



85ct. x 4' & 6' diam. Drilled Shafts



PROJECT:	85ct. x 4' & 6' Diam. Drilled Shafts
LOCATION:	Westmount Section of Montreal, CA
PRODUCTS USED:	M-BOOSTER ® Dry pH Adjuster, FORTIFY ® Slurry Loss Additive, BIG-FOOT ® Polymer Slurry, MO's-MUD ® Strong Viscosity Booster, GEO-NET ® Slurry Loss Circulation Material, FAST-FLOC ® Rapid Acting Liquid Flocculent, GRID-LOCK ® Polymer Expanding Additive, 3" Jet Mixer, Slurry Sampler, Slurry Test Kit

CHALLENGE

1. Mixing, testing, and rebuilding of the polymer slurry;
2. Clarifying the open shaft polymer slurry for downhole camera inspections;
3. Disposal of the used slurry

SOLUTION

MATRIX provided onsite instruction for proper use and set-up of products and equipment, mixing, testing procedures and product disposal

MATRIX was contacted by a worldwide drilled shaft contractor operating in Canada that was unfamiliar with the process to drill shafts under polymer slurry. They were also unfamiliar with MATRIX products and services. They reached out to MATRIX after hearing positive feedback from other drilled shaft contractors about MATRIX products, solutions and their great experiences with MATRIX Field Support Services to train new customers in the uses of polymer drilling.

SITE GEOLOGY:

The subsurface geology on the Montreal jobsite consisted of soft silty clays (30+/-) changing to soft silts laying over a sandy gravel with black silt. The bedrock was a black competent sedimentary rock. Bedrock was only encountered at 12 locations.

CHALLENGE:

The customer had three major concerns that MATRIX was able to address:

1. Mixing, testing, and rebuilding of the polymer slurry

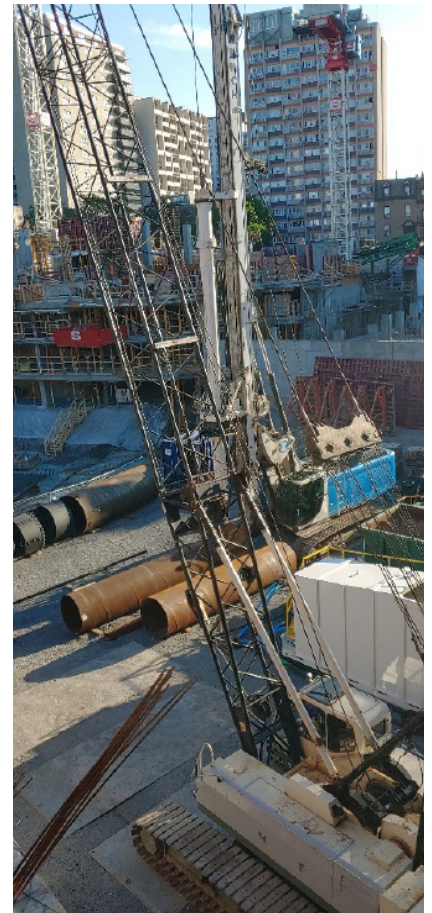
MATRIX provided an estimate for onsite training services for the field teams. The customer accepted the proposal and purchased a Slurry Test Kit, MATRIX Mixer, and MATRIX Slurry Sampler.

2. Clarifying the open shaft polymer slurry for downhole camera inspections

MATRIX discussed the variables and concerns with clarifying or flocculating the suspended solids in a polymer slurry. A review of which products would be required was also completed with the customer.

3. Disposal of the used polymer slurry

MATRIX provided the customer with detailed instructions on the neutralization and disposal of the wasted polymer drilling slurry.



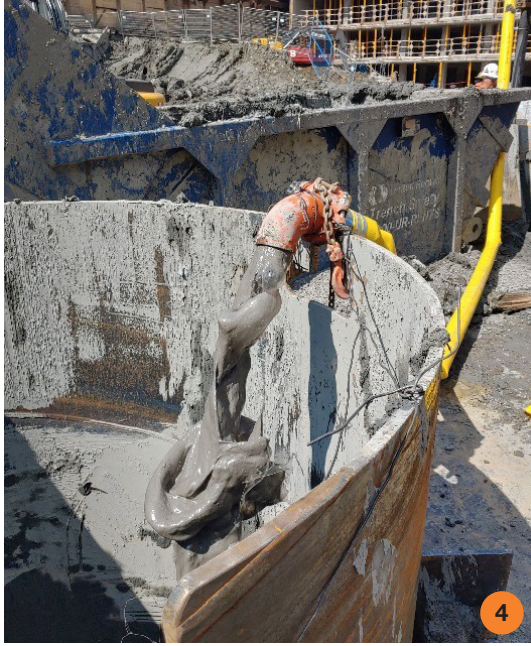


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SOLUTION:

MATRIX provided four days of onsite instruction for proper mixing tank and equipment setup. As well as measuring and mixing instruction for polymer slurry products, proper technique to take slurry samples with the MATRIX slurry sampling tools and how to test and record information after using the MATRIX Slurry Test Kit.

Our MATRIX representative trained the customer in the proper use of air assist bottom hole vacuum system. The slurry worked so well that the bottom of the holes had almost nothing on them prior to installing the vacuum lines.



1 Training site crew on proper mixing

2 Training site crew on how to check viscosity of drilling fluids

3-6 Training site crew on building and using an "air line vacuum"



Measuring drilling fluid viscosity



Checking sand content of drilling slurry

SOLUTION (cont.):

MATRIX also trained the customer to use FAST-FLOC in a drilled shaft to reduce sand content and pour shafts quickly to stay on schedule. FAST-FLOC was used for the final cleaning of the fluid and hole. The customer was extremely impressed with the FAST-FLOC results!

Amount of product used per 19,000 gallon tankful/batch:

- M-BOOSTER** Dry pH Adjuster @ 150 lbs / 19K gals
- FORTIFY** Slurry Loss Additive @ 100 lbs / 19K gals
- BIG-FOOT** Polymer Slurry @ 140 lbs / 19k gals



These products were added directly into the drilling excavation when/if needed:

- **MO's MUD** Strong Viscosity Booster @ 44lbs / 10' drilling in trouble zone (only 5ct x 44lb cans used) in excavations where the groundwater and subsurface geology impacted and reduced the working viscosity of the BIG-FOOT Polymer Slurry system.
- **GEO-NET** Slurry Loss Circulation Material @ 60 lbs / 10' drilling in trouble zone (none of this product was needed)

MATRIX personnel accessibility regarding the issue, quickly traveling to the site, providing a strategic plan of action, and implementing that plan, created a positive outcome for our client. Both problem locations were drilled quickly to final depth in one eight-hour overnight shift.

BIG-FOOT® Polymer Slurry is so good you won't believe it!

For more information regarding this project or any other MATRIX products and services please visit our website at matrixcp.com or call 877.591.3137