

AKKTOBERFEST

TRENCHLESS TECHNICAL SEMINAR

Guided Bore – Auger Bore Combination

**PRESENTED BY: Jim Weist
& Chad Rudolph**



Jim Weist

**President- Michael
Byrne Manufacturing**

BIOGRAPHY

President and owner of Michael Byrne Manufacturing, a supplier for underground construction equipment and accessories for over 50 years. Jim has served as a Non Contractor Board member for NUCA (National Utility Contractors Association) both on the National and Ohio chapters. Jim is also a member of the NFIB, NAM, and the RMC for manufacturing.



Chad Rudolph

President- CornerStone Boring

BIOGRAPHY

- Chad Rudolph has worked in the auger boring, water and sewer utility construction industry since 2000. He is a third-generation family business owner and became an owner in 2015. Since then Cornerstone Boring's sole focus has remained on auger boring. He received his bachelor's degree in construction engineering technology and a master's in business administration from Murray State University in 2005 and 2007 respectively. He is married to his wife, Katie, for 11 years and they have two children.



Guided Bore-Auger Bore Combination



Making Boring Great Again



Pit Set-Up



Align the bore pit and tracks using a Total Station



Setup the total station above a nail hub to position at the front edge or back edge of the bore pit, a single plane laser will assist grading the rock to the required slope of bore.

The total station is used to layout the line and shape of the bore pit. It is important to ensure we are within a 1/8" to 1/16".



Align the GBM based on the track's final position in alignment



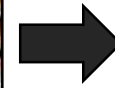
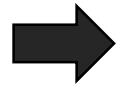
The total station precisely aligns track sections from here through the front track section. The goal is to align tracks very precisely because our GBM jacking frame will be aligned based on the track's alignment. It is important to ensure we are within a 1/8" to 1/16".



Track and Machine Alignment



As the road plates are lowered onto the rock subgrade, the total station is in place to align them closely. Each track section sits on a road plate for stability and ease of make-up.

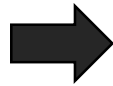


Backstop Installation



Dig out to a pre-determined depth behind the master track and below the road plates.

This is where the portable backstop will be installed



Fill voids behind the backstop with stone or concrete

Lower the backstop so that it is in line with the track and ensure no gaps exist

GBM Aligned with ABM Track

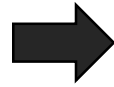


The GBM jacking frame is lowered onto the front track section and aligned in place using the alignment of the tracks

The direction of the tracks sets the direction of the GBM installation, because the casing will be jacked in place from the same alignment.



Setting the Theodolite



On the GBM 240A jacking frame a hole has been cut in the middle of the rear of the frame so once the theodolite is setup on the independent stand to back sight through the hole at the back of our bore machine tracks for center alignment.

Target Pilot Rod Install



Once the Guided Bore Machine and the Auger Bore Machine are aligned together, the target pilot rod is installed for initial pit entry.



Making Boring Great Again



Target Pilot Rod Install



Camera observing target for adjusting the path of the pilot rods

The pilot rod is then thrust through the soil using the theodolite target system on the screen.

*** It is critical to keep the target as close to the center of the crosshairs as possible.**