

Asset Management Systems for Small Transportation Departments



National Tribal Transportation Conference
Star Pass Resort – Tucson, AZ
September 26, 2017

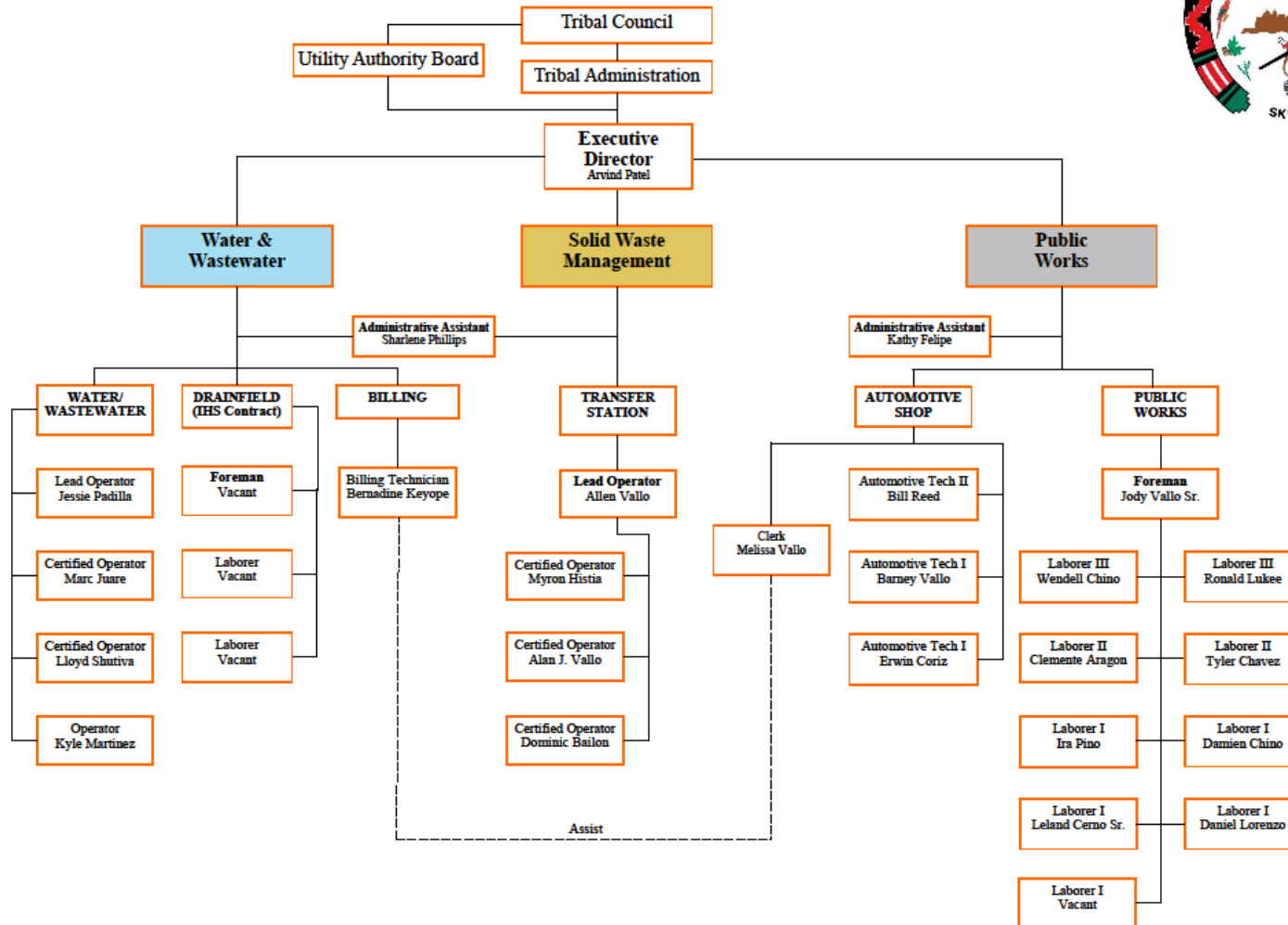


Public Works Department

- ❖ The Pueblo of Acoma Utility Authority - Public Works Department currently employees 15 people:
 - ❖ 1 Director
 - ❖ 1 Foreman
 - ❖ 8 Labors (ranging from Level I to III)
 - ❖ 3 Automotive/mechanic staff
 - ❖ 2 Administrative support staff
- ❖ The Utility Authority is overseen by a community member at-large board
 - ❖ The Board provides oversight which sets policy and not day-to-day activities, personnel matters, etc.

Public Works Department

2017 Utility Authority Organization Chart



Public Works Department

- ❖ Our daily operations consist of the following:
 - ❖ Road Maintenance: We have 374 miles of roads throughout the Pueblo of Acoma that are on our road maintenance inventory (LRTP). However there are 662 miles of roads throughout Acoma that need maintenance
 - Pothole patching, asphalt repair
 - Reshaping & grading of roads
 - Improving and maintaining drainage structures and shoulders
 - Maintaining & replace signage (signage that may be damaged, conversion to retro-reflectivity, graffiti, etc...)
 - Graffiti removal from signage, bridges, box-culverts and other transportation facilities
 - Maintain 8 bridges throughout the Pueblo, clean out box culverts to prevent debris from piling up and causing overflow onto roadway surfaces
 - Snow and ice control
 - Mowing and vegetation control
 - Delineators, guardrail, cattle guard repair/replacement
 - All items within the road right-of-way



Other Duties

- ❖ Repair and and perform maintenance on the 47.8 miles of the farmland irrigation system

- ❖ Mowing, silt removal, concrete patching and repair, slide gate installation and servicing, etc...

- ❖ Assist ranchers with windmill maintenance and replacement

- ❖ 30+ windmills of various sizes located throughout our open range lands
 - ❖ Includes maintenance of stock tanks, dirt tanks, etc...
 - ❖ Assisting with the conversion of windmills to solar applications



Other Duties

❖ Assist our Traditional & Cultural leaders

- ❖ There are approximately 20+ traditional/cultural events throughout the year and we provide support for all events
 - ❖ Portable placement and cleaning, trash cans, setting up of partitions and signage to direct traffic/parking, earth work, preparing of corn fields, irrigation ditch repair, road work, cleaning of traditional leaders areas and any other items requested

❖ Provide services to the community

- ❖ Land clearing/leveling and driveway repair
- ❖ Portable rentals and cleaning including contractors
- ❖ Funeral assistance
- ❖ Demolition of old homes and sheds
- ❖ Farm field disking and plowing
- ❖ Any other request that comes in from the community
- ❖ Provide assistance to the various community organizations and activities
 - ❖ Fun runs
 - ❖ Summer bash
 - ❖ Cross-fit activities
 - ❖ Employee association events



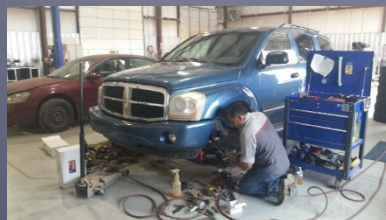
Other Duties

❖ Full service automotive shop

- ❖ Provide maintenance and repair on our own fleet of vehicles, heavy equipment and light equipment
- ❖ Provide these services to other Tribal Government vehicles and equipment
- ❖ Provide these services to the community and neighboring communities
- ❖ Towing service

❖ Revenue (approximate)

- 2012 \$23,000.00
- 2013 \$32,000.00
- 2014 \$12,000.00
- 2015 \$48,000.00
- 2016 \$99,000.00
- 2017 \$125,000.00 (Projected)



Funding Sources

❖ Currently the Public works Department receives 2017 funds from the following agencies

- Pueblo of Acoma Tribal Appropriations
 - \$743,495
- FHWA
 - \$313,166 which is around 18% of the Pueblo's annual allocation
- BIA SWRO
 - \$42,111 to date

The Challenge

- ❖ Prior to 2017 our tracking method for performing this work including the issuing of work orders, tracking costs, submitting reports, etc...was performed using a paper system
 - ❖ Work orders were sometimes lost and not completed in order
 - ❖ Estimates were hand written taking additional time and open for mistakes
 - ❖ When we submitted reports we had to go through all the paperwork in the file to compile data
 - ❖ Preventative maintenance work on equipment and vehicles were not effectively scheduled
 - ❖ Inventory management was difficult with a paper system
- ❖ Inefficient data management
 - ❖ Reporting to funding sources
 - ❖ Reporting to Tribal leadership
 - ❖ Making operational improvements

Moving Forward

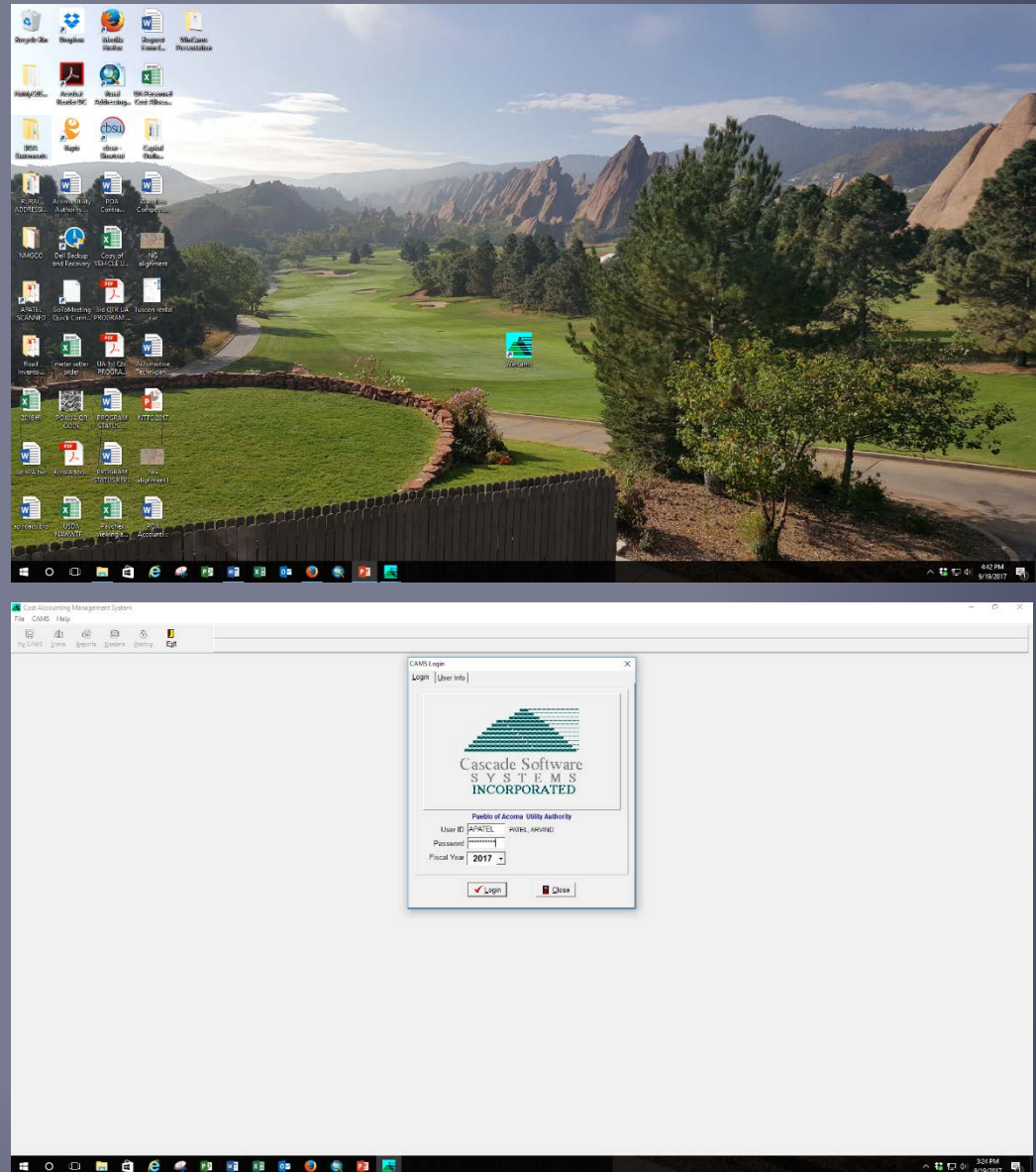
- ❖ In 2016 the BIA SWRO staff encouraged us to look at a new software they were exploring
 - ❖ We were introduced to Cascade Software Systems (CSS) through a webinar demonstration of their WinCams software system
 - ❖ This webinar demonstrated the capabilities of the software as it related to road maintenance activities. Although the software has all the capabilities to run a small government from accounting, facilities management, project management, road maintenance, utilities billing, automotive shop tracking, planning, inventory maintenance, etc....
 - ❖ The intention of the software was to be able to move towards tracking all costs (labor, material, personnel, etc) and to track all work for road maintenance activities in a single software platform
 - ❖ Through the webinar demonstration we also found that this software was able to provide a platform for tracking costs for our automotive shop which is turning out to be a big revenue generator for the Department

Moving Forward

- ❖ We decided to move forward with this software and the BIA SWRO included the cost of the software in our annual 2016 allocation
- ❖ The purchase was made and software was installed November 2016
- ❖ In December 2016, CSS arrived at the Pueblo for the first of two on-site trainings for the new software. This on-site training was for two days. In January, CSS came back again to the Pueblo for the second two-day training
- ❖ Between November and December, we started sending CSS all of our information and building our “codes” for the system
 - ❖ Personnel information including salaries/fringe
 - ❖ All of our vehicles, light equipment and heavy equipment including the cost rates for them
 - ❖ Payroll periods and timecard formats
 - ❖ Establishment of activity codes for work and services that we typically perform
 - ❖ Uploaded our road inventory data including sections, miles, ROW width, surface type, existing conditions and all the data that is within our LRTP
- ❖ In February 2017, the Acoma Public Works Department went live utilizing the new software, tracking all activities and efforts regardless if it was road maintenance related or not
 - ❖ Best advice is for management to make a commitment to move forward with the new system
 - ❖ Change is most often met with hesitation

WinCams

- ❖ We are using this software on our Windows 10 desktops and laptops computers
 - ❖ Software is loaded up by the CSS and is put on our server. As long as we have access to the server we can have access to the data
 - ❖ Our server backs up nightly so the information is always saved and protected
- ❖ Software will allow for multiple users, unlimited seats and all modules unlocked (36 modules)
- ❖ Permission levels can be set for the entire staff from active user to administrator
 - ❖ This is helpful if you have multiple people accessing the data
 - ❖ Mobile applications and data entry
 - ❖ Staff has different levels of computer skills



WinCams

❖ Currently we are using just a few of the modules that are offered with this software

❖ Road Service Requests

❖ We use this to track all of our activities for everything but our automotive and mechanic work

❖ Estimates

❖ Daily Work Orders

❖ Time Tracking

❖ Road and section number

❖ Status of work orders

❖ Payments

❖ Photos

❖ Costs

❖ Keeps data on the work that you complete and can be as specific as you need it to be


Road Service Requests

Service Request No: 000456 Status: Closed / Assigned To: 6839 CHINO, WENDELL
Cleaning and removal of silt from Rincondo Bridge M122

Main | Status Info | Cost Estimate | Materials | Exp Totals | Expenditures | Pending | Payments | Claims | Notes | Photos* | Linked Files | Directory

Service Date: 07/19/17 Time: 01:44 PM
Srv Req Type: <no Srv Req Type>
Source: Service Request
Requestor: Arvind Patel
Phone: (505) 552-5180
Work Requested: <no Work Request Code> ☐ Safety Issue ☐ Weekend / After Hours

Contact Information
Name:
Phone: () -
Instructions:
E-Mail:
To Service: ☒ Roads ☐ Water ☐ Sanitary Sewer ☐ Storm Sewer

Location:  Cleaning and removal of silt from Rincondo Bridge M122

Service Type: <no Service Type> Priority:
Road No: 0034020 Fatima Hill Road Client:
Start Milepost: 0 End Milepost: 0 Sales Tax: 0.00%
Route No: <no Route> Followup: <Select Followup>
Bridge No: <no Bridge> <no Client>
Location: Fatima Hill- section 020
Budget Rev Acct: - - -
Project:
Address:

Picked Up
Date:
Time:
By Whom:
☐ Use Division Labor Rates when Billing

Target Date:
Start Date:
Finish Date: 07/21/17
Finish Time: 11:38 AM

| Est Labor | Est Fringes | Est Overhead | Est Equipment | Est Materials | Admin Amt | Est Tax | Contingency | Total Est Costs |
|---------------|-------------|--------------|---------------|---------------|------------|-----------|-------------|-----------------|
| \$772.42 | \$0.00 | \$0.00 | \$3,795.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$4,567.42 |
| Contingency % | Est Admin % | Est Tax % | | Total Est Exp | LTD Expend | Sales Tax | Balance | |
| 0.00 | 0.00 | 0.00 | | \$4,567.42 | \$0.00 | \$0.00 | \$4,567.42 | |

Done

WinCams

❖ Vehicle and Equipment Master

- ❖ This is a detailed list of the entire public works inventory
 - ❖ Vehicles
 - ❖ Small equipment
 - ❖ Heavy equipment
- ❖ Keeps key information such as license plate, company asset #, make, model, fuel type, etc...
- ❖ We can also assign multiple "rates" for usage on different types of projects
- ❖ Can easily retrieve maintenance records
- ❖ Again, it is easy to retrieve and compile data using this in this system

Vehicle and Equipment Master

Vehicle Number: 50971 Active PM Service Status: <none>

2003 / Catapiller / 950GII Loader

Main | Motorpool | Cgst Centers | Depreciation | Costs | Reimbursable | Revenue / Usage | Operational | PM Services | Info Cats | Pending Repairs | View ROs | Not

Vehicle ID

| Year | Make | Model | License # | Serial # | Veh / Eqp |
|------|------------|---------------|-----------|----------|-----------|
| 2003 | Catapiller | 950GII Loader | | BAA00243 | Equipment |

Category: 02 HEAVY EQUIPMENT Description: 2003 Cat Wheel Loader 950GII

Rating Class Code: <no Rating Class Code>

Vehicle Info

Odometer Type: Hours Alternate Vehicle No:

Subplate: Gross Veh. Weight:

Color: License Expire Date:

Fuel Type: D Diesel Fuel Cap.:

Fuel Vendor: <no Vendor>

Fuel Rules:

ARB Smog Cd: BAR Smog Cd:

Emission Type: None

Rating Code: Rating Date:

Comment:

Replaces: Replaced With:

☒ Off Road EIN ☒ Availability for an Emergency

☒ Class A

Engine Info

Engine Year: Cylinders:

Manufacturer: Model:

Engine Size: Horsepower:

Serial No: Arrangement:

☒ Engine Idle Shutdown

☒ Diesel Particulate Filter ☒ Has Auxiliary Engine

Depreciation

Purchase Price: \$156,259.00

Purchase Date: 01/01/2003

LTD Accessories Cost: \$0.00

Life Expectancy (Months): 120

Current Age (Years): 14.73

Rem Life Exp (Years): 0.00

Salvage Value: \$0.00

Replacement Cost:

Monthly Insurance:

Sales Price:

Sales Date:

How Sold:

Buyer:

Reason for Sale: <none>

Depreciation Formula:

Replacement Year:

Target Hours:

Budgeted Annual Cost:

Monthly Estimated Replacement Cost: \$0.00

Monthly (posting) Depreciation Cost: \$47.75

☒ Vehicle Replacement Program

Replacement:

☐ Collect difference between replacement cost and purchase price

☐ Collect full replacement cost

New Detail Record Accepted

WinCams

❖ Payroll Period Timesheets

- ❖ Identify work "activity"
- ❖ This allows us to allocate staff time to various road/section numbers
- ❖ Allocate equipment usage and costs
- ❖ Allocate multiple funding sources
- ❖ Can be used to process your payroll or produce an output to submit to your Tribe's payroll department for official time card submission

WinCams

❖ Repair Orders

- ❖ This is used to track all activity/work order requests that are for the automotive/mechanic portion of our department
- ❖ Date-in/date-out
- ❖ Odometer readings
- ❖ Photos
- ❖ Tracking labor, materials, equipment (cost)
- ❖ We have wifi enabled mobile workstations for each of the mechanics where they can interface with the system directly

Repair Orders

Repair Order No: 500400 Needs cutting edges and theres no nut on the carb cab PM Service Status: <none>

Vehicle No: 50971 (Active / 2003 / Catapiller / 950GH Loader / Cat: 02)
Current Odom / Date: 7938 / 08/09/17 Vehicle Appropriation / Location: <none> / Public Wroks

Main | Service | Cost Estimate | Parts & Misc | Labor and Equip | Photos | Notes | Pending | Linked Files | Directory

Vehicle No: 50971 ...
Odom / Hrs: 7938

Repair Type: <no Repair Type>
Reason: <no Reason>
Date In: 08/09/2017
Date Out: 08/23/2017
Assigned To: 5996
Location: CORIZ, ERWIN

Priority: PR
Shop Rate: ...
Contact: PUBLIC WORKS
Phone: () -
Surcharge %: 0.00
Sales Tax %: 0.00
Charge To: Vehicle
Project: ...
Vendor: <no Vendor>

Instructions / Notes / Work Performed: Most Recent Odometer: 0007938 \ Last Repair Order Odometer: 0007938
Needs cutting edges and theres no nut on the carb cab
R. Lukee cut off all cutting edge bolts on bucket so that cutting edges could be removed and turned around. Removed and turned cutting edge replaced with washer and nut that fit air cleaner cap bolt.

Operational Status

| | | | |
|---|------------|----|-------------------------|
| <input checked="" type="checkbox"/> Open | 08/09/2017 | MV | |
| <input checked="" type="checkbox"/> Printed | 08/24/2017 | EC | |
| <input type="checkbox"/> Hold | | | |
| <input checked="" type="checkbox"/> Completed | 08/24/2017 | MV | Barney and Ron assisted |

Accounting Status

| | | | |
|--|--|--|--|
| <input type="checkbox"/> Approved | | | |
| <input type="checkbox"/> Hold | | | |
| <input checked="" type="checkbox"/> Billed | | | |

Show Pending Repairs
Show Warranty Info

| Est Hours | Est Labor | Est Ovrrhd | Est Parts | | Est Equip | | | | Est TOTAL | | | |
|-------------|-----------|------------|-----------|-----------|-----------|---------|-------------|--------|-----------|------------|-----------|--------|
| 2.00 | \$165.50 | \$0.00 | \$88.68 | | \$45.00 | | | | \$299.18 | | | |
| Labor Hours | Labor | Overhead | Stock | Non Stock | Tires | Outside | Equip Usage | Misc | Fees | Admin Schg | Sales Tax | TOTAL |
| 0.3 | \$5.30 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$5.30 |

Records are filtered by the checkboxes on the directory tab.

Detail Record Deleted

WinCams

❖ Shop Floor Interface

- ❖ Module specific for automotive and mechanic technicians
- ❖ Allows for the auto techs to enter their time, parts, material in “real-time” to the system database
- ❖ We have mobile stations set up on the shop floor to have their workstations next to their work. This is an example of a mobile application of the software
- ❖ Whether it be through wifi or mobile network card, data entry can be made from staff at any location

The screenshot shows the 'Shop Floor Interface' window. At the top, there are tabs for 'Mechanic Time Clock', 'Time Detail', 'Active R.O.s', 'Pending Work', 'PM Services', and 'R.O. History'. Below these, user information is displayed: 'User Initials ANP', 'User Employee No 3560', 'User Name PATEL, ARVIND', and 'User Division 1000 - ROAD MAINTENANCE - FHWA'. The current time is 16:13:32. The main form contains fields for 'Current R.O. No' (S00003), 'Current Vehicle No' (70001), 'Odometer', 'Location', 'Date' (09/20/2017), 'Activity', 'Mnt Category', 'Mnt Code', and 'Start Time' (16:13). A 'Notes / Instructions' field contains a detailed description of a tractor repair. At the bottom, there are buttons for 'Start New Activity or Task', 'Switch to Another Open R.O.', 'Start New R.O. (stop current work)', 'Start Break (Paid, 18 min)', 'Start Break (Unpaid, 30 min)', 'Start New R.O. (continue current work)', 'Issue Stock Part to Current R.O.', 'Issue Non-Stock Part to Current R.O.', and 'End of Day'. The 'Hrs Elapsed Time' and 'Total Hours Worked' are both 0.0.



Next Steps

- ❖ Now that we have a good familiarity of the base modules we use, we are arranging for CSS to come back for additional on-site trainings
 - ❖ Inventory Management
 - ❖ Completing Level of Service surveys and reporting required by BIA
 - ❖ Tracking depreciation of assets
- ❖ Bringing on our Planning and Engineering Office on-board to start using the software for their planning purposes
 - ❖ Formation of the TIPs
 - ❖ Project Management
 - ❖ others

