E-TICKETING

GREG MULDER, P.E. ICPA/IRMCA

LEE SHEPARD, IOWA DOT
IOWA READY MIX CONCRETE PLANTS
PROBLEMS

- Paper tickets
- Lost tickets
- Ticket Verification
- Ticket sorting
- Summing the tickets for contractor pay
- Safety of workers dodging trucks to collect tickets
WHY E-TICKETS? 100% PAPERLESS?

- As of May, 2017
  - 500+ Agency Users
  - 300+ Non-Dot Users
  - 2330+ Contracts
  - 300,000+ Documents
THIS DOESN’T INCLUDE TICKETS!!
# PCC E-TICKETS

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Description</th>
<th>Unit price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>cy</td>
<td>3000 PSI MCKW51 CEM</td>
<td>$75.00</td>
<td>$750.00</td>
</tr>
<tr>
<td>1</td>
<td>it</td>
<td>RAILING CHARGE</td>
<td>$70.00</td>
<td>$70.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sub Total</td>
<td>$720.00</td>
<td>$720.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAX</td>
<td>$20.00</td>
<td>$20.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>$740.00</td>
<td>$740.00</td>
</tr>
</tbody>
</table>

Ordered: 250.00  Delivered: 10.00  Slump: 4.00

Reach Weight: 0.00 (ON SITE 0.00)

Max water allowed: 0.00
Sand water: 0.00
Batched water: 20.9 g
Water added on site: 20.9 g
Water added allowed on site: 0.00 g
TABLET IN CONCRETE TRUCK
GEOZONES

Geozones Around

• Plant Site
• Job Site
• Other Places?
  • Adjacent Jobsites?
• Wash Out Location?
TICKET UPDATES ON DRIVERS TABLET

<table>
<thead>
<tr>
<th>Plant</th>
<th>Truck</th>
<th>Driver</th>
<th>Order</th>
<th>Customer</th>
<th>Project</th>
<th>Project name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>25</td>
<td>MICHAEL ARMSTRONG</td>
<td>186</td>
<td>55</td>
<td>55116</td>
<td>BLANKET - DES MOINES 2016</td>
</tr>
</tbody>
</table>

Sold to: NORMING CONSTRUCTION, INC.
Deliver to: 6270 NE 14TH DISAST COOPER

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Description</th>
<th>Unit price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>cy</td>
<td>4000 CUBIC INTERIOR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>cy</td>
<td>READY MIX TRUCK Haul &amp; CHARGE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sub Total: 
TAX: 
Total: 

Ordered: 02/15/09 00:02:00
Delivered: 02/15/09 00:02:00
Slump: 02/15/09 00:02:00

Load time: 11:27:05

Going to the job site.
STATUS CHANGES
**BATCH WEIGHTS BROUGHT IN**

<table>
<thead>
<tr>
<th>LOAD TIME</th>
<th>MAX WATER ALLOWED</th>
<th>WATER ADDED @ PLANT</th>
<th>WATER ADDED @ JOBSITE</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:21:14</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>W/C RATIO @ PLANT</td>
<td>0.37</td>
<td>W/C RATIO @ JOBSITE</td>
<td>0.37</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>ACTUAL</th>
<th>MOISTURE</th>
<th>TARGET</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMESTONE</td>
<td>14360</td>
<td>0.6% (10.32 gl)</td>
<td>14266</td>
<td>LB</td>
</tr>
<tr>
<td>SAND</td>
<td>12480</td>
<td>3.3% (49.35 gl)</td>
<td>12596</td>
<td>LB</td>
</tr>
<tr>
<td>LS 3/8&quot; CHIPS</td>
<td>3280</td>
<td>0.6% (2.36 gl)</td>
<td>3089</td>
<td>LB</td>
</tr>
<tr>
<td>CEMENT 1</td>
<td>3995</td>
<td></td>
<td>3970</td>
<td>LB</td>
</tr>
<tr>
<td>FLYASH</td>
<td>1975</td>
<td></td>
<td>1960</td>
<td>LB</td>
</tr>
<tr>
<td>RETARDER</td>
<td>120</td>
<td></td>
<td>119</td>
<td>OZ</td>
</tr>
<tr>
<td>POLYCHEM SA</td>
<td>90</td>
<td></td>
<td>90</td>
<td>OZ</td>
</tr>
<tr>
<td>KB1200</td>
<td>177</td>
<td></td>
<td>178</td>
<td>OZ</td>
</tr>
<tr>
<td>WATER</td>
<td>201</td>
<td></td>
<td>203</td>
<td>GL</td>
</tr>
</tbody>
</table>
PLANT INSPECTION INFO ADDED BY CPI
INSPECTION DATA ENTERED AT SITE
DRIVER TABLET*

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Description</th>
<th>Unit price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>yd</td>
<td>READY MIX TRUCK HAUL, CHARGE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Load time: 11:27:03

<table>
<thead>
<tr>
<th>ACTUAL</th>
<th>MOISTURE</th>
<th>TARGET</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAND</td>
<td>111.86</td>
<td>111.00</td>
<td>lb</td>
</tr>
<tr>
<td>CM L/S</td>
<td>118.88</td>
<td>118.80</td>
<td>lb</td>
</tr>
<tr>
<td>CEMENT</td>
<td>30.20</td>
<td>30.34</td>
<td>lb</td>
</tr>
<tr>
<td>WATER</td>
<td>171</td>
<td>171</td>
<td>g</td>
</tr>
<tr>
<td>FAE</td>
<td>84</td>
<td>75</td>
<td>lb</td>
</tr>
<tr>
<td>MIRW</td>
<td>189</td>
<td>189</td>
<td>oz</td>
</tr>
<tr>
<td>HDT</td>
<td>6</td>
<td>6</td>
<td>g</td>
</tr>
</tbody>
</table>
SMART PHONE

#70 Inspection at job site

**AT JOB SITE**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air content</td>
<td></td>
</tr>
<tr>
<td>Slump</td>
<td></td>
</tr>
<tr>
<td>Concrete temperature</td>
<td></td>
</tr>
<tr>
<td>Water added</td>
<td></td>
</tr>
<tr>
<td>Revolutions</td>
<td></td>
</tr>
<tr>
<td>Unit weight</td>
<td></td>
</tr>
<tr>
<td>Discharged at: click to select</td>
<td></td>
</tr>
</tbody>
</table>

**ACCEPTANCE**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete accepted</td>
<td></td>
</tr>
</tbody>
</table>

**INSPECTOR SIGNATURE**
## Inspection on Site

**Inspector:** Ryan utter

**Accepted**

**Notes:**
Sta 76+98 lt

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Content</td>
<td>8.90</td>
</tr>
<tr>
<td>Slump</td>
<td>0.00</td>
</tr>
<tr>
<td>Temperature</td>
<td>83.0 F</td>
</tr>
<tr>
<td>Water Added</td>
<td>0.00</td>
</tr>
<tr>
<td>Discharge Time</td>
<td>09:53:49</td>
</tr>
<tr>
<td>Revolutions</td>
<td>30</td>
</tr>
</tbody>
</table>
KEY TIMES RECORDED

- TO PLANT @ 12:49:03
- WASHING @ 12:48:51
- POURING @ 12:48:39
- ON JCB @ 12:45:51
- TO JCB @ 12:45:40
- LOADING @ 12:36:18
- TICKETED @ 12:25:49
PINS DROPPED ON MAP
**TICKETS EMAILED OR .PDF DOWNLOADABLE**

---

**NordicPave**

**PLANT**

N

**TRUCK**

141

**DRIVER**

Perez, Carlos

**ORDER**

POW

**CUSTOMER**

STE 1990

**PROJECT**

STEB1990

**PROJECT NAME**

Dos Maresio, BO 139 Park Ave

**SOLD TO**

Lennus Construction

**DEALER TO**

BO 139 Park Ave Dos Maresia, IA

**DATE**

Sep 15, 2017

**TICKET#**

#327730

**TICKETS**

10,000

**UNIT PRICE**

10,88.94

---

**PRODUCT NO.**

DCSU05A

**QTY**

10 cy

**UNIT**

C-SMD 3.5g 5A 5L 5 oz WR 1/oz Ret

**DESCRIPTION**

202

**Hauling Charge**

---

**UNIT PRICE**

10,88.94

**AMOUNT**

10,88.94

---

**ORDERED**

1200.00

**DELIVERED**

10.00

**SLUMP**

2.50

---

**LOAD TIME**

0:22:11

**MAX WATER ALLOWED**

0.00

**WATER ADDED @ PLANT**

0.00

**WATER ADDED @ JOB**

0.00

---

**ACTUAL**

LIMESTONE

14000

**MOISTURE**

6.5% (10.32 g/l)

SAND

12400

**MOISTURE**

3.5% (6.59 g/l)

LS 1/8 CHIPS

3180

**MOISTURE**

6.5% (2.30 g/l)

CEMENT

1050

**MOISTURE**

90

FLUSH

1230

**MOISTURE**

1230

RETAKING

90

**MOISTURE**

90

POLYRESIN 5A

110

**MOISTURE**

110

KBR 260

100

**MOISTURE**

100

WATER

100

---

**INSPECTION ON SITE**

**ACCEPTED**

**INSPECTOR**

Ryan Utter

**NOTES**

Sta 76-98

---

**AIR CONTENT**

5.00

**SLUMP**

0.00

**TEMPERATURE**

83.0 F

**WATER ADDED**

0.00

**DISCHARGE TIME**

09:55:40

**REVOLUTIONS**

90

---
DASHBOARD OF POUR
<table>
<thead>
<tr>
<th>Ticket Number</th>
<th>Order</th>
<th>Location</th>
<th>Truck</th>
<th>Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>#328251</td>
<td>92</td>
<td>Des Moines- BO 103 Park Ave</td>
<td>135</td>
<td>Morton, Orville</td>
</tr>
<tr>
<td>#328249</td>
<td>92</td>
<td>Des Moines- BO 103 Park Ave</td>
<td>121</td>
<td>Adamovicz, Richard</td>
</tr>
<tr>
<td>#328238</td>
<td>86</td>
<td>Des Moines- BO 103 Park Ave</td>
<td>125</td>
<td>Bentley, Dennis</td>
</tr>
<tr>
<td>#328248</td>
<td>92</td>
<td>Des Moines- BO 103 Park Ave</td>
<td>98</td>
<td>Flores, Cesar</td>
</tr>
<tr>
<td>#328246</td>
<td>86</td>
<td>Des Moines- BO 103 Park Ave</td>
<td>107</td>
<td>Ramirez, Salvador</td>
</tr>
</tbody>
</table>

**Date range:**
- **Today**
- **This Week**
- **Custom**

**From:** 2017-09-27  
**To:** 2017-09-27
WHAT DOES THE CITY INSPECTION STAFF NEED TO GET READY

- LAPTOP, TABLET, OR SMART PHONE – ANY BRAND TYPICALLY WORKS
  - INTERNET CAPABILITY
    - CELLULAR DATA PLAN OR HOTSPOT
    - OFFLINE MODE ON DRIVERS TABLET
  - BROWSERS SUPPORTED
    - IE, CHROME, FIREFOX, SAFARI, OTHERS...
- USER NAME AND PASSWORD FOR SECURITY
- GOOD COMMUNICATION WITH CONTRACTOR/CONCRETE SUPPLIER!
QUESTIONS?