

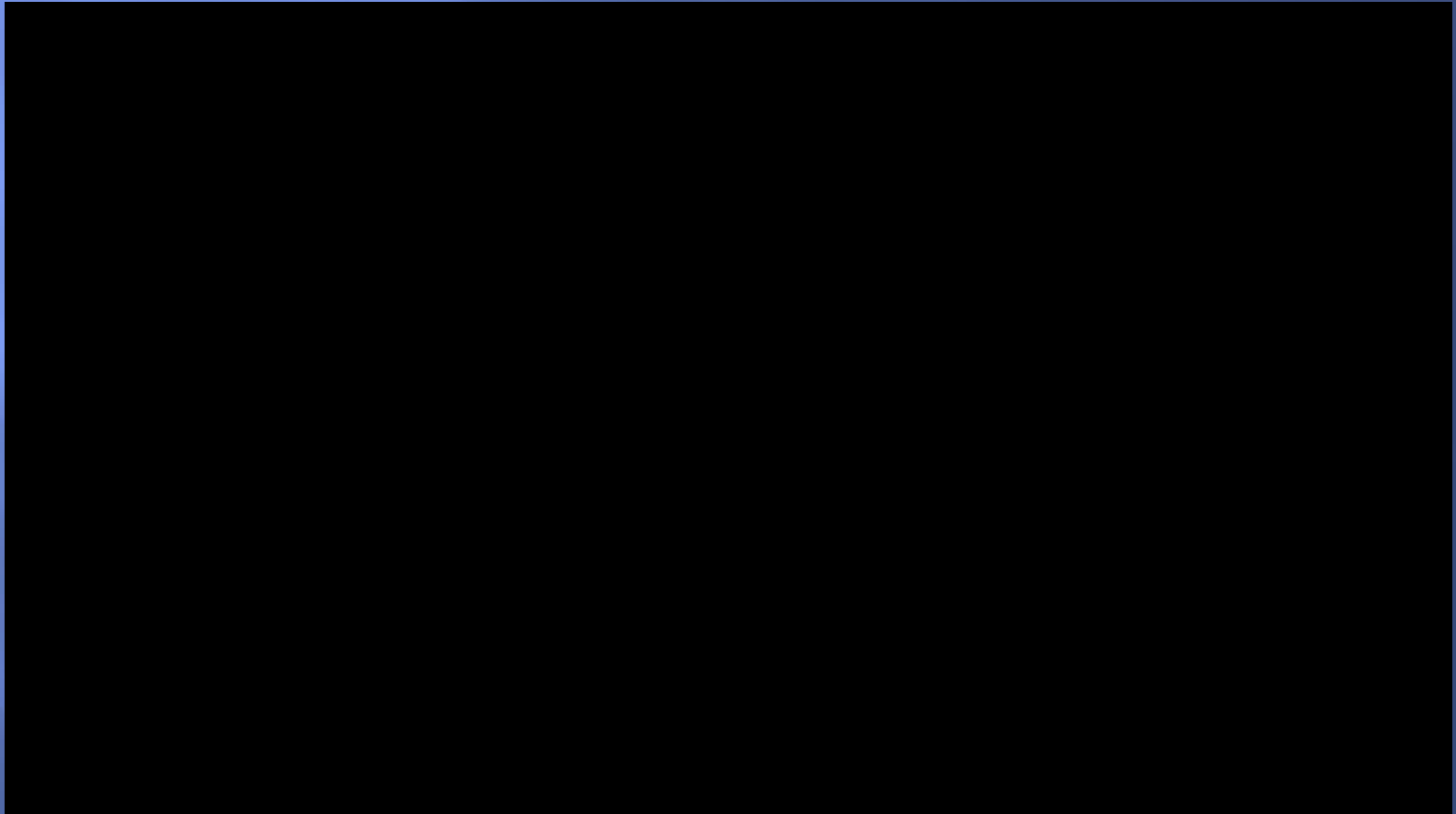
MANHOLE ADJUSTMENTS

“The Whirly GIG”

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The Whirly GIG Manhole Adjustment



Equipment & Material Needed

- ▣ Manhole cutter w/ drum
- ▣ Manhole riser jig cutter
- ▣ Spray paint
- ▣ Skid steer
- ▣ Water tank
- ▣ Plastic riser
- ▣ Concrete



The Removal

MAKE SURE YOU GPS LOCATE FIRST

- Lay marking jig on center of manhole and spray paint
- Use paint mark to line up skid steer core saw
- Saw thru the road
- Remove
- Clean up hole

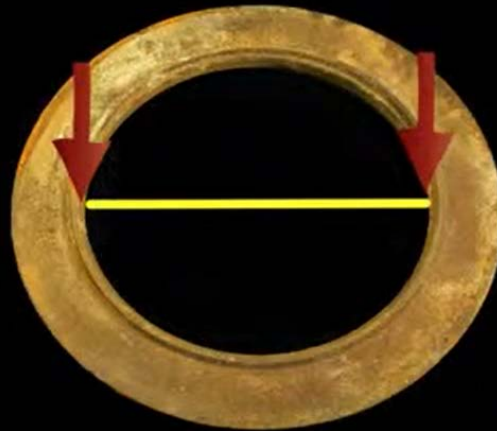


Choosing the Correct Riser Diameter

Casting

Measure the
inside diameter.

*This is the minimum
size form you can use.*



Two measurements

- Inside casting diameter
Is the minimum
- Outside casting diameter
Is the maximum

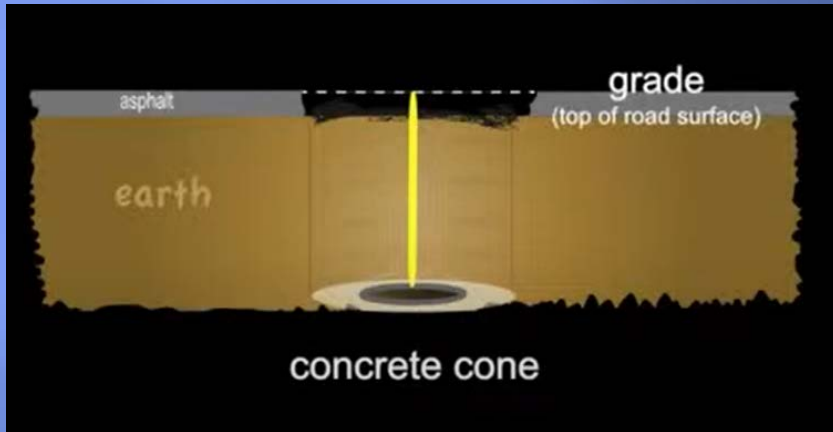
Casting

Measure the
outside diameter.

*This is the maximum
size form you can use.*

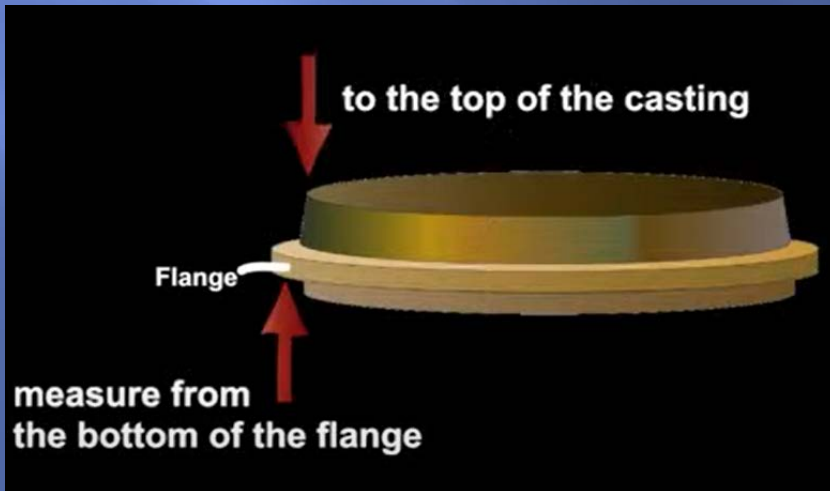


Choosing the Correct Riser Height



Two measurements:

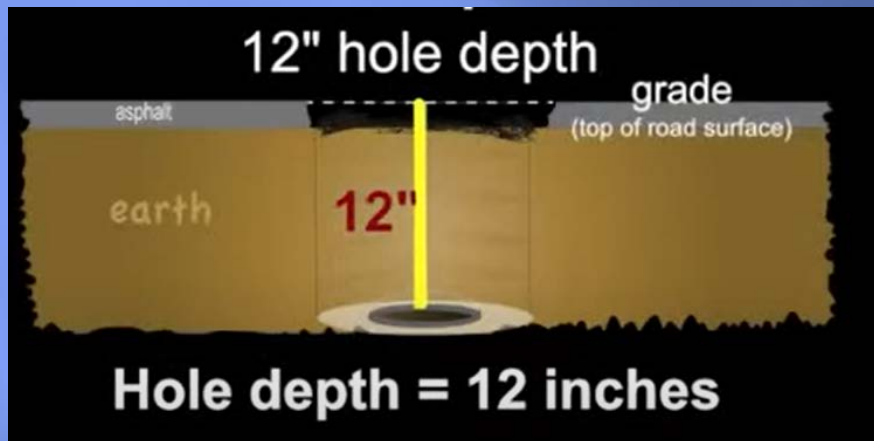
- Hole depth
 - Top of road surface to concrete cone
- Casting height
 - Top of casting to bottom of flange



DO NOT INCLUDE MUD RING

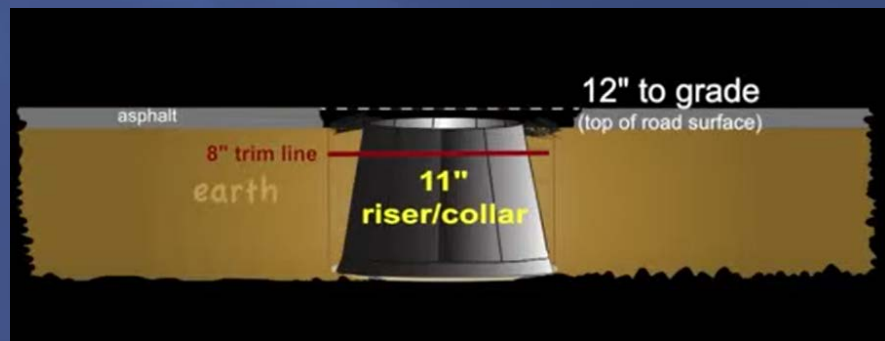
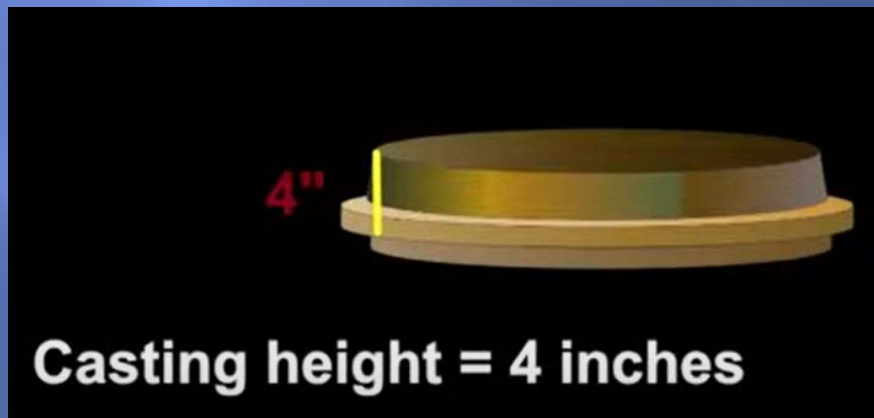
$$\frac{\text{hole depth} + \text{casting height}}{\text{trimmed riser/collar height}}$$

Example



$$\begin{array}{r} 12" \text{ hole depth} \\ - 4" \text{ casting height} \\ \hline 8" \text{ trimmed} \\ \text{riser/collar height} \end{array}$$

So we could use a riser between 9"-11"



Placing the Riser

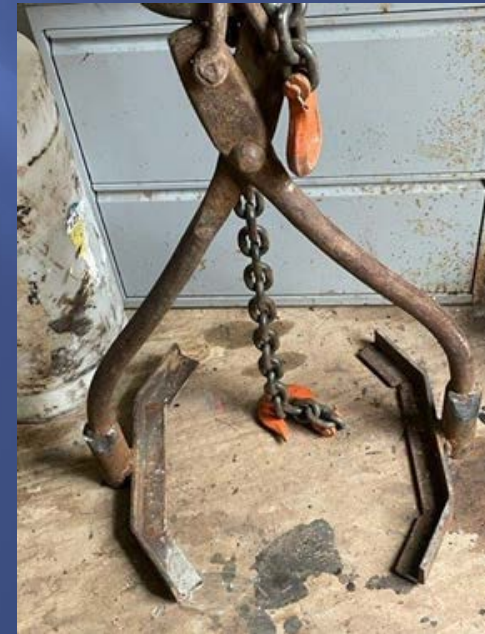


- ▣ Attach the riser to the structure using 22 caliber ramset
- ▣ Measure the casting height
- ▣ Adjust Whirly Gig cutter to height
- ▣ Place Whirly Gig on road above riser and cut plastic riser

Placing the Manhole Casting



- Use a mini excavator or backhoe to place casting on the plastic riser
- Pour Concrete and finish



Why JCDOT?



- Rideability
- Constructability
- Schedule
- Longevity

Costs

▣ Costs for set up:

- Manhole cutter w/ large drum \$38,405
- 21" drum \$ 6,869
- Manhole riser jig \$ 2,450

▣ Riser costs:

▪ Plastic manhole risers

- ▣ 7" x 24" \$68.06
- ▣ 27" x 7" \$67.84
- ▣ 27" x 11" \$72.25
- ▣ 27" x 15" \$83.00
- ▣ 27" x 19" \$100.68
- ▣ 30" x 7" \$81.68
- ▣ 30" x 11" \$90.68

Total investment:
\$47,724

CURRENT PRICING:

JCDOT Crews
Contractor

\$275-\$400/ structure
\$600-\$1000/ Structure

THANK YOU

Questions?

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