

Louisiana DOTD's Maintenance Management System

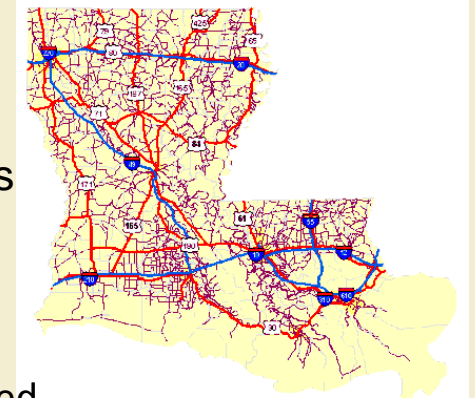
Presented by David B. Coarsey
Program Specialist, LADOTD, Section 42
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About Louisiana's infrastructure

- **Roadway**
 - 16,655 miles of roadway
 - 931 miles of interstate
- **Bridges**
 - 13,095 Bridges
 - 8,073 state-owned
 - 5,022 locally owned
- **Airports**
 - 62 general aviation airports
 - 7 commercial airports
- **Ports**
 - 7 deep draft ports (incl. LOOP)▪
 - 34 shallow-draft port authorities
- **Public Transit**
 - 11 urban & 32 rural systems
- **Freight Rail**
 - 19 freight railroads
 - 2,789 miles of railroad track
- **Public Works**
 - Northern levee districts
 - 555 regulated dams
- **Waterways**
 - 27 locks
 - 25 DOTD oversight
 - 2 owned and operated
 - Over 2,800 miles of navigable waterways
 - 274 deep draft river miles
 - Over 2,526 shallow draft river miles
- **Operations**
 - 3.6 million acres mowed annually
 - 71,000 cu. yds. of litter collected
 - 11 rest areas
 - 5 ferry service locations
 - 3000+ highway-rail crossings
 - 3000+ traffic signals
 - 1,000,000+ traffic signs
 - Over 900 buildings



WHAT IS IT?

Well, in the recent past...

- Home Grown “MOPS” Work Order System
- Growing need to Replace w/ MMS in 2001/'02
- Had to come onto the SAP Payroll system
- SAP ZWORD Work Order System 2005

The recent past.....continued

- Selection of IBM/SAP/AgileAssets 2008
- 2.5 year project to implement the ERP system
- Go-Live LAGov ERP (to include our MMS) Nov. 2010
- And what is LAGov?

LAGov is...

- **SAP - Enterprise Resource Planning (ERP):** SAP - ERP is a software system that manages human resources, finance, purchasing, and logistics information that was previously maintained in over twenty legacy systems. LA DOTD employees in Financial Services, Purchasing, Budget, Project Finance, Project Planning, Maintenance and other sections use this system.
- LA DOTD's Plant Maintenance module for both equipment and facilities is run here.

LAGov is...

- **Agile Assets - Linear Assets Systems:** Agile Assets is used by all districts and sections that perform maintenance duties on roads, bridges, signs, and signals. The software provides tools to schedule and report on maintenance work orders, including assignment of equipment, consumption of materials, and utilization of manpower.

How'd we get there?

- Collect & Clean Data Sets
- Target Destination Columns Defined in Mapping
- Create Setup Tables/Columns
- Create Main Tables
- Add Custom Columns as Required
- Setup & Batch the Import Procedures
- Complete Configuration

How'd we get there?

- Role development and security
- Testing
- Just-in-time Training
- Retraining
- And..... More training.

HOW DOES IT WORK?

How does it work?

- All maintenance work can be identified at its highest level by:
 - *Identifying* the work (something is broken; inspection required)
 - *Planning* the work (specifying the parts, labor)
 - *Scheduling* the work (when are the planned resources available)
 - *Executing* the work (technicians actually performing the job tasks; parts, labor and equipment usage)
 - *Completing* the work (recording technical findings, order settlement of costs, etc.)

Plant Maintenance

Plant Maintenance (PM) is used to track the cost of maintaining



EQUIPMENT and FACILITIES.



Cost reporting includes:

- *Equipment*
 - *Labor*
 - *Materials*
- *Use of equipment to assist with the maintenance/repair*



Plant Maintenance

- In Plant Maintenance, two basic documents are used to plan, schedule, manage, execute and record work and costs associated with technical objects.

➤ **Notifications** {A request for maintenance and a record of the results of maintenance/technical findings. Notifications are used in the normal maintenance process for facilities and fleet and to manage controlled assets/movable property}

➤ **Work Orders** {Work Order is used to plan and schedule labor, materials, and services. It is also the cost collector for the resources (parts, labor, equipment, etc.) used on the job}

Plant Maintenance

- **Notifications:**

- request the maintenance department perform a necessary task
- provide maintenance requirement information
- document work that has been performed
- collect history of a maintenance activity



Notification Data

- Description of problem w/priority
- Technical Object
- Safety, Environmental, etc
- Technical Findings

Plant Maintenance

- **Work Orders:**

- are the result of an inspection or a repair Notification on a technical object
- provide instructions to complete maintenance work
- manage and track all maintenance activities and costs
- record labor associated with the Work Order
- provide a detailed plan and historical record of maintenance tasks
- provide data for FEMA reimbursements (equipment usage and materials consumed)

What is AgileAssets MMS?

- Best of Breed
- Multi-faceted Maintenance Management/Asset Management System
- 18 state DOTs, numerous county and municipalities, other private industries
- 100% browser based

Roadway Maintenance

- Interfaces send data to AGILE from LAGov ERP.
 - Labor, Equipment, Material stock levels
 - Actual Costs, organizational cost data
 - Security, which enables Single Sign-on functionality through the LAGov Portal.
- Users have two different interface points to update or create information – network or PDA/Handheld device.
- Actual Asset records maintained within.

Asset Example-Roadways table

SECTION_INVENTORY													
* Sec. Class Code (F-Sys)	* Section (name)	Section status	Control Sec. (LRS ID)	Direction	Lane	Offset	Logmile From	Logmile To	Admin Unit	District	Maintenance Owner	User Update	Date U
06 - Minor Collector	LA 45, [9.56 to 10.21], 249-01-1-010, [11.64 to 12.29]	ROAD Active	249-01-1-010	Both (All)	All		11.64	12.29	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [10.21 to 10.61], 249-01-1-010, [11.24 to 11.64]	ROAD Active	249-01-1-010	Both (All)	All		11.24	11.64	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [10.61 to 10.83], 249-01-1-010, [11.02 to 11.24]	ROAD Active	249-01-1-010	Both (All)	All		11.02	11.24	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [10.83 to 11.68], 249-01-1-010, [10.17 to 11.02]	ROAD Active	249-01-1-010	Both (All)	All		10.17	11.02	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [11.68 to 13.83], 249-01-1-010, [8.02 to 10.17]	ROAD Active	249-01-1-010	Both (All)	All		8.02	10.17	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [13.83 to 14.6], 249-01-1-010, [7.25 to 8.02]	ROAD Active	249-01-1-010	Both (All)	All		7.25	8.02	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [14.6 to 15.16], 249-01-1-010, [6.69 to 7.25]	ROAD Active	249-01-1-010	Both (All)	All		6.69	7.25	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [15.16 to 15.81], 249-01-1-010, [6.04 to 6.69]	ROAD Active	249-01-1-010	Both (All)	All		6.04	6.69	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [15.81 to 18.2], 249-01-1-010, [3.65 to 6.04]	ROAD Active	249-01-1-010	Both (All)	All		3.65	6.04	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [18.2 to 18.62], 249-01-1-010, [3.23 to 3.65]	ROAD Active	249-01-1-010	Both (All)	All		3.23	3.65	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [18.62 to 18.8], 249-01-1-010, [3.05 to 3.23]	ROAD Active	249-01-1-010	Both (All)	All		3.05	3.23	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 45, [18.8 to 18.81], 249-01-1-010, [3.04 to 3.05]	ROAD Active	249-01-1-010	Both (All)	All		3.04	3.05	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
03 - Principal Arterial	LA 45, [18.81 to 20.2], 249-01-1-010, [1.65 to 3.04]	ROAD Active	249-01-1-010	Both (All)	All		1.65	3.04	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
04 - Minor Arterial	LA 45, [21.55 to 21.85], 249-01-1-010, [0 to .3]	ROAD Active	249-01-1-010	Both (All)	All		0	0.3	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
04 - Minor Arterial	LA 48, [0 to .91], 282-02-1-010, [11.73 to 12.64]	ROAD Active	282-02-1-010	Both (All)	All		11.73	12.64	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
07 - Local	LA 3151, [0 to 1.14], 826-62-1-010, [0 to 1.14]	ROAD Active	826-62-1-010	Both (All)	All		0	1.14	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
03 - Principal Arterial	LA 3152, [.72 to 1.83], 826-03-1-010, [0 to 1.11]	ROAD Active	826-03-1-010	Both (All)	All		0	1.11	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
03 - Principal Arterial	LA 3152, [1.83 to 2.34], 826-03-1-010, [1.11 to 1.62]	ROAD Active	826-03-1-010	Both (All)	All		1.11	1.62	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 3154, [0 to 1.2], 826-44-1-010, [0 to 1.2]	ROAD Active	826-44-1-010	Both (All)	All		0	1.2	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 3154, [1.2 to 1.25], 826-44-1-010, [Section (name)]	ROAD Active	826-44-1-010	Both (All)	All		1.2	1.25	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 3154, [1.25 to 1.54], 826-44-1-010, [1.25 to 1.54]	ROAD Active	826-44-1-010	Both (All)	All		1.25	1.54	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
03 - Principal Arterial	LA 3154, [1.54 to 2.2], 826-44-1-010, [1.54 to 2.2]	ROAD Active	826-44-1-010	Both (All)	All		1.54	2.2	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
03 - Principal Arterial	LA 3154, [2.2 to 2.4], 826-44-1-010, [2.2 to 2.4]	ROAD Active	826-44-1-010	Both (All)	All		2.2	2.4	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
03 - Principal Arterial	LA 3154, [2.4 to 2.54], 826-44-1-010, [2.4 to 2.54]	ROAD Active	826-44-1-010	Both (All)	All		2.4	2.54	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
03 - Principal Arterial	LA 3154, [2.54 to 3.13], 826-44-1-010, [2.54 to 3.13]	ROAD Active	826-44-1-010	Both (All)	All		2.54	3.13	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
04 - Minor Arterial	LA 3155, [0 to .32], 826-45-1-010, [0 to .32]	ROAD Active	826-45-1-010	Both (All)	All		0	0.32	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
06 - Minor Collector	LA 3160, [0 to .77], 845-21-1-010, [0 to .77]	ROAD Active	845-21-1-010	Both (All)	All		0	0.77	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 3160, [.77 to 2.35], 845-21-1-010, [.77 to 2.35]	ROAD Active	845-21-1-010	Both (All)	All		0.77	2.35	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201
05 - Major Collector	LA 3161, [0 to .72], 829-23-1-010, [0 to .72]	ROAD Active	829-23-1-010	Both (All)	All		0	0.72	Section 42 HQ Roadway Maintenance	District 02	District 02	IMPORT 520	3/1/201

Asset Example-TSI

* Control Sec. (LRS ID)	* Logmile From	* Logmile To	* Signal Name (TSI #)	* Signals Class Code (Type)	* Signals Status	Comments	Attachments	User Update	Date Update	* Maintenance Owner	* Admin Unit	* District	Date Conflict M
057-02-1-010	8.72	8.72	01-002	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/11/2013
003-10-1-010	0.51	0.51	01-003	Semi Actuated	Signal Active			P00209504	4/2/2012	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	6/21/2007
003-10-1-010	0.79	0.79	01-004	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/19/2013
003-09-1-010	13.43	13.43	01-005	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/25/2013
003-09-1-010	13.71	13.71	01-006	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/19/2013
003-09-1-010	13.79	13.79	01-007	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/19/2013
003-09-1-010	1	1	01-008	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/19/2013
057-03-1-010	0.056	0.056	01-010	Fixed Time	Signal Active			IMPORT448	5/14/2010	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	6/26/2002
057-03-1-010	0.126	0.126	01-011	Fixed Time	Signal Active			IMPORT448	5/14/2010	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	10/9/2002
057-03-1-010	0.65	0.65	01-012	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/13/2013
057-03-1-010	0.9	0.9	01-013	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/13/2013
057-03-1-010	1.03	1.03	01-014	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/13/2013
207-07-1-010	13.12	13.12	01-017	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/11/2013
207-08-1-010	0.3	0.3	01-018	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/4/2013
392-01-1-010	0.35	0.35	01-019	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/11/2013
003-10-1-010	8.02	8.02	01-021	Flashing Beacon	Signal Inactive			IMPORT448	5/14/2010	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	
003-10-1-010	7.83	7.83	01-022	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	12/9/2013
003-10-1-010	7.79	7.79	01-023	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/25/2013
389-01-1-010	0.13	0.13	01-027	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	12/9/2013
057-03-1-010	1.47	1.47	01-028	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/13/2013
391-01-1-010	0.1	0.1	01-029	Flashing Beacon	Signal Active			P00209504	4/24/2013	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	
003-09-1-010	5.6	5.6	01-031	Flashing Beacon	Signal Active			IMPORT448	5/14/2010	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	
003-10-1-010	2.02	2.02	01-032	Flashing Beacon	Signal Active			P00255096	10/21/2011	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	
801-30-1-010	1.19	1.19	01-037	Fully Actuated	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/25/2013
207-07-1-010	0.45	0.45	01-038	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/25/2013
208-01-1-010	0.11	0.11	01-039	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/4/2013
207-07-1-010	0.84	0.84	01-040	Fixed Time	Signal Active			P00209504	5/21/2014	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	11/25/2013
057-03-1-010	14.26	14.26	01-041	Fixed Time	Signal Active			IMPORT448	5/14/2010	Section 77 Traffic Services Eng	Section 45 Statewide Traffic Services	District	4/19/2001

How do we use it?

Work Requests

- Caller Information
- Location & issue
- Priorities and Status
- Assignment to other Administrative Units
- Creation of Work Orders

Sample Work Request

Work Requests
 2 3378 pages (3378 rows)
 24756

Share to All Districts

<p>* WR Name</p> <p>WR Type</p> <p>WR Issue Type</p> <p>* WR Status</p> <p>Priority</p> <p>Acc/Stor/Vand Ind</p> <p>* Received By P00000402</p> <p>* Admin Unit LaDOTD</p> <p>Phone #</p> <p>Date/Time Received 8/22/2014 10:54:24</p>	<p>Requested By</p> <p>Phone #</p> <p>Address</p> <p>Email Address</p> <p>Request Meeting <input type="checkbox"/></p> <p>Request Call Back <input type="checkbox"/></p> <p>Request Email <input type="checkbox"/></p>	<p>Inspected By</p> <p>Inspection Date</p> <p>Inspector Priority</p> <p>Pre-Inspect Remarks</p> <p>Maintenance Needs</p> <p>Post Inspect Remarks</p>
<p>Control Sec. (LRS ID)</p> <p>Logmile From</p> <p>Logmile To</p> <p>Structure #</p> <p>* Location Description</p> <p>Parish</p> <p>Description of Work</p>	<p>Referred To</p> <p>District/Admin Unit</p> <p>Recommendation</p> <p>Request Approved <input type="checkbox"/></p> <p>ORM Claim <input type="checkbox"/></p>	<p>Linked to WR#</p> <p>Linked to WO #</p> <p>User Update P00000402</p> <p>Date Update 8/22/2014</p> <p>Attachments</p> <p>Comments</p>

How do we use it?

Work Orders

- **Create from Work Requests, or directly**
- **Define characteristics (Asset type, activity, dates, duration, etc...)**
- **Schedule and Enter Time, Equipment and Materials**
- **These will become PM Work Orders and be available for LAGov ERP financial reporting**

Sample Work Order

Louisiana Department of Transportation and Development	Work Order Details Report	Page: 1 of 1 Date: 08/13/2014 Time: 1:07 PM
FY 2015		

Work Order #: 498138 **Admin Unit:** D61/G560 - PRH MAINT CREW/UNIT 2 **Start Date:** 07/29/2014
Project: 01 - Road Maintenance **End Date:** 07/29/2014
Status: Closed **Percent Complete:** 100 **Units:** H
Activity: 630-03 MATERIAL HAULING **WBS:**
Accomplishment: 4.50 **Cost Center:** 2764046100
Has Attachment: No **Work Request:** 23894 **Parish:** POINTE COUPEE

Comments:

Labor:

Employee Name	Employee ID	Work Date	Wage Type	Hours	Avg. Labor Cost
BROWN, LEVY	P00153673	07/29/2014	EA01 - REGULAR ATTENDANCE	4.50	\$ 112.86
POWNALL, ANDREW	P00193458	07/29/2014	EA01 - REGULAR ATTENDANCE	4.50	\$ 114.28

Equipment:

Equipment #	Equipment Class Code	Operator	Work Date	Total Hrs	Mileage	Total Cost
156013	Truck, Dump - 10 cy - to 320HP	LEVY B BROWN	07/29/2014	4.50		\$ 202.50
156243	Truck, Dump - 12 cy - to 400HP	ANDREW D POWNALL	07/29/2014	4.50		\$ 270.00

Accomplishments:

Work Date	Accomplishment	Reported Cost
07/29/2014	4.50 H - Hours	0.00
Total Accomplishment:	4.50 H - Hours	0.00

LABOR TOTAL : \$ 222.68 MATERIAL TOTAL : \$ 0.00
 COMP TIME COST : \$ 0.00 OTHER COST : \$ 0.00
 EQUIPMENT TOTAL : \$ 472.50

WORK ORDER TOTAL: \$ 695.18

Recording Work on the PDA or Handheld Device

- Primarily used by Foreman & Supervisors
- Work Offline (Not Connected)
- Download WOs to Handheld in morning
- Record Labor, Equipment & Material Usage (Day Cards) in the Field
- Capture Accomplishment Info in the Field
- Capture Location Info in the Field (GPS or Other)
- Up Load Day Cards to System at end of day

Sample PDA\Handheld

Work Orders 6:51

Work Order	Project	Asse
554	LA Road Maintenance	Road
557	LA Road Maintenance	Road
558	LA Road Maintenance	Road

Menu

Labor Day Cards 10:24

Employee Name	Hours	TRC
CASS, CHRISTOPHER	6.0	1200-Regula
CHAMBERLAIN, DAVID	6.0	1200-Regula
SCHMIDT, DAVID	6.0	1200-Regula
WALKER, BRADLEY	6.0	1200-Regula

OK Cancel

Location 5:44

Route

Direction ID

GPS From GPS To

Lat Lat

Lon Lon

Description

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OK Cancel

What has it done for us?

- **Necessary Data is at our fingertips**
 - Data analysis can be performed
 - Error detection/review
 - Trends
 - Annual figures with details to back it up
 - Questions answered in minutes
 - Officials call with specific questions
 - Unique data request from Legislature

What has it done for us?

STATEWIDE ACTIVITY FY 14									
Activity	Amount	Man Hour Used	Labor Cost (\$)	K-Time Cost (\$)	Equipment Cost (\$)	Material Cost (\$)	Other Cost (\$)	Total Cost (\$)	Cost / Unit (\$)
400-00 CRACK SEALING - HAND METHOD (LF - Linear Foot)	226201.204	21735.25	\$124,794.76	\$331.40	\$102,072.15	\$52,245.51	\$0.00	\$279,443.82	\$1.24
400-01 CRACK SEALING - MACHINE METHOD (LF - Linear Foot)	25753.85	2466.75	\$35,013.54	\$99.61	\$36,422.75	\$16,188.27	\$0.00	\$87,724.17	\$3.41
400-02 POTHOLE PATCHING - HAND METHOD (OLD) (TON - Ton (US))	7905.273	1062204.5	\$2,304,748.47	\$8,683.42	\$1,580,651.90	\$547,848.84	\$0.00	\$4,441,932.63	\$561.89
400-03 POTHOLE PATCHING - MACHINE METHOD (OLD) (YD3 - Cubic Yard)	5408.761	79733.75	\$677,332.57	\$2,128.26	\$660,163.36	\$306,327.96	\$0.00	\$1,645,952.15	\$304.31
400-04 FULL DEPTH PATCHING (YD2 - Square Yard)	15406.191	25031.75	\$352,036.92	\$11,490.52	\$532,714.96	\$251,865.64	\$0.00	\$1,148,108.04	\$74.52
400-05 LEVELING - HAND METHOD (OLD) (TON - Ton (US))	9650.215	17954	\$287,777.06	\$3,610.56	\$309,330.68	\$312,725.80	\$0.00	\$913,444.10	\$94.66
400-06 LEVELING MOTOR GRADER (OLD) (TON - Ton (US))	32904.245	62284.5	\$686,170.46	\$7,258.56	\$1,093,826.38	\$2,225,908.77	\$0.00	\$4,013,164.17	\$121.96
400-07 LEVELING PAVER (TON - Ton (US))	265160.719	180582	\$2,160,407.31	\$155,833.39	\$3,599,651.37	\$12,647,591.96	\$160.00	\$18,563,644.03	\$70.01
400-08 CHIP SEAL (YD2 - Square Yard)	45753.5	2234	\$8,025.05	\$2,396.17	\$22,868.60	\$60,648.20	\$0.00	\$93,938.02	\$2.05
400-09 SPOT SURFACE REPLACEMENT (OLD) (TON - Ton (US))	9708.148	42787.75	\$536,523.62	\$7,620.82	\$748,195.91	\$616,873.07	\$0.00	\$1,909,213.42	\$196.66

STATEWIDE ACTIVITY FY 14									
Activity	Amount	Man Hour Used	Labor Cost (\$)	K-Time Cost (\$)	Equipment Cost (\$)	Material Cost (\$)	Other Cost (\$)	Total Cost (\$)	Cost / Unit (\$)
400-07 LEVELING PAVER (TON - Ton (US))	265160.719	180582	\$2,160,407.31	\$155,833.39	\$3,599,651.37	\$12,647,591.96	\$160.00	\$18,563,644.03	\$70.01
440-18 MOWING (ACR - Acre)	171512.672	1002339.25	\$3,549,522.74	\$14,714.99	\$7,413,619.21	\$1,902.61	\$1,222.41	\$10,980,981.96	\$64.02
400-02 POTHOLE PATCHING - HAND METHOD (OLD) (TON - Ton (US))	7905.273	1062204.5	\$2,304,748.47	\$8,683.42	\$1,580,651.90	\$547,848.84	\$0.00	\$4,441,932.63	\$561.89
450-05 CLEAN & RESHAPE DITCHES - MACHINE METHOD (LF - Linear Foot)	1377515.671	154440.25	\$1,852,528.74	\$898.32	\$2,488,742.10	\$4,763.69	\$0.00	\$4,346,932.85	\$3.16
400-06 LEVELING MOTOR GRADER (OLD) (TON - Ton (US))	32904.245	62284.5	\$686,170.46	\$7,258.56	\$1,093,826.38	\$2,225,908.77	\$0.00	\$4,013,164.17	\$121.96
520-01 PAVEMENT STRIPING - MACHINE METHOD (MI - Mile)	21763.563	63793.75	\$501,183.49	\$4,002.61	\$619,535.56	\$2,753,215.72	\$0.00	\$3,877,937.38	\$178.18
630-02 ROADWAY FIELD CHECK (H - Hours)	73580.348	1303526.5	\$2,445,103.33	\$36,586.00	\$1,153,919.46	\$743.34	\$3,195.59	\$3,639,547.72	\$49.46
440-14 TREE/BRUSH TRIMMING (OLD) (EA - Each)	320064.798	241052	\$1,379,066.32	\$2,850.60	\$1,930,556.64	\$4,769.15	\$0.00	\$3,317,242.71	\$10.36

What has it done for us?

- Recent Bridge Example

Activity	Admin Unit	Amount	Labor Cost (\$)	K-Time Cost (\$)	Equipment Cost (\$)	Material Cost (\$)	Other Cost (\$)	WO#	WR#	Status	Completion Date	Parish	Start Date	Finish Date	Date Update
620-04 BRIDGES (OVER 20' LENGTH) CONSTRUCTION (LF - Linear Foot)	S51/G727 - BRIDGE RECONSTRUCTION	57	\$19,877.10	\$648.54	\$47,455.00	\$40,689.60	\$75,604.00	493180	23894	Active		EAST BATON ROUGE	7/16/2014	8/12/2014	8/5/2014
630-12 EQUIPMENT TRANSPORTATION (H - Hours)	S51/G727 - BRIDGE RECONSTRUCTION	20	\$7,252.44	\$0.00	\$2,720.00	\$0.00	\$0.00	493205	23894	Active		EAST BATON ROUGE	7/14/2014	7/24/2014	8/5/2014
460-99 OTHER BRIDGE MAINTENANCE	D61/G720 - BRIDGE MAINT		\$2,307.53	\$395.99	\$2,720.00	\$0.00	\$0.00	493350	23894	Closed	7/21/2014	EAST BATON ROUGE	7/18/2014	7/18/2014	7/22/2014
460-99 OTHER BRIDGE MAINTENANCE	D61/G720 - BRIDGE MAINT		\$692.42	\$148.40	\$872.00	\$0.00	\$0.00	493372	23894	Closed	7/21/2014	EAST BATON ROUGE	7/19/2014	7/19/2014	7/22/2014
630-00 FIELD MAINTENANCE SUPERVISION (H - Hours)	S51/G700 - STATEWIDE FIELD GANG		\$5,106.63	\$0.00	\$2,833.00	\$0.00	\$0.00	493997	23894	Active		EAST BATON ROUGE	7/21/2014	8/19/2014	8/5/2014
460-99 OTHER BRIDGE MAINTENANCE	D61/G720 - BRIDGE MAINT		\$12,502.36	\$0.00	\$7,915.00	\$175.20	\$0.00	494012	23894	Closed	8/4/2014	EAST BATON ROUGE	7/21/2014	7/24/2014	8/5/2014
460-99 OTHER BRIDGE MAINTENANCE	D61/G720 - BRIDGE MAINT		\$3,150.97	\$0.00	\$3,597.25	\$4,875.00	\$0.00	495726	23894	Closed	8/4/2014	EAST BATON ROUGE	7/25/2014	7/25/2014	8/5/2014
460-99 OTHER BRIDGE MAINTENANCE	D61/G720 - BRIDGE MAINT		\$5,714.89	\$0.00	\$4,554.00	\$0.00	\$0.00	495958	23894	Closed	8/4/2014	EAST BATON ROUGE	7/26/2014	7/27/2014	8/5/2014
460-99 OTHER BRIDGE MAINTENANCE	D61/G720 - BRIDGE MAINT		\$11,100.41	\$0.00	\$8,309.50	\$2,340.00	\$0.00	496620	23894	Closed	8/4/2014	EAST BATON ROUGE	7/28/2014	7/31/2014	8/5/2014
630-03 MATERIAL HAULING (H - Hours)	D61/G710 - PRH MAINT CREW/BR	10	\$444.17	\$0.00	\$1,250.00	\$0.00	\$0.00	497436	23894	Closed	7/30/2014	EAST BATON ROUGE	7/24/2014	7/24/2014	8/5/2014
630-03 MATERIAL HAULING (H - Hours)	D61/G710 - PRH MAINT CREW/BR	10	\$482.19	\$0.00	\$1,700.00	\$0.00	\$0.00	497441	23894	Closed	8/1/2014	EAST BATON ROUGE	7/25/2014	7/25/2014	8/5/2014
630-03 MATERIAL HAULING (H - Hours)	D61/G560 - PRH MAINT CREW/UNIT 2	5	\$222.68	\$0.00	\$472.50	\$0.00	\$0.00	498138	23894	Closed	8/1/2014	POINTE COUPEE	7/29/2014	7/29/2014	8/5/2014
630-12 EQUIPMENT TRANSPORTATION (H - Hours)	D61/G711 - PRH MAINT CREW/BR	5	\$743.74	\$0.00	\$921.40	\$0.00	\$0.00	498473	23894	Closed	8/1/2014	EAST BATON ROUGE	7/31/2014	7/31/2014	8/5/2014
400-09 LEVELING PAVER SPOT PATCHING (LF - Linear Foot)	D61/G710 - PRH MAINT CREW/BR	100	\$2,869.30	\$0.00	\$2,502.60	\$5,841.01	\$0.00	498528	23894	Closed	8/4/2014	EAST BATON ROUGE	8/1/2014	8/1/2014	8/5/2014
630-12 EQUIPMENT TRANSPORTATION (H - Hours)	D61/G710 - PRH MAINT CREW/BR		\$333.95	\$0.00	\$455.00	\$0.00	\$0.00	498644	23894	Closed	8/4/2014	EAST BATON ROUGE	8/2/2014	8/2/2014	8/5/2014
465-01 CLEAN DECK & DRAIN (LF - Linear Foot)	D61/G710 - PRH MAINT CREW/BR		\$333.95	\$0.00	\$281.20	\$0.00	\$0.00	498648	23894	Closed	8/4/2014	EAST BATON ROUGE	8/2/2014	8/2/2014	8/5/2014
460-99 OTHER BRIDGE MAINTENANCE	D61/G720 - BRIDGE MAINT		\$1,345.20	\$0.00	\$2,130.00	\$36.40	\$0.00	499352	23894	Active		EAST BATON ROUGE	8/4/2014	8/5/2014	8/5/2014
630-03 MATERIAL HAULING (H - Hours)	D61/G711 - PRH MAINT CREW/BR	4	\$249.64	\$0.00	\$520.00	\$0.00	\$0.00	499398	23894	Closed	8/6/2014	EAST BATON ROUGE	8/4/2014	8/4/2014	8/6/2014
440-01 FENCE REPAIR (LF - Linear Foot)	S51/G727 - BRIDGE RECONSTRUCTION	60	\$1,182.75	\$0.00	\$790.00	\$0.00	\$0.00	499403	23894	Active		EAST BATON ROUGE	8/5/2014	8/5/2014	8/7/2014
450-99 OTHER DRAINAGE MAINTENANCE (H - Hours)	S51/G727 - BRIDGE RECONSTRUCTION	1	\$1,475.35	\$0.00	\$790.00	\$648.00	\$0.00	499414	23894	Active		EAST BATON ROUGE	8/4/2014	8/4/2014	8/7/2014
440-01 FENCE REPAIR (LF - Linear Foot)	D61/G720 - BRIDGE MAINT		\$1,596.00	\$0.00	\$1,985.00	\$0.00	\$0.00	499940	23894	Active		EAST BATON ROUGE	8/5/2014	8/5/2014	8/6/2014
440-00 EROSION CONTROL AND REPAIR (YD2 - Square Yard)	D61/G710 - PRH MAINT CREW/BR	100	\$1,313.70	\$0.00	\$1,775.60	\$1,108.25	\$0.00	499993	23894	Closed	8/13/2014	EAST BATON ROUGE	8/5/2014	8/5/2014	8/13/2014
440-00 EROSION CONTROL AND REPAIR (YD2 - Square Yard)	D61/G720 - BRIDGE MAINT		\$1,494.00	\$0.00	\$2,045.00	\$0.00	\$0.00	500285	23894	Active		EAST BATON ROUGE	8/6/2014	8/6/2014	8/6/2014
Totals			\$81,791.37	\$1,192.93	\$98,594.05	\$55,713.46	\$75,604.00								
Labor Cost (\$)			\$81,791.37												
K-Time Cost (\$)			\$1,192.93												
Equipment Cost (\$)			\$98,594.05												
Material Cost (\$)			\$55,713.46												
Other Cost (\$)			\$75,604.00												
Estimated Grand Total			\$312,895.81												
			= Estimates												
			= Materials not in AGILE inventory												

All labor costs are subject to change with subsequent payroll runs.

What lessons have we learned?

- It's all about data it seems.
 - Timeliness – data can't be out of date
 - Location – most transportation data has a location component and it must be accurate
 - Accuracy – is more critical than ever
 - Detail – need to know more and more
 - The system's #1 enemy? **APATHY!**
- And, of course, training.

What are resultant changes?

- Our questions are changing
 - How much time was spent in storm prep?
 - How long were we in transit to a jobsite?
 - How many hours were spent waiting on equipment needing repair?
 - How many hours are our foremen and supervisors spending on administrative duties like paperwork?

What are resultant changes?

- Our metrics are changing
 - Fewer activity codes, based more on the action taken and less on the asset affected
 - Changes in units of measure

What's next for LADOTD's MMS?

- Additional Asset Maintenance Tracking
 - Noise abatement, Culverts, Guardrails, Signs
- Level of Service
- Upgrading to Version 7
- Potential for a new user interface
- Continued monitoring for innovation/improvement



Questions

David B. Coarsey
Program Specialist, LADOTD
(225) 379-1997
David.Coarsey@la.gov