



DESIGN AND CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242

ADDENDUM NO. 1 TO PROJECT NO. Q1665

**CONSTRUCTION WORK
REHABILITATE ROADWAYS AND WALKWAYS
BROOKWOOD SECURE CENTER
PO BOX 419 COUNTY ROAD 29
CLAVERACK, NY**

October 16, 2017

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

BIDDING REQUIREMENTS

1. DOCUMENT 001114 ADVERTISEMENT FOR BIDS: The last date for receipt of bids is changed from Wednesday, October 18, 2017 to Wednesday October 25, 2017.

SPECIFICATIONS

2. GEOTECHNICAL LETTER REPORT: Add the accompanying Report (23 pages) to the end of Document 003132.

DRAWINGS

3. Drawing No. G-002, GENERAL SECURITY NOTES, Note 6: Delete this Note in its entirety.
4. Drawing No. G-002, GENERAL CONSTRUCTION NOTES: Add the following Note:
"18. Contractor to assume that electrical conduits associated with parking lot site lighting will be in conflict with the proposed work. The Contractor shall verify the locations and protect existing lighting conduit and appurtenances."
5. Revised Drawings:
 - a. Drawing Nos. C-202, C-302, and C-303 noted "REVISED DRAWING 10/13/2017" accompany this Addendum and supersede the same numbered originally issued drawings.

END OF ADDENDUM

Margaret F. Larkin
Executive Director
Design and Construction

JRC/JP:jrc



Proud to be Employee Owned

Engineers
Land Surveyors
Planners
Environmental & Safety Professionals
Landscape Architects

Capital District Office

547 River Street, Troy, NY 12180
P: (518) 273-0055 F: (518) 273-8391
www.chazencompanies.com

Hudson Valley Office (845) 454-3980
North Country Office (518) 812-0513

September 11, 2015

Mr. John Pokines
NYS Office of General Services
Design and Construction
34th Floor Corning Tower
Empire State Plaza
Albany, NY 12242

Re: *Brookwood Secure Center – Evaluate and Correct Roadways and Walkways
Geotechnical Assessment and Recommendations
Town of Claverack, Columbia County, New York*
Chazen OGS Contract S6871
Chazen Project No. 31232.05
OGS Project No. Q1665

Dear Mr. Pokines:

The New York State Office of General Services (NYSOGS) retained The Chazen Companies (Chazen) to advance a limited subsurface exploration program at the Brookwood Secure Center located at 419 County Road 29, Town of Claverack, Columbia County, New York herein referred to as the project site. The objective of the exploration program was to define subsurface conditions in support of new asphalt pavement areas and existing asphalt pavement improvements.

Subsurface Exploration

Chazen conducted subsurface explorations to characterize the in situ conditions and to collect representative soil samples. Samples were used for visual classification and as a basis for determining design criteria cited in this letter report. Seven (7) test borings designated B-1 through B-7 were advanced on August 13, 2015 by Atlantic Testing Laboratories (ATL) of Canton, NY utilizing a truck-mounted CME-45 drill rig. Borings B-1 and B-4 were performed within two (2) gravel parking areas. Borings B-2 and B-3 were performed in the northeastern area of the Brookwood patrol road. Borings B-5, B-6, and B-7 were performed within the southwestern parking area. The locations of these test borings are depicted on the attached Exploration Location Plan in **Attachment A**.

Explorations were monitored by a Chazen representative to advise the drillers regarding location and depth of the test boring explorations, to record activities, and to modify the subsurface exploration program as necessary. Subsurface soils were visually classified in the field in accordance with the Unified Soil Classification System (USCS) and ASTM D 2488. Logs detailing the explorations were prepared by Chazen to document subsurface conditions at the project site and are included as **Attachment B**.

Subsurface Stratigraphy

Explorations indicate that at least two distinct strata are present within the depth of explorations at the project site. The sequence of strata, starting from existing site grades and working downward, is: Asphalt/Subbase/Fill, and Glaciolacustrine Deposits. Each stratum is described in greater detail below using the soil percentage descriptions per ASTM D2488.

Asphalt/Subbase/Fill: Borings B-1 and B-4 were performed in existing gravel parking areas and encountered 3 inches and 5 inches of gravel subbase, respectively, overlying Glaciolacustrine Deposits. Borings B-2 and B-3 respectively encountered an approximate 2.5-inch thick and a 1-inch thick layer of asphalt overlying 4 inches of subbase, overlying Glaciolacustrine Deposits. Borings B-5 through B-7 encountered a 5- to 6-inch thick layer of asphalt overlying a 4-inch to 6-inch thick subbase layer overlying Fill material. The observed Fill layer was approximately 0.5- to 1-foot thick and classified as Silty Gravel with Sand. Typically, the subbase encountered within borings B-1 through B-7 was classified as Poorly-Graded Gravel with Sand (GP) and observed to consist of gray, mostly gravel, a little percentage of sand, and a trace percentage of silt. No filter fabric was observed underlying the subbase.

Glaciolacustrine Deposits: A stratum of Glaciolacustrine Deposits was observed underlying the Subbase or Fill material within all borings. All borings were terminated within this stratum at a depth of 8 feet below ground surface. The Glaciolacustrine Deposits stratum was typically classified as a Silt (ML) to Sandy Silt (ML) and varied to Silty Sand (SM) or Lean Clay (CL). The stratum was observed to generally consist of moist to saturated, brown to gray, mostly to a little percentage of silt, mostly to no percentage of sand, and some to no percentage of clay.

No cobbles and/or boulders were observed within the test boring explorations. However, cobbles and/or boulders may be encountered during earthwork activities and can vary across the project site and with depth.

Groundwater: Groundwater was observed to be at a depth of approximately 2 feet below ground surface within borings B-3, B-5, B-6, and B-7. Groundwater levels recorded on the exploration logs are based on field observations and visual classification of the soil samples. Groundwater will fluctuate with season, precipitation, nearby construction activity, and other factors.

Pavement Evaluation

In concert with the site exploration program, Chazen visually assessed and photographed the asphaltic surface at the project site. Specifically, the northeastern portion of the patrol road and southwestern parking area were observed to consist of multiple areas of “alligator” cracking, and “block” cracking. Additionally, it is understood that the Client has observed pumping and weaving of the asphalt surface at these locations. A photograph showing an example of each type of distress at the project site is provided in **Attachment C**.

It is Chazen’s opinion that the main causes for the types of distresses observed at the project site are due to the following:

- The lack of an adequate thickness of subbase;
- A lack of filter fabric underlying the subbase, and;
- High groundwater conditions within predominately fine-grained subgrade soils.

Pavement Recommendations

We recommend use of a flexible pavement system incorporating an asphalt surface, binder and subbase course for paved areas founded on in-situ soils after removal of all loose, disturbed or unsuitable soils. In order to develop the pavement section recommendation, we made the following preliminary design/loading assumptions pertaining to the anticipated traffic at the project site:

1. Vehicular traffic equal to the following:
 - a. 2 trips/year with a 100,000 lb fire truck,
 - b. 20 trips/year with a 50,000 lb fully loaded snow plow truck,
 - c. 1000 trips/year with a 35,000 lb 3-axle service vehicle, and
 - d. 6000 trips/year with a 7,500 lb 2-axle large truck.
 - e. Minor loading from light-weight passenger vehicles (e.g. cars, trucks, SUV's) were ignored.
2. A design life of 15-years.
3. A subgrade California Bearing Ratio (CBR) value of 10 (ML).
4. A frost susceptibility class of F3/F4 for subgrade with greater than 15% fines.

Based on these traffic trip assumptions and using reduced subgrade strength due to frost conditions, we recommend the following pavement section:

Pavement Course	Thickness (inches)	NYSDOT Specification (May 2008)
Top	1.5	Type 6F Top, Section 403.17
Binder	2.5	Type 3 Binder, Section 403.13
Subbase	12	Type 2, Section 304

In addition, we recommend use of a non-woven, separation geotextile fabric such as Amoco Amopave or equivalent, located between prepared subgrade and subbase course. The properly prepared pavement subgrade should be sloped towards the pavement edges to prevent water from ponding below the pavement.

Based on the existing pavement conditions and proposed pavement section, we recommend full-depth reconstruction of the southwestern parking lot and northeastern portion of the patrol road. To support drainage of water and lowering of high groundwater levels, we recommend the following underdrains for each pavement area:

Southwestern Parking Lot

A system of underdrains with pipe laterals should be installed underlying the pavement section described above. The underdrain should consist of 6-inch diameter perforated pipe which spans the length of the parking lot. The underdrain pipe laterals should consist of 4-inch diameter perforated pipe branched perpendicularly from the underdrain and spaced approximately 40-feet on center. The perforated underdrain pipes should be surrounded by a minimum 6-inch thickness of ¾-inch washed stone in each direction, which is wrapped in Mirafi 140N filter fabric or approved equal. The perforated underdrains should connect to solid pipes which daylight to an approved stormwater management areas.

Patrol Road

A 6-inch diameter perforated underdrain should be installed below the pavement section along the length of the reconstructed patrol road. The underdrain pipe should be surrounded by a minimum 6-inch thickness of ¾-inch washed stone in each direction, which is wrapped in Mirafi 140N filter fabric or approved equal. The

perforated underdrain should connect to a solid pipe that daylight to an acceptable stormwater management area.

Existing Gravel Parking Areas

For the two (2) existing gravel parking areas proposed to be reconstructed into paved parking areas, the pavement section outlined above is adequate without an underdrain. The subbase course should be sloped toward the pavement edges to an area allowing water to freely discharge to an approved stormwater management area and/or infiltrate into free-draining soils (i.e. less than 15 percent fines and a minimum of 2 feet above groundwater table) without ponding beneath paved areas.

Control of Water

Based on observed groundwater levels, groundwater seepage into open excavations may occur. Temporary dewatering measures (e.g., sumps, barriers) should be readily available during construction to maintain water levels at a minimum of 12-inches below soil subgrade elevations.

Fill Materials

Fill materials shall be free of unsuitable material such as organics, construction debris, cobbles/boulders, frozen material, etc. Stockpiles of fill materials should be maintained to prevent material from fluctuating from the optimum moisture content, freezing, separating due to migration of fine grained soils, and collection of snow or ice within the stockpiles. Fill areas shall be cleared of all vegetation, roots, and other organic materials prior to placement of fill. Stockpiled soils may require installation of run-off protection between drainage channels and the stockpile.

Compaction should consist of at least four (4) systematic passes using a vibratory roller. In confined areas, hand guided vibratory equipment shall be utilized to compact the soil to the specified criteria. If soil weaving or other disturbance is noticed during compaction, vibratory compaction should be discontinued. Compaction shall meet the requirements stated below or as approved by the Director's Representative.

NYSDOT Selected Fill: Selected Fill is recommended to be used in landscaped areas (i.e. areas not below pavement or structures). Selected Fill should consist of inorganic, sand based, granular soils, free of debris and other deleterious material. This material should be placed in lifts not exceeding 9 inches loose measure and compacted to 90% of the maximum dry density as determined by ASTM D 1557.

We anticipate that the subbase below existing paved areas and within the existing gravel parking areas may be re-used as subbase in paved areas provided it meets the gradation and compaction requirements for Type 2 subbase outlined in Section 304 of the NYSDOT Standard Specifications (May 2008).

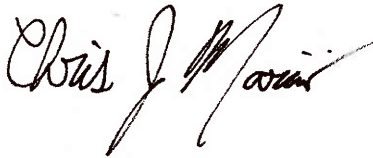
Closure

This letter report and the recommendations contained herein have been prepared for the exclusive use of the NYSOGS and their representatives for specific application to the design and construction of the paving improvements at the Brookwood Secure Center located at 419 County Road 29, Town of Claverack, Columbia County, New York. This letter report was prepared in accordance with generally accepted geotechnical engineering practices. No other warranty, expressed or implied, is made. The analysis and recommendation submitted in this letter report are based in part upon the data obtained from subsurface explorations available at the time of this letter report. The nature and extent of variations between these explorations

may not become evident until construction. If significant variations then appear, then it may be necessary to reevaluate the recommendations cited in this letter report.

Please feel free to contact Chazen at (518) 273-0055 if you have any questions. Chazen looks forward to working with you on this project.

Sincerely,



Christopher J. Marini, P.E.
Project Engineer

Reviewed and approved by:

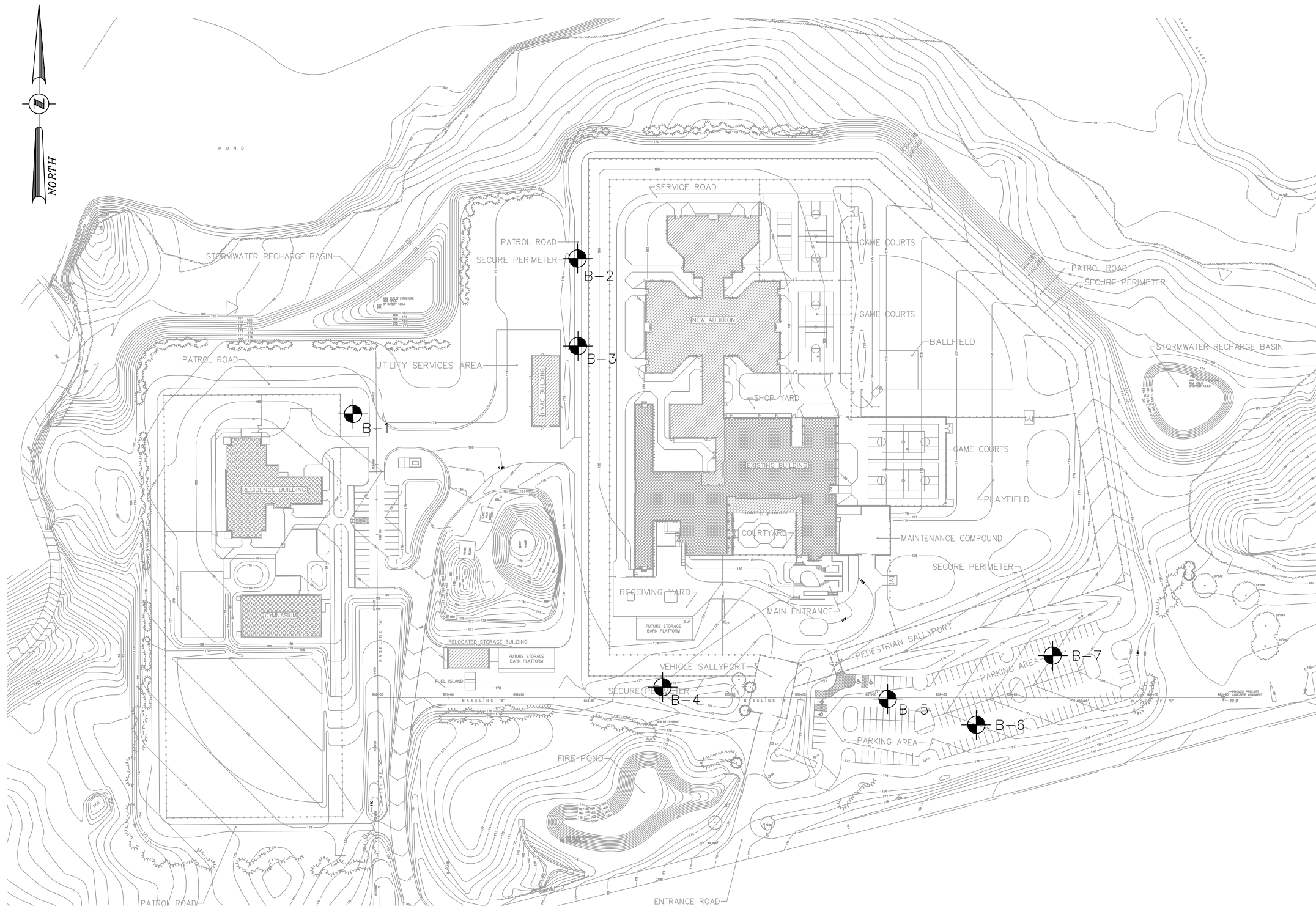


Joseph M. Lanaro, P.E., M.ASCE
Principal
Vice President, Engineering



ATTACHMENT A
Exploration Location Plan

Drawing Name: S:\3\31200-31299\31232-05\DWG\100_FIG1_31232-05_EXPL_LOC_PLAN.dwg Date Printed: Aug 26, 2015, 9:59am



NOTES:

1. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A RECEIVED SITE PLAN ENTITLED "SITE PLAN FOR 90 BED EXPANSION AT BROOKWOOD SECURE CENTER".
2. VERTICAL DATUM IS BASED ON NAVD88.
3. SOIL TEST BORING LOCATIONS SHOWN HEREON WERE PERFORMED BY CHAZEN ON AUGUST 13, 2015.



ORIGINAL SCALE IN INCHES

ALL RIGHTS RESERVED. COPY OR REPRODUCTION OF THIS DRAWING OR DOCUMENT, OR ANY PORTION THEREOF, WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C. IS PROHIBITED. THIS DRAWING OR DOCUMENT IS NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR ANY PURPOSE OTHER THAN THE SPECIFIC PROJECT, APPLICATION AND SITUATION FOR WHICH IT WAS INTENDED. ANY MODIFICATION OF THIS DRAWING OR DOCUMENT, OR ANY USE FOR ANY PROJECT, APPLICATION OR SITUATION OTHER THAN THAT FOR WHICH IT WAS INTENDED, WILL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C.

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER THIS DRAWING OR DOCUMENT IN ANY WAY, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED DESIGN PROFESSIONAL (PROFESSIONAL ENGINEER, LAND SURVEYOR, ARCHITECT OR LANDSCAPE ARCHITECT). IF THIS DRAWING OR DOCUMENT IS ALTERED, THE ALTERING DESIGN PROFESSIONAL SHALL AFFIX TO THE DRAWING OR DOCUMENT HIS OR HER SEAL, THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

CHAZEN ENGINEERING, LAND SURVEYING



Office Locations:

Dutchess County Office:
21 Fox Street
Poughkeepsie, New York 12601
Phone: (845) 454-3980

Capital District Office:
547 River Street
Troy, New York 12180
Phone: (518) 273-0055

North Country Office:
375 Bay Road
Queensbury, New York 12804
Phone: (518) 812-0513

NYS OFFICE OF GENERAL SERVICES

EXPLORATION LOCATION PLAN

419 COUNTY ROAD 29, CLAVERACK, NEW YORK

designed CJM	checked MAK
date 8/25/15	scale 1"=50'
project no. 31232.05	
sheet no.	

FIG 1

ATTACHMENT B
Test Boring Logs

INTERPRETATION OF SUBSURFACE LOGS

The Exploration Logs present observations and the results of tests performed in the field by the Driller, Technician, Geologists, and Geotechnical Engineers as noted. Soil/Rock classifications are made visually and modified accordingly based on laboratory results. The classification of soils or soil like material is subject to limitations imposed by the size of the sampler, the size of the sample and it's degree of disturbance and moisture.

The following defines some of the terms utilized in the preparation of the Subsurface Logs.

SOIL CLASSIFICATIONS

Soil classifications are visual descriptions on the basis of the United Soil Classification ASTM D-2488. The soil density or consistency is based on the penetration resistance determined by ASTM D 1586. Soil Moisture of the recovered materials is described as DRY, MOIST, WET or SATURATED.

SIZE DESCRIPTION		RELATIVE DENSITY/CONSISTENCY (BASIS ASTM D1586)			
Soil Type	Particle Size	Granular Soil		Cohesive Soil	
Boulder	>12"	Density	Blows/FT	Consistency	Blows/FT
Cobble	3" - 12"	Very Loose	< 4	Very Soft	< 2
Gravel-Coarse	3" - ¾"	Loose	5 - 10	Soft	2 - 5
Gravel-Fine	¾" - #4	Medium Dense	11 - 30	Medium Stiff	6 - 10
Sand-Coarse	#4 - #10	Dense	31 - 50	Stiff	10 - 20
Sand-Medium	#10 - #40	Very Dense	50+	Very Stiff	20 - 30
Sand-Fine	#40 - #200			Hard	>30
Silt/NonPlastic	< #200				
Clay/Plastic	< #200				

SOIL STRUCTURE		RELATIVE PROPORTION OF SOIL TYPES	
Structure	Description	Description	% of Sample by Weight
Layer	6" Thick or Greater	Mostly	50 - 100
Seam	6" Thick or Less	Some	30 - 45
Parting	Less than ¼" thick	Little	15 - 25
Varved	Uniform horizontal partings or seams	Few	5 - 10
		Trace	Less than 5


Additional Notes:

1. Utilized c: coarse, m: medium, and f: fine when describing the size of sand or gravel.
2. WOH – weight of hammer.
3. WOR – weight of rods.
4. bgs – below ground surface
5. NA – Not Available
6. ▼ – Phreatic Surface, if observed


Refusal:

1. Split-spoon refusal is considered 50 blows over six inches.
2. Auger and Casing refusal occurs if the driller is unable to advance the boring.
3. Roller bit refusal occurs if the bit is worn and needs to be replaced or the bedrock is a dense very hard material.

TEST BORING LOG

		547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391		PROJECT: Brookwood Secure Center LOCATION: Claverack (Hudson), New York CLIENT: Office of General Services (OGS) PROJECT NO.: 31232.05 (Chazen) Q1665 (OGS)			Test Boring No.: B-1	
Contractor: ATL Drill Rig: CME 45 Truck-Mounted Rig Driller: Tyler W. Inspector: Chris Marini		Start Date: 13-Aug-2015 Finish Date: 13-Aug-2015 El. Datum: NAVD88 G.S. Elevation: 181		Northing: See Figure 1 Easting: Latitude: - Longitude: -		Total Depth: 8 ft. Borehole Dia.: 4 in. Water Depth: N/A ft. Rock Depth: N/A ft. Sample Hammer: Automatic		
Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
1	180	SS-1	6	10			3" Gravel Subbase	
			13			ML	Silt with Sand (ML): Moist, brown, mostly silt, little sand, few gravel [Glaciolacustrine]	
2	179		9					
		SS-2	8	16		ML	Same as above.	
3	178		10					
			11					
4	177		9					
		SS-3	11	12		ML	Sandy Silt (ML): Moist, brown, mostly silt, some sand, few gravel [Glaciolacustrine]	
5	176		13					
			12					
6	175		15					
		SS-4	14	10		SM	Silty Sand (SM): Moist, brown, mostly sand, some silt, few gravel [Glaciolacustrine]	
7	174		16					
			13					
8	173		12					
9	172						End of boring at 8 feet.	
10	171							
11	170							
12	169							
13	168							
14	167							
15	166							
16	165							
17	164							
18	163							
19	162							
20	161							
METHODS: HA- Hollow Stem Auger, RWH- Rotary Wash, DP-Direct Push, TC -Thin-Walled Core							DRILLING INFORMATION	
SAMPLE TYPES: SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PC - Pavement Core							Method: DP 0 to 8.0	
STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.							Method:	
NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.							Sample Core	
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.							Type SS	
ADDITIONAL NOTES:							Int Diam. 2"	
							Weight 140 lb	
							Fall 30"	


TEST BORING LOG

	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	PROJECT: Brookwood Secure Center LOCATION: Claverack (Hudson), New York CLIENT: Office of General Services (OGS) PROJECT NO.: 31232.05 (Chazen) Q1665 (OGS)	Test Boring No.: B-2
Contractor: ATL Drill Rig: CME 45 Truck-Mounted Rig Driller: Tyler W. Inspector: Chris Marini		Start Date: 13-Aug-2015 Finish Date: 13-Aug-2015 El. Datum: NAVD88 G.S. Elevation: 180	Northing: See Figure 1 Easting: Latitude: - Longitude: -
		Total Depth: 8 ft. Borehole Dia.: 4 in. Water Depth: N/A ft. Rock Depth: N/A ft. Sample Hammer: Automatic	

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	15	14			2.5" Asphalt 4" Subbase	
1	179		5			SM	Silty Sand with Gravel (SM): Moist, brown, mostly sand, some gravel, little silt [Glaciolacustrine]	
			6					
2	178		6				Same as above, little gravel.	
		SS-2	13	4		SM		
3	177		15				Same as above.	
			16					
			18					
4	176		10				Same as above.	
		SS-3	11	18		SM		
5	175		9				Same as above.	
			12					
6	174		10					
		SS-4	13	16		SM		
7	173		11				Same as above.	
			12					
8	172						End of boring at 8 feet.	
9	171							
10	170							
11	169							
12	168							
13	167							
14	166							
15	165							
16	164							
17	163							
18	162							
19	161							
20	160							

METHODS: HA- Hollow Stem Auger, RWH- Rotary Wash, DP- Direct Push, TC -Thin-Walled Core	DRILLING INFORMATION	
SAMPLE TYPES: SS-Split Spoon, RC -Rock Core, GS -Grab, ST -Shelby Tube, PC - Pavement Core	Method: DP	0 to 8.0
STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.	Method: TC	0 to 0.3
NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.		Sample Core
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.	Type	SS PC
ADDITIONAL Thin-walled pavement core performed adjacent to boring hole.	Int Diam.	2" 5.8"
NOTES:	Weight	140 lb
	Fall	30"


TEST BORING LOG

	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	PROJECT: Brookwood Secure Center LOCATION: Claverack (Hudson), New York CLIENT: Office of General Services (OGS) PROJECT NO.: 31232.05 (Chazen) Q1665 (OGS)	Test Boring No.: B-3
Contractor: ATL Drill Rig: CME 45 Truck-Mounted Rig Driller: Tyler W. Inspector: Chris Marini		Start Date: 13-Aug-2015 Finish Date: 13-Aug-2015 El. Datum: NAVD88 G.S. Elevation: 180	Northing: See Figure 1 Easting: Latitude: - Longitude: -
		Total Depth: 8 ft. Borehole Dia.: 4 in. Water Depth: 2 ft. Rock Depth: N/A ft. Sample Hammer: Automatic	

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	14	12			1" Asphalt 4" Subbase	
1	179		5			ML	Silt with Sand (ML): Moist, light brown, mostly silt, little f. sand [Glaciolacustrine]	
			4					
2	178		5		▼			
		SS-2	8	24		ML	Silt (ML): Wet, brown, mostly silt, few sand, few clay [Glaciolacustrine]	
3	177		8					
			10					
4	176		10					
		SS-3	15	24		ML	Same as above.	
5	175		10					
			13					
6	174		10					
		SS-4	13	24		ML	Sandy Silt (ML): Wet, brown, mostly silt, some f. sand [Glaciolacustrine]	
7	173		10					
			14					
8	172		13					
							End of boring at 8 feet.	
9	171							
10	170							
11	169							
12	168							
13	167							
14	166							
15	165							
16	164							
17	163							
18	162							
19	161							
20	160							

METHODS: HA- Hollow Stem Auger, RWH- Rotary Wash, DP- Direct Push, TC - Thin-Walled Core	DRILLING INFORMATION	
SAMPLE TYPES: SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PC - Pavement Core	Method: DP	0 to 8.0
STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.	Method: TC	0 to 0.1
NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.		Sample Core
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.	Type	SS PC
ADDITIONAL Thin-walled pavement core performed adjacent to boring hole.	Int Diam.	2" 5.8"
NOTES:	Weight	140 lb
	Fall	30"


TEST BORING LOG

	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	PROJECT: Brookwood Secure Center LOCATION: Claverack (Hudson), New York CLIENT: Office of General Services (OGS) PROJECT NO.: 31232.05 (Chazen) Q1665 (OGS)	Test Boring No.: B-4
Contractor: ATL Drill Rig: CME 45 Truck-Mounted Rig Driller: Tyler W. Inspector: Corey Walsh		Start Date: 13-Aug-2015 Finish Date: 13-Aug-2015 El. Datum: NAVD88 G.S. Elevation: 176	Northing: See Figure 1 Easting: Latitude: - Longitude: -


Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	6	12			5" Subbase	Gravel Parking Area
1	175		3			ML	Silt with Sand (ML): Light brown, moist, mostly silt, little f. sand [Glaciolacustrine]	
			4					
2	174		3					
		SS-2	6	14		ML	Same as above.	
3	173		10					
			13					
4	172		10					
		SS-3	10	12		ML	Same as above.	
5	171		13					
			15					
6	170		17					
		SS-4	11	16		SM	Silty Sand (SM): Light brown, moist, mostly f. sand, some silt [Glaciolacustrine]	
7	169		14					
			12					
8	168		16					
							End of boring at 8 feet.	
9	167							
10	166							
11	165							
12	164							
13	163							
14	162							
15	161							
16	160							
17	159							
18	158							
19	157							
20	156							

METHODS: HA- Hollow Stem Auger, RWH- Rotary Wash, DP- Direct Push, TC -Thin-Walled Core	DRILLING INFORMATION	
SAMPLE TYPES: SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PC - Pavement Core	Method: DP	0 to 8.0
STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted. NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet. 3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.	Method:	Sample Core
	Type	SS
ADDITIONAL NOTES:	Int Diam.	2"
	Weight	140 lb
	Fall	30"


TEST BORING LOG

		547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391		PROJECT: Brookwood Secure Center LOCATION: Claverack (Hudson), New York CLIENT: Office of General Services (OGS) PROJECT NO.: 31232.05 (Chazen) Q1665 (OGS)			Test Boring No.: B-5	
Contractor: ATL Drill Rig: CME 45 Truck-Mounted Rig Driller: Tyler W. Inspector: Corey Walsh				Start Date: 13-Aug-2015 Finish Date: 13-Aug-2015 El. Datum: NAVD88 G.S. Elevation: 177		Northing: See Figure 1 Easting: Latitude: - Longitude: -		Total Depth: 8 ft. Borehole Dia.: 4 in. Water Depth: 2 ft. Rock Depth: N/A ft. Sample Hammer: Automatic
Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
1	176	SS-1	71	16			6" Asphalt	
			17				6" Subbase	
			13			GM	Silty Gravel with Sand (GM): Moist, gray, some gravel, little silt, little sand [Fill]	
2	175		13		▼			
		SS-2	15	8		ML	Sandy Silt with Gravel (ML): Wet, brown, mostly silt, some sand, little gravel [Glaciolacustrine]	
3	174		7					
			8					
4	173		7					
		SS-3	5	6		ML	Silt (ML): Wet, brown to gray, mostly silt, little clay, few sand [Glaciolacustrine]	
5	172		5					
			6					
6	171		7					
		SS-4	12	18		CL	Lean Clay (CL): Wet, brown, some clay, some silt, trace f. sand [Glaciolacustrine]	
7	170		11					
			10					
8	169		13					
							End of boring at 8 feet.	
9	168							
10	167							
11	166							
12	165							
13	164							
14	163							
15	162							
16	161							
17	160							
18	159							
19	158							
20	157							
METHODS: HA- Hollow Stem Auger, RWH- Rotary Wash, DP-Direct Push, TC -Thin-Walled Core							DRILLING INFORMATION	
SAMPLE TYPES: SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PC - Pavement Core							Method: DP	0 to 8.0
STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.							Method: TC	0 to 0.5
NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.								Sample Core
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.							Type	SS PC
ADDITIONAL Thin-walled pavement core performed adjacent to boring hole.							Int Diam.	2" 5.8"
NOTES: Left hole open 1 hour to record water level. Water rose from 8' b.g.s. to 5' b.g.s within 1 hour. It is anticipated it would keep rising based on water content of samples.							Weight	140 lb
							Fall	30"

TEST BORING LOG

		547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391		PROJECT: Brookwood Secure Center LOCATION: Claverack (Hudson), New York CLIENT: Office of General Services (OGS) PROJECT NO.: 31232.05 (Chazen) Q1665 (OGS)			Test Boring No.: B-6	
Contractor: ATL Drill Rig: CME 45 Truck-Mounted Rig Driller: Tyler W. Inspector: Chris Marini		Start Date: 13-Aug-2015 Finish Date: 13-Aug-2015 El. Datum: NAVD88 G.S. Elevation: 178		Northing: See Figure 1 Easting: Latitude: - Longitude: -		Total Depth: 8 ft. Borehole Dia.: 4 in. Water Depth: 2 ft. Rock Depth: N/A ft. Sample Hammer: Automatic		
Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
1	177	SS-1	39	8			6" Asphalt	
			10				5" Subbase	
			9			GM	Silty Gravel with Sand (GM): Wet, gray, mostly gravel, little sand, little silt [Fill]	
2	176		5		▼			
		SS-2	4	18		ML	Silt with Sand (ML): Wet, brown, mostly silt, little sand, trace gravel [Glaciolacustrine]	
3	175		5					
			6					
4	174		6					
		SS-3	12	22		ML	Silt (ML): Wet, brown, mostly silt, few clay [Glaciolacustrine]	
5	173		13					
			14					
6	172		13					
		SS-4	13	24		ML	Same as above, little clay.	
7	171		15					
			14					
8	170		13					
							End of boring at 8 feet.	
9	169							
10	168							
11	167							
12	166							
13	165							
14	164							
15	163							
16	162							
17	161							
18	160							
19	159							
20	158							
METHODS: HA- Hollow Stem Auger, RWH- Rotary Wash, DP-Direct Push, TC -Thin-Walled Core							DRILLING INFORMATION	
SAMPLE TYPES: SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PC - Pavement Core							Method: DP	0 to 8.0
STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.							Method: TC	0 to 0.5
NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.								Sample Core
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.							Type	SS PC
ADDITIONAL Rain shower during boring (last performed of day).							Int Diam.	2" 5.8"
NOTES: Thin-walled pavement core performed adjacent to boring hole.							Weight	140 lb
							Fall	30"

TEST BORING LOG

	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	PROJECT: Brookwood Secure Center LOCATION: Claverack (Hudson), New York CLIENT: Office of General Services (OGS) PROJECT NO.: 31232.05 (Chazen) Q1665 (OGS)	Test Boring No.: B-7
Contractor: ATL Drill Rig: CME 45 Truck-Mounted Rig Driller: Tyler W. Inspector: Corey Walsh		Start Date: 13-Aug-2015 Finish Date: 13-Aug-2015 El. Datum: NAVD88 G.S. Elevation: 180	Northing: See Figure 1 Easting: Latitude: - Longitude: -
		Total Depth: 8 ft. Borehole Dia.: 4 in. Water Depth: 2 ft. Rock Depth: N/A ft. Sample Hammer: Automatic	

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
							5" Asphalt	
1	179	SS-1	6				4" Subbase	
			12			GM	Silty Gravel with Sand (GM): Wet, gray, mostly gravel, little sand, little silt [Fill]	
2	178		11		▼			
		SS-2	11	8		ML	Silt with Sand (ML): Wet, brown, mostly silt, little sand, trace gravel [Glaciolacustrine]	
3	177		4					
			4					
4	176		6					
		SS-3	10	6		ML	Silt (ML): Wet, brown, mostly silt, few clay [Glaciolacustrine]	
5	175		8					
			11					
6	174		15					
		SS-4	9	18		ML	Same as above, little clay.	
7	173		9					
			11					
8	172		18					
							End of boring at 8 feet.	
9	171							
10	170							
11	169							
12	168							
13	167							
14	166							
15	165							
16	164							
17	163							
18	162							
19	161							
20	160							

METHODS: HA- Hollow Stem Auger, RWH- Rotary Wash, DP-Direct Push, TC -Thin-Walled Core	DRILLING INFORMATION	
SAMPLE TYPES: SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PC - Pavement Core	Method: TC	0 to 0.4
STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.	Method: DP	0.4 to 8.0
NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.		Sample Core
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.	Type	SS PC
ADDITIONAL Thin-walled Pavement Core performed on same hole as boring.	Int Diam.	2" 5.8"
NOTES:	Weight	140 lb
	Fall	30"

ATTACHMENT C
Photographs

Appendix C
Brookwood Secure Center – Claverack, NY



Photograph #1 - Description: Observed asphalt “block” cracking at northeastern portion of patrol road. Looking east near B-3.



Photograph #2 - Description: Observed “Alligator” cracking at northeastern portion of patrol road. Looking east near B-2.

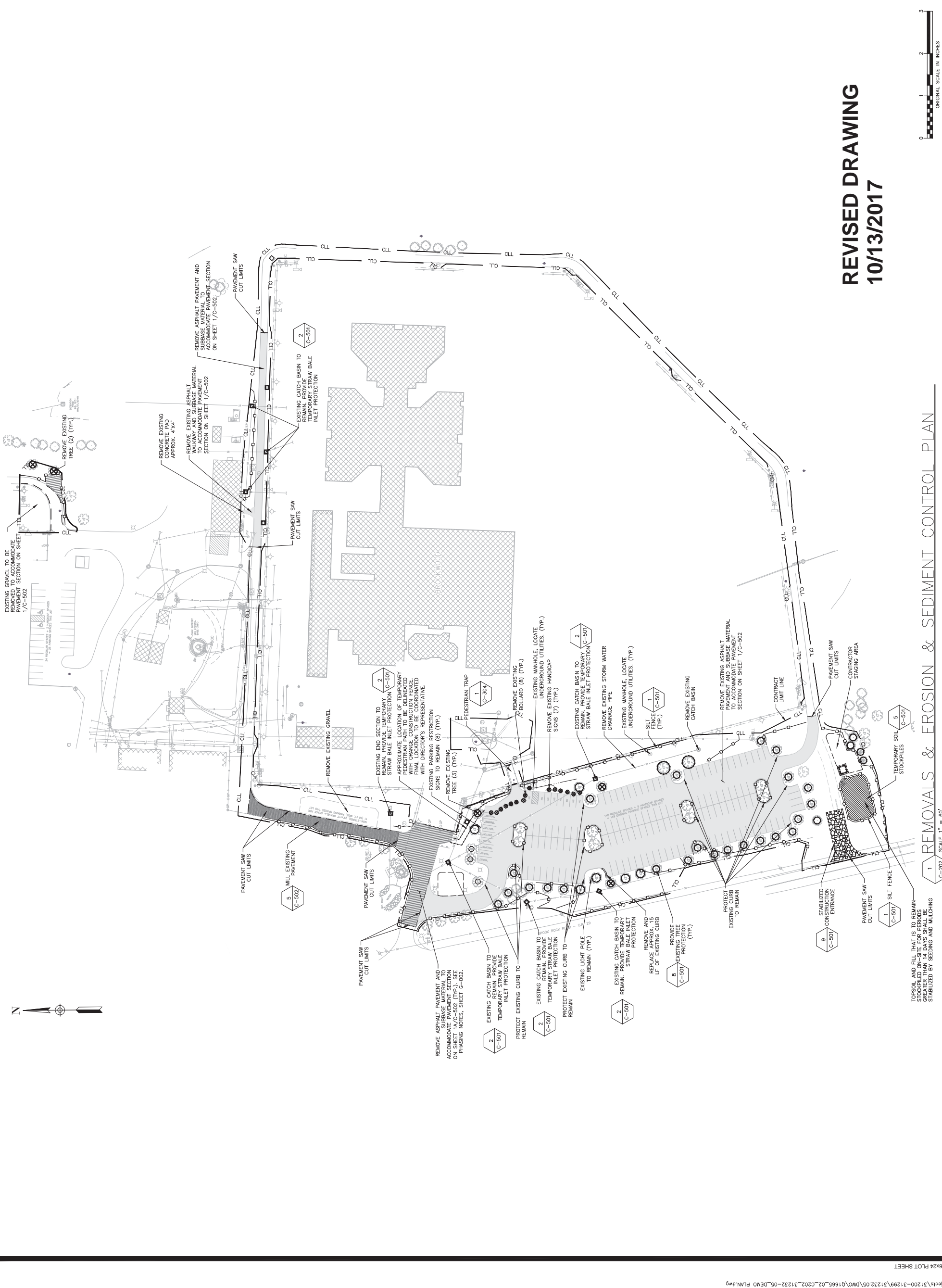
Appendix C
Brookwood Secure Center – Claverack, NY



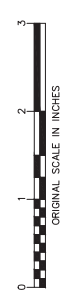
Photograph #3 - Description: Observed “Alligator” cracking along vehicle path. Looking west at entrance road.



Photograph #4 - Description: Observed patch at southwestern parking lot, looking south.

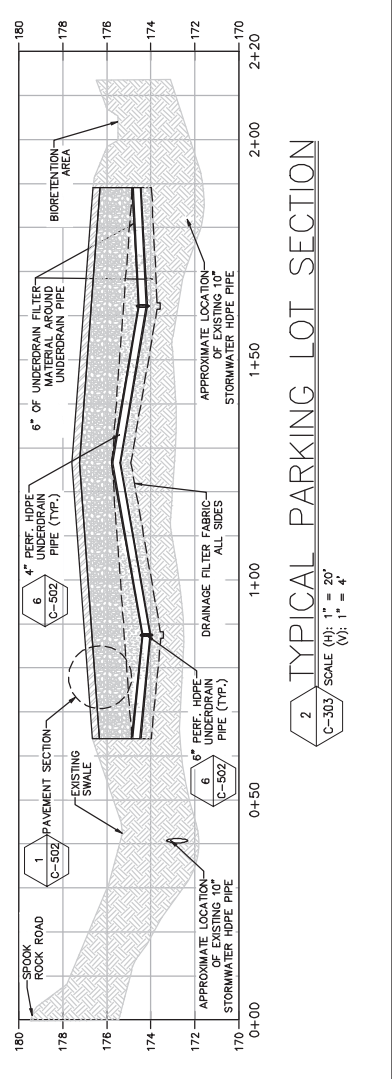
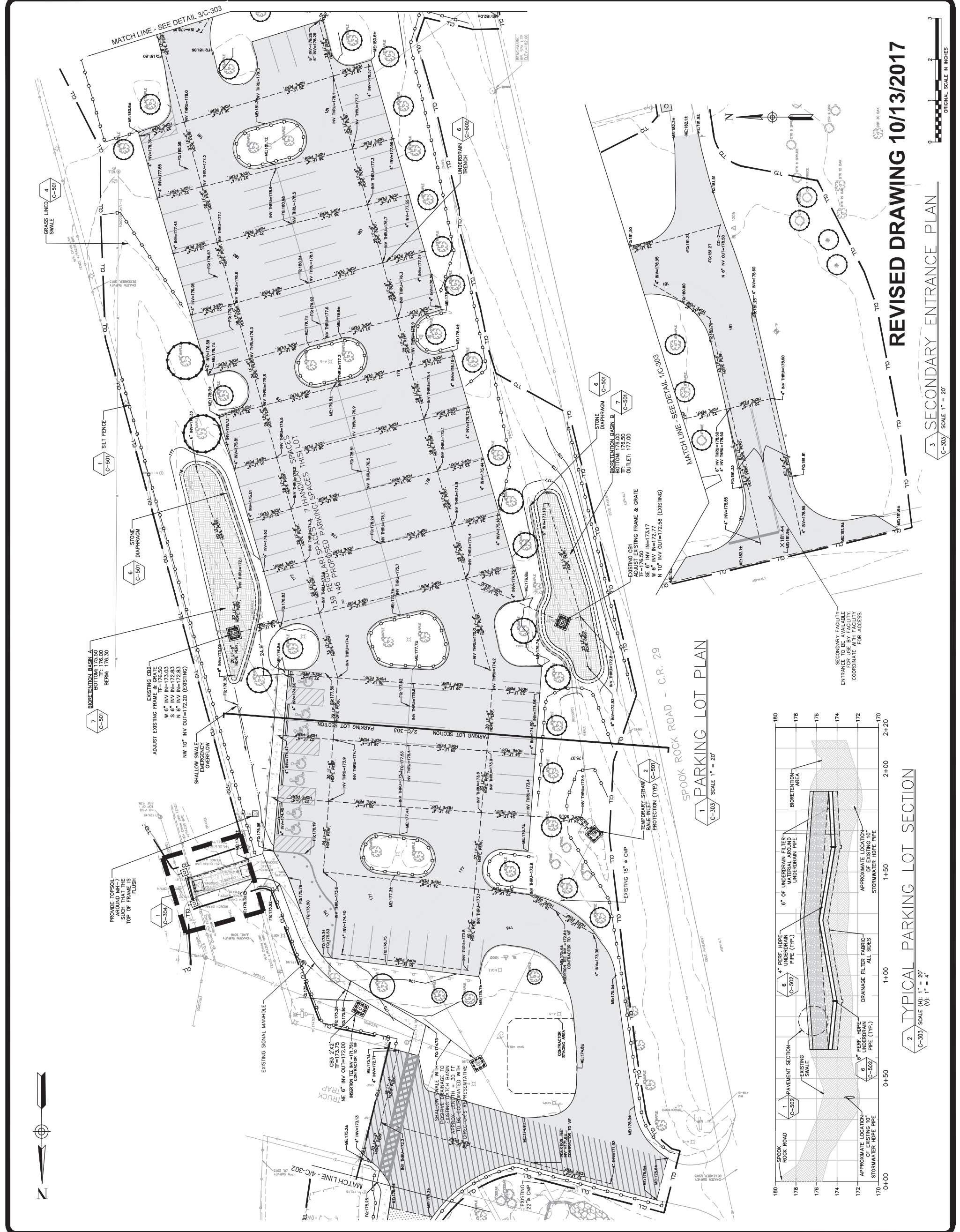


**REVISED DRAWING
10/13/2017**



1 REMOVALS & EROSION & SEDIMENT CONTROL PLAN
C-202 / SCALE 1" = 60'

TOPSOIL AND FILL THAT IS TO REMAIN STOCKPILED ON-SITE FOR PERIODS GREATER THAN 14 DAYS SHALL BE STABILIZED BY SEEDING AND MULCHING



REVISED DRAWING 10/13/2017

3 SECONDARY ENTRANCE PLAN
SCALE 1" = 20'

1 PARKING LOT PLAN
SCALE 1" = 20'

2 TYPICAL PARKING LOT SECTION
SCALE (A): 1" = 4"
SCALE (B): 1" = 4"