

ENGINEERED SOLUTIONS

o f G e o r g i a



Foundation Repair & Waterproofing

Settlement Investigation

Comm. Mgmt. Assoc.

The Aberdeen

2700 Paces Ferry Road SE
Atlanta, GA 30339



November 30, 2016

Community Management Associates
2700 Paces Ferry Road
Atlanta, GA 30339

Subject: The Aberdeen at Paces Ferry
2700 Paces Ferry Road
Atlanta, GA 30339

**Pavement, Sidewalk, Site-Wall, Parking Garage/Electrical
Room and Storm Drainage
Settlement Investigation**

Ms. Smith,

Please accept this letter as a brief overview and description of the investigation processes and findings of the Subsurface Conditions which are impacting the at/near grade structures at the above referenced project.

This investigation was performed by providing a thorough video inspection of the Storm and Sanitary Drainage at the site along with a Geotechnical Investigation of the Subgrade Soils in the areas of concern.

On the dates of 11/4/16 and 11/11/16, I along with representatives of Chattahoochee Consulting Group, Continental Pipe and ESOG Crew were on site performing testing and evaluations of the existing Storm Water Site Drainage and Subsurface Soil Conditions.

With the exception of 1 area the Storm Water System appeared to be in pretty good condition. The area of question is a "Belly" or "Low Spot" with a separated joint between 2 pipe sections located between the drop inlet (Storm 4 in the report) near the overhead door just outside of the parking

garage and the underground Storm Water Detention Vault. All of the video inspection data is included later in this report.

As you will see in the Geotechnical Report from Chattahoochee Consulting Group. On 11/4/16 the efforts to use “Hand Augers” to collect samples were not completely successful due to large and numerous rock fragments in the areas being tested. So, we returned on 11/11/16 with Drilling Equipment capable of advancing drill augers to the required depths.

The preliminary findings of this investigation indicate that some of the settlement conditions are the result of as much as 25’ of marginally placed fill soil. This fill soil is consolidating into small voids within itself and causing surface structures (walls, pavements, etc.) constructed at the surface to settle.

Based on our findings, it appears that the settlement conditions of the surface structures can be stabilized against future settlements using a combination of Foundation Underpinning and Pressure (Injection) Grouting for Soil Stabilization. We recommend Underpinning the Heavier Loaded Structures with Foundation Piers (Piles) and Stabilizing the fill soil within the whole affected area with Injection Grouting. I am attaching a Sectional Detail of both of these services along with some photographs of the resulting signs of significant settlement of the surface structures.

Foundation Underpinning is a process which extends the load of a structure deeper into the subgrade to Bedrock or a Dense Soil Strata capable of supporting the load requirements of said structure(s). This is performed by exposing the foundation of a structure, preparing it, mounting large steel brackets to the foundation and driving steel piers into the ground until they reach material that can support the loads above. The Pier is then mechanically attached to the foundation bracket and the structure becomes secure and stable.

Pressure (Injection) Grouting for Soil Stabilization is a process where Grout Injection locations are strategically laid out at the surface throughout the affected settlement area. Usually in a grid type pattern with spacing of 5'-10' apart. At each Injection location a hole will be drilled through any surface pavement and a Grout Injection Rod (Probe) is advanced (Drilled or Driven) into the subgrade soils to a depth where firm, bearable soils are encountered. As the injection rods are extracted in 1'-2' increments, grout is injected into the subgrade soils under ***controlled pressures and volumes*** to fill any voids and compact the soils. The actual grout design and make up are usually site specific and are determined by soil conditions for that project. Initially, I am thinking a Cement Based "Low Density Cellular Grout" may work best for your application. These processes prevent future consolidation and settlements of poorly/marginally placed fill zones.

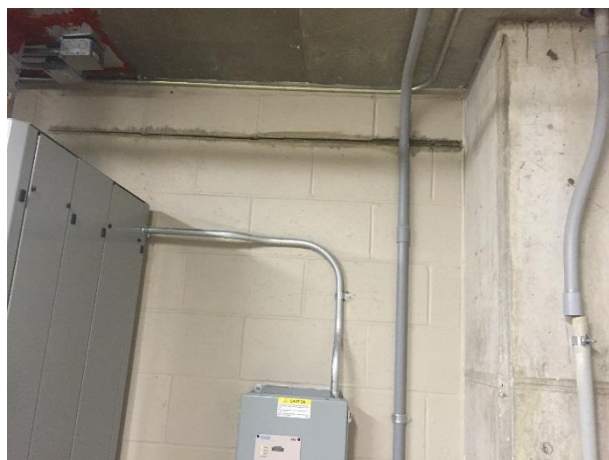
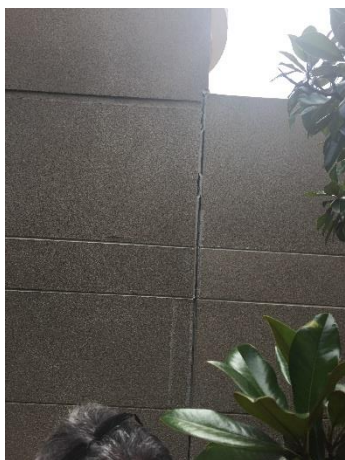
I have been performing these services in this geographic region with great success since 1987. These remedial measures are tried, true and warrantable. As an order of magnitude for your project. Included as a part of this report are some "Budget Proposals". These proposals are pending "Final Design" and are specific for 3 different work areas.

1. **"Parking Garage Corner"** This area includes the Electrical Room, Parking Garage Entrance, Transformer Pads, and Lower Retaining Wall.
2. **"Loading Dock Pavement and Adjacent Stairs/Site-Wall at side Entry"**
3. **"Middle Retaining Wall at Parking Garage Entrance"**

We will also be happy to provide you with a specific repair design which you could let out for bid by specialty foundation contractors like ESOG if requested.

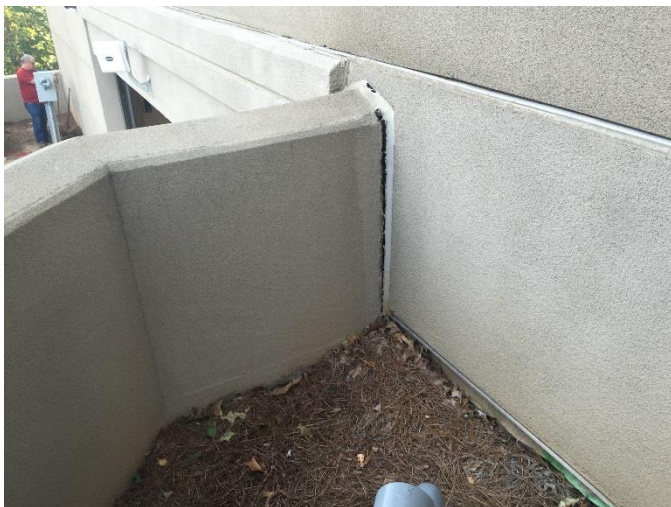


Pictures





Pictures





Foundation Repair & Waterproofing

A Lifetime of Support

2260 Northwest Parkway Suite H Marietta, GA 30067
ofc. 678.290.1325 fax 770.956.7403 www.esogrepair.com

Please, do not hesitate to contact me should you have any questions or need any additional information.

Thank you.

Chuck Irby
V.P. of Geotechnical Services
Engineered Solutions of Georgia
2260 Northwest Parkway
Suite H
Marietta Georgia 30067
O) 678-290-1325
F) 770-956-7403
E) chuck.irby@esogrepair.com

Consulting Geotechnical Engineers
Environmental Science
Construction Management & Inspection
Construction Materials Testing
Hydrogeology/Groundwater Monitoring
Earth Instrumentation Services



5871 New Peachtree Road
Doraville, GA 30340-1084
Phone: 770/457-9776
Fax: 770/457-9964

Chattahoochee Consulting Group, Inc.

November 28, 2016
Project Number: 4754.002.16

Engineered Solutions of Georgia
2260 Northwest Parkway
Suite H
Marietta, GA 30067

Attention: Mr. Chuck Irby

RE: Report of Geotechnical Exploration
The Aberdeen on Paces Ferry
2700 Paces Ferry Road
Vinings, Georgia

Gentlemen:

Chattahoochee Consulting Group, Inc. (CCG) is pleased to present this proposal for geotechnical engineering services.

PROJECT BACKGROUND

We understand that the high-rise condominium structure was completed in 2009 and is primarily supported on pile foundations based on a review of the structural drawings for the building. Based on our visual observations, apparent settlement is evident primarily along the front, northeast portion of the building. Outward deflection of the free-standing retaining wall structures within this area, as well as distress of the pavements between the loading dock and lower parking garage was noted, including the areas around the two drop inlet structures. Additionally, significant distress was noted at the entrance of the lower parking garage and the adjacent electrical room enclosed by masonry walls. Our review of the architectural plans prepared by Smallwood, Reynolds, Stewart, Stewart and Associates, Inc. and the structural plans prepared by Stanley D. Lindsey, Ltd., indicate that the front (north) and the front portion of the east side wall of the electrical room are supported by a foundation wall which is not pile supported, (see Figure 3). Additionally, a below grade storm water detention vault, 16 feet deep, is present below the parking deck near this area. It appears that the settlement observed is due to consolidation of the backfill soils in this area. Review of the report from a ground penetrating radar (GPR) investigation, performed by GPRS, Inc. dated May 7, 2016, reported several areas

where underlying voids are suspected beneath the pavements and electrical room slab. A video evaluation of the storm pipes in this area was also performed under the direction of Engineered Solutions of Georgia on November 4, 2016. We understand that this evaluation determined that there is a separation of the storm pipe that drains into the underground detention vault beneath the pavements in parking deck P1, which allows subsurface water flows into the backfill soils in this area. The original Grading & Drainage Plan dated April 28, 2009 and prepared by Kimley-Horn and Associates, Inc. was also reviewed to determine the depth of new fill materials proposed beneath the northeast portion of the building. This review indicates that approximately 12 vertical feet of new fill was placed beneath the east side of the building, where the ground surface is approximately 7 feet below the lower parking deck. Significantly deeper new fill depths are present below the parking deck level, where up to 19 vertical feet of new fill is shown. Up to 28 feet of fill is indicated in the vicinity of the front loading dock area and an estimated 16 feet of new fill is shown in the area of the eastern stormwater drop inlet within the driveway to parking level P1.

FIELD EXPLORATION

A total of eight (8) boring locations were explored within or adjacent to the areas of observed distress. Based on our initial site visit, significant below grade utilities are present in the areas of the proposed exploration and a private utility contractor, RHD Services, Inc. was contracted to identify the location of underground utilities prior to selecting the specific boring locations. The initial borings were drilled on November 4, 2016. The borings were performed using hand auger techniques, which were proposed to be terminated at depths of 7 to 15 feet below the existing grades. Four of the borings were performed through 4 inch diameter cores through the existing pavements and the floor slab in the Main Electrical Room at the northeast corner of parking deck P1. These specific boring locations included the Main Electrical Room at the northeast corner of parking deck P1, The west side of the parking Deck P1 entrance where cracking is evident, near the eastern stormwater drop inlet within the entrance drive to parking deck P1 and the sidewalk area near the west side of the loading dock driveway. The remaining boring locations included the east side of the building at the north corner, near the base of the adjacent retaining wall north of this corner, the landscape area adjacent to the entrance to parking deck P1 and near the base of the exterior steps east of the loading dock driveway. The approximate boring locations are shown on the Boring Location Plans, Figures 1 & 2, attached with this report. The borings were located by our field engineer, who supervised the drilling operations and maintained logs of boring. The boring logs will indicate the depth, classification, relative density or consistency of the soils encountered, depth to rock or groundwater and any unusual subsurface conditions noted.

Due to significant rock fragments within the existing fill soil encountered, each of the hand auger borings encountered shallow refusal prior to penetrating the existing fill embankments. Numerous boring offsets were performed for the borings not located in the concrete areas that were cored. The hand auger boring depths ranged from 1 to 5 feet below existing grades. Dynamic Cone Penetrometer Tests were performed in each boring where obvious rock fragments were not encountered, to determine the relative densities of the soils encountered. It should be noted that the only boring which encountered a void beneath the existing pavements was located in the main electrical room, where a 4 inch thick void was present. The concrete thickness at the boring locations ranged from 4.8 inches in boring B-3 in the electrical room slab, to approximately 6 inches in boring B-7 in the sidewalk adjacent to the loading dock.

The site was revisited on November 11, 2016 with representatives of Engineered Solutions of Georgia, to drill the accessible borings with a mini-excavator mounted drill rig using 3.5 inch diameter, continuous flighted augers. Dynamic Cone Penetrometer Tests (DCP) were performed in each boring where obvious rock fragments were not encountered, to determine the relative densities of the soils encountered. Borings B-1 and B-2 were drilled to depths of 29 feet. Based on visual evaluation of the soils encountered the estimated depth of fill in these borings is 25 feet below existing grades. Boring B-3 encountered refusal on large rocks at a depth of approximately 3 feet at two locations and was not offset further due to the close proximity of the underground power lines. Boring B-5, located within the driveway to parking deck P1 encountered refusal on rock fragments at a depth of 6 feet. Boring B-9, located adjacent to the exterior stairs east of the loading dock, was drilled to a depth of 19 feet and was terminated within apparent fill soils.

The borings indicate that the existing fill soils on the northeast portion of the building area predominately consist of rock laden Silts with some sand. Due to the frequent rock fragments, the many of the DCP tests performed in the borings are considered elevated and not representative of the overall fill consistencies. Where the DCP values are considered representative, soft to stiff relative densities were recorded. Additionally, the drilling operations from the mechanical drill rig indicate soft fill layers between zones of the rock laden fill.

CONCLUSIONS AND RECOMMENDATIONS

The borings indicate that the observed settlement is due to the consolidation of the relatively soft backfill soils that exist at the northeast portion of the building and driveway areas. Based on the limited boring data and review of the pre-development site grades, fill depths of up to 32 feet are present in this area. Our review of the structural design drawings indicate that the majority of the structure is supported on driven pile foundations, which appear to be adequately supporting the building. An exception is main electrical room at the northeast corner of parking level P1, where the front wall and a portion of the east wall are supported on a foundation wall bearing in the existing fill soils, (see Figure 3). Additionally, the retaining wall structure adjacent to this area and adjacent to the entrance drive to parking deck P1 are supported within these fill soils, as well as the exterior stairs to the MDF Room and Stairway No. 2. These structures which bear on shallow foundation have experienced settlement, as well as the pavements, stormwater structures and sidewalks in this area.

The report of the ground penetrating radar (GPR) investigation, performed by GPRS, Inc. indicated that possible voids are present beneath the pavements in the vicinity of the eastern stormwater drop inlet, adjacent to the trench drain and entrance to parking deck P1 and in the main electrical room. The only void encountered at the boring locations was within the main electrical room, where a 4 inch thick void was encountered. It should be noted that additional void areas may exist beneath the pavements and floor slabs away from the specific core and boring locations.

We recommend that the foundation wall supporting the front wall and a portion of the east wall of the main electrical room be stabilized by helical piers along the exterior edge (toe) of the foundation and compaction grouting the rear, (heel) backfilled portion of the foundation. Helical piers are a steel foundation system consisting of a central shaft with one or more helix-shaped bearing plates

which are installed adjacent to the existing shallow foundation and attached via a foundation bracket to support the foundation loads. The piers are advanced below grade, through the soft or unsuitable fill materials to bear within the underlying stable soils. The torque required to advance the pier is recorded during installation to determine the capacity of the pier. Compaction grouting injects a cement grout below grade under high pressure to densify the soils and create a grout column to stabilize the underlying soils. In this application, a boring will be advanced through the backfill soils and cored through the heel of the existing foundation. Casing will subsequently be driven through the soft fill soils below the foundation to the underlying stiff soils. Cement grout will subsequently be injected through the casing at high pressure to densify the soils as the casing is withdrawn, typically at 1 foot intervals, to the base of the foundation. This method of foundation stabilization is also recommended for both free-standing retaining walls adjacent to the northeast portion of the building. The exterior stairs and landing to the MDF Room and Stairway No. 2 may be stabilized with helical piers attached to the existing shallow foundations.

The storm pipe draining to the underground detention vault that has separated should be repaired to prevent water infiltration into the backfill soils. This may be performed conventionally, by excavation and repairing the separated pipe, or may be repaired by installation of a pipe liner, provided that the required flow capacity of the pipe allows a reduction of the pipe section. We recommend that a contractor specializing in this service be consulted to determine the feasibility of this procedure and that the project civil engineer, Kimley-Horn and Associates be consulted to ensure that lining the pipe will not detrimentally affect the site drainage of the development.


The main electrical room, entrance to parking deck P1 and the driveway, sidewalk and storm structures in this area may be stabilized using pressure grouting. Similar to compaction grouting, pressure grouting injects a cement grout into the soft subsurface soils to densify and fill potential voids, but with smaller diameter holes and lower pressure. Pressure grouting is recommended beneath the floor of the main electrical room, where a significant void was found and beneath the entrance to parking deck P1, where significant cracking and vertical displacement of the pavements are evident. Due to the relatively extensive area comprising the exterior driveways and sidewalks that bear within the fill soils in this area, it may be desired to monitor the settlement and distress in these areas which do not support structures. If the monitoring program indicates that additional settlement and distress of these areas occur, it may be more cost effective to replace the pavements and sidewalks with reinforced pavement sections to help limit future distress. This alternative would assume risk that some future additional settlement and cracking of the pavements supported on these fill soils could occur.

It should be noted that due to the presence of frequent rock fragments in the fill soils, installation of helical piers, compaction grouting and pressure grouting will be hindered and will likely create refusals prior to penetrating the fill. This will require offset locations and will slow the stabilization process. The presence of below grade utilities will also restrict the location of helical piers and grout injection points, particularly in the main electrical room and adjacent landscape area where the power transformers are present.

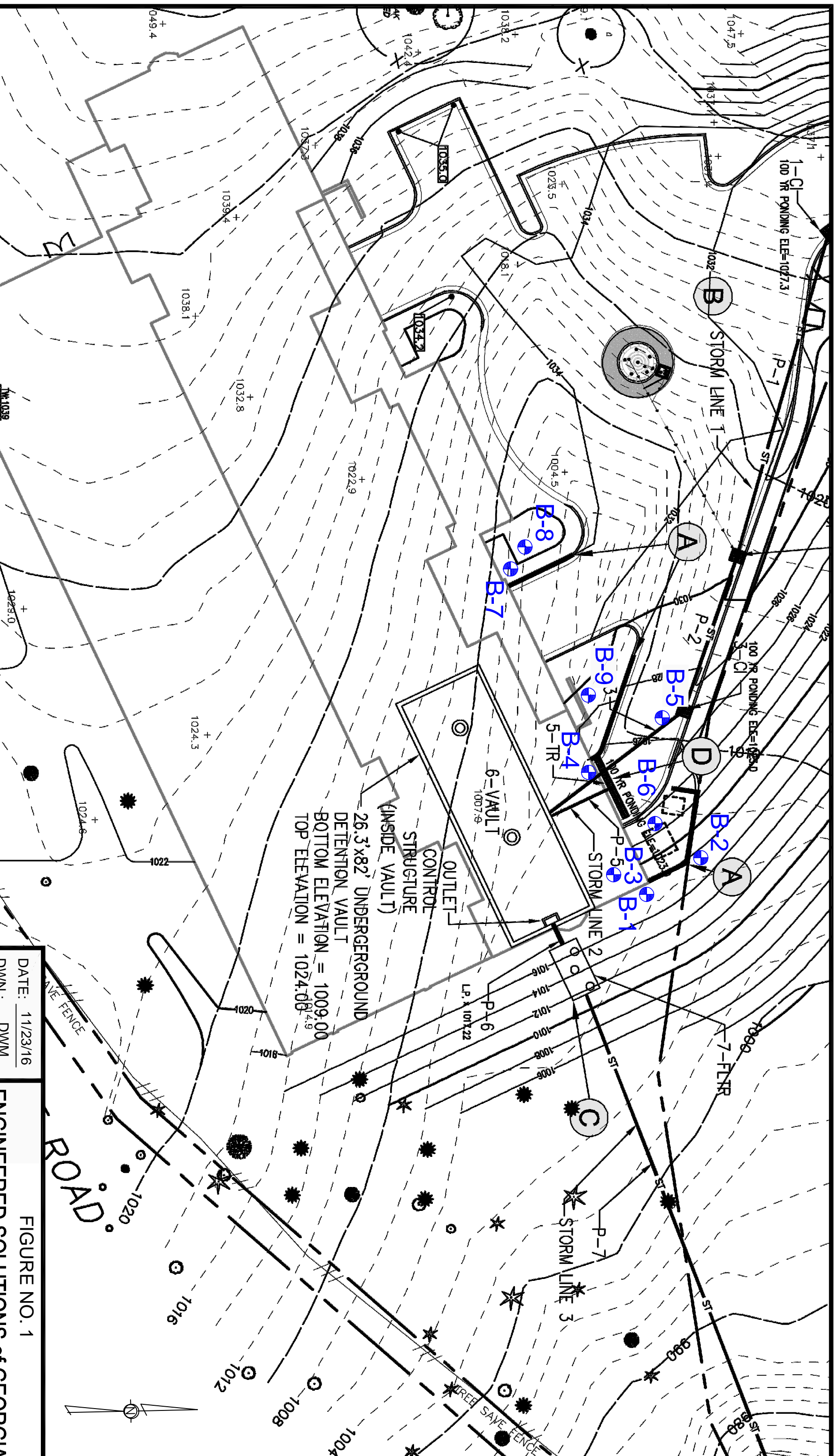
We have enjoyed working with you on this project. If you have any questions concerning this report, please do not hesitate to contact this office.

Sincerely,

CHATTAHOOCHEE CONSULTING GROUP, INC.


David W. Maxey, P.E.
Senior Engineer





26.3'x82' UNDERGROUND
 DETENTION VAULT
 BOTTOM ELEVATION = 1009.00
 TOP ELEVATION = 1024.00

LEGEND

 BORING LOCATION

NOT-TO-SCALE

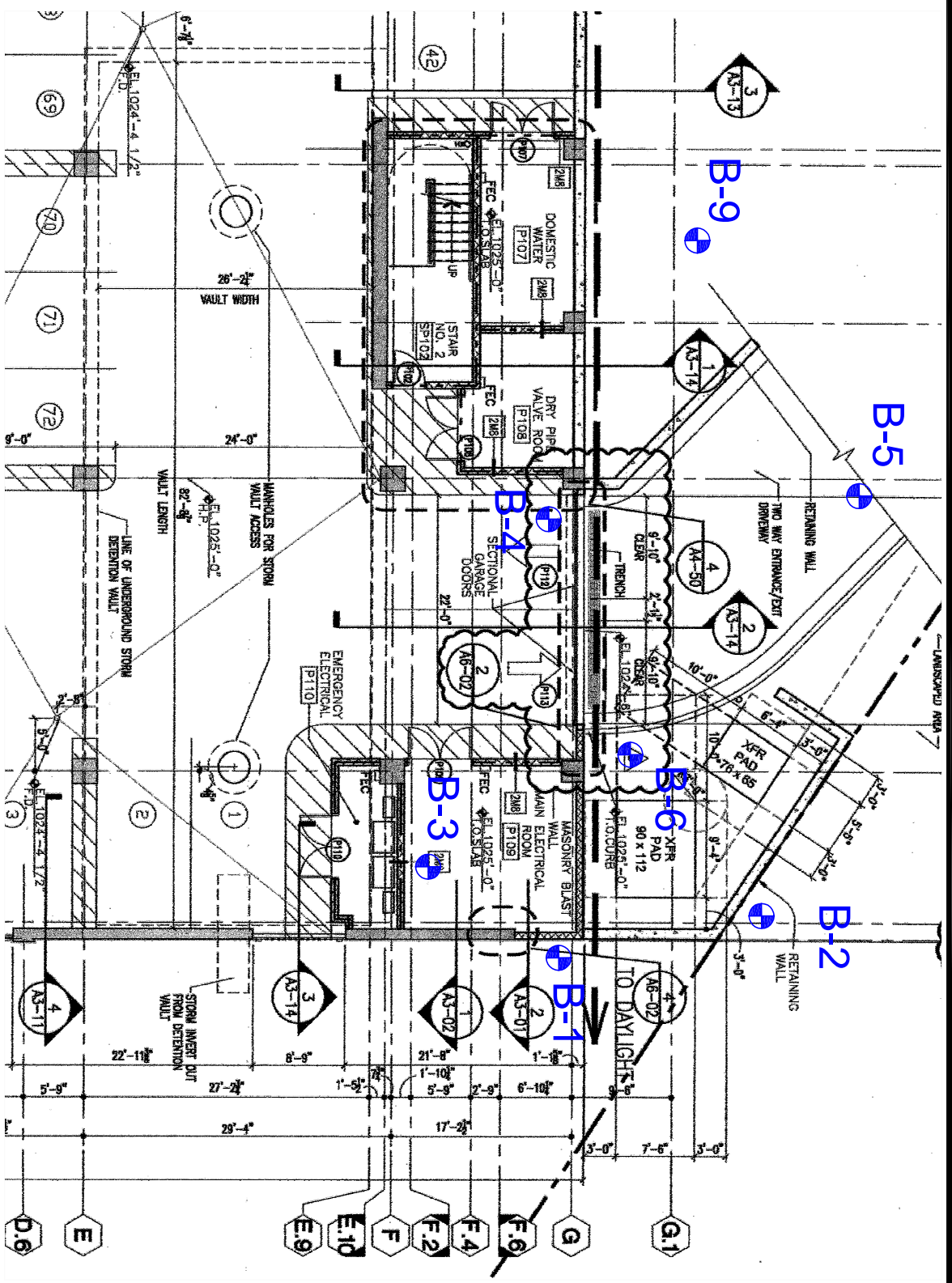


DATE:	11/23/16
DWN.:	DWM
APPR.:	
REVIS.:	
PROJECT NO.:	4754.002.16

FIGURE NO. 1

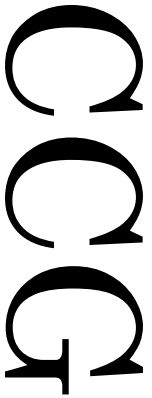
ENGINEERED SOLUTIONS of GEORGIA
THE ABERDEEN

BORING LOCATION PLAN



LEGEND

BORING LOCATION



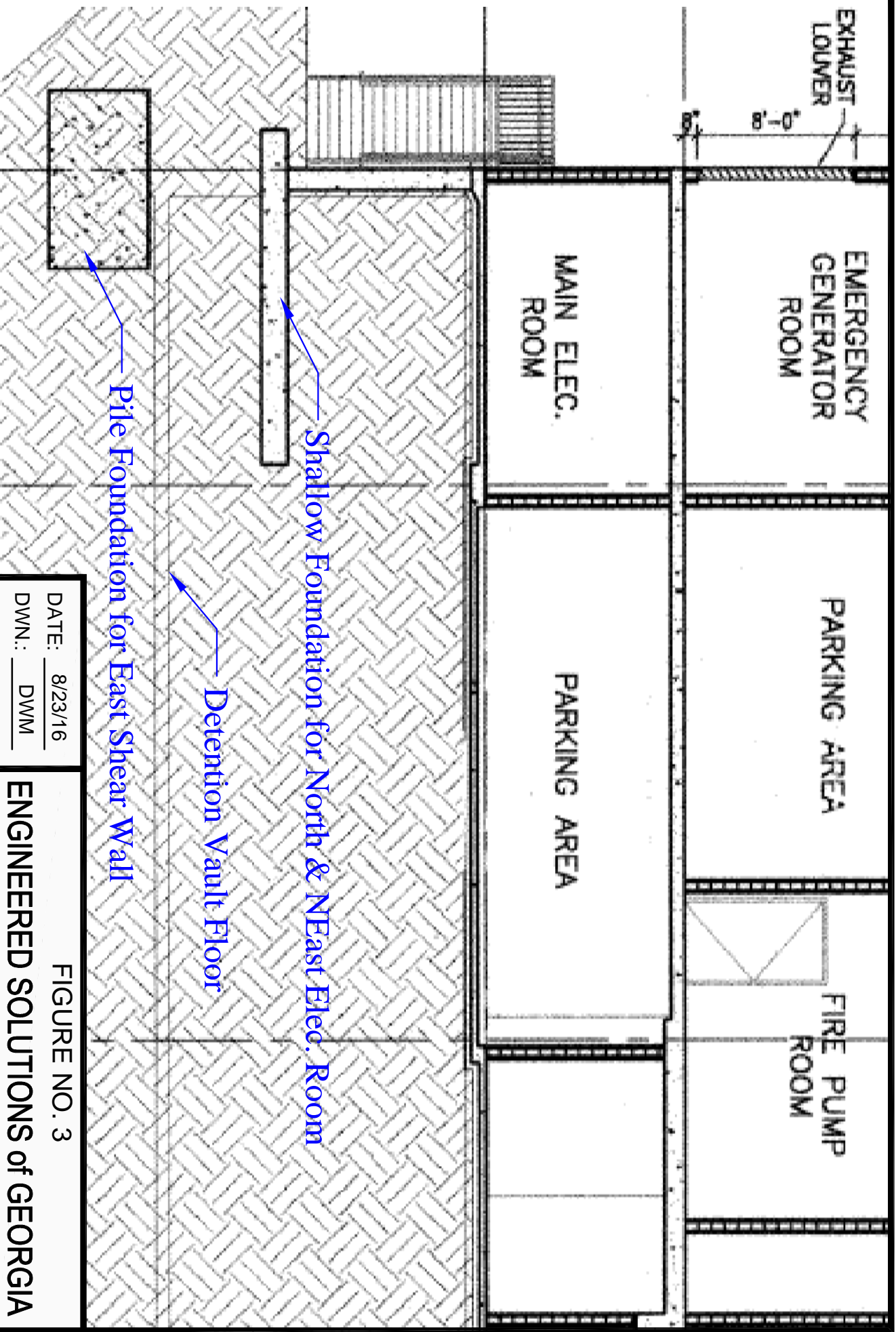
NOT TO SCALE

DATE: 8/23/16
 DWN.: DWM
 APPR.:
 REVIS.:
 PROJECT NO.: 4754.002.16

FIGURE NO. 2

ENGINEERED SOLUTIONS of GEORGIA
THE ABERDEEN

PARKING DECK P1 BORING PLAN



EXHAUST LOWER

0'-8"

EMERGENCY GENERATOR ROOM

PARKING AREA

FIRE PUMP ROOM

MAIN ELEC. ROOM

PARKING AREA

Shallow Foundation for North & NEast Elec. Room

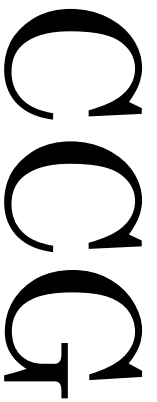
Detention Vault Floor

Pile Foundation for East Shear Wall

FIGURE NO. 3

ENGINEERED SOLUTIONS of GEORGIA
THE ABERDEEN

NOT TO SCALE



DATE: 8/23/16
 DWN.: DWM
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 REVIS.:
 PROJECT NO.: 4754.002.16

ARCH DETAIL A3-01 SECTION 2

APPENDIX A
BORING LOGS



LOG of BORING

Project Name: **The Aberdeen**
 Client: **Engineered Solutions of Georgia**
 Location: **Vinings, Georgia**

Project No.: **4754.002.16**
 Boring No.: **B-1**
 Date: **11/11/2016**

Elevation	Description	Depth (feet)	Samples		Drilling Observations
			No.	Type	
~1016 ft. MSL	Topsoil: 5"				Hand Auger Boring
	FILL: Rock-laden SILT, brown, black, some sand, topsoil, dry to moist, non-plastic				No groundwater encountered at the time of drilling. * DCP on rock fragments
			1 DCP 13-13*		
5.0					
	FILL: Sandy SILT, stiff, tan, brown, trace mica, dry, non-plastic				Note: Topsoil observed in drill cuttings from approximately 10 to 15 feet.
			2 DCP 15+*		
10.0					
	FILL: Sandy SILT, red, brown, trace mica, moist, low plastic				
			3 DCP 15+*		
15.0					
	Sandy SILT, red, brown, trace mica, moist, low plastic				
			4 DCP 7-11		
20.0					
	Sandy SILT, red, brown, trace mica, moist, low plastic				
			5 DCP 6-10		
		25.0			
	Boring Terminated @ 29'				
					LEGEND
					SPT= Standard Penetration Test SS = Split-Spoon (sample) DCP = Dynamic Cone Penetrometer GS= Ground Surface TS = Top of Slab HWR= Highly Weathered Rock PWR= Partially Weathered Rock



LOG of BORING

Project Name: **The Aberdeen**
 Client: **Engineered Solutions of Georgia**
 Location: **Vinings, Georgia**

Project No.: **4754.002.16**
 Boring No.: **B-2**
 Date: **11/11/2016**

Elevation	Description	Depth (feet)	Samples		Drilling Observations
			No.	Type	
~1018 ft. MSL	Topsoil: 5"				Hand Auger Boring
	FILL: Rock-laden SILT, brown, some sand, dry to moist, non-plastic				No groundwater encountered at the time of drilling. * DCP on rock fragments
		5.0	1	DCP 10-13*	
		10.0	2	DCP 9-10	
		15.0	3	DCP 15+*	
	FILL: Sandy SILT, stiff, tan, brown, some rock fragments, trace mica, dry, non-plastic				
		20.0	4	DCP 15+*	
	trace organic debris and voids present 22' to 26'				
		25.0			
	Sandy SILT, red, brown, trace mica, moist, low plastic				
	Boring Terminated @ 29'				
					LEGEND
					SPT= Standard Penetration Test SS = Split-Spoon (sample) DCP = Dynamic Cone Penetrometer GS= Ground Surface TS = Top of Slab HWR= Highly Weathered Rock PWR= Partially Weathered Rock



LOG of BORING

Project Name: The Aberdeen
Client: Engineered Solutions of Georgia
Location: Vinings, Georgia

Project No.: 4754.002.16
Boring No.: B-3
Date: 11/11/2016

Table with 5 columns: Elevation, Description, Depth (feet), Samples (No. Type, DCP), and Drilling Observations. Includes data for gravel at 2 feet depth and a legend for SPT, SS, DCP, GS, TS, HWR, and PWR.



LOG of BORING

Project Name: The Aberdeen
Client: Engineered Solutions of Georgia
Location: Vinings, Georgia

Project No.: 4754.002.16
Boring No.: B-4
Date: 11/11/2016

Table with 5 columns: Elevation, Description, Depth (feet), Samples (No. Type, DCP), and Drilling Observations. The table contains data for a boring log, including soil descriptions like 'GRAVEL' and 'Boring Terminated @ 2.5'', depth markers from 5.0 to 25.0 feet, and a legend for abbreviations like SPT, SS, DCP, GS, TS, HWR, and PWR.



LOG of BORING

Project Name: **The Aberdeen**
 Client: **Engineered Solutions of Georgia**
 Location: **Vinings, Georgia**

Project No.: **4754.002.16**
 Boring No.: **B-5**
 Date: **11/11/2016**

Elevation	Description	Depth (feet)	Samples		Drilling Observations
			No.	Type	
~1027 ft. MSL	Concrete 5.5"			DCP	Hand Auger Boring
	FILL: SILT, stiff, brown, some sand, trace rock fragments, roots, dry, non-plastic				No groundwater encountered at the time of drilling. Boring refused on large rock fragments in the fill at 6 feet below the existing grades.
			1	DCP 11-8	
	Rock-laden FILL	5.0	2	DCP 5-6	
	Auger Refusal @ 6'	10.0			
		15.0			
		20.0			
		25.0			
					LEGEND SPT= Standard Penetration Test SS = Split-Spoon (sample) DCP = Dynamic Cone Penetrometer GS= Ground Surface TS = Top of Slab HWR= Highly Weathered Rock PWR= Partially Weathered Rock



LOG of BORING

Project Name: **The Aberdeen**
 Client: **Engineered Solutions of Georgia**
 Location: **Vinings, Georgia**

Project No.: **4754.002.16**
 Boring No.: **B-6**
 Date: **11/11/2016**

Elevation	Description	Depth (feet)	Samples		Drilling Observations
			No.	Type	
~1023ft. MSL	Topsoil: 0"			DCP	Hand Auger Boring
	FILL: SILT, brown, orange, some sand, dry, non-plastic				No groundwater encountered at the time of drilling. Boring refused on large rock fragments in the fill at 3 feet below the existing grades.
	ROCK FRAGMENTS				
	Auger Refusal @ 3'				
		5.0			
		10.0			
		15.0			
		20.0			
		25.0			
					LEGEND SPT= Standard Penetration Test SS = Split-Spoon (sample) DCP = Dynamic Cone Penetrometer GS= Ground Surface TS = Top of Slab HWR= Highly Weathered Rock PWR= Partially Weathered Rock



LOG of BORING

Project Name: The Aberdeen
Client: Engineered Solutions of Georgia
Location: Vinings, Georgia

Project No.: 4754.002.16
Boring No.: B-7
Date: 11/11/2016

Table with 5 columns: Elevation, Description, Depth (feet), Samples (No. Type, DCP), and Drilling Observations. Includes data for soil fill, auger refusal at 3.5', and DCP samples at 3-3 and 1-3 depths. Includes a legend for SPT, SS, DCP, GS, TS, HWR, and PWR.



LOG of BORING

Project Name: **The Aberdeen**
 Client: **Engineered Solutions of Georgia**
 Location: **Vinings, Georgia**

Project No.: **4754.002.16**
 Boring No.: **B-8**
 Date: **11/11/2016**

Elevation	Description	Depth (feet)	Samples		Drilling Observations
			No.	Type	
~1034.5 ft. MSL	Topsoil: 5"				Hand Auger Boring
	FILL: SILT, soft to firm, tan, brown, some sand, trace mica, rock fragments, very moist, non-plastic		1	DCP 4-3	No groundwater encountered at the time of drilling. * DCP on rock fragments
			2	DCP 13-12*	
			3	DCP 6-5	
			4	DCP 5-5	
		5.0	5	DCP 4-6	
			6	DCP 9-9*	
			7	DCP 11-10*	
	Hand Auger Refusal @ 7.5'	10.0			Note: Boring refused at 7.5 feet on rock fragments.
		15.0			
		25.0			
LEGEND					
SPT= Standard Penetration Test					
SS = Split-Spoon (sample)					
DCP = Dynamic Cone Penetrometer					
GS= Ground Surface					
TS = Top of Slab					
HWR= Highly Weathered Rock					
PWR= Partially Weathered Rock					

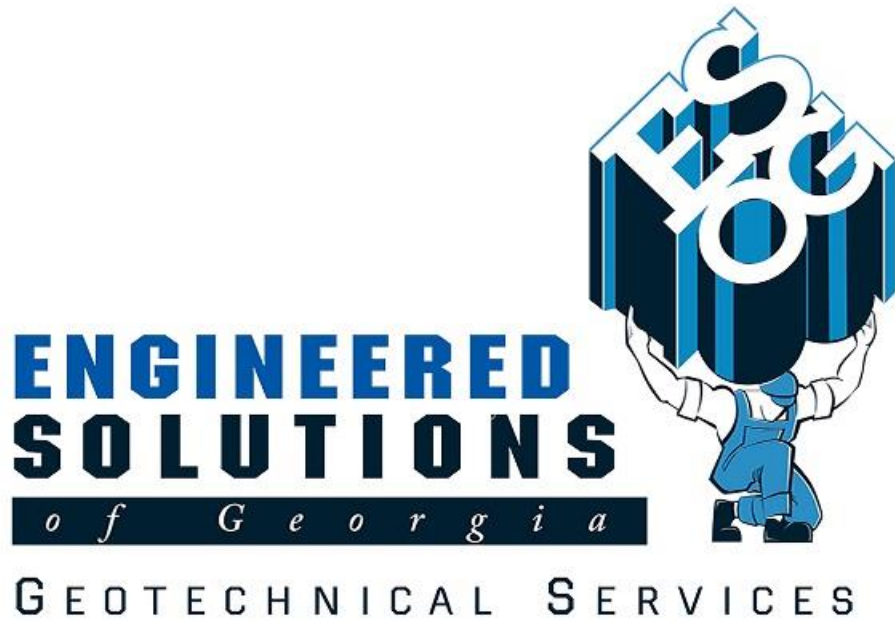


LOG of BORING

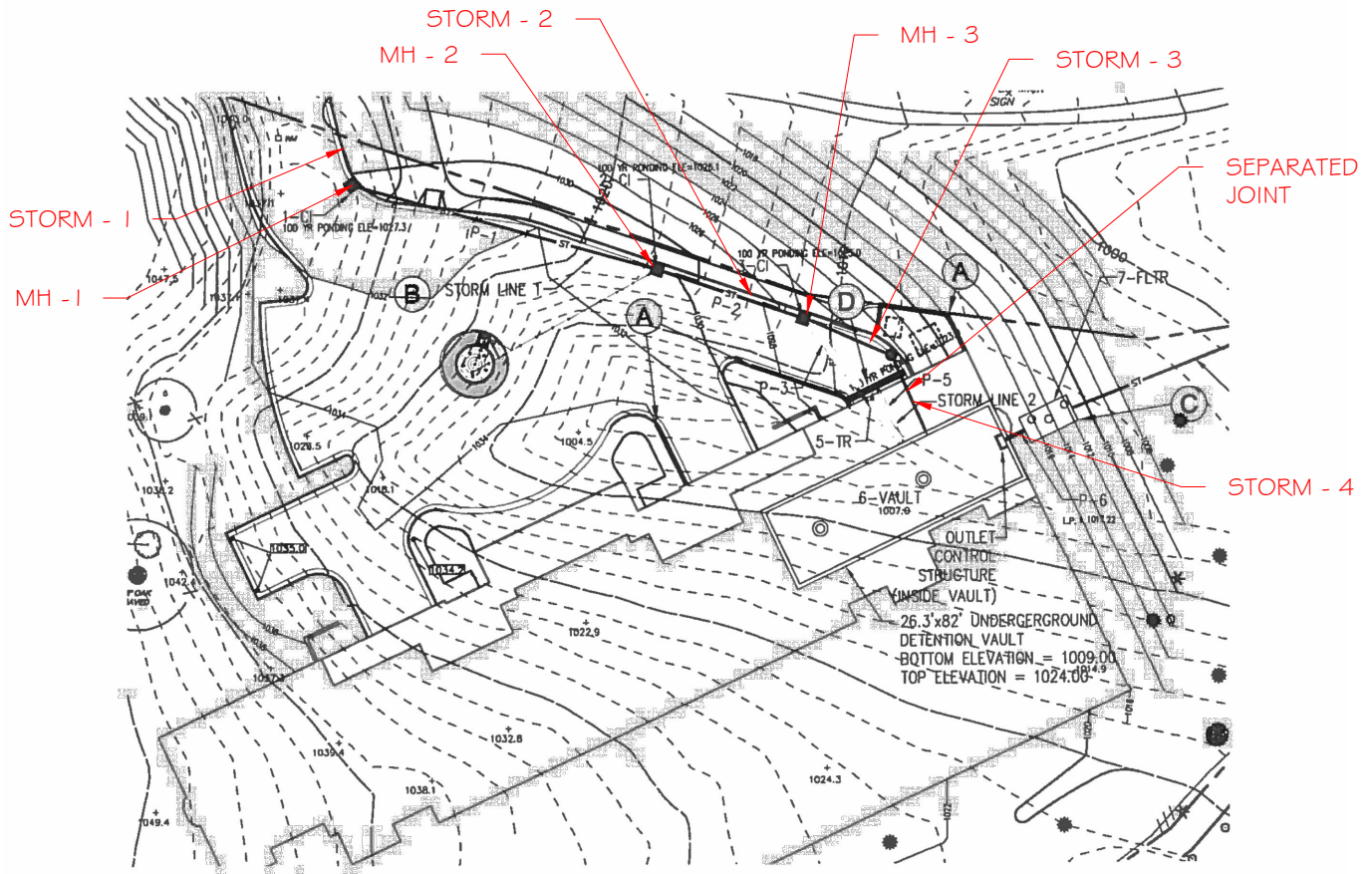
Project Name: **The Aberdeen**
 Client: **Engineered Solutions of Georgia**
 Location: **Vinings, Georgia**

Project No.: **4754.002.16**
 Boring No.: **B-9**
 Date: **11/11/2016**

Elevation	Description	Depth (feet)	Samples		Drilling Observations
			No.	Type	
~1032 ft. MSL	Topsoil: 0"			DCP	Hand Auger Boring
	FILL: Rock-laden SILT, brown, some sand, trace roots, dry to moist, non-plastic	5.0			No groundwater encountered at the time of drilling.
	FILL: Sandy SILT, soft to firm, brown, trace to some rock fragments, moist, non-plastic	10.0			
		15.0			
	Boring Terminated @ 19'	20.0			
		25.0			<p align="center">LEGEND</p> <p>SPT= Standard Penetration Test SS = Split-Spoon (sample) DCP = Dynamic Cone Penetrometer GS= Ground Surface TS = Top of Slab</p> <p>HWR= Highly Weathered Rock PWR= Partially Weathered Rock</p>



Pipe Investigation



STORM LOCATIONS

The Aberdeen at Paces Ferry
Atlanta, GA

DRAWN BY
RS

SCALE
N.T.S.

DATE
12/2/2016

DRAWING NUMBER
SK-1



ENGINEERED SOLUTIONS
of Georgia

Foundation Repair & Waterproofing

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Sanitary 1 Video



Sanitary 1 Pictures



Cross Section Report

MH Sanitary 1 to Sanitary 2

Downstream Inspection

PS R Sanitary 1		Street 2700 Paces Ferry Road		City Atlanta GA		Date 11/03/2016		Time :50:34 AM		Weather	
Ht/Dia 8	Width	Shape Circular	Material DIP	Length Surveyed 41.8	Total Length	Status Completed	Additional Info	Purpose	Sheet 1	Video Name Sanitary 1_359_11_03_2016.mpg <input checked="" type="checkbox"/>	



- = image attached
- = video attached
- = uninspected portion

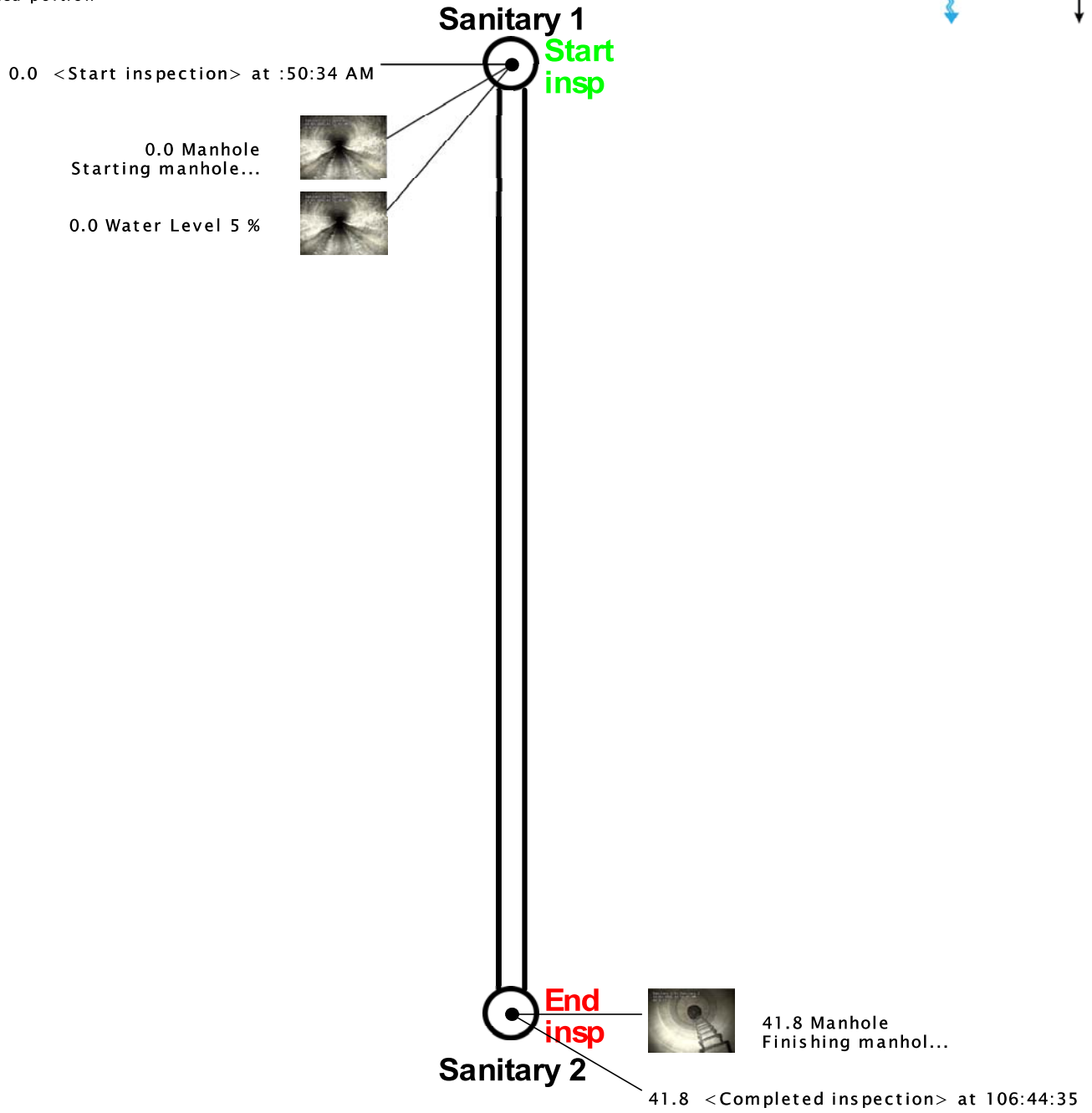
Plan View Report

MH Sanitary 1 to Sanitary 2

Downstream Inspection

PSR Sanitary 1			Street 2700 Paces Ferry Road			City Atlanta GA			
Date	Time	Weather	Ht/Dia	Width	Shape	Material	Length Surveyed	Total Length	Status
11/03/2016	:50:34 AM		8		Circular	DIP	41.8		Completed
Video Name			Additional Info			Purpose		Sheet	
Sanitary 1_359_11_03_2016.mpg			<input checked="" type="checkbox"/>					1	

- = video attached
- = uninspected portion



TV Inspection Report

MH Sanitary 1 to Sanitary 2 Downstream Inspection

PSR Sanitary 1	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:50:34 AM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	41.8	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Parking Lot		8		Circular	DIP	N		

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Sanitary 1	20.500			Sanitary 2	18.900		

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Downstream							

Video Name	Media Label	Additional Info	Purpose	Sheet
Sanitary 1_359_11_03_2016.mpg				1

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Footage	Code	CD	Observation	At	To	V1	V2	%	Jt	Remarks	Img
<Start Inspection>											
0.0	AMH		Manhole							Starting manhole: Sanitary 1	X
0.0	MWL		Water Level					5			X
41.8	AMH		Manhole							Finishing manhole: Sanitary 2	X
<Complete Inspection>											



TV Inspection Report

With Grading

MH Sanitary 1 to Sanitary 2

Downstream Inspection

PS R Sanitary 1	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:50:34 AM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	41.8	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Parking Lot		8		Circular	DIP	N		

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Sanitary 1	20.500			Sanitary 2	18.900		

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Downstream							

Video Name	Media Label	Additional Info	Purpose	Sheet
Sanitary 1_359_11_03_2016.mpg				1

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Footage	Code	CD	Observation	At	To	V1	V2	%	St	O&M	Jt	Remarks	Img
<Start Inspection>													
0.0	AMH		Manhole									Starting manhole: Sanitary 1	X
0.0	MWL		Water Level					5					X
41.8	AMH		Manhole									Finishing manhole: Sanitary 2	X
<Complete Inspection>													

TV Inspection Report

With Grading

MH Sanitary 1 to Sanitary 2

Downstream Inspection

PSR Sanitary 1	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:50:34 AM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	41.8	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Parking Lot		8		Circular	DIP	N		

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Sanitary 1	20.500			Sanitary 2	18.900		

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Downstream							

Video Name	Media Label	Additional Info	Purpose	Sheet
Sanitary 1_359_11_03_2016.mpg				2

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Structural							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	0	0	0	0.0	0000	0.0

O&M							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	0	0	0	0.0	0000	0.0

Overall							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	0	0	0	0.0	0000	0.0



Sanitary 2 Video



Sanitary 2 Pictures

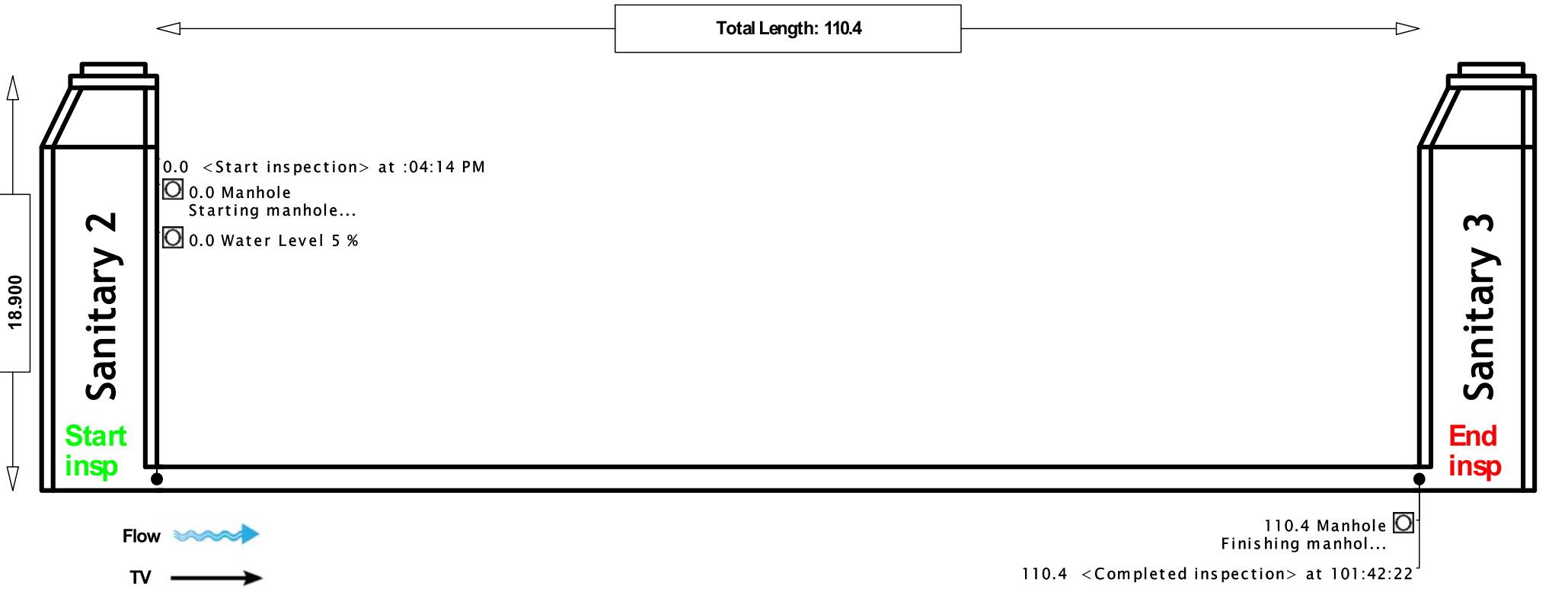


Cross Section Report

MH Sanitary 2 to Sanitary 3

Downstream Inspection

PS R Sanitary 2		Street 2700 Paces Ferry Road		City Atlanta GA		Date 11/03/2016	Time :04:14 PM	Weather		
Ht/Dia 8	Width	Shape Circular	Material DIP	Length Surveyed 110.4	Total Length	Status Completed	Additional Info	Purpose	Sheet 1	Video Name Sanitary 2_360_11_03_2016.mpg <input checked="" type="checkbox"/>



- = image attached
- = video attached
- = uninspected portion

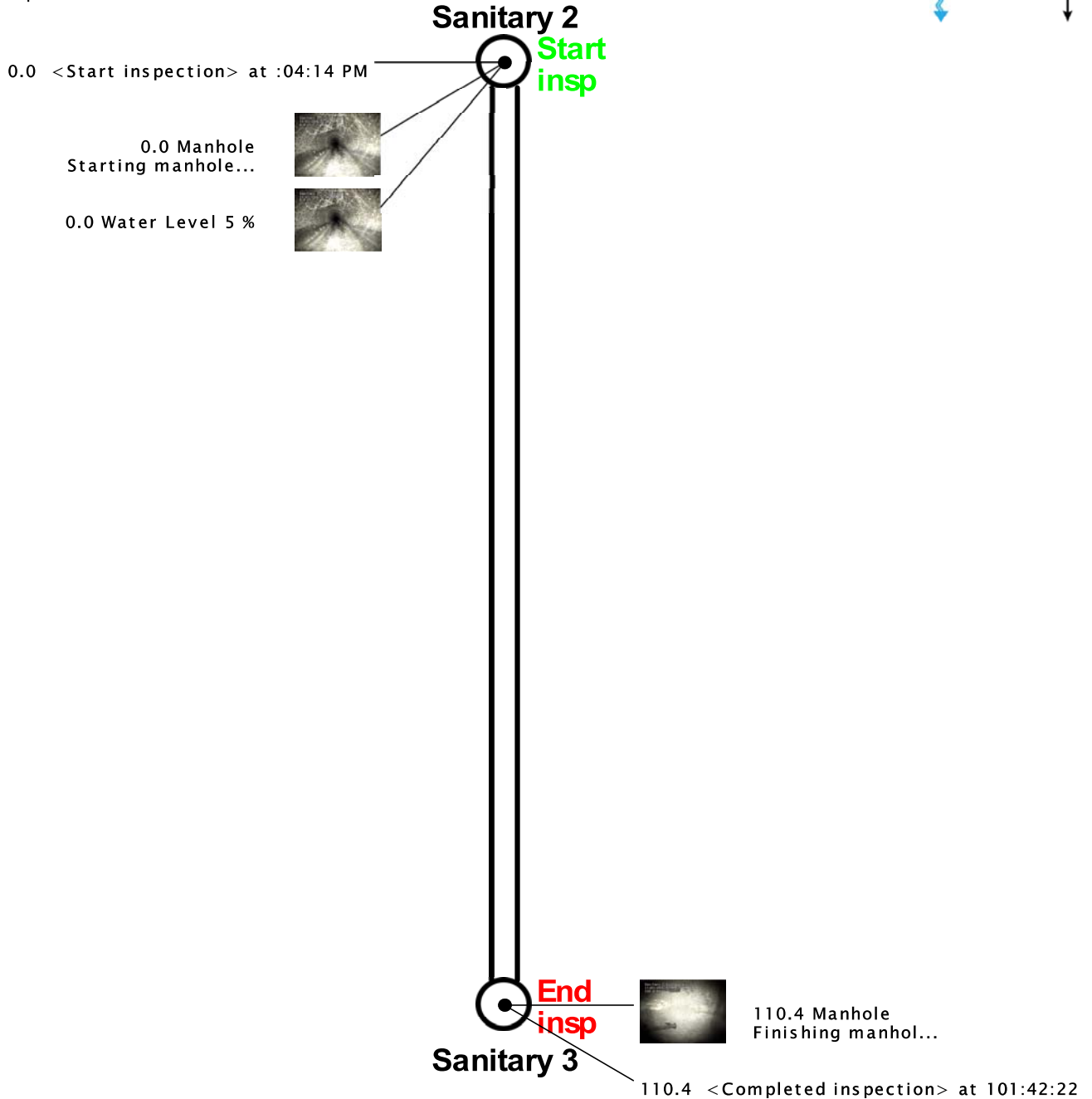
Plan View Report

MH Sanitary 2 to Sanitary 3

Downstream Inspection

PSR Sanitary 2			Street 2700 Paces Ferry Road			City Atlanta GA			
Date	Time	Weather	Ht/Dia	Width	Shape	Material	Length Surveyed	Total Length	Status
11/03/2016	:04:14 PM		8		Circular	DIP	110.4		Completed
Video Name			Additional Info			Purpose		Sheet	
Sanitary 2_360_11_03_2016.mpg <input checked="" type="checkbox"/>								1	

- = video attached
- = uninspected portion



TV Inspection Report

MH Sanitary 2 to Sanitary 3 Downstream Inspection

PSR Sanitary 2	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:04:14 PM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	110.4	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Yard		8		Circular	DIP	N		

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Sanitary 2	18.900			Sanitary 3			

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Downstream							

Video Name	Media Label	Additional Info	Purpose	Sheet
Sanitary 2_360_11_03_2016.mpg				1

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Footage	Code	CD	Observation	At	To	V1	V2	%	Jt	Remarks	Img
<Start Inspection>											
0.0	AMH		Manhole							Starting manhole: Sanitary 2	X
0.0	MWL		Water Level					5			X
110.4	AMH		Manhole							Finishing manhole: Sanitary 3	X
<Complete Inspection>											



TV Inspection Report

With Grading

MH Sanitary 2 to Sanitary 3

Downstream Inspection

PSR Sanitary 2	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:04:14 PM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	110.4	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Yard		8		Circular	DIP	N		

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Sanitary 2	18.900			Sanitary 3			

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Downstream							

Video Name	Media Label	Additional Info	Purpose	Sheet
Sanitary 2_360_11_03_2016.mpg				1

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Footage	Code	CD	Observation	At	To	V1	V2	%	St	O&M	Jt	Remarks	Img
<Start Inspection>													
0.0	AMH		Manhole									Starting manhole: Sanitary 2	X
0.0	MWL		Water Level					5					X
110.4	AMH		Manhole									Finishing manhole: Sanitary 3	X
<Complete Inspection>													



TV Inspection Report

With Grading

MH Sanitary 2 to Sanitary 3

Downstream Inspection

PSR Sanitary 2	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:04:14 PM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	110.4	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Yard		8		Circular	DIP	N		
Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd	
Sanitary 2	18.900			Sanitary 3				
Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category	
Downstream								

Video Name	Media Label	Additional Info	Purpose	Sheet
Sanitary 2_360_11_03_2016.mpg				2

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Structural							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	0	0	0	0.0	0000	0.0

O&M							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	0	0	0	0.0	0000	0.0

Overall							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	0	0	0	0.0	0000	0.0



Storm 1 Video

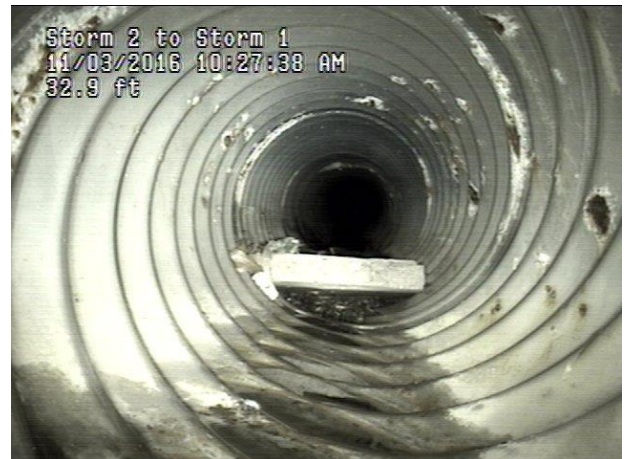
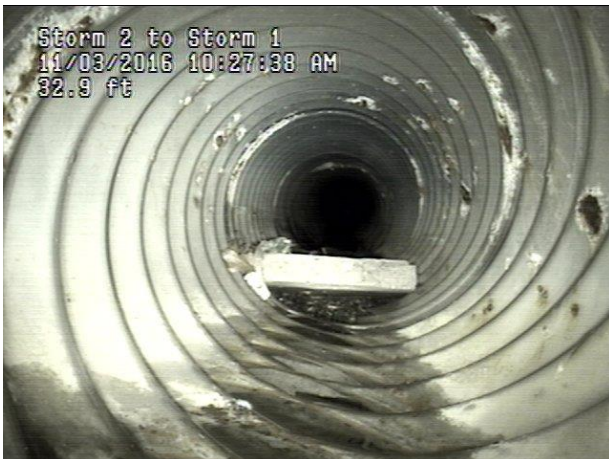
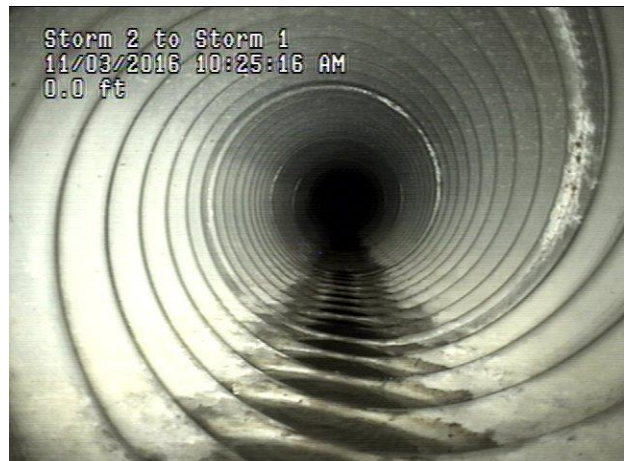
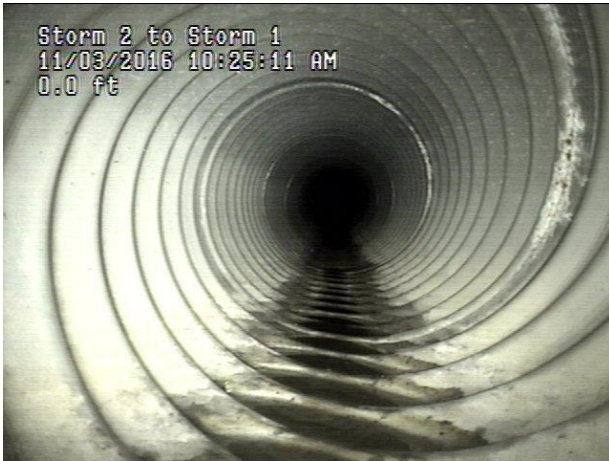


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Storm 1 Pictures

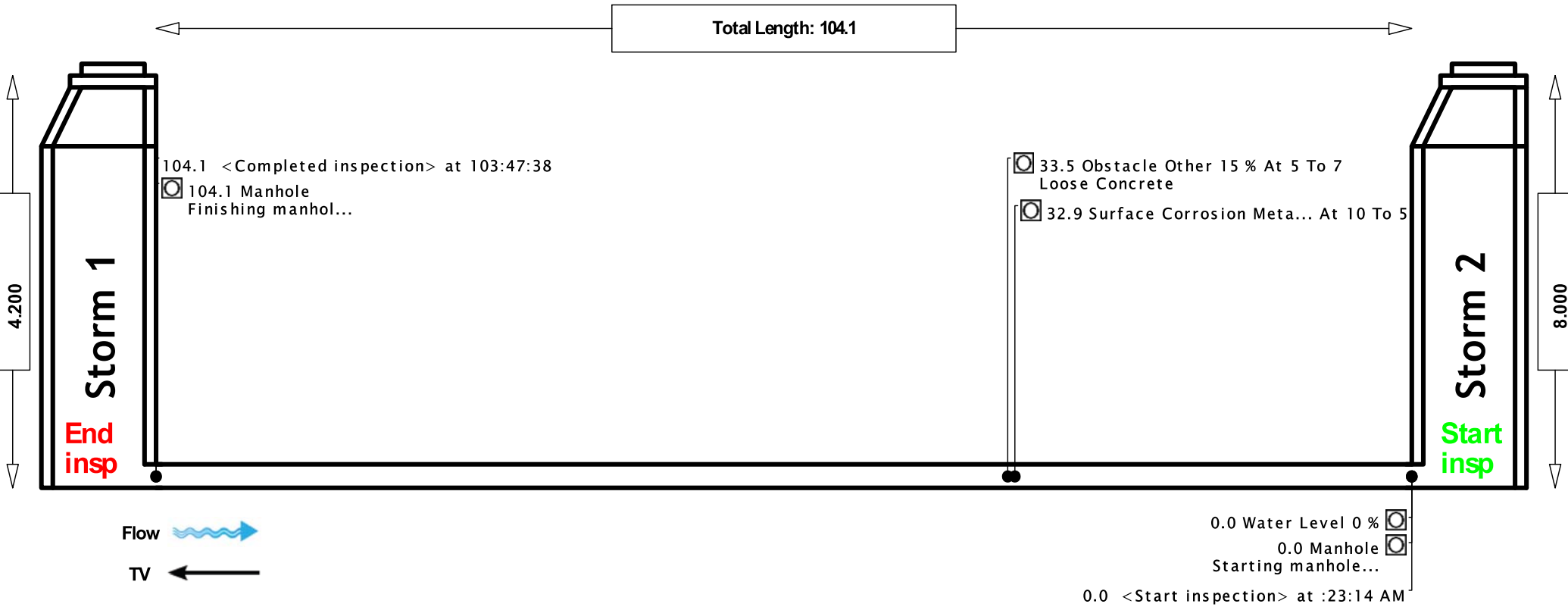


Cross Section Report

MH Storm 2 to Storm 1

Upstream Inspection

PS R Storm 1		Street 2700 Paces Ferry Road	City Atlanta GA	Date 11/03/2016	Time :23:14 AM	Weather					
Ht/Dia 12	Width	Shape Circular	Material CMP	Length Surveyed 104.1	Total Length	Status Completed	Additional Info	Purpose	Sheet 1	Video Name Storm 1_355_11_03_2016.mpg	<input checked="" type="checkbox"/>



- = image attached
- = video attached
- = uninspected portion

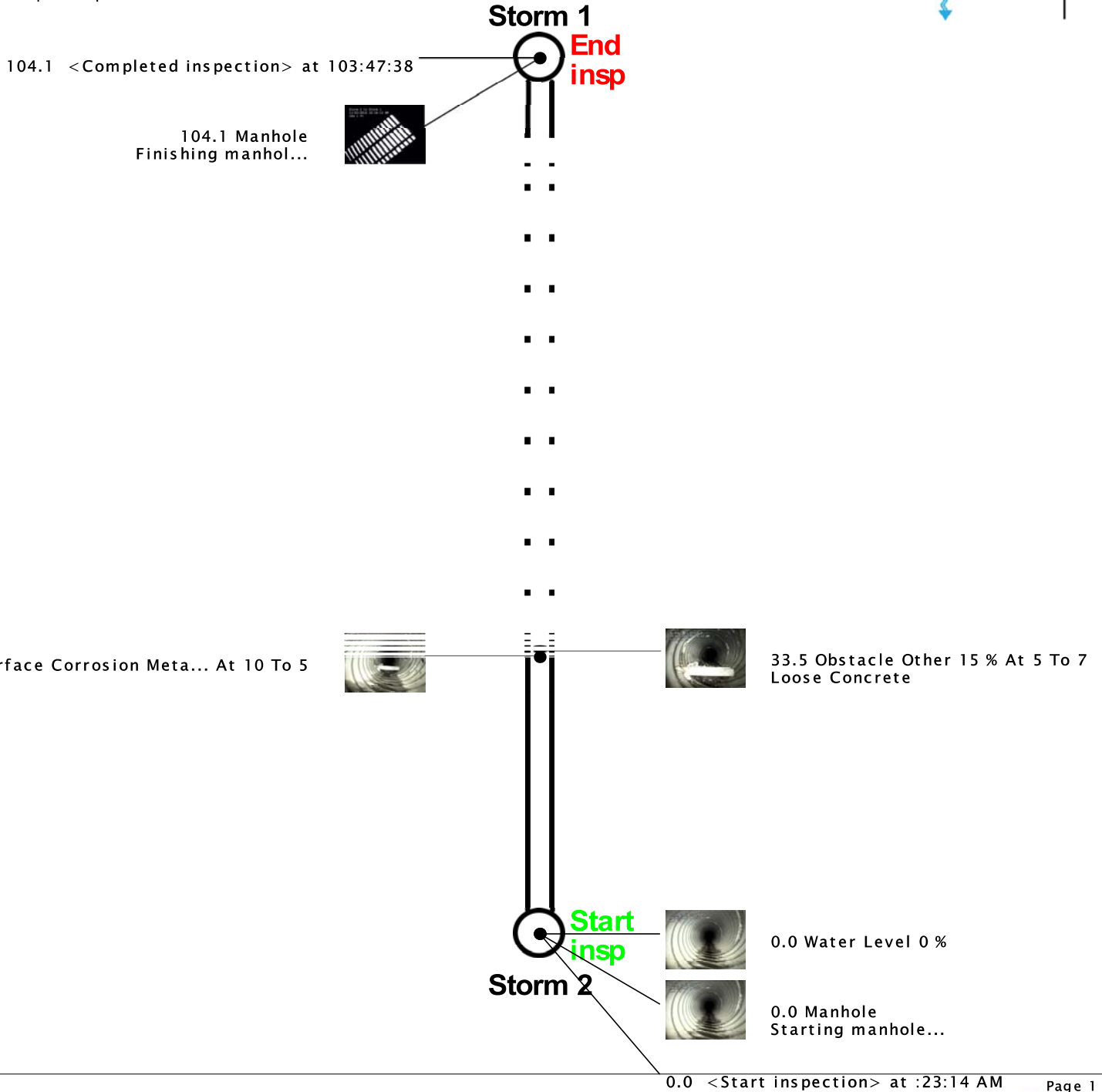
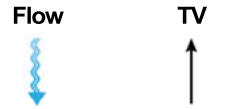
Plan View Report

MH Storm 2 to Storm 1

Upstream Inspection

PSR Storm 1			Street 2700 Paces Ferry Road				City Atlanta GA			
Date 11/03/2016	Time :23:14 AM	Weather	Ht/Dia 12	Width	Shape Circular	Material CMP	Length Surveyed 104.1	Total Length	Status Completed	
Video Name Storm 1_355_11_03_2016.mpg			Additional Info				Purpose		Sheet 1	

- = video attached
- = uninspected portion



TV Inspection Report

MH Storm 2 to Storm 1 Upstream Inspection

PSR Storm 1	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:23:14 AM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	104.1	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Parking Lot		12		Circular	CMP	N		

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Storm 1	4.200			Storm 2	8.000		

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Upstream							

Video Name	Media Label	Additional Info	Purpose	Sheet
Storm 1_355_11_03_2016.mpg				1

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Footage	Code	CD	Observation	At	To	V1	V2	%	Jt	Remarks	Img
<Start Inspection>											
0.0	AMH		Manhole							Starting manhole: Storm 2	X
0.0	MWL		Water Level					0			X
32.9	SCP		Surface Corrosion Meta...	10	5						X
33.5	OBZ		Obstacle Other	5	7			15		Loose Concrete	X
104.1	AMH		Manhole							Finishing manhole: Storm 1	X
<Complete Inspection>											

TV Inspection Report

With Grading

MH Storm 2 to Storm 1

Upstream Inspection

PS R Storm 1	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:23:14 AM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	104.1	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Parking Lot		12		Circular	CMP	N		

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Storm 1	4.200			Storm 2	8.000		

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Upstream							

Video Name	Media Label	Additional Info	Purpose	Sheet
Storm 1_355_11_03_2016.mpg				1

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Footage	Code	CD	Observation	At	To	V1	V2	%	St	O&M	Jt	Remarks	Img
<Start Inspection>													
0.0	AMH		Manhole									Starting manhole: Storm 2	X
0.0	MWL		Water Level					0					X
32.9	SCP		Surface Corrosion Meta...	10	5				3				X
33.5	OBZ		Obstacle Other	5	7			15		3		Loose Concrete	X
104.1	AMH		Manhole									Finishing manhole: Storm 1	X
<Complete Inspection>													



TV Inspection Report

With Grading

MH Storm 2 to Storm 1

Upstream Inspection

PSR Storm 1		PO number	Status Completed	Date 11/03/2016	Time :23:14 AM	Weather		
Street 2700 Paces Ferry Road		City Atlanta GA		Owner				
Customer	Surveyor Name Randy Askea	Cert # Cobra	Length Surveyed 104.1	Total Length				
Location Code Parking Lot	Location Details	Ht/Dia 12	Width	Shape Circular	Material CMP	Pre-Cleaning N	Date Cleaned	Sewer Use
Upstream MH Storm 1	US Rim to Inv 4.200	US Grd to Inv	US Rim to Grd	Downstream MH Storm 2	DS Rim to Inv 8.000	DS Grd to Inv	DS Rim to Grd	
Direction Upstream	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category	

Video Name Storm 1_355_11_03_2016.mpg	Media Label	Additional Info	Purpose	Sheet 2
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Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Structural							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	1	0	0	3.0	3100	3.0

O&M							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	1	0	0	3.0	3100	3.0

Overall							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	2	0	0	6.0	3200	3.0



Storm 2 Video

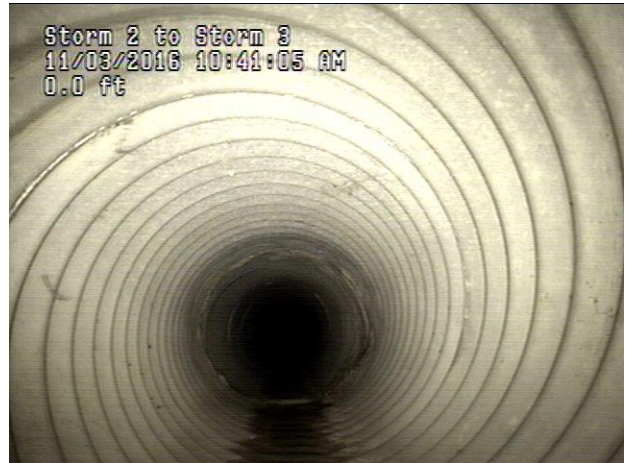


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Storm 2 Pictures





Storm 3 Video



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GEOTECHNICAL SERVICES

Storm 3 Pictures

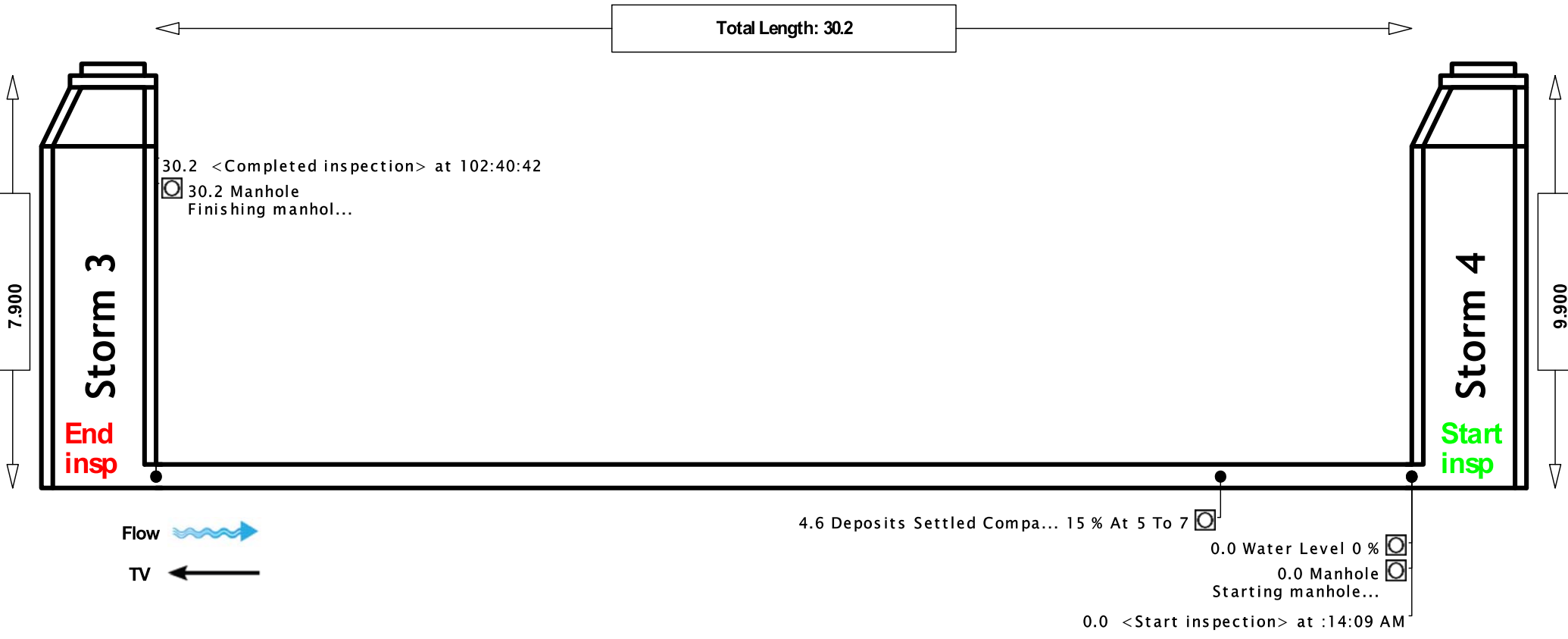


Cross Section Report

MH Storm 4 to Storm 3

Upstream Inspection

P S R Storm 3		Street 2700 Paces Ferry Road	City Atlanta GA	Date 11/03/2016	Time :14:09 AM	Weather					
Ht/Dia 18	Width	Shape Circular	Material CMP	Length Surveyed 30.2	Total Length	Status Completed	Additional Info	Purpose	Sheet 1	Video Name Storm 3_357_11_03_2016.mpg	<input checked="" type="checkbox"/>



- = image attached
- = video attached
- = uninspected portion

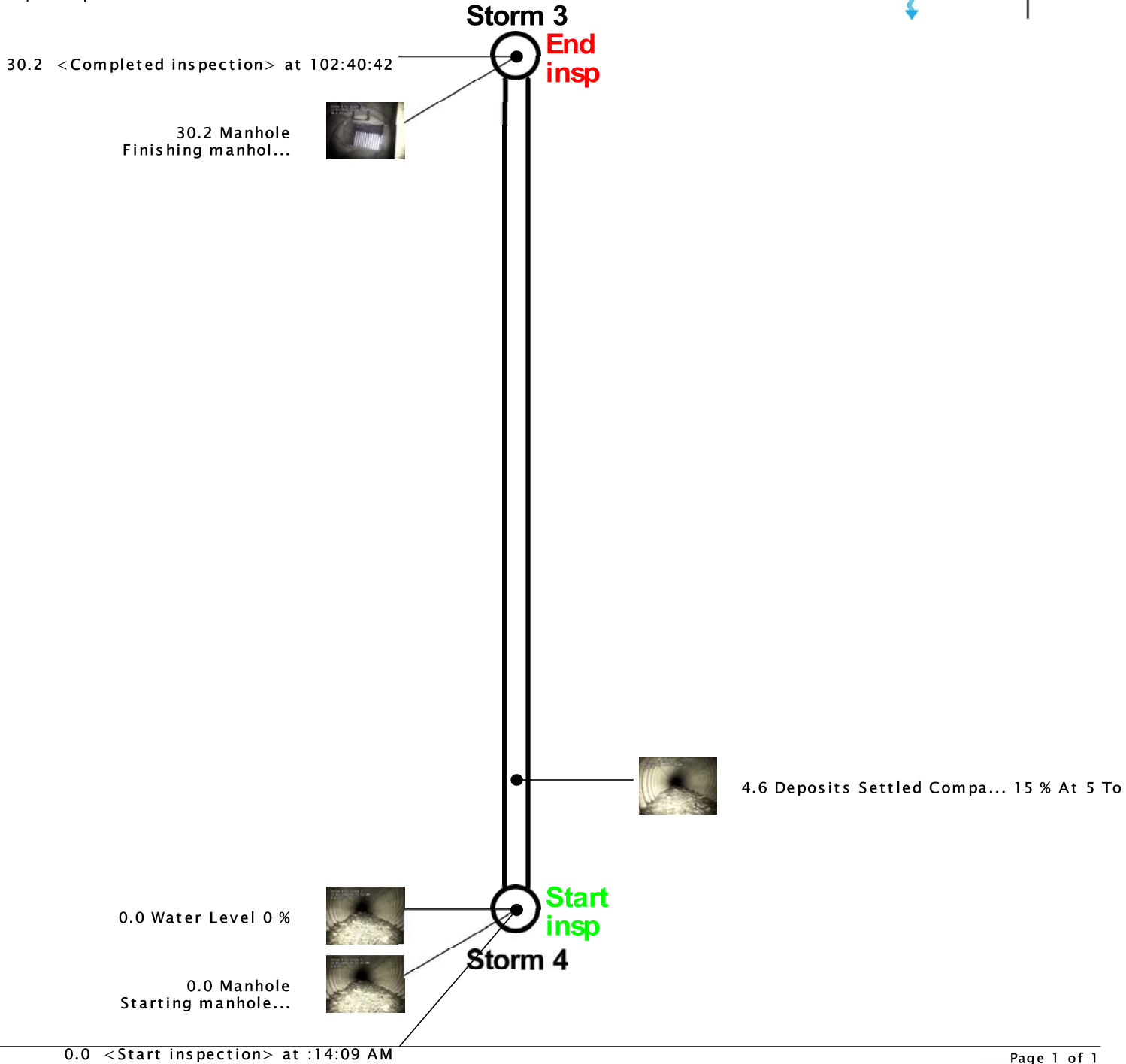
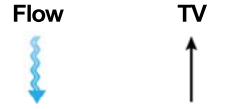
Plan View Report

MH Storm 4 to Storm 3

Upstream Inspection

PS R Storm 3			Street 2700 Paces Ferry Road				City Atlanta GA			
Date 11/03/2016	Time :14:09 AM	Weather	Ht/Dia 18	Width	Shape Circular	Material CMP	Length Surveyed 30.2	Total Length	Status Completed	
Video Name Storm 3_357_11_03_2016.mpg			Additional Info				Purpose		Sheet 1	

- = video attached
- = uninspected portion



TV Inspection Report

MH Storm 4 to Storm 3 Upstream Inspection

PSR Storm 3	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:14:09 AM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	30.2	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Parking Lot		18		Circular	CMP	N		
Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd	
Storm 3	7.900			Storm 4	9.900			
Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category	
Upstream								

Video Name	Media Label	Additional Info	Purpose	Sheet
Storm 3_357_11_03_2016.mpg				1

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Footage	Code	CD	Observation	At	To	V1	V2	%	Jt	Remarks	Img
			<Start Inspection>								
0.0	AMH		Manhole							Starting manhole: Storm 4	X
0.0	MWL		Water Level					0			X
4.6	DSC		Deposits Settled Compa...	5	7			15			X
30.2	AMH		Manhole							Finishing manhole: Storm 3	X
			<Complete Inspection>								

TV Inspection Report

With Grading

MH Storm 4 to Storm 3

Upstream Inspection

PS R Storm 3	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:14:09 AM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	30.2	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Parking Lot		18		Circular	CMP	N		

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Storm 3	7.900			Storm 4	9.900		

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Upstream							

Video Name	Media Label	Additional Info	Purpose	Sheet
Storm 3_357_11_03_2016.mpg				1

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Footage	Code	CD	Observation	At	To	V1	V2	%	St	O&M	Jt	Remarks	Img
<Start Inspection>													
0.0	AMH		Manhole									Starting manhole: Storm 4	X
0.0	MWL		Water Level					0					X
4.6	DSC		Deposits Settled Compa...	5	7			15		3			X
30.2	AMH		Manhole									Finishing manhole: Storm 3	X
<Complete Inspection>													

TV Inspection Report

With Grading

MH Storm 4 to Storm 3

Upstream Inspection

PS R Storm 3		PO number	Status Completed	Date 11/03/2016	Time :14:09 AM	Weather		
Street 2700 Paces Ferry Road		City Atlanta GA		Owner				
Customer	Surveyor Name Randy Askea		Cert # Cobra	Length Surveyed 30.2	Total Length			
Location Code Parking Lot	Location Details	Ht/Dia 18	Width	Shape Circular	Material CMP	Pre-Cleaning N	Date Cleaned	Sewer Use
Upstream MH Storm 3	US Rim to Inv 7.900	US Grd to Inv	US Rim to Grd	Downstream MH Storm 4	DS Rim to Inv 9.900	DS Grd to Inv	DS Rim to Grd	
Direction Upstream	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category	

Video Name Storm 3_357_11_03_2016.mpg	Media Label	Additional Info	Purpose	Sheet 2
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Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Structural							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	0	0	0	0.0	0000	0.0

O&M							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	1	0	0	3.0	3100	3.0

Overall							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	1	0	0	3.0	3100	3.0



Storm 4 Video

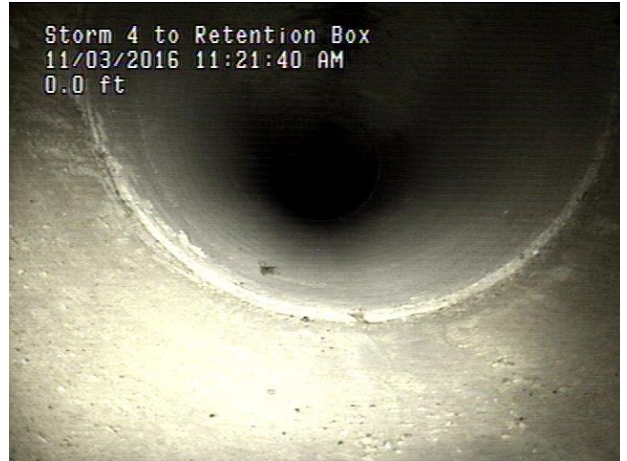
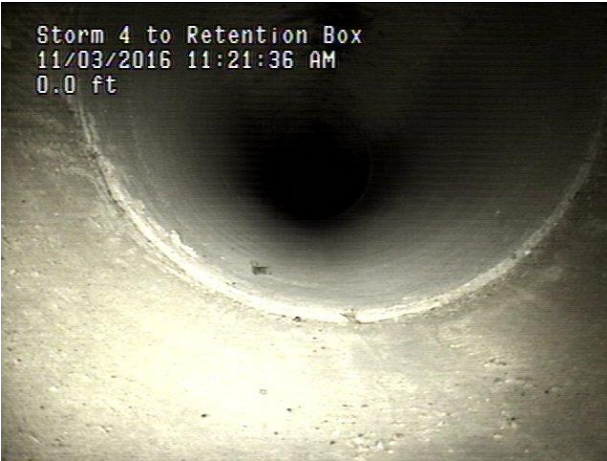


**ENGINEERED
SOLUTIONS**

o f G e o r g i a

GEOTECHNICAL SERVICES

Storm 4 Pictures

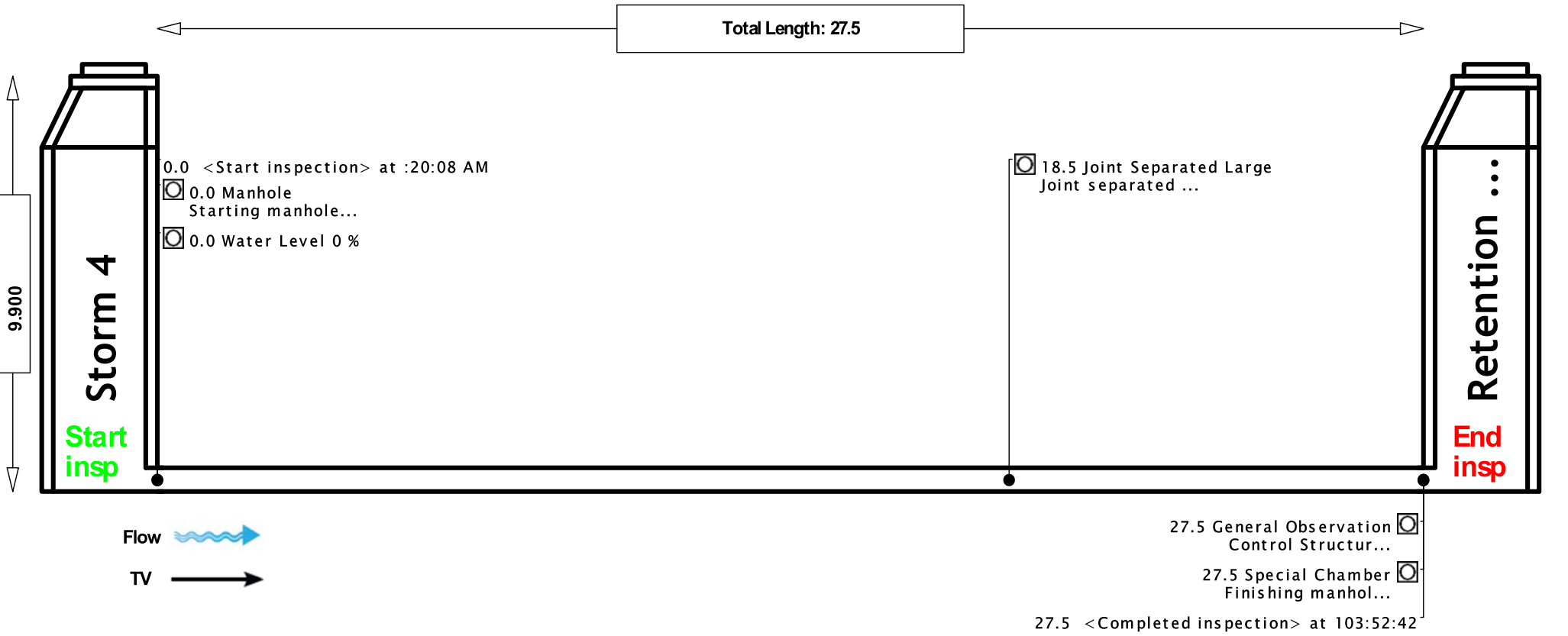


Cross Section Report

MH Storm 4 to Retention Box

Downstream Inspection

PS R Storm 4		Street 2700 Paces Ferry Road		City Atlanta GA		Date 11/03/2016	Time :20:08 AM	Weather		
Ht/Dia 18	Width	Shape Circular	Material RCP	Length Surveyed 27.5	Total Length	Status Completed	Additional Info	Purpose	Sheet 1	Video Name Storm 4_358_11_03_2016.mpg <input checked="" type="checkbox"/>



- = image attached
- = video attached
- = uninspected portion

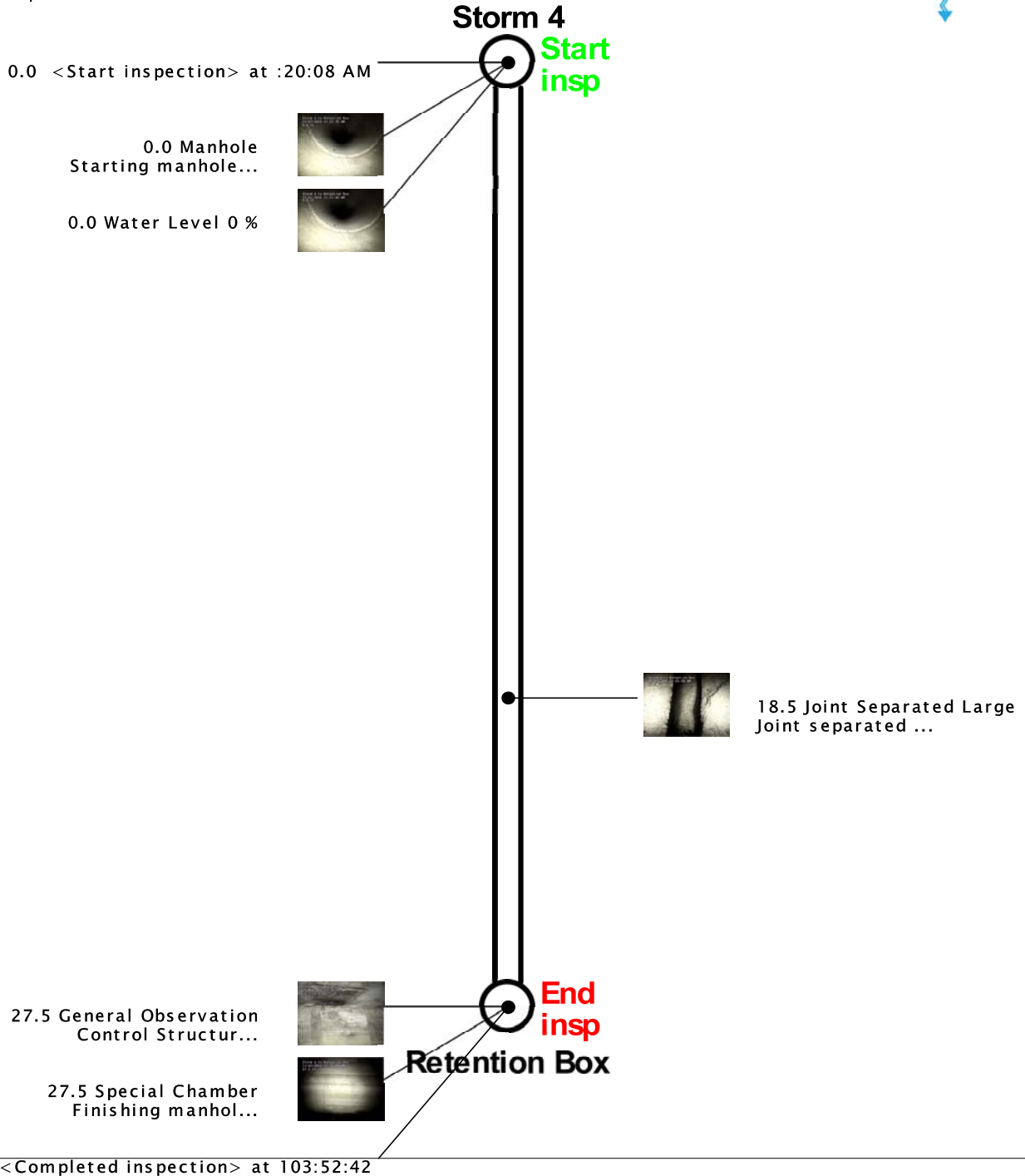
Plan View Report

MH Storm 4 to Retention Box

Downstream Inspection

PSR Storm 4			Street 2700 Paces Ferry Road				City Atlanta GA			
Date 11/03/2016	Time :20:08 AM	Weather	Ht/Dia 18	Width	Shape Circular	Material RCP	Length Surveyed 27.5	Total Length	Status Completed	
Video Name Storm 4_358_11_03_2016.mpg			Additional Info				Purpose		Sheet 1	

- = video attached
- = uninspected portion



TV Inspection Report

MH Storm 4 to Retention Box

Downstream Inspection

PSR Storm 4	PO number	Status	Date	Time	Weather
	<input type="text"/>	Completed	11/03/2016	:20:08 AM	<input type="text"/>

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	<input type="text"/>

Customer	Surveyor Name	Cert #	Length Surveyed Total Length
<input type="text"/>	Randy Askea	Cobra	27.5

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Parking Lot	<input type="text"/>	18	<input type="text"/>	Circular	RCP	N	<input type="text"/>	<input type="text"/>

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Storm 4	9.900	<input type="text"/>	<input type="text"/>	Retention Box	<input type="text"/>	<input type="text"/>	<input type="text"/>

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Downstream	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Video Name	Media Label	Additional Info	Purpose	Sheet
Storm 4_358_11_03_2016.mpg	<input type="text"/>	<input type="text"/>	<input type="text"/>	1

Optional1	Optional2
<input type="text"/>	<input type="text"/>
Optional3	Optional4
<input type="text"/>	<input type="text"/>
Optional5	Optional6
<input type="text"/>	<input type="text"/>
Optional7	Optional8
<input type="text"/>	<input type="text"/>
Optional9	Optional10
<input type="text"/>	<input type="text"/>

Footage	Code	CD	Observation	At	To	V1	V2	%	Jt	Remarks	Img
<Start Inspection>											
0.0	AMH		Manhole							Starting manhole: Storm 4	X
0.0	MWL		Water Level					0			X
18.5	JSL		Joint Separated Large							Joint separated at 6:00	X
27.5	MGO		General Observation							Control Structure	X
27.5	AOC		Special Chamber							Finishing manhole: Retention Box	X
<Complete Inspection>											

TV Inspection Report

With Grading

MH Storm 4 to Retention Box

Downstream Inspection

PSR Storm 4	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:20:08 AM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	27.5	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Parking Lot		18		Circular	RCP	N		

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Storm 4	9.900			Retention Box			

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Downstream							

Video Name	Media Label	Additional Info	Purpose	Sheet
Storm 4_358_11_03_2016.mpg				1

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Footage	Code	CD	Observation	At	To	V1	V2	%	St	O&M	Jt	Remarks	Img
<Start Inspection>													
0.0	AMH		Manhole									Starting manhole: Storm 4	X
0.0	MWL		Water Level					0					X
18.5	JSL		Joint Separated Large						2			Joint separated at 6:00	X
27.5	MGO		General Observation									Control Structure	X
27.5	AOC		Special Chamber									Finishing manhole: Retention Box	X
<Complete Inspection>													

TV Inspection Report

With Grading

MH Storm 4 to Retention Box

Downstream Inspection

PSR Storm 4	PO number	Status	Date	Time	Weather
		Completed	11/03/2016	:20:08 AM	

Street	City	Owner
2700 Paces Ferry Road	Atlanta GA	

Customer	Surveyor Name	Cert #	Length Surveyed	Total Length
	Randy Askea	Cobra	27.5	

Location Code	Location Details	Ht/Dia	Width	Shape	Material	Pre-Cleaning	Date Cleaned	Sewer Use
Parking Lot		18		Circular	RCP	N		

Upstream MH	US Rim to Inv	US Grd to Inv	US Rim to Grd	Downstream MH	DS Rim to Inv	DS Grd to Inv	DS Rim to Grd
Storm 4	9.900			Retention Box			

Direction	Flow control	Drainage Area	Lining Method	Joint Length	Year Laid	Year Renewed	Sewer Category
Downstream							

Video Name	Media Label	Additional Info	Purpose	Sheet
Storm 4_358_11_03_2016.mpg				2

Optional1	Optional2
Optional3	Optional4
Optional5	Optional6
Optional7	Optional8
Optional9	Optional10

Structural							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	1	0	0	0	2.0	2100	2.0

O&M							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	0	0	0	0	0.0	0000	0.0

Overall							
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Rating	Quick	Index
0	1	0	0	0	2.0	2100	2.0



2260 Northwest Parkway • Suite H • Marietta, GA 30067 • 678-290-1325

Commercial Contract for Services

Date of Issue: **12/2/16**

Customer Information

Name: **Helen Smith Community Management Associates**
 Address: **2700 Paces Ferry Road**
 City: **Atlanta** State: **GA** Zip: **30339**
 Phone: **(770) 434-0289**
 Cell: **(770) 653-8254**
 Fax:
 Email: **hsmith@cmacommunities.com**

Jobsite Information

Contact Name: **Helen Smith Community Management Associates**
 Address: **The Aberdeen at Paces Ferry 2700 Paces Ferry Road**
 City: **Atlanta** State: **GA** Zip: **30339**
 Phone: **(770) 434-0289**
 Cell: **(770) 653-8254**
 Fax:
 Email: **hsmith@cmacommunities.com**

ENGINEERED SOLUTIONS OF GEORGIA PROPOSES TO FURNISH AND INSTALL THE FOLLOWING SCOPE OF WORK:

“Budget Proposal”

Pending Final Repair Design

ENGINEERING AND DESIGN OF ALL REPAIR AREAS - **\$7,700.00**

WORK AREA 1 – \$221,565.00

Parking Garage Corner – (Electrical Room, Parking Garage Entrance, Transformer Pads and Lower retaining Wall)

1. Private Utility Locate
2. Underpinning of Accessible Foundations with Foundation Support Piles
3. Compaction Grouting beneath inaccessible Foundations
4. Pressure (Injection) Grouting throughout area
5. Repair separated Pipe Joint with CIPP Pipe Lining System

WORK AREA 2 - \$39,625.00

Loading Dock Pavement and Adjacent Stairs/Site Wall at Side Entry

6. Private Utility Locate
7. Underpinning of Site-Wall and steps Foundations with Foundation Support Piles
8. Pressure (Injection) Grouting throughout area

WORK AREA 3 - \$68,440.00

Middle Retaining Wall at Parking garage Entrance including Adjacent Pavement and Sidewalks

1. Private Utility Locate
2. Underpinning of Site-Wall and steps Foundations with Foundation Support Piles
3. Pressure (Injection) Grouting throughout area

Payment Schedule

Deposit	\$84,332.50
Due Upon Completion	\$252,997.50

Total Contract Amount \$337,330.00

Quotation valid for 30 days from the date of issue. Contract subject to terms and conditions printed on the accompanying addenda.

Presented by ESOG

Accepted by the Customer

ESOG Signature

Date

Customer Signature

Date

Chuck Irby

Print Name

Helen Smith Community Management Associates

Print Name

Terms & Conditions of This Contract

Customer: Helen Smith Community Management, Inc. Address: The Abredeem at Paces Ferry 2700 Paces Ferry Road, Atlanta, GA 30339 Date of Issue: 12/2/16

PAYMENT TERMS

Payment terms shall be as stated in this proposal. Payment is due in the form of cash, check, credit card or money order. The customer hereby expressly agrees and consents to ESOG's presentation of and request for payment of any check or other payment order issued to ESOG by the customer by any commercially reasonable electronic means in accordance with applicable provisions of the Uniform Commercial Code and the customer further authorizes any bank or other financial institution on which any such order is drawn or through which such order is payable to make payment pursuant to such order directly to ESOG or for credit to ESOG's account by electronic funds transfer. ESOG may apply the customer's payment against any open charges at ESOG's sole discretion. The customer agrees to pay ESOG on past due accounts a monthly interest charge equal to the maximum interest charge permitted by the law governing the account between the customer and ESOG. The customer and ESOG further agree that, where required by law to specify such rate, a rate of one and one-half percent (1.5%) per month shall apply. The interest rate provided hereby shall continue to accrue after ESOG obtains a judgment against the customer. The customer agrees to pay ESOG all costs, expenses of collection, suit or other legal action, including all actual attorney's and paralegal fees incurred pre-suit, through the trial, on appeal or in any administrative proceedings brought about as a result of the commercial relationship between them. Any cause of action which ESOG may have against the customer may be assigned by ESOG or any affiliate thereof without the consent of the customer.

CONTRACT TIME

It is understood that the work is to be performed in one continuous operation unless otherwise specifically agreed.

PERMITS

The customer shall provide permits for all work.

CLEAR WORK AREA

This includes removal by the customer of any and all obstructions and/or impediments in the work area. This includes but is not limited to: carpet, floor covering, stairs, counters, counter tops, cabinets, shelves, plumbing, appliances, furniture and fixtures. A workspace of at least 36" from each wall and a clear path of ingress and egress for personnel and equipment to and from the work area shall be provided.

ACCESS TO WORKSITE, WATER AND ELECTRICAL POWER

The customer shall provide access to the work area, water for mixing concrete (if necessary) and cleanup and electricity. If no power is provided, the customer will be responsible for any cost incurred in providing power. In the event of circuit overload, access to the fuse or circuit breaker box (electrical service) must be provided. In the case of fuses, the customer must provide an ample supply of replacement fuses in the event of circuit overload. If pumps are required, the customer shall be responsible for providing an electrical outlet within 25 feet of the pump.

PRE-BID INFORMATION

Information used in planning the work covered in this proposal has been furnished by the customer and ESOG assumes no responsibility for its accuracy. If conditions are not in accordance with the information furnished to ESOG by the customer or others, the recommended procedures and scope of work in this proposal may not be accurate and any additional expenses incurred by ESOG as a result of this difference will be reimbursed to ESOG by the customer at cost plus 15%.

PRIOR NEGOTIATIONS

All prior negotiations, proposals, correspondence and memoranda between the customer and ESOG are superseded by this proposal. This proposal, in its entirety, shall be made an integral part of and incorporated into any purchase order, proposal or contract agreement resulting from it. This proposal is subject to revision in scope, price and terms if not accepted in writing by the customer within 30 days.

TERMINATION OF CONTRACT

If conditions beyond ESOG's control make it impossible for ESOG to perform as specified and the customer elects to terminate the contract, ESOG will be entitled to reimbursement in full for all ESOG's costs including mobilization, labor, materials and overhead plus a reasonable profit for all work performed up to the date of written notification of termination by the buyer.

LIEN RIGHTS

It is mutually agreed that ESOG shall retain any and all rights conferred upon it by the lien statutes of the state in which the jobsite is located and of the federal or territorial government.

SURVEYS AND UTILITY LOCATE

The customer shall provide surveys to locate and stake for all pile locations and top of pier elevations and shall locate all underground utilities.

NORMAL CONSTRUCTION

This contract assumes normal construction, concrete thickness and footing depth (no more than three feet below interior slab) and further assumes compliance with applicable building codes. If unforeseen subsurface conditions are encountered additional charges may be levied (at the contractor's option) to prepare the area for install

Customer Signature

CORE VALUES

UNDERSTANDING

- It is important to us that our customers fully understand the issues they are having with their home and why the problems have occurred.
- We will create a customized plan that will fully address the issues and insure that our customers completely understand what we will be doing and how it will be done.

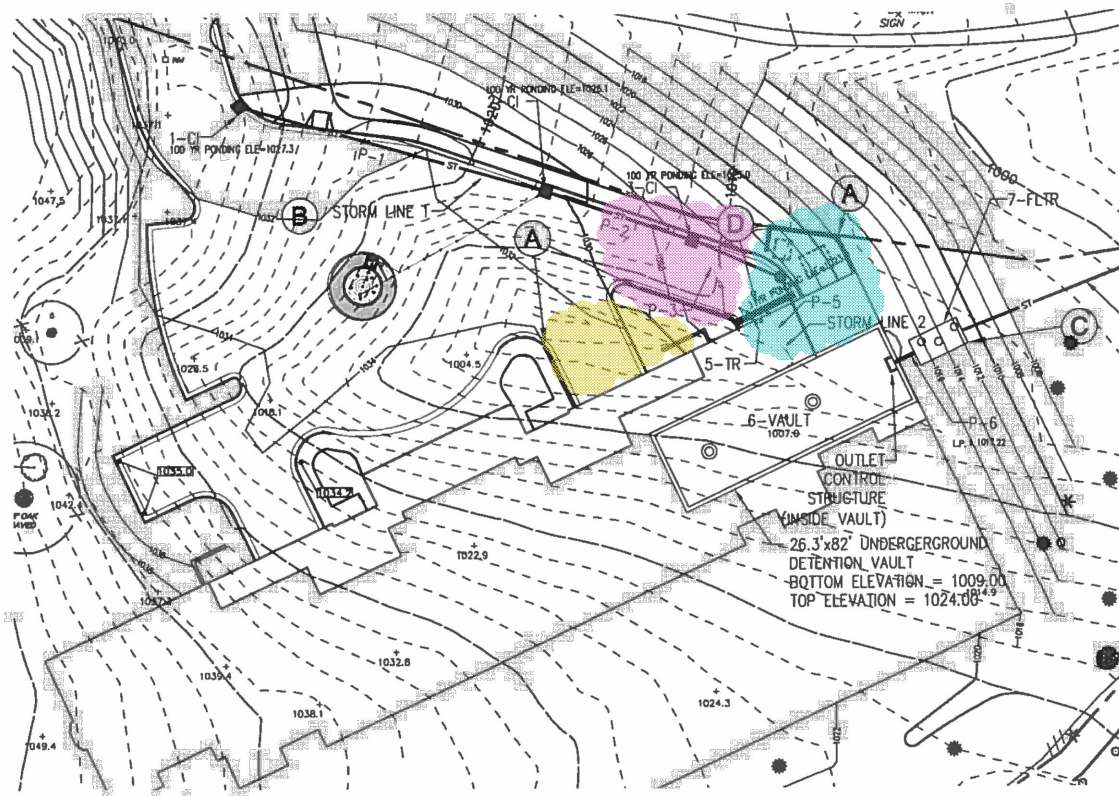
TRUST




We want to earn the trust of our customer in three ways:

- **COMMUNICATION** – From the first phone call to the last we will keep our customers informed of their project status and changes as we work together.
- **EXECUTION** – From the project design to the completion of the work we will do exactly what we have contracted together to accomplish.
- **WORKMANSHIP** – Every project is custom designed to correct the issues and we will stand behind it with a warranty that is stated in the contract. We will also send out warranty certificates that are transferable with the property.

RESPECT

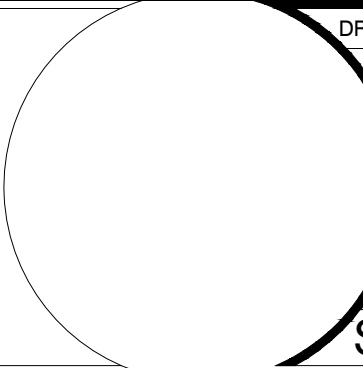
We consider our customers friends and family and we treat them that way. We will respect their time by confirming all appointments and arriving on time. We will treat their home like our own while performing all work and we will dress and speak professionally at all times. We ensure that all work related debris is removed when the job is completed.



LEGEND	
	INDICATES WORK AREA 1
	INDICATES WORK AREA 2
	INDICATES WORK AREA 3

REPAIR AREAS

The Aberdeen at Paces Ferry
Atlanta, GA



DRAWN BY
RS

SCALE
N.T.S.

DATE
12/2/2016

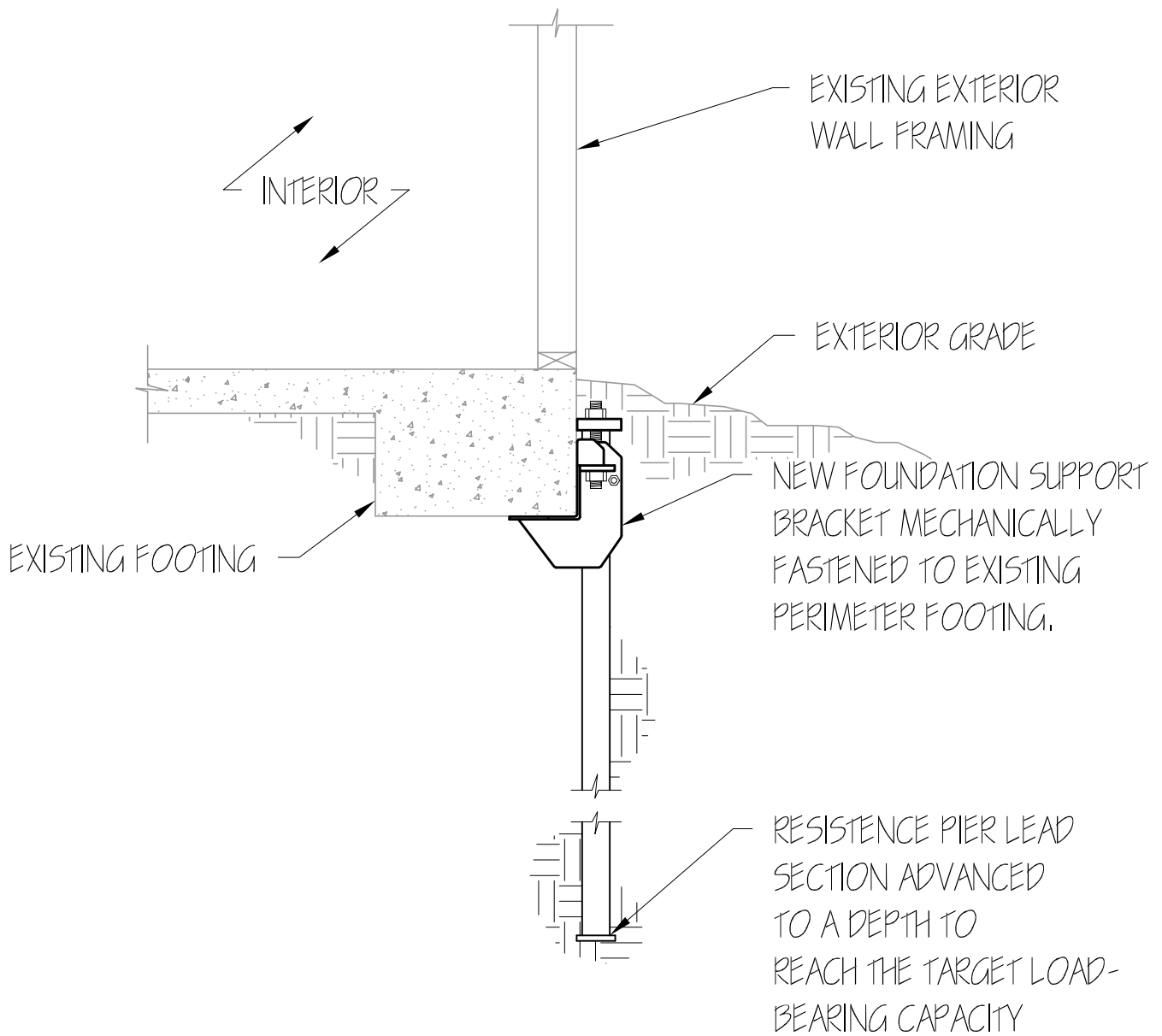
DRAWING NUMBER
SK-1



ENGINEERED SOLUTIONS
of Georgia

Foundation Repair & Waterproofing

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RESISTENCE PIER DETAIL

DRAWN BY

O.C.

SCALE

N.T.S.

DATE

2/12/13

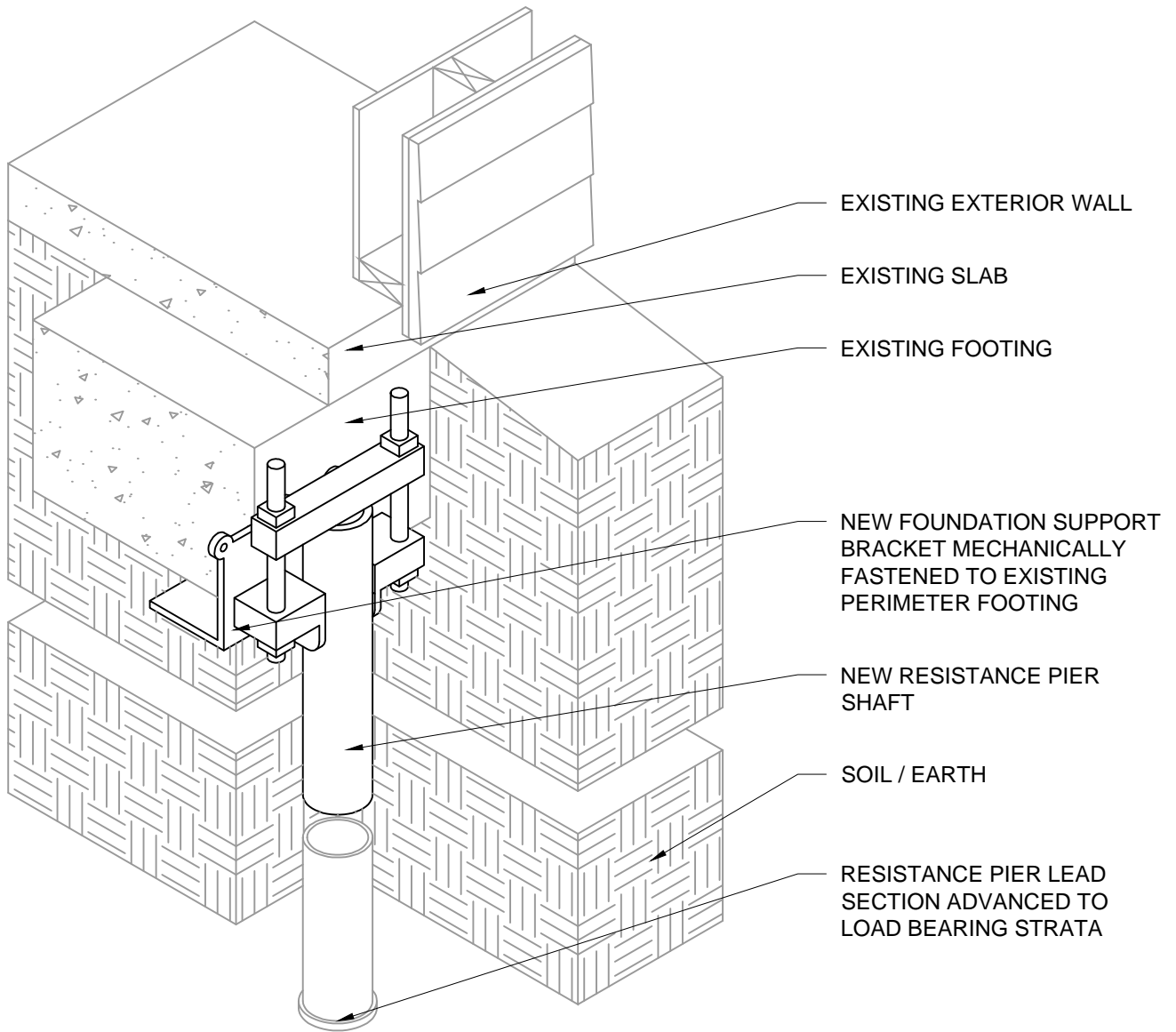
DRAWING NUMBER

RP-1

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SOLUTIONS**
of Georgia

Foundation Repair & Waterproofing





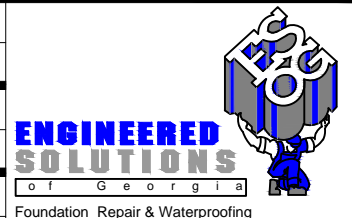
RESISTANCE PIER

DRAWN BY
OC

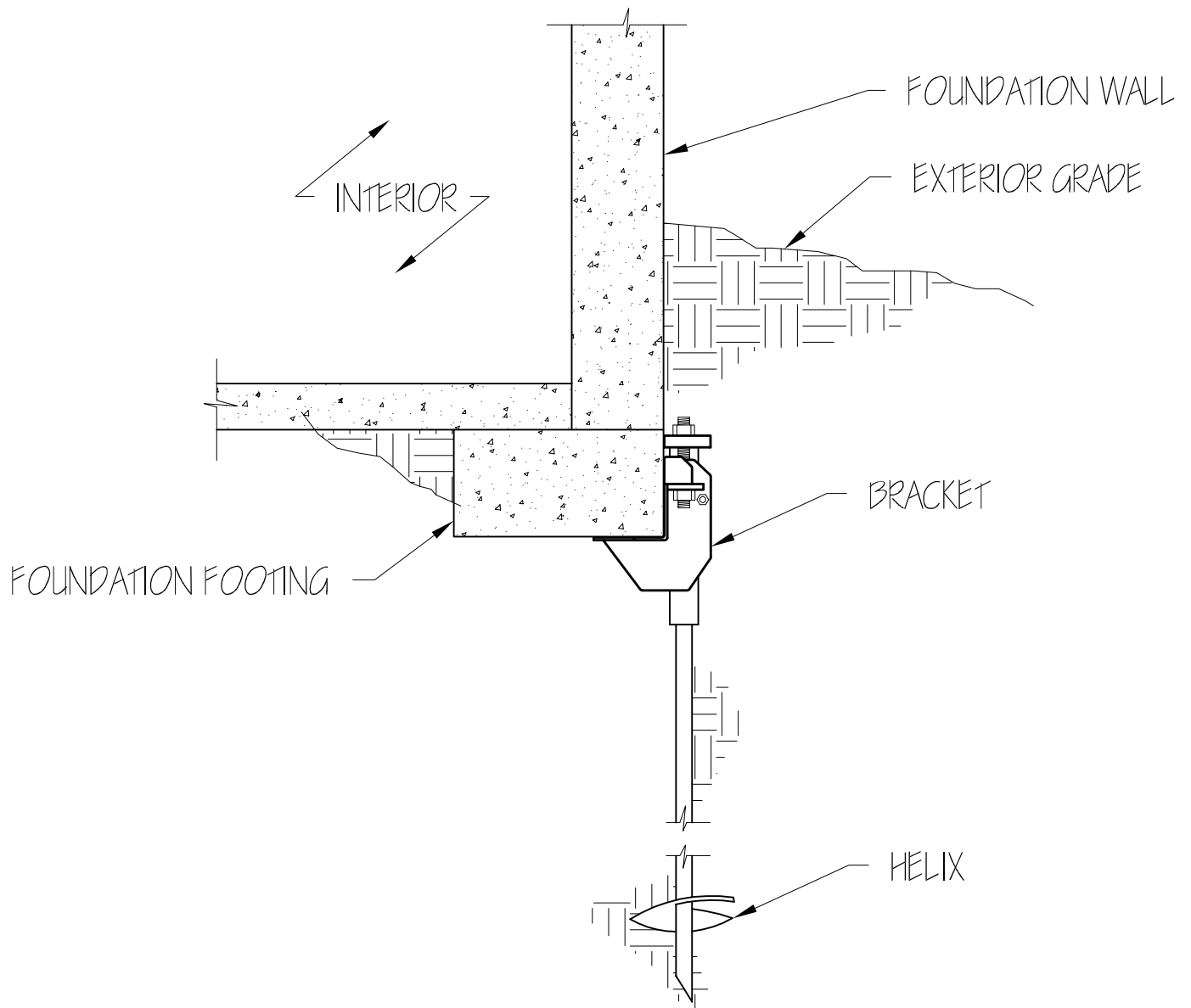
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N.T.S.

DATE
3/27/15

DRAWING NUMBER
ST-4



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FOUNDATION FOOTING

INTERIOR

FOUNDATION WALL

EXTERIOR GRADE

BRACKET

HELIX

PIER

DRAWN BY

KS

SCALE

N/A

DATE

4/9/07

DRAWING #

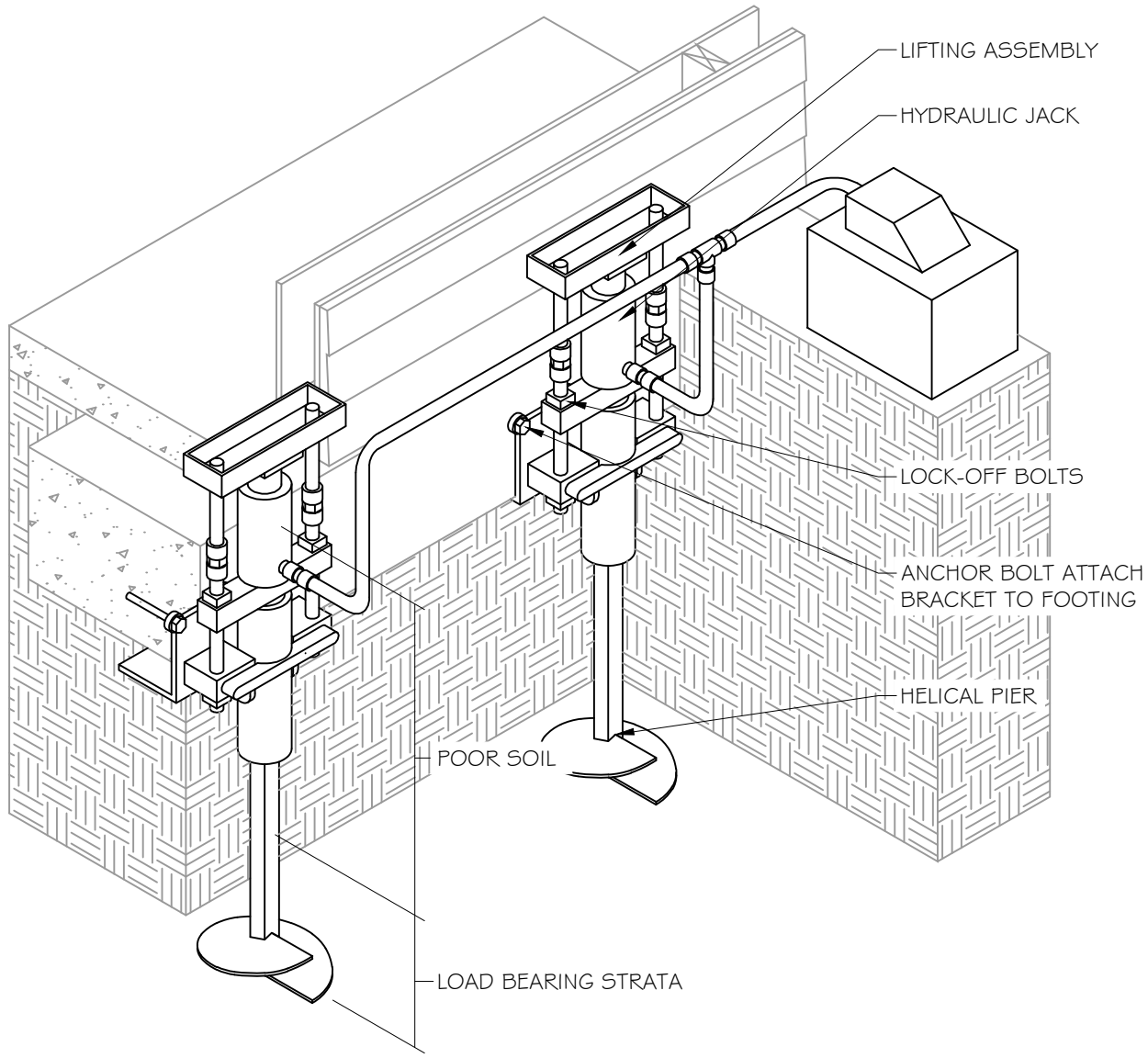
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**ENGINEERED
SOLUTIONS**

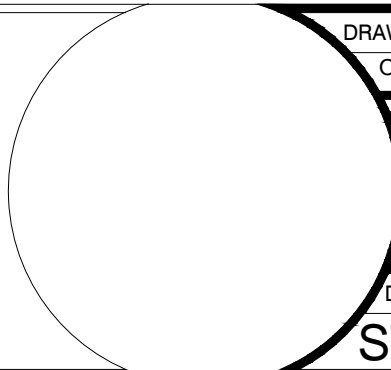
of Georgia

Foundation Repair & Waterproofing





RETROFIT PIER

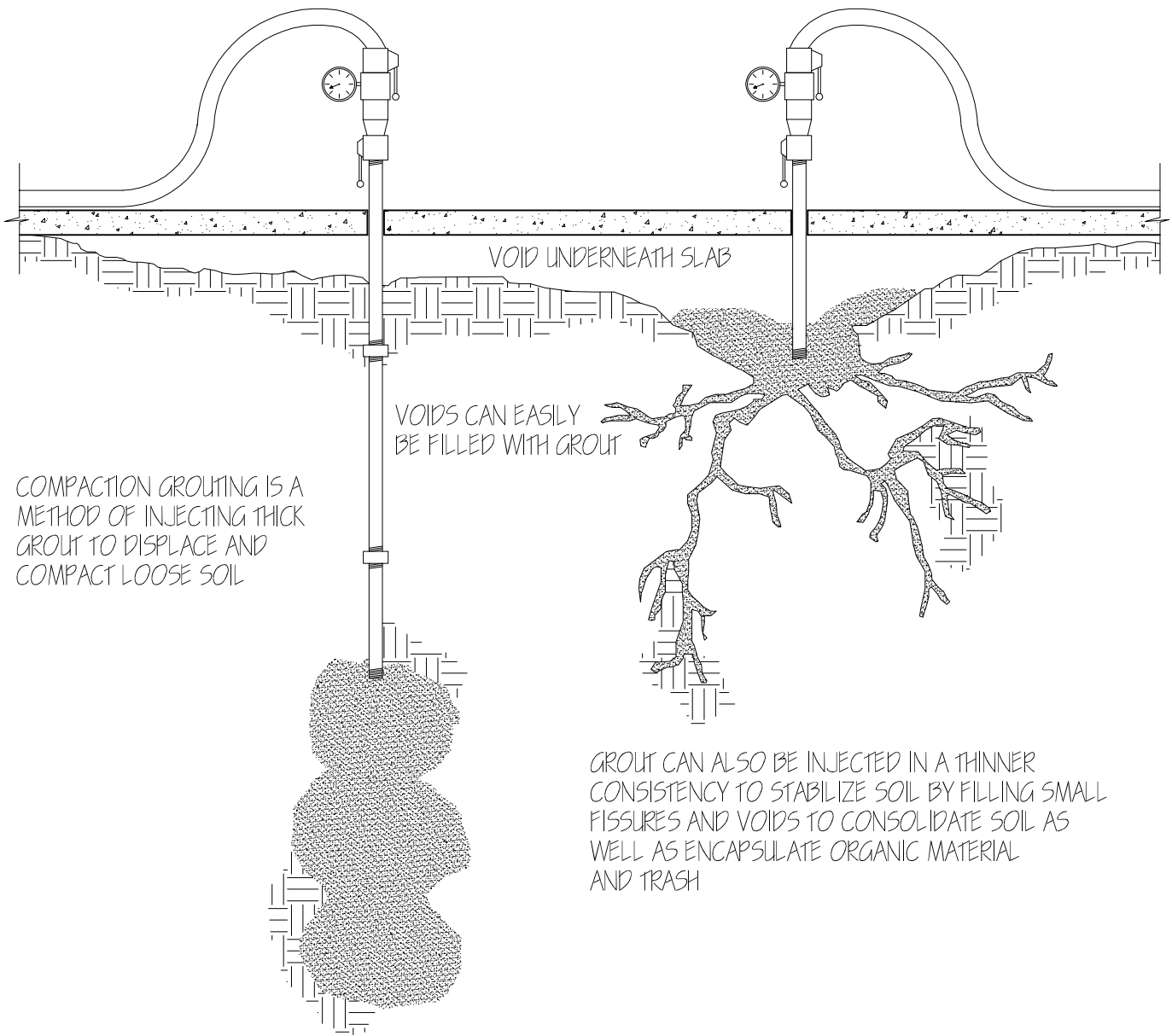


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SCALE	N.T.S.
DATE	3/27/15
DRAWING NUMBER	ST-1

ENGINEERED SOLUTIONS
of Georgia
Foundation Repair & Waterproofing

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PRESSURE IS MONITORED THROUGH GAUGES



COMPACTION GROUTING IS A METHOD OF INJECTING THICK GROUT TO DISPLACE AND COMPACT LOOSE SOIL

VOIDS CAN EASILY BE FILLED WITH GROUT

GROUT CAN ALSO BE INJECTED IN A THINNER CONSISTENCY TO STABILIZE SOIL BY FILLING SMALL FISSURES AND VOIDS TO CONSOLIDATE SOIL AS WELL AS ENCAPSULATE ORGANIC MATERIAL AND TRASH

COMPACTION GROUTING
SOIL STABILIZATION
VOID FILL

DRAWN BY

KS

SCALE

N/A

DATE

10/23/06

DRAWING #

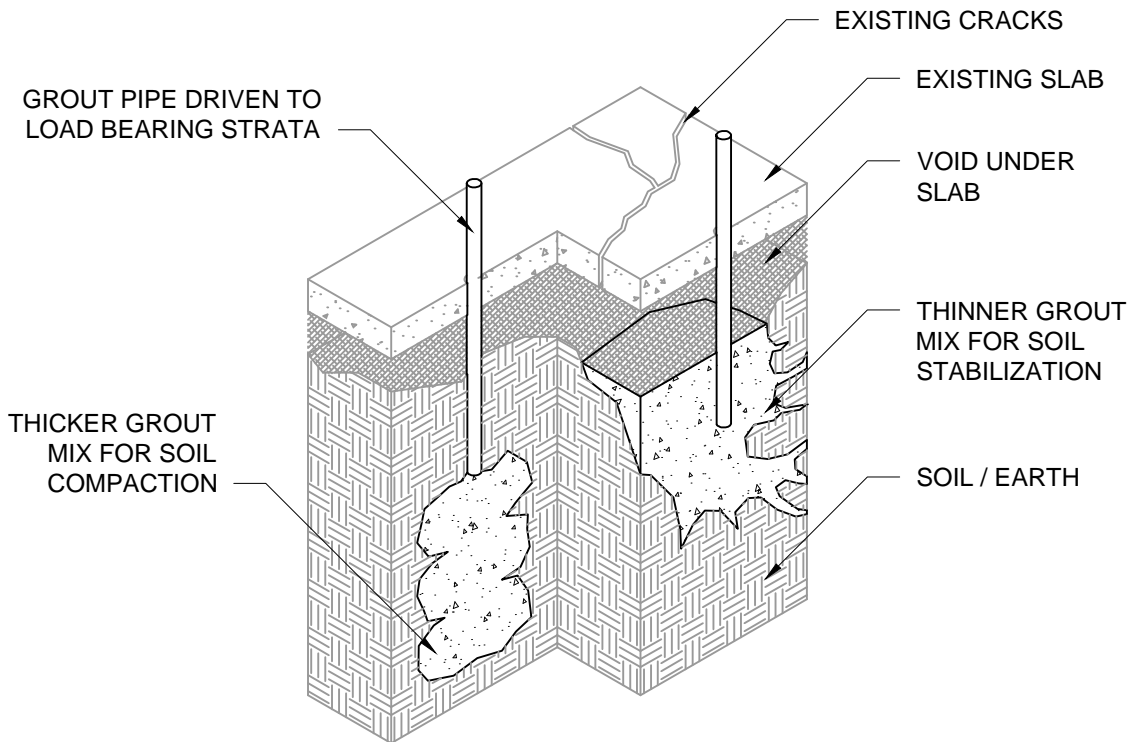
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ENGINEERED
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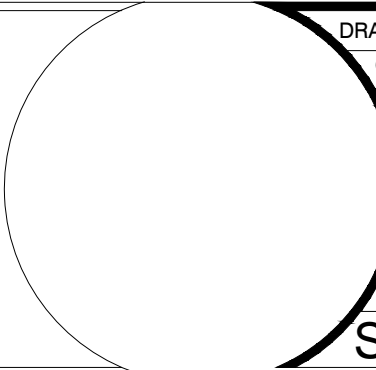
of Georgia

Foundation Repair & Waterproofing





**PRESSURE
GROUTING**



DRAWN BY

OC

SCALE

N.T.S.

DATE

3/27/15

DRAWING NUMBER

ST-13



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Foundation Repair & Waterproofing

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INSITUFORM® CIPP

Affordable, reliable and non-disruptive solutions for sewer pipe reconstruction



Our Trenchless Solution

The Insituform® cured-in-place pipe (CIPP) is a jointless, seamless, pipe-within-a-pipe used to rehabilitate sanitary sewers, storm sewers and force mains.

Insituform® CIPP addresses your top concerns:

Infiltration reduction. Water entering your sewer system through cracks, holes and joint failures can overload your treatment facilities, especially during wet weather. Insituform® CIPP significantly reduces this infiltration. In dry climates, roots find the sewer system an attractive source of water and nutrients and create blockages and overflows. Insituform® CIPP contains your flow within the pipe while keeping external water and roots out.

Structural integrity. Insituform® CIPP restores structural integrity to your damaged sewer pipes. The design models used, independent test results and over 40 years of service all confirm that Insituform® CIPP is a structural product with a 100-year design life.

Increased flow capacity. Insituform® CIPP provides the least cross-sectional reduction of all methods used to rehabilitate pipes. There are no joints or seams that can separate over time and the smooth, jointless interior provides excellent abrasion resistance and typically improves flow capacity.

Affordability. The Insituform® CIPP process is usually less expensive than conventional dig and replace methods of sewer repair. When the lost business revenues, traffic congestion and social costs associated with other methods are considered, your savings are immeasurable.

Installation flexibility. Insituform® CIPP can be installed using either air or water inversion, or by pulling into place. The cure can be done with steam or hot water. All processes are consistent with nationally recognized standards and Insituform's own ISO-certified quality control program. Since each job is unique, we apply the most cost-effective, technically optimal solution to meet your pipeline rehabilitation needs.



Insituform®
an AEGION company

Insituform® CIPP is the best choice for trenchless rehabilitation.

Insituform superior processes

Since inventing CIPP over 40 years ago, Insituform has developed the highest quality manufacturing and installation systems in the trenchless industry.

As a vertically integrated company, we take responsibility for research and development, manufacturing, installation and service. Our systems are designed to produce consistency and high performance in our products and services.

Manufacturing

Insituform's patented manufacturing capabilities are certified to the ISO 9001:2008 standard, ensuring that our tubes are constructed for optimal long-term performance. During the manufacturing process, each tube goes through 25 separate quality checks.

Wet out

Insituform's resin impregnation process ensures that Insituform® CIPP achieves the required strength and enables wet out of many lengths, diameters and thicknesses.

Insituform's wet out facilities utilize environmentally friendly methods and equipment. In fact, Insituform has been recognized by the United States' Environmental Protection Agency for efforts to protect the environment at its various wet out facilities.

Installation

Every Insituform installation is completed using our own safety-certified crews who follow strict safety procedures and documented work practices. Each crew is equipped with highly specialized equipment, backup resources and engineering support.

Insituform's advanced installation methods include air invert steam cure, which reduces water usage on a job site by approximately 95% and energy usage by 75%.

Transportation Solutions

Insituform offers affordable, trenchless solutions to renew and extend the life of underground stormwater control and drainage structures. A large number of culverts running under the nation's roadways are approaching or have exceeded their expected design life. A culvert or storm sewer pipe collapse can have catastrophic effects on the traveling public, your budget and your credibility. Insituform can help you avoid the direct costs and the social costs of a failure by proactively renewing your underground assets.

For transportation projects, particularly culverts, Insituform uses installation methods that minimize the use of water and maximize resin containment, thus protecting downstream waters from contamination.

The Insituform® CIPP Installation Process



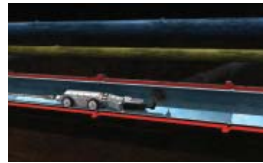
Step 1:

A resin-saturated, coated felt tube is inverted (shown) or pulled into a damaged pipe.



Step 2:

Hot water or steam is used to cure the resin and form a tight-fitting, jointless and corrosion-resistant replacement pipe.



Step 3:

Service laterals are restored internally with robotically controlled cutting devices and the rehabilitated pipe is inspected by closed-circuit TV.

The Insituform® CIPP Technical Envelope

The Insituform® CIPP Technical Envelope	
Diameter range	4 in. – 124 in.*
pH range	0.5 – 10.5
Effluent temperature	up to 140° F
Pipe condition — fully deteriorated	Yes
Pipe condition — partially deteriorated	Yes
Bends	Yes
Offset joints	Yes
Diameter changes	Yes, without manhole access
Thickness changes	Yes, without manhole access
Typical shot length	200 ft.– 1000 ft.
Host pipe shape	All shapes
Host pipe material	All materials

* Thickness and length limitations in larger diameters

This table refers to general purpose municipal sewer CIPP projects. Insituform can provide products that extend beyond these parameters through our engineering group. Please contact your local representative at 800.234.2992 for assistance with applications extending beyond this technical envelope.



Insituform®

an AEGION® company

Insituform Technologies, LLC
17988 Edison Avenue
St. Louis, MO 63005
800.234.2992
www.insituform.com





Engineered Solutions of Georgia
★★★★★ 159 Reviews
(678) 905-1499
www.esogrepair.com »

CONTACT THIS BUSINESS

What your neighbors are saying

★★★★★

Very Helpful, 8/11/2015

I was having difficulty trying to find out where my basement was leaking. I contacted Engineered Solutions based on the reviews I read on line. Allan came to my house and not only gave me a detailed...

★★★★★

Very honest company, 3/25/2015

Allan Waite came and consulted on a sidewalk which was pulling away from our house. He presented the options, and told me about how much each option would cost. The lesser cost was one that I could...

Larry F.
Posted on 2016-03-21

Todd was very knowledge and

Todd was very knowledge and the prices were cheaper. They did a really good and they absolutely fixed everything. They made us happy and I have recommended them and I will again.

OVERALL ★★★★★
QUALITY ★★★★★
SERVICE ★★★★★
VALUE ★★★★★

Joe S.
Posted on 2016-03-10

the experience was extraordinary... starting

the experience was extraordinary... starting with the follow-up from Samantha to the delightful initial call from Luis to the highly-professional skills and professional decorum and sterling work ethics of Shane, Alex, Jonathan, and Cruz. This is not an empty gesture of just wanting to be "nice." As a business man and one conversant with construction, this outfit and team are absolutely first-rate. FIVE STARS for sure!

OVERALL ★★★★★
QUALITY ★★★★★
SERVICE ★★★★★
VALUE ★★★★★

Nick W.
Posted on 2015-10-17

ESoG provided a solid engineered

ESoG provided a solid engineered solution to my structural problems around my home. This consisted of a combination of screw anchors and driven piles. Reaching a good load bearing soil required depths over 20 feet. Their solution was well thought out and all alternatives discussed. The work was carried out on time by professionals who were no strangers to what they were doing. And they were neat! Tarps were used to store the dirt that they had to move, and everything thoroughly cleaned up when they left. They took pride in their work and seemed to delight in showing off what they had accomplished. Well pleased!

OVERALL ★★★★★
QUALITY ★★★★★
SERVICE ★★★★★
VALUE ★★★★★

John M.
Posted on 2015-10-14

ESOG arrived when they said

ESOG arrived when they said they would and set up and started work efficiently. My job was a sinkhole under my driveway that was pulling the surrounding soils into it. Allan surveyed the site and presented a proposal based on his best estimate of the job, while emphasizing that a job like mine had many unknowns that could make it a larger job than expected. He was correct, our sinkhole was much bigger than expected, so the crew came back over four days to finish up the job. They cleaned up every day, and at the end, they pressure washed the street to remove all residues. I watched the job over most of the time they were here and was quite satisfied that they were able to fill the sinkhole and solve my problem. I would definitely use them again.

OVERALL ★★★★★
QUALITY ★★★★★
SERVICE ★★★★★
VALUE ★★★★★

Pat S.
Posted on 2015-10-08

This was the best contractor

This was the best contractor I have dealt with in a long time. They did exactly what they contracted to do, worked in the hot crawl space by going thru a basement window, and the cellar looked better after they left than before. And I feel it is structurally ready for 50 more years. It was a relief to find them for cellar/pier work. There are some fast operators out there! Chris's report went a bit overboard, included speculation, and included the attic—which has stood up there for 100 years with one small plaster incident. My entire objective was improving the main floor and the cellar. That attic photo/commentary caused a lot of anxiety when I gave his report to the prospective buyers, as I was required to do legally. When asked he did remove the speculative comments. The rest of his report was specific and told just what to do. I would use him again, but give directions! Overall the company was terrific. I wish they would advertise under "crawl space". I did not know the magic word 'pier' and it took me months to find them after trying out some other, jackleg operations.

OVERALL ★★★★★
QUALITY ★★★★★
SERVICE ★★★★★
VALUE ★★★★★

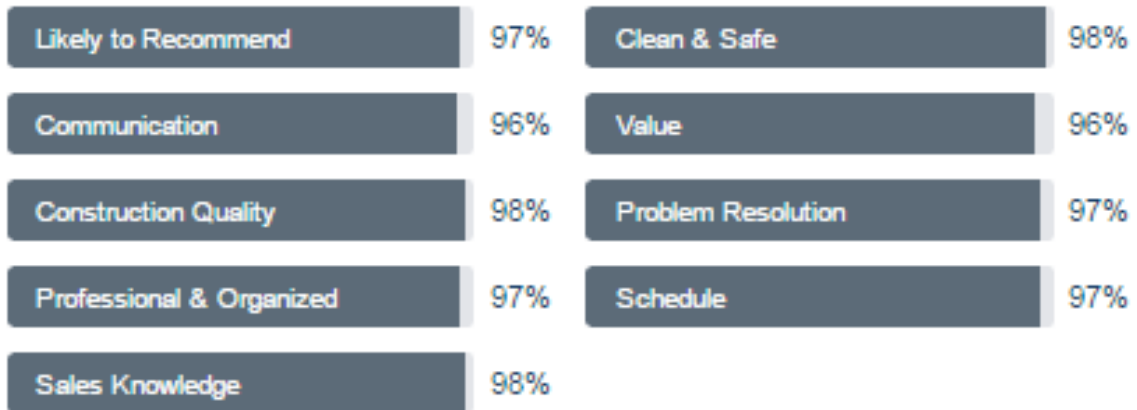




Engineered Solutions of Georgia

2260 Northwest Parkway Suite H · Marietta, GA 30062 · (678) 290-1325
www.esogrepair.com

★★★★★ 178 ratings



Review by Paul A. of Atlanta, GA

Mar 24, 2016



The company exceeded my expectations.

Did you find this helpful? [Yes](#)

Review by Anthony A. of Atlanta, GA

Mar 21, 2016



These guys are honest, knowledgeable, professional, and solve problems.

Did you find this helpful? [Yes](#)

Review by Joe S. of Duluth, GA

Mar 10, 2016



the experience was extraordinary... starting with the follow-up from Samantha to the delightful initial call from Luis to the highly-professional skills and professional decorum and sterling work ethics of Shane, Alex, Jonathan, and Cruz. This is not an empty gesture of just wanting to be "nice." As a business man and one conversant with construction, this outfit and team are absolutely first-rate. FIVE STARS for sure!

Did you find this helpful? [Yes](#)

Review by Dave R. of Fayetteville, GA

Mar 09, 2016



Extremely knowledgable and great company!

Did you find this helpful? [Yes](#)

Review by Charles M. of Lilburn, GA

Feb 22, 2016



I am impressed by the work done by Engineered Solutions of Georgia.

Did you find this helpful? [Yes](#)

Review by Matt B. of Smyrna, GA

Feb 20, 2016



Excellent service from beginning to end. Hands down the best experience I've ever had with a contractor.

Did you find this helpful? [Yes](#)

Review by Richard P. of Douglasville, GA

Feb 20, 2016



Did what they promised on time and on budget

Did you find this helpful? [Yes](#)





Consumer Investigator
Dale Cardwell



Dale Trusts...

ENGINEERED SOLUTIONS

678-ESOG-NOW



FOUNDATION REPAIR • WATERPROOFING



A Message from Dale

My wife Angie and I live in a brick home that was built in 1989. I've learned through secret shopping there are only a handful of companies that understand foundation and waterproofing – and even less that provide a permanent solution at a reasonable price. Engineered Solutions of Georgia is an exceptional company that provides excellence at a fair price.

About Engineered Solutions of Georgia:

Engineered Solutions of Georgia has been solving home and residential foundation problems since 2008. They are locally owned and operated with a team of experts in foundation repair and basement waterproofing. And, when it comes to these types of issues, you definitely want professionals with years of experience. If you've recently found damage to your foundation or think you may need repairs, make the call to Engineered Solutions of Georgia today.

Price

First, relax and know that Consumer Investigator Dale Cardwell has investigated and determined that Engineered Solutions of Georgia delivers excellence. Second, know that Engineered Solutions wants you to fully understand your issues and why your home's problems occurred. Engineered Solutions will customize a plan you will understand completely, and agree to the solution – before the job begins.

Quality

Engineered Solutions of Georgia is just that...your guarantee that a real engineer has weighed in on your home's challenges, has created a solution, and guarantees a satisfactory result. You can have no greater peace of mind. Plus, they work with cutting-edge, market-leading products. My investigation finds that few companies resolve your home's challenges as thoroughly and economically as Engineered Solutions of Georgia.

Customer Service

One call to Engineered Solutions and your concerns literally melt away. ESOG considers their customers as friends and family – and they treat you that way. TrustDale's review finds they respect your time by confirming all appointments and they arrive on time. Engineered Solutions – truly - treats your home like their own, and TrustDale guarantees they will dress and speak professionally at all times. Plus, they clean up after they leave! Combine this with the TrustDale *Make It Right* Guarantee, and you have an exceptional customer service experience!

What is the TRUSTDale Investigative Process & the *Make it Right* Guarantee?

7-Point Investigative Review

The TrustDale Investigative Process is completed through a personal interview with the business owner or representative, a completed application, public records search, and secret shopping. TrustDale disclaims any liability for any and all inadvertent inaccuracies.

1. **Price:** The Company must price its main product or products competitively (unless there is a significant difference in the quality of the product). The Company must honor the price it advertises, and not use unavailable products to lure and trap customers into more expensive products.
2. **Verified Reputation & Customer Service:** The performance of each company is continually and systematically reviewed for delivery of excellent customer service. This is achieved by conducting follow up surveys of customers who have contacted recommended service providers.
3. **What Would Cardwell Do:** Dale Cardwell developed a proven standard of consumer fairness through thousands of real-world problem-solving experiences. This created the basis for "What Would Cardwell Do?" in regard to whether Dale would choose to personally do business with this Company.
4. **Governor's Office of Consumer Affairs, Consumer Publications, FTC:** Each Company is reviewed through the pertinent agencies and publications.
5. **Licensing, Professional Certification, Insurance and Bonding:** Each Company is reviewed for proper professional credentialing.
6. **Lawsuit Search and Review:** A review of the Company's litigation history is completed to assure no history of unprofessional or illegal business practices.
7. **"Make it Right Guarantee":** The Company agrees to accept and abide by TrustDale's Make it Right Guarantee.

Make it Right Guarantee

Certified businesses must agree in writing to accept and abide by the following:

1. Customers have a right to extraordinary customer service.
2. My current warranty and customer service are among the best available in the field.
3. I ensure complete customer satisfaction, by offering the TrustDale *Make It Right* guarantee.
4. The TrustDale Guarantee becomes valid when a customer contacts the vendor through TrustDale, or confirms his purchase on TrustDale.com within 24 hours of the transaction.
5. The TrustDale Guarantee states that if the customer is dissatisfied with a product, repair or customer service, the customer will first employ the avenues of redress made available by the business' customer service agreement. In the event that at the conclusion of the process the customer remains dissatisfied, he/she will have the right to take the grievance to TrustDale.
6. I will allow TrustDale and an independent expert in the field to review the customer's complaint. If upon conclusion of review, the independent expert and Dale agree that the customer's position is justified, I agree to abide by the recommendation of TrustDale to *Make It Right*.
7. *Make It Right* means the vendor will repair/replace the product as recommended by TrustDale, or will pay for the product to be repaired or replaced, or will reimburse the customer for the cost of the repair/product at a price up to, but not to exceed, the original price paid by the customer.





CERTIFICATE OF LIABILITY INSURANCE

ENGISOL-01 FRIERSONT

DATE (MM/DD/YYYY)

11/6/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Insurance Office of America, Inc. 2839 Paces Ferry Road Suite 1200 Atlanta, GA 30339	CONTACT NAME: Ashley Strickland PHONE (A/C, No. Ext): (678) 919-1150 E-MAIL ADDRESS: Ashley.Strickland@ioausa.com	FAX (A/C, No.): (678) 919-1151
	INSURER(S) AFFORDING COVERAGE	
INSURED Engineered Solutions of Georgia, Inc. 2260 Northwest Pkwy Suite H Marietta, GA 30067	INSURER A: Admiral Insurance Company	NAIC # 24856
	INSURER B: Nationwide Mutual Insurance Company	23787
	INSURER C: RSUI Indemnity Company	22314
	INSURER D: Kinsale Insurance Company	38920
	INSURER E:	
	INSURER F:	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDITIONAL SUBROGATION	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:		CA00001977602	07/27/2015	07/27/2016	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMPROP AGG \$ 2,000,000
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS		BA -00000055557U	07/27/2015	07/27/2016	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$		NHA069574	07/27/2015	07/27/2016	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> N/A				PER STATUTE <input type="checkbox"/> OTHER <input type="checkbox"/> E L EACH ACCIDENT \$ E L DISEASE - EA EMPLOYEE \$ E L DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

EXCESS IS OVER GENERAL LIABILITY AND EMPLOYERS LIABILITY ONLY

CERTIFICATE HOLDER

Engineered Solutions of Georgia, Inc.
 2260 Northwest Pkwy
 Suite H
 Marietta, GA 30067

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Ashley Strickland



Thank you

**ENGINEERED
SOLUTIONS**
o f G e o r g i a



Foundation Repair & Waterproofing

**Corporate office
2260 Northwest Parkway
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Marietta, GA 30067
678-290-1325 - office
770-956-7403 – Fax
www.esogrepair.com**