Highway 55 C&D Landfill & Recycling Center

Carmen Johnson

Fac/Perm/Co ID#	Date	Doc ID#
92-30	8/14/13	DIN

Re-Scanned 10/24/14 (JB)

FINAL PERMIT-TO-OPERATE

APPROVED
DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION
DATE 12/10/02 BY LB
PTO
PHASE 1: 5.80AC OF 17.90AC.
92-30
CENTRAL FILE COPY

DEC 2002
Received
Solid Waste
Section

OCTOBER 2, 2002

APPROVED
DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION
DATE _____ BY _____

GRIFFIN BROTHERS COMPANIES

October 2, 2002

OCT 2002
Received
Solid Waste
Section

Mr. Jim Barber
North Carolina Department of Environment
Health and Natural Resources
Division of Solid Waste Management
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Carmen Johnson
Fac/Perm/Co ID# 92-30
Date 8/14/13
Doc ID#
DIN

RE: Final Permit-to-Operate
Highway 55 C&D Landfill
Wake County, North Carolina

Dear Mr. Barber,

Attached is the Final Permit-to-Operate for our Highway 55 C&D Landfill. We have included the Phase 1 Subgrade Certification for 5.8 acres of Phase 1 and the initial Phase 1 Well Installation and Sampling Report.

We will be ready for final inspection the week of October 21st. Upon opening, our operating schedule will be 7:00 AM through 6:00 PM, Monday through Saturday. If these hours change throughout the season, NCDENR will be notified.

Thank you and if you have any questions, please do not hesitate to contact me at 704-895-0329.

Sincerely,

Ron Gilkerson

19109 West Catawba Ave, Suite 118 • Cornelius, NC 28031 • 704.896.6650 • FX 896.2960

Final Permit-to-Operate

Wake County, North Carolina

Highway 55 C&D Landfill & Recycling Center

October 2002

SECTION 1

Phase 1 Subgrade Certificaiton

SECTION 2

Phase 1 Well Installation and Initial Sampling Report

APPENDIX A

Lithologic Logs

APPENDIX B

Chain of Custody

APPENDIX C

Well Development Record

TABLES

FIGURES

PATTERSON
BREWER
& Associates
Engineering • Surveying • Planning

Post Office Box 1387 • Mooresville, NC 28115
704/662-0100 • Fax 704/662-0101

September 30, 2002

NCDENR, Division of Waste Management
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Attention: Mr. Jim Barber

Reference: **Phase 1 As-Built Subgrade Verification**
Highway 55 C&D Landfill
Wake County, North Carolina

Gentlemen:

Patterson, Brewer & Associates, P.A. has verified subgrade elevations of the as-built subgrade for the western portion of Phase 1 which encompasses 5.8 acres. Subgrade elevations were checked on a 100-ft grid. All locations checked verified the minimum permitted subgrade elevations. A copy of the Phase 1 as-built elevations is attached for reference.

We appreciate your cooperation with us on this project. If you have any questions or need additional information, please contact us.

Respectfully Submitted,

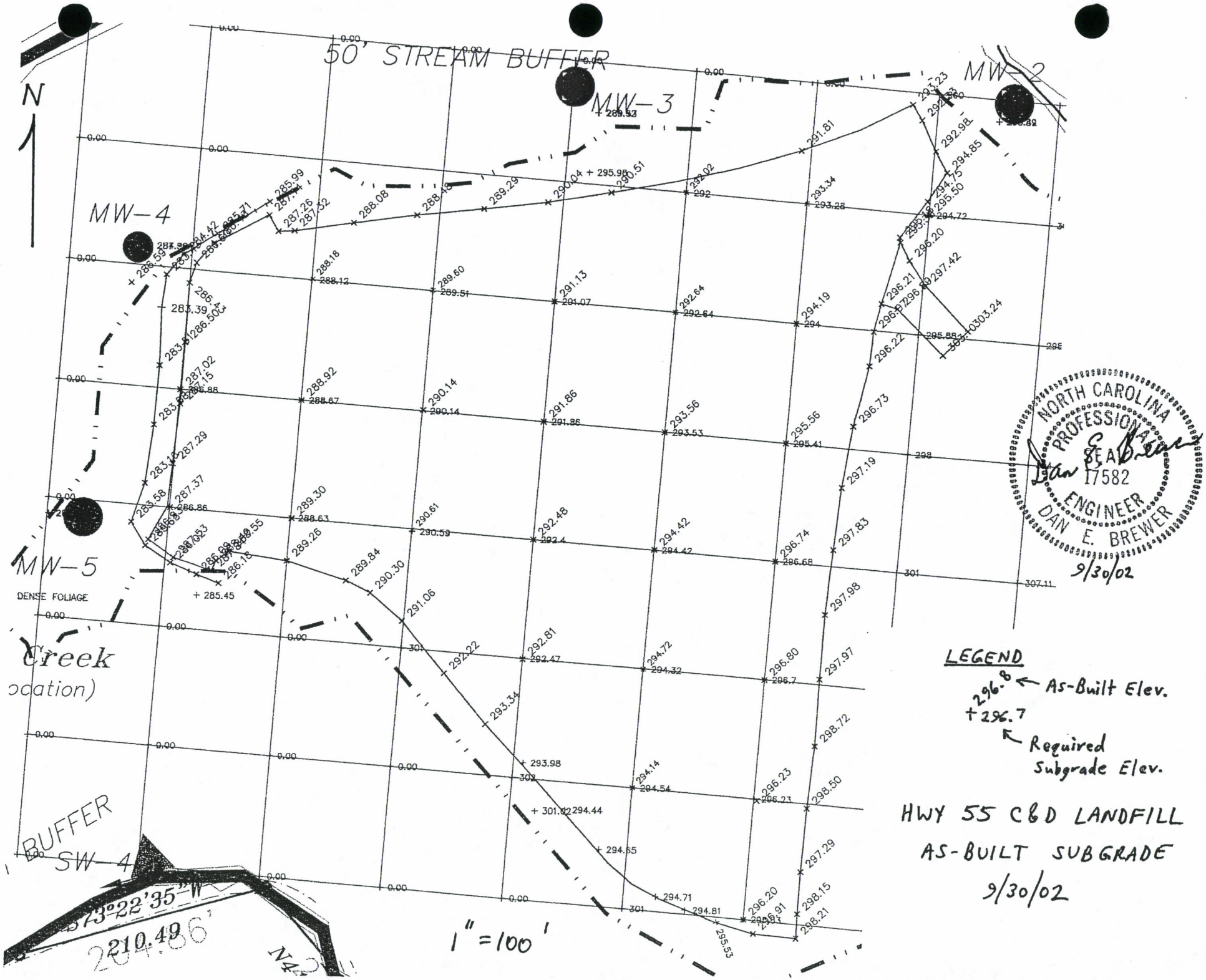
Patterson, Brewer & Associates, P.A.

Dan E. Brewer

NORTH CAROLINA PROFESSIONAL SEAL 17582 ENGINEER DAN E. BREWER

Dan E. Brewer, P.E.
Principal

cc: Mr. Ron Gilkerson


50' STREAM BUFFER
N
MW-2
MW-3
MW-4
MW-5
DENSE FOLIAGE
Creek
ocation)
BUFFER
SW-4
S73°22'35"W
210.49
204.86'
1" = 100'
NORTH CAROLINA
PROFESSIONAL
SEAL
17582
ENGINEER
DAN E. BREWER
9/30/02
LEGEND
296.8 ← As-Built Elev.
+296.7
← Required Subgrade Elev.
HWY 55 C&D LANDFILL
AS-BUILT SUBGRADE
9/30/02

ENVIRO-PRO
PROFESSIONAL CORPORATION

September 27, 2002

Mr. Ron Gilkerson
Griffin Brothers Companies
19109 W. Catawba Avenue, Suite 118
Cornelius, North Carolina 28031-5613

Subject: Phase I Well Installation and Initial Sampling Report
Highway 55 C&D Landfill
Wake County, North Carolina
Project No. EP-1306

Dear Mr. Gilkerson:

In accordance with the Water Quality Monitoring Plan approved by the North Carolina DENR-Solid Waste Section on August 9, 2002 as part of the Site Plan Application Report and the final Permit to Operate, Enviro-Pro, P.C. (EP) personnel have completed permanent groundwater monitor well installation and the initial round of sampling at the subject site. This sampling was conducted on September 26, 2002 and includes upstream and downstream samples of Little Creek (SW-1 and SW-2), Falls Branch (SW-3 and SW-4), and groundwater monitor wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7. Sampling locations are indicated on attached Figure 12. Appendix A contains Lithologic and Well Completion Logs for the seven recently installed wells, with well construction data presented in attached Table 1. For QA/QC purposes, a field equipment (i.e., bailer) rinse blank and a laboratory trip blank were also analyzed.

All samples were collected as described in the approved Water Quality Monitoring Plan and were then transported to the Shealy Environmental Services laboratory in Cayse, South Carolina for analysis of volatile organic compounds (Method 8260B) and the eight RCRA metals. The completed Chain of Custody Record for these samples is included as Appendix B. A summary of the field parameters recorded during well purging and the volume of water purged from each well prior to sampling is provided on the forms included as Appendix C.

15101 Regena Lane • Charlotte, NC 28278 • (704) 583-0075 • FAX (704) 583-2673

The next sampling event for the Highway 55 C&D Landfill site is scheduled for March 2003. Please contact me at (704) 583-0075 if you have any questions concerning the data submitted herein. I will prepare a letter report summarizing the analytical test results for submission to the DENR upon receiving them from Shealy. Thank you for the opportunity to provide our environmental services on this project.

Sincerely,
ENVIRO-PRO, P.C.

Thomas H. Bolyard

Thomas H. Bolyard, P.G.
Senior Hydrogeologist

APPENDIX A

ENVIRO-PRO, P.C. Charlotte, North Carolina	LITHOLOGIC LOG	Boring No.: MW-1 Job No: EP-1306 Client: Hwy 55 C&D Landfill, LLC

Project Location: Wake Co. State: NC Total Depth: 32'
Logged By: THB Soil Sample Method: Air Cuttings Date Started: 9-11-02 Date Complete: 9-11-02
Driller: R. Phillips / R. Simmons Drill Method: Air Rotary Equipment Type: Centerra CT-450 Boring Diameter: 6"
Soil Gas Sample Method: Groundwater (bmp): 0 hrs 24 hrs
Land Surface Elevation (LS): Measuring Point Elev. (MP): Remarks:

Elevation ft	Depth ft	SPT/Interval	Sample ID No.	Description	Soil Gas	Moisture	USCS Log	Comments
				Yellow-brn. clayey Silt				
	5							
	10			PWR - Sampled as Tan-brn. silty Sand w/ Rx fragments				
				Bedrock @ 14'				
	15							
	20			Rd-brn. Fanglomerate				
	25			Water-bearing fracture @ 27'				
	30			Terminated Air Drilling @ 32' bgs Set 2" PVC well				
	35							

ENVIRO-PRO, P.C. Charlotte, North Carolina	LITHOLOGIC LOG	Boring No.: MW-2 Job No: EP-1306 Client: Hwy 55 C&D Landfill, LLC

Project Location: Wake Co. State: NC Total Depth: 20'

Logged By: THB Soil Sample Method: Air Cuttings Date Started: 9-11-02 Date Complete: 9-11-02

Driller: R. Phillips w/ R. Simmons Drill Method: Air Rotary Equipment Type: Centerra CT-450 Boring Diameter: 6"

Soil Gas Sample Method: Groundwater (bmp): 0 hrs 24 hrs

Land Surface Elevation (LS): Measuring Point Elev. (MP): Remarks:

Elevation ft	Depth ft	SPT/Interval	Sample ID No.	Description	Soil Gas	Moisture	USCS Log	Comments
				Yellow-brn clayey Silt				
	5			PWR – Sampled as tan – rd-brn sl. clayey Sandy Silt w/ Rx frag.				
	10			Bedrock @ 11'				Moist @ 13'
	15			Rd-brn fanglomerate				
	20			Terminated Air Drilling @ 20' bgs Set 2" PVC Well				
	25							

ENVIRO-PRO, P.C. Charlotte, North Carolina	LITHOLOGIC LOG	Boring No.: MW-3 Job No: EP-1306 Client: Hwy 55 C&D Landfill, LLC

Project Location: Wake Co. State: NC Total Depth: 19'

Logged By: THB Soil Sample Method: Air Cuttings Date Started: 9-11-02 Date Complete: 9-11-02

Driller: R. Phillips w/ R. Simmons Drill Method: Air Rotary Equipment Type: Conterra CT-450 Boring Diameter: 6"

Soil Gas Sample Method: Groundwater (bmp): 0 hrs 24 hrs

Land Surface Elevation (LS): Measuring Point Elev. (MP): Remarks:

Elevation ft	Depth ft	SPT/Interval	Sample ID No.	Description	Soil Gas	Moisture	USCS Log	Comments
				Yellow-brn. clayey Silt				
	5							
	10			PWR- Sampled as tan- rd.-brn. sl. clayey fine sandy Silt w/ Rx frag.				
	15							
				Terminated Air Drilling @ 19' bgs				
	20			Set 2" PVC well				

ENVIRO-PRO, P.C. Charlotte, North Carolina	LITHOLOGIC LOG	Boring No.: MW-4 Job No: EP-1306 Client: Hwy 55 C&D Landfill, LLC

Project Location: Wake Co. State: NC Total Depth: 19'

Logged By: THB Soil Sample Method: Air Cuttings Date Started: 9-11-02 Date Complete: 9-11-02

Driller: R. Phillips w/ R. Simmons Drill Method: Air Rotary Equipment Type: Centerra CT-450 Boring Diameter: 6"

Soil Gas Sample Method: Groundwater (bmp): 0 hrs 24 hrs

Land Surface Elevation (LS): Measuring Point Elev. (MP): Remarks:

Elevation ft.	Depth ft.	SPT/Interval	Sample ID No.	Description	Soil Gas	Moisture	USCS Log	Comments
				Yellow-brn. clayey Silt				
	5							
	10			PWR-Sampled as tan-rd-brn. sl. clayey sandy Silt w/ Rx frag.				
	15							
				Terminated Air Drilling @ 19' bgs				
	20			Set 2" PVC well				

ENVIRO-PRO, P.C. Charlotte, North Carolina	LITHOLOGIC LOG	Boring No.: MW-5 Job No: EP-1306 Client: Hwy 55 C&D Landfill, LLC

Project Location: Wake Co. State: NC Total Depth: 19'

Logged By: THB Soil Sample Method: Air Cuttings Date Started: 9-11-02 Date Complete: 9-11-02

Driller: R. Phillips w/ R. Simmons Drill Method: Air Rotary Equipment Type: Canterra CT-450 Boring Diameter: 6"

Soil Gas Sample Method: Groundwater (bmp): 0 hrs 24 hrs

Land Surface Elevation (LS): Measuring Point Elev. (MP): Remarks:

Elevation ft.	Depth ft.	SPT/Interval	Sample ID No.	Description	Soil Gas	Moisture	USCS Log	Comments
				Yellow-brn. clayey Silt				
	5							
	10			PWR - Sampled as tan - rd.-brn sl. clayey sandy Silt w/ Rx frag.				
	15							
				Terminated Air Drilling @ 19' bgs				
	20			Set 2" PVC Well				

ENVIRO-PRO, P.C. Charlotte, North Carolina	LITHOLOGIC LOG	Boring No.: MW-6 Job No: EP-1306 Client: Hwy 55 C&D Land Dev, LLC

Project Location: Wake Co. State: NC Total Depth: 19'
Logged By: THB Soil Sample Method: Air Cuttings Date Started: 9-11-02 Date Complete: 9-11-02
Driller: R. Phillips w/ R. Simmons Drill Method: Air Rotary Equipment Type: Centerra CT-450 Boring Diameter: 6"
Soil Gas Sample Method: Groundwater (bmp): 0 hrs 24 hrs
Land Surface Elevation (LS): Measuring Point Elev. (MP): Remarks:

Elevation ft	Depth ft	SPT/Interval	Sample ID No.	Description	Soil Gas	Moisture	USCS Log	Comments
				Yellow-brn. clayey Silt				
	5							
	10			PWR - Sampled as tan - rd-brn sl. clayey sandy Silt w/ Rx frag.				
	15							
				Terminated Air Drilling @ 19' bgs				
	20			Set 2" PVC well				

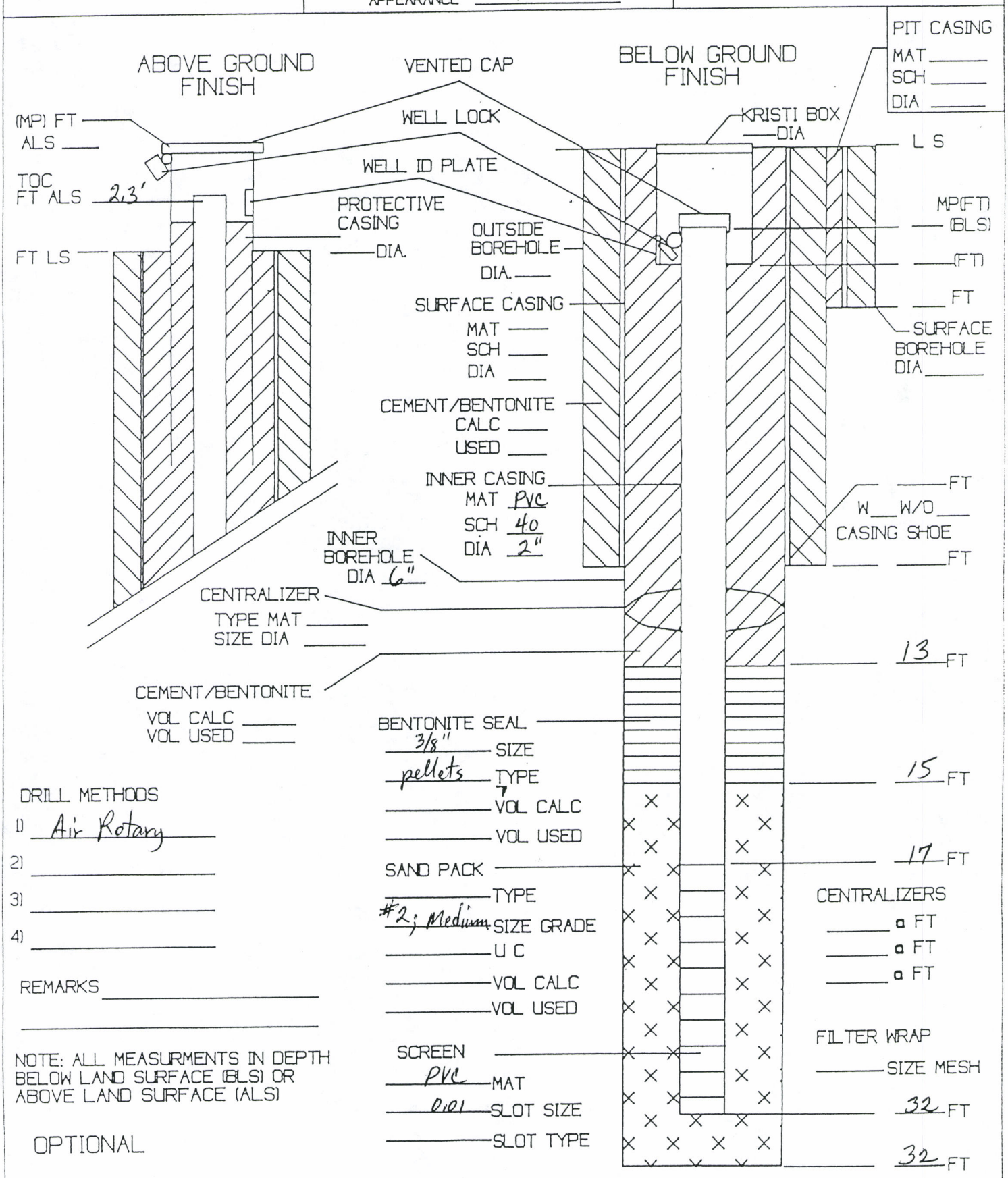
LITHOLOGIC LOG

Boring No.: MW-7 Job No: EP-1306
Client: Hwy 55 C&D Landfill, LLC

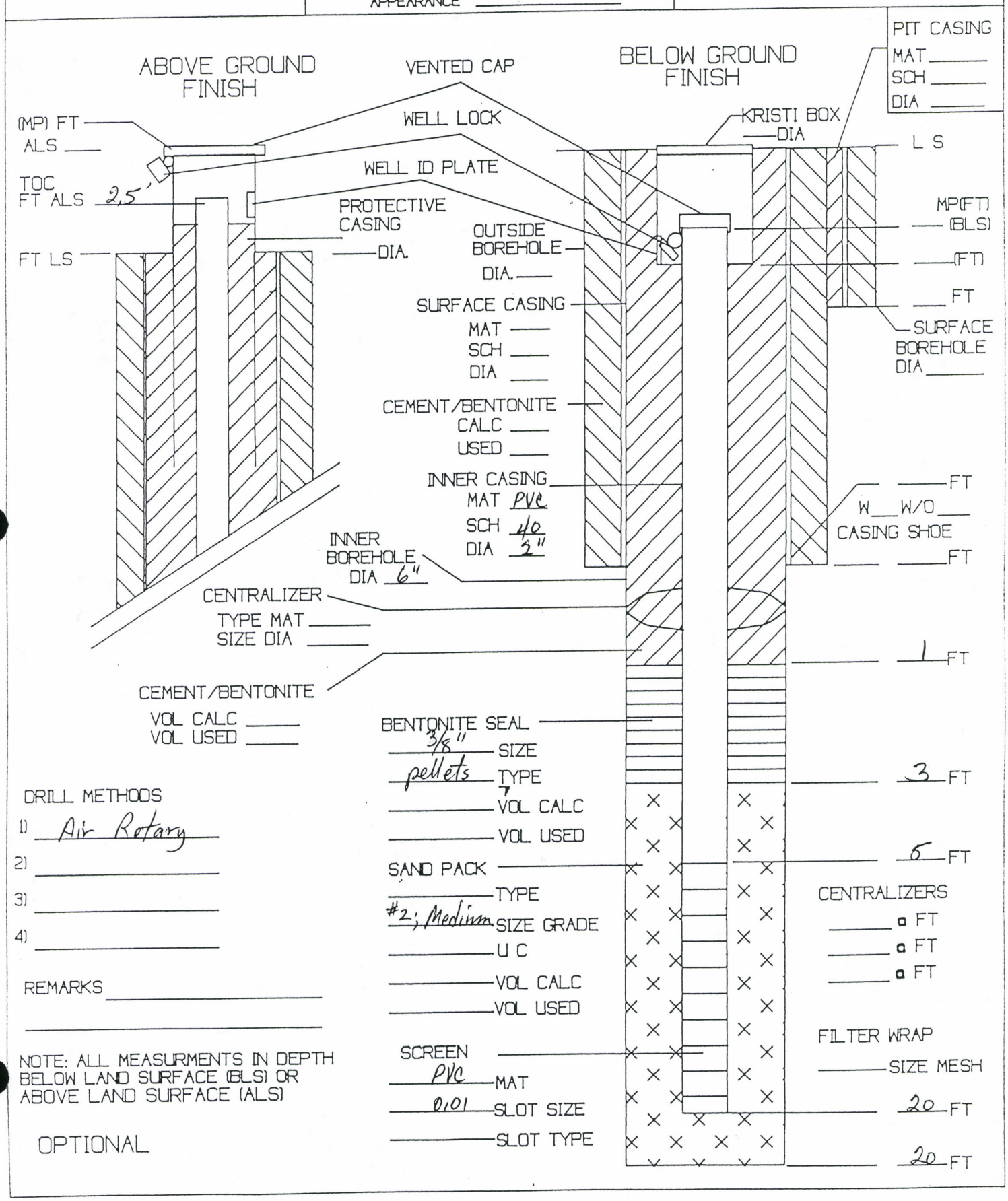
Project Location: Wake Co. State: NC Total Depth: 22'
Logged By: THB Soil Sample Method: Air Cuttings Date Started: 9-11-02 Date Complete: 9-11-02
Driller: R. Phillips w/ R. Simmons Drill Method: Air Rotary Equipment Type: Centerra CT-450 Boring Diameter: 6"
Soil Gas Sample Method: Groundwater (bmp): 0 hrs 24 hrs
Land Surface Elevation (LS): Measuring Point Elev. (MP): Remarks:

Elevation ft.	Depth ft.	SPT/Interval	Sample ID No.	Description	Soil Gas	Moisture	USCS Log	Comments
				Yellow-brn. clayey Silt				
	5							
	10			PWR - Sampled as tan-yl.-brn. sl. clayey sandy Silt w/ Rx frag.				
	15							
				Bedrock @ 18'				
	20			Rd-brn. Fanglomerate				
				Terminated Air Drilling @ 22' bgs				
	25			Set 2" PVC well				

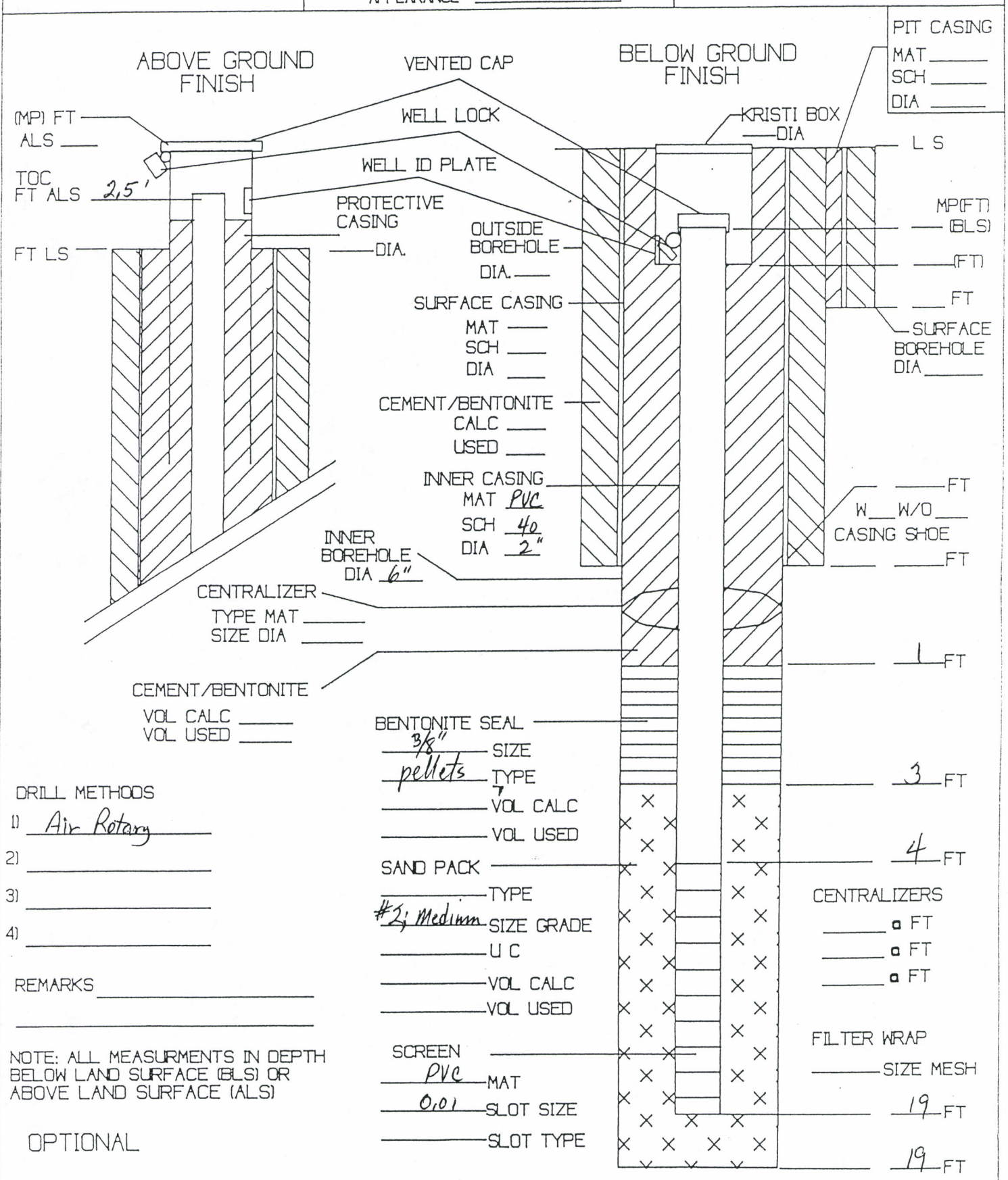
ENVIRO-PRO, P.C. CHARLOTTE, NC	WELL COMPLETION LOG TYPE (III)	WELL # MW-1 JOB # EP-1306 CLIENT Hwy 55 C&D Landfill, LLC
PROJECT LOCATION Pelfonville	COUNTY Wake STATE NC	LOG BY THB
LAND SURFACE ELEV.	MEASURING PT. ELEV. (MP)	DATE BEGAN 9-11-02 DATE COMPLETED 9-11-02
WELL DEV. METHOD	VOLUME EVAC. ____ APPEARANCE ____	MONITORED FORMATION



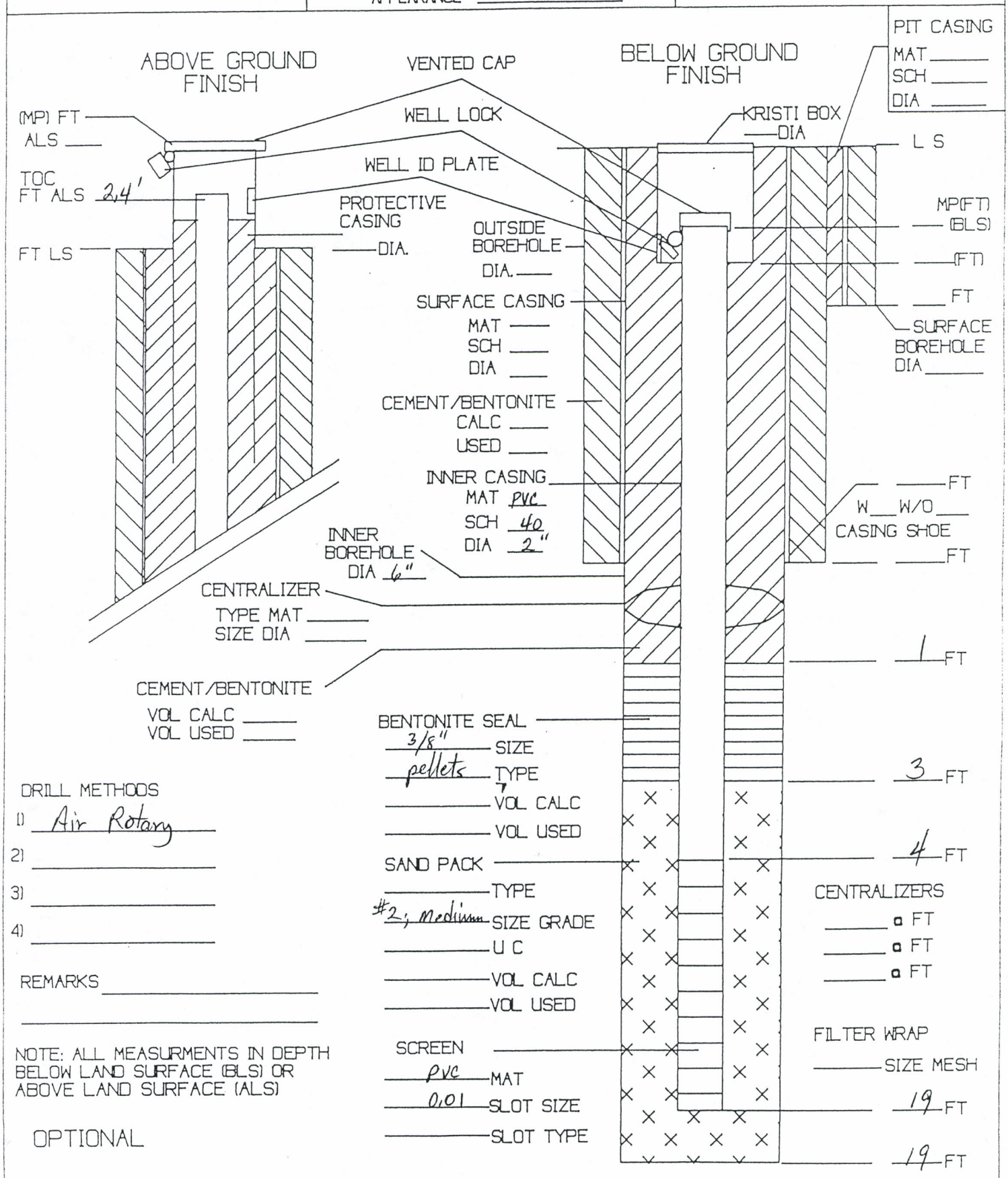
ENVIRO-PRO, P.C. CHARLOTTE, NC	WELL COMPLETION LOG TYPE (III)	WELL # MW-2 JOB # EP-1306 CLIENT Hwy 55 C&D Landfill, LLC
PROJECT LOCATION Feltonville	COUNTY Wake STATE NC	LOG BY THB
LAND SURFACE ELEV.	MEASURING PT. ELEV. (MP)	DATE BEGAN 9-11-02 DATE COMPLETED 9-11-02
WELL DEV. METHOD	VOLUME EVAC. _____ APPEARANCE _____	MONITORED FORMATION



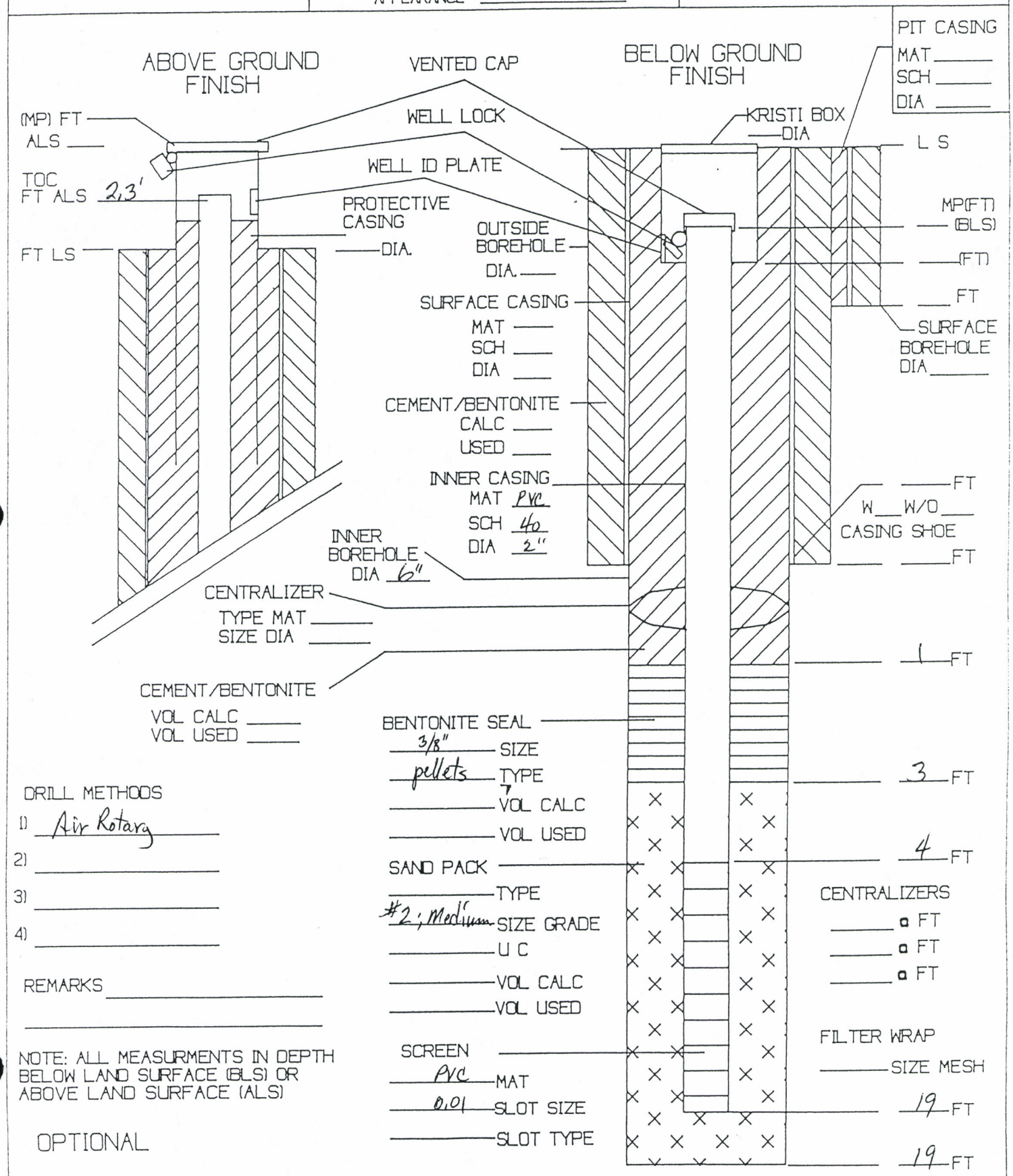
ENVIRO-PRO, P.C. CHARLOTTE, NC	WELL COMPLETION LOG TYPE (III)	WELL # MW-3 JOB # EP-1306 CLIENT Hwy 55 C&D Landfill, LLC
PROJECT LOCATION Feltonville	COUNTY Wake STATE NC	LOG BY THB
LAND SURFACE ELEV.	MEASURING PT. ELEV. (MP)	DATE BEGAN 9-11-02 DATE COMPLETED 9-11-02
WELL DEV. METHOD	VOLUME EVAC. _____ APPEARANCE _____	MONITORED FORMATION



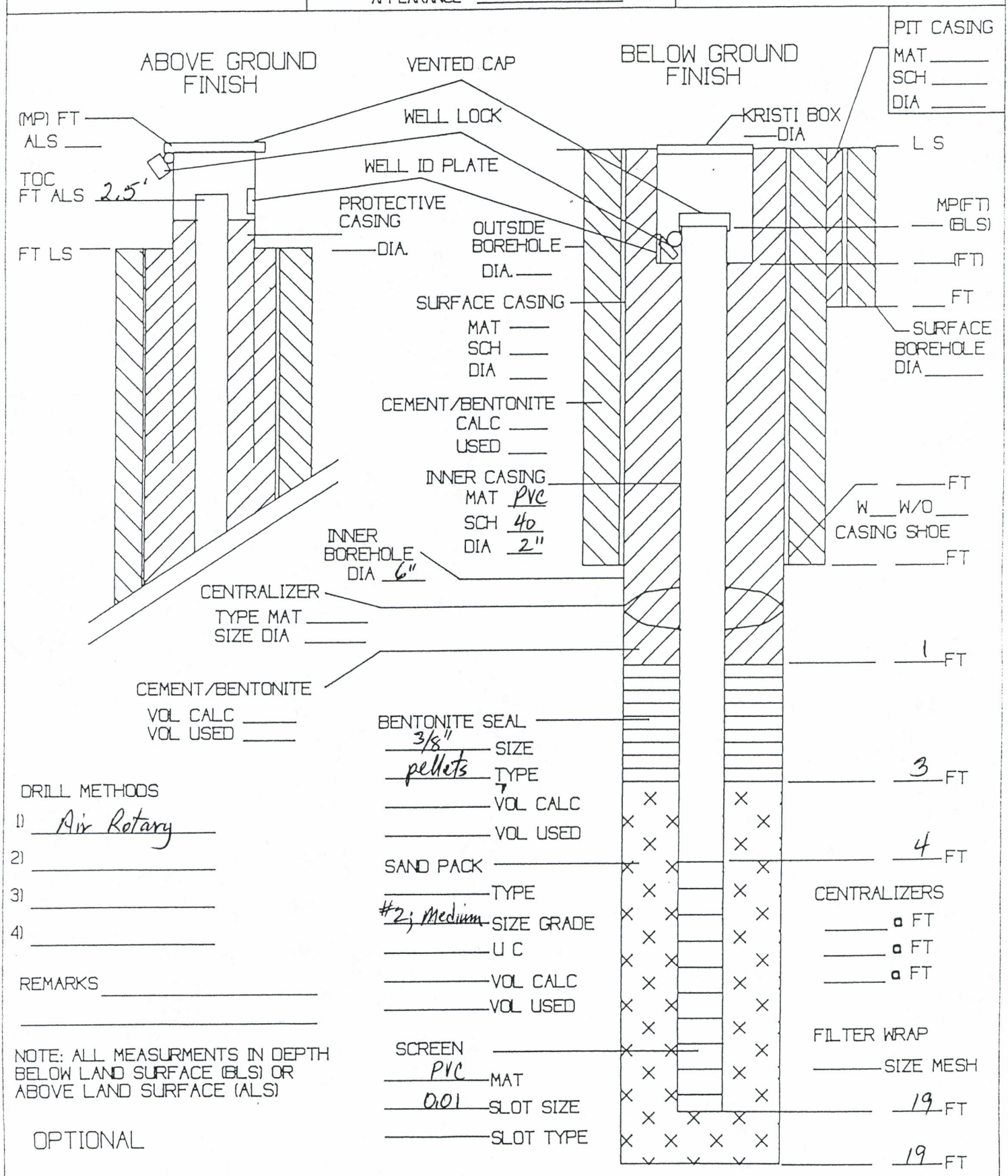
ENVIRO-PRO, P.C. CHARLOTTE, NC	WELL COMPLETION LOG TYPE (III)	WELL # MW-4 JOB # EP-1306 CLIENT Hwy 55 C&D Landfill, LLC
PROJECT LOCATION Fellsville	COUNTY Wake STATE NC	LOG BY THB
LAND SURFACE ELEV.	MEASURING PT. ELEV. (MP)	DATE BEGAN 9-11-02 DATE COMPLETED 9-11-02
WELL DEV. METHOD	VOLUME EVAC. ____ APPEARANCE ____	MONITORED FORMATION



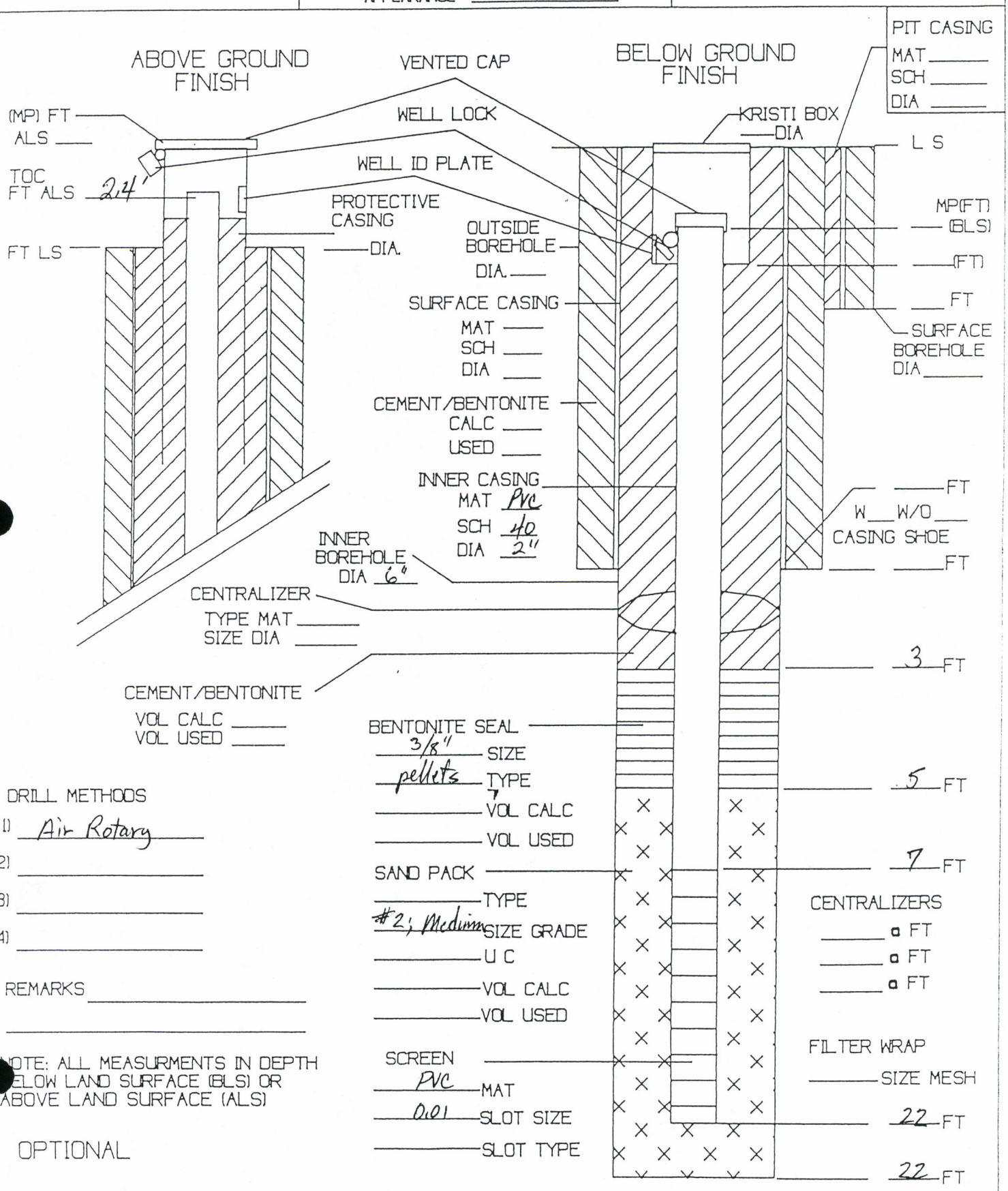
ENVIRO-PRO, P.C. CHARLOTTE, NC	WELL COMPLETION LOG TYPE (III)	WELL # MW-5 JOB # EP-1306 CLIENT Hwy 55 C&D Landfill, LLC
PROJECT LOCATION Feltonville	COUNTY Wake STATE NC	LOG BY THB
LAND SURFACE ELEV.	MEASURING PT. ELEV. (MP)	DATE BEGAN 9-11-02 DATE COMPLETED 9-11-02
WELL DEV. METHOD	VOLUME EVAC. _____ APPEARANCE _____	MONITORED FORMATION



ENVIRO-PRO, P.C. CHARLOTTE, NC	WELL COMPLETION LOG TYPE (III)	WELL # MW-6 JOB # EP-1306 CLIENT Hwy 55 C&D Landfill, LLC
PROJECT LOCATION Fuquay-Varina	COUNTY Wake STATE NC	LOG BY THB
LAND SURFACE ELEV.	MEASURING PT. ELEV. (MP)	DATE BEGAN 9-11-02 DATE COMPLETED 9-11-02
WELL DEV. METHOD	VOLUME EVAC. _____ APPEARANCE _____	MONITORED FORMATION



ENVIRO-PRO, P.C. CHARLOTTE, NC	WELL COMPLETION LOG TYPE (III)	WELL # MW-7 JOB # EPC-1306 CLIENT Hwy 55 C&D Landfill, LLC
PROJECT LOCATION Feltonville	COUNTY Wake STATE NC	LOG BY THB
LAND SURFACE ELEV.	MEASURING PT. ELEV. (MP)	DATE BEGAN 9-11-02 DATE COMPLETED 9-11-02
WELL DEV. METHOD	VOLUME EVAC. ____ APPEARANCE ____	MONITORED FORMATION



APPENDIX B

SHEALY

Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive
Cayce, South Carolina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 12948

Client: Enviro-Pro, P.C.	Project Manager: T. Bolyard	Telephone No. / Fax No. / E-mail: 704-583-0075	Quote No.: 7926
Address: 15101 Regency Ln.	Sampler's Signature: X T. Bolyard	Waybill No.	Page 1 of 2
City: Charlotte; State: NC; Zip Code: 28278	Printed Name: T. Bolyard	Analysis (Attach list if more space is needed.)	
Project Name: Hwy 55 C&D			
Project No.: EP-1306	P.O. No.		

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Solid	Non-Aqueous	No. of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit		8260B (Appendix I)	RCRA Metals									Remarks / Cooler I.D.
SW-1	9/26/02	10:00	G	X					1	2				✓	✓									
SW-2		10:45	G	X					1	2				✓	✓									
SW-3		12:00	G	X					1	2				✓	✓									
SW-4		11:00	G	X					1	2				✓	✓									
MW-1		11:45	G	X					1	2				✓	✓									
MW-2		9:30	G	X					1	2				✓	✓									
MW-3		9:45	G	X					1	2				✓	✓									
MW-4		10:15	G	X					1	2				✓	✓									
MW-5		10:30	G	X					1	2				✓	✓									
MW-6		11:15	G	X					1	2				✓	✓									

Lot No.

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

Sample Disposal: ☐ Return to Client ☑ Disposal by Lab

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

Turn Around Time Required (Prior lab approval required for expedited TAT.): ☑ Standard ☐ Rush (Specify) 7-day T-A-T

QC Requirements (Specify)

1. Relinquished by: T. Bolyard	Date: 9/27/02	Time: 12:15	1. Received by: [illegible]	Date: 9-27-02	Time: 12:15
2. Relinquished by	Date	Time	2. Received by	Date	Time
3. Relinquished by	Date	Time	3. Laboratory received by	Date	Time

Comments

LAB USE ONLY
Received on ice (Circle) Yes No Ice Pack

Receipt Temp. _____ °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Shealy Form No. 1001

SHEALY

Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive
Cayce, South Carolina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 13629

Client: Enviro-Pro, P.C.	Project Manager: T. Bolyard	Telephone No. / Fax No. / E-mail: 704-583-0075	Quote No. 7926
Address: 15101 Regena Ln.	Sampler's Signature: X T. Bolyard	Waybill No.	Page 2 of 2
City: Charlotte; State: NC; Zip Code: 28278	Printed Name: T. Bolyard	Analysis (Attach list if more space is needed.)	
Project Name: Hwy 55 C&D			
Project No.: EP-1306	P.O. No.		Lot No.

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Solid	Non-Aqueous	Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	8260B (Appendix I)	RCRA metals	Remarks / Cooler I.D.
MW-7	9/26/07	11:30	G	X					1	2			✓	✓	
Field Blank		12:15	G	X						2			✓	✓	
Trip Blank			G	X						2			✓		

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

Sample Disposal: ☐ Return to Client ☑ Disposal by Lab

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

Turn Around Time Required (Prior lab approval required for expedited TAT.): ☑ Standard ☐ Rush (Specify) 7-day T-A-T

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished by: T. Bolyard	9/27/07	12:15	1. Received by: [illegible]	9-27-07	12:15
2. Relinquished by			2. Received by		
3. Relinquished by			3. Laboratory received by		

Comments:

LAB USE ONLY
Received on ice (Circle) Yes No Ice Pack
Receipt Temp. _____ °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Shealy Form No. 1001

APPENDIX C

WELL DEVELOPMENT, PURGE, AND SAMPLE RECORD

LIENT: Hwy 55 C&D Landfill, LLC
OCATION: Apex, NC
ROJECT NAME/DESCRIPTION: Hwy 55 C&D
ATE OF WATER LEVEL MEASUREMENTS: 9-26-02

DEVELOP:
PURGING: ✓
SAMPLING: ✓

PROJECT NO.: EP-1306
PROJ. MGR.: THB
CHECKED BY:
PREPARED BY: THB

Sample ID	A Well No.	B Sample Date	C Time (hrs)	D Well Depth (ft)	E MP Elevation (ft)	F Depth to Water (ft-bmp)	(E - F) = G Water Level Elevation (ft)	(D - F) = H Hgt. of Water Col. (ft)	I Volume of Water (gal)*	Vol. of Water Purd. (gal)**	Temp. (°C)	Specific Cond. (umhos)	pH	Turbidity or Appearance
	MW-1	9-26-02	11:45	32		21.71		10.29	1.7	6.0				
	MW-2	"	9:30	20		8.65		11.35	1.9	6.0				
	MW-3	"	9:45	19		6.97		12.03	2.0	6.0				
	MW-4	"	10:15	19		6.24		12.86	2.1	7.0				
	MW-5	"	10:30	19		5.67		13.33	2.2	7.0				
	MW-6	"	11:15	19		6.19		12.81	2.1	7.0				
	MW-7	"	11:30	22		10.56		11.44	1.9	6.0				
	SW-1	"	10:00	—		—								
	SW-2	"	10:45	—		—								
	SW-3	"	12:00	—		—								
	SW-4	"	11:00	—		—								
	Field Blank	"	12:15	—		—								

Comments:

*To calculate volume of water in the well multiply "H" by 0.163 for a 2" well, 0.652 for a 4" well, or 1.469 for a 6" well.

**To calculate purge volume, multiply "I" by the desired number of well volumes (e.g., 3 to 5)

e.g., after each well volume).

WELL DEVELOPMENT, PURGE, AND SAMPLE RECORD

LIENT: Hwy 55 C&D Landfill, LLC
OCATION: Apex, NC
ROJECT NAME/DESCRIPTION: Hwy 55 C&D
ATE OF WATER LEVEL MEASUREMENTS: 9-26-02

DEVELOP:
PURGING: ✓
SAMPLING: ✓

PROJECT NO.: EP-1306
PROJ. MGR.: THB
CHECKED BY:
PREPARED BY: THB

Sample ID	A Well No.	B Sample Date	C Time (hrs)	D Well Depth (ft)	E MP Elevation (ft)	F Depth to Water (ft-bmp)	(E - F) = G Water Level Elevation (ft)	(D - F) = H Hgt. of Water Col. (ft)	I Volume of Water (gal)*	Vol. of Water Pgd. (gal)**	Temp. (°C)	Specific Cond. (umhos)	pH	Turbidity or Appearance
	MW-1	9-26-02	11:45	32		21.71		10.29	1.7	6.0				
	MW-2	"	9:30	20		8.65		11.35	1.9	6.0				
	MW-3	"	9:45	19		6.97		12.03	2.0	6.0				
	MW-4	"	10:15	19		6.24		12.86	2.1	7.0				
	MW-5	"	10:30	19		5.67		13.33	2.2	7.0				
	MW-6	"	11:15	19		6.19		12.81	2.1	7.0				
	MW-7	"	11:30	22		10.56		11.44	1.9	6.0				
	SW-1	"	10:00	—		—								
	SW-2	"	10:45	—		—								
	SW-3	"	12:00	—		—								
	SW-4	"	11:00	—		—								
	Field Blank	"	12:15	—		—								

Comments:

*To calculate volume of water in the well multiply "H" by 0.163 for a 2" well, 0.652 for a 4" well, or 1.469 for a 6" well.

**To calculate purge volume, multiply "I" by the desired number of well volumes (e.g., 3 to 5).

e.g., after each well volume).

DEVELOPMENT/PURGE READINGS

PROJECT NO.: EP-1306
PROJECT NAME: Hwy 55 C&D
LOCATION: Apex, NC

DATE(S): 9-26-02
PERSONNEL: TRB/THB

WELL I.D.	TIME(Duration)	GALLONS	NTUs	TEMP. (DEGREES C)	CONDUCTIVITY (2mu/cm)	pH
MW-1		2	—	17.9	18.20	7.0
		4	—	18.2	10.03	7.0
		6	—	18.3	9.29	7.0
MW-2		2	—	18.1	1695	7.0
		4	—	18.2	1731	7.0
		6	—	18.3	1740	7.0
MW-3		2	—	18.0	1720	7.0
		4	—	18.3	1702	7.0
		6	—	18.4	1696	7.0
MW-4		2	—	18.1	592	7.0
		4	—	18.2	566	7.0
		6	—	18.2	554	7.0
MW-5		2	—	18.2	472	7.0
		4	—	18.4	461	7.0
		6	—	18.5	458	7.0
MW-6		2	—	18.1	188.2	7.0
		4	—	18.2	179.0	7.0
		6	—	18.2	174.7	7.0
MW-7		2	—	18.2	1327	7.0
		4	—	18.4	1368	7.0
		6	—	18.4	1375	7.0
SW-1		—	—	21.6	115.9	6.5-7.0
SW-2		—	—	21.4	121.2	6.5-7.0
SW-3		—	—	21.5	79.3	6.5-7.0
SW-4		—	—	21.6	770	6.5-7.0

TABLE 1

MONITORING WELL CONSTRUCTION DATA

HIGHWAY 55 C&D LANDFILL, LLC.

WELL ID	DATE INSTALLED	TOTAL DEPTH (FT. BGS.)	SCREEN INTERVAL (FT.)	GROUND ELEVATION	T.O.C. ELEVATION
MW-1	9/11/02	32.00	17-32'	362.87	365.33
MW-2	9/11/02	20.00	5-20'	293.42	295.89
MW-3	9/11/02	19.00	4-19'	286.92	289.53
MW-4	9/11/02	19.00	4-19'	284.96	287.39
MW-5	9/11/02	19.00	4-19'	282.92	285.82
MW-6	9/11/02	19.00	4-19'	285.47	288.13
MW-7	9/11/02	22.00	7-17'	295.67	298.26

NOTES:
FT.BGS.- Feet below ground surface
T.O.C.- Top of Casing

GRIFFIN BROTHERS COMPANIES

LANDFILL DEVELOPMENT

•• FAX TRANSMITTAL ••

Date: 12-6-02

To: Jim Barber **Fax Number::** 910/486-1791

From: ☐ LARRY GRIFFIN, SR. • 704.896.6650 Fax 896.2960

☐ MIRIAM MOORE • 704 [illegible] 2960

☐ CINDY [illegible] 2960

[illegible] 2960

L

MESSA

FAX: 704-896-2960
Jim Barber
Ron Gilkerson
SITE: 919-
704-895-0329
CELL 704-589-0222
Permit to Operate?
GRIFFIN BROS. C&D L.F.
(by PASS OPENING WED. OR EARLIER)

[illegible] 895
[illegible] 362-6424
Ron's Cell Phone 704/589-0222

STEVE BLOSSOM NEXTEL 919-291-5906

SCALEHOUSE: DEBBIE JOHNSON.

This facsimile transmission consist of 1 pages, including this cover page.

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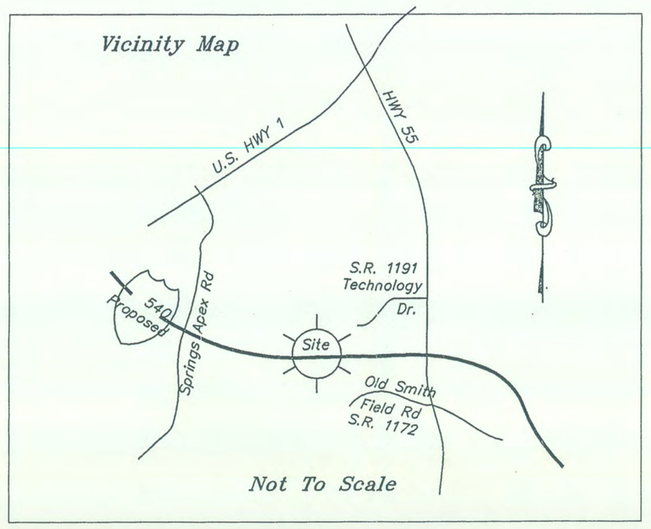
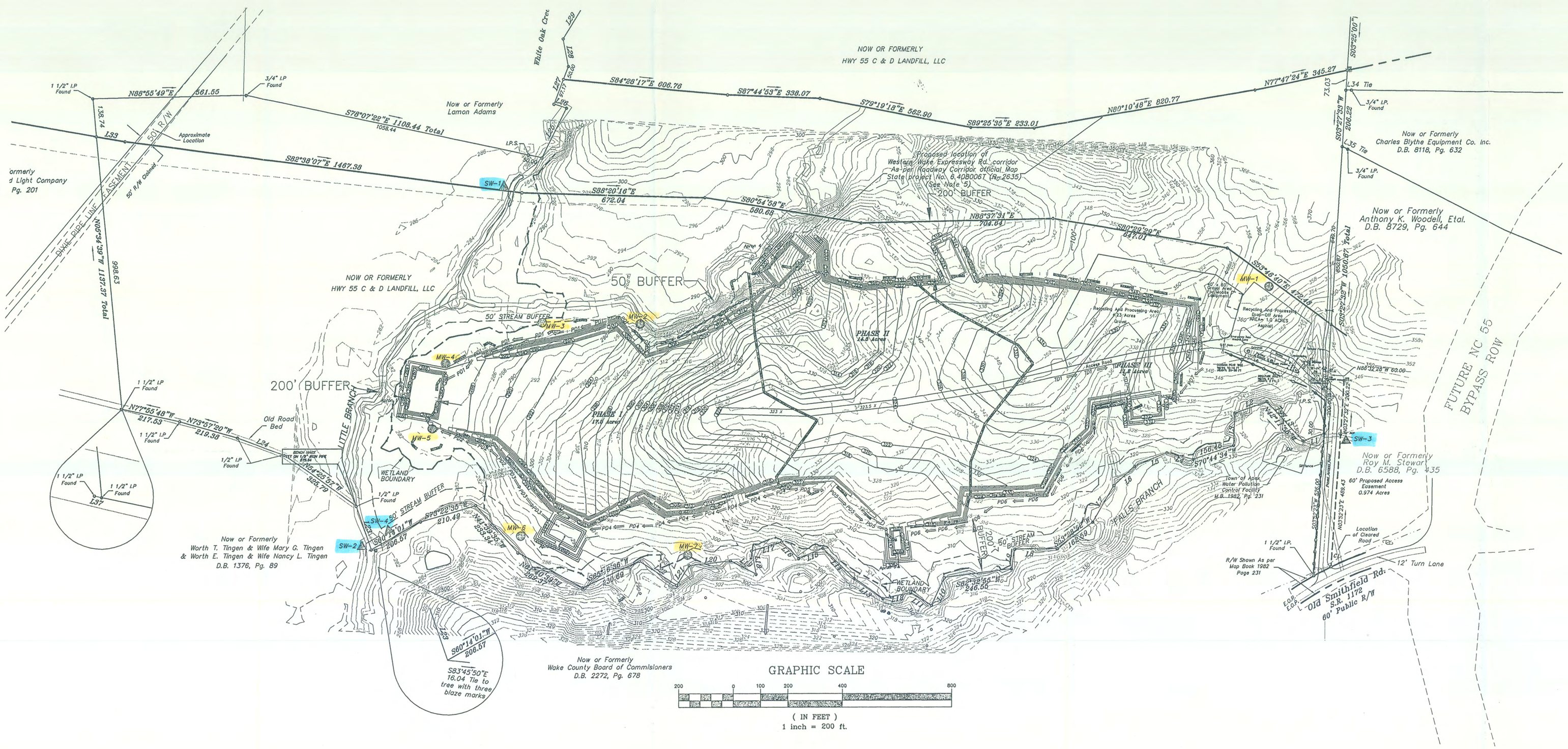


BENCHMARK	POWER POLE	WM	WATER MAIN	RAILROAD SIGNAL	TREE LINE	PAINTED LINE	DEPRESSION INT. CONTOUR
TRAVERSE POINT	POWER POLE W/ LIGHT	WV	WATER VALVE	RETAINING WALL	SMALL TREE	TRAILS (TO SCALE)	SIGN
2428.28 FIELD ELEVATION	LP	GM	GAS METER	WATER LINE	LARGE TREE	PAVED ROADS (TO SCALE)	UNIDENTIFIED OBJECT
2426.3 PHOTOGRAMMETRIC ELEVATION	GUIDE WIRE	PM	PARKING METER	SEWER LINE	LARGE TREE W/ TRUNK	INDEX CONTOURS	TRAFFIC SIGNAL
PROPERTY CORNER	MH	FP	FLAG POLE	GAS LINE	BUSH	DEPRESSION INDEX CONTOUR	TELEPHONE PEDESTAL
CATCH BASIN	FH	MB	MAILBOX	FENCE	PINE TREE	INTERMEDIATE CONTOUR	ROTATING BEACON
						MONITORING WELL	WIND SOCK

MAGNETIC



PROPOSED CONSTRUCTION AND
DEMOLITION LANDFILL SITE
USEABLE ACRES 43.6
TOTAL ACRES 88.6

Legend

- MW-18 = Monitoring Well Location
- SB-3 = Soil Boring Location
- = Wetland Boundary
- = 50' Stream Buffer
- = Total Landfill Boundary
- = Usable Landfill Boundary
- MW-1 = Proposed Monitoring Well Location
- SW-1 = Proposed Surface Water Well Location

ENVIRO-PRO, P.C.
15101 REGENA LANE, CHARLOTTE, NC 28278
(704) 583-0075 * Fax (704) 583-2673

PATTERSON BREWER & Associates
Engineering * Surveying * Planning
Post Office Box 1387 * Mooresville, NC 28115
704/662-0100 * Fax 704/662-0101

JOB NAME:

HWY 55 C&D LANDFILL AND RECYCLING CENTER

WATER QUALITY MONITORING MAP

LOCATION: WAKE COUNTY, NC	DRAWN BY: TPD / CHECKED BY: DEB
	SCALE: 1" = 200'
OWNERS: GRIFFIN BROTHERS COMPANIES, 19109 WEST CATAWBA COUNTY, CORNELIUS, NC 28031	DATE OF FIELD SURVEY: 1/1/00
	DATE OF MAP: 1/1/00
	JOB NUMBER: M01117 / SHEET NUMBER: FIGURE 12