

# Use the Culvert Cost PC App to Create and Edit a Repair

April 30, 2015

Find Culvert Cost app from this link:

<http://mndot.maps.arcgis.com/home/index.html>

Sign in

Minnesota Department of Transportation

HOME GALLERY MAP SCENE GROUPS

Sign In

**MnMap** - A collaborative GIS information site brought to you by MnDOT

Transit Service Planning: Demographic Variables

MnDOT 2015 Construction Projects

St Croix Crossing and Highway 36 story map

10-Yr Capital Highway Work Plan Projects (2015-2024)

The Minnesota Department of Transportation oversees more than 140,000 miles of state, county, city and township roads, 4,458 miles of rail road, 168 rest areas, 135 public airports and nine shipping ports throughout the state of Minnesota. The mission of the department is to *"Provide the highest quality, dependable multi-modal transportation system through ingenuity, integrity, alliance and accountability."*

MnDOT's main web page  
511 Traveler Information  
*(For optimal performance please view apps in either Chrome or Firefox. There are some known issues with IE. )*

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# Login as CULVERT\_COST

(Ask for password\$ if you don't remember it)

Check the box: Keep me signed in

Sign in to Minnesota Department of Transportation

esri

Username  
CULVERT\_COST

Password  
.....

Keep me signed in

**SIGN IN**

[Forgot username or password?](#)

(Be quick because the login times out fast and gives an error message)

# Search All Content for culvert (first time in)

The screenshot shows a web browser window with the URL <http://mndot.maps.arcgis.com/home/index.html>. The page features a navigation bar with links for HOME, GALLERY, MAP, SCENE, GROUPS, MY CONTENT, and MY ORGANIZATION. A search bar in the top right corner contains the text "culvert". A dropdown menu is open, listing search options: Search All Content, Search for Maps, Search for Layers, Search for Apps, Search for Tools, Search for Files, and Search for Groups. A yellow arrow points from the top right towards the search bar. A yellow text box in the center of the page reads "Second time, choose My Content". The main content area displays a large background image of a road and a bridge, with four featured project cards below it: "Transit Service Planning: Demographic Variables", "MnDOT 2015 Construction Projects", "St Croix Crossing and Highway 36 story map", and "10-Yr Capital Highway Work Plan Projects (2015-2024)".

Second time, choose My Content

culvert

- Search All Content
- Search for Maps
- Search for Layers
- Search for Apps
- Search for Tools
- Search for Files
- Search for Groups

Transit Service Planning: Demographic Variables

MnDOT 2015 Construction Projects

St Croix Crossing and Highway 36 story map

10-Yr Capital Highway Work Plan Projects (2015-2024)

# CULVERT\_COST PROD is the production app

The screenshot shows a web browser window with the URL `http://mndot.maps.arcgis.com/home/sea`. The page title is "Search Results". The navigation menu includes "HOME", "GALLERY", "MAP", "SCENE", "GROUPS", "MY CONTENT", and "MY ORGANIZATION". The main heading is "Search Results" with a sub-heading "2 results".

On the left side, there is a sidebar with the following options:

- All Results
- Maps
- Layers
- Scenes
- Apps
- Tools
- Files
- Show ArcGIS Desktop Content
- Only search in Minnesota Department of Transportation
- Related Searches
- Find items published by Esri related to "culvert"

The search results are displayed in a table with columns: Relevance, Title, Owner, Rating, Views, and Date. Two results are shown:

Relevance	Title	Owner	Rating	Views	Date
	CULVERT_COST CULVERT COST PROD	Web Map by CULVERT_COST	☆☆☆☆☆ (0 ratings, 0 comments, 9 views)		
	CULVERT_COST CULVERT COST PROD	Web Map by CULVERT_COST_ADMIN	☆☆☆☆☆ (0 ratings, 0 comments, 42 views)		

A yellow arrow with a red outline points to the "Open" link under the first result's thumbnail. The thumbnails are world maps.

# PC app looks like this:

The screenshot shows a web browser window displaying a GIS application. The browser's address bar shows the URL <http://mndot.maps.arcgis.com/home/wel> and the page title is 'CULVERT\_COST'. The application interface includes a menu bar with 'File', 'Edit', 'View', 'Favorites', 'Tools', and 'Help'. Below the menu bar, there are buttons for 'Convert' and 'Select'. The main navigation area features 'HOME', 'CULVERT\_COST', 'NEW MAP', 'CREATE PRESENTATION', and a user profile icon labeled 'Culvert'. A toolbar contains various icons for map interaction, including a search bar labeled 'Find address or place'. On the left side, a 'Contents' panel lists several layers with checkboxes: 'CULVERT REPAIRS' (checked), 'EQUIPMENT' (checked), 'LABOR' (checked), 'MATERIALS' (checked), 'CULVERTS' (checked), 'PREV YEAR REPAIRS' (unchecked), and 'Topographic' (checked). The main map area displays a map of North Dakota with numerous colored markers (red, green, blue, orange) representing culvert repair locations. The map includes a scale bar (0, 50, 100 miles) and the Esri logo. The footer contains links for 'Esri.com', 'ArcGIS Marketplace', 'Help', 'Terms of Use', 'Privacy', 'Contact Esri', and 'Report Abuse'.

Turn off 2014 Repairs  
with PREV YEAR REPAIRS

Web App

# PC Web App Menus

CULVERT COST - Windows Internet Explorer

http://mndot.maps.arcgis.com/home/webmap/viewer.html?web

CULVERT COST

HOME CULVERT COST NEW MAP Culvert

Details Add Edit Basemap Share

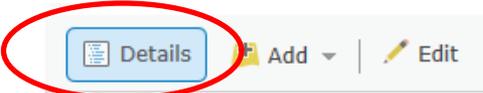
Find address or place

Choose your task: Details or Edit

Back to Index

# Web App

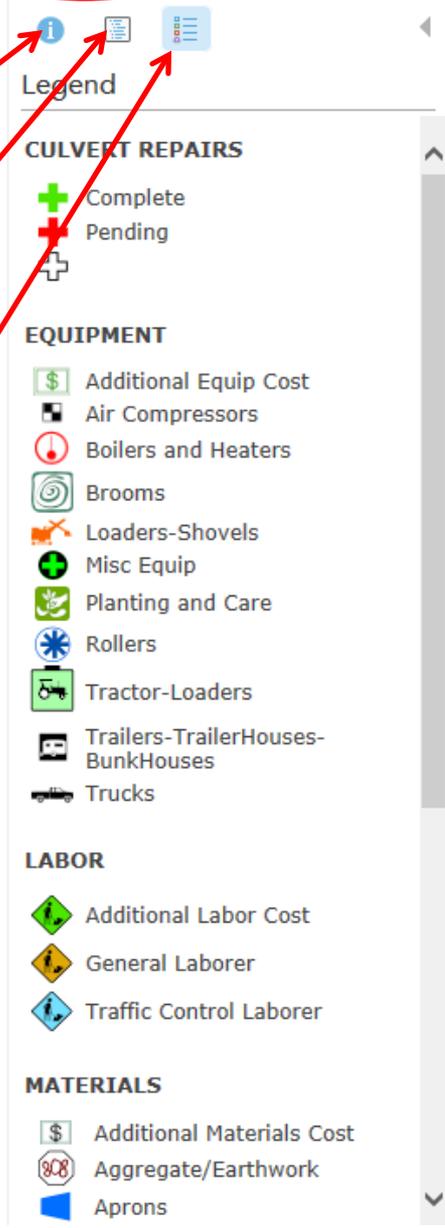
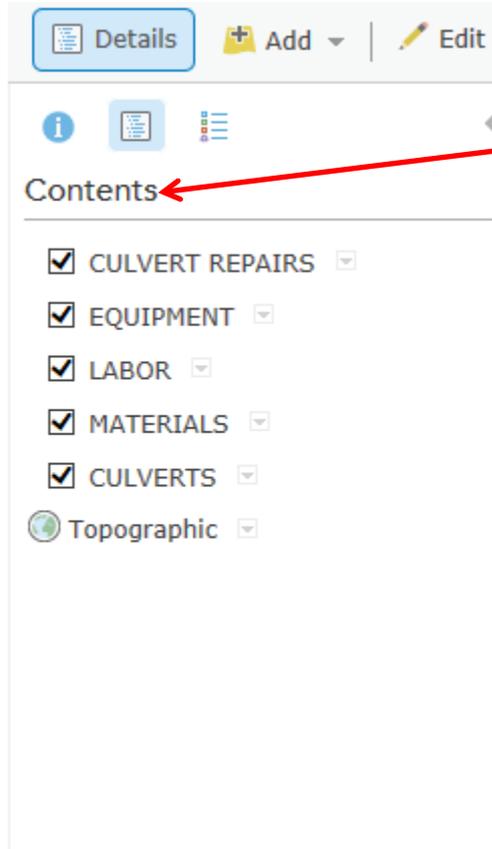
## Details Menu



App version  
Information

Contents  
(show tables)

Legend



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[to](#)  
[Index](#)

# Web App

## In Details Menu

click to view a Repair or turn off Content layers

The screenshot shows a web application interface for 'CULVERT\_COST'. The browser address bar is 'http://mndot.maps.arcgis.com/home/web' with a tab titled 'CULVERT\_COST'. The application has a menu bar (File, Edit, View, Favorites, Tools, Help) and a toolbar with icons for home, edit, save, print, and search. A search bar contains 'Find address or place'. On the left, a 'Contents' panel lists layers: CULVERT REPAIRS, EQUIPMENT, LABOR, MATERIALS, CULVERTS, PREV YEAR REPAIRS, and Topographic. The main map area shows a map of the region around Hibbing, MN, with a red cross icon indicating a repair location. A details popup window is open, displaying the following information:

(2 of 11)	
<b>REPAIR ID: 11042 FOR PIPE ID: 10108</b>	
REPAIR ID: 11042	
PIPE ID: 10108	
USER_NAME: Kevin Hoge	
DATE_STARTED: October 7, 2014	
DATE_COMPLETED:	
REPAIR_STATUS: Pending	
REPAIR_DESC:	
DISTRICT: 3	
REPAIR_MADE: Slipline	
WO_NUMB:	
CULVERT_TYPE: Mainline	
INSIDE_WIDTH_IN: 19.00	
INSIDE_HEIGHT_IN: 19.00	
PREREPAIR_CONDITION: 4 - Very Poor	
FILL_OVER_PIPE_FT: 3.00	
REPAIRED_SHAPE:	
REPAIRED_MATERIAL: Liner HDPE	
Zoom to	Edit
Get Directions	

At the bottom of the popup, the 'Edit' button is circled in red. A red arrow points from the 'Click to View Details' callout to the popup, and another red arrow points from the 'Click to Edit' callout to the 'Edit' button.

Click to View Details

Then,  
Click to Edit

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# Web App

## Details > Content > Show Table

The screenshot shows the ArcGIS web application interface for a map titled 'CULVERT COST'. The 'Details' and 'Content' buttons in the top-left navigation bar are circled in red. The 'Content' menu is open, showing various options, with 'Show Table' at the bottom also circled in red. A pop-up window displays details for a repair with ID 641 for pipe ID 680505. At the bottom, a table view for 'EQUIPMENT' is shown, containing two rows of data. A red oval highlights the table area.

HOME ▾ CULVERT COST NEW MAP Culvert ▾

Details Content | Add ▾ | Edit | Basemap | Save | Share | Directions | Measure | Bookmarks | Find address or place 🔍

About | Content | Legend

Contents

- CULVERT REPAIRS
- EQUIPMENT
- LABOR
- MATERIALS
- CULVERTS
- Topographic

Zoom to | Transparency | Set Visibility Range

Move up | Move down | Rename | Remove | Copy | Hide in Legend | Remove Pop-up | Configure Pop-up | Disable Editing | Show Table | Filter

**(1 of 2)**

**REPAIR ID: 641 FOR PIPE ID: 680505**

REPAIR ID	641
HYDINFRA ID	680505
FULL NAME	Alison Wieckowicz
DATE STARTED	April 10, 2014
DATE COMPLETED	
REPAIR STATUS	Pending
COMMENT	
PROJECT TYPE	Maintenance
DISTRICT	Metro
ACTIVITY	Clean-Repair
REPAIR MADE	Other
WORK ORDER	

Zoom to | Get Directions | Edit

**EQUIPMENT (2 features, 0 selected)**

REPAIR ID	EQUIPMENT CATEGORY	EQUIPMENT DESCRIPTION	UNIT COST	QUANTITY
961	2	980 Pickup Sweeper - HR	null	16.00
961	1	436 Air Comp <50 CFM MTD - HR	null	10.00

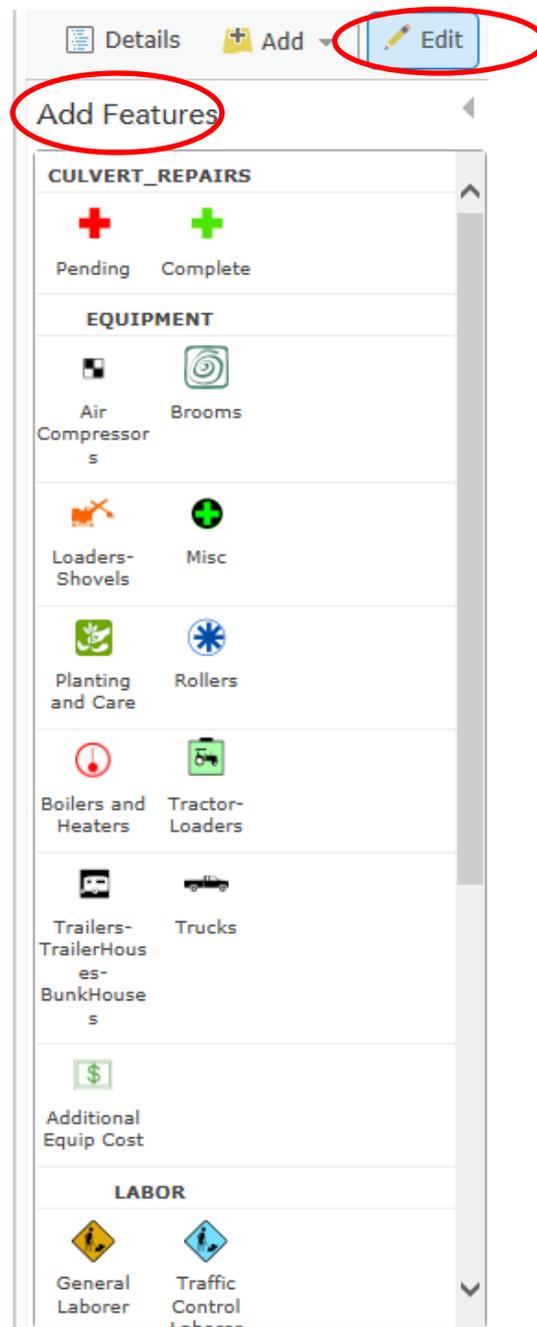
Table Options

Esri.com · ArcGIS Map Viewer · Contact Esri · Report a Problem

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# Web App

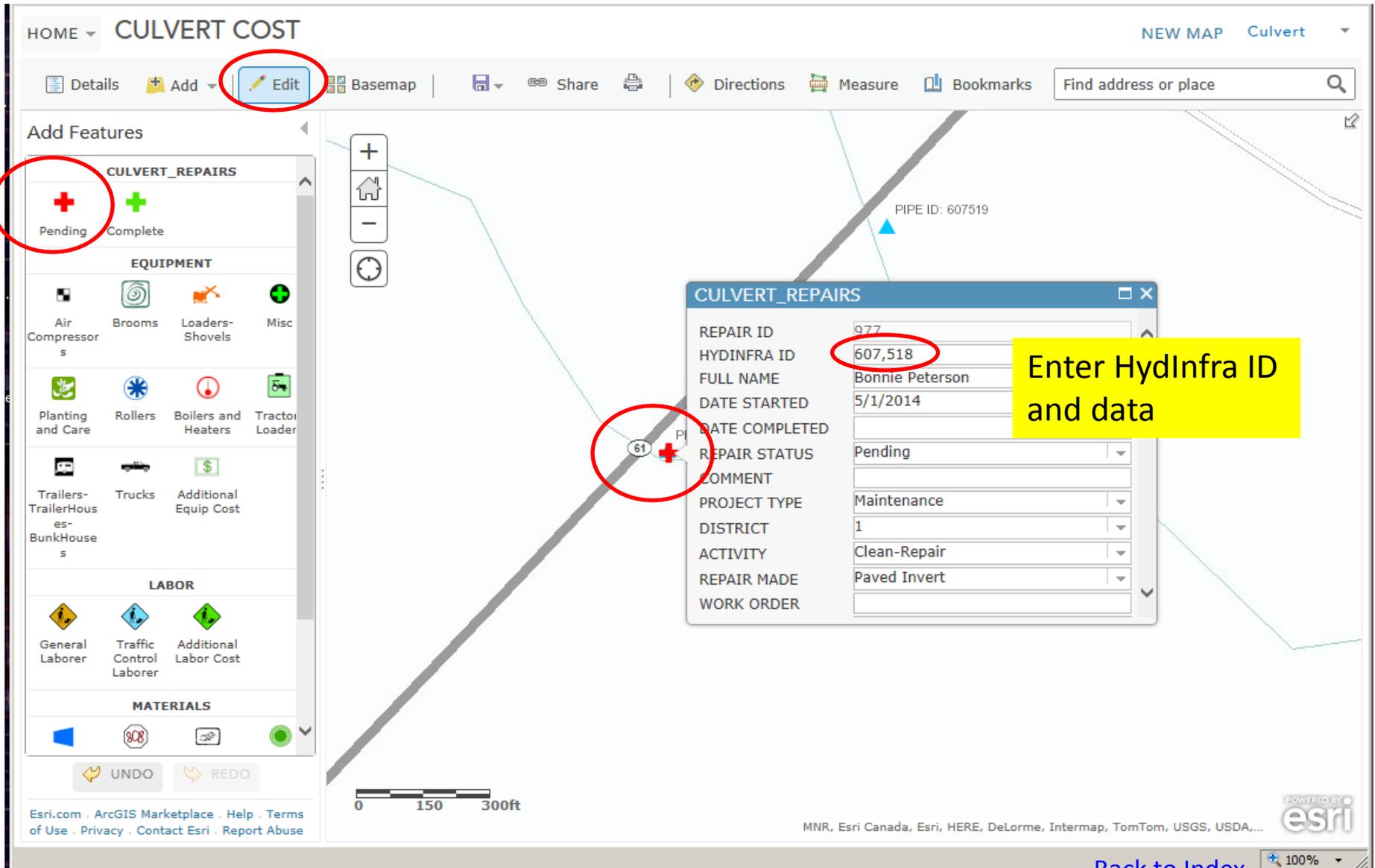


## Edit Menu

- Add a Repair
- Add Equipments
- Add Materials
- Add Labors
  
- Label everything with Repair ID

# Create a Repair

Choose Edit Menu > Click  > Click on Pipe



HOME ▾ CULVERT COST NEW MAP Culvert ▾

Details Add **Edit** Basemap | Share | Directions Measure Bookmarks Find address or place

**Add Features**

- CULVERT\_REPAIRS**
  -  Pending
  -  Complete
- EQUIPMENT**
  - Air Compressors
  - Brooms
  - Loaders-Shovels
  - Misc
  - Planting and Care
  - Rollers
  - Boilers and Heaters
  - Tractor Loaders
  - Trailers-TrailerHouses-BunkHouses
  - Trucks
  - Additional Equip Cost
- LABOR**
  - General Laborer
  - Traffic Control Laborer
  - Additional Labor Cost
- MATERIALS**

UNDO REDO

0 150 300ft

POWERED BY 

MNR, Esri Canada, Esri, HERE, DeLorme, Intermap, TomTom, USGS, USDA,...

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REPAIR ID	977
HYDINFRA ID	607,518
FULL NAME	Bonnie Peterson
DATE STARTED	5/1/2014
DATE COMPLETED	
REPAIR STATUS	Pending
COMMENT	
PROJECT TYPE	Maintenance
DISTRICT	1
ACTIVITY	Clean-Repair
REPAIR MADE	Paved Invert
WORK ORDER	

Enter HydInfra ID and data

# Web App

## Edit mode, make changes

HOME ▾ CULVERT COST NEW MAP Culvert ▾

Details + Edit

Find address or place

**Add Features**

**CULVERT\_REPAIRS**

Pending Complete

**EQUIPMENT**

Air Compressors Brooms Loaders-Shovels

Misc Planting and Care Rollers

Boilers and Heaters Tractor-Loaders Trailers-TrailerHouses-BunkHouses

Trucks Additional

UNDO REDO

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HYDINFRA ID	680,505
FULL NAME	Alison Wieckowicz
DATE STARTED	4/10/2014
DATE COMPLETED	
REPAIR STATUS	Pending
COMMENT	
PROJECT TYPE	Maintenance
DISTRICT	Metro
ACTIVITY	Clean-Repair
REPAIR MADE	Other
WORK ORDER	

0 0.5 1mi

Esri, HERE, DeLorme, USGS, METI/NASA, NGA, US... **esri** POWERED BY

100%

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# Check your Repair!

## for Completeness with the Individual Repair Details Report

- Go to [Culvert Cost Reports](#)
- Choose [Individual Repair Details Report](#)
  - Select the Repair ID or the HydInfra ID

# Culvert Cost Reports



## Culvert Repair Cost - Individual Repair Details Report

Hydinfra ID: 637426      Repair ID: 33      Repair Status: Pending  
 Repair Made: Other  
 Activity: Clean-Repair

Width before repair: 44.00	Name: Schmuck	District: M
Height before repair: 44.00	Project Type: Maintenance	Function:
Length before repair: 77.00	RCA WO#: 1234	Culvert Type: Frontage
Material before repair:	Constr SP #: Sp 4444	Hwy System: IS
Shape: Round	Completed Date:	Hwy #: 94
Width after repair: 12.00	Start Date: 04/10/2014	Ref Pt:
Height after repair: 12.00	Condition before repair: 4 - Very Poor	Left or Right: L
Material after repair: Aluminized Steel	Condition after repair: 1 - Like New	
Length after repair (ft): 88.00		
Fill over pipe (ft): 77.00		
Comment: Test of test		

Labor Cost	Labor Classification	Charge Rate	Sum Hours	Labor Cost
	TG	\$31.05	20	\$621.00
			<b>Total Labor:</b>	<b>\$621.00</b>

Equipment Cost	Charge Class - Description - Charge Units	Charge Rate	Quantity	EquipCost
	437 Air Comp 50-150 CFM MTD - HR	\$36.69	1	\$36.69
	646 Mudjack - hour	\$58.15	4	\$232.60
	619 Brush Chipper - hour	\$46.13	3	\$138.39
	770 Shovels 1/2 C.Y.. or 3/4 C.Y. - HR	\$51.61	1	\$51.61
	468 Roller, Articulated, 3-6 ton - hour	\$27.79	1	\$27.79
	646 Mudjack - hour	\$58.15	5	\$290.75
			<b>Total Equipment:</b>	<b>\$777.83</b>

Material Cost	Material Description	Charge Rate	Quantity	MatlCost
	HDPE Culvert - lf	\$66.00	77	\$5,082.00
			<b>Total Labor:</b>	<b>\$5,082.00</b>

Cost Summary	Labor	Equipment	Materials	Total Cost
	\$621.00	\$777.83	\$5,082.00	\$6,480.83

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### 1. Individual Repair Details Report

- Review a repair for completeness

### 2. All Repairs Summary Report

- Review all repairs and cost totals

### 3. Statistical Analysis Report