

## Designer-Integrated Work Management for Small Utilities



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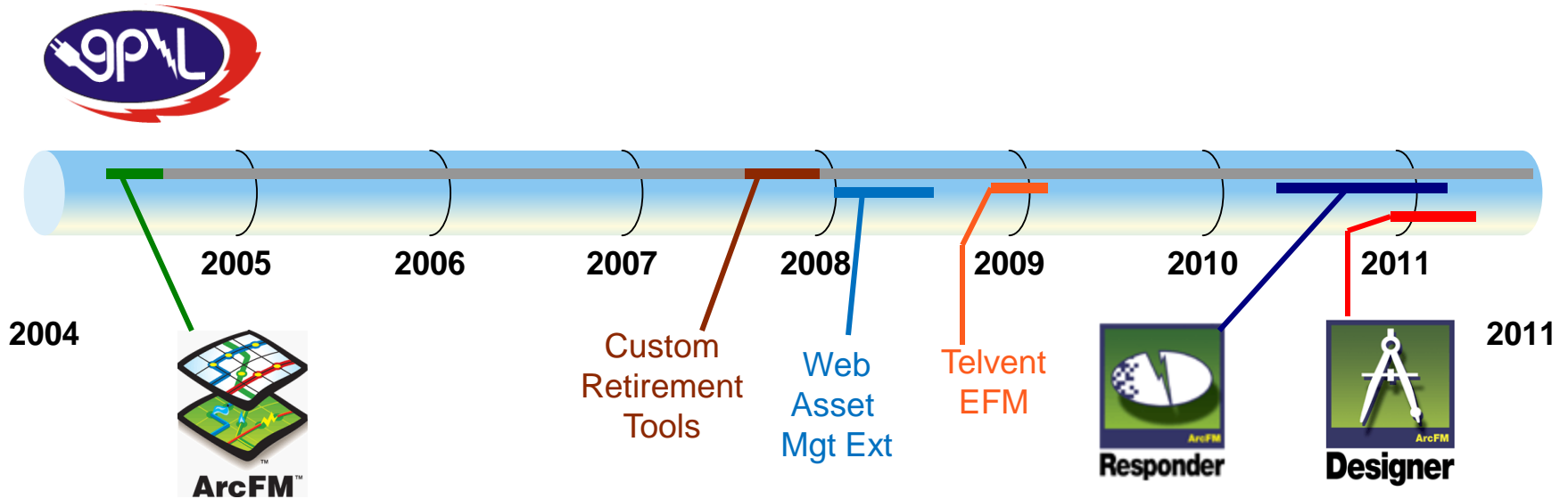
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# TELVENT

## Background



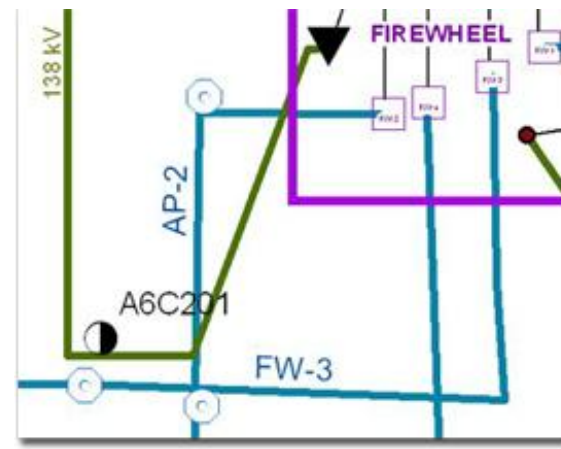
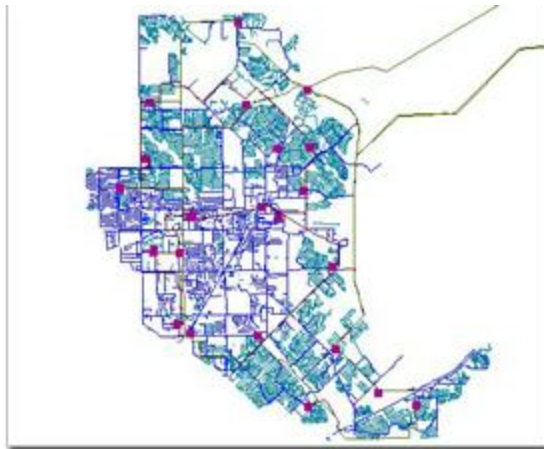
- Telvent's Domestic GIS Partner Program
- Premier Tier-3 Implementation Partner!



**TELVENT**  
Partner Program

## Business Background

- GP&L is located in Garland, Texas approximately 20 mile northeast of Dallas Texas
- **GP&L** consists of approximately 25 square miles of service area with 70,000 electric meters
- GP&L was using a homegrown Work Management System (WMS) developed in 1985 using Microsoft Access & SQL server
- GP&L has been using ArcFM since 2004



# EAM Initiative

- In 2007 GP&L was tasked with finding an Enterprise Asset Management (EAM) System
- An EAM committee was formed
- A list of system requirements was created
- After bids were submitted the committee narrowed the list of qualified vendors down to four (4)
- Vendors were notified and demos were conducted by each
- None of the EAM systems could meet all of the criteria
  - “Work arounds” required to meet all requirements
- Total cost of solution ranged from 2.5 Mil. – 5 Mil.



# EAM Initiative

- Based on state of the economy GP&L could not commit to the cost of a new EAM
- BUT the business requirements still existed...
  
- Long term relationship with SSP Innovations
- Partnered to design and build a web-based Work Management System
- Goal: To meet key small utility requirements of work design & management
- Project APPROVED - work started in early 2010



# New WMS: Workforce Manager

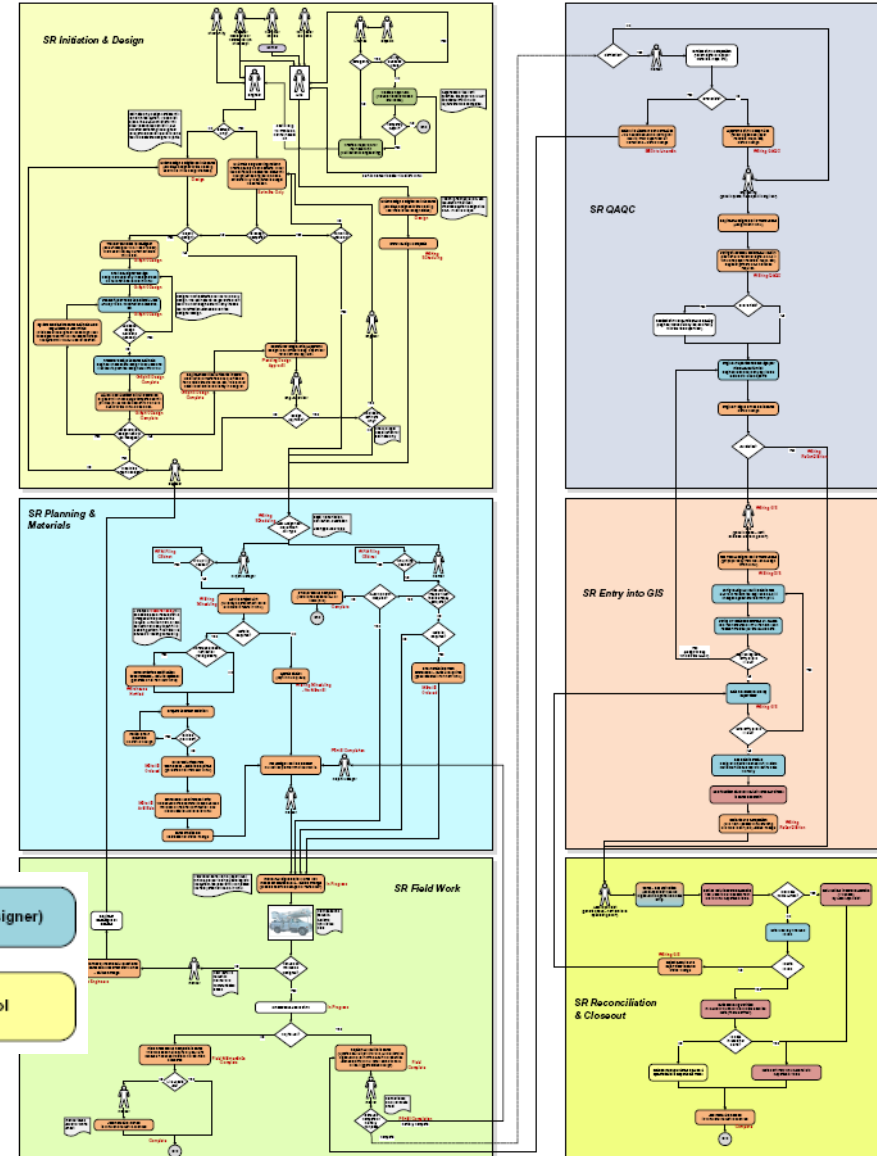
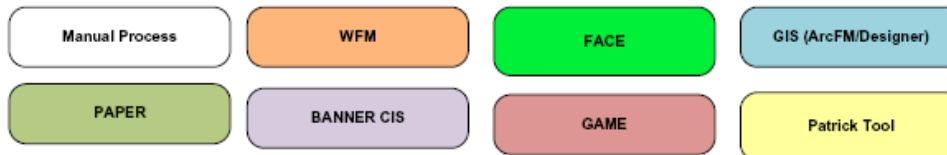
- Initial Project Goals
  - Meet Key Work Design/Management Requirements
  - Small Project Budget
  - Co-development
  - Deployment within 2010
  
- Technical Goals
  - Utilize SQL Server
  - Web-based Application Access
  - Utilize Windows Authentication
  - Robust Role-based Authorization Model



## Start with the Workflow

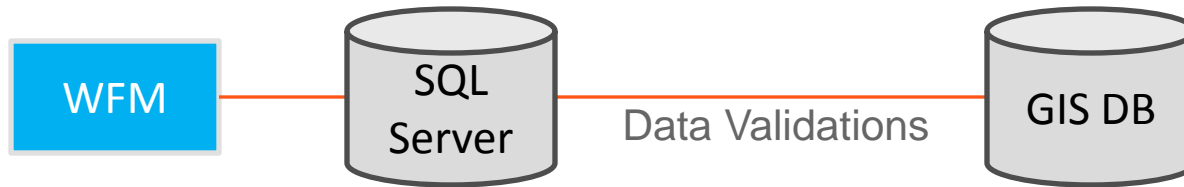
- From Start to Finish
- Broken into Phases
  - SR Initiation & Design
  - SR Planning & Materials
  - SR Field Work
  - SR QAQC
  - SR Entry into GIS
  - SR Reconciliation & Closeout

- Legend Shows Systems

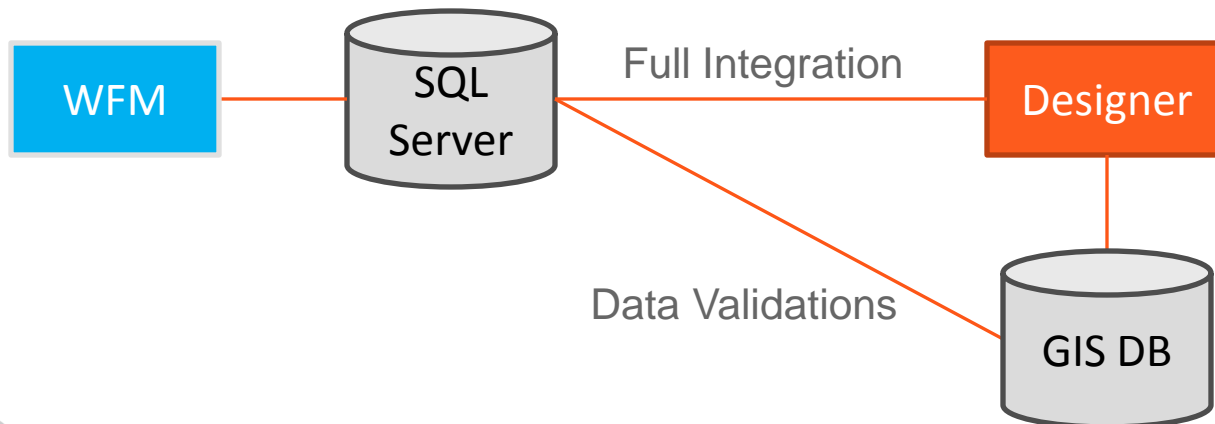


## Workforce Manager – Phased Architecture

- Phase 1 – October 2010



- Phase 2 – March 2011




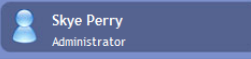
## Workforce Manager – Key Functionality

- Creation of Work/Service Requests
- Tracking of Standard Work Request, Site, Facility, and Schedule Data
- Fully Configurable Work Request Lifecycle From Creation Through Closeout
- Wizard Driven Status and Event Updates
- Capital & Maintenance Project and Charge Code Management
- Easy to Use Compatible Unit (CU) Based Estimating Tools
- Material Order Generation
- Workflow Document Management System
- Interactive Comments to Facilitate Effective Project Communication
- Role-Based Authorization Powered By Microsoft Active Directory Authentication
- User and Group Work Assignment Queues with Designated Approval Chains
- As-Built Tracking Based Off of Estimate
- Reports: Cost Estimates, Field Work Packets, Estimates vs. Actuals, and Work Aging
- Basic and Advanced Work Request Search Tools
- Compatible Unit Library Management Tools for Materials, Labor, and Equipment
- Full Audit Tracking of User Edits and Lifecycle Events
- Pre-configured Interface to ESRI/ArcFM GIS For Data Synchronization & Validation
- Pre-configured Extension to Telvent Designer for Graphical Work Design

## Demo – Workforce Manager

## Demo – Dashboard View





**Service Requests**

**SR Dashboard**

Create New SR

Order Truck Stock

Aging Report

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**Search**

SR#

Created By

Project Name

Street Num

Street Name

Customer

Pole #

Loop #

Xfr #

Circuit #

Zone #

Meter #

Air Switch #

Cap. Bank #

Advanced Search

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**WFM Admin**

Security Management

Manage WFM Roles

Batch File Uploads

Projects & Tasks


System/Lookup Tables

Construction Standards

Resources

Parts Replacement

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An SSP Innovations Solution

**Dashboard**

**My Requests**

Action	SR #	Location	MC	Budget Class	Department	Job Type	Project Name	Status	Priority	RC Date	Owner	Status Chg
	294103	BELTLINE & BUTTERMIL...		Capital	Distribution	OVERHEAD CONSTRUC...	C/O POLE	Field Complet...	Priority 3 - 6 to 18...	5/15/2007	Skye Perry	9/3/2010
	432365	5118 BARCELONA DR		Capital	Distribution	UNDERGROUND CONST...	REPLACE DAMAGED H...	Waiting QA/QC	Urgent - 5 days	8/13/2010	Skye Perry	8/23/2010
	432975	101 N GARLAND AVE	19U	Capital	Distribution	NEW COMMERCIAL SE...	NEW COMMERCIAL SE...	Field Complet...	Priority 2 - 30 days...	9/10/2010	Skye Perry	10/12/2010
	432983	101 NAAMAN SCHOOL		Capital	Distribution	NEW RESIDENTIAL S...	NEW RESIDENTIAL S...	Field Complet...	Priority 1 - Within ...	9/30/2010	Skye Perry	9/3/2010
	432984	100 NANCY JANE		Capital	Distribution	NEW RESIDENTIAL S...	NEW RESIDENTIAL S...	Field Complet...	Priority 1 - Within ...	9/30/2010	Skye Perry	10/13/2010
	432985	101 N GARLAND AVE	19U	Capital	Distribution	NEW RESIDENTIAL S...	NEW RESIDENTIAL S...	Waiting QA/QC	Priority 1 - Within ...	10/21/2010	Skye Perry	10/13/2010
	432988	105 N GARLAND AVE	19U	Maintenance	Distribution	METER SET - RESID...	METER SET - RESID...	Field Mainten...	Priority 1 - Within ...	10/29/2010	Skye Perry	10/13/2010
	432991	N GARLAND AVE & S...		Maintenance	Distribution	STREET LIGHT - IN...	STREET LIGHT - IN...	Field Mainten...	Priority 1 - Within ...	10/29/2010	Skye Perry	10/13/2010
	432993	0 Browning 555		Capital	Distribution	NEW COMMERCIAL SE...	NEW COMMERCIAL SE...	Field Complet...	Priority 3 - 6 to 18...	11/18/2010	Skye Perry	10/13/2010
	432995	101 S GARLAND AVE	29C	Maintenance	Distribution	LINE LOCATE	Line Locate	Complete	Priority 1 - Within ...	11/30/2010	Skye Perry	10/13/2010
	432997	123 GANNET DR		Maintenance	Distribution	OVERHEAD CONSTRUC...	OVERHEAD CONSTRUC...	Field Mainten...	Priority 1 - Within ...	10/14/2010	Skye Perry	10/13/2010
	432998	103 N GARLAND AVE	19U	Maintenance	Distribution	OVERHEAD CONSTRUC...	OVERHEAD CONSTRUC...	Field Mainten...	Priority 1 - Within ...	10/29/2010	Skye Perry	10/13/2010
	432999	N GARDENGATE ST &...		Capital	Distribution	NEW COMMERCIAL SE...	NEW COMMERCIAL SE...	In Progress	Priority 1 - Within ...	10/29/2010	Skye Perry	10/13/2010
	433014	100 WALL ST		Capital	Distribution	OVERHEAD CONSTRUC...	OVERHEAD CONSTRUC...	Design	Priority 1 - Within ...	10/29/2010	Skye Perry	10/27/2010
	433026	101 ACORN GREEN CIR		Capital	Distribution	TROUBLE CALL	TROUBLE CALL	Field Complet...	Priority 1 - Within ...	11/16/2010	Skye Perry	11/16/2010
	433032	501 VALARIE CT		Maintenance	Distribution	METER SET - RESID...	METER SET - RESID...	Design	Priority 1 - Within ...	11/27/2010	Skye Perry	11/17/2010
	433033	101 S GARLAND AVE	29C	Capital	Distribution	NEW COMMERCIAL SE...	NEW COMMERCIAL SE...	Graphic Desig...	Priority 1 - Within ...	11/30/2010	Skye Perry	12/3/2010
	433034	301 N GARLAND AVE	19U	Capital	Distribution	NEW RESIDENTIAL S...	NEW RESIDENTIAL S...	Graphic Desig...	Priority 1 - Within ...	12/24/2010	Skye Perry	12/9/2010
	433037	500 N GARLAND AVE	19U	Maintenance	Distribution	METER SET - RESID...	METER SET - RESID...	Graphic Desig...	Priority 1 - Within ...	11/30/2010	Skye Perry	12/3/2010
	433039	1720 COMMERCE ST	19A-Y	Capital	Distribution	POLE CHANGEOUT - ...	POLE CHANGEOUT - ...	Field Complet...	Priority 1 - Within ...	11/18/2010	Skye Perry	11/18/2010
	433044	500 TAHOE DR		Maintenance	Distribution	UNDERGROUND CONST...	UNDERGROUND CONST...	Graphic Desig...	Priority 1 - Within ...	11/30/2010	Skye Perry	12/3/2010
	433048	5010 N GARLAND AVE	9Y	Maintenance	Distribution	OVERHEAD CONSTRUC...	OVERHEAD CONSTRUC...	Graphic Desig...	Priority 1 - Within ...	11/29/2010	Skye Perry	1/14/2011
	433050	100 W HARVARD DR	29A-N	Maintenance	Distribution	STREET LIGHT - RE...	Repair Residentia...	Waiting Sched...	Priority 1 - Within ...	11/30/2010	Skye Perry	11/19/2010
	433067	105 S GARLAND AVE	29C	Capital	Distribution	NEW COMMERCIAL SE...	NEW COMMERCIAL SE...	Design	Priority 1 - Within ...	12/31/2010	Skye Perry	11/29/2010
	433068	101 MAIN ST	19Y	Capital	Distribution	NEW COMMERCIAL SE...	Main St Wal-mart	Material Orde...	Priority 2 - 30 days...	3/25/2011	Skye Perry	1/14/2011

**Waiting QAQC** \_\_\_\_\_

**Waiting GIS** \_\_\_\_\_

**Waiting Reconciliation** \_\_\_\_\_

Each user is presented with a dashboard showing all work assigned to them. Queues of work are also available based on user permissions.

## Demo – Work Creation

**Create Service Request**

(x) Job Type:

(x) Department:

(x) Budget Classification:

Creation of new work/service requests begins with a wizard driven process that ensures data validation across key fields in support of charge code / job costing. Additional plug-in creation wizards are available for more specific job types including line locates, call before you dig work orders (integrated to one call notifications), cyclical jobs, etc.

Standard work request, site, facility, and schedule data are gathered and validated against GIS as applicable.

**Service Request** Status - New (unsaved)

(x) SR Number:   created from paper SR

Assigned To:  Created By:

(x) Priority:

(x) Job Type:  (x) Department:

(x) Budget Classification:  (x) Charge #:

(x) Project Name:

Scheduled Start Date:  (x) Requested Completion Date:

Schedule Reminder Date:

Customer Name:  Customer Phone #:

Billable:  Assigned Inspector:

**Location / Address**  Street Address  Intersection

(x) Starting #:  Ending #:

Pre-dir:  (x) Street:  Suffix:  Post-dir:

Dallas MAPSCO #:

Description of Work Wanted:

## Demo – Work Creation

**Site Data**

**Access Data**

Alley

Easement

Paved

Dirt

**Site Ready**

Site Ready

Tree Trimming Required

Date Trimmed

DIGTESS Confirm Date

Date Inspected

DIGTESS Confirm #

**Load Data**

Load

Secondary Voltage

Secondary Cond. Size

# of Wires

Main Panel AMPS

Length

**Meter Data**

**Old**

SN  Mfg

Volts  Reading

Mult  Demand Reading

KWHR ERT SN  KW Demand ERT SN

**New**

SN  Mfg

Volts  Reading

Mult  Demand Max

PT  CT

Demand Mult  Digits

KWHR ERT SN  KW Demand ERT SN

Based on the type of work being performed, additional (configurable) data fields are available. These additional fields are grouped into configurable data panels to allow them to be easily added to the work request page as needed based on the type of job. Some examples of these configurable panels are shown above. New panels can be added and configured to support specific utility data requirements.

## Demo – Non-graphical Estimating Tools

Estimate - Total: \$5121.66

Material: \$1048.36    Equipment: \$2331.00    Labor: \$1742.30    AP: \$0    Construction Stds

Install || OH-1650AW || QTY=2

Install || OH-45 || QTY=2

Material

- 535-65-12115 || SPEC QTY=1 EA || TOTAL QTY=2 EA

Equipment

- BUCKET TRUCK: 3 HR
- HOLE DIGGER: 2 HR
- LINE TRUCK: 3 HR
- MATERIAL TRAILER: 3 HR
- PICKUP: 3 HR
- POLE CAT: 3 HR

Labor

- APPRENTICE LINE: 3 HR
- JOURNEYMAN LINE: 6 HR
- SENIOR LINEMAN: 3 HR

**Edit Item**

Standard	OH-45
Title	45' WOOD POLE
Install/Remove	Install
Std Quantity	2

Save    Delete

New Standard: Install #4 Qty: [ ] [ ? ]

New Material: [ ]

Fixed Cost AP Items:

Type	Description	PO#	Cost	Add
[ ]	[ ]	[ ]	[ ]	[ Add ]

#4 5 KV CABLE == CABLE, 5 KV # 4 AWG OKOGUARD  
 #4 ACSR TRIPLEX SERVICE == WIRE SERVICE DROP #4 AWG ACSR TRIPLEX PERIWINKLE  
 #4 AL TIE WIRE == #4 AL TIE WIRE (25 lbs. Roll) 645 ft per roll  
 #4 BARE ACSR == #4 BARE ACSR  
 #4/0 ACSR == #4/0 ACSR  
 #4/0 ACSR SERVICE QUADRAPLEX == CABLE SER DROP #4/0 ACSR QUADROPLEX APPALOOSA  
 #4/0 ACSR TRIPLEX == CABLE, SERVICE DROP #4/0 ACSR TRIPLEX, CERAPUS  
 #4/0 AL W/1 2/0 == CABLE ALUM TWO 4/0 AND ONE 2/0 USE  
 #4/0 AWG SERVICE == #4/0 AWG CONDUCTOR, SERVICE DROP 7 STR  
 #4/0 CU AWG CABLE == CABLE CU 4/0 AWG 19 STR. SNGL COND. 600V TUPE RHH, RHW, USE

Once the Work Request has been created, a compatible unit (CU) estimate can be created using the WFM estimate control. This control allows the engineer/designer to install or remove CU's, materials, or fixed cost items using WFM's type-ahead controls. The material, equipment, and labor totals are maintained as the estimate is updated. Labor/Equipment-only CU's can be used for maintenance jobs.

## Demo – Estimating Tools – Material List

Estimate - Total: \$5130.06

Material: \$1056.76    Equipment: \$2331.00    Labor: \$1742.30    AP: \$0    **Material List**

280-07-13115		SPEC QTY=1 FT		TOTAL QTY=20 FT	⊕
285-08-10730		SPEC QTY=2 EA		TOTAL QTY=4 EA	⊕
285-08-10786		SPEC QTY=2 EA		TOTAL QTY=4 EA	⊕
285-08-10788		SPEC QTY=1 EA		TOTAL QTY=2 EA	⊕
285-08-15310		SPEC QTY=2 EA		TOTAL QTY=4 EA	⊕
285-08-56634		SPEC QTY=2 EA		TOTAL QTY=4 EA	⊕
285-08-85430		SPEC QTY=4 EA		TOTAL QTY=8 EA	⊕
285-10-11125		SPEC QTY=1 PR		TOTAL QTY=2 PR	⊕
285-21-45000		SPEC QTY=1 EA		TOTAL QTY=2 EA	⊕
285-39-10246		SPEC QTY=3 EA		TOTAL QTY=6 EA	⊕
285-39-14039		SPEC QTY=1 EA		TOTAL QTY=2 EA	⊕
286-42-23310		SPEC QTY=1 EA		TOTAL QTY=2 EA	⊕
286-42-25100		SPEC QTY=3 EA		TOTAL QTY=6 EA	⊕
535-65-12115		SPEC QTY=1 EA		TOTAL QTY=2 EA	⊕

**Edit Item**

Material	280-07-13115
Warehouse	#4/0 ACSR
Description	PENGUIN 6/1 STR.
Spec Quantity	1
Total Quantity	<input type="text" value="20"/>

Save    Delete

**New Standard:**  Qty:

**New Material:**  Qty:

**Fixed Cost AP Items:**

Type	Description	PO#	Cost	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Add"/>

The estimate can be viewed in the CU tree view as shown previously or viewed strictly at the material level. These views can be changed interactively by the user to provide maximum flexibility when editing the estimate.

# Demo – Document Management

☐ — Attachments —

**Job Prints:** SR.pdf added by Perry, Skye on 1/14/2011 11:51:27 PM [delete]

**Material Order:** MaterialOrderForSR\_433068.txt added by Perry, Skye on 1/14/2011 11:53:32 PM [delete]

C:\Documents and Settings\sperry\My Documents\DamperScreenshot.jpg

New Attachment Type

Project-related documents can be uploaded into WFM at any point during the work lifecycle via the attachments panel. The type of attachments can be configured for the specific utility. The documents are indexed and stored within the WFM server application. The documents are then available to all users with access to the specific work request. Common uses of this module include capturing graphic design maps/schematics, material order confirmations, as-built markups, and any other document that contains applicable work request information from a related system or process.

## Demo – Comments / Communication

☐ — Comments —

<b>Perry, Skye</b> 1/15/2011 12:09 AM	I met with the developer today and inspected the job site. This is a high priority job per the customer. If more information is needed on scheduling, the customer can be contacted directly via phone or email.
<b>Perry, Skye</b> 1/15/2011 12:10 AM	Update - use email joe@devstore.com or phone 876-461-2222

Post a Comment

*Email these users*  
(CTRL+select for multiple):

Alexander, Roger	<input type="checkbox"/>	Email 'Created By' User
Barnes, Larry	<input type="checkbox"/>	Email 'Assigned To' User
Beck, George		
Brister, Charlie		

Post Comment to Board

The comments section facilitates centralized, effective project communication with email notifications to one or more team members. Comments are tracked by the user who made the comment along with a timestamp. The comments are shown in chronological order and facilitate all types of conversation, notes, and commentary. In addition to posting a new comment, the tool allows the user to notify other users via email. The email will contain a link directly to the WFM work request along with the comment/response that was made. The list box of ALL users provides an easy way to email multiple users with the comment.

## Demo – Audit Tracking

History

Date	Time	User Name	Edit	Details
11/18/2010	8:29AM	Garrett, John	New SR Created	Service Request Header JobTypeID: --> POLE CHANGEOUT - OVERHEAD DeptID: --> Distribution BudgetClassID: --> Capital ChargeCode: --> EC-D7531-001-1 JobName: --> POLE CHANGEOUT - OVERHEAD PriorityID: --> Priority 1 - Within 30 days DescWorkWanted: ***MODIFIED*** Billable: --> N AssignedToID: --> John Garrett RequestedCompletionDate: 1/1/0001 --> 11/18/2010 CurrentStatus: New SR --> Design
11/18/2010	8:29AM	Garrett, John	SR Updated	Location Data AddressNbrFrom: 0 --> 1720 AddressName: --> COMMERCE AddressSuffix: --> ST DallasMAPSCO: --> 19A-Y
11/18/2010	8:32AM	Garrett, John	Estimate Updated	Construction Standard Added
11/18/2010	8:32AM	Garrett, John	Estimate Updated	Construction Standard Added
11/18/2010	8:33AM	Garrett, John	SR Updated	Added New Circuit: Pole# h7a-214
11/18/2010	8:33AM	Garrett, John	Task Fired	Mark Design Complete (send to Waiting Scheduling)
11/18/2010	8:33AM	Garrett, John	SR Updated	Service Request Header AssignedToID: John Garrett --> Juan Martinez
11/18/2010	8:33AM	Garrett, John	Status Change	Status Changed: Design --> Waiting Scheduling
11/18/2010	8:34AM	Garrett, John	Task Fired	***Reassign Service Request
11/18/2010	8:34AM	Garrett, John	SR Updated	Service Request Header AssignedToID: Juan Martinez --> John Garrett
11/18/2010	8:34AM	Garrett, John	Task Fired	Assign SR to a Crew (mark as In Progress)
11/18/2010	8:35AM	Garrett, John	SR Updated	Service Request Header AssignedToID: John Garrett --> Danny Ruff
11/18/2010	8:35AM	Garrett, John	Status Change	Status Changed: Waiting Scheduling --> In Progress
11/18/2010	8:36AM	Garrett, John	Task Fired	***Reassign Service Request
11/18/2010	8:36AM	Garrett, John	SR Updated	Service Request Header AssignedToID: Danny Ruff --> John Garrett

All edits and lifecycle events are captured with a timestamp and logged to the audit tracking module for the work request. This is an invaluable tool for reviewing “who” did “what” “when” to the work request. The audit tracking will track all changes against a WR including field edits, comments, attachments, and most importantly status changes. The following screenshot shows the detail captured by the audit tracking module.

## Demo – Reports

WFM		Estimated Parts List					
SR # 433068				Total Parts Cost: \$1056.76			
Standard	Std Qty	Warehouse#	Description	Spec Qty	Unit Cost	Total Qty	Total Cost
#4/0 ACSR	20	280-07-13115	#4/0 ACSR PENGUIN 6/1 STR.	1	\$0.42	20	\$8.40
OH-1650AW	2	285-08-10730	BOLT MACHINE 1/2" X 6" W/NUT 100/BX	2	\$0.69	4	\$2.76
OH-1650AW	2	285-08-10786	BOLT MACHINE 5/8" X 12" W/NUT	2	\$0.86	4	\$3.44
OH-1650AW	2	285-08-10788	BOLT MACHINE 5/8" X 14" W/NUT	1	\$0.96	2	\$1.92
OH-1650AW	2	285-08-15310	WASHER SQUARE 1/2" 500/BX	2	\$0.16	4	\$0.64
OH-1650AW	2	285-08-56634	NUT 5/8" SQ MACHINE	2	\$0.14	4	\$0.56
OH-1650AW	2	285-08-85430	WASHER SPRING DOUBLE COIL 5/8" S				
OH-1650AW	2	285-10-11125	BRACE CROSSARM WOOD 60" SPAN				
OH-1650AW	2	285-21-45000	CROSSARM, 8 FT TANGENT FIBERGLA				
OH-1650AW	2	285-39-10246	PIN STEEL 5/8" X 5-3/4" W/NUTS				
OH-1650AW	2	285-39-14039	1 PT RACK GALV 1-1/2" X 1/2" X 1/8"				
OH-1650AW	2	286-42-23310	INSULATOR SPOOL TYPE SECONDAR				
OH-1650AW	2	286-42-25100	INSULATOR PIN TYPE 15KV				
OH-45	2	535-65-12115	POLE WOOD UTILITY 45' CL 2				

	A	B	C	D	E	F	G	H
1	<b>WFM SR Aging Report</b>							
2								
3	<b>Data Extracted</b>	1/15/2011						
4	<b>Aging Days</b>	7						
5	<b>Status Filter</b>	Not Specified						
6	<b>Job Type Filter</b>	Not Specified						
7	<b>Department Filter</b>	Not Specified						
8	<b>Budget Classification Filter</b>	Not Specified						
9	<b>Total SR Count</b>	936						
10								
11	<b>SR #</b>	<b>Budget Class</b>	<b>Department</b>	<b>Job Type</b>	<b>Status</b>	<b>Priority</b>	<b>RC Date</b>	<b>Owner</b>
12	384417	Capital	Distribution	OVERHEAD CONSTRUC...	Design	Priority 3 - 6 to 18...	7/1/2009	Joe Enna
13	389769	Capital	Distribution	OVERHEAD CONSTRUC...	Design	Priority 3 - 6 to 18...	11/24/2010	John Garrett
14	396560	Capital	Distribution	OVERHEAD CONSTRUC...	Design	Priority 3 - 6 to 18...	8/15/2009	Joe Enna
15	397424	Capital	Distribution	OVERHEAD CONSTRUC...	Design	Priority 3 - 6 to 18...	8/15/2009	Joe Enna
16	397425	Capital	Distribution	OVERHEAD CONSTRUC...	Design	Priority 3 - 6 to 18...	8/16/2009	Joe Enna
17	397429	Capital	Distribution	OVERHEAD CONSTRUC...	Design	Priority 3 - 6 to 18...	8/15/2009	Joe Enna
18	402009	Capital	Distribution	UNDERGROUND CONST...	Design	Priority 3 - 6 to 18...		Cliff York
19	420893	Capital	Distribution	UNDERGROUND CONST...	Design	Priority 3 - 6 to 18...	10/4/2010	Joe Enna
20	430504	Capital	Distribution	UNDERGROUND CONST...	Design	Priority 1 - Within ...		Cliff York

WFM supports several reports that can be generated directly within the web application. These reports can be easily customized to support a specific utility's requirements.

## Demo – Search Tools

**Search**

SR#

Created By

Project Name

Street Num

Street Name

Customer

Pole #

Loop #

Xfr #

Circuit #

Zone #

Meter #

Air Switch #

Cap. Bank #

*Advanced Search*

145 records

**Basic Search**

Matching service requests with Circuit# = AP-1

Action	SR #	Location	MC	Budget Class	Department	Job Type	Project Name	Status	Priority	RC Date	Owner	Status Chg
<a href="#">▶</a>	6654	APOLLO AUTO TRANSFOR...		Maintenance	Distribution	OVERHEAD CONSTRUC...	REMOVE 69KV - 795...	Complete	Priority 3 - 6 to 18...		unassigned	8/23/2010
<a href="#">▶</a>	34174	GALAXIE & LINDENSHIR...		Maintenance	Distribution	OVERHEAD CONSTRUC...	REPAIR CAP-BANK	Complete	Priority 3 - 6 to 18...		unassigned	8/23/2010
<a href="#">▶</a>	34266	JUPITER RD & CAMPBEL...		Maintenance	Distribution	OVERHEAD CONSTRUC...	REPAIR CAPACITOR ...	Complete	Priority 3 - 6 to 18...		unassigned	8/23/2010
<a href="#">▶</a>	34824	APOLLO 1 & 2		Maintenance	Distribution	OVERHEAD CONSTRUC...	LOAD BALANCING	Complete	Urgent - 5 days		unassigned	8/23/2010
<a href="#">▶</a>	68841	APOLLO SUB.		Maintenance	Distribution	UNDERGROUND CONST...	REBUILD U. G. FEE...	Complete	Priority 3 - 6 to 18...	3/30/2001	unassigned	8/23/2010
<a href="#">▶</a>	76611	R.O.W. BEHIND APOLLO...		Maintenance	Distribution	OVERHEAD CONSTRUC...	U.G. DIP AT AP-1	Complete	Priority 3 - 6 to 18...	4/20/2001	unassigned	8/23/2010
<a href="#">▶</a>	78483	APOLLO 1		Maintenance	Distribution	TROUBLE CALL	FEEDER LOCKOUT	Complete	Urgent - 5 days		unassigned	8/23/2010
<a href="#">▶</a>	83529	3406 HIGH PLATEAU		Maintenance	Distribution	OVERHEAD CONSTRUC...	CHECK CAPACITOR B...	Complete	Priority 3 - 6 to 18...		unassigned	8/23/2010
<a href="#">▶</a>	83871	4031 STAR TREK		Maintenance	Distribution	TROUBLE CALL	LOW WIRES	Complete	Urgent - 5 days		unassigned	8/23/2010
<a href="#">▶</a>	87853	test 1		Maintenance	Distribution	OVERHEAD CONSTRUC...	TEST 1	Cancelled	Priority 3 - 6 to 18...	5/24/2001	unassigned	8/23/2010
<a href="#">▶</a>	101951	LOOKOUT 2-POLES E.OF...		Maintenance	Distribution	OVERHEAD CONSTRUC...	CAP-BANK REPAIR	Complete	Priority 3 - 6 to 18...		unassigned	8/23/2010
<a href="#">▶</a>	104088	LANDERSHIRE & GALAXI...		Maintenance	Distribution	OVERHEAD CONSTRUC...	SECURE B PHASE	Complete	Urgent - 5 days		unassigned	8/23/2010
<a href="#">▶</a>	104244	LANDERSHIRE & GALAXI...		Maintenance	Distribution	TROUBLE CALL	FIRE CALL	Complete	Urgent - 5 days		unassigned	8/23/2010
<a href="#">▶</a>	105273	4422 GALAXIE RD		Maintenance	Distribution	TROUBLE CALL	L-139 P10 LTS OUT...	Complete	Urgent - 5 days		unassigned	8/23/2010
<a href="#">▶</a>	106604	7030 N SHILOH RD		Maintenance	Distribution	TROUBLE CALL	UNLOCK TAP CAN	Complete	Urgent - 5 days		unassigned	8/23/2010
<a href="#">▶</a>	110634	JUPITER RD N OF BIG ...		Maintenance	Distribution	OVERHEAD CONSTRUC...	FUSE MELTED ON C...	Complete	Priority 3 - 6 to 18...		unassigned	8/23/2010
<a href="#">▶</a>	111264	3130 CROSSTIMBER LAN...		Maintenance	Distribution	TROUBLE CALL	BLINKING LIGHTS	Complete	Urgent - 5 days		unassigned	8/23/2010
<a href="#">▶</a>	111268	3326 BUCKETHORN		Maintenance	Distribution	TROUBLE CALL	BLINKING LIGHTS	Complete	Urgent - 5 days		unassigned	8/23/2010
<a href="#">▶</a>	112121	GALAXIE RD.		Maintenance	Distribution	OVERHEAD CONSTRUC...	CHANGE OUT POLES ...	Complete	Priority 3 - 6 to 18...	3/30/2002	unassigned	8/23/2010
<a href="#">▶</a>	112910	2917 TEAKWOOD		Maintenance	Distribution	METER RECONNECT	RECONNECT	Complete	Priority 3 - 6 to 18...		unassigned	8/23/2010

Effective search tools are an important function of any work management system. WFM provides two independent search tools to allow users to locate the data they are looking for quickly and efficiently. The first search tool is the 'basic' search which is available in the menu section of the WFM application and is accessible on all pages within the application. The basic search allows a user to search on a wide range of company parameters.

## Demo – Advanced Search Tools

Advanced Search - Service Requests

**System Saved Searches**

Capital Work Waiting Scheduling

**User Saved Searches**

Back To Engineers SRs  
 Completed by Me  
 Customer Delay SRs  
 Design SRs  
 Estimate Only SRs  
 In Progress SRs

**Custom Searches**

BudgetClassification  
 ChargeCode  
 CircuitDataType  
 ContactName  
 ContactPhone  
 CreateDate  
 CreatedBy  
 Department  
 DescriptionOfWorkWanted  
 DIGTESSConfirmDate  
 DIGTESSConfirmNbr  
 FacilitiesDamageReport  
 JobType  
 LastStatusChangeDate

=  
 <>  
 LIKE  
 >  
 >=  
 <  
 <=  
 AND  
 OR  
 IS  
 IN  
 UPPER  
 (  
 )  
 ,  
 %

'Capital'

'Maintenance'

select \* from ServiceRequest WHERE:  
 Status = 'Waiting Scheduling' AND  
 BudgetClassification = 'Capital'

Save the custom search with this name (please verify first):  System

The advanced search tools take the searches a step farther by allowing the user to construct detailed query level searches. The user can build dynamic searches by double clicking the available fields, the comparison operators, and the available unique values to populate the query engine. Alternatively users can type directly into the query engine. Commonly used custom searches can be saved for repeated future use at either the user or system level.

## Demo – CU Library Management

Add/Edit Construction Standard

**Search for SR's using Construction Standard:**

Optional Status Filter: Standard

Back to Engineers  
 Back to Lineman  
 Cancelled  
 Complete

Search

**Load Existing Construction Standard**

Name: OH-50 Load Details

Description: 50' WOOD POLE

Active: Active

Valid Departments:  Distribution  
 Substation  
 Transmission

Save Delete

**Edit Resources for OH-50** Install

---

**Materials - \$500.95 (1)**

Action	Warehouse #	Description	QTY	UOM	Unit Cost	Total Cost
✕ ✎	535-65-12125	POLE WOOD UTILITY 50' CL 2	1	EA	\$500.95	\$500.95

Add Material:  Qty:  ?

---

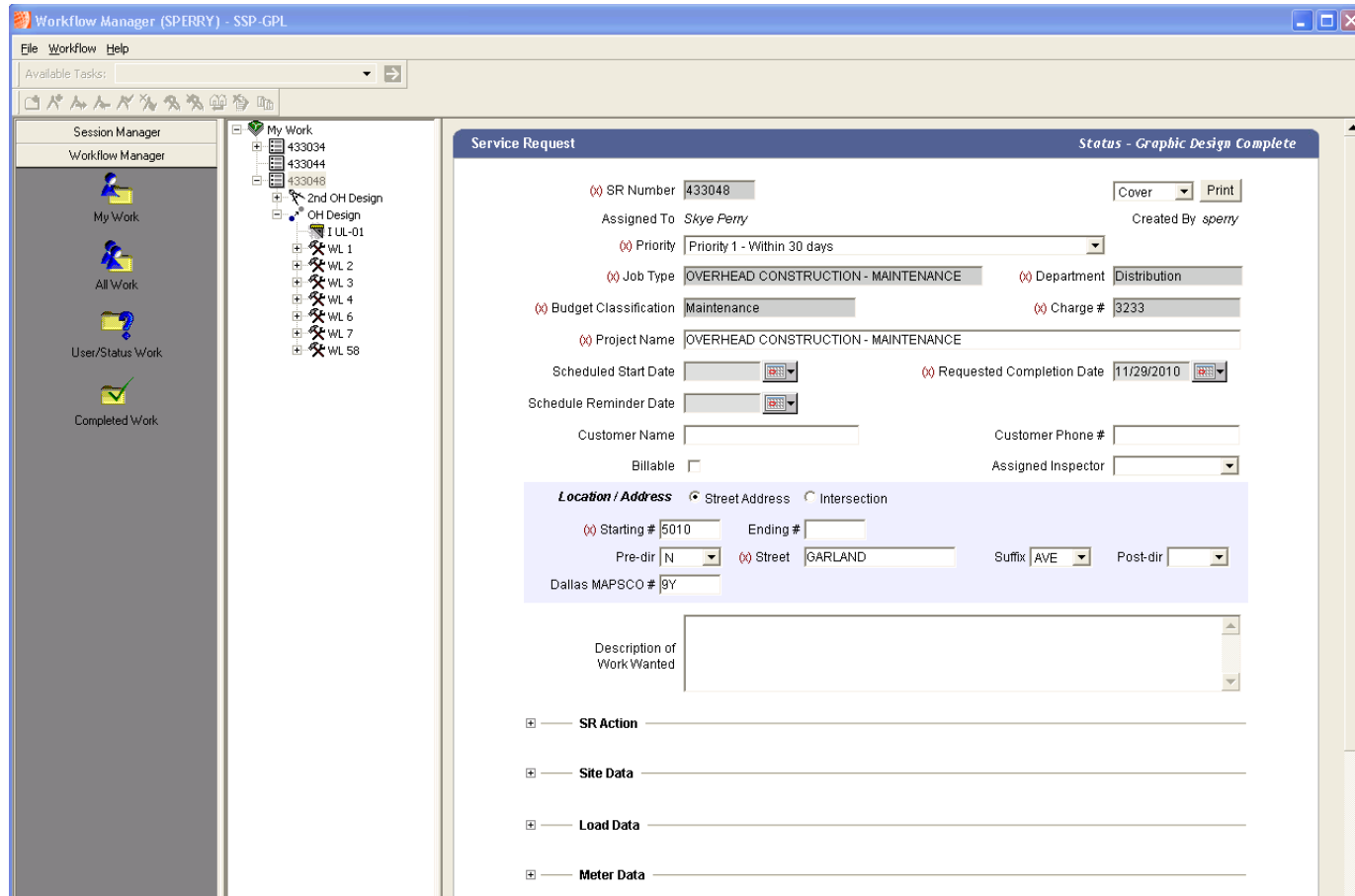
**Labor - \$275.10 (3)**

Action	Type	QTY	UOM	Unit Cost	Total Cost
✕ ✎	APPRENTICE LINE	1.5	HR	\$27.68	\$41.52
✕ ✎	JOURNEYMAN LINE	3	HR	\$51.03	\$153.09
✕ ✎	SENIOR LINEMAN	1.5	HR	\$53.66	\$80.49

Add Labor:  Qty:

The WFM application provides tools to create and manage a compatible unit (CU) library. Most existing utility CU libraries can be imported into WFM with minimal translation and the tools can be used to maintain them going forward. This same tool is used to configure the materials, labor and equipment assigned to each compatible unit. This configuration is the foundation for all estimating and tracking of work within WFM.

## Demo – Telvent Designer Integration



The WFM application can be implemented as a standard alone web-based system but the return on investment increases if the optional Telvent Designer integration is implemented. The Designer integration allows the WFM estimate to be loaded from a GIS Designer revision. The WFM / Designer integration augments the work request workflow by allowing it to be sent to Designer for graphical design. There is a tight integration allowing the WFM work request web functionality to be exposed directly within Designer.

# Demo – Telvent Designer Integration

**Designer GIS Mapping**

**GIS Class** Pole - Distribution

**Attributes**

Class 2

Construction Standard OH-35

Material Wood

Pole Height 35'

**Extended Data**

Labor Internal

Network Status De-energized

Site Condition Normal

Soil Condition Rock

Traffic Condition No Traffic

Save GIS Mapping

An extra compatible unit configuration module is added to WFM that allows for the WFM CU's to be mapped to the Designer GIS features. These mappings are then automatically loaded back into the Designer system.

## Demo – Telvent Designer Integration



The standard out of the box Designer functionality is then used to create one or more design revisions using GIS features mapped to the WFM CU Library. The design engineer can then choose an approved design revision to send back to WFM. The work locations, compatible units, extended data, etc is automatically loaded directly into the Workforce Management estimate just as if it was created directly within Workforce Management.

The Workforce Management costing engine, validations, and status changes are made available in Designer via the integration. The workflow continues normally in WFM until the as-built stage at which time the graphical as-built redlines are applied via Designer.

**My Work**

- 433034
- 433044
- 433048
- 2nd OH Design
  - OH Design
    - I UL-01
    - WL 1
      - I OH-35
    - WL 2
      - I OH-35
      - I OH-1650AS
      - I OL-01
      - I T3KVACSP
    - WL 3
    - WL 4
    - WL 6
    - WL 7
    - WL 58

**Estimate - Total: \$6229.18**

Material: \$2179.42	Equipment: \$2321.90	Labor: \$1727.86	AP: \$0	Construction Stds
<ul style="list-style-type: none"> <li>WL 1    FacilityID=                             <ul style="list-style-type: none"> <li>Install    OH-35    QTY=1</li> </ul> </li> <li>WL 2    FacilityID=                             <ul style="list-style-type: none"> <li>Install    OH-1650AS    QTY=1</li> <li>Install    OH-35    QTY=1</li> <li>Install    OL-01    QTY=1</li> <li>Install    T3KVACSP    QTY=2</li> </ul> </li> <li>WL 3    FacilityID=G5A-223</li> <li>WL 4    FacilityID=</li> <li>WL 58    FacilityID=</li> <li>WL 6    FacilityID=</li> <li>WL 7    FacilityID=</li> <li>No WL                             <ul style="list-style-type: none"> <li>Install    UL-01    QTY=1</li> </ul> </li> </ul>				

# Business Benefits

- Workforce Management is Completely Configurable
  - As Work Processes Change, WFM Can Accommodate
- Reduced Paper Usage
  - 90% Paperless by End of Summer 2011
- Work Documentation All Attached to the SR
  - Includes Scanned Field Documents
  - Faster & Easier to Research Old Jobs
- Configurable Security
  - Allows Managers to Grant Access in Minutes
- Comments Function Heavily Used
- Great Search/Query Tools (address, facility ID, etc)
- Data Validation Eliminated Duplicate Data Entry
- Minimal Change Management = Easy User Acceptance
- Designer Rollout will Bring Many New Benefits



## Thank You

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