

**T & E First-Round Winner**  
Innovations Challenge

**April 2016**  
Prepared by Transportation Planning  
Missouri Department of Transportation

## Drain Grate Puller



### Description

Drain Grate Puller was designed to be fixed to the front of a truck plow ram for removing drainage grates for cleaning drains. The puller centers over drainage grate and can adjust to accommodate for different size grates. The puller attaches to all corners of the grate for even pressure from the plow ram to remove the grate safely.

### Benefit

The puller simplifies work since less tools are needed to remove a grate that is stuck or in a bind. It improves safety by pulling with even pressure and prevents grate from striking workers when breaking free.

### Materials and Labor

Materials List:

3/8 Grade 70 Chain Hook 6 Each \$85

3/8 Chain 12 Ft \$61

Front Plow Ram Arm 1 Each In stock

Square Tubing 2"X2" 36 1/4" In stock

Square Tubing 2 1/2"X2 1/2" 38" In stock

Flat Steel 16"X6" 1 Each In stock

Total Cost: \$146

Labor: 2 hours

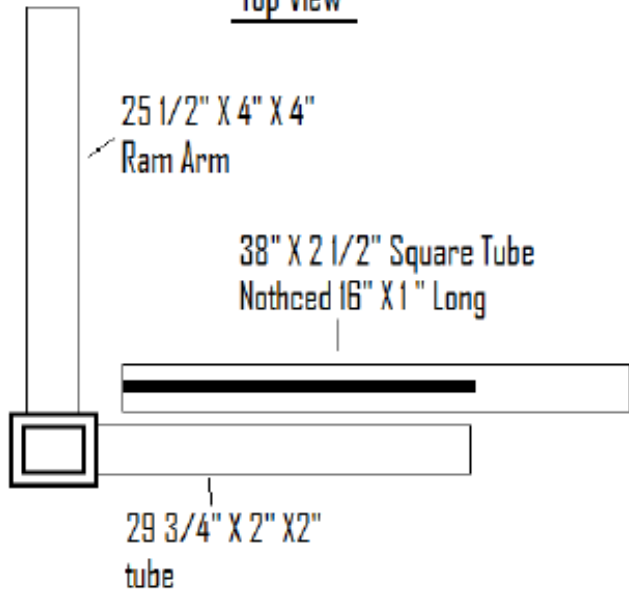
### For More Information Contact:

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Additional photos can be seen by accessing the Innovations Challenge SharePoint page at:  
<http://sharepoint/systemdelivery/TP/Documents/InnovationsChallenge.aspx>.

Top View

Shop Drawing



Side View

