

Michigan Engineers'  
Resource Library

**MERL**



Center for  
**Technology & Training**

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CENTER FOR TECHNOLOGY AND TRAINING

***Michigan Tech***

Civil & Environmental  
Engineering



# CENTER FOR TECHNOLOGY AND TRAINING

- SURFACE TRANSPORTATION
- TYPICALLY APPLIED RESEARCH
- LOCAL & STATE AGENCIES



## STRENGTH AREAS:

IT – SOFTWARE

PAVEMENT MANAGEMENT / ASSET MANAGEMENT

TRAFFIC SAFETY ENGINEERING

BRIDGE ENGINEERING

BRIDGE LOAD RATING

CONSTRUCTION ENGINEERING



# CENTER FOR TECHNOLOGY AND TRAINING

UNDER CIVIL AND  
ENVIRONMENTAL ENGINEERING

20-22 FULL TIME STAFF

- ENGINEERS,
- COMPUTER PROGRAMMERS,
- TECHNICAL WRITERS,
- BUSINESS PROFESSIONALS

10-15 STUDENTS







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**Estimate  
Track  
Analyze**

- STARTED IN 1997
- YEARLY CONTRACT WITH MDOT
  - CURRENT CONTRACT: ~\$90,000
- FREE TO MI LOCAL AGENCIES/CONSULTANTS
- ~1400 USERS





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**Estimate  
Track  
Analyze**

- PROJECT ESTIMATOR
  - MDOT'S PAY ITEM LIST AND AVERAGE UNIT PRICES
- BID UTILITY
  - COLLECT AND ANALYZE BIDS
- LOCAL JOB MANAGER
  - MANAGE THE PROJECT IN THE FIELD, TRACKING ITEM USAGE AND PAYMENTS



# LOCAL JOB MANAGER

- DAILY INSPECTIONS/POSTINGS
- PAY ESTIMATES
- CONTRACT MODIFICATIONS
- NO MATERIALS

Postings	Pay Estimates	Contract Mods	Item Summary
Date	Total	Notes	
10/17/2009	\$2,008.74	This posting is to balance our records with the contractor records t	
10/16/2009	\$33,769.90	HMA patch placed in all disturbed sidewalk areas today. No ticket	
10/15/2009	\$1,098.20	Installed sewer lateral at Santo Stefano Del Lago	
10/14/2009	\$6,963.50	These items were placed at Santo Stefano Del Lago. In addition t	
10/13/2009	\$8,138.43	Work was performed in front of Mr. Kozak's today. In addition to th	

Posting Date:	Field Book Number/Page:				
10/13/2009					
Notes:					
Work was performed in front of Mr. Kozak's today. In addition to these items, future pay estimates need to include Extra Service Length, Long-1 each, and Upsize Water Service 1" to 1.5", Long-1 each.					
<div> <div>+</div> Add Item(s) <div>×</div> Remove Selected </div>					
Pay Item	Description	Qty	Units	Price	Total
1 2040013	Sidewalk, Rem	23.300	Syd	\$2.60	\$60.58
2 4027002	Forcemain, DI, 16 inch, Tr Det G	34.500	Ft	\$32.30	\$1,114.35
3 8250245	Water and Fire Suppression Service, 6 inch, Long	1.000	Ea	\$5,400.00	\$5,400.00
4 8257030	Additional Water Main Fittings, Not Shown on Plans	265.000	Lb	\$5.90	\$1,563.50



# LOCAL JOB MANAGER

- ITEM SUMMARY
  - COMPLETELY PLACED, QTY REMAINING, UNPAID
- ITEM POSTING HISTORY

Postings Pay Estimates Contract Mods Item Summary					
Filter:					
Pay Item:		Description:			
Filter Pay Item		Filter Description		Completely Placed	
Pay Item	Description	Units	Proj Qty	Placed	Paid
2040005	Curb, Rem	Ft	105.00	105.00	0.00
4027054	San Service Connection, PVC, 18 inch	Ea	1.00	1.00	0.00
4027055	San Service Connection, PVC, 30 inch	Ea	1.00	1.00	0.00
4027060	Sewer Flow Control, 24 inch	Ea	1.00	1.00	1.00
8120102	Plastic Drum, High Intensity, Lighted, Fum	Ea	40.00	40.00	40.00
8120103	Plastic Drum, High Intensity, Lighted, Oper	Ea	40.00	40.00	40.00
8250057	Gate Valve and Box, 12 inch	Ea	2.00	2.00	0.00
8257030	Additional Water Main Fittings, Not Shown on Plans	Lb	1,500.00	2,120.00	0.00

Item Posting History			
Pay Item:		Description:	Units:
8257030		Additional Water Main Fittings, Not Shown on Plans	Lb
Project Qty:		Unit Price:	
1500.00		\$5.90	
Posting Date	FB No./Page	Qty Placed	Total
10/02/2009		265.00	\$1,563.50
10/05/2009		265.00	\$1,563.50
10/06/2009		265.00	\$1,563.50
10/07/2009		265.00	\$1,563.50
10/08/2009		265.00	\$1,563.50
10/10/2009		265.00	\$1,563.50
10/13/2009		265.00	\$1,563.50
10/14/2009		265.00	\$1,563.50





# MERL MOBILE

- ANDROID AND IOS

9:12

MERL Local Job Manager

24-AALutzHMA

3/10/2015

972015

3/10/2015

Contract Information

Contract Number

49602000 001

Description

Saginaw Township Concrete Pavement & Curb Repair 2007

Location1

Various locations within The Village Subdivision

Location2

in Saginaw Township

CLOUD CONTRACT FILES

OPEN





# MERL MOBILE

- PROJECT INFO
- POSTING HISTORY
- ADD POSTING

8:05 AM 81% [Battery Icon] [Signal Icon] [Wi-Fi Icon] [USB Icon] [Camera Icon] [App Icon]

< [Globe Icon] Project Information

102564 Anderson And Blue Schoo Roads [Document Icon] Post

Project Type Road Rehabilitation

Federal/State Number 08-5109

Federal Item Number

Control Section EDA-78522

[List Icon] Posting History

[Document Icon] Open Todays Posting





# MERL MOBILE

← Daily Posting

Posting [edit]

Posting Date: 3/10/2015

Posting Total: \$0.00

Field Book Number/Page: 1

Notes: Light foundation construction began.

+ ADD ITEM(S)

⚡ SUBMIT POSTING

Pay Item Code	Qty	Units	Price	Total
Description				

← Add Items

3 inch

Pay Item Code	Units	Quantity Available
Description		
8190029	Ft	15
Conduit, DB, 1, 3 inch		
8190032	Ft	50
Conduit, DB, 2, 3 inch		
8190044	Ft	50
Conduit, Directional Bore, 3 inch		

Current Items

Pay Item Code	Quantity	Units	Price	Total
Description				
8190029	185	Ft	\$10.00	\$1,850.00
Conduit, DB, 1, 3 inch				

← Add Items

conduit

Pay Item Code	Units	Quantity Available
Description		
8190026	Ft	120
Conduit, DB, 1, 1 1/4 inch		
8190029	Ft	200
Conduit, DB, 1, 3 inch		

Edit Posting Item Quantity

Quantity 185

Available 200

Units Ft

Description Conduit, DB, 1, 3 inch

Supplemental Description

PayItemCode 8190029

Placed 0

Project Quantity 200

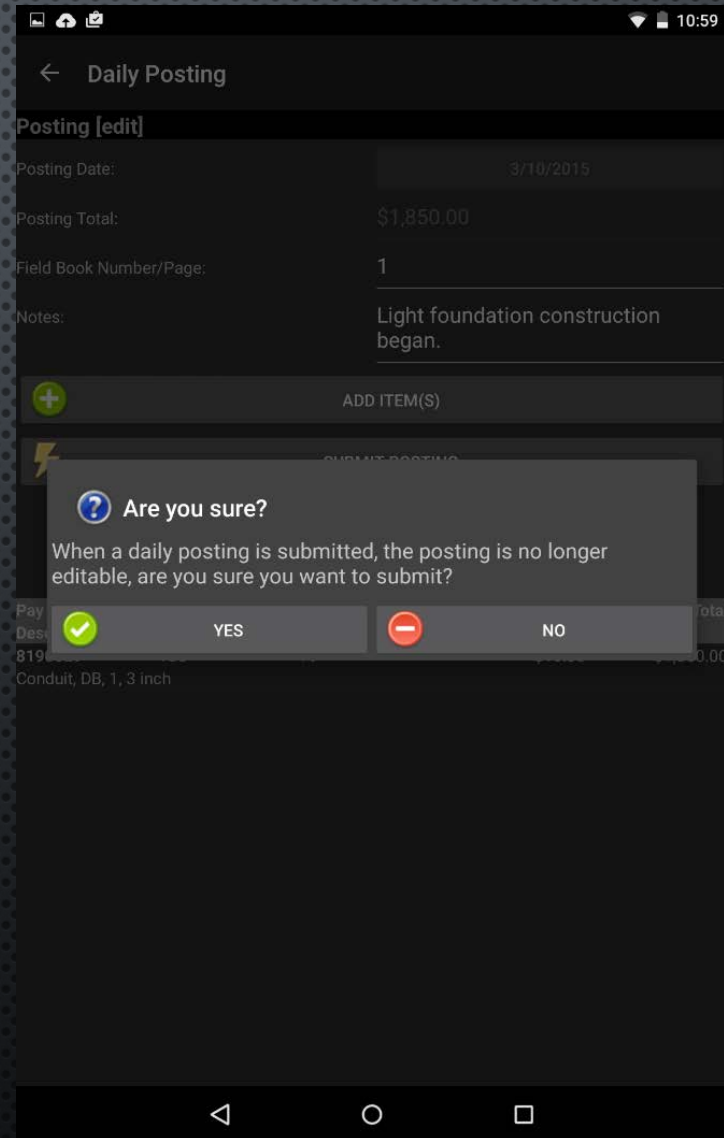
✓ SAVE ✗ CANCEL





# MERL MOBILE

- SUBMIT/UPLOAD POSTING
- DOWNLOAD TO MERL







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**Estimate  
Track  
Analyze**

- WEB-BASED PROJECT ESTIMATOR
  - COMING SOON
- WEB-BASED BID UTILITY
  - 2018
- WEB-BASED LOCAL JOB MANAGER
  - 2019





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**Estimate  
Track  
Analyze**

## CONTACT INFO:

- [MERL@MTU.EDU](mailto:MERL@MTU.EDU)
- 906-487-2102

## FREE TO DOWNLOAD:

- [HTTP://MERL.TRANS.MTU.EDU](http://MERL.TRANS.MTU.EDU)