



3 April 2000

Mr. Arthur Marks
U.S. Army Corps of Engineers—Buffalo District
1776 Niagara Street
Buffalo, New York 14207

Handwritten signature/initials

RE: Closure of AIRCO, Inc. Witmer Road Landfill – Wetland Impacts
EA Project No. 12040.33

Dear Mr. Marks:

EA Engineering P.C., and its affiliate EA Engineering, Science, and Technology, as consultants to BOC Gases, are developing design plans for closure of the AIRCO, Inc. Witmer Road landfill. The site was used for disposal of slag from various industrial processes and will be closed under a Consent Order with the New York State Department of Environmental Conservation. It appears that a preconstruction notification may be required under Nationwide Permit 38 (NWP 38—Cleanup of Toxic and Hazardous Waste). We are submitting the attached information for your review to determine if this is the appropriate process for this site.

This property is approximately 25 acres located off Witmer Road in Niagara, New York, at the intersection of the Lewiston and Niagara U.S. Geological Survey topographic quad maps (Attachment A). Under the existing site conditions, a drainage swale (approximately 1,685 ft) collects runoff and seepage along the southeast, south, and southwest perimeter of the landfill and transports this flow offsite emergent (*Phragmites* and cattail dominated) wetland south of the property. A preliminary site assessment conducted in November 1999 indicated that this swale constitutes approximately 0.5 acres of linear wetland; at that time, the primary vegetation in the swale was sparse remnants of *Phragmites* (Attachment B).

The 60 percent design calls for pulling some waste material from beyond the property fenceline, regrading, capping, and seeding the site. The regrading process will entail removal of the existing drainage swale and use of best management practices for erosion and sedimentation control. In conjunction with regrading and capping the waste material, a new swale will be constructed at the perimeter of the cap to carry runoff to the wetland south of the site. Five pertinent sheets from the 60 percent design submittal are enclosed (Attachment C) that show existing site conditions, proposed final grade and site conditions, representative cross-sections of the new drainage swale, details of the cap termination and drainage swale, and details of erosion control structures.

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EA tentatively plans to conduct a confirmatory delineation of the affected wetland area at the beginning of the growing season in late April 2000. I would like to schedule a meeting at that time to meet onsite with you or someone from your staff to review conditions at the site, the delineated wetland boundary, and the proposed closure plans. I will contact you to make arrangements when we have a tentative date for this site visit. If you require additional information or have any questions regarding the material we have provided, please do not hesitate to contact me.

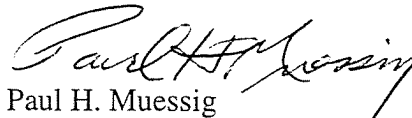
Sincerely yours,

EA ENGINEERING, P.C.



David S. Santoro, P.E., L.S.
President

EA ENGINEERING, SCIENCE,
AND TECHNOLOGY



Paul H. Muessig
Senior Environmental Scientist

PHM/caw
Attachments

cc: C. McLeod (EA)
M. Resh (BOC)
M. Hinton (NYSDEC)

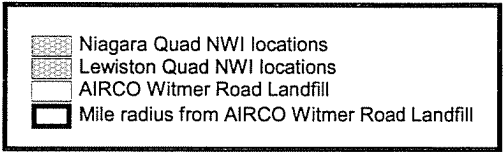
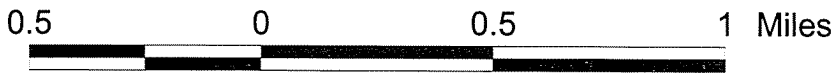
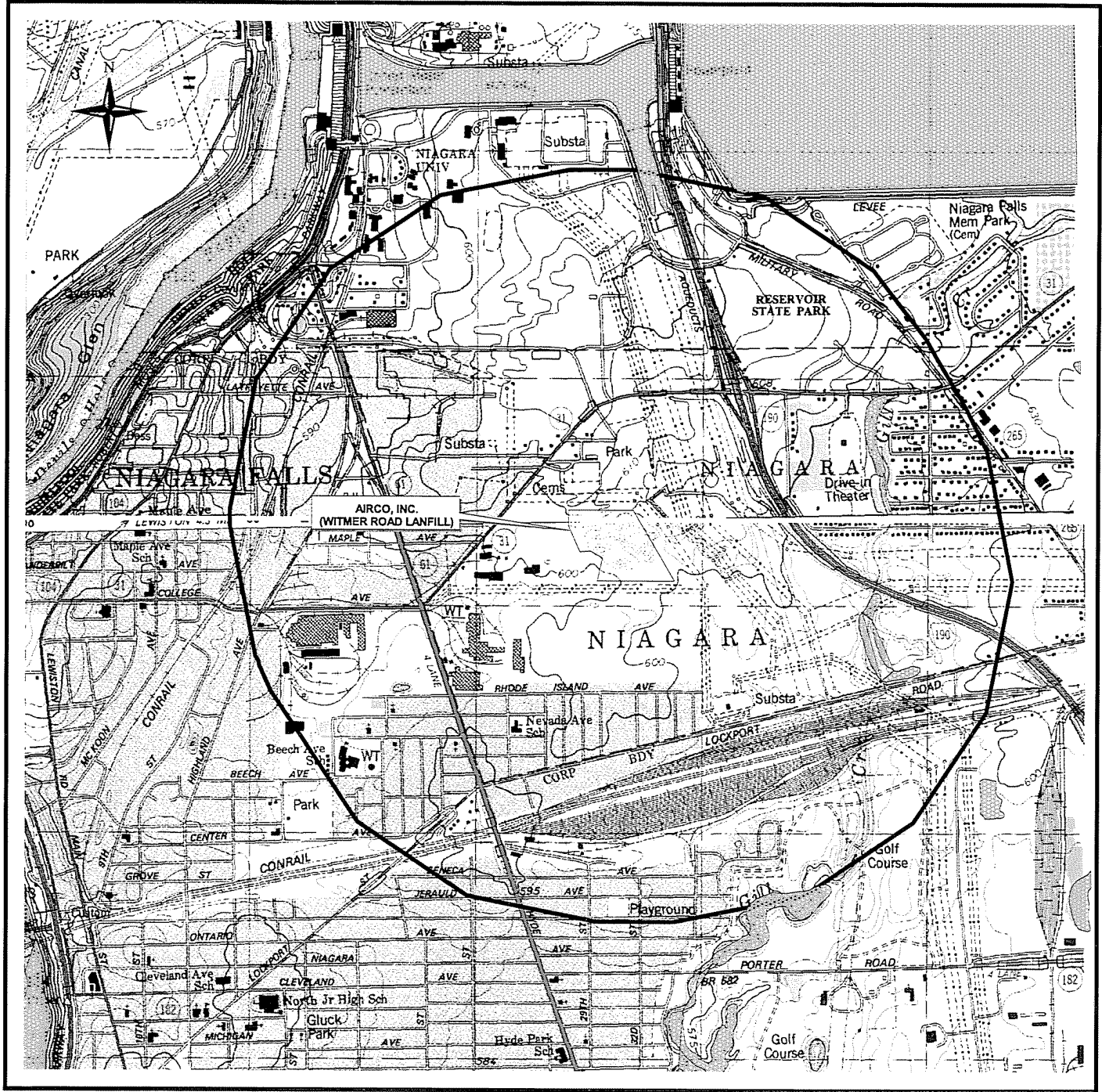
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Attachment A

Location Map for AIRCO, Inc. Witmer Road Landfill

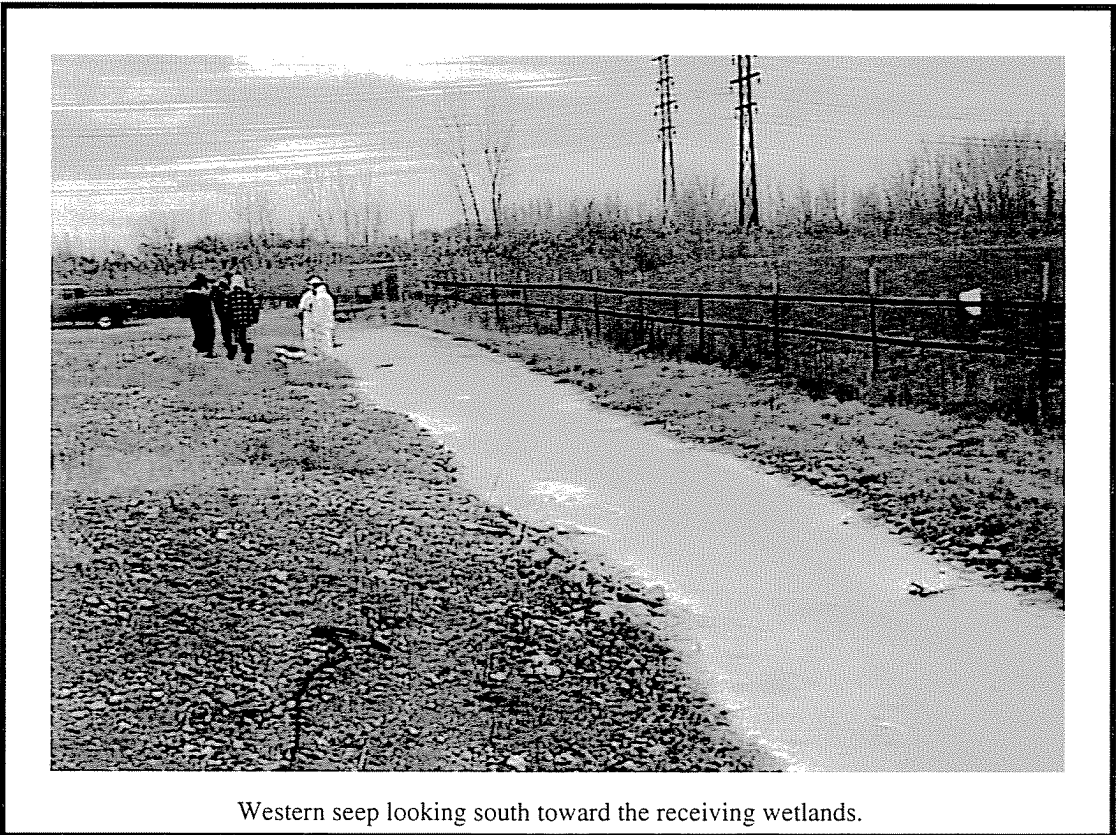
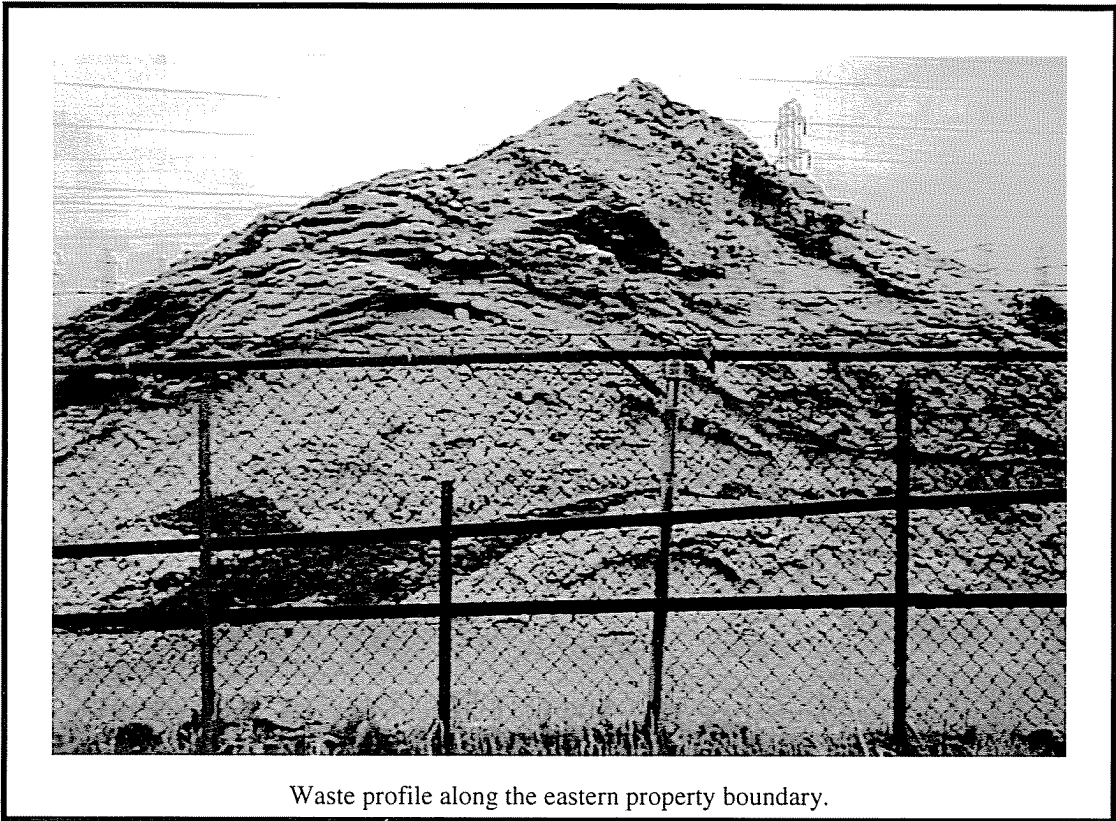


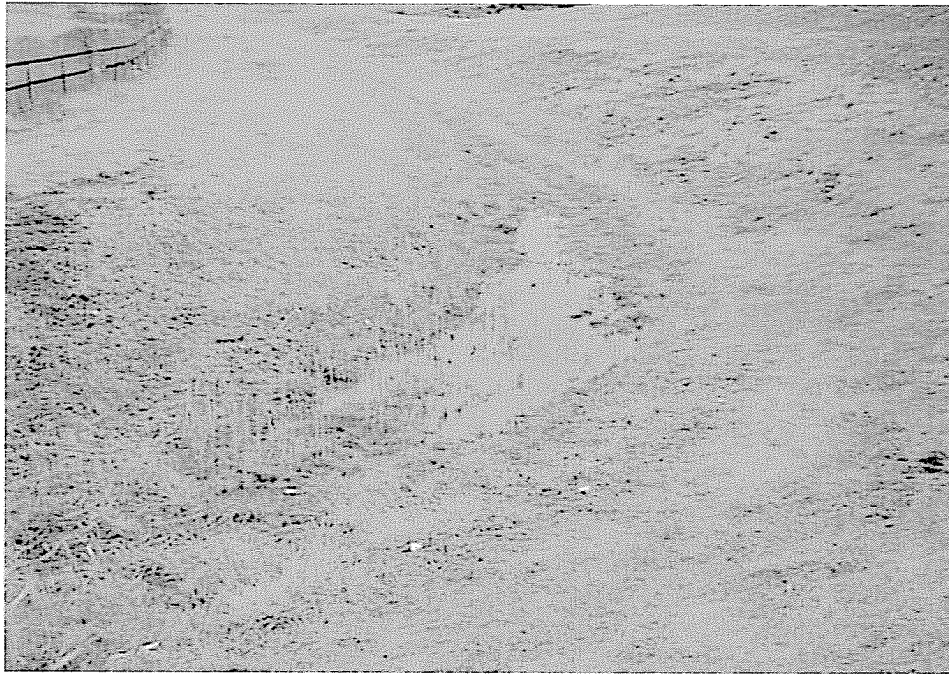
**LOCATION MAP SHOWING AIRCO, INC.
WITMER ROAD LANDFILL AND
NATIONAL WETLAND INVENTORY MAPPED WETLANDS**



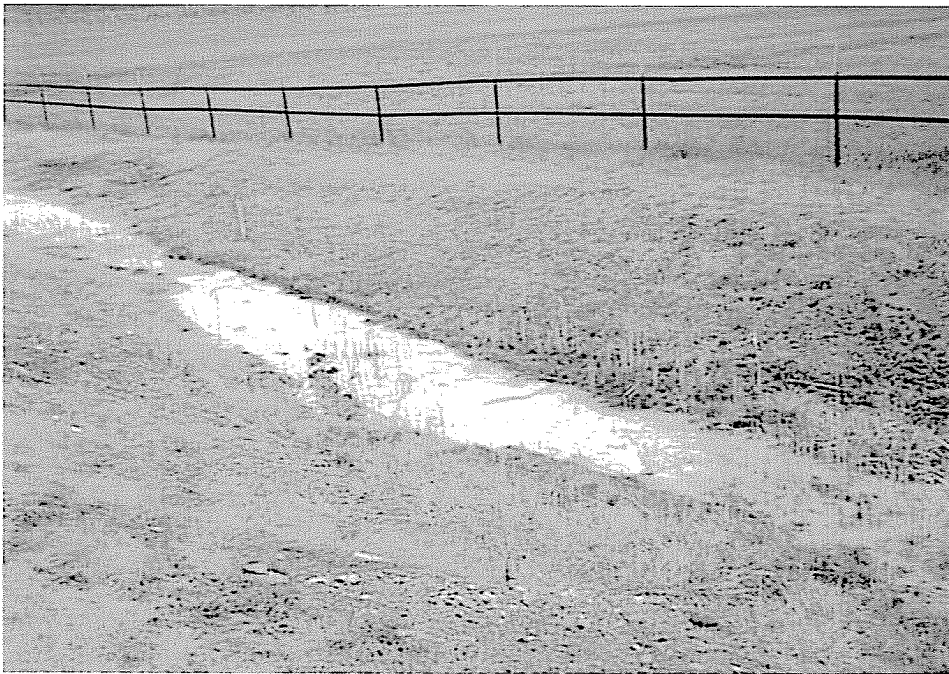
Attachment B

**AIRCO, Inc. Witmer Road Landfill
Photos of Existing Perimeter
Drainage Swale/Wetlands**

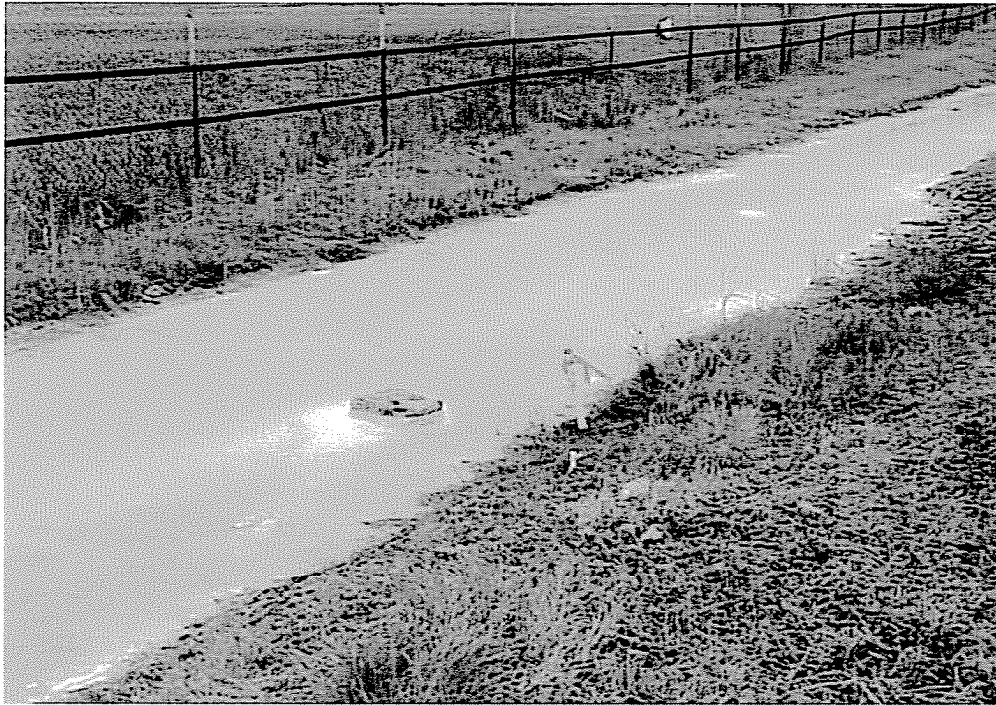




Western seep looking north toward the Niagara Mohawk parcel.



Western seep looking west toward SKW parcel.



Western seep looking northwest toward the SKW parcel.

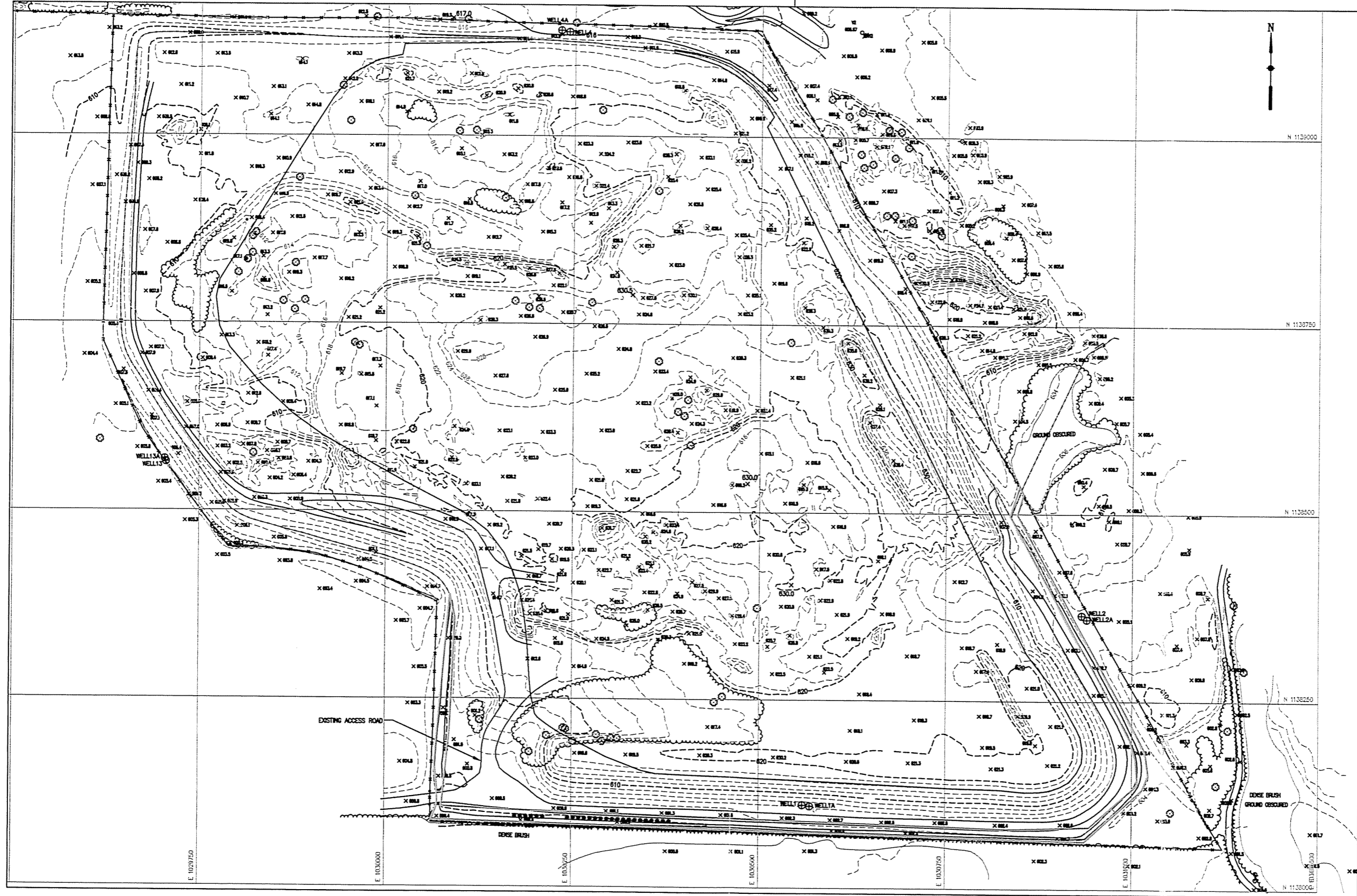


TP-01 in the southern sloped area previously capped.

Attachment C

AIRCO, Inc. Witmer Road Landfill
Selected 60 Percent Design Sheets
Showing Existing Condition (Wetland
Boundary), Proposed Final Grade,
Proposed Perimeter Drainage Swale,
Perimeter Drainage Swale Details,
and Runoff Erosion Control Structure
Details

MATCHLINE SHEET C-1



N 1133000
N 1133750
N 1133500
N 1133250
E 1030000
E 1030250
E 1030500
E 1030750
E 1031000

NO.	DATE	BY	DESCRIPTION

WITMER ROAD LANDFILL CLOSURE
NAGARA FALLS, NEW YORK

EXISTING CONDITIONS PLAN - SOUTH



EA ENGINEERING,
SCIENCE, AND
TECHNOLOGY

Lowton Center
15 Lowton Circle
Sparks, Maryland 21152
(410) 771-4950

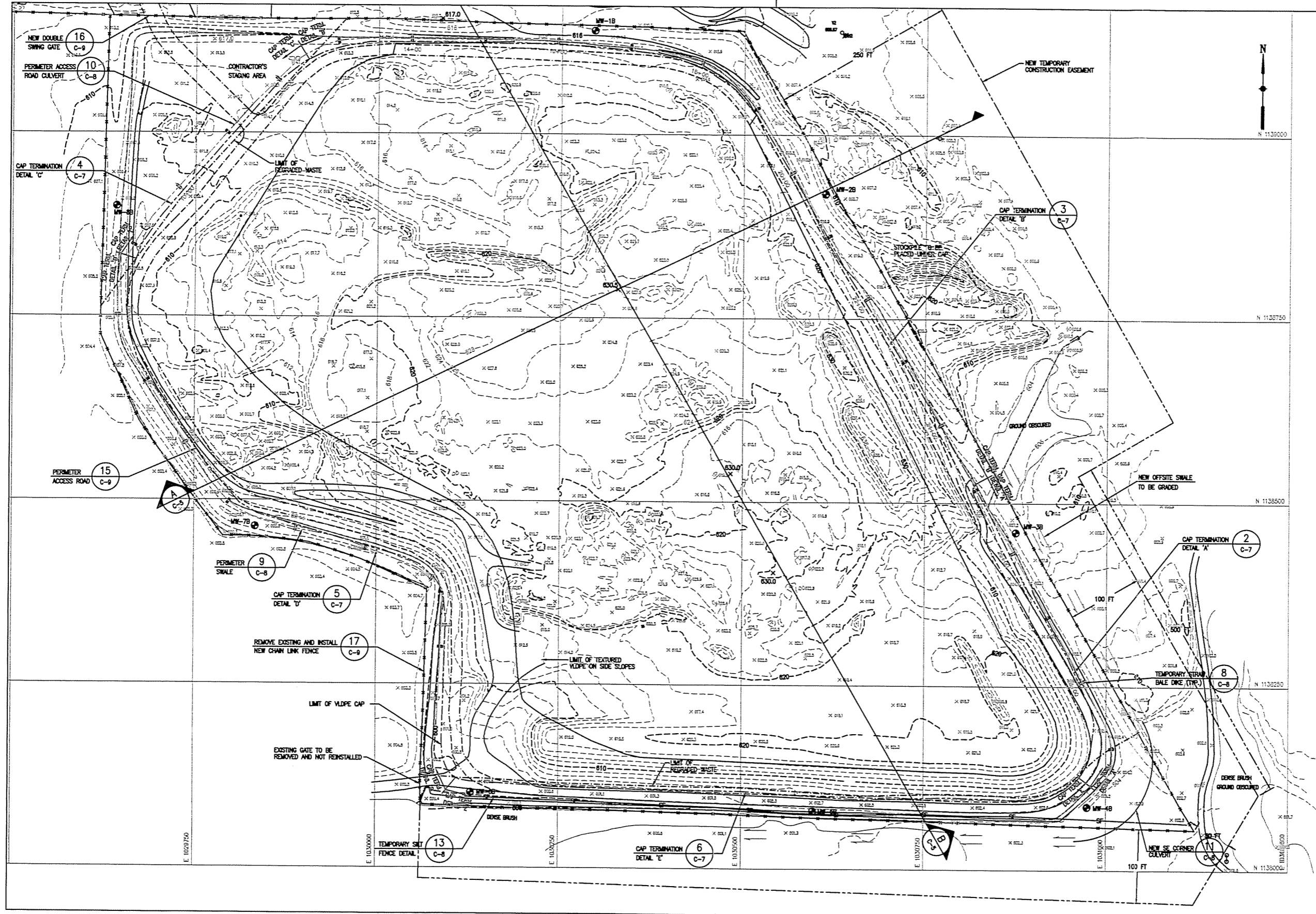
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DRAWN BY	JES
CHECKED BY	MAJ
PROJECT MANAGER	CEM
PROJECT NUMBER	12040.65
SCALE	AS SHOWN
FILE NAME	EXISTING-S
DRAWING NUMBER	C-2
SHEET NUMBER	3 OF 10

WARNING: IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, SECTION 7209, SPECIAL PROVISION 2, FOR ANY PERSON UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR TO ALTER ANY ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ITEM HIS SEAL AND NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

NOTES:
EXISTING CONDITIONS SURVEY PERFORMED BY WEDEL, LOCKPORT, NY IN DECEMBER 1999.
EIGHT EXISTING MONITORING WELLS ARE TO BE ABANDONED IN ACCORDANCE WITH THE "POST-CLOSURE MONITORING AND FACILITY MAINTENANCE PLAN" FOR THE SITE.



60% DESIGN SUBMITTAL



NO.	DATE	BY	DESCRIPTION

WITMER ROAD LANDFILL CLOSURE
 NIAGARA FALLS, NEW YORK
 FINAL CONDITIONS PLAN - SOUTH



EA ENGINEERING,
 SCIENCE, AND
 TECHNOLOGY
 Loveton Center
 15 Loveton Circle
 Sparks, Maryland 21152
 (410) 771-4950

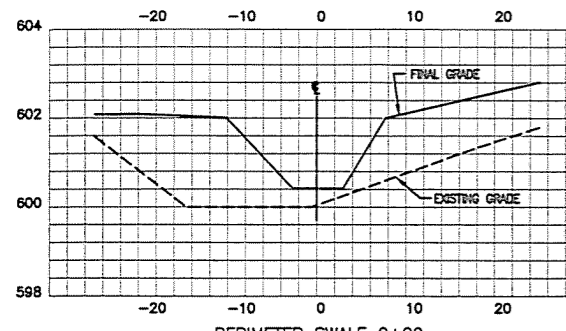
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DRAWING NUMBER	C-4
SHEET NUMBER	5 OF 10

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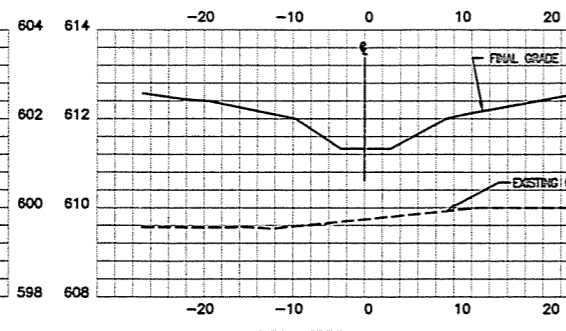
NOTES:
 EXCAVATE WASTE BETWEEN THE PROPERTY LINE AND THE "NEW LIMIT OF WASTE" AND PLACE UNDER THE LANDFILL CAP. REMOVE THE EXISTING WASTE STOCKPILE LOCATED ALONG THE EASTERN PROPERTY BOUNDARY ON NIAGARA MOHAWK'S PROPERTY AND PLACE UNDER THE LANDFILL CAP.
 INSTALL NEW MONITORING WELLS IN ACCORDANCE WITH THE "POST-CLOSURE MONITORING AND FACILITY MAINTENANCE PLAN" FOR THE SITE.



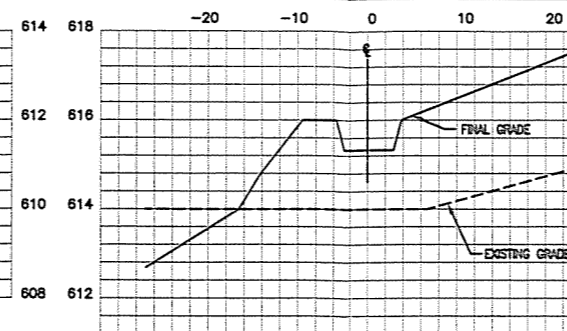
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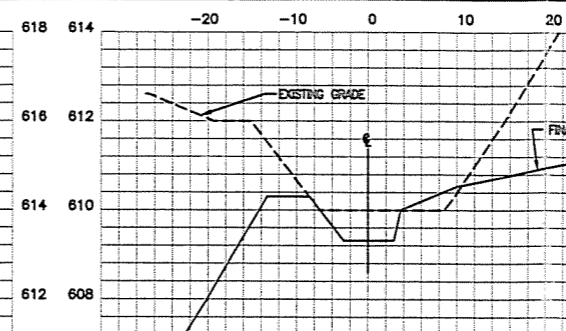
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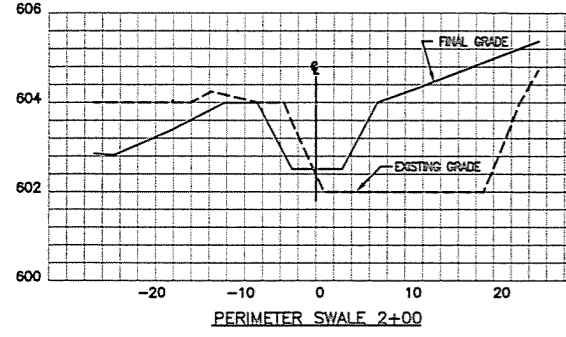
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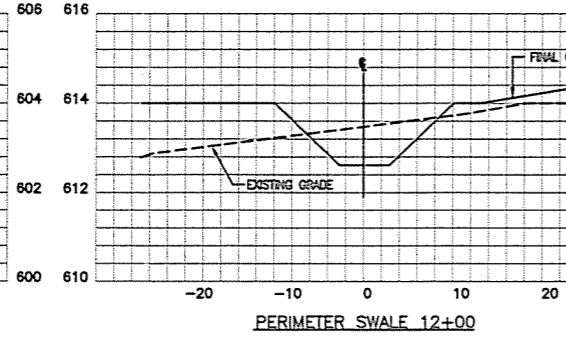
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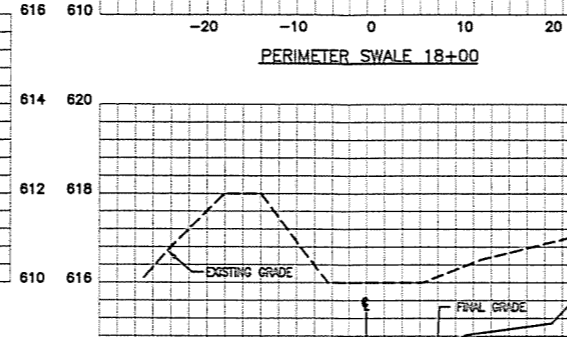
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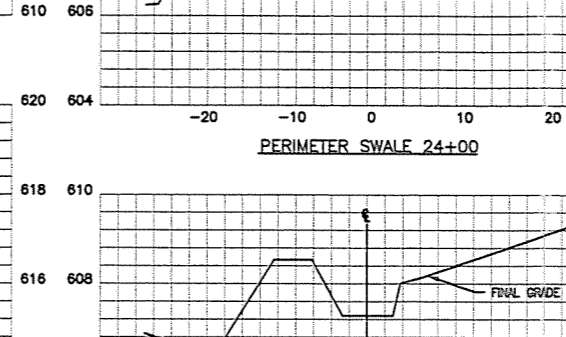
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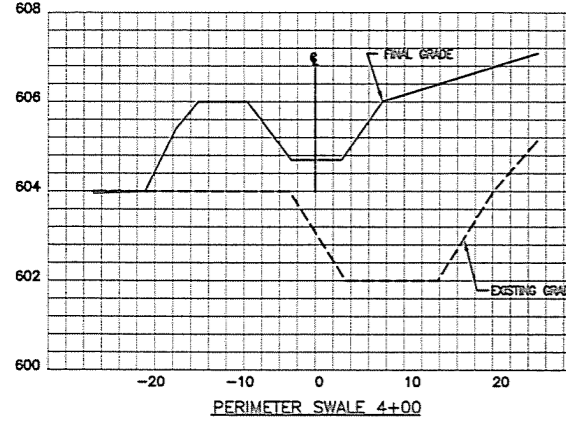
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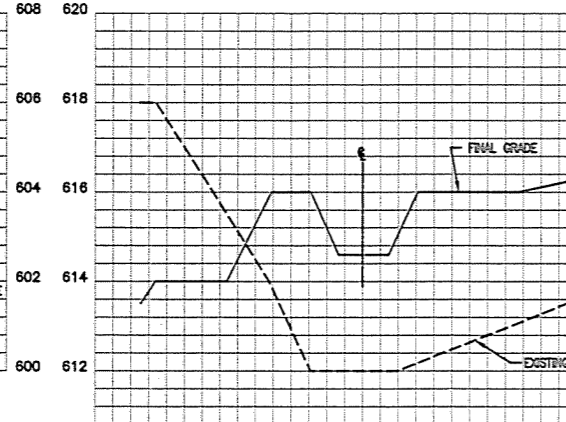
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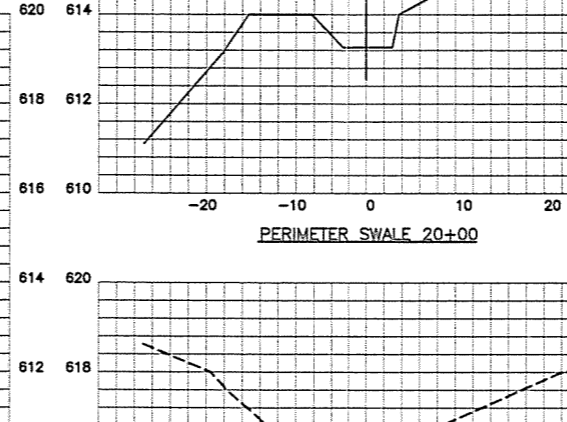
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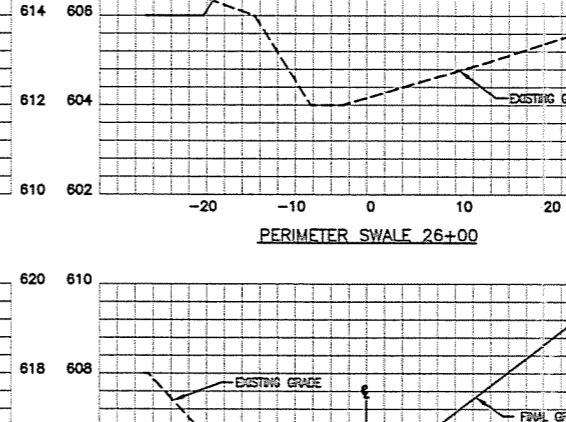
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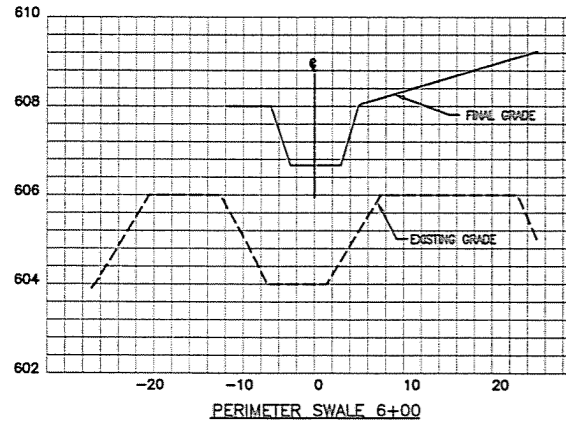
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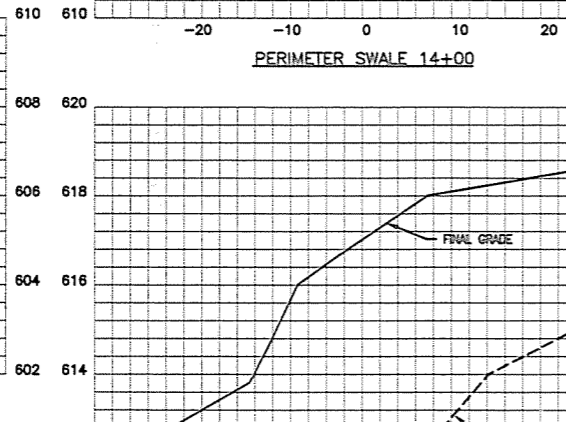
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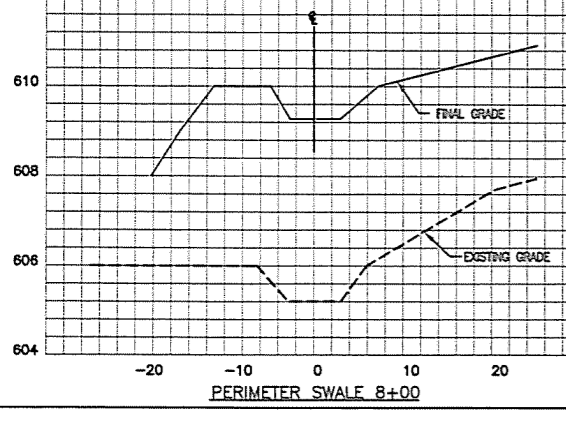
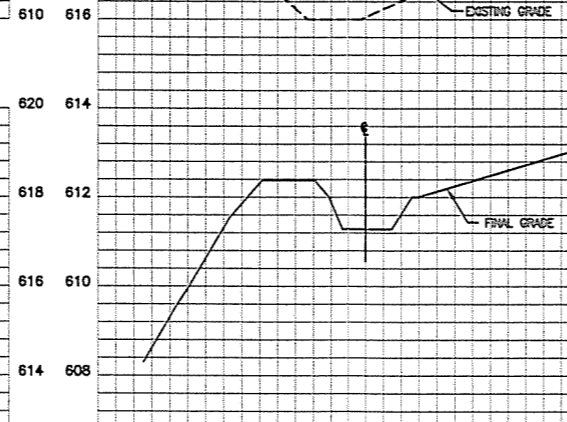
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PERIMETER SWALE 6+00

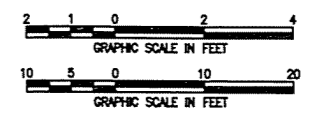


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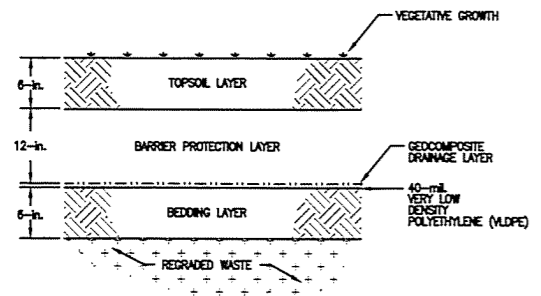
PERIMETER SWALE 8+00

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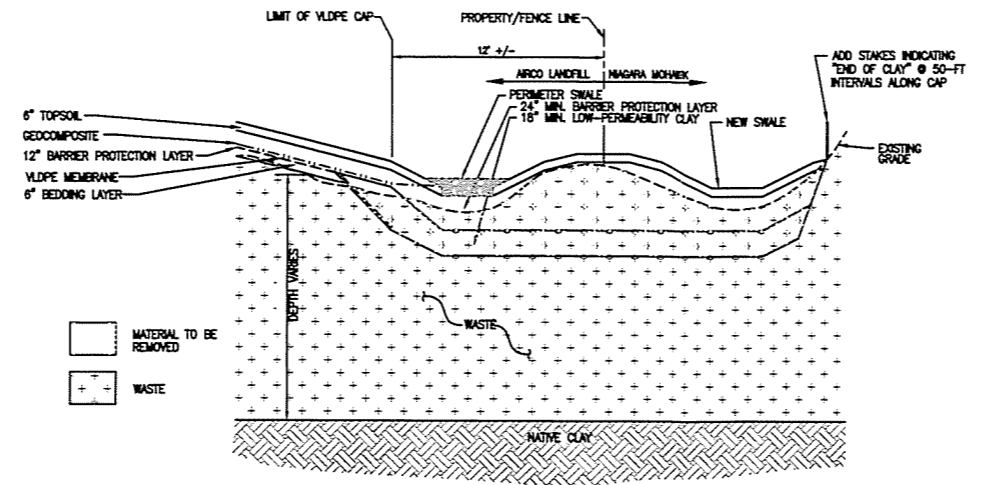


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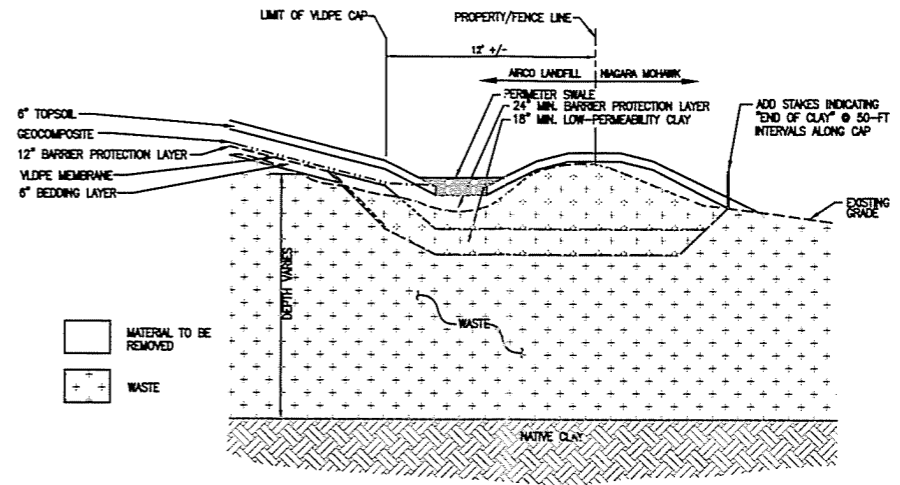
REVISONS	DESCRIPTION	
	BY	
	DATE	
NO.		
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 EA ENGINEERING, SCIENCE, AND TECHNOLOGY Loveton Center 15 Loveton Circle Sparks, Maryland 21152 (410) 771-4950		DATE MARCH 2000 DESIGNED BY DOK DRAWN BY JES CHECKED BY MJG PROJECT NUMBER CEM PROJECT NUMBER 12040.65 SCALE AS SHOWN FILE NAME X-SEC2 DRAWING NUMBER C-6 SHEET NUMBER 7 OF 10



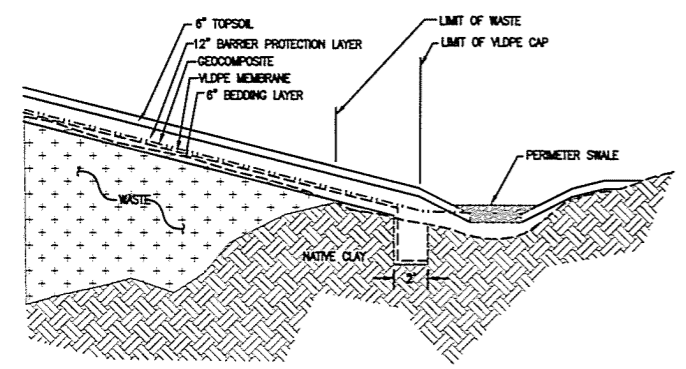
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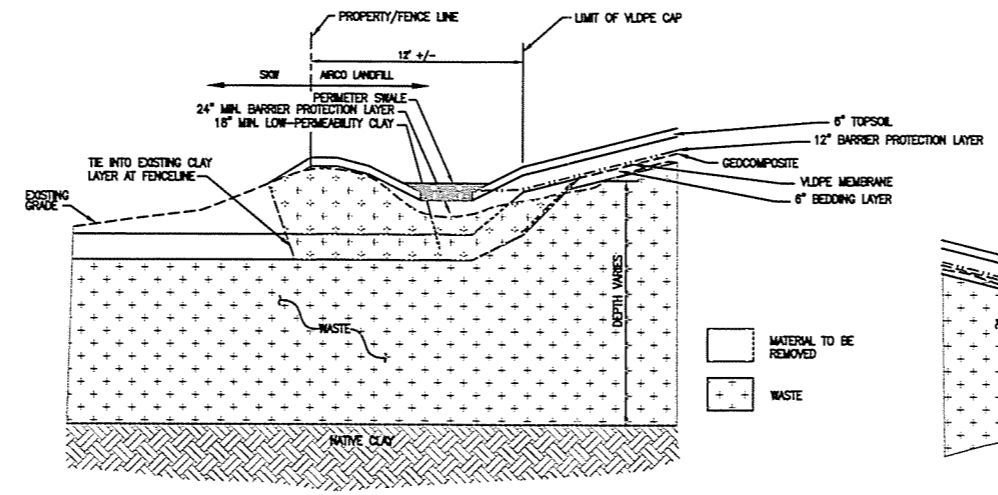
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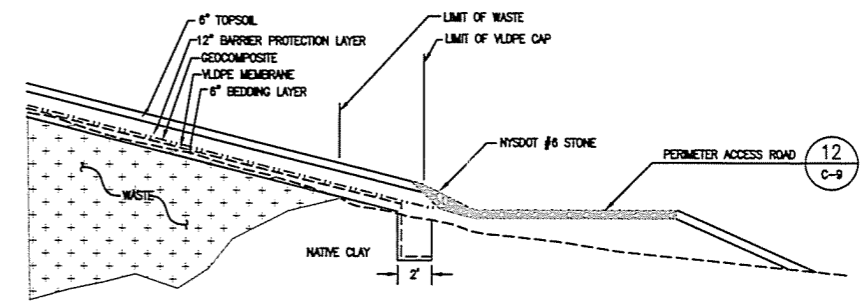
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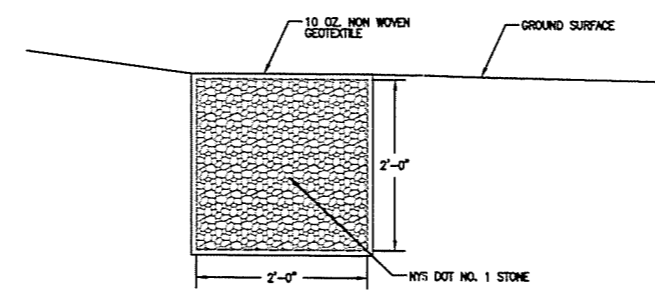
CAP TERMINATION DETAIL 'C' 4
SCALE 1"=5'



CAP TERMINATION DETAIL 'D' 5
SCALE 1"=5'

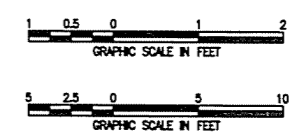


CAP TERMINATION DETAIL 'E' 6
SCALE 1"=5'



TEMPORARY SURFACE WATER CONVEYANCE SYSTEM DETAIL 7
SCALE 1"=1'

NOTE:
WILL BE LOCATED AS NEEDED IN FIELD TO DEMATER CONSTRUCTION AREA.



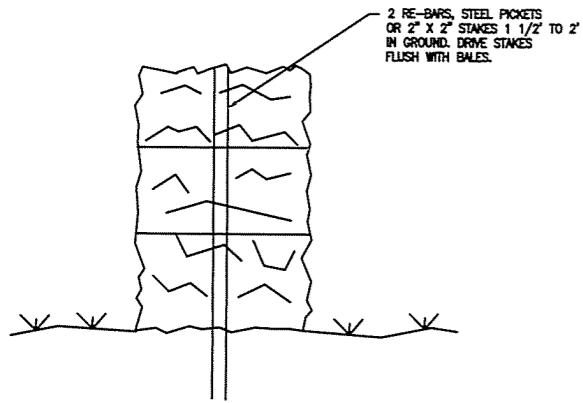
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NO.	DATE	BY	DESCRIPTION

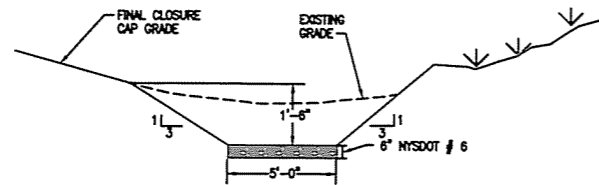
WITMER ROAD LANDFILL CLOSURE NIAGARA FALLS, NEW YORK	
CAP DETAILS	

EA ENGINEERING, SCIENCE, AND TECHNOLOGY Loveton Center 18 Loveton Circle Sparks, Maryland 21152 (410) 771-4950	
DATE	MARCH 2000
DESIGNED BY	DDK
DRAWN BY	NTB
CHECKED BY	MJG
PROJECT MANAGER	CEM
PROJECT NUMBER	1204065
SCALE	AS SHOWN
FILE NAME	DETAIL-1
DRAWING NUMBER	C-7
SHEET NUMBER	8 OF 10

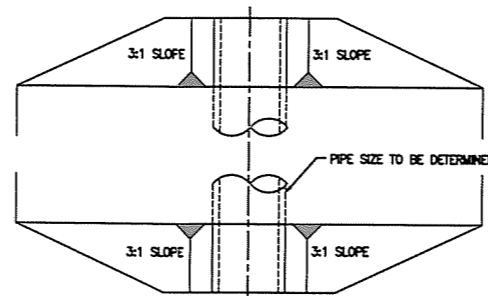
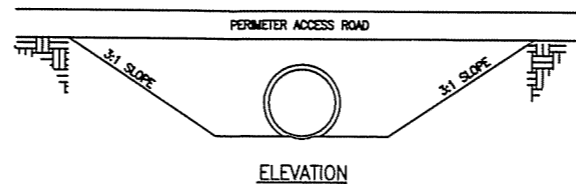


TEMPORARY STRAW BALE DIKE (8)
NOT TO SCALE (C-8)

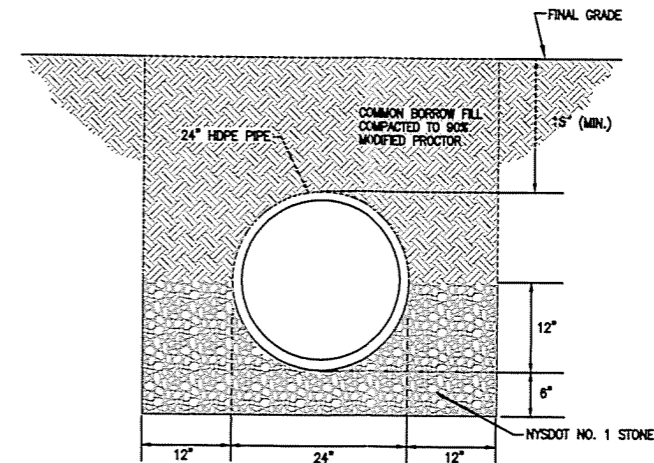
- BALES SHALL BE PLACED WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



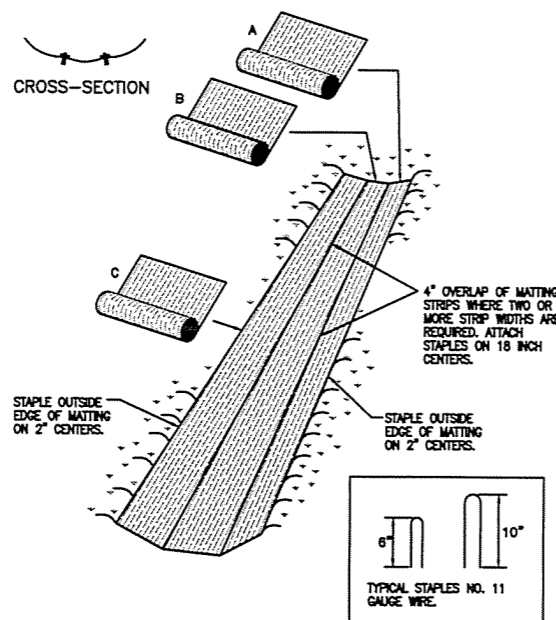
PERIMETER SWALE DETAIL (9)
NOT TO SCALE (C-8)



PERIMETER ACCESS ROAD CULVERT (10)
NOT TO SCALE (C-8)



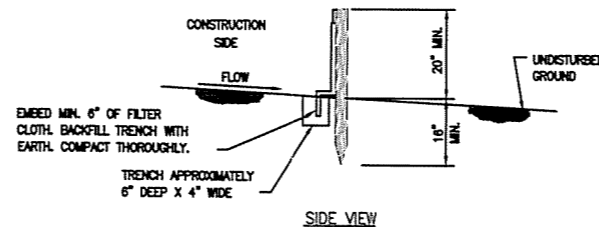
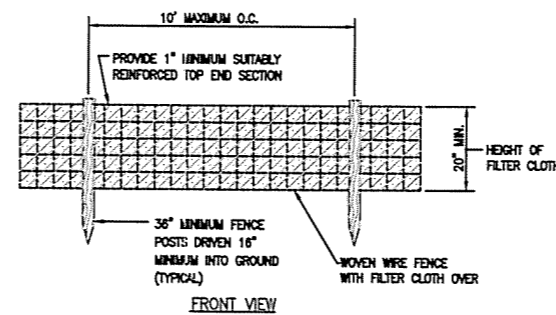
SOUTHEAST CORNER CULVERT (11)
SCALE 1" = 1' (C-8)



EROSION CONTROL MATTING (12)
NOT TO SCALE (C-8)

- CONSTRUCTION SPECIFICATIONS**
- ALL BENCHES, DRAINAGE DITCHES AND SWALES SHALL BE STABILIZED WITH EROSION CONTROL MATTING (HY CURLEX OR APPROVED EQUAL).
 - KEY-IN MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH 6" IN DEPTH. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE CHANNEL CROSS-SECTION SECURE WITH A ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE TRENCH SPACING BETWEEN STAPLES IS 6".
 - STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING BETWEEN STAPLES.
 - BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.
 - STAPLES SHALL BE PLACED 2' APART WITH 4 ROWS FOR EACH STRIP, 2 OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER.
 - WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4". SHIPLAP FASHION. REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
 - THE DISCHARGE END OF THE MATTING LINER SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE FLOW MUST BE KEYED-IN.



TEMPORARY SILT FENCE DETAIL (13)
NOT TO SCALE (C-8)

NOTES:

- FASTEN WOVEN WIRE FENCE TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FASTEN FILTER CLOTH SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
- PERFORM MAINTENANCE AS NEEDED AND REMOVE ERODED SILT WHEN "BULGES" DEVELOP IN THE SILT FENCE.
- REMOVE SILT FENCE AFTER FINAL GRADING IS COMPLETED.

MATERIALS:

POSTS:
STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FENCE:
WOVEN WIRE, 14 GAUGE 6" MAX. MESH OPENING

FILTER CLOTH:
FILTER X, STABILINKA T140N, MIRAFI 100X, OR APPROVED EQUAL.

PREFABRICATED UNIT:
GEOPAF, ENVIROFENCE, OR APPROVED EQUAL.

EROSION AND SEDIMENT CONTROL NOTES

- INITIAL DISTURBANCE SHALL BE LIMITED TO THAT NECESSARY TO GAIN ENTRANCE TO THE SITE TO INSTALL THE SEDIMENT CONTROLS.
- ALL EXCAVATED MATERIALS SHALL BE PLACED ON A HIGH ELEVATION OF THE SITE, WHEN POSSIBLE AND CONFINED TO AN AREA WHERE IT WILL NOT OBSTRUCT THE NORMAL COURSE OF DRAINAGE.
- CONTINUOUS INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES IS MANDATORY.
- ANY SEDIMENT CONTROL DEVICES DISTURBED DURING CONSTRUCTION MUST BE RESTORED IMMEDIATELY.
- ALL POINT OF INGRESS AND EGRESS SHALL BE PROTECTED TO MINIMIZE TRACKING OF MUD ON TO PUBLIC RIGHTS-OF-WAY.



60% DESIGN SUBMITTAL

REVISIONS	DESCRIPTION
NO.	DATE
BY	

WITMER ROAD LANDFILL CLOSURE
NIAGARA FALLS, NEW YORK

EROSION AND SEDIMENT CONTROL DETAILS



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