



## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine  
**Client:** Pizzagalli Construction Company  
**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2  
**Date:** 10-19-10  
**Weather:** Mostly clear, 40s-50s

**Work in Progress:** Gorham Sand & Gravel (GSG): Stripping existing pavement from proposed construction area and digging test pits to explore depth and composition of existing fill material within proposed building footprint.

**Work Performed by SWCE Rep.:** Observed and logged test pits performed by GSG.

**General Observations, Discussions, Etc:** As discussed at the site meeting on 10-18-10, S. W. COLE ENGINEERING, INC. was on site to observe and log two test pits within the proposed bank building footprint. Upon arrival, GSG was stripping existing pavement from the site footprint. We observed GSG excavate two test pits (TP-1 and TP-2). TP-1 was located at approximately foundation line C-1 and TP-2 was located at approximately foundation line A.8-3.4. TP-1 encountered asphalt pavement overlying granular fill material with asphalt debris to a depth of about 1.8 feet, overlying dark brown clayey sandy silt to a depth of about 1.2 feet, overlying gray and olive clayey sandy silt transition to olive silty clay with depth. Pocket penetrometer readings taken on the clayey silt and silty clay ranged from about 4 to 5 KSF. The test pit was terminated at elevation 43.67 feet as measured by GSG. We advanced a hand auger into the olive silty clay to elevation 39.62 feet.

TP-2 encountered asphalt pavement overlying granular fill material containing asphalt debris, concrete, metal wire, metal pipe, and CMU blocks. Water was observed flowing in from a pipe within the fill material at about elevation 41.7 (about 5.3 feet deep) as measured by GSG. Because GSG was not setup to dewater excavations by pumping into an onsite frac tank at this time, the test pit was terminated within the fill material when water inflow was encountered.

Patrick Coughlin of St. Germain Collins was onsite to obtain samples of the encountered fill material for environmental testing.

**On Site:** 8:00 – 11:30am  
**Attachments:** Photos  
**Sheet:** 1 of 1

**SWC Rep.:** E. Walker  
**Rev. by:** B. Chaput

P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - RECICOR's\COR 10-19-10.doc

GRAY, ME OFFICE

286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.







**S.W. COLE**  
ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine

**Client:** Pizzagalli Construction Company

**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2

**Date:** 10-20-10

**Weather:** clear, 50s

**Work in Progress:** Gorham Sand & Gravel (GSG): Over-excavating existing fill materials in the northwestern portion of the proposed building footprint, installing sump and pump for future dewatering, and beginning to backfill areas of overexcavation.

**Work Performed by SWCE Rep.:** Observed and recorded earthwork activities performed by GSG.

**General Observations, Discussions, Etc:** S. W. COLE ENGINEERING, INC. was onsite to observe GSG earthwork activities. Upon arrival, GSG was excavating to approximate bottom of footing grade along foundation line D. The length of subgrade exposed upon arrival was observed to consist of variable fill material. We recommended to Mark Johnson (GSG foreman) and Ed Hume (Pizzagalli Construction Superintendent) that the excavations continue in order to remove all fill material beneath the building footprint and extending 1H:1V from edge of proposed footings. GSG encountered a relatively deep zone of clayey fill material with asphalt debris along foundation line D extending approximately from line 2 to 3.4+5'. H.B. Fleming was on site to observe the excavation conditions in the event that excavation shoring may be needed to attain the 1H:1V over-excavation limits along Congress Street. However, as over-excavation continued, GSG determined that shoring would not be needed. The over-excavation of fill material in this zone extended until native gray silty clay was encountered at elevations varying from about 35.59 to 36.39 feet, as measured by GSG. The fill material was trucked off site. The native silty clay had pocket penetrometer readings on the order of 5 KSF where an undisturbed sample could be obtained. The sidewalls of the excavation appeared to consist of native olive to gray silty clay. A small amount of water was observed to flow into the over-excavation from a relic pipe or conduit within the fill materials.

Per our recommendation, GSG placed an initial approximate 2-foot thick layer of  $\frac{3}{4}$  inch crushed stone fully wrapped in Mirafi 160N geotextile in the base of the over-excavation. The crushed stone was compacted with 2 to 3 passes with an IR SB2 vibratory roller. GSG installed a sump for future pumping within the crushed stone layer. GSG will continue to backfill the excavation with Structural Fill at a later date. GSG will continue over-excavation moving southeast, into the building footprint on 10-21-10.

**On Site:** 9:00am – 4:00pm

**Attachments:** Photos

**Sheet:** 1 of 1

**SWC Rep.:** E. Walker

**Rev. by:** B. Chaput

P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - REC\COR\ICOR 10-20-10.doc

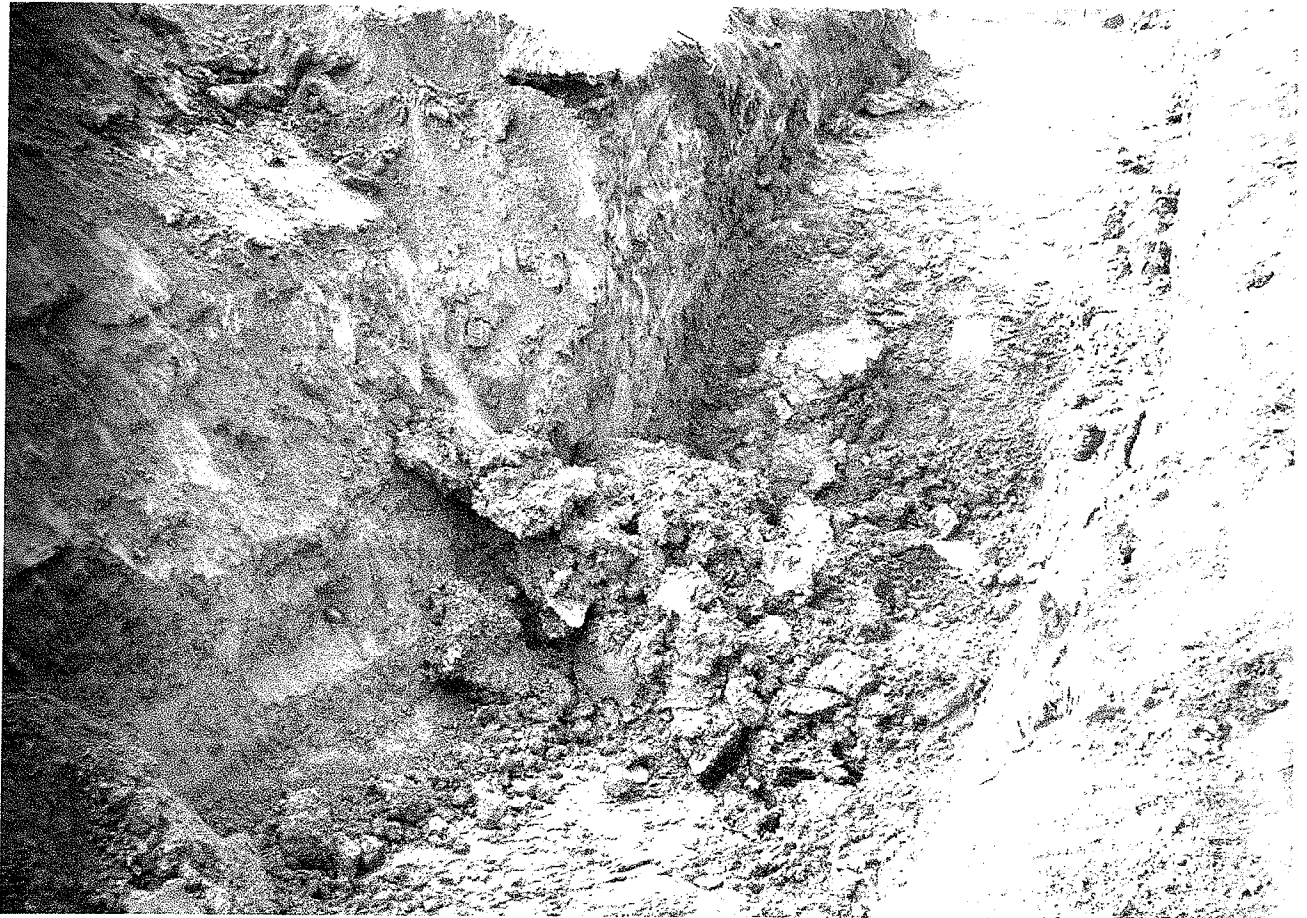
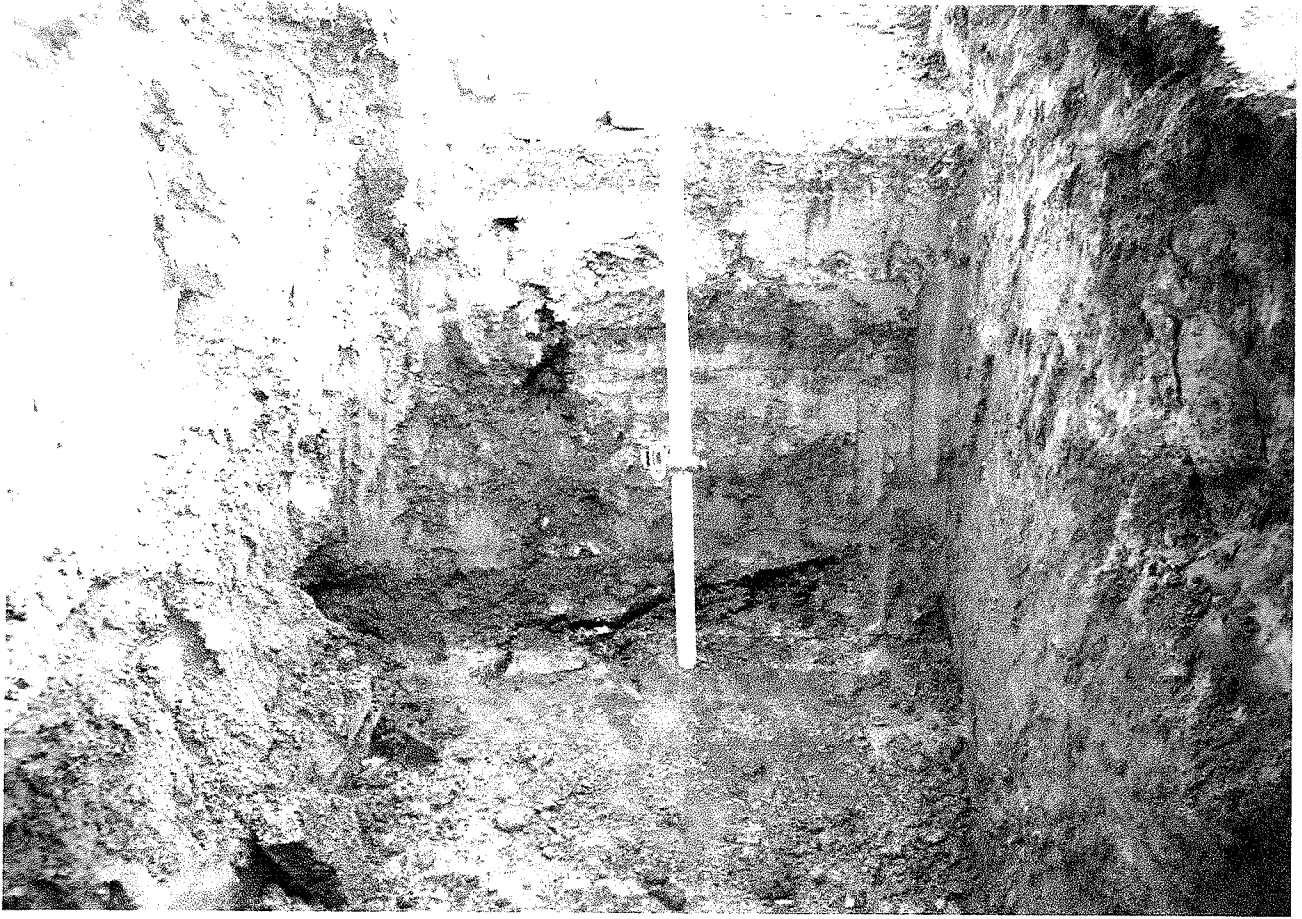
GRAY, ME OFFICE

286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.









• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine

**Client:** Pizzagalli Construction Company

**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2

**Date:** 10-21-10

**Weather:** clear, 50s

**Work in Progress:** Gorham Sand & Gravel (GSG): Over-excavating existing fill materials in the southern and southwestern portions of the proposed building footprint.

**Work Performed by SWCE Rep.:** Observed and recorded earthwork activities performed by GSG.

**General Observations, Discussions, Etc:** S. W. COLE ENGINEERING, INC. was onsite to observe GSG earthwork activities. Upon arrival, GSG was over-excavating existing fill material and debris along foundation line 4, working towards the southeast. The existing fill material consisted of highly variable sandy and silty/clayey material with very frequent debris including concrete foundation pieces, brick, metal wire and pipe, plastic signage and buckets, and wood. Petroleum odor was observed coming from the over-excavation. A partially demolished foundation wall and basement slab was encountered in foundation line 4 at approximately the intersection with line B+5'. Water was observed to flow into the over-excavation from relic pipes and conduits within the fill material. GSG excavated a trench to allow water to flow into the sump installed in the western corner of the building footprint on 10-20-10. GSG began to pump water from the sump into the on site frac tank. Karl Gimpel and Bob Chaput, P.E. (SWCE) made a site visit to observe over-excavation conditions and discuss work plans with Mark Johnson (GSG foreman). We discussed limits of over-excavation beneath sidewalks and foundations. We recommended that the fill material be removed at least to frost depth beneath sidewalk areas and replaced with compacted Structural Fill. We discussed potentially leaving deeper granular fill material free of debris in place provided GSG can pump water down and the material can be proof rolled. It was decided that further observation of the material will be needed once the loose debris and fill are cleaned off of the top and water is pumped down.

GSG was observed to separate granular fill material relatively free of debris and silty and clayey material into a plastic lined stockpile in the eastern portion of the site for potential reuse. Unsuitable fill material was placed in a separate plastic lined stockpile to be trucked off site once environmental testing by others is complete. Brian Bachmann of St. Germain Collins was onsite to observe environmental conditions of the fill material.

GSG will continue to remove existing fill and debris and pump water from the over-excavation on 10-22-10.

**On Site:** 9:00am – 1:45pm

**Attachments:** Photos

**Sheet:** 1 of 1

**SWC Rep.:** E. Walker

**Rev. by:** B. Chaput

P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - REC\COR\S\COR 10-21-10.doc

GRAY, ME OFFICE

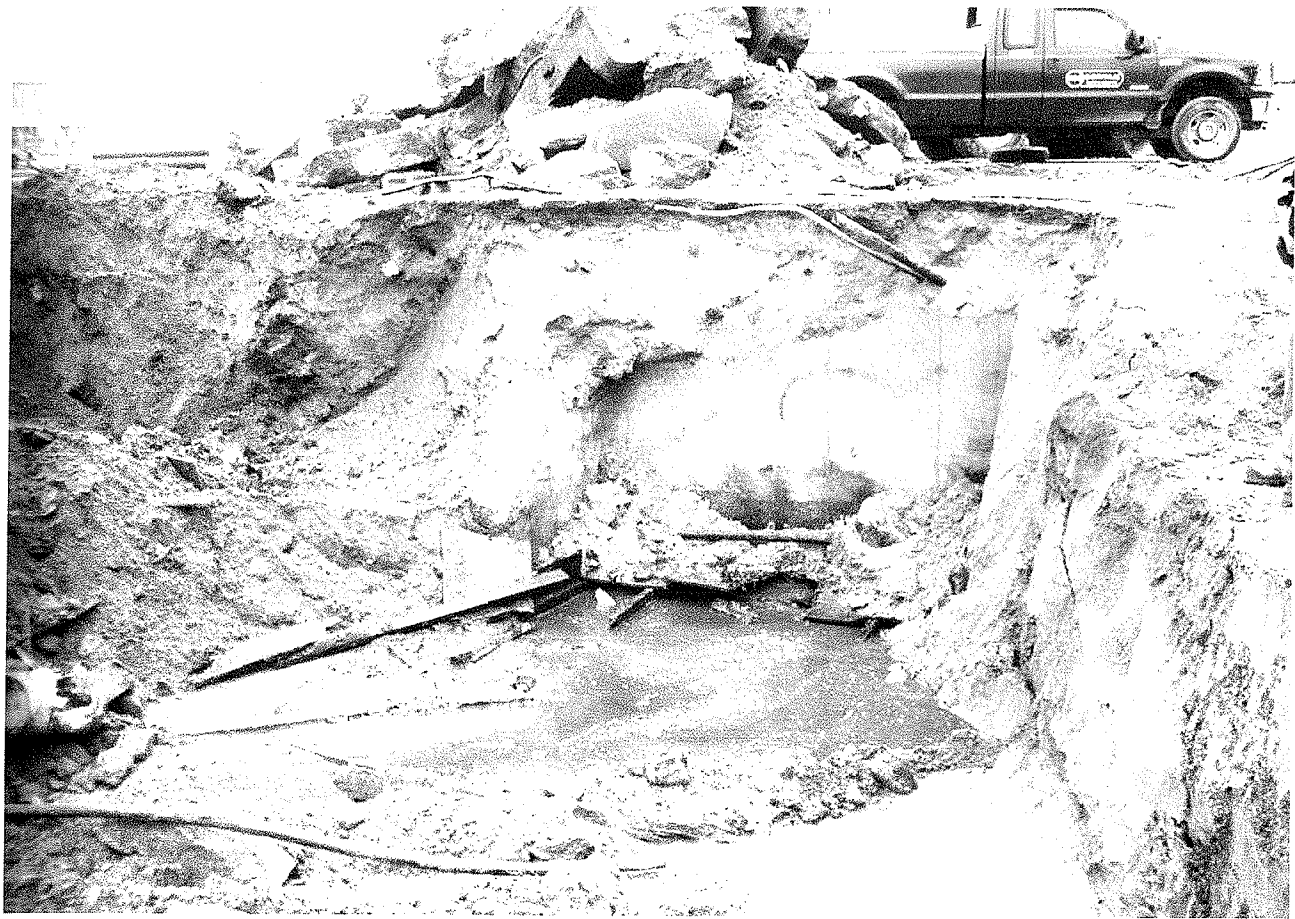
286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.











**S.W. COLE**  
ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine  
**Client:** Pizzagalli Construction Company  
**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2  
**Date:** 10-22-10  
**Weather:** Mostly clear, 35-55

**Work in Progress:** Gorham Sand & Gravel: Over-excavation of unsuitable soils from below the proposed building footprint.

**Work Performed by SWCE Rep.:** Made general observations of excavation, subgrade conditions and footing preparation. Sampled on-site granular borrow and imported structural fill for laboratory grain size and moisture density testing.

**General Observations, Discussions, Etc:** Gorham Sand & Gravel (GS&G) continued removing unsuitable fill under and adjacent to 4-line. A smooth edged bucket continues to be used for excavation and Gorham Sand is maintaining a sump/pump operation to help minimize subgrade soil disturbance. The excavation was laterally over-sized in accordance with our typical recommendations along 4-line at least at a 1:1 to account for the bearing splay below bottom of proposed footing. Based on layout provided by GS&G, the additional lateral excavation also appears to have removed the unsuitable fill soils from beneath the proposed sidewalk area adjacent to the building. Subgrade soils exposed in the sidewalk area consisted of mottled brown silty clay with pocket penetrometer strengths of between 5 and 7-ksf. The excavation southwest of 4-line was sloped back to meet the parking area pavement section at approximately a 3:1 also in accordance with our general recommendations. Some additional removal of fill soils and final subgrade preparation remains to be performed northwest of 4-line (directly underlying the proposed footing extending into the building interior), but GS&G opted to wait until Monday when trucks will be available to haul in crushed stone and structural fill as needed. Soils unsuitable for reuse on site are being hauled to Commercial Recycling and granular soils that appear to meet a granular fill specification are being blended and stockpiled on site. We discussed with Pizzagalli (Ed Hume) that where silty clay or saturated soils are encountered under building footings that our recommendation would be that a minimum of 12-inches of crushed stone enveloped in woven geotextile fabric be used (with subsequent lifts of compacted structural fill as needed) but that in other areas compacted granular fill can be used to replace any material removed below the recommended section. Work observed and conditions encountered thus far appears to be progressing in general accordance with recommendations and findings detailed in our June 10, 2008 geotechnical report.

**On Site:** 7:00am – 1:45pm

**Attachments:** Photos

**Sheet:** 1 of 1

**SWC Rep.:** K. Gimpel

**Rev. by:** B.Chaput

*BCD*

P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - REC\COR's\COR 10-22-10.doc

GRAY, ME OFFICE

286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.









**S.W. COLE**  
ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine  
**Client:** Pizzagalli Construction Company  
**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2  
**Date:** 10-25-10  
**Weather:** Overcast, 40-55

**Work in Progress:** Gorham Sand & Gravel: Over-excavation of unsuitable soils from below the proposed building footprint. Graded and compacted structural fill and granular borrow within the over-excavated areas.

**Work Performed by SWCE Rep.:** Made general observations of excavation, subgrade conditions and footing preparation. Performed in-situ density testing on backfill material placed.

**General Observations, Discussions, Etc:** Gorham Sand & Gravel (GS&G) continued with the over-excavation where they had started working late last week working generally along 4-line between approximately D and B-lines. Native stiff silty clay had previously been exposed at proposed footing elevation from D, 4 to about D (-11'), 4. The current excavation effort was focused primarily between D (-11'), 4 and about B (+3'), 4; additional unsuitable fill soils were removed from this area to an elevation of 36.6-feet (elevation provided by GS&G) exposing brown to gray mottled silty clay with pocket penetrometer strengths of between 3 and 5-ksf. This over-excavated area measured about 17-feet in width and was made with a smooth edged bucket to help minimize soil disturbance. Within this deeper 15x17-foot area, woven geotextile fabric (Mirafi 600x) was used to envelope approximately 12-inches of compacted ¾-inch crushed stone. The enveloped cell installed today was contained by the native clays on three sides and granular mixed fill to the southwest. The excavation appeared to be oversized at least to the recommended 1:1 slope below the bottom of the proposed footings. After the stone had been compacted and enveloped, 12-inch compacted lifts of structural fill were graded within the area of footing influence and granular borrow salvaged from on site was used beyond this area below the proposed slab and sidewalk areas (below the respective designed sections). Compaction effort was supplied by a vibratory forward/reverse plate compactor on the lower lifts (no longer a stock machine, but estimated to be 800-pounds) and a 7-ton vibratory drum roller (Ingersoll Rand SD 70x) on subsequent lifts. As part of today's backfill operation, GS&G also graded and compacted structural fill in the area along D-line that had been over-excavated and prepared with a fabric wrapped stone cell last week (approximately between D, 4 (-10') and B (+10'), 4). Current laboratory results on granular borrow and structural fill are still pending so record percent compaction will need to be back-figured, but based on GS&Gs submittals, the structural fill material tested appears to range between 125.0 and 129.1-pcf or between 96.0 and 99.3-percent compacted using a 130.1-pcf proctor value (the imported material is now reported being hauled from Phinney Pit). Towards the end of the day a sump pipe was installed southeast of A-line to help dewater the remainder of 4-line where further over-excavation and backfill is planned for tomorrow.

**On Site:** 7:00am – 4:00pm  
**Attachments:** Photos  
**Sheet:** 1 of 1

**SWC Rep.:** K. Gimpel  
**Rev. by:** B. Chaput

P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - REC\COR's\COR 10-25-10.doc

GRAY, ME OFFICE

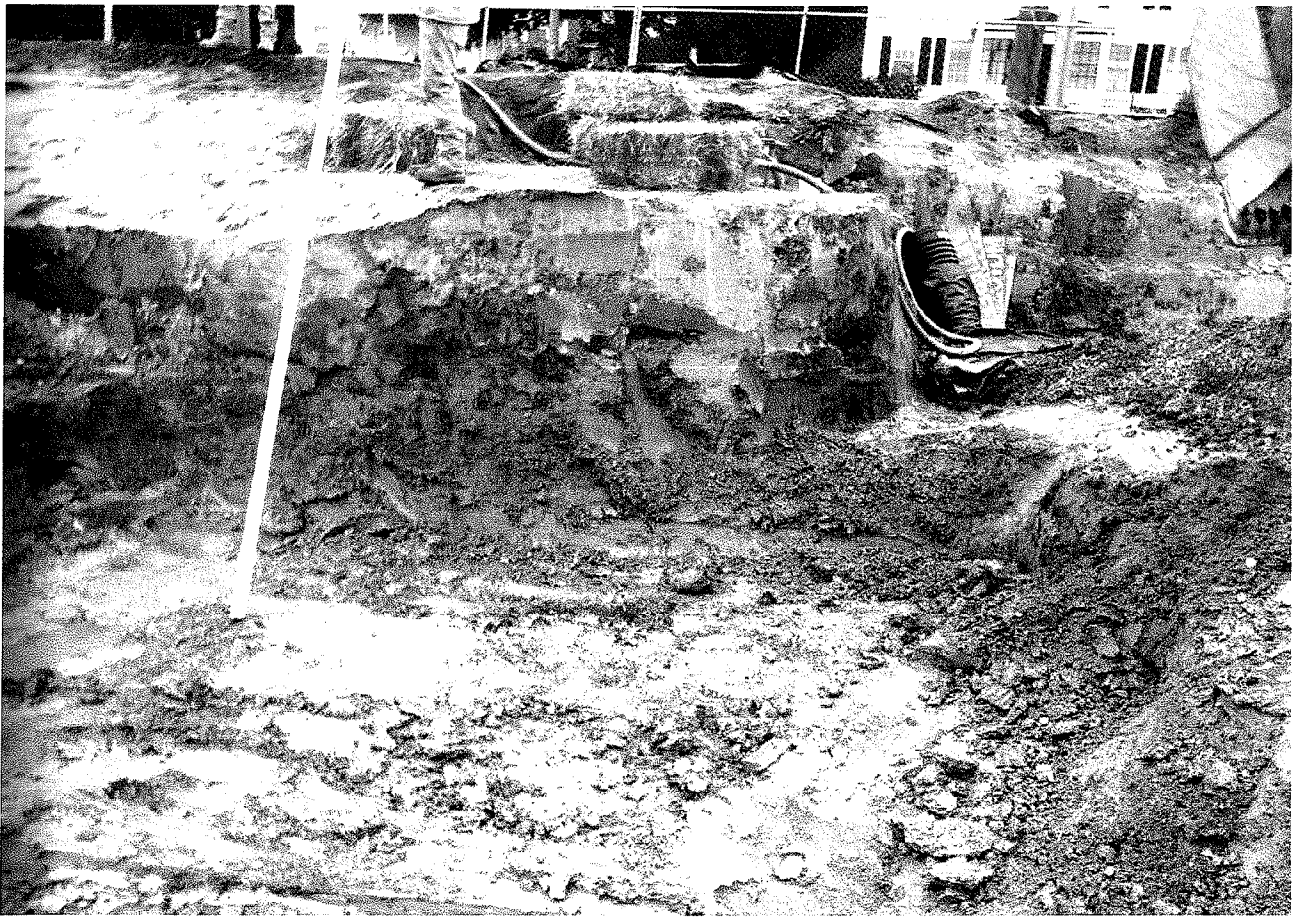
286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.













**S.W. COLE**  
ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine  
**Client:** Pizzagalli Construction Company  
**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2  
**Date:** 10-26-10  
**Weather:** Overcast morning, sunny afternoon, 50-70s

**Work in Progress:** Gorham Sand & Gravel: Over-excavation of unsuitable soils from below the proposed building footprint. Graded and compacted structural fill and granular borrow within the over-excavated areas.

**Work Performed by SWCE Rep.:** Made general observations of excavation, subgrade conditions and footing preparation. Performed in-situ density testing on backfill material placed. Sampled structural fill material being imported for laboratory analysis (alternate source from previously sampled material).

**General Observations, Discussions, Etc:** Gorham Sand & Gravel (GS&G) continued removing unsuitable soils where they had left off on D-line working into the corner at D, 1 and up 1-line to the northeast building corner. Roughly between column lines 1.5 and 2, the over-excavation extended to an elevation of 40.6-feet and was stopped when native undisturbed stiff clays were exposed. In order to tie into the sewer stub an area about 8 by 10-feet was excavated to about elevation 38.6-feet. The last several feet of D-line underlying proposed footing D, 1 was excavated to approximately 40.6-feet where stiff native silty clays were also exposed. Native silty clays overlain in places with fine sandy silt were encountered at proposed footing subgrade along all of 1-line with the exception of the previously mentioned corner at D, 1 and an isolated area near B, 1 where the water lines were previously installed (to be moved). Where stiff undisturbed clays are encountered at proposed footing subgrade, we recommended that 6-inches of compacted  $\frac{3}{4}$ -inch crushed stone overlying woven geotextile fabric be used as a footing base. In the deeper excavations underlying proposed footings compacted structural fill overlying woven geotextile fabric is being used to bring the grade back up to bottom of footing. None were installed today, but in deeper over-excavations where clays are softer or saturated conditions are encountered, a 12-inch fabric wrapped stone cell is being installed prior to switching to compacted structural fill. In addition to the excavation and backfill that GS&G performed along D and 1-lines, they also finished removing unsuitable fill soils and relic organics from below the proposed slab area roughly between B to C (+8') by 1 (+5') to 3.4-line. In this sub-slab area, the approximate bottom of excavation was reportedly 43.8-feet; we anticipate that an additional zone of shallow native soils likely at a similar elevation will be encountered between 1 to 2-lines by A to B-lines but this area is not expected to be prepared until the deeper over-excavation has been completed in the south building corner. As part of the backfill operation, compacted granular borrow (on-site material suitable for reuse) was graded and compacted over the sub-slab area where excavation had been completed. In slab areas, the on-site soils stockpiles appear appropriate for reuse below the designed section of 12-inches of structural fill slab base material. GS&G altered their source of structural fill, so the material was re-sampled for laboratory testing. In-situ density tests being performed continue to be compared to the submittal information; current laboratory results are expected to be complete later this week. Excavation and backfill practices observed continue to be in general accordance with our expectations and recommendations based on our geotechnical investigation and findings.

**On Site:** 7:00am – 3:30pm  
**Attachments:** Photos  
**Sheet:** 1 of 1

**SWC Rep.:** K. Gimpel  
**Rev. by:** B. Chaput

P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - REC\COR's\COR 10-26-10.doc

*Red*

GRAY, ME OFFICE

286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.













## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine  
**Client:** Pizzagalli Construction Company  
**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2  
**Date:** 10-27-10  
**Weather:** Overcast with periods of rain, 50-60.

**Work in Progress:** Gorham Sand and Gravel: Over-excavation of unsuitable soils from below the proposed building footprint.

**Work Performed by SWCE Rep.:** Made general observations of excavation, subgrade conditions and footing preparation. Sampled imported granular borrow material for laboratory analysis (the material proposed for use if there is not enough of the on-site borrow material).

**General Observations, Discussions, Etc:** Gorham Sand and Gravel (GS&G) set back and resumed over-excavating unsuitable fill soils from the southern corner of the building where about 8-feet had been previously removed. The sump/pump operation lowered the water level enough to finish the recommended excavation and prepare subgrade for fill. In an area approximately located from column lines 2 (+4') to 4 (+3') and roughly falling between B and A (-6'), mixed loose fill was removed to an elevation of about 35.8-feet. Between A (-6') and A' (-4') fill was removed to an elevation of about 36.8-feet (canopy area). For the main building footings, the excavation was oversized laterally at about a 1:1 ratio below proposed bottom of footing except where native stiff undisturbed brown silty clay was encountered; in these areas the clay was exposed with a smooth edged bucket and left in place. Subgrade soils within today's work area consisted of saturated brown to gray fine sand with trace silt. This sandy material is still relic fill, but appeared to be free from unsuitable materials and acceptable to remain in place if properly densified. This residual granular fill is likely the old tank base material that based on a shallow test pit was found to be about 2-feet in depth. Underlying the sand fill was medium to soft gray silty clay consistent with our original geotechnical findings. After the unsuitable materials had been removed, GS&G installed a 12-inch compacted lift of ¾-inch crushed stone enveloped in woven geotextile fabric across the entire bottom of today's over-excavation. The crushed stone was compacted with the 800-pound +/- vibratory plate compactor and subsequent lifts of structural fill and granular borrow will be compacted with the 7-ton vibratory drum roller. Today's over-excavation largely completes anticipated removal of unsuitable fill and subgrade preparation for the main building and the canopy area. We did discuss with GS&G (Mark) that once the granular backfill has been graded and compacted to the top height of the confining stiff brown silty clay (where encountered) that we recommend that the overlying granular fill be removed laterally as needed to continue to provide the recommended 1:1 bearing splay support.

**On Site:** 7:00am – 3:15pm

**Attachments:** Photos

**Sheet:** 1 of 1

P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - REC\COR's\COR 10-27-10.doc

**SWC Rep.:** K. Gimpel

**Rev. by:** B. Chaput

GRAY, ME OFFICE

286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.









• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine  
**Client:** Pizzagalli Construction Company  
**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2  
**Date:** 10-28-10  
**Weather:** Overcast/fog turning clear  
in afternoon, 60s

**Work in Progress:** Gorham Sand & Gravel: Backfilling previous over-excavation within building footprint.

**Work Performed by SWCE Rep.:** Made general observations of backfilling operations and performed field densities on in-place backfill material.

**General Observations, Discussions, Etc:** Upon arrival, the site was observed to generally be wet but in good condition after previous precipitation. Gorham Sand & Gravel (GS&G) began placing compacted lifts of both imported Structural Fill (Phinney pit crushed gravel) and reuse on site granular fill within the over-excavation performed previously on 10-27-10, approximately from column lines 2 (+4') to 4 (+3') and between B and A (-6'). As previously discussed with GS&G and Pizzagalli Construction, backfill material underlying building and canopy footings and within their zone of influence (1H:1V from bottom edge of footing) consisted of imported Structural Fill. In other areas, including beneath slab-on-grade areas, backfill consisted of reused on site granular fill material previously over-excavated. GS&G culled any large asphalt or concrete particles from the reuse material. All material was placed in approximate 12-inch lifts and compacted with several passes of an IR SD 70D vibratory roller. The first lift of material was placed directly over the 12-inch layer of crushed stone wrapped in Mirafi 600X geotextile, which was placed directly over subgrade on 10-27-10. The lifts of backfill were observed to be firm and unyielding in response to the compaction effort. Field densities were taken on the compacted lifts of material with results meeting or exceeding 95% of Modified Proctor values. Field density results will be provided under separate report. Brian Bachmann and Patrick Coughlin of St. Germain Collins were on site to make environmental observations. Backfilling of the area reached approximately elevation 41.5 feet on this date and will continue on 10-29-10.

**On Site:** 8:00am – 3:30pm

**Attachments:** Photos

**Sheet:** 1 of 1

**SWC Rep.:** E. Walker/K. Gimpel  
**Rev. by:** B. Chaput

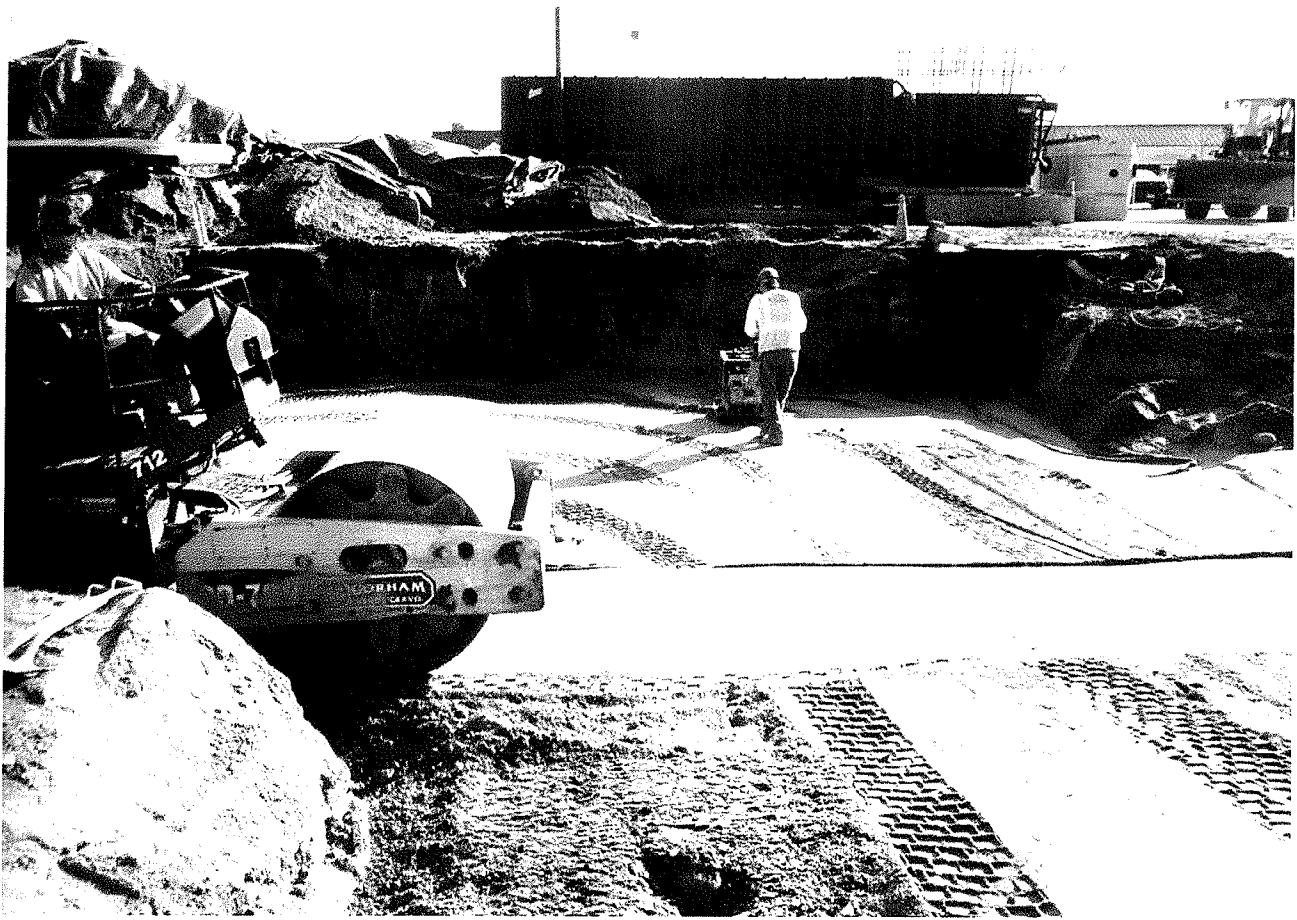
P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - REC\COR's\COR 10-28-10.doc

GRAY, ME OFFICE

286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.









## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine  
**Client:** Pizzagalli Construction Company  
**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2  
**Date:** 10-29-10  
**Weather:** Overcast, 50 – 60.

**Work in Progress:** Gorham Sand & Gravel: Finished backfilling previous over-excavation within building footprint to bottom of proposed footing grade.

**Work Performed by SWCE Rep.:** Made general observations of backfilling operations and performed field densities on in-place backfill material.

**General Observations, Discussions, Etc:** Gorham Sand & Gravel (GSG) continued placing compacted lifts of both imported Structural Fill (Phinney pit 3-inch crushed gravel) and onsite granular fill within the previously performed over-excavation. The imported structural fill material was used below the proposed footings and within the 1:1 zone of influence (denoted by GSG layout). Recycled on-site granular fill was used beyond the footing areas. Underlying the sidewalk and drive- thru slab areas, GSG switched from the granular borrow material to structural fill when the backfill operation reached 4.5-feet below proposed finish grade in accordance with our recommendations. Compaction continues to be performed with a 7-ton vibratory drum roller (IR SD-70X) and a 800-pound +/- vibratory forward/reverse plate compactor (modified Bomag). In-situ density tests performed indicated material is being compacted to a minimum of 95-percent of a 133.0-pcf proctor value for the structural fill and a 130.4-pcf proctor value for the granular borrow. Several lifts of compacted granular borrow were also graded below the proposed interior slab area. The building corner at D, 4 where native stiff clay was encountered (approximately a 10x10-foot area) was cut with a smooth edged bucket to 6-inches below bottom of footing in preparation for ¾-inch crushed stone and geotextile fabric. We discussed with Pizzagalli (Ed) and GSG (Mark) that we should be scheduled as needed to perform additional testing and observations now that the footprint for the main building has been prepared. We recommended that subgrade observations be performed on the ramped sidewalk section, the parking lot and between 1 to 2-lines on A-line (excavation not completed so that an access ramp can be maintained) and B to A-lines on 1-line (excavation not completed where the water service needs to be relocated).

**On Site:** 7:45am – 1:00pm  
**Attachments:** Photos  
**Sheet:** 1 of 1

**SWC Rep.:** K. Gimpel  
**Rev. by:** B. Chaput

P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - REC\COR's\COR 10-29-10.doc

GRAY, ME OFFICE

286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.











## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine  
**Client:** Pizzagalli Construction Company  
**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2  
**Date:** 11-2-10  
**Weather:** Sunny, 30 - 60

**Work in Progress:** Gorham Sand & Gravel: Excavation and subgrade preparation for proposed retaining wall/sidewalk ramp at building entrance.

**Work Performed by SWCE Rep.:** Made general observations of excavation, subgrade conditions and preparations for footings.

**General Observations, Discussions, Etc:** As scheduled by Gorham Sand & Gravel (GS&G), we made a site visit to observe the excavation and subgrade at the ramped entrance walkway. In accordance with our typical recommendations, the excavation was performed with a smooth edged bucket to help minimize soil disturbance. Soils encountered at subgrade consisted of stiff brown silty clay with pocket penetrometer strengths of about 8 to 9-ksf; no free water was observed at subgrade elevation. The excavation was made about 6-inches below proposed bottom of footing to allow for a working mat of compacted ¾-inch crushed stone overlying woven geotextile fabric (Mirafi 600x). We understand that the bottom of the prepared excavation was made to about elevation 43.0 for the first 20-feet south off the building corner at D, 4 and then dropped in 1-foot increments to about elevation 40.0 where it ties into the existing sidewalk section. These footing grades appear to be per the available sheet S1.01 but differ from notes on an October revision to sheet A3.04; we discussed the perceived discrepancy with Pizzagalli (Ed) and understand that they will follow up as needed. At the time of this site visit, the work previously noted as pending on 1-line where the water line needed to be relocated appears to have been completed. No observations were made in this area, but we understand from GS&G (Mark) that underlying the water lines stiff silty clay was encountered and that once the fire service was capped outside the foundation and the domestic service was stubbed up within the building that the excavation was backfilled with crushed stone and lifts of compacted structural fill.

**On Site:** 8:45am – 11:45am  
**Attachments:** Photos  
**Sheet:** 1 of 1

**SWC Rep.:** K. Gimpel  
**Rev. by:** B. Chaput

P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - REC\COR's\COR 11-2-10.doc

GRAY, ME OFFICE

286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.









## CONSTRUCTION OBSERVATION REPORT

**Project:** TD Bank Building Portland, Maine  
**Client:** Pizzagalli Construction Company  
**Client's Rep.:** Ed Hume

**SWCE Project No.:** 08-0395.2  
**Date:** 11-12-10  
**Weather:** Sunny, 30 - 60

**Work in Progress:** Gorham Sand & Gravel: Excavation and preparation for building footing and general foundation backfill and compaction.

**Work Performed by SWCE Rep.:** Made general observations of excavation, subgrade conditions and preparations for footings.

**General Observations, Discussions, Etc:** As scheduled by Pizzagalli, we made a site visit to perform in-situ density tests on compacted structural fill material being used for foundation backfill. At the time of our visit, the crushed stone and fabric wrapped foundation drain was being installed along the exterior of the footing and Gorham Sand and Gravel (GS&G) had graded and compacted an initial 12-inch lift of backfill material along about three quarters of the building interior. Compaction effort was supplied by a 800-pound forward/reverse vibratory plate compactor and density tests performed indicated that material was compacted to a minimum of 95-percent of a 133.0-pcf proctor value (see separate field density report for test results). While on site, Mark (GS&G) requested that we make subgrade observations for the last section of the building footing that had been pending final preparations while construction traffic was still accessing the building interior. The area observed was located roughly between column lines A, 1 and A, 2. As has been standard practice, the excavation was performed with a smooth edged bucket to help minimize soil disturbance. Subgrade soils observed consisted of native undisturbed stiff brown silty clay near A, 1 that transitioned to native grayish silt and sand where the footing steps up and ended with compacted structural fill (part of the previously performed over-excavation and replacement where unsuitable soils were observed) at A, 2. The footing area was prepared with 6-inches of ¾-inch crushed stone overlying woven geotextile fabric. Subgrade conditions and footing preparation observed remain consistent with our general expectations and typical recommendations. Also while on site we discussed with Pizzagalli (Ed) the perceived potential to pond groundwater around the ramped entrance footings. The ramped area footings are 3-feet lower than the main building footings; sidewall soils consist of stiff brown silty clay and we are not aware of any provisions for drainage in this area. We understand that Pizzagalli will submit an RFI to the civil engineer to clarify if any drainage should be added.

**On Site:** 8:00am – 9:15am  
**Attachments:** Photos  
**Sheet:** 1 of 1

**SWC Rep.:** K. Gimpel  
**Rev. by:** B. Chaput

P:\2008\08-0395.2 C - Pizzagalli Construction Co. - Portland, ME - TD Bank Building - REC\COR's\COR 11-12-10.doc

GRAY, ME OFFICE

286 Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E) [infogray@swcole.com](mailto:infogray@swcole.com), (I) [www.swcole.com](http://www.swcole.com)

The SWCE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality of the work.







