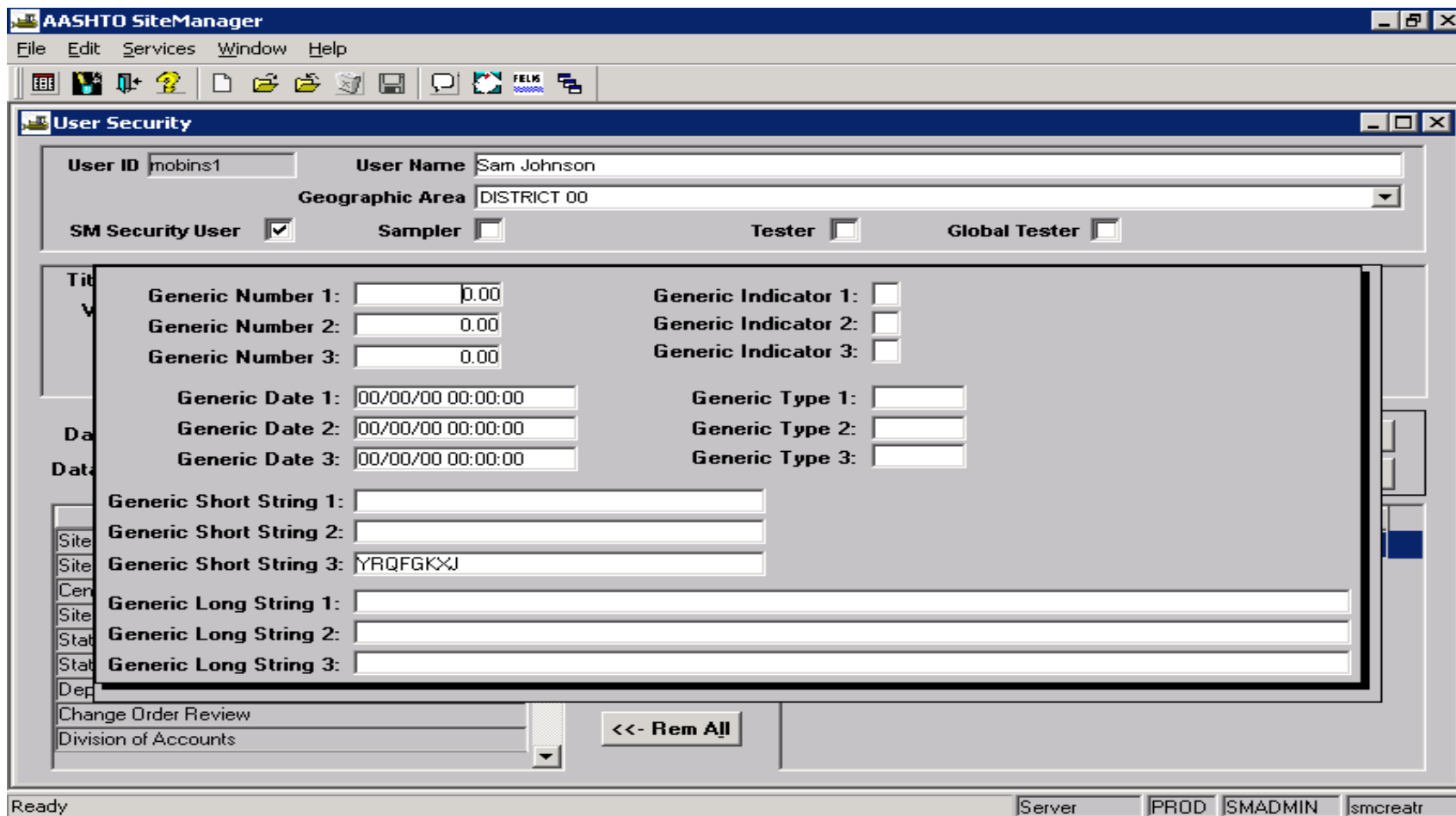
The screenshot displays the 'FieldManager (Contract: 53654-32283)' application window. The main focus is the 'Change User Information (User: Levi L Lewis)' dialog box. The dialog contains the following fields and options:

- User ID:** lewis
- User Initials:** ll
- User Name:** Lewis (Last Name), Levi (First Name), L (Middle Initial)
- Phone No:** (empty)
- Device 1 ID:** GHJKFDSN
- Device 2 ID:** (empty)
- Device 3 ID:** (empty)
- Password:** *****
- Re-enter Password:** *****
- Security Level:** FieldManager User (dropdown menu)

Below the Security Level dropdown, a message states: "This user has read/write access to everything in the system excluding the User Information." At the bottom of the dialog are 'OK' and 'Cancel' buttons.

The status bar at the bottom of the application window shows 'Ready' on the left, 'PUG Demo Users' in the center, and 'admin' on the right.

User set up in the AASHTOWare Project SiteManager software



AASHTO SiteManager

File Edit Services Window Help

User Security

User ID: mobins1 User Name: Sam Johnson

Geographic Area: DISTRICT 00

SM Security User: Sampler: Tester: Global Tester:

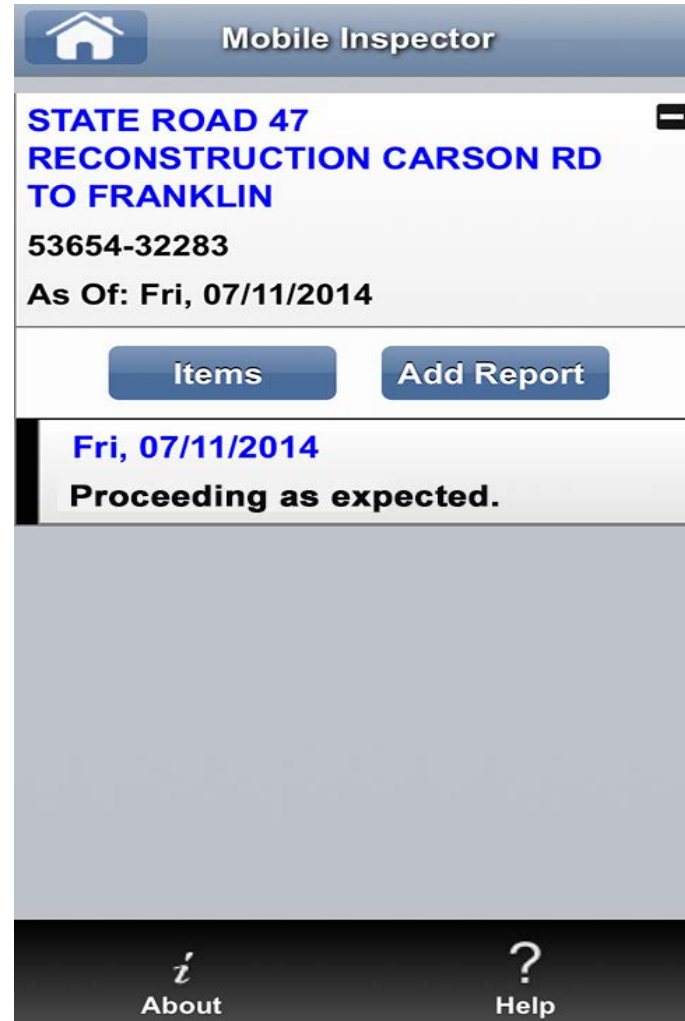
Generic Number 1: 0.00 Generic Indicator 1:
 Generic Number 2: 0.00 Generic Indicator 2:
 Generic Number 3: 0.00 Generic Indicator 3:
 Generic Date 1: 00/00/00 00:00:00 Generic Type 1:
 Generic Date 2: 00/00/00 00:00:00 Generic Type 2:
 Generic Date 3: 00/00/00 00:00:00 Generic Type 3:
 Generic Short String 1:
 Generic Short String 2:
 Generic Short String 3: YRQFGKXJ
 Generic Long String 1:
 Generic Long String 2:
 Generic Long String 3:

Change Order Review <<- Rem All

Division of Accounts

Ready Server PROD SMADMIN smcreatr

Contracts list expanded



Contract Items

Contract Items	
<input type="text" value="Filter Items..."/>	
00001M : D G A BASE -	
Line: 0078_X098011906004 Auth Qty: 19,078.000 MTON	
Original:	28,078.000
Pending:	0.000
Total Posted:	25,279.519
Total Paid:	25,273.519
Unit Price:	\$22.410
00018M : DRAINAGE BLANK... +	
Line: 8022_X098011906004 Auth Qty: 4,850.000 MTON	
00020M : TRAFFIC BOUND B... +	
Line: 0079_X098011906004 Auth Qty: 2,144.000 MTON	

Report Details

☰
Report Details

Mon, 08/11/2014 ▼
🔒
🗑️

Weather: Sunny ▼

Low Temp: 88 °F

High Temp: 99 °F

Attachments: 📷 📎

Remarks:

Materials arrived on time.

26 characters

📅 Details
📄 Postings
🔍 Equipment
👥 Personnel

AASHTOWare
Project
FieldManager



☰
Report Details

Mon, 08/11/2014 ▼
🔒
🗑️

AM Cond: Other - See ... ▼

PM Cond: Rain ▼

High Temp: 80 °F

Low Temp: 75 °F

Remarks: Delay ▼

Delay due to weather

20 characters

📅 Details
📄 Postings
🔍 Equipment
👥 People

AASHTOWare
Project
SiteManager



Adding a new item posting

Item Postings ☰

New Item Posting

Item:

Proj/Catg:

Contractor:

Qty: **Cyd**

Location:

Station From: +

Station To: +

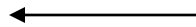
Materials: 

Attention Flag:

Remarks:

☰ 📄 🔧 👥
Details Postings Equipment Personnel

AASHTOWare
Project
FieldManager



Item Postings ☰

New Item Posting

Item:

Contractor:

Qty: **MTON**

Location:

Station From: +

Offset Type:

Offset Dist:

Station To: +

Offset Type:

Offset Dist:

Measured:

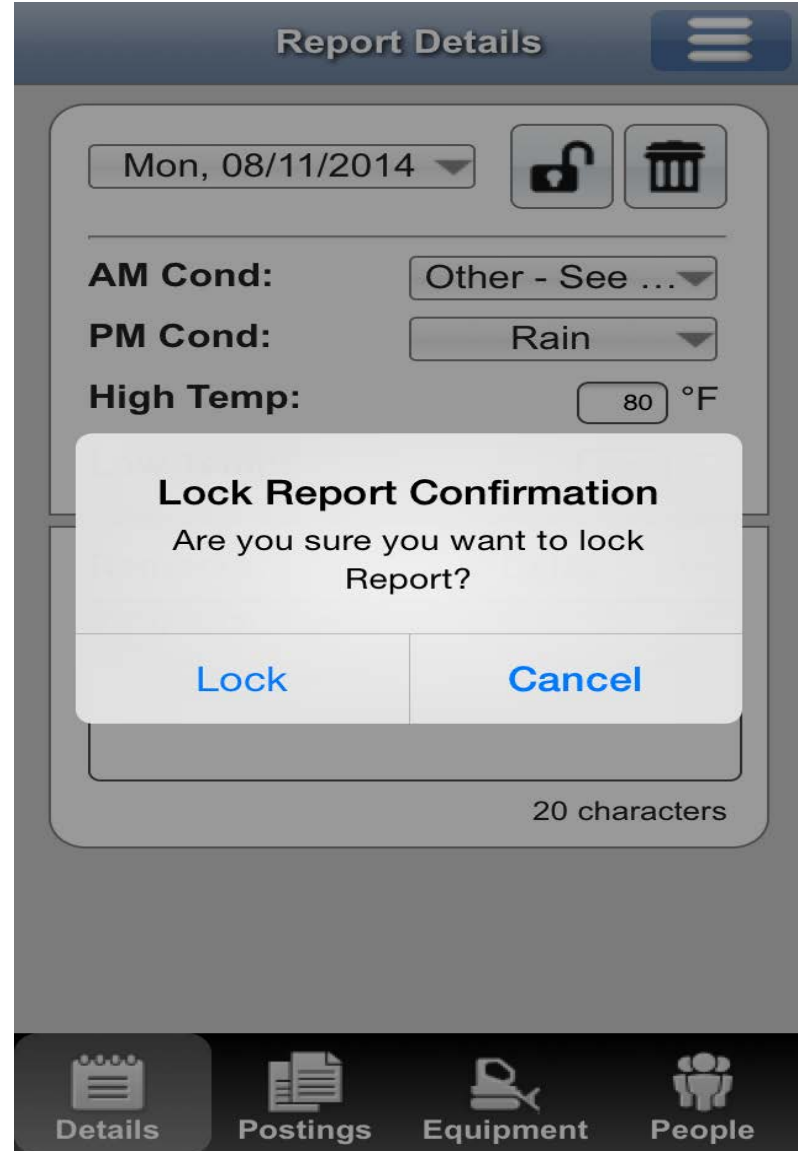
Remarks:

☰ 📄 🔧 👥
Details Postings Equipment People

AASHTOWare
Project
SiteManager



Locking a report



The screenshot displays a mobile application interface for 'Report Details'. At the top, there is a header with the title 'Report Details' and a menu icon. Below the header, a date dropdown menu shows 'Mon, 08/11/2014'. To the right of the date are two icons: an unlocked padlock and a trash can. The main content area contains three rows of data: 'AM Cond:' with a dropdown menu set to 'Other - See ...', 'PM Cond:' with a dropdown menu set to 'Rain', and 'High Temp:' with a text input field containing '80 °F'. A modal dialog box is centered on the screen, titled 'Lock Report Confirmation', with the text 'Are you sure you want to lock Report?' and two buttons: 'Lock' and 'Cancel'. At the bottom right of the dialog, it says '20 characters'. The bottom navigation bar features four icons: 'Details' (calendar), 'Postings' (document), 'Equipment' (wrench), and 'People' (group of people).

Where is the Mobile Inspector software now?

- Production ready for the AASHTOWare Project FieldManager software
 - MI, WI, and ME conducting 90-day evaluations
 - NV is actively testing with future plans to be determined
- VT and KY are piloting with the AASHTOWare Project SiteManager software

Where is the Mobile Inspector software now? (cont'd)

- AASHTO member agencies will license the AASHTOWare Project SYNC service through AASHTO
- No support for Windows devices
 - Starting exploratory project shortly
- Proof-of-concept to connect current client/server Mobile Inspector application to web-based AASHTOWare Project 3.00

Michigan Pilot

- Piloted the Mobile Inspector app on 5 contracts at 3 field offices from July to November, 2013
- 19 inspectors were asked to participate
- Mobile devices used were mainly iPads and iPhones
- One consultant inspector used an Android device
- Many inspectors used both a smart phone and tablet so they could determine their preference
- Pilot goals included seeking answers to the following questions:
 - Is Mobile Inspector practical on a tablet
 - Is Mobile Inspector practical on a smart phone
 - Do inspectors prefer using Mobile Inspector instead of FieldBook to create IDRs/DWRs

Michigan Pilot Results

- Mobile Inspector is:
 - Easy to learn
 - Intuitive and easy to use
- Allows users to create and view IDRs/DWRs:
 - Anywhere at job site
 - While walking around
- Mobile Inspector running on a tablet:
 - Excellent tool
 - Most preferred using a tablet over smart phone due to larger screen size
 - More difficult to carry a tablet than a smart phone
 - Most preferred using Mobile Inspector over FieldBook

Vermont Pilot

- Purpose of the project was to determine viability of using Mobile Inspector to create DWRs on smart phones and tablets
- Piloting on 3 live contracts beginning in July 2014 and is still on-going
- 5 inspectors are participating in the pilot
- Mobile devices include iPads and iPhones

Vermont Pilot Results

- Easy to learn
- Intuitive and easy to use
- Portable and convenient
- Easier to use on a tablet due to larger screen size
- Smart phones more portable than tablets
- Good tool for Inspectors not necessarily Resident Engineers
- Entering a significant number of comments is cumbersome
- Users would like to run Mobile Inspector on more than one device
- All inspectors said they would use Mobile Inspector if offered

Kentucky Pilot

- Tested on a multi-project contract
- Tested on Louisville Southern Indiana River Bridges projects
 - <http://kyinbridges.com/>
- Feedback has been good and the inspectors like the functionality
 - it reduces office time and increase field presence

Questions

