

List of Our Completed Projects:

Project 1:

Name of Project: Government Canada - Injection Grouting of the Hasting Swing Bridge Replacement, Project Number R.055746.001, PWGSC Ontario. *Location:* Hasting Swing, Ontario, Canada *Client:* Public Works and Government Services Canada

Main project features: Injection Grouting of the Hasting Swing Bridge

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for owner approve.
- Supply and installation ten (10) structures Monitoring Points and two (2) biaxial Tiltmeter and set up the automatic data collection and management system for monitoring during the injection grouting of the bridge.

Project 2:

Name of Project: TTC Lawrence West Station – Key Station Accessibility Project, *Location:* Toronto, Ontario, Canada

Client: TTC

Main project features: TTC Lawrence West Subway Station – Subway Station Renovation Work project.

Activities performed: install and monitoring following instrument

- Prepared the geotechnical monitoring program for TTC approve.
- Prepared the noise and vibration monitoring program for TTC approve.
- Designed the monitoring instrumentation and installed two (2) inclinometers in soldier piles; Installed and monitored the one (1) real-time vibration stations and one (1) real-time noise control station; Precision survey and three dimensions monitoring data reporting for ten (10) surfaces monitoring for ground movement, subway slabs, buildings and shafts shoring system.

Project 3:

Name of Project: TTC – Wilson Yard Modifications - Site Services Stage 2, Phase 5 *Location:* Toronto, Ontario, Canada

Client: TTC

Main project features: Wilson Yard Modifications Construction Project. *Activities performed:* install and monitoring following instrument

- Prepared the noise and vibration monitoring program for TTC approve.
- Installed the one (1) real-time noise monitoring station.

Project 4:

Name of Project: TTC Ossington Station Easier Access Phase III, Toronto, Ontario *Location:* City of Toronto, Ontario, Canada *Client:* TTC

Main project features: Station Easier Access Phase III

Activities performed: install and monitoring following instrument

• Prepared the vibration and noise monitoring program for TTC approve.



• Prepared and installed one (1) real-time vibration stations and two (2) real-time noise monitoring station; Installed twelve (12) existing building and shoring system monitoring points to monitor the displacement and settlement; Installed twelve (12) strain gauge and nine (9) inclinometers to monitoring the shoring system and excavated building shaft.

Project 5:

Name of Project: TTC Lawrence Station – Fire Ventilation Upgrade Project,

Location: Toronto, Ontario, Canada

Client: TTC

Main project features: TTC Yonge Street and Lawrence Subway Station – Fire Ventilation Upgrade

Activities performed: install and monitoring following instrument

- Prepared the geotechnical monitoring program for TTC approve.
- Prepared the noise and vibration monitoring program for TTC approve.
- Designed the monitoring instrumentation and installed six (6) inclinometers in caisson walls and another six (6) inclinometers in soil; Installed and monitored the four (4) real-time vibration stations and one (1) real-time noise control station; Precision survey and three dimensions monitoring data reporting for fourteen (14) surfaces monitoring for ground movement, subway slabs, buildings and shafts shoring system.

Project 6:

Name of Project: TTC – Wilson Complex Wheel Lathe Project, Location: Toronto, Ontario, Canada Client: TTC Main project features: TTC Wilson Yard Modifications Work and Construction project. Activities performed: install and monitoring following instrument

- Prepared the geotechnical monitoring program for TTC approve.
- Prepared the noise and vibration monitoring program for TTC approve.
- Installed and monitored the one (1) real-time vibration stations and one (1) real-time noise control station; Precision survey and three dimensions monitoring data reporting for twenty (20) monitoring points for ground movement, existing structures and shafts shoring system

Project 7:

Name of Project: TTC – TTC Roncesvalles Yard – Acoustic Barrier North Wall *Location:* Toronto, Ontario, Canada

Client: TTC

Main project features: Acoustic Barrier North Wall Construction Project.

- Prepared the noise and vibration monitoring program for TTC approve.
- Installed the one (1) real-time vibration monitoring station; Installed twenty (20) existing retaining wall, building and shoring system monitoring points to monitoring the displacement and settlement.



Project 8:

Name of Project: TTC – St. Clair West Station - Easier Access Phase III Location: Toronto, Ontario, Canada Client: TTC

Main project features: Easier Access Construction Project.

Activities performed: install and monitoring following instrument

- Prepared the noise and vibration monitoring program for TTC approve.
- Installed the one (1) real-time vibration monitoring station; Installed two (2) inclinometers, two (2) deep settlement points and two (2) surfacing monitoring points to monitor the shoring system and ground displacement and settlement.

Project 9:

Name of Project: TTC - Greenwood Yard – Track Conversion and South Fencing Replacement, Toronto, Ontario (Contract No. GR1-46) Location: Toronto, Ontario, Canada Client: TTC Main project features: Greenwood Yard Fencing Replacement project.

Activities performed: install and monitoring following instrument

- Prepared the geotechnical monitoring program for TTC approve.
- Prepared the vibration monitoring program for TTC approve; Precision survey and three dimensions monitoring data reporting for thirty-six (36) structure and shoring monitoring points for the existing structure and shaft shoring system

Project 10:

Name of Project: TTC – Wilson Carhouse North Expansion *Location:* Toronto, Ontario, Canada

Client: TTC

Main project features: TTC Wilson Yard Modifications Work and Construction project. *Activities performed:* install and monitoring following instrument

- Prepared the geotechnical monitoring program for TTC approve.
- Prepared the noise and vibration monitoring program for TTC approve.
- Installed and monitored the one (1) real-time noise and (1) vibration control station.
- Precision survey and three dimensions monitoring data reporting for thirty-six (36) structure and shoring monitoring points for the existing structure and shaft shoring system

Project 11:

Name of Project: TTC Coxwell Station - Easier Access Phase III, Toronto, Ontario (Contract D45-8).

Location: Toronto, Ontario, Canada

Client: TTC

Main project features: Coxwell Station - Easier Access Phase III Construction Project. *Activities performed:* install and monitoring following instrument

• Prepared the noise and vibration monitoring program for TTC approve.



- Prepared and installed three (3) real-time vibration stations and one (1) real-time noise monitoring station.
- Supply, installation and monitoring four (4) Ground Monitoring Points (SMP), ten Surface Monitoring Points (SMP), five (5) inclinometers and four (4) Levelogger and Barologger for the shoring system, existing structures, ground movements and ground water level.
- Supply, installation four (4) Electrolevel beams and set up the automatic data collection and management system for monitoring the subway station tunnel boxes movement.

Project 12:

Name of Project: TTC - Woodbine Station Easier Access and Second Exit *Location:* Toronto, Ontario, Canada *Client:* TTC

Main project features: Woodbine Station Easier Access and Second Exit Construction Project. *Activities performed:* install and monitoring following instrument

- Prepared the noise and vibration monitoring program for TTC approve.
- Installed four (4) standpipe piezometers, eleven (11) inclinometers, nineteen (19) settlement monitoring points for monitoring the shoring system, existing structures, ground movements and ground water level.

Project 13:

Name of Project: TTC Keele Yard Retrofit (Contract B4-36) Location: Toronto, Ontario, Canada Client: TTC Main project features: TTC Keele Yard Modifications Work and Construction project. Activities performed: install and monitoring following instrument

- Prepared the geotechnical monitoring program for TTC approve.
- Prepared the noise and vibration monitoring program for TTC approve.
- Installed and monitored the one (1) real-time noise and one (1) vibration control station.
- Precision survey and three dimensions monitoring data reporting for sixty two (62) Surface Monitoring Points (SMP and six (6) Deep Monitoring Points (DMP) for the existing ground, structure, railway track and shaft shoring system

Project 14:

Name of Project: TTC Broadview Station - Bus Roadway On-Grade Paving Rehabilitation, Toronto, Ontario (Contract D5-24)

Location: Toronto, Ontario, Canada

Client: TTC

Main project features: TTC Broadview Station Modifications Work and Construction project. *Activities performed:* install and monitoring following instrument

• Prepared the noise and vibration monitoring program for TTC approve.



• Installed and monitored the four (4) real-time noise monitoring stations and four (4) real-time vibration control stations.

Project 15:

Name of Project: Roncesvalles Yard – East Retaining Wall Replacement and Electrical Upgrades, Toronto, Ontario (Contract B4-29).

Location: Toronto, Ontario, Canada

Client: TTC

Main project features: TTC Roncesvalles Yard Modifications Work and Construction project. *Activities performed:* install and monitoring following instrument

- Prepared the geotechnical monitoring program for TTC approve.
- Prepared the noise and vibration monitoring program for TTC approve.
- Installed and monitored the one (1) real-time noise and (1) vibration control station.
- Precision survey and three dimensions monitoring data reporting for eighteen (18) Surface Monitoring Points (SMP for the existing structures and retaining wall.

Project 16:

Name of Project: TTC- Kennedy Subway Station End of Line Cleaning Facilities (Contract F3-28)

Location: Toronto, Ontario, Canada

Client: TTC

Main project features: Kennedy Subway Station Improvement

Activities performed: install and monitoring following instrument

- Prepared vibration monitoring program for TTC approve.
- Installed and monitored the two (2) vibration control stations.

Project 17:

Name of Project: MTO- Highway 26 and drainage ditch improvements project (Contract No. 2015-2256).

Location: Edenvale, Ontario, Canada

Client: MTO

Main project features: Highway 26 Reconstruction and Widening

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for owner approve.
- Supply, installation and monitoring ten (10) Settlement Pins (SPs); nine (9) building monitoring points (BMPs) for the embankment and existing structures;

Project 18:

Name of Project: HWY 410 from south of HWY 401 to Queen Street, Central Region, Ontario (Contract No. 2014-2026).

Location: City of Mississauga, City of Brampton, Central Region, Ontario, Canada *Client:* MTO

Main project features: Highway construction and twenty-two cross highway 410 sewer tunnels ground settlement monitoring.



- Prepared the monitoring program for approve
- Twenty Six (26) track monitoring points, one hundred nine (109) ground settlement monitoring points and two hundred fifteen (215) pavement markers for monitoring the railway tracks, highway pavement structures and ground settlement.

Project 19:

Name of Project: 407 East Extension – Structure M-117 Location: Highway 35 and Highway 115, Ontario, Canada Client: MTO Main project features: Highway 407 East Extension Activities performed: install and monitoring following instrument

- Prepared the vibration monitoring program for owner approve.
- Supply and install four (4) vibration stations monitoring for the existing Enbridge gas pipes.

Project 20:

Name of Project: Cameron Lake Bridge Replacement, Highway 35 and Pearns Road (MTO 2015-4197)

Location: Kawartha Lake, Ontario, Canada

Client: MTO

Main project features: Bridge Replacement and Highway Reconstruction and Widening *Activities performed:* install and monitoring following instrument

- Prepared the monitoring program for owner approve.
- Prepared the vibration monitoring program for owner approve.
- Supply and installation two (2) deep benchmark (DMP) and four (4) settlement pins (SP) for monitoring the existing bridge movement.
- Supply and install two (2) real-time vibration stations monitoring for the existing bridge and neighbors during the piling and construction work.

Project 21:

Name of Project: Metrolinx – Georgetown South Project – West Corridor Track and Grading *Location:* Toronto, Ontario, Canada

Client: Metrolinx

Main project features: Railway Tracks and Grading Construction

Activities performed: install and monitoring following instrument

- Pre-Construction/Post-Construction condition survey for existing structures and buildings.
- Prepared the geotechnical monitoring program for Metrolinx approve.
- Monitoring ground and Highways 401 and 409 movement during the storm sewer tunneling crossing the highways 401 and 409
- Protection and monitoring the existing highway 401 Bridges.

Project 22:

Name of Project: South Blair Road/Rail Grade Separation and Access Road Project *Location:* City of Whitby, Ontario, Canada *Client:* Metrolinx



Main project features: Rail Grade Separation Ground Settlement, Shoring Support System and Tracks Monitoring

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for Metrolinx approve.
- Prepared the vibration and noise monitoring program for Metrolinx approve.
- Preconstruction condition survey
- Prepared and installed and monitored one (1) real-time vibration stations and one (1) real-time noise control station
- Prepared, installed and monitored thirty (30) in-ground monitoring points and eighty (80) pile monitoring points.
- Installed and monitored twenty-six (26) inclinometers in soldier piles for monitoring the shoring support system.

Project 23:

Name of Project: BRT Phase II – Tahoe Station Project
Location: City of Mississauga, Ontario, Canada
Client: Metrolinx
Main project features: Vibration Monitoring and Crack Gauge Monitoring
Activities performed: install and monitoring following instrument

- Prepared the monitoring program for approve
- Prepared, installed two (2) vibration monitoring station and three (3) crack gauges to monitoring the cracks movement during the demolition activities.

Project 24:

Name of Project: Metrolinx – UP Express Union Station Platform and Waiting Lounge *Location:* City of Toronto, Ontario, Canada

Client: Metrolinx

Main project features: Union Station Renovation

Activities performed: install and monitoring following instrument

- Prepared the vibration and noise monitoring program for Metrolinx approve.
- Prepared and installed and monitored six (6) real-time vibration stations and one (1) real-time noise control station.

Project 25:

Name of Project: GO Transit/Metrolinx Bridge Underpass - 2014-162T Z2/Z3 - Dixie Road Watermain and Road Reconstruction, Mississauga, Ontario

Location: Mississauga, Ontario, Canada

Client: Metrolinx

Main project features: GO Transit/Metrolinx Bridge Monitoring

- Prepared the monitoring program for Metrolinx approve.
- Supply, installation and monitoring six (6) bridge monitoring points for the bridge movement.



Project 26:

Name of Project: 750mm Water main Installation along Countryside Drive, City of Brampton, Ontario (Project No.: 10-1115, 08-1109 and 14-1375)

Location: Brampton, Ontario, Canada

Client: Regional of Peel

Main project features: Watermain Tunnelling Work

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for owner approve.
- Supply, installation and monitoring sixteen (16) Settlement Monitoring Point (SMP) for monitoring the Highway structures and ground movement.

Project 27:

Name of Project: Hanlan Feedermain and Mississauga City Centre Watermain, Contract 3, City of Mississauga

Location: City of Mississauga, Ontario, Canada

Client: Regional of Peel

Main project features: Railway, Excavated Shaft and Ground Monitoring for Tunneling work *Activities performed:* install and monitoring following instrument

- Prepared the monitoring program for approve.
- Prepared, installed and monitored one hundred one (101) ground monitoring points; Prepared, installed and monitored twenty eight (28) Tape Extensometer (TPX); Installed and monitored seven (7) Inclinometer (INC); Installed and monitored three (3) Multipoint borehole extensometers (MPBX) for monitoring the tunneling, railway and ground movement and displacement.
- Prepared and installed twelve (12) real-time vibration stations monitoring the Highway 403 and Highway 401 bridges during the underneath tunneling work.

Project 28:

Name of Project: The Gore Road Watermain and Trunk Sanitary Sewer from Castlemore Road to North of Beamish Court

Location: City of Brampton, Ontario, Canada

Client: Region of Peel

Main project features: Tunneling Settlement Monitoring and Utilities Monitoring *Activities performed:* install and monitoring following instrument

- Prepared the monitoring program for approve.
- Prepared, installed and monitored thirteen (13) in-ground monitoring points and eight (8) surface monitoring points.

Project 29:

Name of Project: 1800mm and 1650mm Trunk Sanitary Sewers at Lester B. Person International Airport, City of Mississauga, Ontario (Project No. 11-2210) *Location:* Mississauga, Ontario, Canada *Client:* Regional of Peel



Main project features: Trunk Sanitary Sewers Tunnelling Work

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for client approve.
- Supply and installation five (5) Surface Monitoring Points and thirty-eight (38) Settlement Monitoring Markers (SMM) for monitoring the Airport runway structures and ground movement.

Project 30:

Name of Project: North Brampton Pumping Station NB14-1 Chamber and Zone Piping Modification (Project 10-1966, 13-1903 and 07-1506), Brampton, Ontario *Location:* City of Brampton, Ontario, Canada

Client: Regional of Peel

Main project features: Pumping Station Construction and Tunneling Work

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for approve
- Installed one (1) real-time vibration monitoring station.
- Installed and monitored four (4) inclinometers, two (2) utility monitoring points, twelve (12) ground monitoring points and five (5) surface/structures monitoring points for the existing building, ground settlement and shoring system.

Project 31:

Name of Project: External Storm Servicing for 1135/1125 Haig Boulevard, Mississauga, ON *Location:* City of Mississauga, Ontario, Canada

Client: Regional of Peel

Main project features: Tunneling Work Cross the CN and Metrolinx railway tracks.

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for approve
- Installed and monitored forty-two (42) shallow ground monitoring points and four (4) deep ground monitoring points for the CN railway and Metrolinx railway tracks.

Project 32:

Name of Project: Green Road and CPR Grade Separation, Bowmanville, Ontario (Contract No.: CL2013-26)

Location: Bowmanville, Ontario, Canada

Client: Corporation of the Municipality of Clarington

Main project features: CPR Grade Separation

Activities performed: Monitoring two (2) inclinometers.

Project 33:

Name of Project: Road widening, sanitary, Forcemain and Watermain Phase A, Steeles Ave (Trafalgar Road to 340 m east of 8th line North),

Location: Halton Hills, Ontario, Canada *Client:* Regional of Halton



Main project features: Sanitary and watermain tunneling pipes cross the Mile Creek and near the existing bridge

Activities performed: install and monitoring following instrument

- Designed the monitoring program and installed the monitoring instrumentation.
- Precision survey and monitoring data reporting for the ground settlement movement, bridge, buildings, two (2) launch shaft and two (2) receiving shafts shoring system.
- Vibration monitoring during the piling works.

Project 34:

Name of Project: Trunk Sanitary Sewer, Regional Road 25, Town of Milton, Ontario (R-218B-14) *Location:* Town of Milton, Ontario, Canada

Client: Region of Halton

Main project features: Regional Road 25 Reconstruction and Trunk Sewer

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for approve.
- Supply, installation and monitoring thirty-one (31) ground monitoring points (GMP) and ten (10) convergence pins for ground settlement, gas pipe and tunnel works.

Project 35:

Name of Project: Region of Halton - Derry Road/CN Rail Grade Separation from Scott Blvd to Bronte Street

Location: Town of Milton, Ontario, Canada

Client: Region of Halton

Main project features: Railway Tracks and Grading Construction

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for approve.
- Installed three (3) deep benchmarks, forty-five (45) settlement rods and sixty (60) surface monitoring points monitoring, existing structures, ground, shoring system, retaining wall and CN Rail Track movement during the watermain tunneling and railway separation construction.

Project 36:

Name of Project: Hwy 407 – 1.1 km Eastbound from Bronte Road- Boyne Trunk Wastemain, Town of Oakville and Town of Milton, Ontario.

Location: Town of Oakville and Town of Milton

Client: Region of Halton

Main project features: Boyne Trunk Wastewater main Tunnel

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for approve.
- Supply, installation and monitoring twenty-two (22) Surface Monitoring Point (SPM), four (4) Settlement Rod (SR) and four (4) Deep Benchmark for Highway 407 structures and ground settlement during tunnel work crossing the Highway.

Project 37:



Name of Project: Construction of Rebecca Trunk Wastewater Main- From the Oakville Southwest Wastewater Treatment Plant to Forsythe Street, Town of Oakville, Ontario (Contract S-2869A-15)

Location: Oakville, Ontario, Canada

Client: Regional of Halton

Main project features: Trunk Wastewater Main and Wastewater Treatment Plant Construction *Activities performed:* install and monitoring following instrument

- Prepared the monitoring program for owner approve.
- Supply, installation and monitoring thirty four (34) Building Monitoring Points (BMP); ninety one (91) Surface Monitoring Points (SMP); twenty eight (28) Shallow Subsurface Monitoring Points (SSMP); fifty eight (58) Utility Monitoring Points (UMP) and two (2) Inclinometers (INC) for monitoring the structures, ground movement, shaft shoring system and utilities.

Project 38:

Name of Project: Construction of the Holland Landing and Green Lane Forcemains, Sanitary Sewer, and Watermain and all Ancillary Works, East Gwillimbury, Ontario (Contract No. T-13-12)

Location: East Gwillimbury, Ontario, Canada

Client: Regional of York

Main project features: Storm, Sewer and Sanitary Forcemain Tunneling Works *Activities performed:* install and monitoring following instrument

- Prepared the monitoring program for approve;
- Supply, installation and monitoring five (5) Deep monitoring points (DMP) and twenty (20) Shallow monitoring points (SMP) for ground settlement movement and Metrolink railway tracks.

Project 39:

Name of Project: Construction of the Midblock Collector Road (Norman Bethune Avenue) crossing Highway 404 between Highway 7 and 16th Avenue, and widening of Allstate Parkway from 130m south of Centurian Drive to 90m north of Centurian Drive- DIVISION 2: Construction of the Hwy 404 S-E/W Ramp Extension from Highway 7 to Norman Bethune Avenue (Contract No. T-14-53)

Location: Richmond Hill and Markham, Ontario, Canada

Client: Regional of York

Main project features: Embankment settlement monitoring, Highway and Ground Settlement monitoring for tunnelling work

- Prepared the monitoring program for approve
- Prepared and installed two (2) real-time vibration station and two (2) real-time noise monitoring station
- Installed eighteen (18) settlement rods, two (2) utility monitoring points (UMP) to monitoring the Highway and ground settlement, and utilities pipes during the sewer tunnelling work.



• Installed six (6) settlement plate (SP) to monitoring the new constructed embankment settlement.

Project 40:

Name of Project: Reconstruction and Widening for 2nd Concession Road, York Region, ON *Location:* East Gwillimbury, Ontario, Canada

Client: Regional of York

Main project features: Rail Grade Separation Ground Settlement, Shoring Support System and Tracks Monitoring

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for approve
- Prepared and installed three (3) real-time vibration station and three (3) real-time noise monitoring station
- Installed forty-five (45) settlement rods, twelve (12) load cell, six (6) inclinometers and eighty (80) surface monitoring points/track monitoring points to monitor the existing structures, ground, shoring system and CN Rail Track movement during the watermain tunneling and railway separation construction.
- Installed forty-four (44) settlement rods (SR) and four (4) deep settlement point (DMP) to monitoring the railway track over the constructed box-culvert.

Project 41:

Name of Project: Pearldale Avenue from Hasbrooke Drive to Finch Avenue West Sanitary Sewer and Watermain

Location: City of Toronto, Ontario, Canada

Client: City of Toronto

Main project features: Building Settlement and Utilities Monitoring for Dewatering work *Activities performed:* install and monitoring following instrument

- Prepared the monitoring program for approve.
- Prepared, installed and monitored thirty-two (32) building monitoring points for the structures and houses.

Project 42:

Name of Project: CAMH Emergency Room Renovations project at 250 College Street *Location:* City of Toronto, Ontario, Canada

Client: City of Toronto

Main project features: Building Renovation

- Prepared the engineering monitoring program for client approve.
- Prepared the noise and vibration monitoring program and installed and monitored the one (1) real-time vibration stations and one (1) real-time noise control station.
- Designed the monitoring instrumentation and installed ten (10) strain gauges, twelve (12) prisms and set up real-time data collection and management system for monitoring the major building beams movements, deformation, and strain and stress changes.



Project 43:

Name of Project: Waterfront Toronto East Bayfront External Servicing, Toronto, Ontario (Project No. 0900467)

Location: Toronto, Ontario, Canada

Client: City of Toronto

Main project features: Storm, Sewer and Sanitary Forcemain Tunneling Works and Infrastructure Monitoring.

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for approve;
- Supply, installation and monitoring twenty-two (22) Settlement Monitoring Points (SMP) for the ground settlement movement;
- Supply, installation and monitoring twenty-two (22) Surface Monitoring Markers (SMM) for the existing infrastructures.

Project 44:

Name of Project: 1500 mm Combined Sewer Installation and Watermain Replacement Project at Kenilworth Avenue North, City of Hamilton, Ontario

Location: City of Hamilton, Ontario, Canada

Client: City of Hamilton

Main project features: Railway Settlement and Ground Monitoring for Tunneling and Dewatering work

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for approve.
- Prepared, installed and monitored nine (9) building monitoring points; Forty one (43) ground monitoring points and Thirty (30) railway monitoring points for the buildings/structures, railway and ground movement and displacement.

Project 45:

Name of Project: County Road No. 50 – Reconstruction Phase 6, County of Simcoe, Ontario (Contract No. 2013R50-024-01)

Location: County of Simcoe, Ontario, Canada

Client: County of Simcoe

Main project features: County Road No. 50 Reconstruction

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for approve.
- Pre-Construction/Post-Construction condition survey for existing heritage structures and buildings.
- Supply, installation and monitoring five (5) Levelogger and Barologger for ground water level movement.

Project 46:

Name of Project: 369 Queen street west commercial building construction *Location:* Toronto, Ontario, Canada *Client:* 2039390 Ontario Inc. *Main project features:* Commercial Building Construction Project



Activities performed: install and monitoring following instrument

- Pre-Construction/Post-Construction condition survey for existing heritage structures and buildings.
- Prepared the vibration control and monitoring program for City of Toronto approve.
- Set up three real-time vibration monitoring stations inside the existing heritage structures/buildings for vibration control during the excavation, caissons and backfill construction activities.
- Mentoring the existing heritage structures/buildings and system systems.

Project 47:

Name of Project: Rossland Road Realignment/Reconstruction, Phase I, Ajax, Ontario (RFT No.T14027)

Location: Ajax, Ontario, Canada

Client: Town of Ajax

Main project features: Embankment Backfill, Bridge and Road Construction *Activities performed:* install and monitoring following instrument

- Prepared the monitoring program for approve
- Six (6) ground settlement monitoring points for embankment settlement monitoring.
- Piling inspection and concrete field and lab strength testing.

Project 48:

Name of Project: Freeport Forcemains – Freeport Pumping Station (3563 King Street East) to Goodrich Drive, Contract No. T15-023.

Location: Kitchener, Ontario, Canada

Client: City of Kitchener

Main project features: Freeport Pumping Station Forcemains Tunnelling Work

Activities performed: install and monitoring following instrument

- Prepared the monitoring program for owner approve.
- Supply, installation and monitoring four (4) Settlement Monitoring Point (SMP) and fifteen (15) Settlement Monitoring Marker (SMM) for monitoring the Highway structures and ground movement.

Project 49:

Name of Project: Torbram Road Widening and Reconstruction, City of Brampton (BID CALL NO. T2015-073)

Location: Brampton, Ontario, Canada

Client: City of Brampton

Main project features: Tunneling, road widening and reconstruction

- Prepared the monitoring program for owner approve.
- Supply, installation and monitoring two (2) of In-Ground Monitoring Point (IGMP) and four (4) Structure Settlement Markers (SSM) for existing structure.
- Four (4) vibration monitoring stations for existing building.