

## E-Permitting Overview- Benefits, Differences, & Cost Savings

**Holly E. Miller, PE, CPESC, CFM**

Assistant Town Engineer

Town of Wake Forest

**Jeff Bock, CPESC**

Grading and Erosion Control Inspector

City of Charlotte



## Agenda

- Old School Ways
- New World Systems (Tyler)- Town of Wake Forest
- Accela- City of Charlotte
- Pro's and Cons
- Summary

## What programs are being used?



## Old School Ways

- Excel spreadsheets
- Access data base
- Updates
- Hard Copies
- Review paper plans, specs, calculations
- Phone/email correspondence



## Typical Plan Review

- First Review- 30 days max
- Second Review- 15 days max
- Average review 2-3 weeks
- Average turn around time 3+ months
- Typical Delays
  - FRO form & fee
  - Signatures
  - Plans

**NOT APPROVED**

## New School

- Digital plan submission
- Digital comments
- Lessens turn around time
- Get projects out the door
- Documentation of communication
- Link to other permits
- Average turn around time 2 months
- Time is money!



## New World Systems (NWS)

- Finance
- Human Resources
- Building Inspections- E-Suite
- Project Planning
  - Master Plan
  - Development Permits
  - Erosion Permits
  - Inspections
  - Nov's/Civil's





## NWS E&SC Permitting

- Purchased in 2008
- Customized Land Disturbance/E&SC permitting
- Went live in 2009
- Imported all permits since 2006
- Coordinate with Planning & Building Inspections
- Fees and renewals
- Stop work orders, violations, civils



## NWS Demo

<http://twfnwapp/Logos/Login.aspx?FromLogout=true>

Project Planning Center

Search Project Activities SHEARON FARMS TRACT 4

SHARON FARMS TRACT 4

- Activities (73)
- Documents (0)
- Notes (0)
- Related Professionals (0)
- Parcels (0)
- Fees (\$ 745.00)
- Payments (\$ 0.00)
- Sub Projects (0)

Refresh

CONSTRUCTION PLAN REVIEW

Name	Status	Start	Due	Completed
APPLICATION REVIEW BY STAFF (1)				
1ST CONSTRUCTION PLAN REVIEW BY STAFF (6)				
2ND CONSTRUCTION PLAN REVIEW BY STAFF (7)				
3RD CONSTRUCTION PLAN REVIEW BY STAFF (7)				
STAFF REVIEW COMPLETE				
ADDRESSES ASSIGNED				
PLANS APPROVED BY STAFF				
SAEC PERMITS ISSUED				
PRE CONSTRUCTION MEETING				
DEVELOPMENT PERMITS ISSUED				

PLAT REVIEW

Name	Status	Start	Due	Completed
FINAL PLAT REVIEW COMPLETE (3)				
1ST PLAT REVIEW BY STAFF (2)				
APPLICATION REVIEW BY STAFF				
2ND PLAT REVIEW BY STAFF (2)				
3RD PLAT REVIEW BY STAFF (2)				
STAFF REVIEW COMPLETE				

SITE INSPECTION

Name	Status	Start	Due	Completed
PUBLIC \$ STREET TREE APPROVAL				
ENGINEERING SITE INSPECTION APPROVAL				
SIGN REVIEW				

2:42 PM 4/6/2016

Permit Service

Permit Type: E-LAND DISTURB - E-LAND

Permit Number:

Service Address:

Go Advanced Reset New

Permit Service

- E-LAND DISTURB - 2009-0000178  
WF 1850751025  
1400 WAIT AVE
- E-LAND DISTURB - 2009-0000185  
WF 1850751025  
1400 WAIT AVE
- E-LAND DISTURB - 2009-0000192  
WF 1860218477  
3113 ROGERS RD
- E-LAND DISTURB - 2009-0000370  
WF 1850453800
- E-LAND DISTURB - 2009-0000437  
WF 1830994619
- E-LAND DISTURB - 2009-0000457  
WF 1830654879
- E-LAND DISTURB - 2011-00002407  
WF 1851004203  
0 WAIT AVE
- E-LAND DISTURB - 2012-0000257  
WF 1851004203  
0 WAIT AVE
- E-LAND DISTURB - 2012-00003978

E-LAND DISTURBING - 2009-0000178

Status: Permit Issued 11/06/2014

Address: 1400 WAIT AVE  
WAKE FOREST, NC 27587

Parcel Number: WF 1850751025


General User-Defined Fields Fees Related Professionals Inspections

Inspection Date	Date Type	Inspection Type	Inspection Source	Status	Reason
01/20/2010	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	
06/29/2011	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	
07/15/2011	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	
08/17/2011	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	
06/22/2012	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	
07/25/2012	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	
11/30/2012	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	
12/27/2012	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	
01/29/2013	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	
02/22/2013	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	
03/07/2013	Completed	E-EB&C MONTHLY - MONTHLY EROSION INSPECTION	Planned Inspection	Passed	

Options 28 Rows

2:23 PM 4/6/2016





**TOWN of WAKE FOREST**

301 S. Brooks Street  
Wake Forest, NC 27884  
919-435-9400  
www.wakeforestnc.com

**Erosion and Sediment Control Permit  
NOTICE OF VIOLATION**

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Address: [Redacted]

RE: Project Name [Redacted] Permit No: [Redacted]

Dear Sirs:

On 04/26/16 an EASC inspection was conducted at the above referenced project. It was noted that sediment and erosion control devices were in need of **maintenance and repair**. In particular, the site needs to be **temporarily stabilized** within 14 days, silt fence repaired, seed stockpile, return silt to site, and install inlet protection as noted on the attached inspection report. In addition all erosion and sediment control measures need to be reestablished to retain sediment onsite. The project is in violation of the Town of Wake Forest Unified Development Ordinance and may be subject to a fine for the following reasons:

- Failure to follow the approved plan
- Failure to provide adequate ground cover within 14 days of grading
- Insufficient measures to retain sediment onsite
- Failure to take all reasonable measures
- Failure to maintain erosion control measures
- Failure to ensure permit
- NCEDES violation
- Tracking mud off det area offsite/run street

To bring the project back into compliance, the following must be accomplished within (30) ten days you receipt of this notification:

1. Temporarily seed lot within 14 days
2. Repair and maintain existing silt fence and erosion control measures
3. Provide additional erosion control measures to contain onsite sediment
4. Repair and track out sediment basin

## NOV Docs

- 2 -

5. Reestablish curb baffles on basin
6. Recheck sediment basin outlet structure and skimmer
7. Install inlet protection
8. Seed stockpile
9. Remove construction debris near Meadowlark and Cloverbank

Please note that if the allotted ten (10) day deadline is not met, the Town of Wake Forest may invoke Civil Penalties against you in the amount of \$5,000.00 per day of continuing violation as which states:

*Any person who violates any of the provisions of this ordinance, or rule or order adopted or issued pursuant to this ordinance, or who initiates or continues a land disturbing activity for which a Plan is required except in accordance with the terms, conditions, and provisions of an approved Plan, is subject to a civil penalty. The maximum civil penalty amount that the Town may assess per violation is five thousand dollars (\$5,000.00). A civil penalty may be assessed from the date of the violation. Each day of a continuing violation shall constitute a separate violation.*


When you have taken appropriate measures to insure that this violation has been corrected, contact our office so that we may reinspect your project. Your prompt attention and cooperation in this matter will be greatly appreciated. If you have any questions, please call the engineering office at (919) 435-9443.

Sincerely,

*Holly E. Miller*


Holly E. Miller, PE, CPESC, CFM  
Assistant Town Engineer

Cc: Eric Kramrod, Director of Engineering  
Eric Venson, Town Attorney  
Ashley Rogers, PE, State Sediment Specialist, NC DEQ  
John Holley, P.E., CPESC, Regional Engineer, NC DEQ  
Kerrie Rogers, PE, CPESC, Assistant State Sediment Specialist, NC DEQ  
Joe Depner, Environmental Service Specialist, NC DEQ  
Sean Kover, District Environmental Specialist NC DEQ DWR.



## Pros and Cons- NWS

- NWS finance driven
- Guinea pigs for E&SC permits
- System tweaks
- Pin number needed with address
- User overrides
- No E-review for E&SC yet
- High cost for upgrades
- Hard copies
- User uploads







## Accela

- Web based application (West Coast/East Coast)
  - Kiva (Client Based) Purchased by Accela 2006
- Implementation Phase
  - Go live in 2008
- Organization of records
  - Child/Parent records
  - Workflow
- Unified Land Development ePlan review
  - E&SC, CDOT, NCDOT, UF, Planning, CATS, CMUD, Fire, Engineering



## Accela (Inspections and Enforcement)

- ▶ Inspection Documentation-Mobile Inspector
  - ▶ iPhone/iPad
  - ▶ Inspection Reports Generated
  - ▶ Sent to Financial Responsible Party
  
- ▶ Enforcement Cases
  - ▶ Child records under Grading Permit record
  - ▶ Workflow



## Accela Pros and Cons

- ▶ Unified Review eliminates confusion between reviewers and requirements
- ▶ Web Based Application
- ▶ Customizable
  
- ▶ Cost
- ▶ Web Based Application
- ▶ Acronym Confusion
- ▶ Inability to write Violations in the field



## Accela

- ▀ Guilford County
- ▀ Charlotte
- ▀ High Point
- ▀ Asheville
- ▀ Buncombe County
- ▀ Cabarrus County & Concord
- ▀ Onslow County
  
- ▀ NC Appraisal Board (Implementation)



## Accela Demo

<https://av.accela.com/jetspeed/portal>

https://accela.com/... Accela Automation®

**CITY OF CHARLOTTE** Jeff Boek CharlotteOfficeStaff Alerts (65) Sign Out

HOME NAVIGATION CREATE NEW MAPS

Home Alerts APQ Contacts Enforcement Inspection GIS AA Classic Preferences Payment Processing Global Search Ad Hoc Report

**User Info**

Jeff Boek  
Supervisor  
CITY OF CHARLOTTE,  
NC

**Reports**

- My Reports
- ACA Reports
- Accela\_Standard\_Rep
- Ad Hoc Reports
- Bond Letters and Rep...
- CMCSI
- Enforcement Reports
- General Reports
- Land Development Re...
- Planning Reports
- Rezoning Letters
- Street Acceptance
- temp

**My Tasks**

My Task Searching

Menu Assign Help My Filters Review

Workflow Tasks (12) Inspections (59) Document Review Tasks (0)

Showing 1-10 of 12

Alt ID	Project Name	Short Notes	Assigned Date	Due Date	Task	Status
<input type="checkbox"/> SDRSF-2016-00011	Walden Ridge Subdivision	ACA Single Fam...	04/09/2016	04/29/2016	Erosion Control Review	Revisions
<input type="checkbox"/> SDRMF-2015-00072	Rodden Square Apartments	ACA Multifamly...	04/09/2016	04/29/2016	Erosion Control Review	Revisions
<input type="checkbox"/> SDRSFR-2016-00011	Paw Creek Village	ACA Single Fam...	04/11/2016	04/28/2016	Erosion Control Review	
<input type="checkbox"/> LDPSMN-2016-00083	Aldi Expansion - 4120 Sunset Rd	04/22/16 at 10...	04/22/2016	04/29/2016	Erosion Control Review	
<input type="checkbox"/> LDPSMN-2016-00080	Budget Storage Mallard Creek	04/22/16 at 9am	04/22/2016	04/29/2016	Erosion Control Review	
<input type="checkbox"/> LDPSMN-2016-00084	Aldi - 2526 Freedom Dr	04/22/16 at 11...	04/22/2016	04/29/2016	Erosion Control Review	
<input type="checkbox"/> SDRSF-2015-00075	Moores Chapel Village	ACA Single Fam...	04/12/2016	04/29/2016	Erosion Control Review	Revisions
<input type="checkbox"/> SDRSF-2015-00063	Lantana	ACA Single Fam...	04/15/2016	05/04/2016	Erosion Control Review	No Review Requir
<input type="checkbox"/> LDC-2016-00033	Mallard Creek Academy	Meck 362781	04/18/2016	05/08/2016	Erosion Control Review	OK
<input type="checkbox"/> LDPSMN-2016-00079	Coffee Shop	04/29/16 at 11...	04/29/2016			

Page 1 of 2

https://accela.com/... Accela Automation®

Search a CAP Record Detail

**Quicklinks**

- POSSELD Dashboard
- PCLARIS
- GEO Spatial Portal
- City Email
- Citizen Access
- Ex-VirtualCharlotte
- Zoning Grid map
- Virtual Charlotte
- City and County Maps Gallery
- the.ooo E-Plans

**Bulletin Board**

Following are currently supported browsers and Operation system for ACA  
(As of January, 2016):  
- Internet Explorer 11.

Alt ID	Project Name	Short Notes	Assigned Date	Due Date	Task	Status
<input type="checkbox"/> LDGP-2015-00158	Prosperity Village Square	Grading Permit	9821	MCKAY	RD	In Progress
<input type="checkbox"/> LDPCCO-2015-00122	Prosperity Village Square		9821	MCKAY	RD	OPEN
<input type="checkbox"/> LDPCCO-2015-00119	Prosperity Village Square		5134	RIDGE	RD	OPEN
<input type="checkbox"/> SDFPMAR-2015-00083	Prosperity Place Block 33 Buldin...	ACA Block 33 Bldg 33				Approved
<input type="checkbox"/> INSPECTION-2015-00277	Prosperity Village Square	Inspection	5134	RIDGE	RD	In Progress

Record ID: LDGP-2015-00158

Menu List View Clone Sgl Clone Mult Search Look Up Delete Help

Go To Summary ASI Workflow Inspect (18) Activity Sum (4) Document (5) RelatedRec Fee (0) Payment Parcel (1) Address (1)

- SDRC-2014-00077 [LandDevelopment.Subdivision.Review.Commercial.NA] 04/18/2015 00:00:00
- LDGP-2015-00158 [LandDevelopment.Grading.Permi.NA.NA] 12/15/2015 00:00:00
- LDPCCO-2015-00122 [LandDevelopment.PCCO.NA.NA] 04/18/2015 10:36:42
- INSPECTION-2015-00004 [LandDevelopment.Site.Permi.NA.NA] 01/09/2015 08:47:46
- LDGP-2015-00158 [LandDevelopment.Grading.Permi.NA.NA] 12/15/2015 00:00:00

Search a CAP  
Record Detail

Quicklinks

- POSSSELD Dashboard
- POLARIS
- GEO Spatial Portal
- City Email
- Citizen Access
- Ex-VirtualCharlotte
- Zoning Grid map
- Virtual Charlotte
- City and County Maps Gallery
- theLoop E-Plans

Bulletin Board

Following are currently supported browsers and Operation system for ACA  
(As of January, 2016):

- Internet Explorer

Record ID	Address	Permit Type	Parcel ID	Owner	Address	Status
LDGP-2015-00158	Prosperity Village Square	Grading Permit	9821	MCKAY	RD	In Progress
LDPCCO-2015-00172	Prosperity Village Square		9821	MCKAY	RD	OPEN
LDPCCO-2015-00119	Prosperity Village Square		5134	RIDGE	RD	OPEN
SDFPMAR-2015-00083	Prosperity Place Block 33 Buldn...	ACA Block 33 Bldg 33				Approved
INSPECTION-2015-00277	Prosperity Village Square	Inspection	5134	RIDGE	RD	In Progress

Page 1 of 4

Record ID: LDGP-2015-00158

Menu New Supervisor Help

Go To Summary ASI Workflow Inspect (18) ActivitySum (4) Document (5) RelatedRec Fee (0) Payment Parcel (1) Address (1)

Task	Status	Status Date	Action By
Preconstruction Meeting	Complete	10/07/2015	Jeff Bock
Erosion Control Inspection	Issue Permit	12/15/2015	Jeff Bock
Urban Forester Inspection	Pass	12/15/2015	Stan Armstrong
Close Permit	In Progress		

There currently are no ad hoc tasks defined.

Workflow Tasks

- Info Received
- Subdivision Review Gateway
- Distribute Plans
- NC DOT Review
- Parks and Rec Review
- MUMPO Review
- Urban Forester Review
- Floodway Review
- Planning Review
- Solid Waste Review
- Fire Review
- CATS Review
- CMUD Review
- Storm Water Review
- CDOT Signalization Review
- City Arborist Review
- Urban Design Review
- Subdivision Plan Collection
- CDOT Review
- Engineering Review
- Addressing Review
- Erosion Control Review
- Resubmittal Distribution
- Plan Collection
- Contact to Pickup Plans
- Distribute Approved Plans
- GIS Layer Collection
- Construction Phase
- NC DOT DW Permit

Task Details - Erosion Control Review

Staff \* Current User: Jeff Bock  
Department \* Current Department: E&PM Erosion Control

Status: --Select--  
Status Date: 04/18/2016  
Due Date: 04/25/2016  
Last Status Revisions

Assigned Date: 04/09/2016  
Assigned to: Jeff Bock  
Assigned to Department: E&PM Erosion Control

Comments

Standard Comment

check spelling

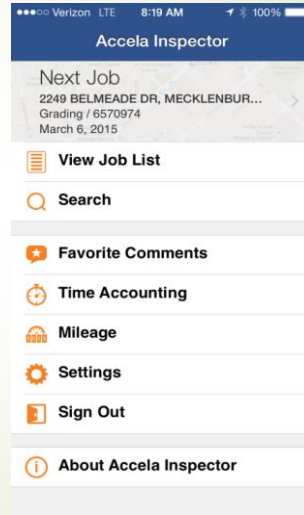
Display Comment in ACA  
 Display E-mail Address in ACA

Task Specific Information

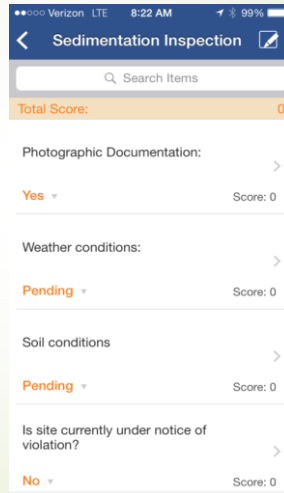
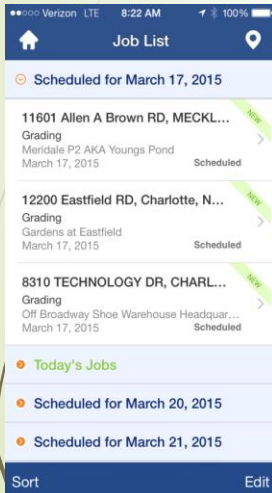
Site Visit: [Text]  
 Scale  
 Drainage Area Map  
 Name And Classification Of Receiving Watercourse [Text]

Vicinity Map  
 Legend  
 North Arrow  
 Existing Conditions Plan  
 Phased Erosion Control Plan  
 Utility Plans

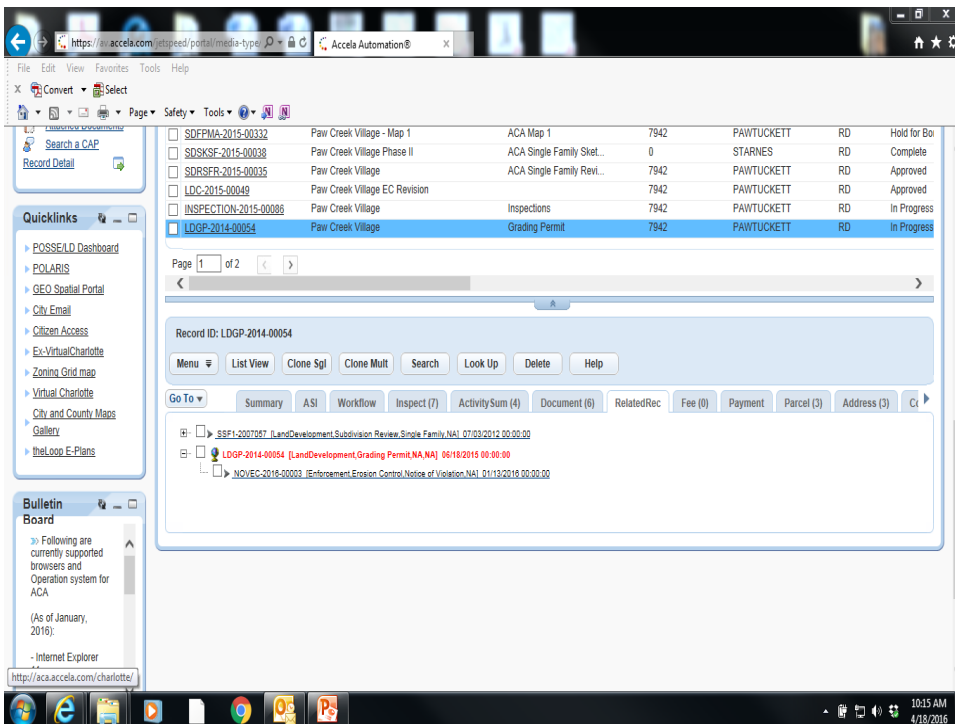
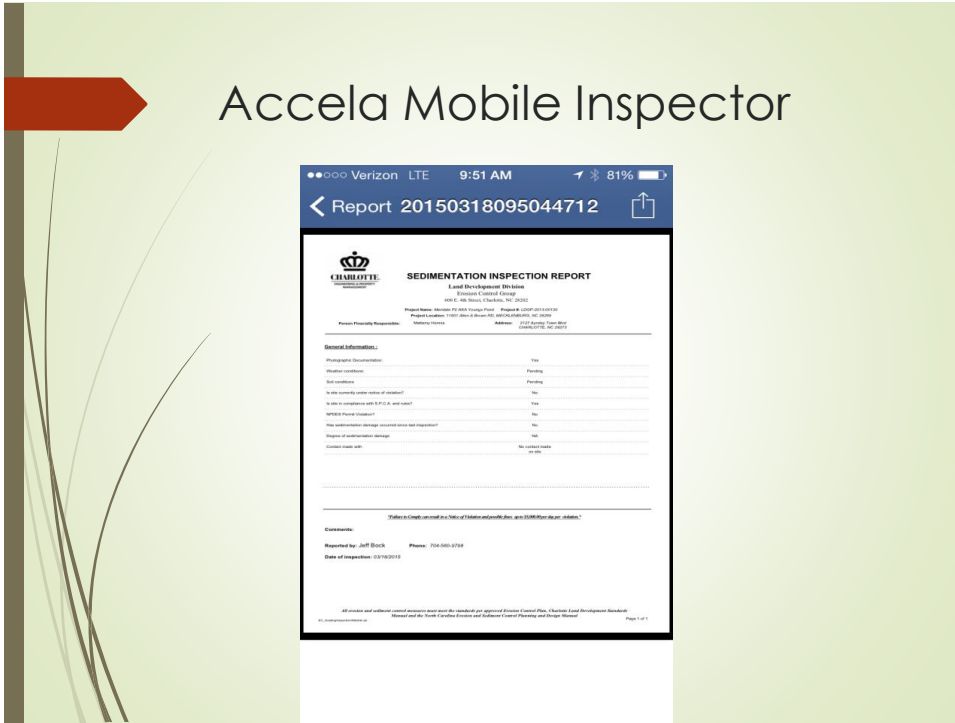
# Accela Mobile Inspector



# Accela Mobile Inspector



# Accele Mobile Inspector



## Cost Savings Example

### Old School

Plan Submittal Cost- 3 months

Design Engineer	120 hours * \$500/hr * 3	\$180,000
Review	5 hours * \$50/hr * 3	\$750
Travel/expenses	\$500+	\$500
	<b>Total</b>	<b>\$181,250</b>

### New School

Plan Submittal Cost- 2 months

Design Engineer	120 hours * \$500/hr * 2	\$120,000
Review	3 hours * \$50/hr * 2	\$300
Travel/expenses	\$0	\$0
	<b>Total</b>	<b>\$120,300</b>

**Savings \$60,950**

## Summary

- ▶ Lots of software out there
- ▶ Pro's and Con's to each
- ▶ Data driven
- ▶ Document tracking
- ▶ Cloud based
- ▶ Time/money savers





Questions?