

“Green Solutions Protecting Our Environment”

Trenchless Consulting, LLC

Minimal Excavation Construction Method Technologies - Reducing Social, Environmental and Economic Impacts while reducing Carbon and Safety Concerns Related to Existing Open Excavation Methods.



“Remote Sewer Saddle Mailine Connection Technology”



Remote Lateral Connection Process for Pipe Bursting
Speaker: Ted Dimitroff, President, Trenchless Consulting LLC

Current pipe bursting sewer saddle connections require man entry and all excavation must meet OSHA requirements. The new Remote Lateral Connection is a non-man-entry method that is much safer and greatly reduces social, economic and environmental issues created by the current, open-excavation method. Fully field tested on pipe bursting projects, the tools and process can be used at depths of 4 to 30 feet and deeper, if needed; make a better connection; and are easier than current methods.

Local trenchless technology seminars will be soon coming to select areas in Florida. These seminars will be a one day class and will provide CEU or PHD credits for each attendee. More information will be coming soon.

REMOTE SEWER LATERAL SADDLE CONNECTIONS

Patent # 7,674,072

EF Lateral Connections Made In Tight Areas



Remote Sewer Mainline Lateral Connection Uses

- Sanitary sewers
- Septic tank elimination projects
- PipeBursting
- Remove & replace sewer projects
- Storm drain drop inlets
- CIPP projects mainline saddle renewals
- Micro-tunnel and pilot tube projects to make deep connections.
- Same process used to install 48 inch deep manhole connections.

Vertical Drilling Machine Provides Quick Access



This machine can make deep large diameter saddle taps

Downtown OKC Lateral Connections



Vacuum Slurry Removal



48" Lateral Connection Man Entry Access Hole Installing Insert-a-tee fitting (this fitting only weakens the pipe, saddle fitting strengthens the pipe)



New Industry Tool Design With Spring Pressure System. Deep Non Man Entry or Man Entry Lateral Installations



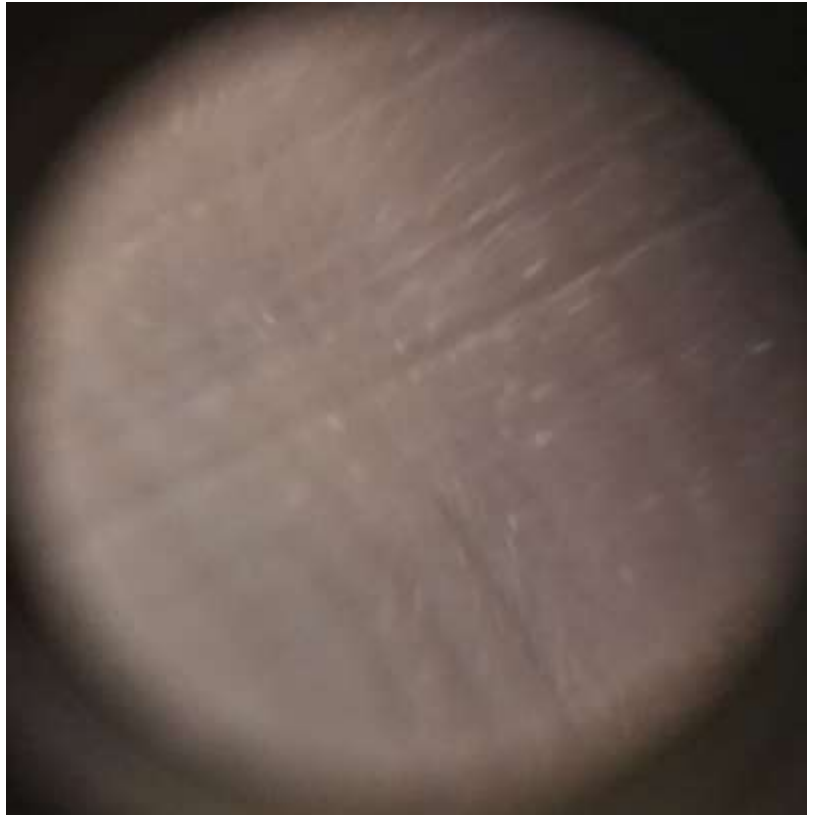
Remote Lateral Connection Tool Package



PVC Saddle Design Strengthens the Mainline Pipe and can be used on CIPP Relining Saddle Replacement Projects



Coarse Beads verse Fine Beads



Glass Bead Pipe Cleaning



Pipe Cleaned



Effective Cleaning Removes Outer Layer



Outer Layer Removal



Ready



Existing Industry Lateral Tool Design is Outdated and Requires Man Entry



Existing Tool on Left verses New Tool Design



10 Foot Deep Non Man Entry Electro Fusion Saddle Connection Made, Same Setup Used on PVC Connection



Sewer Lateral Mainline Connection

Open Cut

Verses

Remote Process



Deep Non Man Entry Lateral Connection Kit



Shallow Man Entry Lateral Connection Kit



- Saddle connection fittings strengthen the pipe.
- Improved flow, no chance of misalignment.
- Large hole in pipe is done after the connection is made.
- No egg shaping of the pipe while making connections.
- Shoring boxes are expensive verse vertically drilled holes with metal culvert pipe.
- Excavators needed to dig deep are much more expensive than shallow digging machines.
- Volume of soil removed is greatly reduced and that reduces the back-fill material and restoration cost.

THANK YOU

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