

# Technology in Construction

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# 6 Reasons implementations fail

- ▶ Fail to Manage the goal & discount scope creep
- ▶ Fail to receive and maintain executive support
- ▶ Fail to consider & include users in the process
- ▶ Fail to inform/engage the entire organization
- ▶ Fail to gauge users technical literacy & train for it
- ▶ Fail to get professional help when it's available



# Recent Technology Updates

- ▶ VectrGPS
- ▶ HCSS Safety
- ▶ Mobility / Citrix Sharefile
- ▶ Equipment 360
- ▶ Construction Imaging – Invoice Router



# VectrGPS

Miller Brothers Construction, Inc. | benpolasek@mbcholdings.com

myhcss.com | HCSS Support

**HCSS GPS**

Map



Equipment



Locations



Alerts



Reports

## Equipment Types

Sort by: ☒ Code ☐ Type ☐ Description

\* TYPE

0

ART TRUCK

ATTACHMENT

BACKHOE

BIDWELL

BOOM TRUCK

BROOM

BUCKETS

CARDINAL

COMPACTOR

Equipment Types

Locations

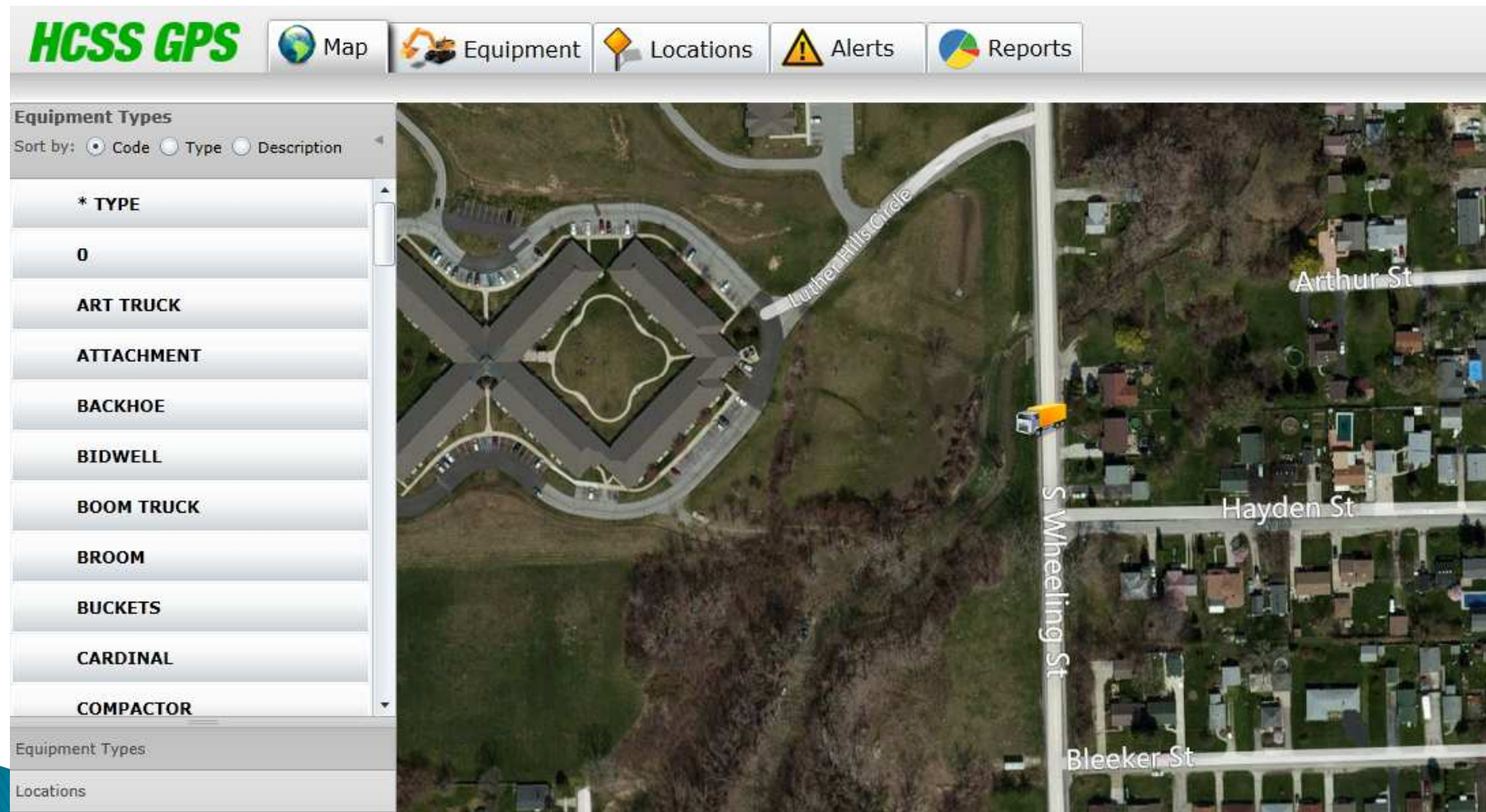
Equipment

On Map





# VectrGPS



# VectrGPS

HCSS GPS

Map

Equipment

Locations

Alerts

Reports

Setup

All Alerts

Theft Alerts

Location Alerts

Overspeed Alerts

Event Alerts

Contacts

Date ▾

Time	Equipment Code	Equipment Description	GPS ID	Alert Type		
▼ Date: Last Week						
03:21:06 PM	373	HAULMARK VAN TRAILER	20901	Location Breached		
11:43:32 AM	3125	HAULMARK VAN TRAILER	25448	Location Breached		
► Date: Two Weeks Ago						
► Date: Three Weeks Ago						
► Date: Last Month						
► Date: Older						

Print



# HCSS Safety

The screenshot displays the 'Requirements & Alerts - Safety Field' window. The interface includes a sidebar with navigation icons for 'Requirements & Alerts' (3 items), 'Outstanding Issues' (1 item), 'Daily Safety Log' (10/16/2013), 'Meetings', 'Inspections', 'Incidents', and 'Send/Receive'. The main area shows a table of alerts for job 108152, recorded by Michael Ritter. The table has columns for Type, Date, and Description. Three alerts are listed, all of type 'Inspection Follow up'. The first two are dated 9/11/2013 and the third is dated 7/29/2013. The bottom status bar indicates 'Choose a safety category, highlight an item and then double click to view and edit.' and a 'Close Safety' button.

[Requirements & Alerts] - Safety Field

Job: 108152 Recorded By: MICHAEL RITTER Date: (All Dates)

Alerts

Type	Date	Description
Inspection Follow up	9/11/2013	You have been assigned a follow up item: Proper clothing for inspection conducted on 9/11/2013
Inspection Follow up	9/11/2013	You have been assigned a follow up item: Hard hats for inspection conducted on 9/11/2013
Inspection Follow up	7/29/2013	You have been assigned a follow up item: Hard hats for inspection conducted on 7/29/2013

Choose a safety category, highlight an item and then double click to view and edit.

Close Safety

# HCSS Safety

[New Inspection] - Safety Inspection Entry\*

Save + Close Cancel

Job: 108152 Date: 10/16/2013 Recorded By: MICHAEL RITTER Status: Open

Inspection Type: Job Inspection Form: Safety : OSHA:Field OSHA

Location: Responsible Person(s): MICHAEL RITTER

Form Entry Reference Materials Documents Notes

Form Categories <<

**Behaviors (Field) 5/5**

Confined Space (Field) 0/8

Cranes And Hoisting Equipment (Field) 0/9

Electrical (Field) 0/3

Excavations (Field) 0/9

Fall Protection (Field) 0/10

Fire Protection (Field) 0/2

Hand And Power Tools (Field) 0/4

Housekeeping (Field) 0/6

Ladders / Stairs (Field) 0/7

Medical / Emergency (Field) 0/3

Rigging & Material Handling (Field) 0/5

Traffic Zones (Field) 0/6

Welding / Cutting (Field) 0/3

Motorized Equipment (Field) 0/10

Loading, Hauling, Dumping 0/8

P.P.E. (Field) 0/12

Site Ground Conditions (Field) 0/6

Items Needing Attention

Date Found	Category	Description	Corrected	Corrective Action	Due Date	Assigned To	Comment	Docs
10/16/2013	Behaviors (Field)	Proper lifting techniqu...	<input checked="" type="checkbox"/>			MICHAEL ...		
10/16/2013	Behaviors (Field)	Safety procedures be...	<input checked="" type="checkbox"/>			MICHAEL ...		

Inspection Items

Description	Per ...	Safe	Caution	At Risk	Risk Severity	Follow Up	Comment	Docs
<b>Behaviors (Field)</b>								
<input checked="" type="checkbox"/> N/a Focused on task						<input type="checkbox"/>		
<input checked="" type="checkbox"/> N/a Keeps safe distance from equipment						<input type="checkbox"/>		
<input checked="" type="checkbox"/> N/a Proper lifting techniques used						<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> N/a Safety procedures being followed						<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> N/a Task performed correctly						<input type="checkbox"/>		
<b>Confined Space (Field)</b>								
<input type="checkbox"/> N/a Atmospheric conditions						<input type="checkbox"/>		
<input type="checkbox"/> N/a Attendant						<input type="checkbox"/>		
<input type="checkbox"/> N/a Means of communication						<input type="checkbox"/>		
<input type="checkbox"/> N/a Permit						<input type="checkbox"/>		



# HCSS Safety

The screenshot displays the HCSS Safety Dashboard - HCSS Ops Center. The interface includes a top navigation bar with tabs for Safety, Scheduling, Resources, Setup, and View. A search bar on the right prompts the user to 'Enter keyword(s) for help'. Below the navigation bar, there are controls for 'Switch Windows' and 'Skin Gallery'. The main content area is divided into several sections:

- Safety Dashboard:** A section with a 'Quick Jump' bar for 'Incident Number' and 'Employee Code'.
- Days Without Lost Time:** A large digital display showing '0' for 'Days Free' as of 'Today is Wed, October 16, 2013'.
- Overview:** A table showing data for Job 108152.
- Alerts:** A table listing various safety alerts with columns for Alert Created, Job, Alert Type, Recorder, Description, and Item Date.

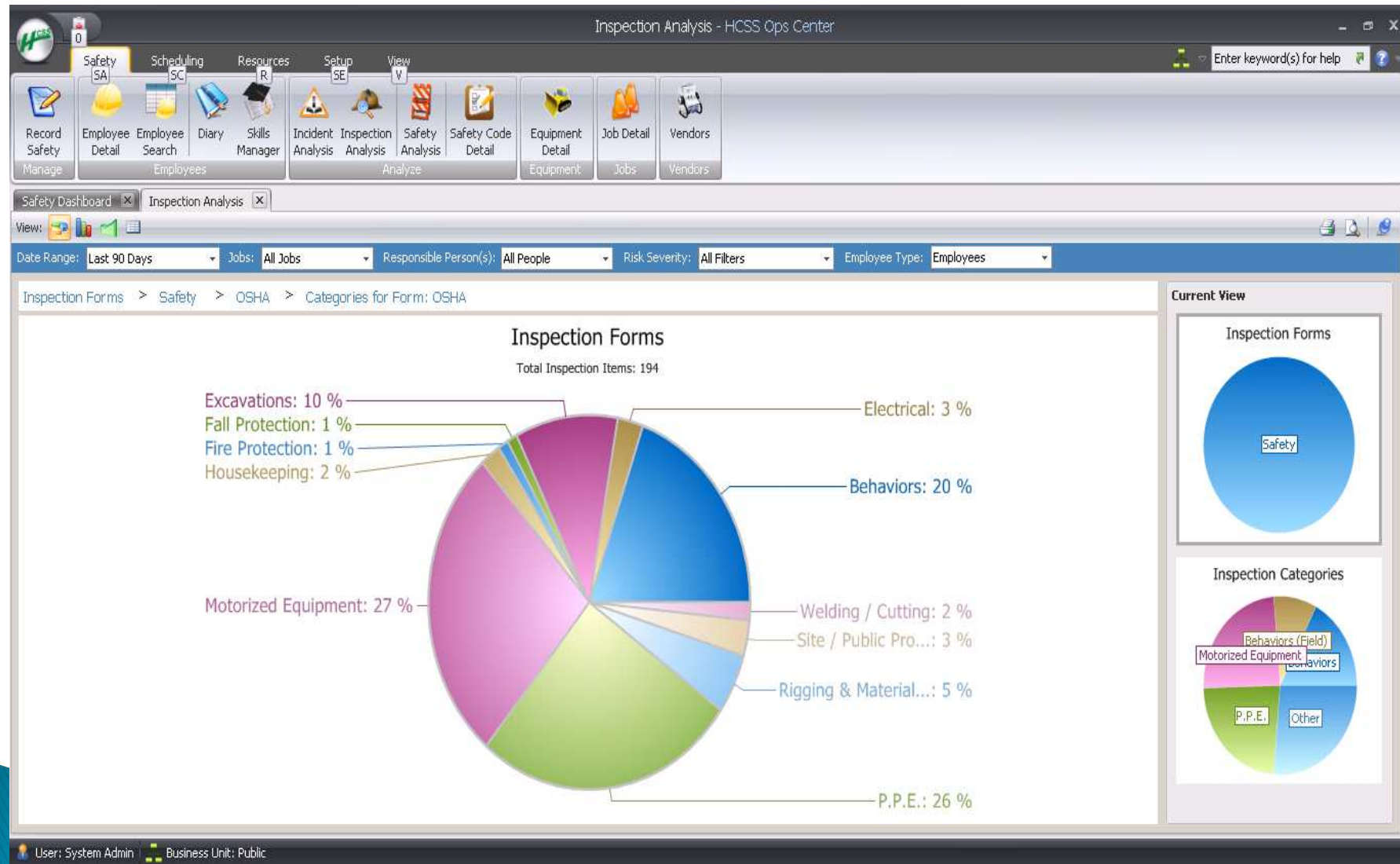
The user information at the bottom indicates 'User: MICHAEL RITTER' and 'Business Unit: Public'.

Job Name	Attendance	Outstanding Issues	# Incidents	Days Incident Free
108152	100.00 %		3	0

Alert Created	Job	Alert Type	Recorder	Description	Item Date
9/11/2013	113100	Rejected Meeting	JOHN ISOLA	Job Tasks / Hazards / Safe Work Practices rejected by MICHAEL RITTER on 9/11/2013 9:48 AM.	9/9/2013
9/11/2013	108152	Meeting Attend ...	MICHAEL RITTER	Safety Meeting Complete Excavation Inspection Log had 0.0% attendance; the threshold is 80.	9/11/2013
9/11/2013	108152	Incident Recorded	MICHAEL RITTER	Incident of type Injury has been recorded.	9/11/2013
9/10/2013	113100	Meeting Attend ...	JOHN ISOLA	Safety Meeting Job Tasks / Hazards / Safe Work Practices had 0.0% attendance; the threshold is 80.	9/9/2013
8/29/2013	112267	Incident Recorded	BENJAMIN MEYER	Incident of type General Public Accident has been recorded.	8/22/2013

# HCSS Safety



# Citrix Sharefile

**Miller Bros. Const.**

Help Log Out

Search Files and Folders

Advanced Search

Home Manage Users Send a File Request a File My Settings Apps

File Box

Inbox

Recycle Bin

View/Edit Folder Access

More Options

- View Activity Log
- Request Files
- Add Note
- Add URL
- Copy Folder
- Move Folder
- Get Direct Link
- Edit Folder Details
- Edit Folder Options

My Files & Folders

Shared Folders

Favorite Folders

113387 - Home Depot

113387 - Home Depot

Create Folder Upload Files

Download Send More Actions View

Title	MB	Uploaded	Creator
C-000 Bulletin 2R.pdf	1.09	10/9/13 4:29P	M. Private
C-100 Bulletin 2R.pdf	3.08	10/9/13 4:29P	M. Private
C-201 Bulletin 2R.pdf	1.57	10/9/13 4:29P	M. Private
C-202 Bulletin 2R.pdf	0.47	10/9/13 4:29P	M. Private
C-301 Bulletin 2R.pdf	1.00	10/9/13 4:29P	M. Private
C-302 Bulletin 2 .pdf	0.60	10/9/13 4:29P	M. Private
C-303 Bulletin 2R.pdf	0.74	10/9/13 4:29P	M. Private
C-400 Bulletin 2R.pdf	1.51	10/9/13 4:29P	M. Private
C-401 Bulletin 2R.pdf	0.92	10/9/13 4:29P	M. Private
C-402 Bulletin 2R.pdf	0.73	10/9/13 4:29P	M. Private
C-403 Bulletin 2R.pdf	0.90	10/9/13 4:30P	M. Private
C-404 Bulletin 2R.pdf	0.69	10/9/13 4:30P	M. Private
C-405 Bulletin 2R.pdf	0.55	10/9/13 4:30P	M. Private

# E360

Equipment360 Dashboard - HCSS Equipment360

Equipment360 | Scheduling | Purchasing | Resources | Reports | Setup | View

Quick Jump: Work Order ID: Equipment ID: Part #: PO #:

Current Status: Today is Thursday, October 17, 2013

Alerts: 269 | Unassigned Work Orders: 4 | Pending Time Cards: 1

Pending Time Cards

Name	Date	Hrs	OT	DT	
JOHN BREIER	4/25/2013	10.00	0.00	0.00	

Alerts

Entity Type	Entity N...	Alert Type	Alert Date	Entity Description	Location	Job Description	Meter Reading	Last Service Meter	Miles Due	Hours Due	Day...	Due D...	Description
Equipment	1042	PM	12/1/2012	1999 FORD F350 FLATBED	15009-1	ARCHBOLD YARD	157061 odometer reading on ...	0			-290	12/31/...	Annual DOT I...
Equipment	1042	PM	4/22/2013	1999 FORD F350 FLATBED	15009-1	ARCHBOLD YARD	157061 odometer reading on ...		3000		-164	5/5/2013	3,000 Mile PM
Equipment	1203	PM	12/1/2012	HUDCO PLATE TAMP 75 100 ...	15009-1	ARCHBOLD YARD		0			-290	12/31/...	Annual Inspec...
Equipment	1204	PM	12/1/2012	HUDCO PLATE TAMP 325 EXC.	15009-1	ARCHBOLD YARD		0			-290	12/31/...	Annual Inspec...
Equipment	1205	PM	12/1/2012	HUDCO PLATE TAMP 312 EXC.	512595	AEP MIDDLE CREEK - PRES...		0			-290	12/31/...	Annual Inspec...

Maintenance Work Orders

ID	Type	Name	Description	Location	Location ...	Job	Job Descri...	Creation Date	Problem Des...	Status	Status Date	P...	Assigned To
3539	Equipment	1043	1999 FORD F250 PICKUP-01	15009-1	ARCHBOL...	150...	ARCHBOLD...	4/18/2013 12:35...	1] check out ...	Open	4/18/2013 12:...	N...	SHORT'S AUTO CARE, INC.
3655	Equipment	110	2007 GMC SIERRA PICKUP-01	113450	HOOSIER ...	113...	HOOSIER L...	4/26/2013 8:14 AM	5,000 Mile PM	Open	4/26/2013 8:1...	N...	General Mechanic
3586	Job	110169	HALLET AVE. LUCAS/ FULTON CO.			110...	HALLET AV...	4/23/2013 8:03 AM	GREASE AND...	Open	4/23/2013 8:0...	N...	JOHN BREIER
3620	Job	111375	LINDE NORTH STAR PROJECT			111...	LINDE NOR...	4/24/2013 3:59 PM	GREASE AND...	Open	4/24/2013 4:0...	N...	JOHN BREIER
2362	Job	112000	ARCHBOLD SOCCER FIELD			112...	ARCHBOLD...	12/1/2012 5:03 AM	move trucks ,...	Open	12/1/2012 5:0...	N...	DENNIS RETTIG
3650	Job	112102	RT. 6 DITCH RELOCATION			112...	RT. 6 DITC...	4/26/2013 8:10 AM	GREASE AND...	Open	4/26/2013 8:1...	N...	JOHN BREIER

User: System Admin | Business Unit: Default Business Unit



# E360

Equipment360 - Mechanic Edition

Daily Tasks

My Work

Parts List

Purchases

Review Time Card

Quick Jump

Work Order ID:

Equipment ID:

References

Equipment Detail

Vendor Detail

Diary

Welcome to Equipment360, DONALD
 

10/17/2013 09:15 AM

Today: Hrs: 0 OT: 0 DT: 0  
 Week: Hrs: 0 OT: 0 DT: 0

Work Assignments

9

Prior Time Cards

1/11/2011  
 10/12/2011  
 10/14/2011  
 10/28/2011

Work Filter

Location: All Locations  
 Job: All Jobs  
 Date:   
☒ Show only my work  
☐ Show unstarted work  
 Clear Filters

New Work Order

Open Work Order

Show All

WO #	Type	Name	Location	Job	Problem Description	Priority	Status	Date	Assign...	Assignment Com...
3280	Job	113000-005		113000-005	AUCTION PREP. WORK ORDER, F...	Normal	Open	3/20/2013	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3617	Equipment	4385	112397	112397	1] CHECK OUT POSSIBLE FUEL OR...	Normal	Open	4/25/2013	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3432	Equipment	7203	113450	113450	1] remove all panel, belly pans for ...	Normal	Open	4/10/2013	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3645	Equipment	224	15009-1	15009-1	replace gps	Normal	Work Complete	4/24/2013	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3534	Equipment	3308	15009-1	15009-1	1] bed raise problem, -complete sy...	Normal	Open	4/17/2013	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3198	Equipment	438	15009-1	15009-1	250 Hour PM	Normal	Open	3/12/2013	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3522	Equipment	438	15009-1	15009-1	remove panels to check hyd. tank...	Normal	Work Complete	4/15/2013	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3199	Equipment	7129	15009-1	15009-1	1,000 Hour PM	Normal	Work Complete	3/12/2013	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3542	Equipment	967	15009-1	15009-1	100 Hour PM	Normal	Open	4/19/2013	<input checked="" type="checkbox"/>	<input type="checkbox"/>

☒ [Assigned To Mechanic] = 'Checked'

Edit Filter

User: DONALD BELL

Business Unit: Default Business Unit

# Construction Imaging – Invoice Router

- ▶ **Old Process:**
- ▶ Receptionist would open mail and give to AP Clerk (1)
- ▶ AP Clerk attaches Vendor card with data entry information (2)
- ▶ AP Clerk places the invoice on PM's desk (3)
- ▶ PM would approve invoice and place on AP Clerk's desk (4)
- ▶ AP Clerk would data enter information from vendor card into accounting software
- ▶ AP Clerk would file open payables in file until paid (5)
- ▶ Once check is written, AP clerk attaches copy of check to invoice (6)
- ▶ AP Clerk files paid invoices in file cabinet (7)
  - Invoice is touched 7 times throughout this process



# Construction Imaging – Invoice Router

- ▶ **Current process:**
- ▶ Receptionist opens mail and scans invoices (1)
- ▶ AP Clerks route invoices in IR to approvers (PM's, supervisors, etc.)
- ▶ An email is sent to “approvers” stating there are invoices waiting for approval
- ▶ PM's approve invoices
- ▶ Invoice is automatically routed back to AP Clerk upon approval
- ▶ Job cost information is automatically transferred from IR to our accounting software
- ▶ No invoices to file, all information is in IR
  - Invoice is touched 1 time with this process. After 1 week, our receptionist shreds all scanned invoices



# More benefits from Invoice Router:

- ▶ No lost invoices!
- ▶ Ability to approve invoices while out of the office
- ▶ Able to check on status of invoices ~ can run a query to view invoices waiting for approval – especially helpful at month end
- ▶ Can easily e-mail invoices
- ▶ Easily access copies of invoices for T & M work
- ▶ Ohio Sales Tax audit – no boxes to pull, just give auditors access to IR
- ▶ Document history report ~ detail information of who and when (who routed it, who approved it and when)
- ▶ Data entry occurs once in IR, no double entry of writing information down and then re-typing into accounting software

