

# MnDOT's e-ticketing pilot project

How Contractors can use Electronic Tickets and Technology?

Valerie Sheedy, P.G.  
Aggregate Manager  
Ulland Brothers, Inc.



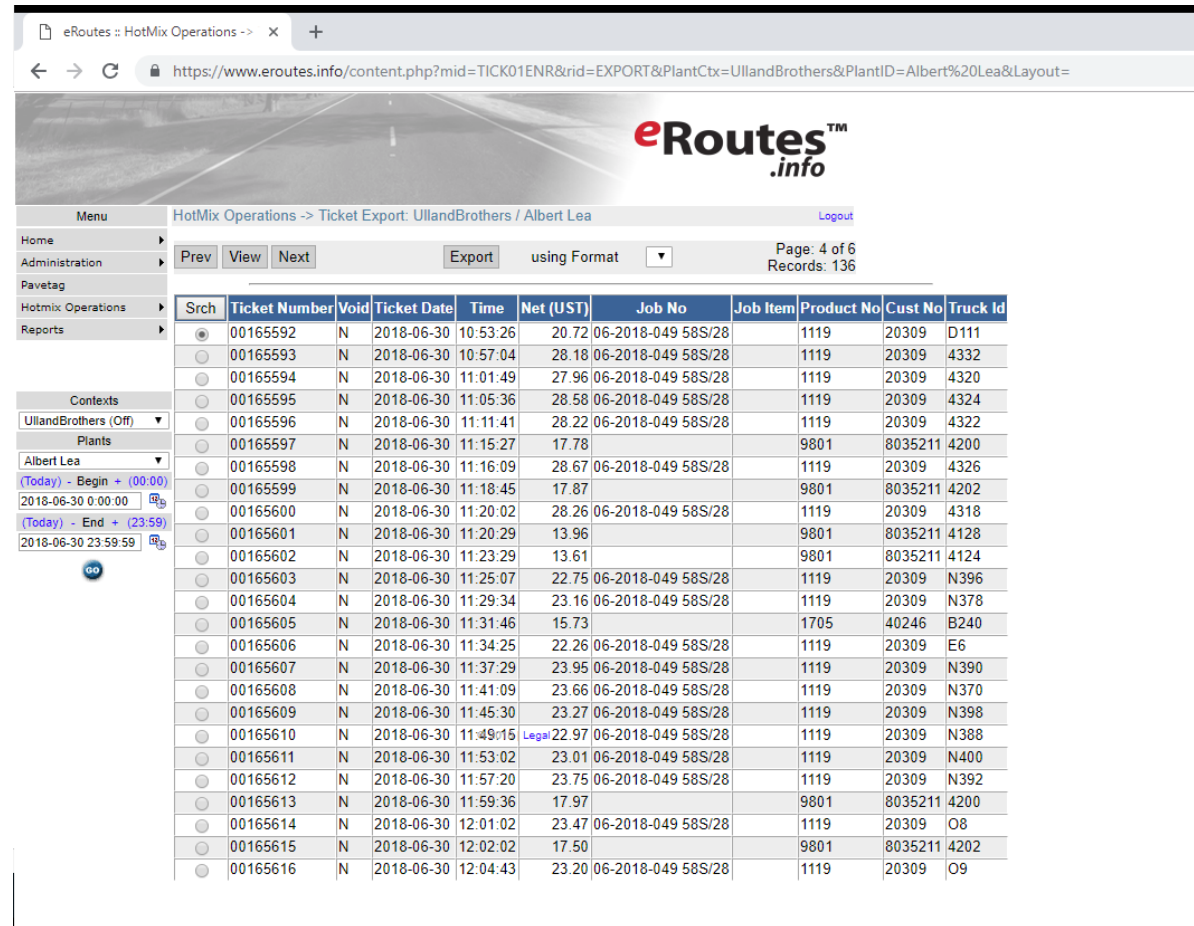
# What do you need?

- ▶ Truck Tags
  - ▶ Plug and play, very simple
- ▶ Paver and Plant receivers
  - ▶ Std. 12v plug-in, straightforward
- ▶ Computers and Data connections
  - ▶ Field phone/Tablet and Plant, standard
- ▶ eRoutes Subscription

DEVICE ID	TRUCK ID
A100004395EBB1	4318 X / 4200
A100004395EC07	4320 X
A100004395F076	4322 X
A100004395F0DF	4324 X
A100004395F2D5	4326 X
A100004395F2E7	4328 X
A100004395F36D	4330 X
A100004395F394	4332 X
A100004395F4B7	N370 X
A100004395F510	N372 X
A100004395F5CA	N378 X
A100004395F620	N382 X
A100004395F6C9	N388 X
A100004395F94B	N390 X
A100004395FD1C	N392 X
A100004395FD3F	N396 X
A100004395FD47	N398 X
A100004395FEF9	N400 X
A100004396011C	Knudby 6 X 66
A10000439601D8	olsen 10 X
A1000043960248	olsen 9 X
A1000043960261	olsen 8 X
A1000043960317	D 111 X 301
A10000439604B2	D 112 X 107
A100004396057E	D 113 X 110
A1000043960604	D 207 X
A100004396063A	D 213 X
A1000043960741	D 214 X
A100004396074C	D 215 X
A1000043961033	D 311 X
A10000439610FB	D 306 X
A10000439837D5	D 309 X
A1000043983B1E	D 315 X
A10000439840DF	D 608 X 211
A100004398420F	D 708 X
A1000043984224	D 908 X
A100004398426D	8348
A1000043984273	N 354 / 4124
A1000043984379	4316 / 4202
A10000439B2D34	

# Generating a Digital Ticket

- ▶ Work with Trimble + Software Manufacturer on Loadout System
  - ▶ Relatively simple, a few hours of programming
  - ▶ Set up fields, including QC test ID
- ▶ Web-Application



The screenshot displays the eRoutes.info web application interface. The browser address bar shows the URL: <https://www.eroutes.info/content.php?mid=TICK01ENR&rid=EXPORT&PlantCtx=UllandBrothers&PlantID=Albert%20Lea&Layout=>. The page title is "HotMix Operations -> Ticket Export: UllandBrothers / Albert Lea". The interface includes a navigation menu on the left with options like Home, Administration, Pavetag, Hotmix Operations, and Reports. The main content area shows a table of ticket data with columns: Srch, Ticket Number, Void, Ticket Date, Time, Net (UST), Job No, Job Item, Product No, Cust No, and Truck Id. The table contains 20 rows of data, including ticket numbers from 00165592 to 00165616, dates of 2018-06-30, and various truck IDs.

Srch	Ticket Number	Void	Ticket Date	Time	Net (UST)	Job No	Job Item	Product No	Cust No	Truck Id
<input checked="" type="radio"/>	00165592	N	2018-06-30	10:53:26	20.72	06-2018-049 58S/28		1119	20309	D111
<input type="radio"/>	00165593	N	2018-06-30	10:57:04	28.18	06-2018-049 58S/28		1119	20309	4332
<input type="radio"/>	00165594	N	2018-06-30	11:01:49	27.96	06-2018-049 58S/28		1119	20309	4320
<input type="radio"/>	00165595	N	2018-06-30	11:05:36	28.58	06-2018-049 58S/28		1119	20309	4324
<input type="radio"/>	00165596	N	2018-06-30	11:11:41	28.22	06-2018-049 58S/28		1119	20309	4322
<input type="radio"/>	00165597	N	2018-06-30	11:15:27	17.78			9801	8035211	4200
<input type="radio"/>	00165598	N	2018-06-30	11:16:09	28.67	06-2018-049 58S/28		1119	20309	4326
<input type="radio"/>	00165599	N	2018-06-30	11:18:45	17.87			9801	8035211	4202
<input type="radio"/>	00165600	N	2018-06-30	11:20:02	28.26	06-2018-049 58S/28		1119	20309	4318
<input type="radio"/>	00165601	N	2018-06-30	11:20:29	13.96			9801	8035211	4128
<input type="radio"/>	00165602	N	2018-06-30	11:23:29	13.61			9801	8035211	4124
<input type="radio"/>	00165603	N	2018-06-30	11:25:07	22.75	06-2018-049 58S/28		1119	20309	N396
<input type="radio"/>	00165604	N	2018-06-30	11:29:34	23.16	06-2018-049 58S/28		1119	20309	N378
<input type="radio"/>	00165605	N	2018-06-30	11:31:46	15.73			1705	40246	B240
<input type="radio"/>	00165606	N	2018-06-30	11:34:25	22.26	06-2018-049 58S/28		1119	20309	E6
<input type="radio"/>	00165607	N	2018-06-30	11:37:29	23.95	06-2018-049 58S/28		1119	20309	N390
<input type="radio"/>	00165608	N	2018-06-30	11:41:09	23.66	06-2018-049 58S/28		1119	20309	N370
<input type="radio"/>	00165609	N	2018-06-30	11:45:30	23.27	06-2018-049 58S/28		1119	20309	N398
<input type="radio"/>	00165610	N	2018-06-30	11:49:15	Legal 22.97	06-2018-049 58S/28		1119	20309	N388
<input type="radio"/>	00165611	N	2018-06-30	11:53:02	23.01	06-2018-049 58S/28		1119	20309	N400
<input type="radio"/>	00165612	N	2018-06-30	11:57:20	23.75	06-2018-049 58S/28		1119	20309	N392
<input type="radio"/>	00165613	N	2018-06-30	11:59:36	17.97			9801	8035211	4200
<input type="radio"/>	00165614	N	2018-06-30	12:01:02	23.47	06-2018-049 58S/28		1119	20309	O8
<input type="radio"/>	00165615	N	2018-06-30	12:02:02	17.50			9801	8035211	4202
<input type="radio"/>	00165616	N	2018-06-30	12:04:43	23.20	06-2018-049 58S/28		1119	20309	O9



# Mobile Device

mobile.eroutes.info

100 % Complete

0 Loads Remaining   0 Tons Remaining   - Time Remaining

**0/27 TRUCKS ACTIVE**

Next truck	Min	Tons	ID
-	-	-	-

Following truck	Min	Tons	ID
-	-	-	-

45333/12750   0   45333/12750   1906

Tons Scaled   Tons in Transit   Tons Paved   Tickets

mobile.eroutes.info

100 % Complete

0 Loads Remaining   0 Tons Remaining   - Time Remaining

**HAULING**

Tons In Transit 0

Minutes next truck arrival

LOAD COUNT

mobile.eroutes.info

100 % Complete

0 Loads Remaining   0 Tons Remaining   - Time Remaining

**PAVING**

Tons Paved 45333

0 Tons Remaining

YIELD 99 (%)   TONS/HR 0 (average)

mobile.eroutes.info

TICKETS

06-2018-049   2018-11-28

100 % Complete

0 Loads Remaining   0 Tons Remaining   - Time Remaining

**TICKETS**

Printed Tickets 1906


00167671	2018-07-24 18:14:10
00167669	2018-07-24 17:55:46
00167667	2018-07-24 17:45:22
00167665	2018-07-24 17:20:27
00167653	2018-07-24 16:00:03
00167648	2018-07-24 15:41:25
00167647	2018-07-24 15:33:27
00167646	2018-07-24 15:30:41

Mobile Web App: [https://mobile.eroutes.info/cat\\_test](https://mobile.eroutes.info/cat_test)

# Reports...

eRoutes Reports -> Deliveries per Truck (Details) Logout

https://www.eroutes.info/content.php?mid=REPORT&rid=DISPLAY&repid=42&ReportTitle=Deliveries+per+Truck+%28Details%29&date



Menu	Reports -> Deliveries per Truck (Details)
Home	Daily Material Totals per Customer per Job (UST)
Administration	Deliveries per Customer (Details)
Inventory	Deliveries per Customer (MT - Details)
Logistics Operations	Deliveries per Customer (MT - Summary)
Reports	Deliveries per Customer (Summary)
	Deliveries per Customer per Job per Product (MT - Details)
	Deliveries per Customer per Job per Product (MT - Summary)
	Deliveries per Customer per Job per Product UST (Details)
	Deliveries per Customer per Job per Product UST (Summary)
	Deliveries per Customer/Plant
	Deliveries per Customer/Plant (MT)
	Deliveries per Job (Details)
	Deliveries per Job (MT - Details)
	Deliveries per Job (MT - Summary)
	Deliveries per Job (Summary)
	Deliveries per Job per Product (MT - Details)
	Deliveries per Job per Product (MT - Summary)
	Deliveries per Job per Product (UST - Details)
	Deliveries per Job per Product (UST - Summary)
	Deliveries per Product (Details)
	Deliveries per Product (MT - Details)
	Deliveries per Product (MT - Summary)
	Deliveries per Product (Summary)
	Deliveries per Truck (Details)
	Deliveries per Truck (MT - Details)
	Deliveries per Truck (MT - Summary)
	Deliveries per Truck (Summary)
	Heures Arrivée Camions

[\[Back\]](#)  
[\[Export as HTML\]](#)  
[\[Export as PDF\]](#)  
[\[Export as Excel\]](#)

Deliveries per Truck (Details)			
2018-01-26 0:00 - 2018-11-28 23:59			
Domain: UllandBrothers			
Domain Total: 224094.92			
Job	Date	Time	Net Weight (MT)
	2018-06-22	10:18:55	9.11
	2018-07-25	10:04:26	14.61
	2018-08-06	12:09:18	9.17
	2018-09-17	10:15:29	10.02
	2018-09-17	14:37:32	5.62
			<b>48.53</b>
			<b>48.53</b>
	2018-08-07	09:55:08	5.50
	2018-08-07	14:29:01	5.57
	2018-08-08	09:38:24	5.45
	2018-08-08	11:05:05	5.52
	2018-08-08	14:14:41	7.35
	2018-08-09	09:39:26	7.38
	2018-08-14	11:51:56	7.37
	2018-08-14	14:26:32	5.64
	2018-08-15	11:45:43	3.68
			<b>53.46</b>
			<b>53.46</b>
	2018-06-30	08:12:30	12.72
	2018-06-30	08:56:45	12.21
	2018-06-30	09:39:11	12.99
	2018-06-30	10:20:05	12.42
	2018-06-30	11:23:29	12.35

ps://www.eroutes.info/content.php?mid=REPORT&rid=DISPLAY&repid=42

# Conclusions -

- ▶ Fleet Management:
  - ▶ Truck Dispatch and Paving Superintendent
  - ▶ Project Manager
  - ▶ Quality Control
- ▶ Simple, useful, but costly

