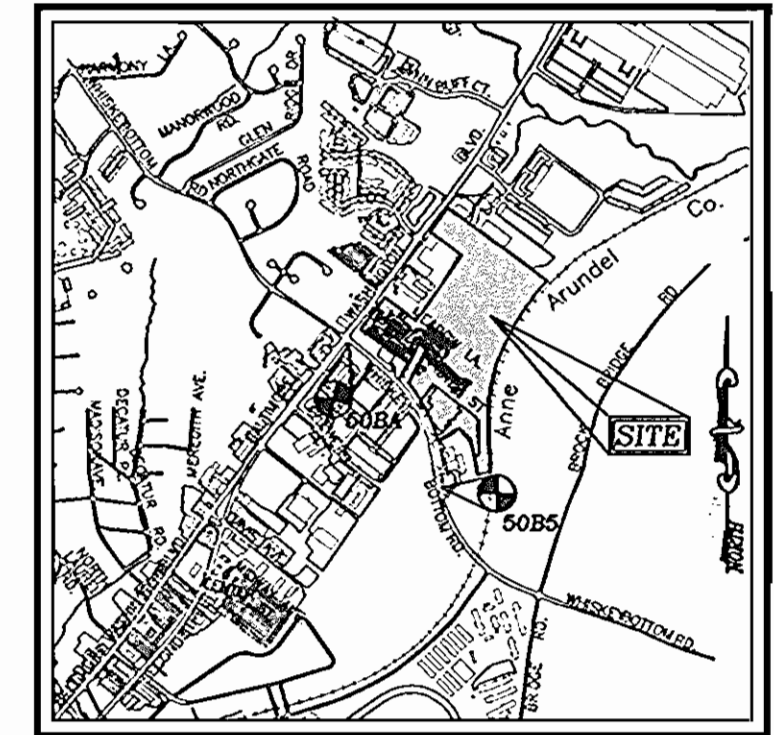


GENERAL NOTES

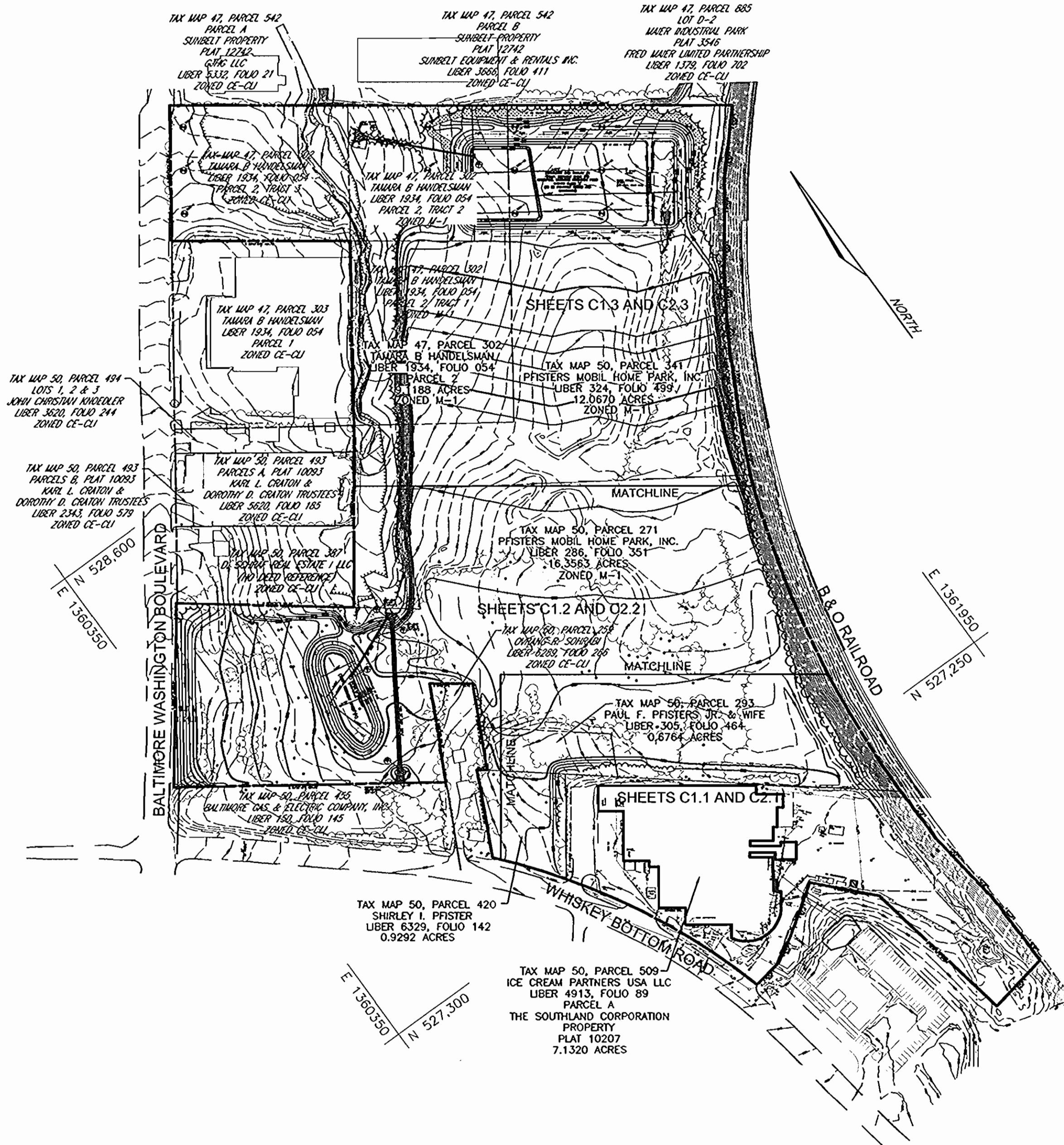
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 - MISS UTILITY: 1-800-257-7777
 - BELL ATLANTIC TELEPHONE CO.: 725-9976
 - HOWARD COUNTY BUREAU OF UTILITIES: 313-2366
 - VERIZON CABLE LOCATION DIVISION: 393-3553
 - B.G.&E. CO. CONTRACTOR SERVICES: 850-4620
 - B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 787-4620
 - STATE HIGHWAY ADMINISTRATION: 531-5533
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE WORKING DAYS PRIOR TO THE START OF WORK.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAM, FLOODPLAIN OR THEIR REQUIRED BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
- THE SUBJECT PROPERTY IS ZONED M-2 PER THE FEBRUARY 2, 2004 COMPREHENSIVE ZONING PLAN.
- COORDINATES AND ELEVATIONS ARE BASED ON HOWARD COUNTY MONUMENT NO'S. 508A AND 508B.
- THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES DATED APRIL 2004.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL PHOTOGRAMMETRIC SURVEY PERFORMED BY POTOMAC AERIAL SURVEYS DATED MARCH 2004.
- EXISTING UTILITIES ARE BASED ON HOWARD COUNTY UTILITY PLANS.
- A TRAFFIC STUDY WILL BE PROVIDED WITH THE BUILDING SITE DEVELOPMENT PLAN.
- THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED MAY 2004.
- THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS INC., DATED MAY 2004 AND JUNE 2004.
- NO BURIAL GROUNDS OR CEMETERIES ARE LOCATED ON THIS PROPERTY.
- LANDSCAPING WILL BE PROVIDED WITH THE BUILDING SITE DEVELOPMENT PLAN AND WILL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 16.124 OF THE HOWARD COUNTY CODE.
- THE FOREST CONSERVATION PLAN WILL BE PROVIDED WITH THE BUILDING SITE DEVELOPMENT PLAN AND WILL COMPLY WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE.
- PERMANENT STORMWATER MANAGEMENT REQUIREMENTS FOR THIS SITE WILL BE FULFILLED THROUGH THE USE OF GRAVEL TRENCHES AND A MICROPOOL EXTENDED DETENTION POND. THE GRAVEL TRENCHES WILL BE LOCATED UNDER THE PROPOSED PARKING LOTS AND WILL BE USED TO PROVIDE RECHARGE VOLUME FOR THE ENTIRE SITE. THE WATER QUALITY VOLUME AND THE CHANNEL PROTECTION VOLUME WILL BE PROVIDED IN THE MICROPOOL EXTENDED DETENTION POND.
- ACCESS TO PUBLIC WATER HAS BEEN PROVIDED UNDER CONTRACT NO. 1-W. ACCESS TO PUBLIC SEWER HAS BEEN PROVIDED UNDER CONTRACT NO. 649-S.
- ALL EXISTING STRUCTURES, WITH THE EXCEPTION OF THE EXISTING NESTLE'S FACILITY ON PARCEL A, SHALL BE CLEARED FROM THE SITE PRIOR TO THE START OF MASS GRADING. REFER TO THE DEMOLITION PLAN SHEETS FOR SPECIFIC STRUCTURES TO BE REMOVED.
- AT LEAST ONE WELL REMAINS ONSITE FROM USE OF THE PROPERTY PRIOR TO CONNECTION TO THE PUBLIC WATER. PROPOSED GRADING COULD POTENTIALLY IMPACT THIS AND ANY OTHER WELLS COULD REMAIN ONSITE. DOCUMENTATION OF PROPER ABANDONMENT/SEALING OF ALL WELLS IS REQUIRED PRIOR TO SUBMISSION OF ORIGINALS FOR SIGNATURE.
- GRADING MAY ENCOUNTER AN INCOMPLETELY ABANDONED SEPTIC SYSTEM WHICH SERVED ANY OF THE VARIOUS TRAILERS PRIOR TO PUBLIC SEWER CONNECTION. CONTRACTORS SHOULD BE PREPARED TO PROPERLY PUMP AND COLLAPSE ANY SEPTIC TANKS OR DRYWELLS IF ENCOUNTERED.

DREYERS GRAND ICE CREAM MASS GRADING SITE DEVELOPMENT PLAN

BENCHMARKS			
NO.	NORTHING	EASTING	ELEVATION
508A	527,561.678'	1,359,772.604'	249.737'
508B	524,999.375'	1,357,925.748'	178.195'



VICINITY MAP
SCALE: 1"=2000'



LOCATION MAP
SCALE: 1"=200'

FOREST CONSERVATION WORKSHEET	
NET TRACT AREA	ACRES
A. TOTAL TRACT AREA	48.49
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.44
C. OTHER DEDUCTIONS	--
D. NET TRACT AREA	48.05
ZONING USE CATEGORY: RESIDENTIAL-SUBURBAN	
LAND USE CATEGORY	
E. AFFORESTATION MINIMUM (15% X D)	7.21
F. CONSERVATION THRESHOLD (15% X D)	7.21
EXISTING FOREST COVER	
G. EXISTING FOREST ON NET TRACT AREA	29.62
H. FOREST AREA ABOVE CONSERVATION THRESHOLD	22.41
BREAK-EVEN POINT	
I. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION	11.69
J. CLEARING PERMITTED WITHOUT MITIGATION	17.93
PROPOSED FOREST CLEARING	
K. FOREST AREAS TO BE CLEARED	21.18
L. FOREST AREAS TO BE RETAINED	8.44
PLANTING REQUIREMENTS	
M. REFORESTATION FOR CLEARING ABOVE THRESHOLD	5.30
N. REFORESTATION FOR CLEARING BELOW THE THRESHOLD	0
P. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD	1.23
Q. TOTAL REFORESTATION REQUIRED	0
R. TOTAL AFFORESTATION REQUIRED	0
S. TOTAL REFORESTATION AND AFFORESTATION REQUIREMENT	4.07

SITE ANALYSIS DATA CHART			
TOTAL PROJECT AREA 48.49 AC	AREA OF PLAN SUBMISSION 48.49 AC	LIMIT OF DISTURBED AREA 33.0 AC	PRESENT ZONING M-2
PROPOSED USE COMMERCIAL	TYPE OF UNIT N/A	TOTAL UNITS ALLOWED N/A	TOTAL UNITS PROPOSED N/A
OPEN SPACE REQUIRED N/A	OPEN SPACE PROVIDED N/A	RECREATION OPEN SPACE REQUIRED N/A	RECREATION OPEN SPACE PROVIDED N/A
DPZ FILE REF.: N/A	DEED REF.: 324/499, 6329/142, 4913/89, 286/351, 1934/54		

PERMIT INFORMATION CHART					
SUBMISSION NAME N/A	SECTION/AREA N/A	PARCEL NUMBERS 509, 271, 341, 420, 302 & 293			
PLAT REF. 10207	TAX MAP 47 & 50	GRID NO. 5	ZONE M-2	ELECT. DIST. 6TH	CENSUS TR. 6069.02
WATER CODE: C04	SEWER CODE: 7101800				

SHEET INDEX	
DESCRIPTION	SHEET NO.
COVER SHEET	C0.1
DEMOLITION PLAN	C1.1
DEMOLITION PLAN	C1.2
DEMOLITION PLAN	C1.3
GRADING AND SEDIMENT EROSION CONTROL PLAN	C2.1
GRADING AND SEDIMENT EROSION CONTROL PLAN	C2.2
GRADING AND SEDIMENT EROSION CONTROL PLAN	C2.3
SEDIMENT EROSION CONTROL DETAILS	C6.1
STORMWATER MANAGEMENT DETAILS	C6.2
STORMWATER MANAGEMENT DETAILS	C6.3
STORMWATER MANAGEMENT DETAILS	C6.4
FOREST STAND DELINEATION	L1.1
FOREST STAND DELINEATION DETAILS AND NOTES	L1.2

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/22/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 10/25/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 10/25/04
DIRECTOR DATE



OWNERS
ICE CREAM PARTNERS USA, L.L.C. 30003 BAINBRIDGE ROAD SOLON, OHIO 44139
NESTLE ICE CREAM, INC. 5929 COLLEGE AVE. OAKLAND, CA 94618

DEVELOPER
NESTLE ICE CREAM, INC. 5929 COLLEGE AVE. OAKLAND, CA 94618

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MARYLAND 21043
TEL: 410.461.7666 FAX: 410.461.8961

REL. DATE BY APP. RELEASED FOR

0909 WHISKEY BOTTOM ROAD
LAUREL, MD 20723

Dreyers

COVER SHEET

THE DENNIS GROUP, LLC
PLANNING • ENGINEERING • CONSTRUCTION MANAGEMENT

1391 MAIN STREET
SPRINGFIELD, MASSACHUSETTS 01103
413-787-1785, FAX 413-787-1786

136 SOUTH MAIN STREET
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801-531-8585, FAX 801-531-8586

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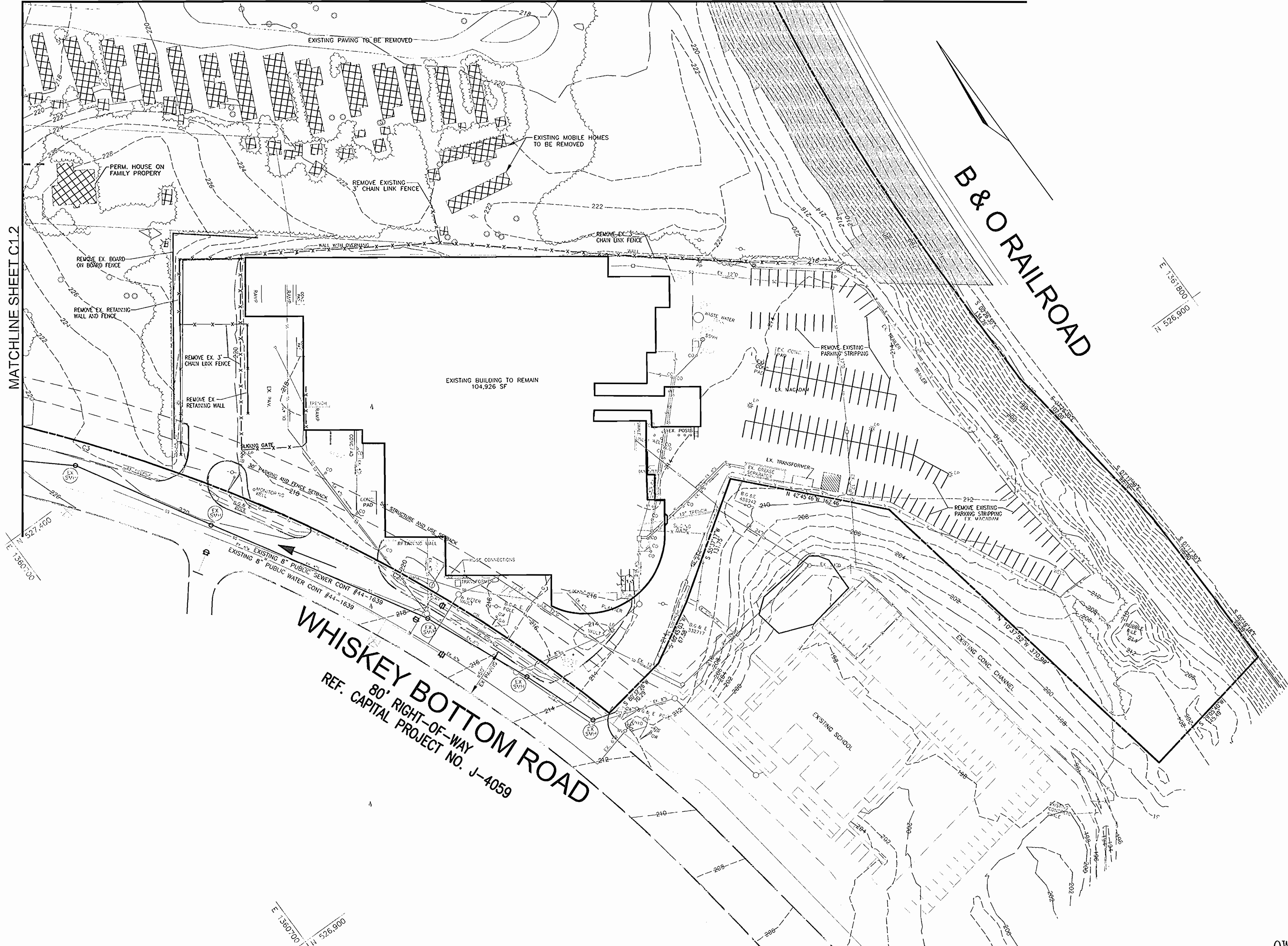
DRAWING NO.
C0.1

HO. CO. DPZ SHEET:
1 OF 13

SDP-04-144

MATCHLINE SHEET C1.2

LEGEND	
---200---	EXISTING 2 FT CONTOUR
---200---	EXISTING 10 FT CONTOUR
---	EXISTING TREELINE
[Cross-hatched box]	EXISTING STRUCTURE TO BE REMOVED
[Diagonal hatched box]	EXISTING UTILITY EASEMENT
[Stippled box]	AREA OF 15 TO 24.9 PERCENT SLOPES
[Dotted box]	AREA OF 25 PERCENT OR GREATER SLOPES



MATCHLINE SHEET C1.2

WHISKEY BOTTOM ROAD
 80' RIGHT-OF-WAY
 REF. CAPITAL PROJECT NO. J-4059

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/22/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 10/25/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 1/23/04
 DIRECTOR DATE



OWNERS
 ICF CREAM PARTNERS USA, L.P. NESTLE ICE CREAM, INC.
 30003 BARNBRIDGE ROAD SOLON, OHIO 44159 5929 COLLEGE AVE. OAKLAND, CA 94618

DEVELOPER
 NESTLE ICE CREAM, INC.
 5929 COLLEGE AVE. OAKLAND, CA 94618

PFSTERS MOBILE HOME PARK, INC.
 c/o NESTLE ICE CREAM, INC.
 1 PINE LANE LAUREL, MD 20723

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 TEL: 410.461.7666 FAX: 410.461.8961

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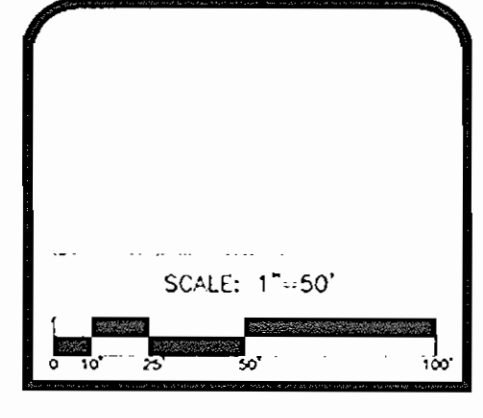
9090 WHISKEY BOTTOM ROAD
 LAUREL, MD 20723

DEMOLITION PLAN

THE DENNIS GROUP, LLC
 PLANNING • ENGINEERING • CONSTRUCTION MANAGEMENT

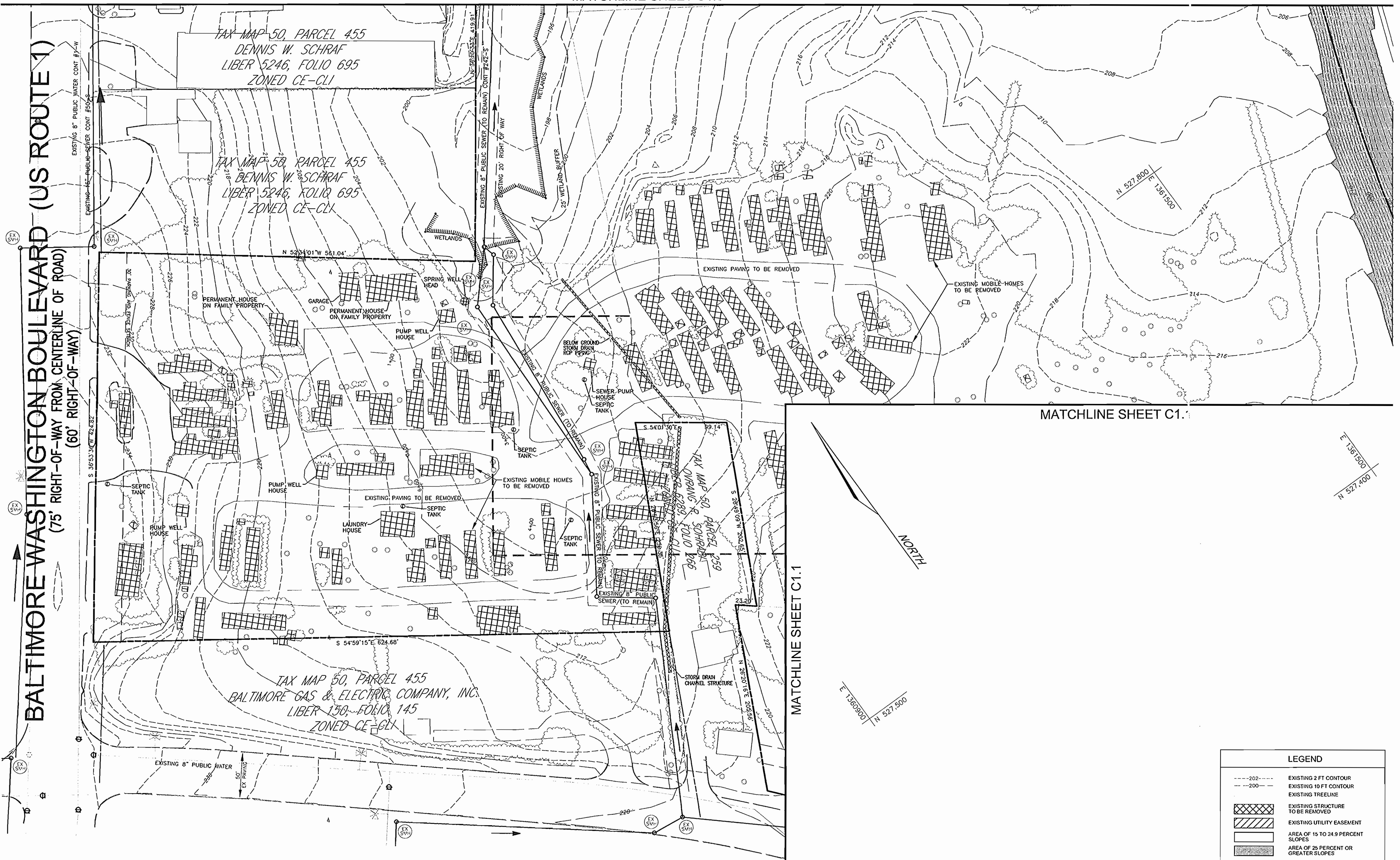
1391 MAIN STREET
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 413-787-1785 • FAX: 413-787-1786

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DRAWING NO.
C.1.1
 HO. CO. DP7 SHEET:
 2 OF 13



BALTIMORE WASHINGTON BOULEVARD (US ROUTE 1)
 (75' RIGHT-OF-WAY FROM CENTERLINE OF ROAD)
 (60' RIGHT-OF-WAY)

TAX MAP 50, PARCEL 455
 DENNIS W. SCHRAF
 LIBER 5246, FOLIO 695
 ZONED CE-CL1

TAX MAP 58, PARCEL 455
 DENNIS W. SCHRAF
 LIBER 5246, FOLIO 695
 ZONED CE-CL1

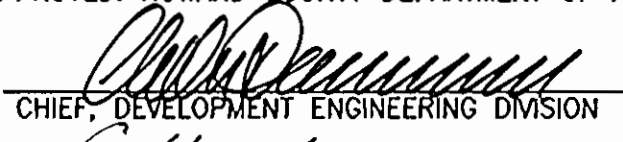
TAX MAP 50, PARCEL 455
 BALTIMORE GAS & ELECTRIC COMPANY, INC.
 LIBER 150, FOLIO 145
 ZONED CE-CL1

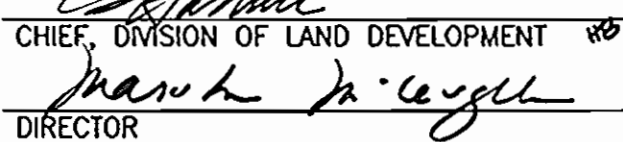
MATCHLINE SHEET C1.1


MATCHLINE SHEET C1.1

LEGEND	
---202---	EXISTING 2 FT CONTOUR
---200---	EXISTING 10 FT CONTOUR
- - - - -	EXISTING TREELINE
[Cross-hatched box]	EXISTING STRUCTURE TO BE REMOVED
[Diagonal lines box]	EXISTING UTILITY EASEMENT
[White box]	AREA OF 15 TO 24.9 PERCENT SLOPES
[Stippled box]	AREA OF 25 PERCENT OR GREATER SLOPES

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 10/22/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

 10/22/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

 10/22/04
 DIRECTOR DATE



OWNERS
 ICE CREAM PARTNERS USA, I.L.C. 30003 BANBRIDGE ROAD SOLON, OHIO 44139
 NESTLE ICE CREAM, INC. 5929 COLLEGE AVE. OAKLAND, CA 94618
 PFISTERS MOBILE HOME PARK, INC. c/o NESTLE ICE CREAM, INC. 1 PINE LANE LAUREL, MD 20723

DEVELOPER
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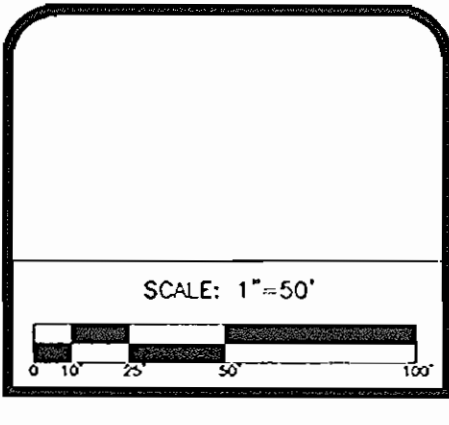
9090 WHISKEY BOTTOM ROAD
 LAUREL, MD 20723

DEMOLITION PLAN

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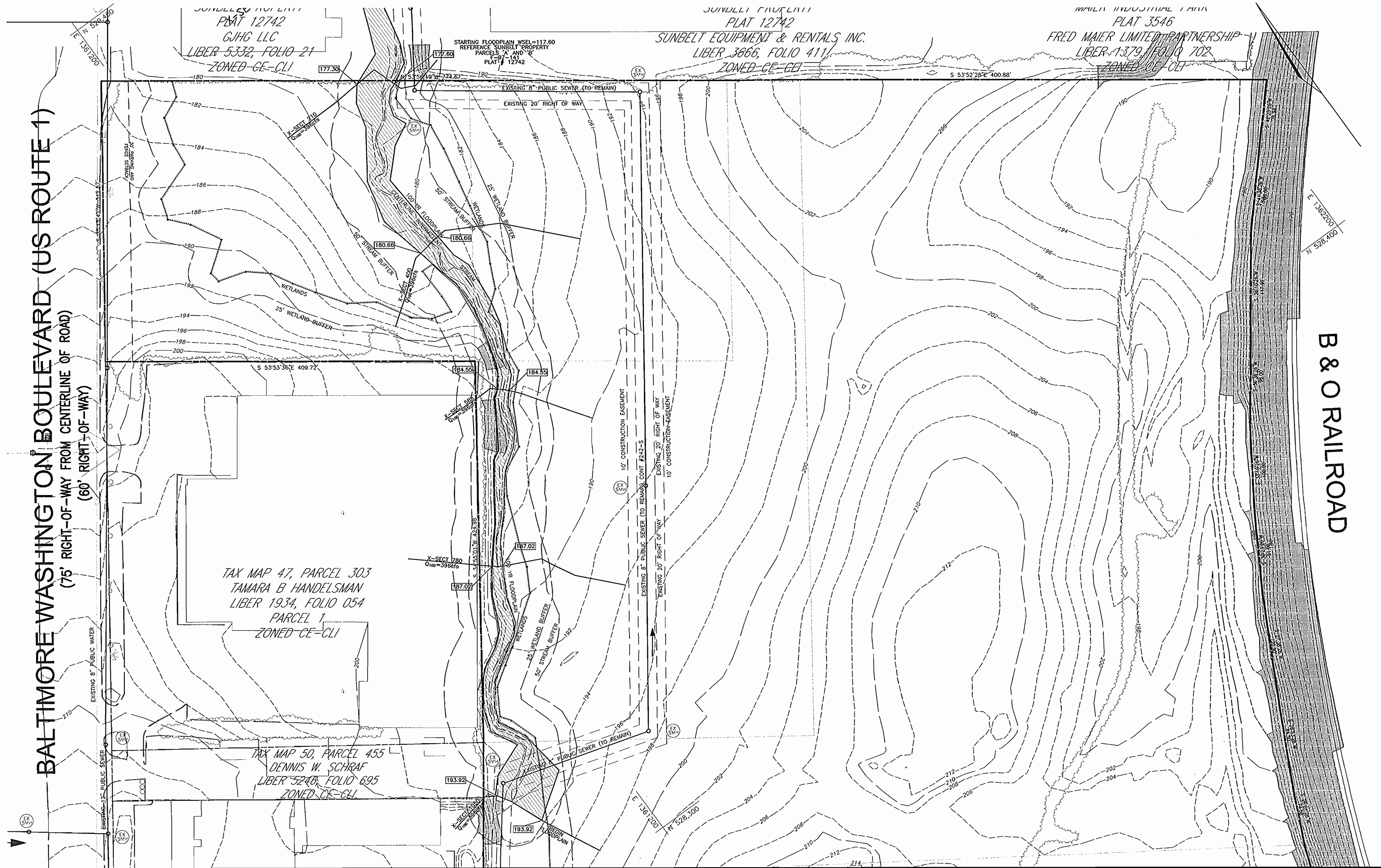


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DRAWING NO.
C.1.2
 HO. CO. DPZ SHEET:
 3 OF 13

BALTIMORE WASHINGTON BOULEVARD (US ROUTE 1)
 (75' RIGHT-OF-WAY FROM CENTERLINE OF ROAD)
 (60' RIGHT-OF-WAY)

B & O RAILROAD



SUNBELT INDUSTRIAL PLANT
 PLAT 12742
 GJHG LLC
 LIBER 5332, FOLIO 21
 ZONED CE-CL1

SUNBELT INDUSTRIAL PLANT
 PLAT 12742
 SUNBELT EQUIPMENT & RENTALS INC.
 LIBER 3666, FOLIO 411
 ZONED CE-CE1

WALTON INDUSTRIAL PLANT
 PLAT 3546
 FRED MAIER LIMITED PARTNERSHIP
 LIBER 1379, FOLIO 702
 ZONED CE-CL1

TAX MAP 47, PARCEL 303
 TAMARA B HANDELSMAN
 LIBER 1934, FOLIO 054
 PARCEL 1
 ZONED CE-CL1

TAX MAP 50, PARCEL 455
 DENNIS W. SCHRAF
 LIBER 5240, FOLIO 695
 ZONED CE-CL1

MATCHLINE SHEET C1.2

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/22/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 10/23/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 [Signature] 10/23/04
 DIRECTOR DATE



OWNERS
 ICE CREAM PARTNERS USA, L.L.C. NESTLE ICE CREAM, INC.
 3000'S BARNBRIDGE ROAD 5929 COLLEGE AVE.
 SOLON, OHIO 44139 OAKLAND, CA 94618

DEVELOPER
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 5929 COLLEGE AVE.
 OAKLAND, CA 94618

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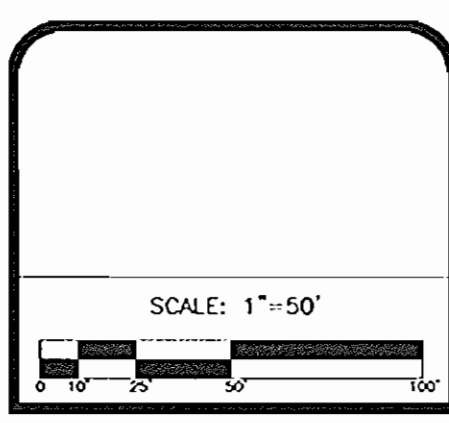
9090 WHISKEY BOTTOM ROAD
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DEMOLITION PLAN

THE DENNIS GROUP, LLC
 PLANNING • ENGINEERING • CONSTRUCTION MANAGEMENT

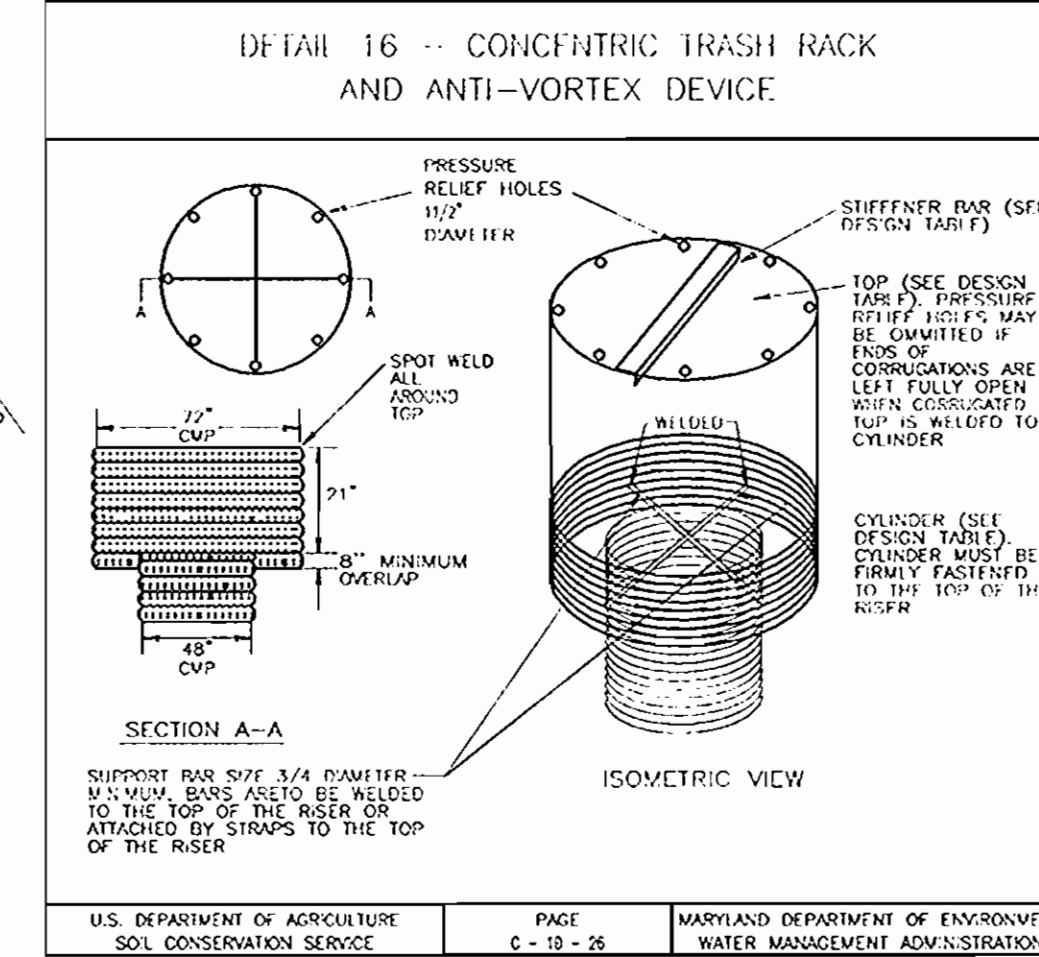
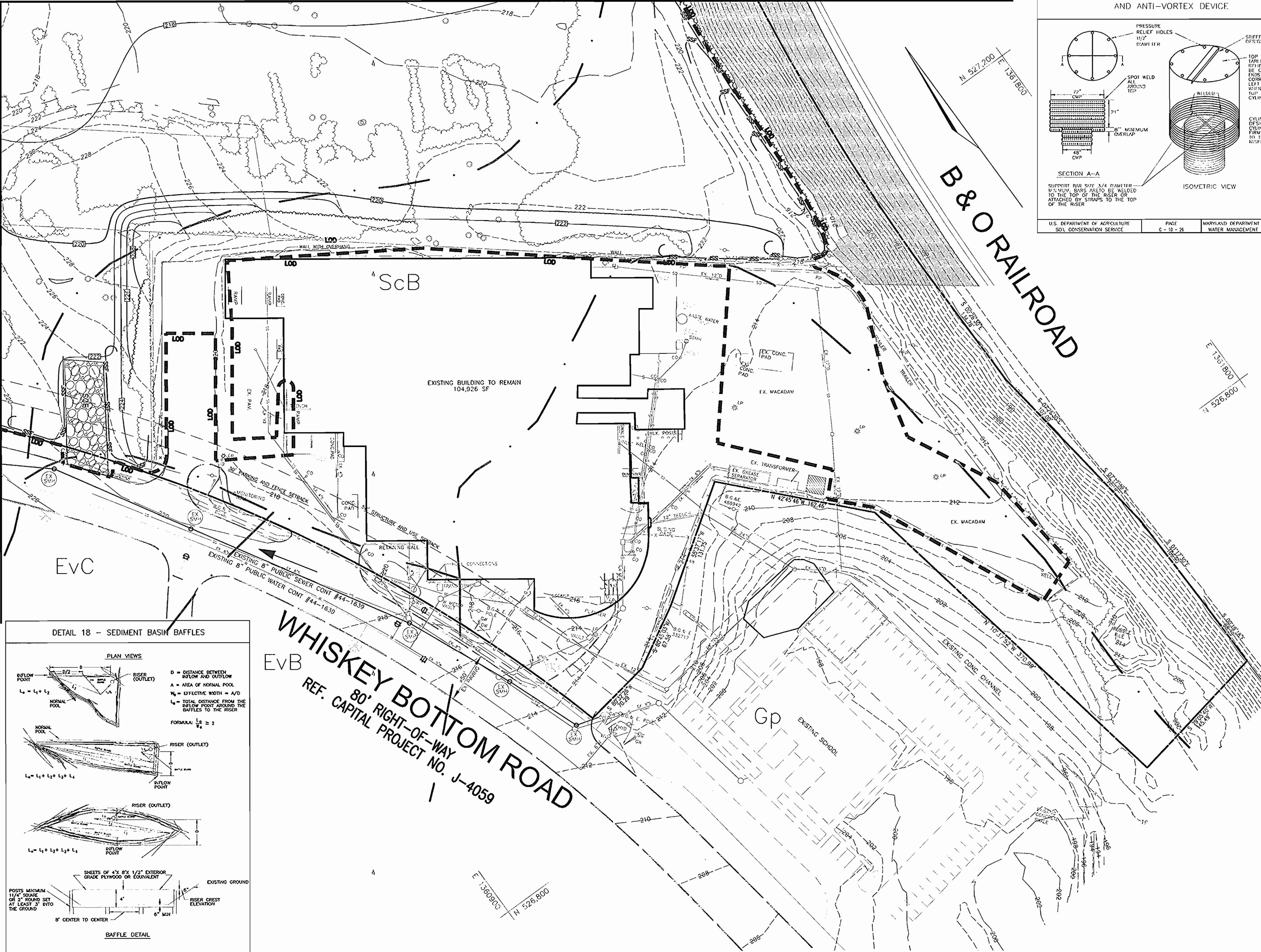
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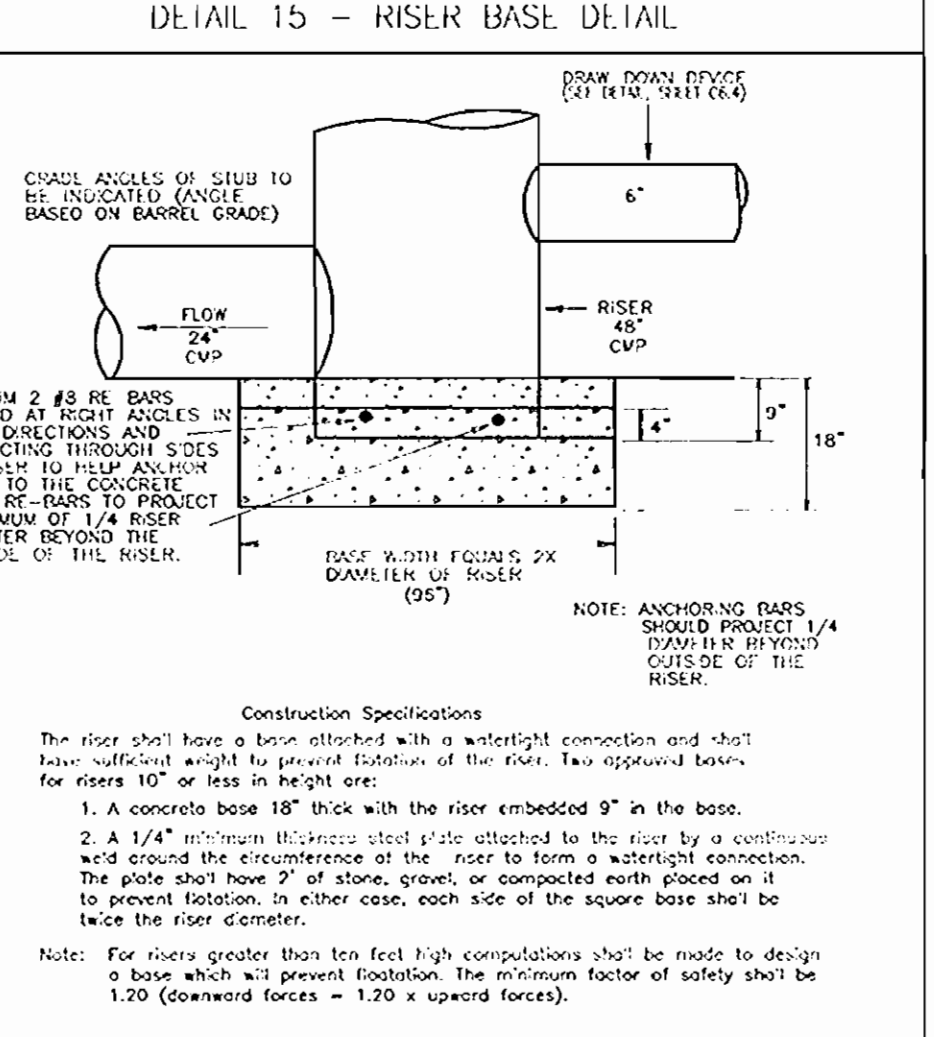
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 HO. CO. DPZ SHEET:
 4 OF 13

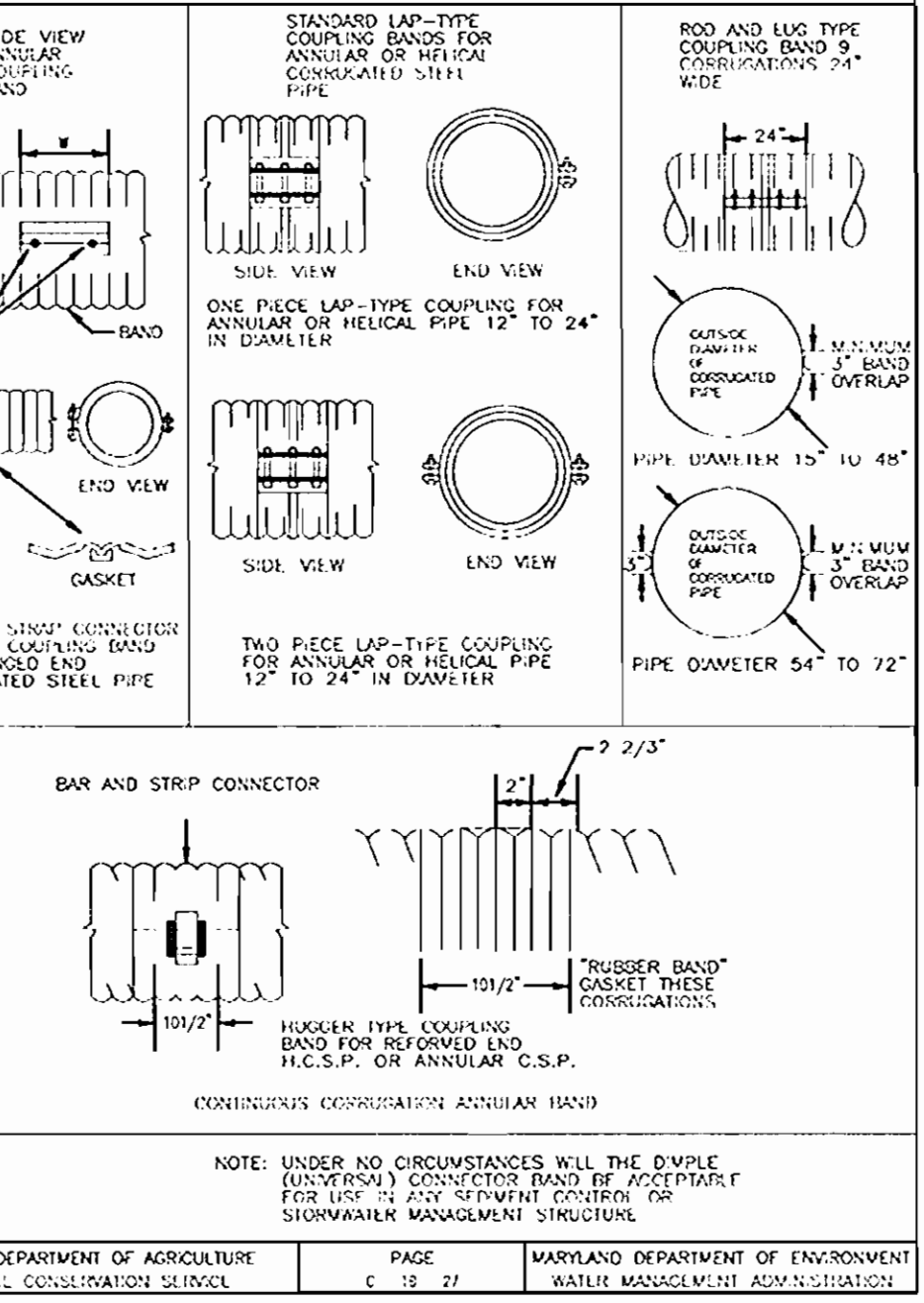


DETAIL 16 CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE (continued)

Riser Diam. in.	Trash Rack Cycle in.	Minimum Support Bar Size	Minimum Top Thickness	Stiffener
12	16	1/2"	1/4"	1/2"
15	16	3/4"	1/4"	1/2"
18	27	1/2"	1/4"	1/2"
21	30	1/2"	1/4"	1/2"
24	36	1/2"	1/4"	1/2"
27	42	1/2"	1/4"	1/2"
36	54	1/2"	1/4"	1/2"
42	60	1/2"	1/4"	1/2"
48	72	1/2"	1/4"	1/2"
54	78	1/2"	1/4"	1/2"
60	90	1/2"	1/4"	1/2"
66	96	1/2"	1/4"	1/2"
72	102	1/2"	1/4"	1/2"
78	114	1/2"	1/4"	1/2"
84	120	1/2"	1/4"	1/2"



DETAIL 17 - TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE (ALL CONNECTOR BANDS REQUIRE NFOPRENF CASKETS)



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/22/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 10/22/04
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 10/22/04
DIRECTOR

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 10/22/04
USDA-NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 10/22/04
HOWARD S.C.D.

BY THE DEVELOPER:

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 10/22/04
NESTLE ICE CREAM COMPANY, LLC. BY:

[Signature] 10/22/04
SIGNATURE OF DEVELOPER

BY THE ENGINEER:

I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 10/22/04
SIGNATURE OF ENGINEER



OWNERS
ICE CREAM PARTNERS USA, L.L.C.
30003 BANBRIDGE ROAD
SOLON, OHIO 44139

DEVELOPER
NESTLE ICE CREAM, INC.
5929 COLLEGE AVE.
OAKLAND, CA 94618

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS - SURVEYORS - PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MARYLAND 21043
TEL: 410.461.7666 FAX: 410.461.8961

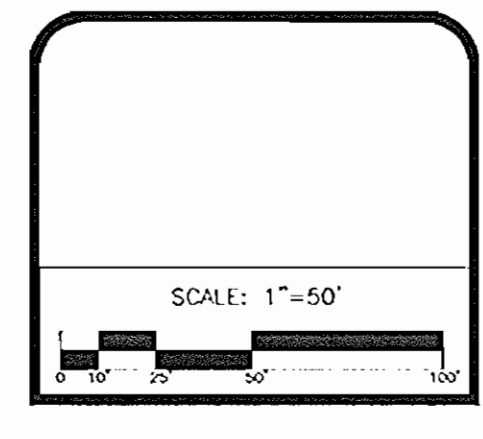
9090 WHISKEY BOTTOM ROAD
LAUREL, MD 20723

**MASS GRADING AND
SEDIMENT CONTROL PLAN**

THE DENNIS GROUP, LLC
PLANNING • ENGINEERING • CONSTRUCTION MANAGEMENT

136 SOUTH MAIN STREET
SALT LAKE CITY, UTAH 84101
801-531-8585, FAX 801-531-8586

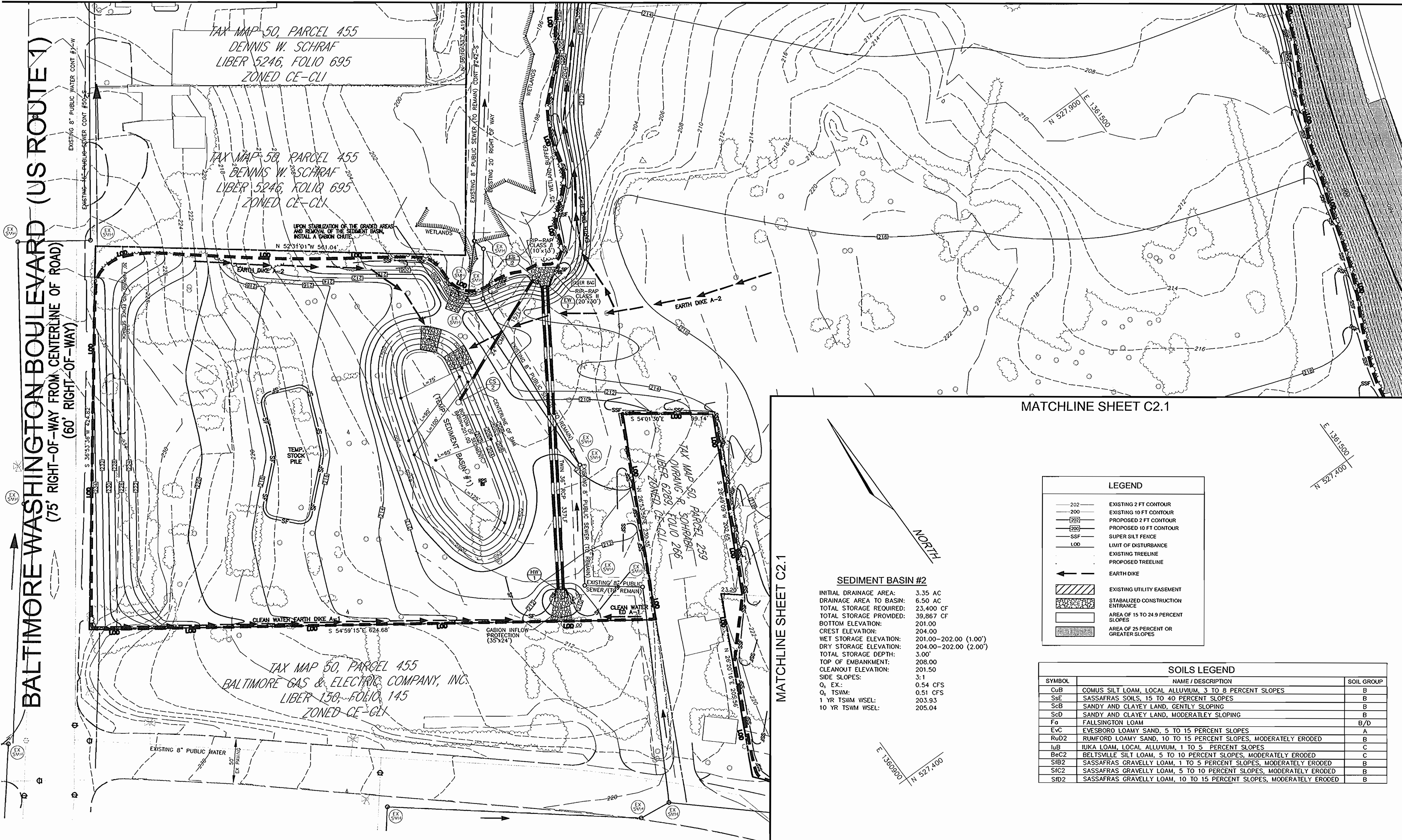
1391 MAIN STREET
SPRINGFIELD, MASSACHUSETTS 01103
415-787-1785, FAX 415-787-1786



DRAWING NO.
C.2.1

HO. CO. DP2 SHEET:
5 OF 13

SDP-04-144



BALTIMORE WASHINGTON BOULEVARD (US ROUTE 1)
 (75' RIGHT-OF-WAY FROM CENTERLINE OF ROAD)
 (60' RIGHT-OF-WAY)

MATCHLINE SHEET C2.1

MATCHLINE SHEET C2.1

SEDIMENT BASIN #2

INITIAL DRAINAGE AREA:	3.35 AC
DRAINAGE AREA TO BASIN:	6.50 AC
TOTAL STORAGE REQUIRED:	23,400 CF
TOTAL STORAGE PROVIDED:	39,867 CF
BOTTOM ELEVATION:	201.00
CREST ELEVATION:	204.00
WET STORAGE ELEVATION:	201.00-202.00 (1.00')
DRY STORAGE ELEVATION:	204.00-202.00 (2.00')
TOTAL STORAGE DEPTH:	3.00'
TOP OF EMBANKMENT:	208.00
CLEANOUT ELEVATION:	201.50
SIDE SLOPES:	3:1
Q, EX:	0.54 CFS
Q, TSMV:	0.51 CFS
1 YR TSMV WSEL:	203.93
10 YR TSMV WSEL:	205.04

LEGEND

- 202 --- EXISTING 2 FT CONTOUR
- 200 --- EXISTING 10 FT CONTOUR
- 202 --- PROPOSED 2 FT CONTOUR
- 200 --- PROPOSED 10 FT CONTOUR
- SSF --- SUPER SILT FENCE
- LOD --- LIMIT OF DISTURBANCE
- --- EXISTING TREELINE
- --- PROPOSED TREELINE
- --- EARTH DIKE
- --- EXISTING UTILITY EASEMENT
- --- STABILIZED CONSTRUCTION ENTRANCE
- --- AREA OF 15 TO 24.9 PERCENT SLOPES
- --- AREA OF 25 PERCENT OR GREATER SLOPES

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
CuB	COMUS SILT LOAM, LOCAL ALLUVIUM, 3 TO 8 PERCENT SLOPES	B
SsE	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES	B
ScB	SANDY AND CLAYEY LAND, GENTLY SLOPING	B
ScD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	B
Fo	FALLSINGTON LOAM	B/D
EvC	EVESBORO LOAMY SAND, 5 TO 15 PERCENT SLOPES	A
RuD2	RUMFORD LOAMY SAND, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C
BcC2	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
SB2	SASSAFRAS GRAVELLY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SIC2	SASSAFRAS GRAVELLY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
SD2	SASSAFRAS GRAVELLY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED	B

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/22/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 10/25/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 10/25/04
 DIRECTOR DATE

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 10/20/04
 USA - NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 10/20/04
 HOWARD S.C.D. DATE

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 10/12/04
 SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:

I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 10/12/04
 SIGNATURE OF ENGINEER DATE



OWNERS

ICE CREAM PARTNERS USA, L.L.C. 30003 BANBRIDGE ROAD SOLON, OHIO 44139

NESTLE ICE CREAM, INC. 5929 COLLEGE AVE. OAKLAND, CA 94618

PFSTERS MOBILE HOME PARK, INC. c/o NESTLE ICE CREAM, INC. 1 PINE LAKE LAUREL, MD 20723

DEVELOPER

NESTLE ICE CREAM, INC. 5929 COLLEGE AVE. OAKLAND, CA 94618

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Dreyers

9090 WHISKEY BOTTOM ROAD
 LAUREL, MD 20723

**MASS GRADING AND
 SEDIMENT CONTROL PLAN**

THE DENNIS GROUP, LLC

PLAYING • ENGINEERING • CONSTRUCTION MANAGEMENT

136 SOUTH MAIN STREET
 SALT LAKE CITY, UTAH 84101
 801-531-8585, FAX 801-531-8586

1391 MAIN STREET
 SPRINGFIELD, MASSACHUSETTS 01103
 413-787-1785, FAX 413-787-1786

SCALE: 1"=50'

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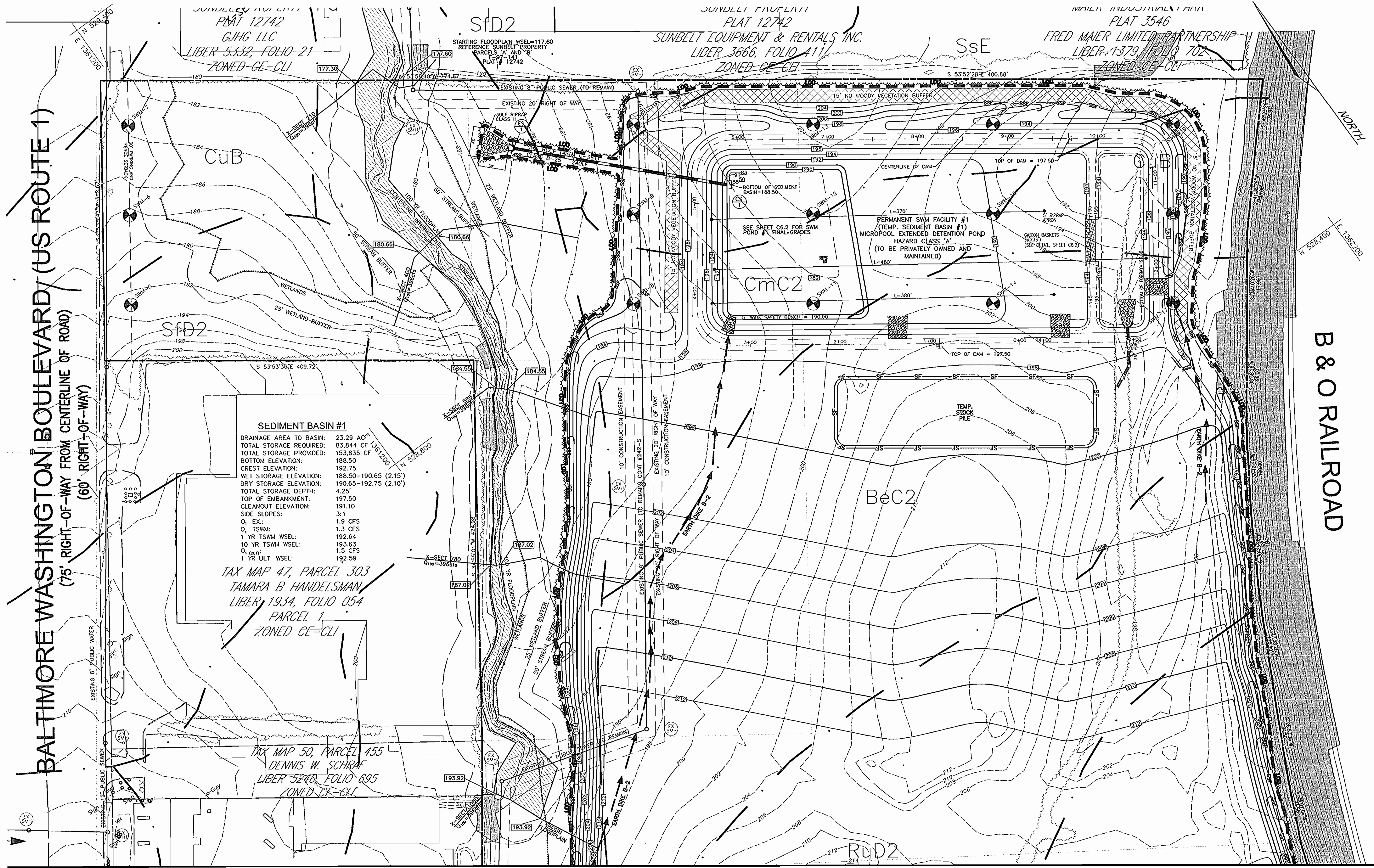
DRAWING NO.
C.2.2

HO. CO. DPZ SHEET:
 6 OF 13

SDP-04-144

BALTIMORE WASHINGTON BOULEVARD (US ROUTE 1)
 (75' RIGHT-OF-WAY FROM CENTERLINE OF ROAD)
 (60' RIGHT-OF-WAY)

B & O RAILROAD



SEDIMENT BASIN #1

DRAINAGE AREA TO BASIN:	23.29 AC
TOTAL STORAGE REQUIRED:	83,844 CF
TOTAL STORAGE PROVIDED:	153,835 CF
BOTTOM ELEVATION:	188.50
CREST ELEVATION:	192.75
WET STORAGE ELEVATION:	188.50-190.65 (2.15')
DRY STORAGE DEPTH:	4.25'
TOP OF EMBANKMENT:	197.50
CLEANOUT ELEVATION:	191.10
SIDE SLOPES:	3:1
Ø, EX.:	1.9 CFS
Ø, TSWM:	1.3 CFS
1 YR TSWM WSEL:	192.64
10 YR TSWM WSEL:	193.63
Ø, 60 YR ¹ :	1.5 CFS
1 YR ULT. WSEL:	192.59

TAX MAP 47, PARCEL 303
 TAMARA B HANDELSMAN
 LIBER 1934, FOLIO 054
 PARCEL 1
 ZONED CE-CL1

TAX MAP 50, PARCEL 455
 DENNIS W. SCHRAF
 LIBER 5246, FOLIO 695
 ZONED CE-CL1

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/22/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 10/25/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 10/23/04
 DIRECTOR DATE

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 10/20/04
 USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 10/20/04
 HOWARD S.C.D. DATE

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I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 10-2-04
 SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:

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[Signature] 10/20/04
 SIGNATURE OF ENGINEER DATE

MATCHLINE SHEET C2.2



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DRAWING NO.
C.2.3
 HO. CO. DP2 SHEET:
 7 OF 13

THE DENNIS GROUP, LLC
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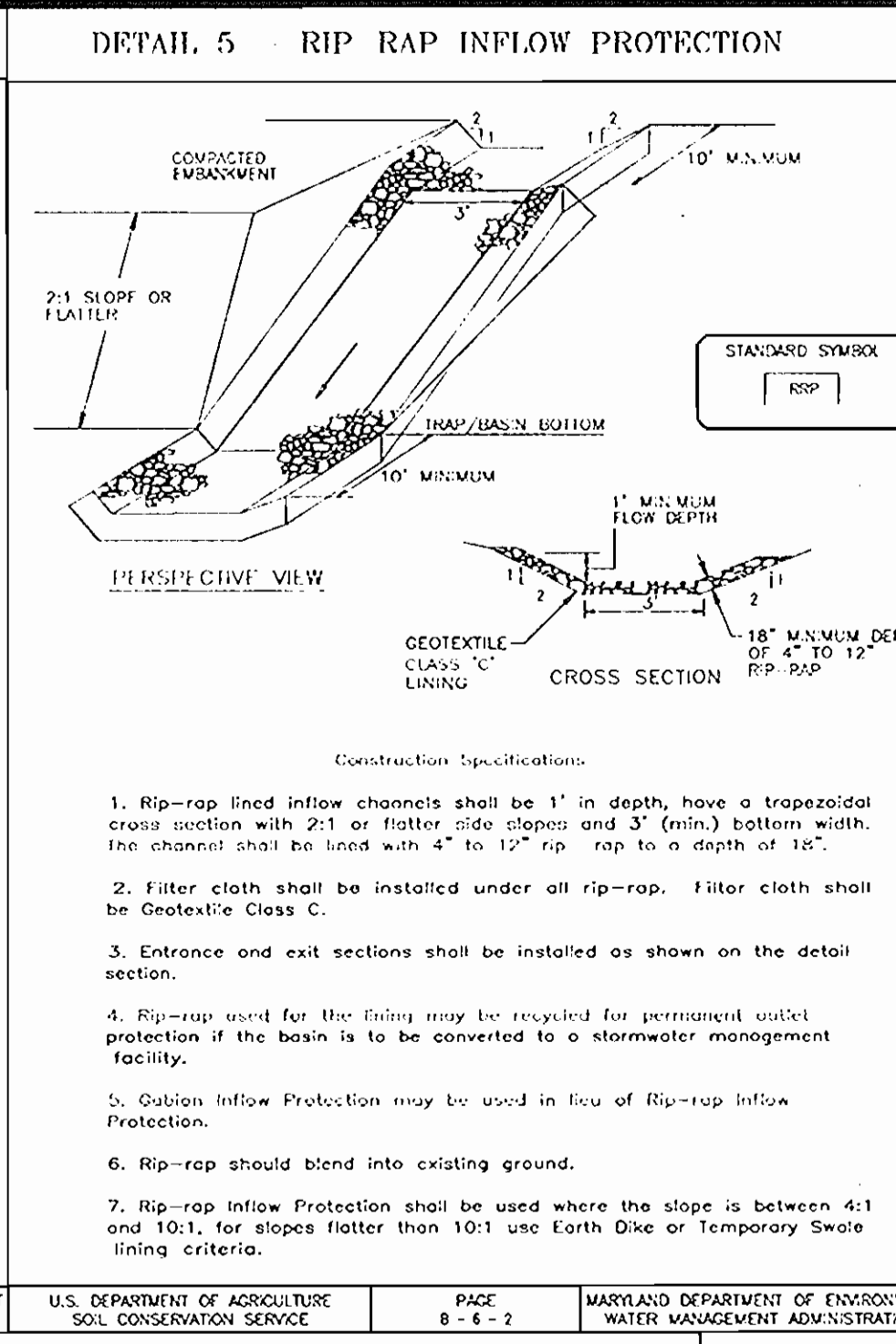
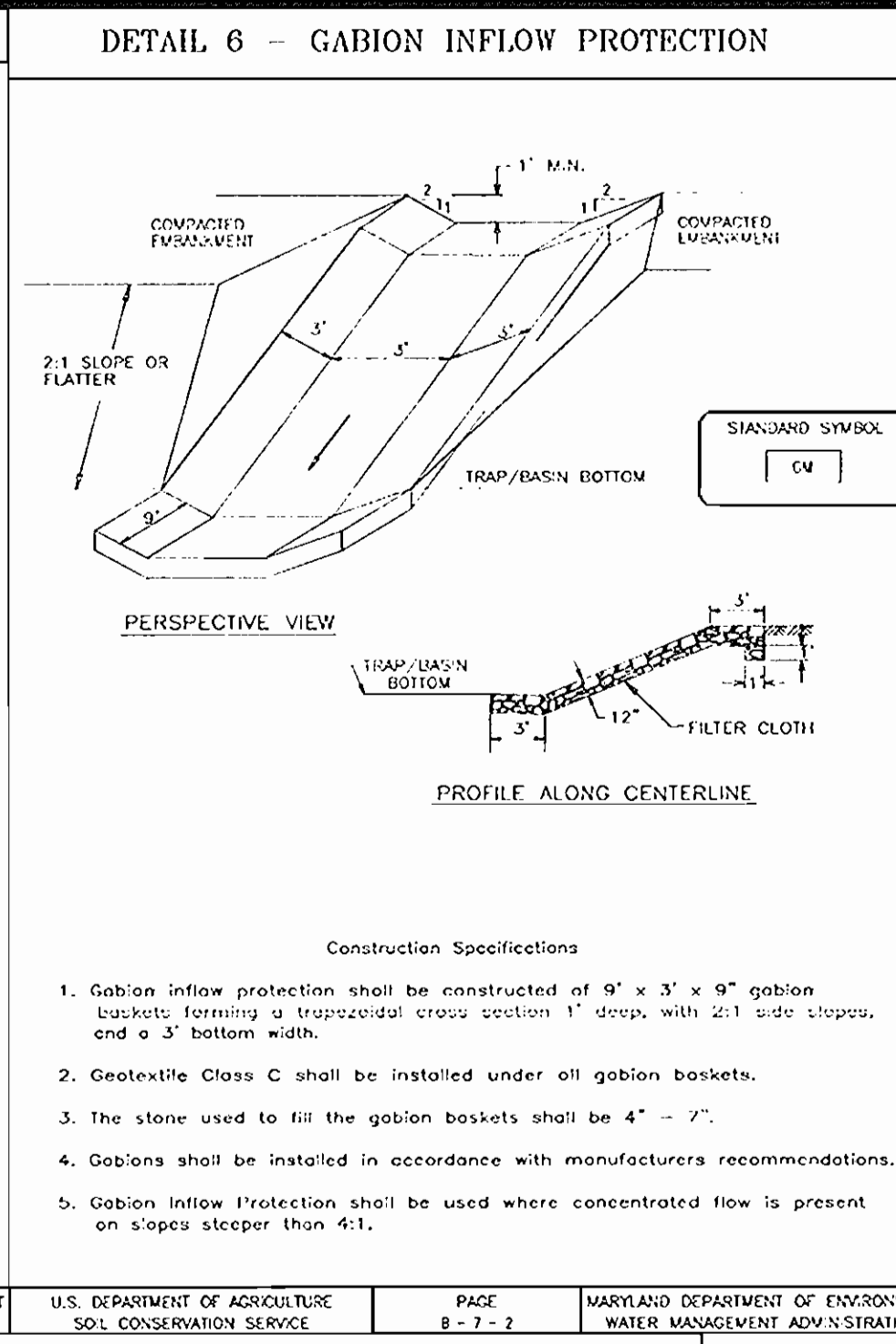
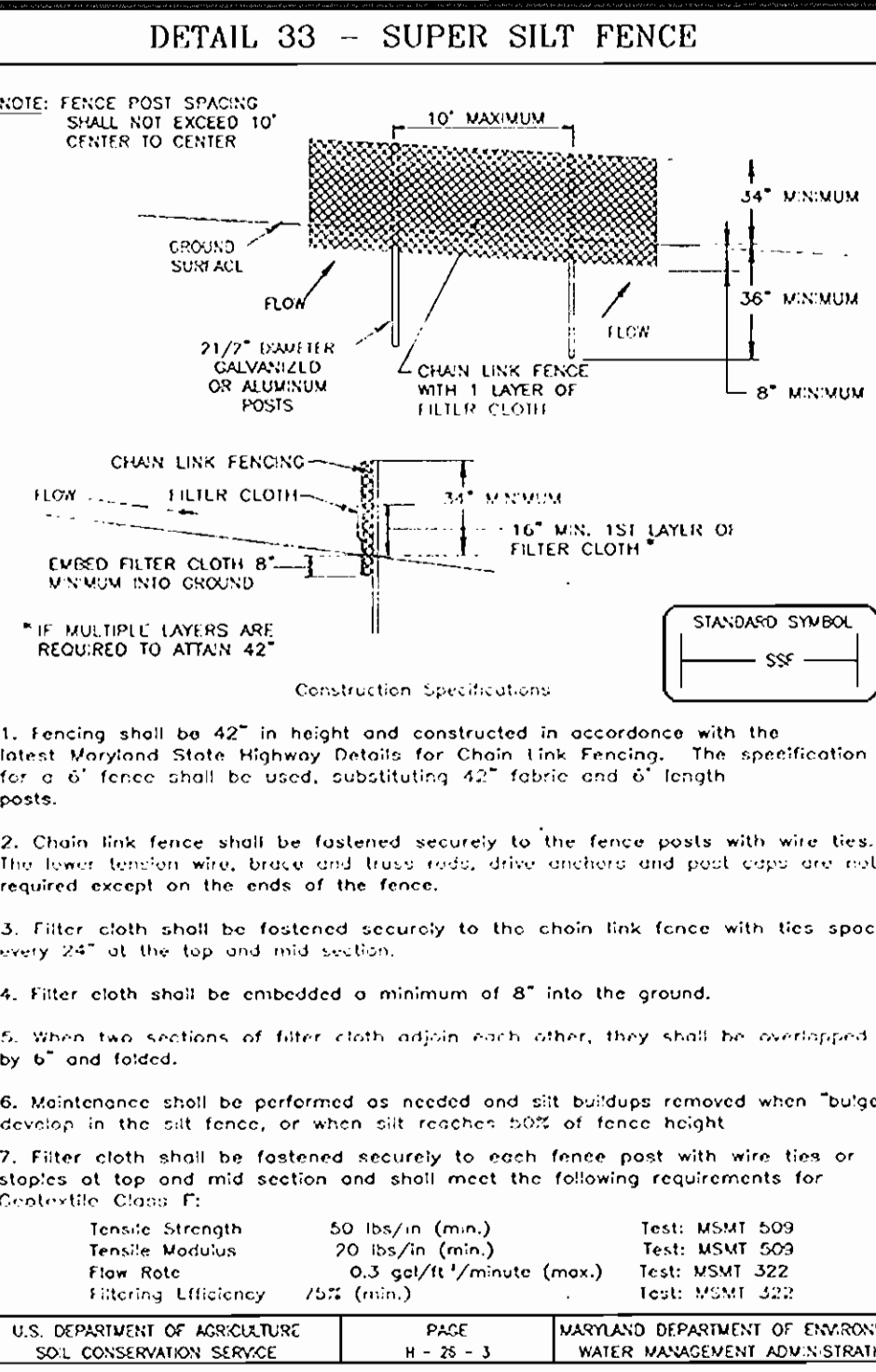
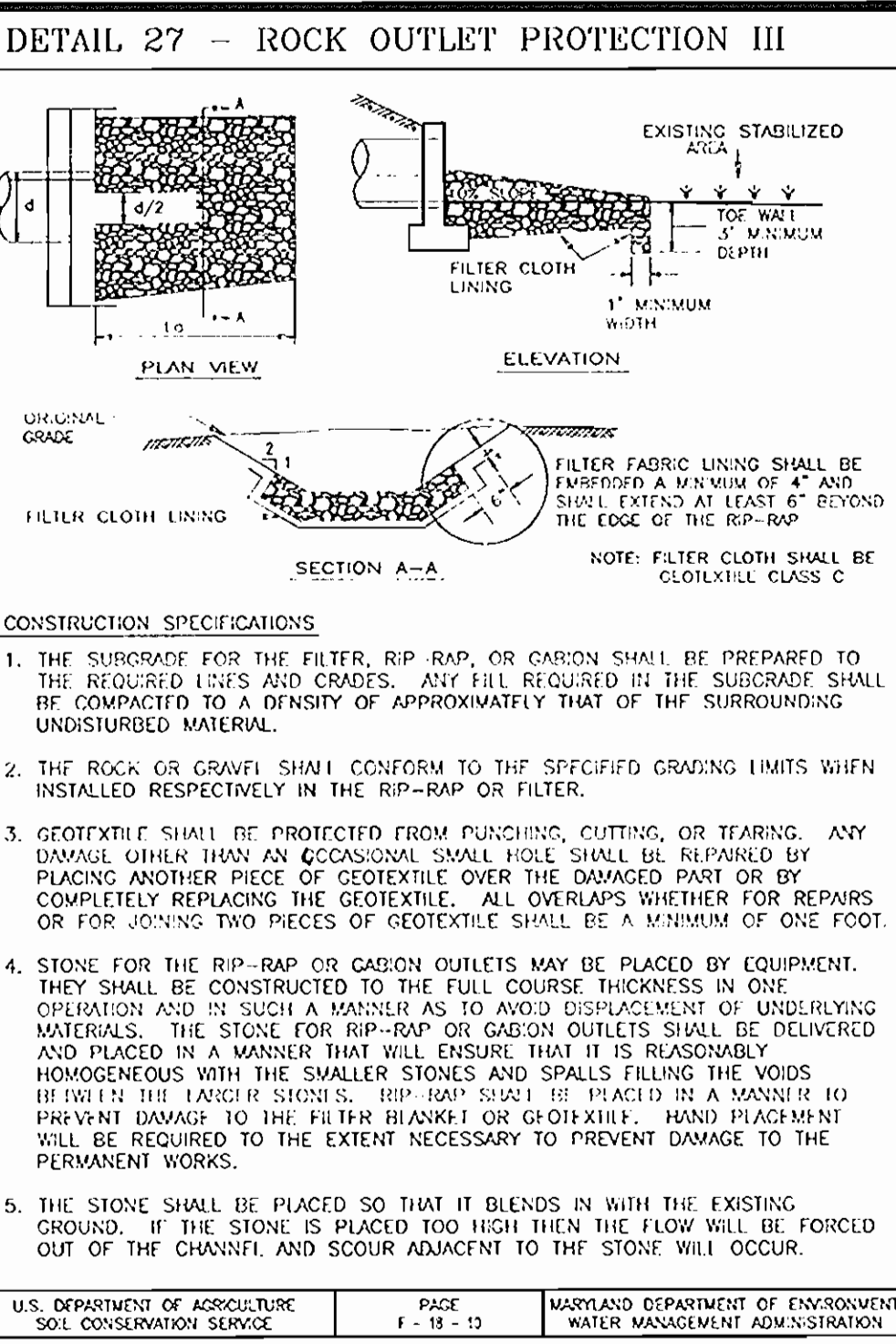
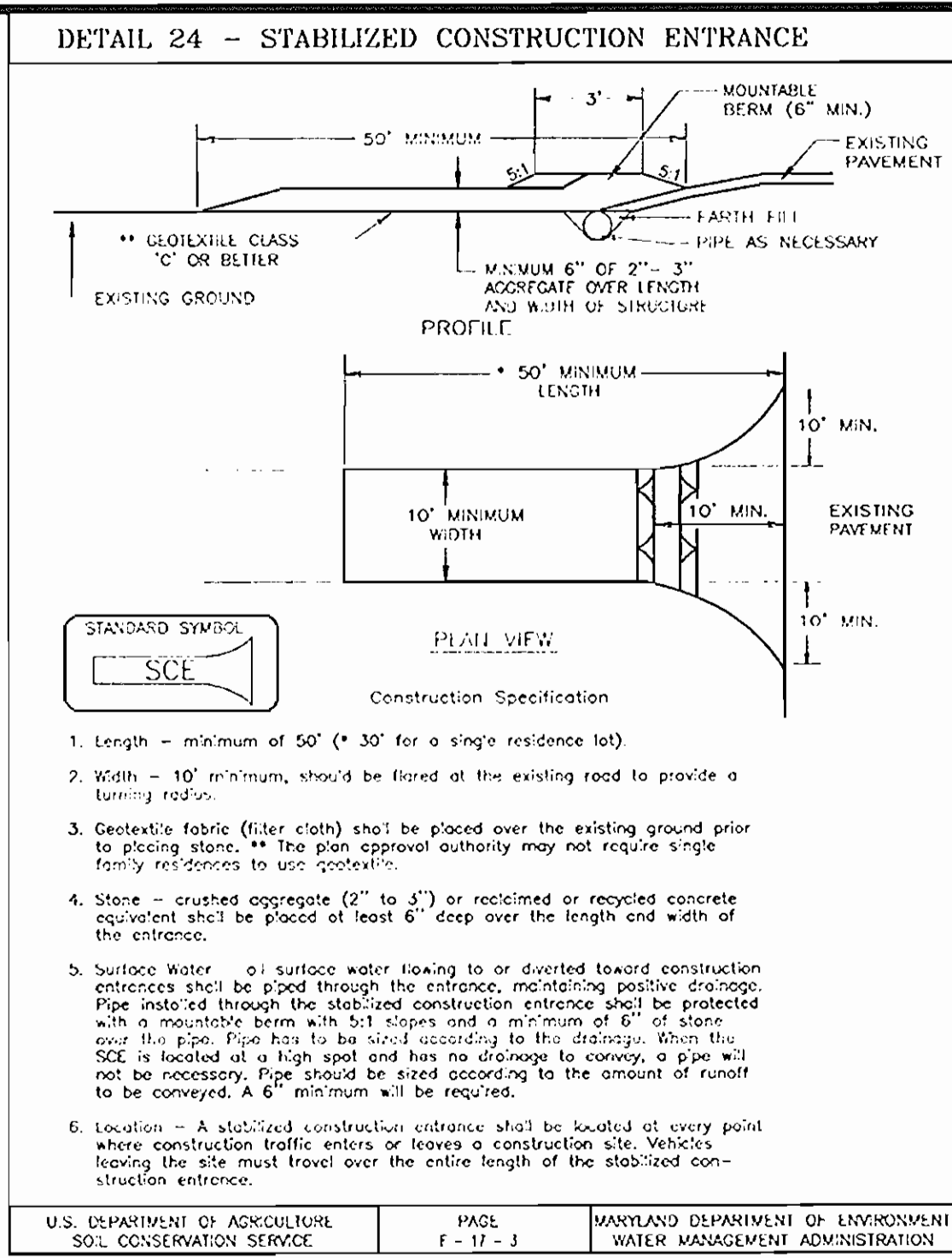
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 SALT LAKE CITY, UTAH 84101
 801-531-8585, FAX 801-531-8586

9080 WHISKEY BOTTOM ROAD
 LAUREL, MD 20723

MASS GRADING AND SEDIMENT CONTROL PLAN

SCALE: 1"=50'

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PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE. A PERMANENT LONG-LEIVED VEGETATIVE SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously done.

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs./1000 sq ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs per acre 30-0-0 ureiform fertilizer (9 lbs./1000 sq ft.)
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq ft.) and apply 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq ft.) before seeding. Harrow or disc into upper three inches of soil.

SEEDING: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs./1000 sq ft.) of Kentucky 31 Tall Fescue. For the periods May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.5 lbs./1000 sq ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by applying 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs./acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw mulch.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq ft.) of untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal./1000 sq ft.) of emulsified asphalt on flat areas. On slopes 3 feet or higher, use 348 gallons per acre. MAINTENANCE: Inspect all seeded areas and make needed repairs.

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously done.

SOIL AMENDMENTS: Apply 600 lbs. per acre 10-10-10 fertilizer.

SEEDING: For periods March 1 thru April 30, and from August 15 thru November 15, seed with 2 1/2 bushels per acre of annual ryegrass (5.7 lbs./1000 sq ft.) for the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.7 lbs./1000 sq ft.). For the period November 1 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq ft.) of untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal./1000 sq ft.) of emulsified asphalt on flat areas. On slopes 3 feet or higher, use 348 gallons per acre.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT SHOWN.

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Placement of topsoil over a prepared subsoil prior to providing a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or

Conditions Where Practice Applies

- This practice is limited to areas having 2:1 or flatter:
 - The texture of the exposed subsoil/parent material is silt loam, sandy clay loam, or silty clay loam.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No soil or sand shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to prevent dissipation of phytotoxic materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil shall be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

Topsoil Application

- When topsoiling, maintain needed erosion and sediment control practices such as ditches, Grade Stabilization Structures, Earth Dikes, Rip-rap, Silt Fence and Sediment Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
- Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

Vegetative Stabilization - Section 2 - Vegetative Stabilization Methods and Materials.

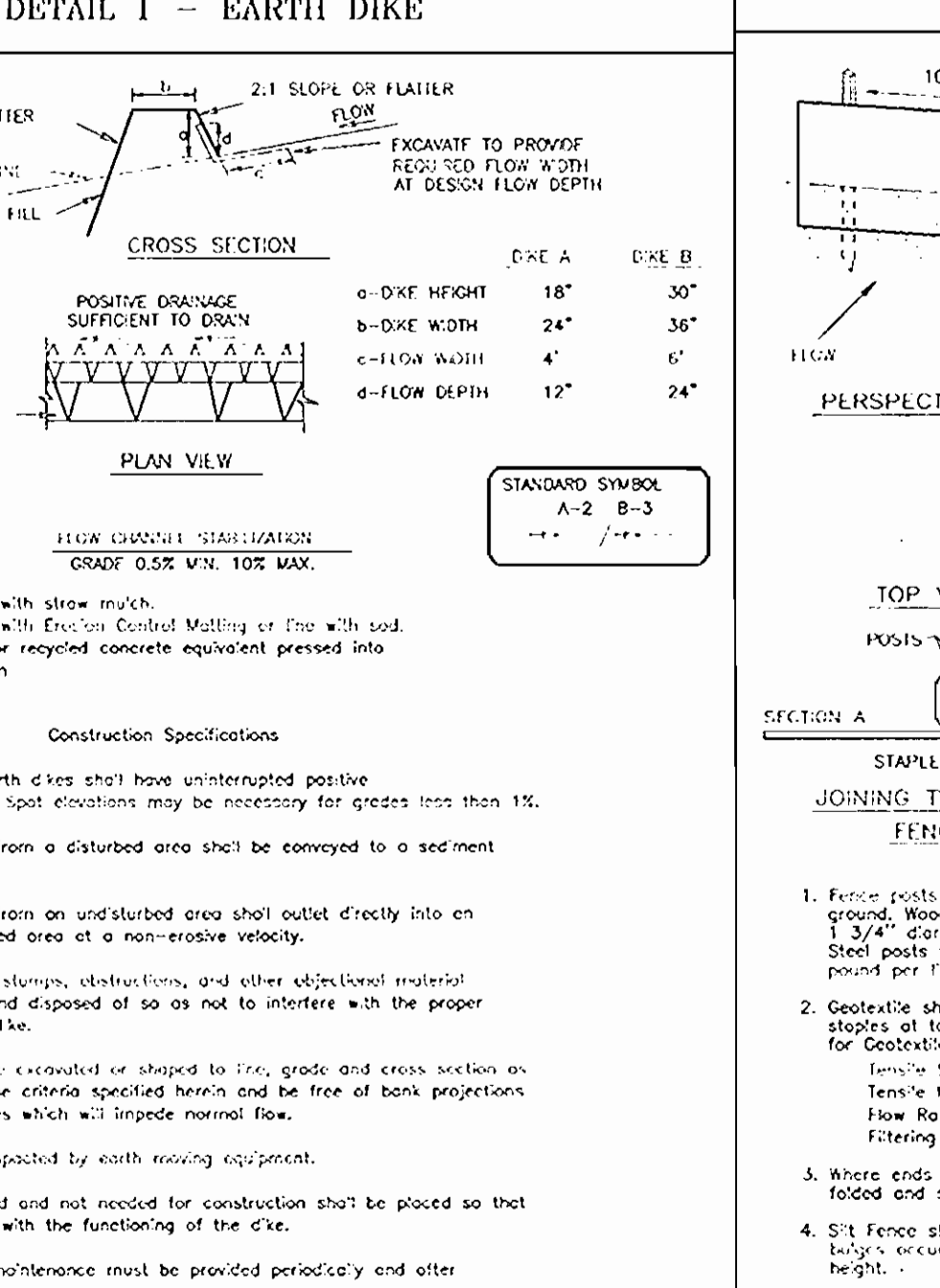
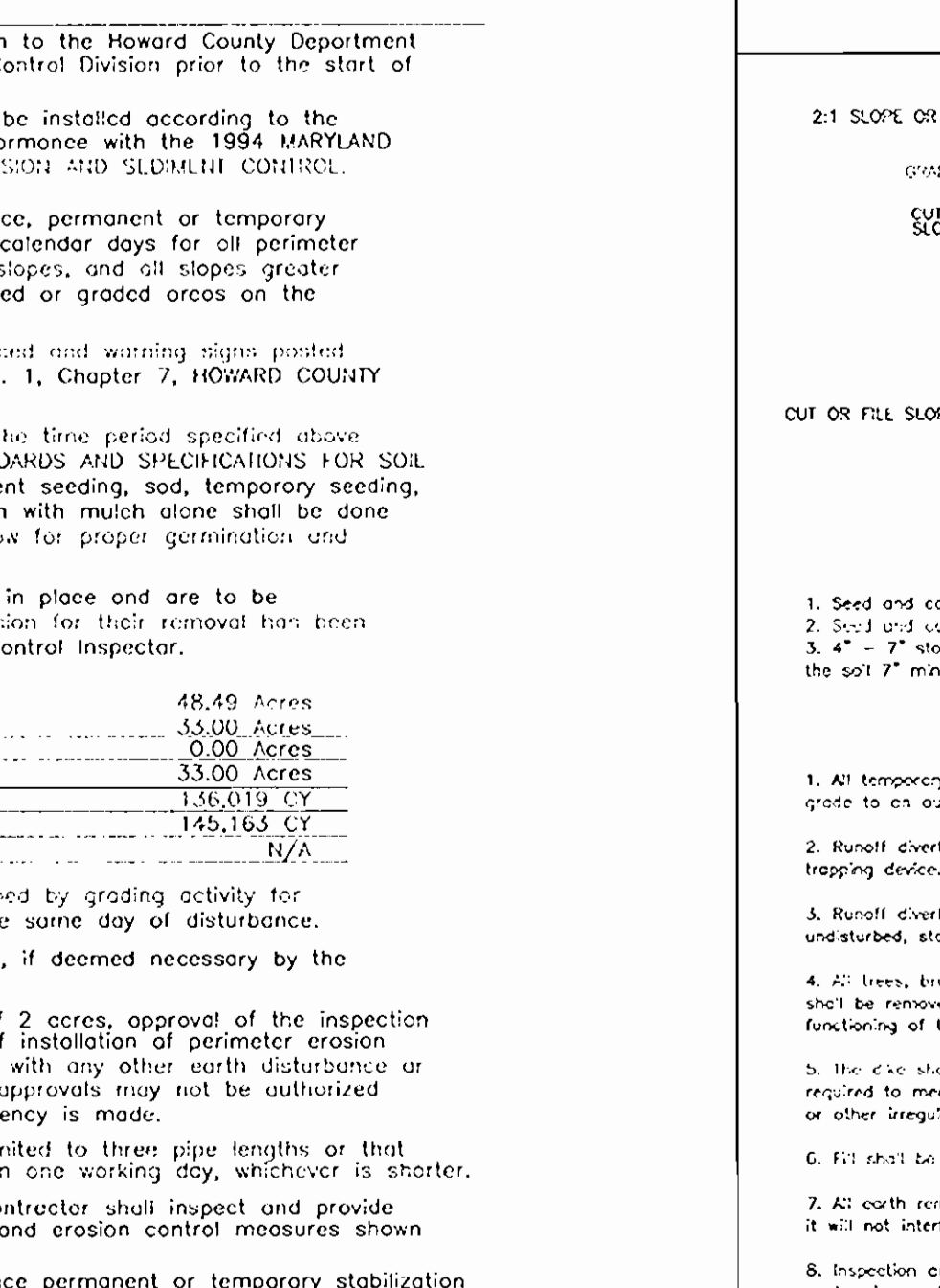
- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (315, 1950).
- All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in compliance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1, (b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be tested and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch alone shall be done when recontouring/seeding deters due to poor germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area	48.49 Acres
Area Disturbed	33.00 Acres
Area to be seeded or sodded	0.00 Acres
Area to be vegetatively stabilized	33.00 Acres
Total Cost	1,36,019.00
Total Fill	145,163.00
Offsite waste/borrow area location	N/A
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back filled and stabilized within one working day, whichever is shorter.
- During grading and after each rainfall, the contractor shall inspect and provide the necessary maintenance on the sediment and erosion control measures shown herein.
- Following initial soil disturbance or redistribution permanent or temporary stabilization shall be completed within:
 - 7 calendar days for all perimeter sediment control structures, dikes, slopes, ditch perimeter slopes, slopes and all slopes greater than 3:1.
 - 14 calendar days for all other disturbed areas.

To be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active grading permit.



STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	HW. IN	HW. OUT	REMARKS
HW-1	TYPE "A" HEADWALL WITH BARREL	N 527794 E 1360715	210.00	TWIN 36" 205.50	205.50	MODIFIED SD - 5.11
HW-1	TYPE "A" HEADWALL WITH BARREL	N 529379 E 1362338	205.00	TWIN 36" 205.50	205.50	MODIFIED SD - 5.11
ES-1	CONCRETE END SECTION	N 529007 E 1361515	193.00	188.50	183.00	
ES-2	CONCRETE END SECTION	N 529239 E 1360891	205.75	201.8	203.50	
CS-1	PRECAST CONTROL STRUCTURE	N 528832 E 1361684	196.00	SEE DETAIL, SHEET C6.3		
CS-2	PRECAST CONTROL STRUCTURE	N 529007 E 1360746	205.75	SEE DETAIL, SHEET C2.1		

PIPE SCHEDULE			
SIZE	TYPE	LENGTH	REMARKS
4"	PVC	10 LF	
8"	PERFORATED PVC	5 LF	
6"	CP	10 LF	
36"	RIP (BOX OUTLET & TWIN OUTLETS)	554 LF	
18"	CP	157 LF	

30.0 DUST CONTROL

Controlling dust blowing and movement on construction sites and roads.

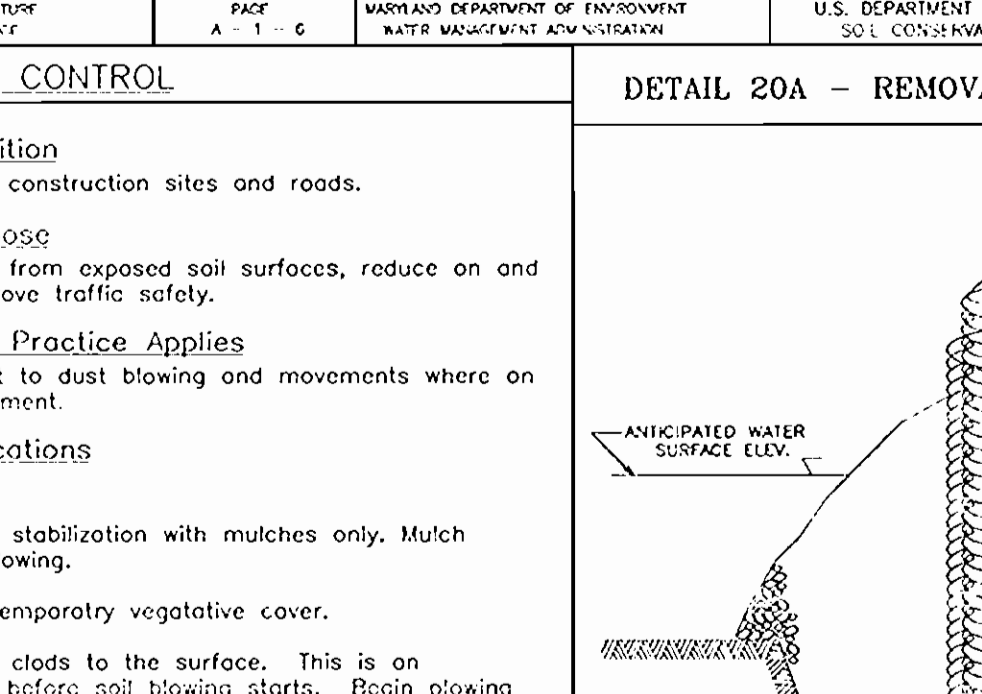
Definition
Purpose
Conditions Where Practice Applies
Specifications

Temporary Methods:

- Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or locked to prevent blowing.
- Vegetative Cover - See standards for temporary vegetative cover.
- Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12' apart, spring-tooth harrows, and similar plows are examples of equipment which may produce the desired effect.
- Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.
- Barriers - Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 100 times their height are effective in controlling soil blowing.
- Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

Permanent Methods

- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
- Topsoiling - Covering with less erosive soil materials. See standards for topsoiling.
- Stone - Cover surface with crushed stone or coarse gravel.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 10/22/04

CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 10/25/04

DIRECTOR

DATE: 10/26/04

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

DATE: 10/26/04

DATE: 10/26/04

OWNERS: ICE CREAM PARTNERS USA, L.L.C. NESTLE ICE CREAM, INC. 30033 BANHURD ROAD SOLON, OHIO 44139

DEVELOPER: NESTLE ICE CREAM, INC. 5929 COLLEGE AVE. OAKLAND, CA 94618

ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS - SURVEYORS - PLANNERS

8407 MAIN STREET ELLICOTT CITY, MARYLAND 21043 TEL: 410.461.7666 FAX: 410.461.8961

BY THE ENGINEER:

I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE NECESSARY CONSTRUCTION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

DATE: 10/26/04

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 10/22/04

CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 10/25/04

DIRECTOR

DATE: 10/26/04

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

DATE: 10/26/04

DATE: 10/26/04

OWNERS: ICE CREAM PARTNERS USA, L.L.C. NESTLE ICE CREAM, INC. 30033 BANHURD ROAD SOLON, OHIO 44139

DEVELOPER: NESTLE ICE CREAM, INC. 5929 COLLEGE AVE. OAKLAND, CA 94618

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DATE: 10/26/04

DATE: 10/26/04

9090 WHISKEY BOTTOM ROAD LAUREL, MD 20723

SEDIMENT CONTROL DETAILS

THE DENNIS GROUP, LLC

PLANNING • ENGINEERING • CONSTRUCTION MANAGEMENT

1391 MAIN STREET SPRINGFIELD, MASSACHUSETTS 01103 413-787-7187, FAX: 413-787-1786

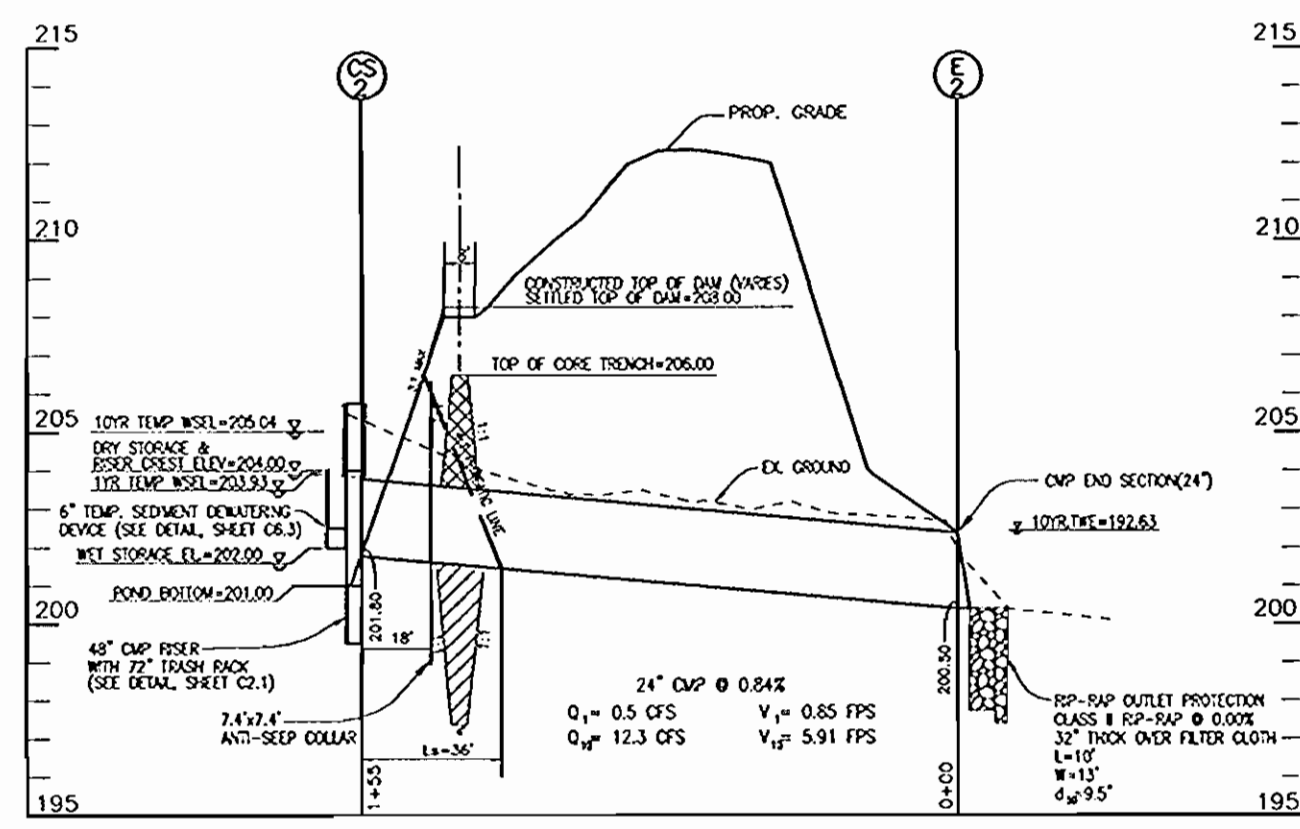
136 SOUTH MAIN STREET SALT LAKE CITY, UTAH 84141 801-531-8585, FAX: 801-531-8586

STATE OF MARYLAND PROFESSIONAL ENGINEERING

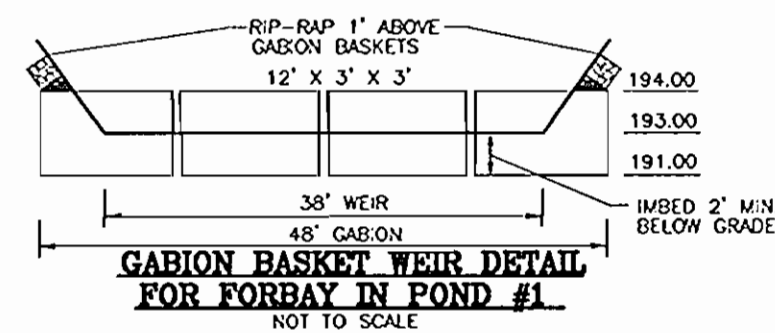
DRAWING NO. C6.1

HO. CO. DP7 SHEET: 8 of 13

SDP-04-144



SECTION THROUGH PRINCIPAL SPILLWAY BASIN #2
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

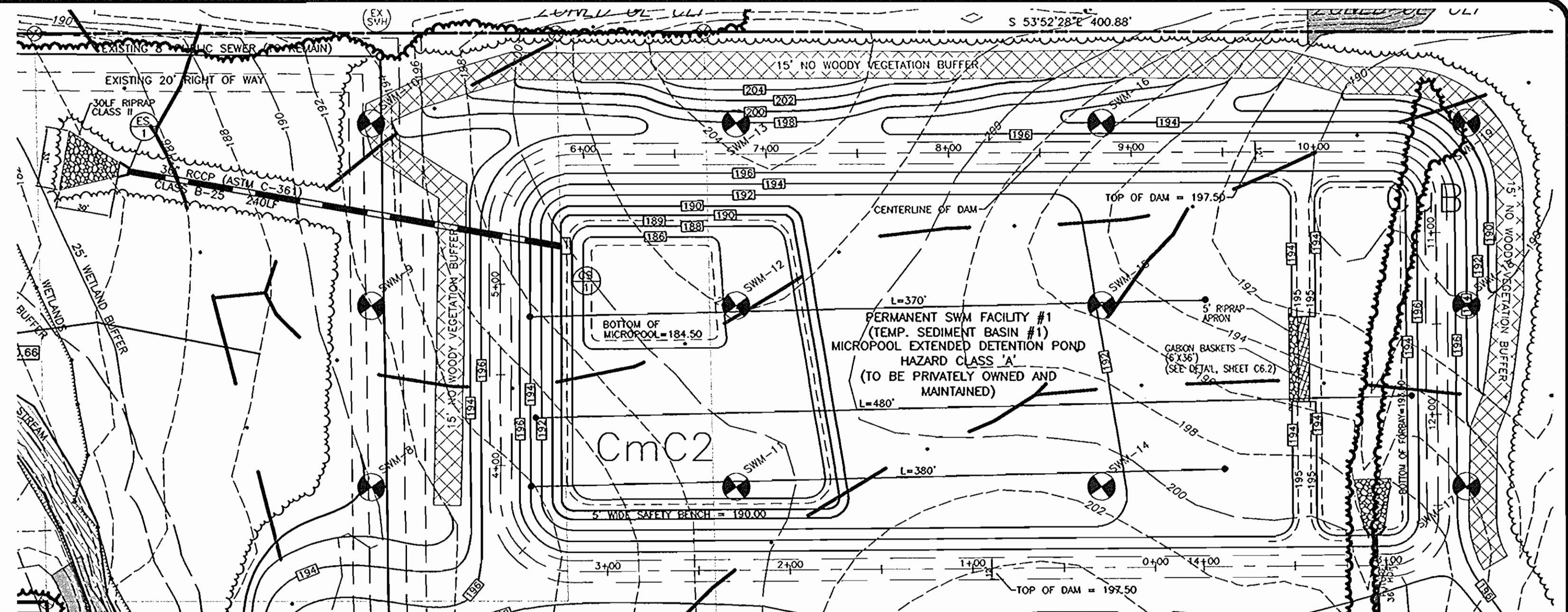


- NOTES:
1. ALL WIRE USED IN GABION CONSTRUCTION SHALL BE GALVANIZED AND PLASTIC COATED.
 2. FILTER CLOTH SHALL BE PLACED WHEREVER GABIONS COME INTO CONTACT WITH SOIL.
 3. STONE FILL SHALL CONSIST OF HARD, DURABLE, CLEAN STONE 4"-8" IN DIAMETER.
 4. CONSTRUCTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

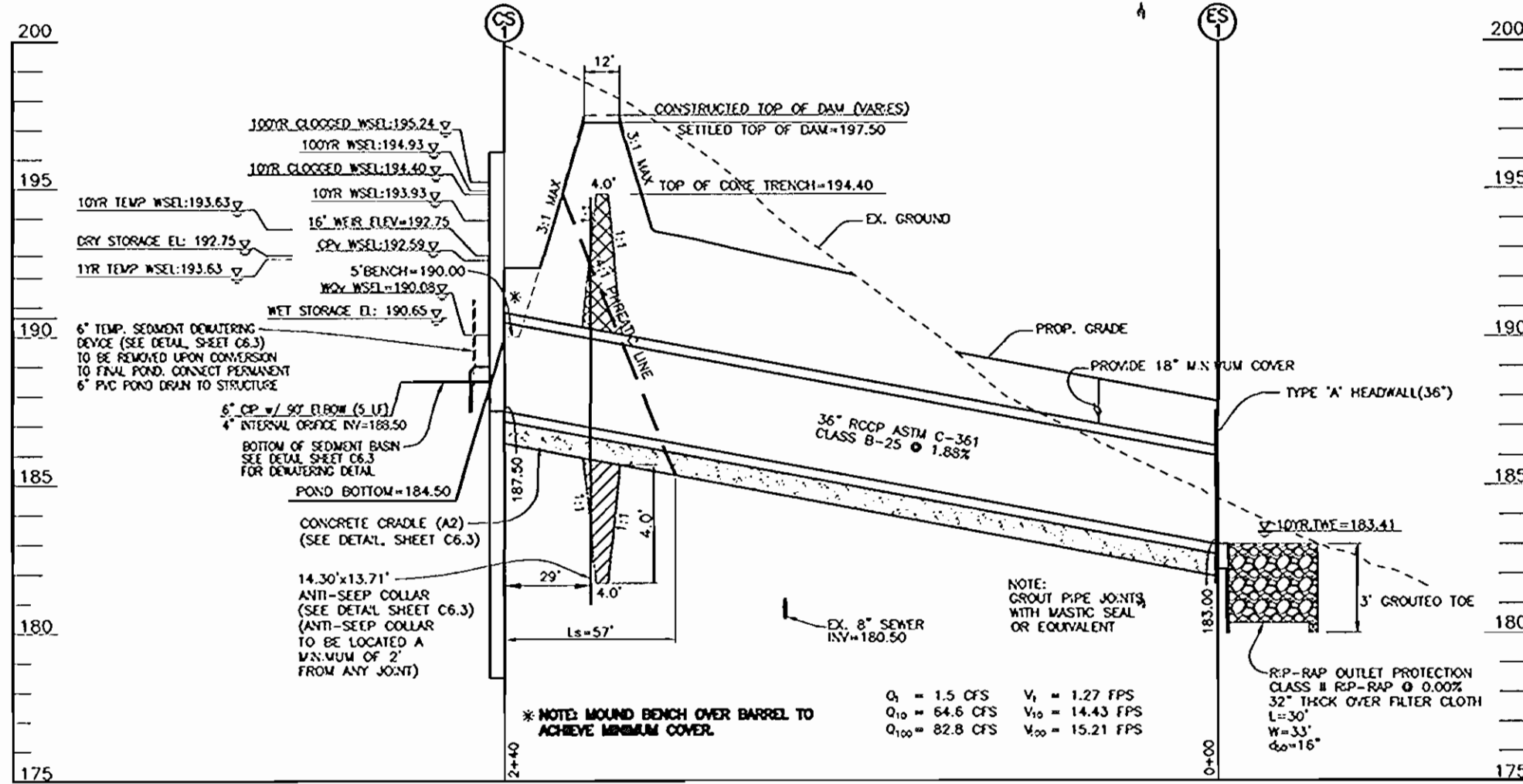
SWM POND SUMMARY

	1 YEAR	10 YEAR	100 YEAR
FLOW INTO POND	74.9 c.f.s.	181.5 c.f.s.	233.8 c.f.s.
FLOW OUT OF POND	1.5 c.f.s.	64.6 c.f.s.	82.8 c.f.s.
W.S. ELEVATION	192.59	193.93	194.93
STORAGE VOLUME	3.65 AC FT	5.94 AC FT	8.13 AC FT

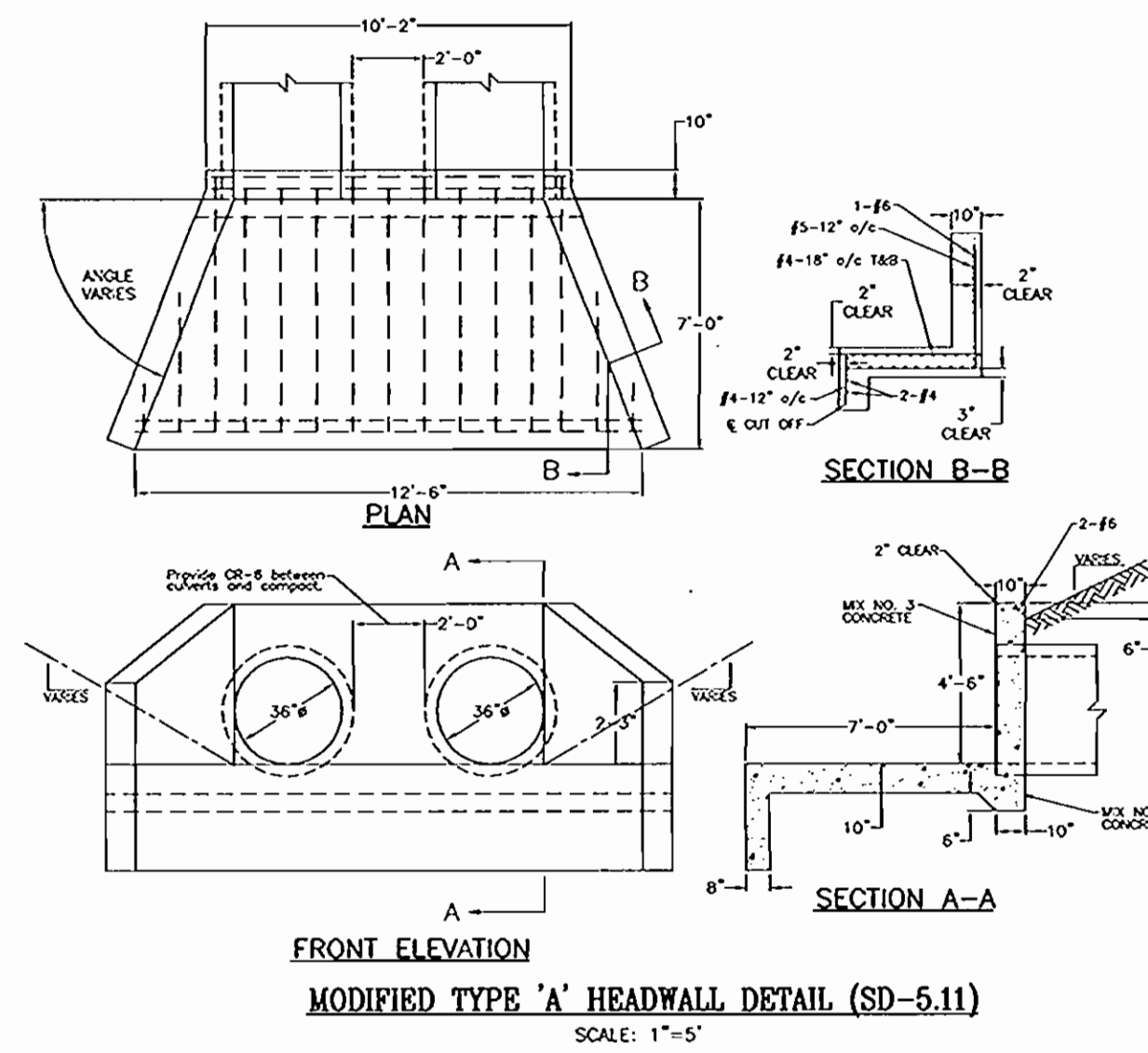
CONDITION	CN	Ic	RUNOFF Q ₂ HR STORM			
			Q	Q	Q	Q
			1/8"	1/4"	1/2"	1"
EXISTING	75	0.35	0.71	16.1	63.2	108.2
IMPROVED	93	0.10				



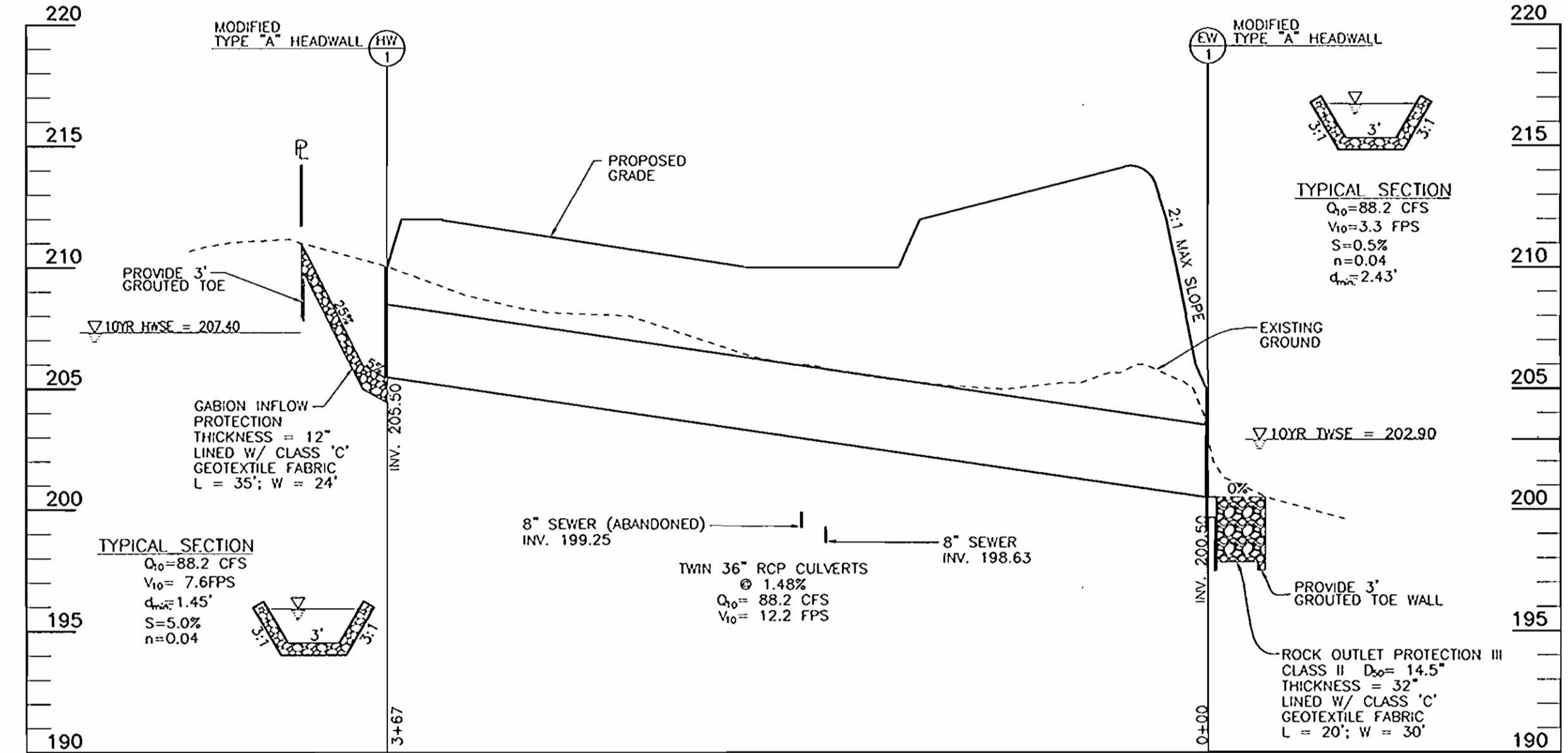
SWM POND #1 FINAL GRADES
SCALE: 1"=50'



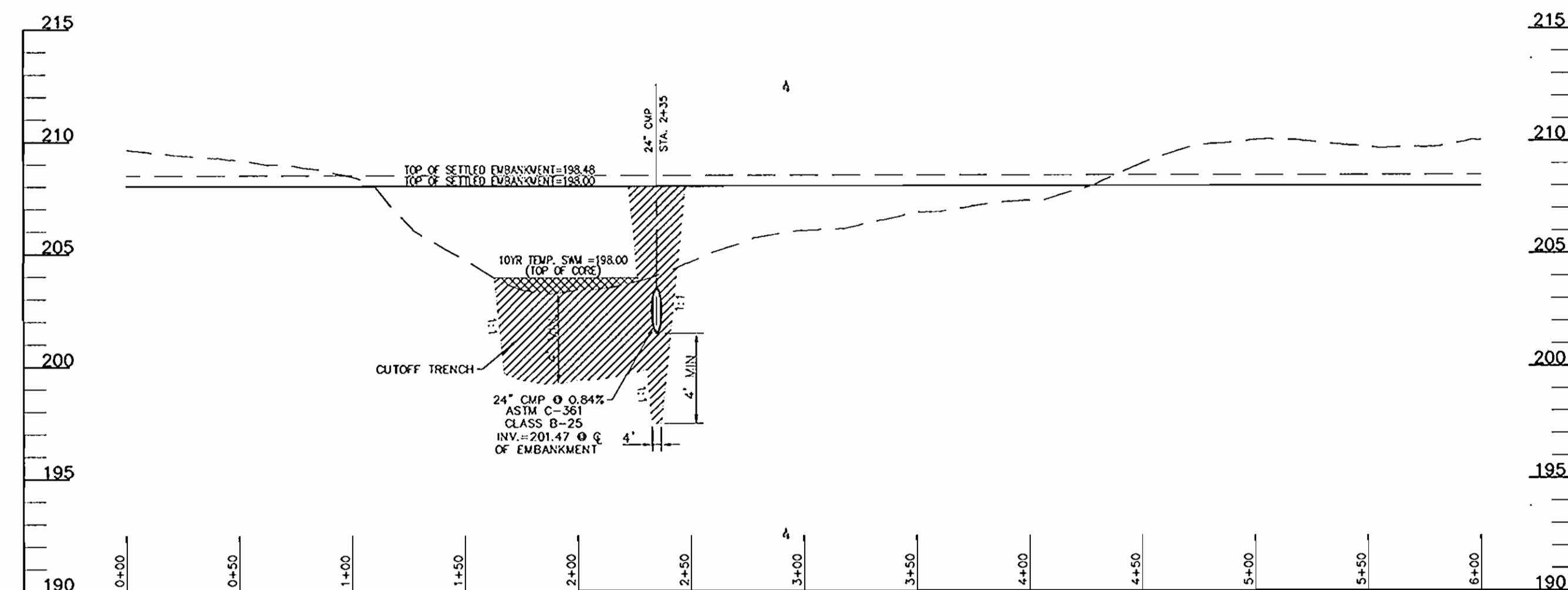
SECTION THROUGH PRINCIPAL SPILLWAY BMP #1
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



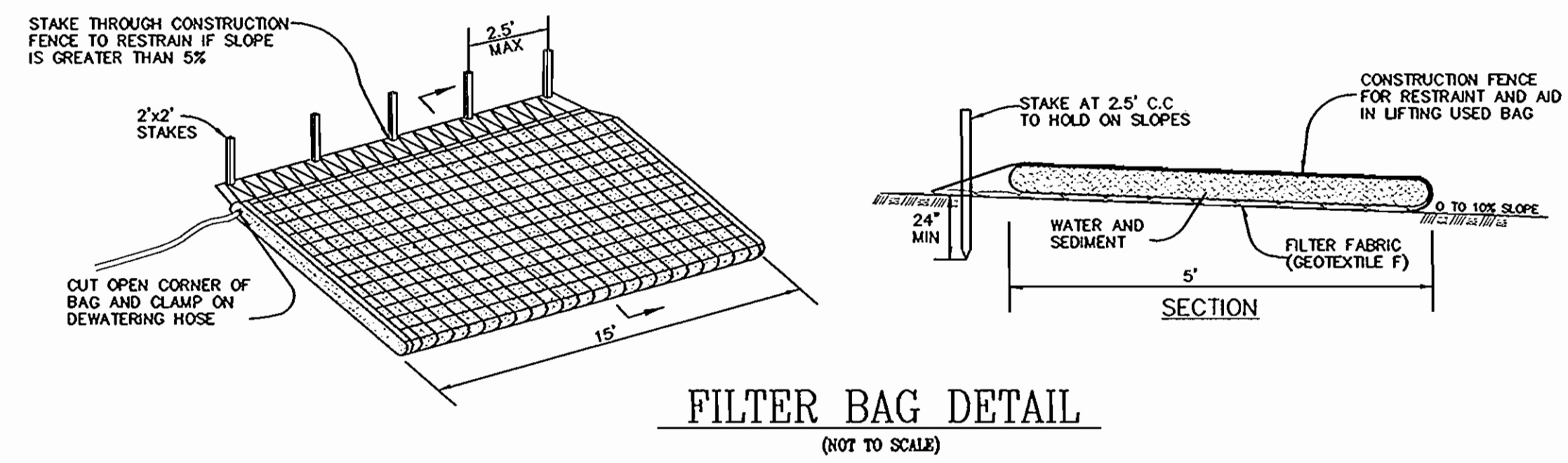
MODIFIED TYPE 'A' HEADWALL DETAIL (SD-5.11)
SCALE: 1"=5'



CULVERT PROFILE #1
SCALE: 1"=50' HORZ.
1"=5' VERT.



PROFILE ALONG POND #2 EMBANKMENT
SCALE: 1"=50' HORZ.
1"=5' VERT.



FILTER BAG DETAIL
(NOT TO SCALE)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/22/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 10/23/04
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 10/23/04
 DIRECTOR

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 [Signature] 10/20/04
 USA - NATURAL RESOURCES CONSERVATION SERVICE
 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 10/20/04
 HOWARD S.C.D.

BY THE DEVELOPER:
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 [Signature] 10-20-04
 SIGNATURE OF DEVELOPER

BY THE ENGINEER:
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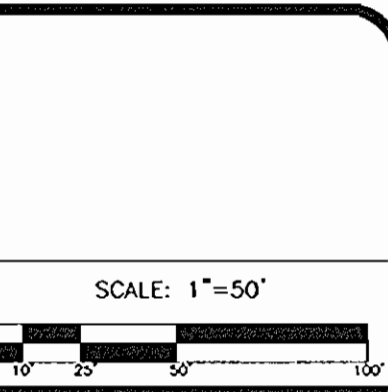


OWNERS
 ICE CREAM PARTNERS USA, L.L.C. 30003 BAINBRIDGE ROAD SOLON, OHIO 44139
 NESTLE ICE CREAM, INC. 5929 COLLEGE AVE. OAKLAND, CA 94618
 PFISTERS MOBILE HOME PARK, INC. c/o NESTLE ICE CREAM, INC. 1 PINE LANE LAUREL, MD 20723
 DEVELOPER
 NESTLE ICE CREAM, INC. 5929 COLLEGE AVE. OAKLAND, CA 94618

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
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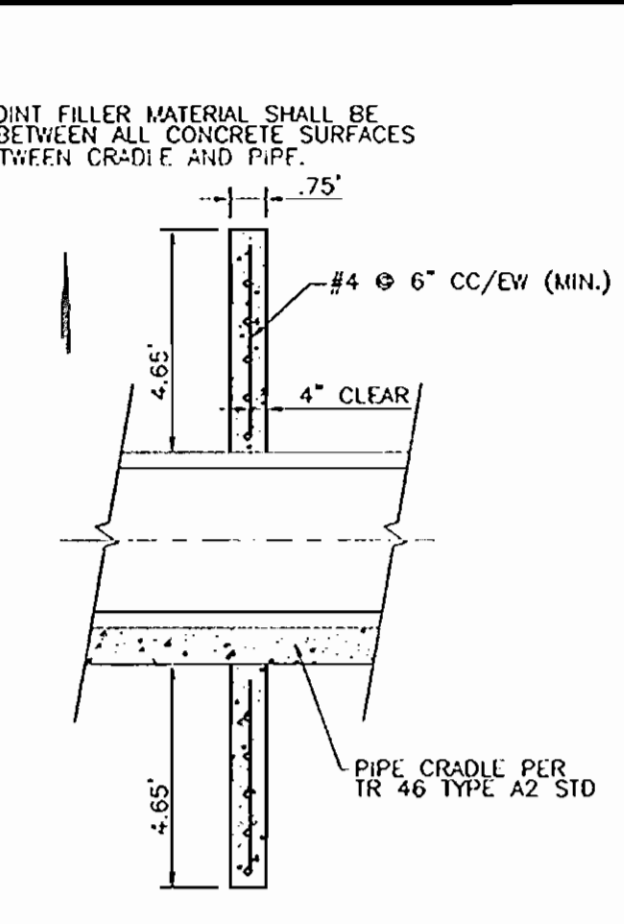
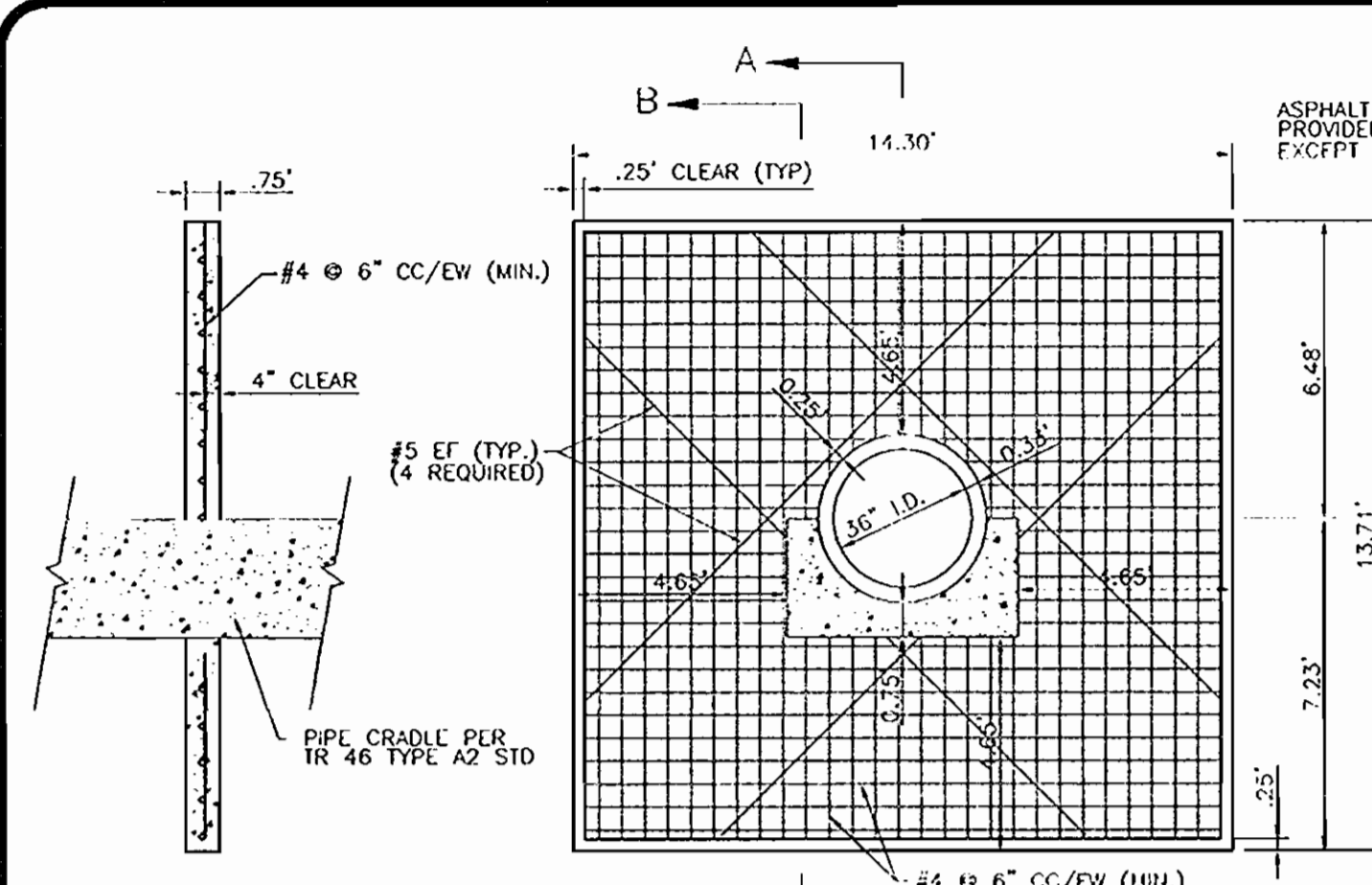
9090 WHISKEY BOTTOM ROAD
 LAUREL, MD 20723
 Dreyers
 SEDIMENT CONTROL DETAILS

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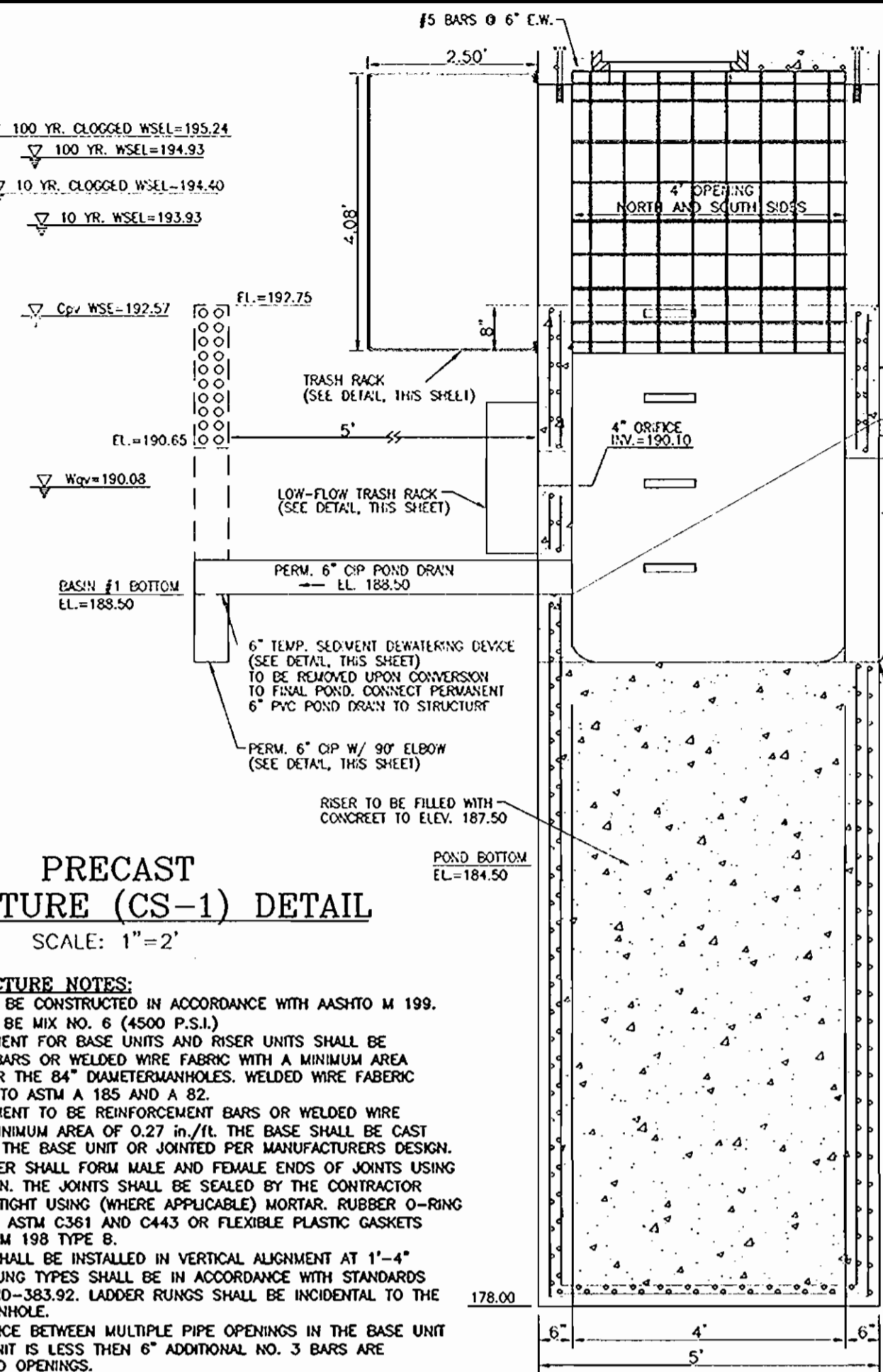
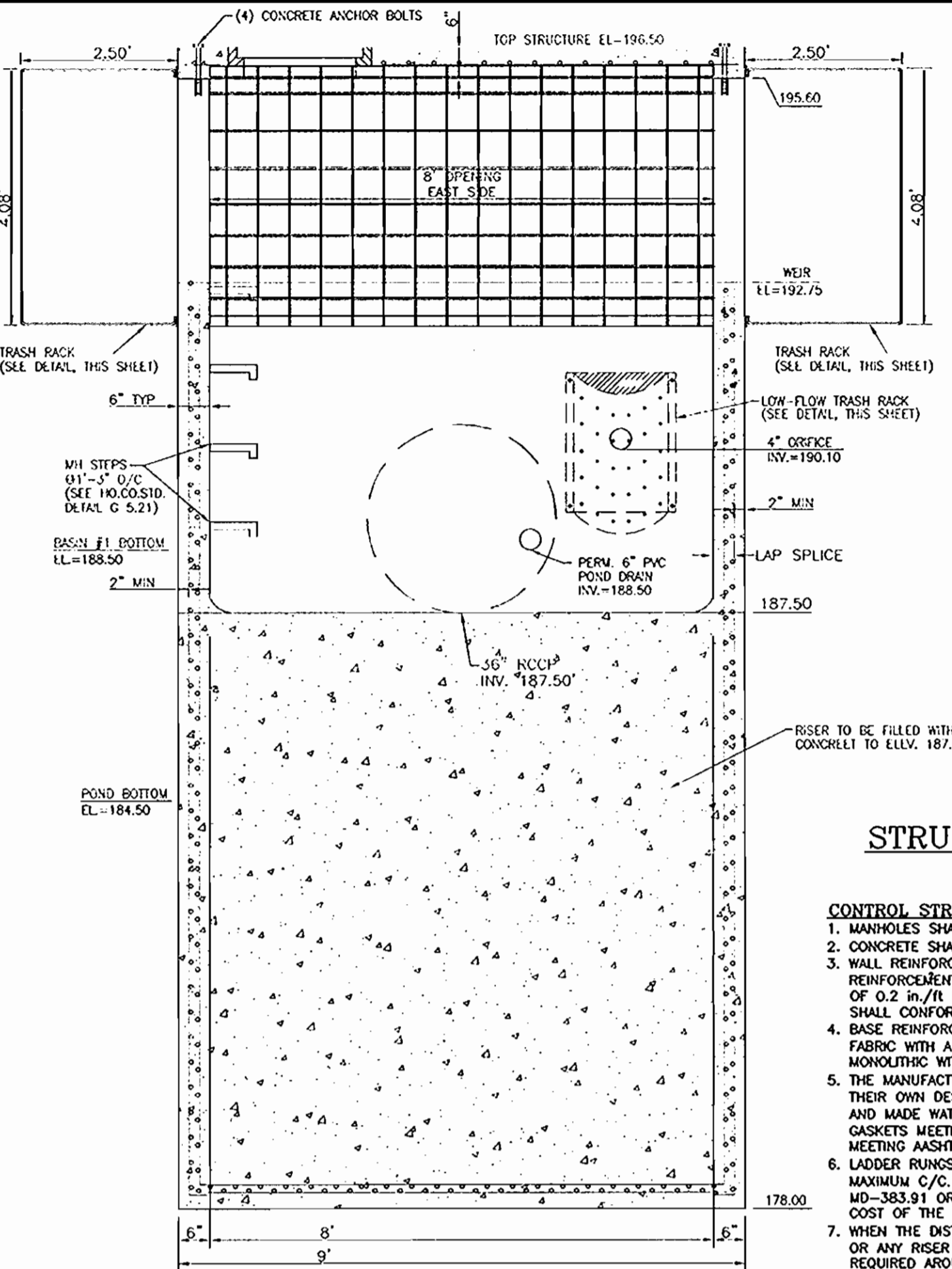
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C6.2
 HO. CO. DPZ SHEET:
 9 OF 13
 SDP-04-144



SECTION B-B
SCALE: 1"=3'

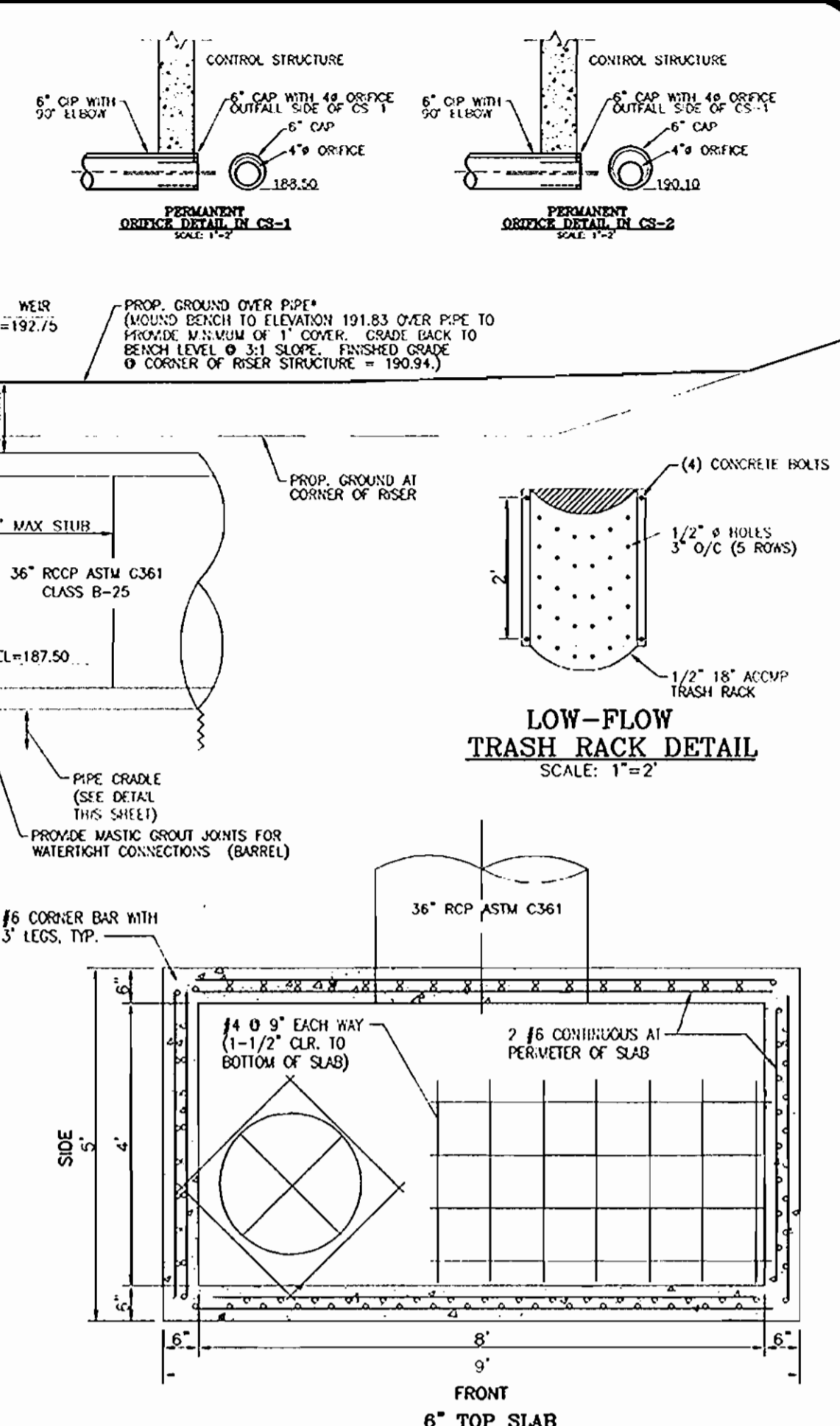
SECTION A-A
SCALE: 1"=3'

NOTES:
 1. ANTI-SEEP COLLARS SHOULD BE PLACED WITHIN THE SATURATION ZONE.
 2. ALL ANTI-SEEP COLLARS AND THEIR CONNECTIONS TO THE CONDUIT SHALL BE WEATHERTIGHT AND MADE UP COMPARTMENT WITH THE CONDUIT.
 3. COLLARS DIMENSIONS SHALL EXTEND A MIN. OF 2' IN ALL DIRECTIONS AROUND THE PIPE.
 4. ANTI-SEEP COLLAR SHALL BE PLACED A MIN. OF 2' FROM PIPE JOINTS EXCEPT WHERE FLANGED JOINTS ARE USED.
(SWM FACILITY)
CONCRETE ANTI-SEEP COLLAR DETAIL
 SCALE: 1"=3'



PRECAST
STRUCTURE (CS-1) DETAIL
SCALE: 1"=2'

CONTROL STRUCTURE NOTES:
 1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
 2. CONCRETE SHALL BE MIX NO. 6 (4500 P.S.I.)
 3. WALL REINFORCEMENT FOR BASE UNITS AND RISER UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.27 in²/ft FOR THE 8" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 82.
 4. BASE REINFORCEMENT TO BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.27 in²/ft. THE BASE SHALL BE CAST MONOLITHIC WITH THE BASE UNIT OR JOINTED PER MANUFACTURER'S DESIGN.
 5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WEATHERTIGHT USING (WHERE APPLICABLE) MORTAR, RUBBER O-RING GASKETS MEETING ASTM C361 AND C443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
 6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS MD-383.91 OR MD-383.92. LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
 7. WHEN THE DISTANCE BETWEEN MULTIPLE PIPE OPENINGS IN THE BASE UNIT OR ANY RISER UNIT IS LESS THAN 6" ADDITIONAL NO. 3 BARS ARE REQUIRED AROUND OPENINGS.
 8. LIFT HOLES OR LEFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
 9. MIX NO. 2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
 10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD.MD-384.13 FOR DETAILS.
 11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 10'-1" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 10'-1" THE COST OF THE DRIP STONE LANDING, NO. 57 AGGREGATE GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.



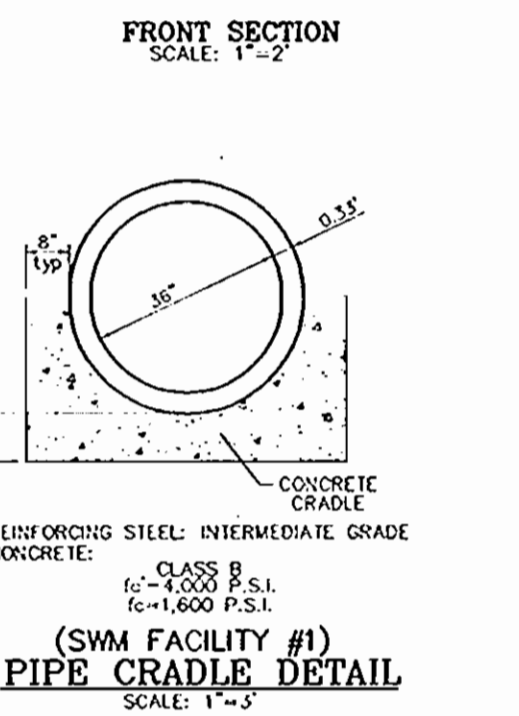
LOW-FLOW
TRASH RACK DETAIL
SCALE: 1"=2'

SUMMARY TABLE

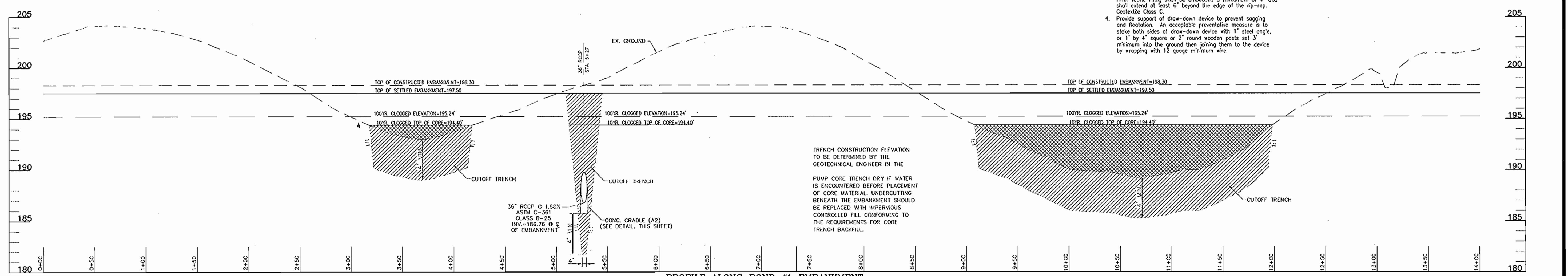
Type of Requirement	Volume Required	Volume Provided
Re, (Recharge Vol. for Entire Site)	5.82 acres ≈ 20,255 cubic feet	N/A - Re, will be provided under a future phase of this project
WQ:		
Study Points - IA, IB, & IC	N/A	By Pass Areas - No Improvements
Study Point = IC (31.4 acres)	72,658 cubic feet	72,658 cubic feet (BMP = 1)
Study Point = 2 (0.9 acres)	N/A	No Improvements
Study Point = 3 (1.8 acres)	N/A	No Improvements
Cp:		
Study Points - IA, IB, & IC	N/A	By Pass Areas - No Improvements
Study Point = IC (31.4 acres)	3,227 cubic feet	3,227 cubic feet (BMP = 1)
Study Point = 2 (0.9 acres)	N/A	< 2.0 cfs for 1-Year Storm
Study Point = 3 (1.8 acres)	N/A	< 2.0 cfs for 1-Year Storm

Note: Both Q_p (Overbank Flood Protection or 10-year storm) and Q_e (Extreme Flood Volume or 100-year storm) are not required for this site since this watershed area is not classified as one of the sensitive watershed areas for Howard County.

The recharge volume for the entire site will be met at a future phase of this project. The water quality volume for the Study Point IC is met through the use of a micropool extended detention pond located near the northern border of the site. Study Points IA, IB, and IC do not require water quality volume or channel protection volume since they are by-pass areas which are not being improved under this plan. The channel protection volume for the site (Study Point IC) is met through the use of a micropool extended detention pond. Study Points 2 and 3 do not require either water quality volume or channel protection volume since there are no proposed improvements in these areas, and the 1-year storm runoff is less than 2.0 cfs.



(SWM FACILITY #1)
PIPE CRADLE DETAIL
SCALE: 1"=3'



PROFILE ALONG POND #1 EMBANKMENT
SCALE: 1"=50' HORIZ.
1"=5' VERT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 USA-NATURAL RESOURCES CONSERVATION SERVICE
 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

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 Nestle Ice Cream Company, LLC, by:

BY THE ENGINEER:
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 SOLON, OHIO 44139

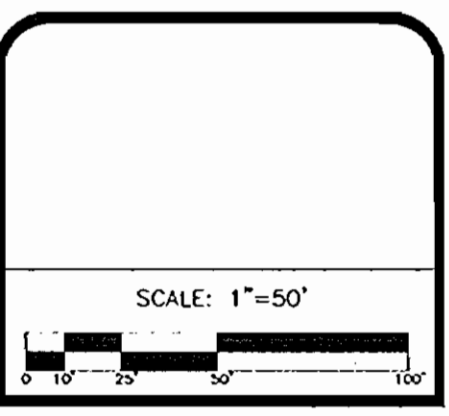
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REL. DATE BY APP. RELEASED FOR

9090 WHISKEY BOTTOM ROAD
 LAUREL, MD 20723
Dreyer's
 STORMWATER MANAGEMENT
 DETAILS

THE DENNIS GROUP, LLC
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C6.3
 HO. CO. DPZ SHEET:
 10 OF 13
 SDP-04-144

**MARYLAND 378
STORMWATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS**

CONSTRUCTION SPECIFICATIONS
These specifications are applicable to all ponds with the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.
Site Preparation
Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and slope banks shall be graded to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.
Areas to be covered by the embankment shall be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise directed on the plans. Trees, brush, logs, and stumps shall be cut approximately level with the ground surface. For stormwater management ponds, a minimum of a 25-foot radius around the steel structure shall be designated.
All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.
Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, rocks, rubbish, stones greater than 6", foam or other objectionable materials. Fill material for the center of the embankment, and all fill banks shall conform to United Soil Classification GC, SC, CL, or CU and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Material used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which will be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one track load of hauling equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tread or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within +/-2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and it to be certified by the engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Out Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill
Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand or other manually directed compaction equipment. The material needs to be placed in compacted lifts of 4 to 6 inches and adjacent to the pipe. At no time during the backfilling operation shall drain equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.
Structure Backfill
Structure backfill may be flexible fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The backfill shall have a minimum of 100-200 psi dry unconfined compressive strength. The backfill fill shall have a minimum pH of 4.0 and a minimum resistivity of 2000 ohm-cm. Material shall be placed such that minimum of 6" (measured perpendicular to the outside of the pipe) of flexible fill shall be under (bedding) any pipe, and, on the sides of the pipe. If any pipe is to extend up to the surface for rigid conduits, average density of the fill shall be 7 to ensure feasibility of the material. Adequate measures shall be taken (sand bags, etc.) to prevent loading the pipe. When using flexible fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flexible fill zone. At no time during the backfilling operation shall drain equipment be allowed to operate closer than four feet, measured horizontally, to any part of the structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill (flexible fill) shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Pipe Conduits
All pipes shall be installed in cross section.
Corroated Metal Pipe - All of the following criteria shall apply for corroded metal pipe:
1. Materials - (Riveted Corroded Steel Pipe) - Steel pipes with polymeric coating shall have a minimum coating thickness of 100 (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with waterproofing coatings bars or flanges.
Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with waterproofing coatings bars or flanges. Aluminum Coated Steel Pipe, when used with flexible fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be primed with one coat of zinc chromate primer or two coats of asphalt.
Non-Routine Maintenance

POUND BOTTOM SOIL CONDITIONS
If broken rock fragments are encountered at finished pond bottom, under cut a minimum of 12" below basin grade and to a horizontal distance of at least 18" beyond each edge of the broken rock and backfill with fine-grained fill or CL soils corresponding to a firm condition. This procedure should be performed under the supervision of the project Geotechnical Engineer.
In order to lower the infiltration rate into the sands with gravel, it is recommended that the sands with gravel be undercut and replaced with a minimum of 12 inches of soils classified as SM per ASTM D-2487 or Sandy Loam per USDA classification. The fill soil should be compacted to at least 95 percent of its maximum dry density per ASTM D-698.
OPERATION, MAINTENANCE AND INSPECTION
INSPECTION OF THE POND(S) SHALL BE PERFORMED ON AN ANNUAL BASIS, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, NRCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SLOPAGE, RUBBED CHANNEL, SLIDING OR SLUMPING.
OPERATION AND MAINTENANCE SCHEDULE FOR EXTENDED DETENTION FACILITY
STORMWATER MANAGEMENT FACILITY
ROUTINE MAINTENANCE
1. FACILITY WILL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WEATHER TO DETERMINE IF FUNCTIONING PROPERLY.
2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
3. DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
4. VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREAS SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
NON-ROUTINE MAINTENANCE
1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, RISER, AND THE PILES SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
2. SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, INTERFERE WITH THE FUNCTION OF THE RISER, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEFERRED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

OWNERS
ICE CREAM PARTNERS USA, L.L.C.
30003 BAINBRIDGE ROAD
SOLON, OHIO 44139
PEPPER'S HOME PARK, INC.
c/o NESTLE ICE CREAM, INC.
1 PINE LAKE
LAUREL, MD 20723
DEVELOPER
NESTLE ICE CREAM, INC.
5929 COLLEGE AVE.
OAKLAND, CA 94618
NESTLE ICE CREAM, L.L.C. by
Robert H. Vogel Engineering, Inc.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-185 or M-211 with waterproofing coatings bars or flanges. Aluminum pipe, when used with flexible fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be primed with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding water shall be between 4 and 9.
2. Coatings, bolts, anti-seep coats, and sections, etc., must be composed of the same material and coatings as the pipe. Metals must be installed from dissimilar materials with use of rubber or plastic insulating materials at least 24 inch thickness.
3. Connections - All connections with pipes must be completely waterproof. The drain pipe or barrel connection to the riser shall be welded around when the pipe and riser are metal. Anti-seep coats shall be connected to the pipe in such a manner as to be completely waterproof. Dimple bands are not considered to be waterproof.
All connections shall use a rubber or neoprene gasket when fitting pipe sections. The end of each pipe shall be sealed on an oblique surface of concrete to conform to the backfill. The following type connections are acceptable for pipes less than 24 inches diameter: flanges on both ends of the pipe with a crease 3/8 inch thick closed end cast iron pipe. For pipes 24 inches diameter or larger, the pipe shall have a minimum diameter of 1/2 inch greater than the connection depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch diameter corrugated barrel with a minimum of 4 (two) rods and nuts, 2 on each connecting pipe end. A 24 inch side by 3/8 inch thick closed end crease neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed end crease neoprene gaskets will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed end crease neoprene gaskets or have lock washers with internal coating or a neoprene bead.
4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soil, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
5. Backfilling shall conform to "Structure Backfill".
6. Other details (anti-seep coats, valves, etc.) shall be as shown on the drawings.

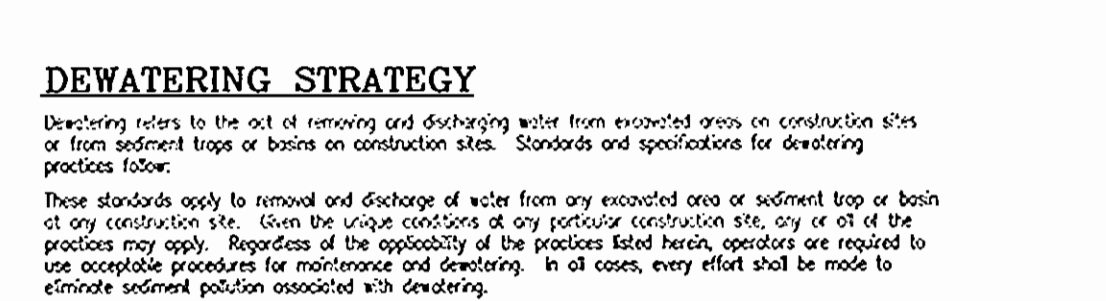
Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:
1. Materials - Reinforced concrete pipe shall have ball and spigot joints with rubber gaskets, and shall equal or exceed ASTM C-361.
2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding/cradle for their entire length. This bedding/cradle shall consist of a 12-inch wide layer of compacted bedding material and a 12-inch wide layer of compacted bedding material with a minimum thickness of 6 inches. Where a concrete grade is not needed for structural reasons, flexible fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.
3. Laying pipe - Ball and spigot pipe shall be placed with the ball and spigots. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are seated for the entire length, the bedding shall be placed so that all spigot ends of the pipe are filled. Care shall be exercised to prevent any deviation from the original free end grade of the pipe. The first joint must be located within 4 feet from the riser.
4. Backfilling shall conform to "Structure Backfill".
5. Other details (anti-seep coats, valves, etc.) shall be as shown on the drawings.

Plastic Pipe - The following criteria shall apply for plastic pipe:
1. Materials - PVC pipe shall be PVC-112 or PVC-122 conforming to ASTM D-1785 or ASTM D-2241. Compacted High Density Polyethylene (HDPE) pipe, coatings and fittings shall conform to the following: "4" - "10" inch pipe shall meet the requirements of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirements of AASHTO M294 Type S.
2. Joints and connections to anti-seep coats shall be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soil, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Backfilling shall conform to "Structure Backfill".
5. Other details (anti-seep coats, valves, etc.) shall be as shown on the drawings.

Drainage Ditches - When a drainage ditch is used, a registered professional engineer will supervise the design and construction aspects.
Concrete
Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Item 3.
Rock Riprap
Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction Materials, Section 311.
Gravel
Gravel shall be placed under all riprap and shall meet requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313, Item 3.
Care of Water during Construction
All work on permanent structures shall be carried out in areas free from erosion. The contractor shall construct and maintain temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect to be occupied by the permanent works. The contractor shall also provide an insufficient quantity of the on-site soils suitable for use in the construction of the cutoff trenches and impervious cores. This material will need to be imported to the project site. Bulk samples should be taken of the proposed impervious soils and submitted to the Geotechnical Engineer for approval prior to the importation of this material to the site.

Geotechnical Construction Recommendations
Cut-Off Trench and Impervious Core Construction
According to the site grading plan, cut-off trenches and impervious cores will be required at the east and west sides of the proposed SWM pond.
In accordance with Maryland Code 378 requirements, the cutoff trench shall extend at least 4 feet below the principal spillway pipe, having a minimum width of 4 feet, and have side slopes of 1H:1V, or flatter. The impervious core shall extend vertically upward from the cutoff trench to the 10-year stormwater surface elevation. Fill materials for the cutoff trench and impervious core construction shall consist of GC, SC, CL, or CH soil types, having at least 30 percent by weight passing the No. 200 sieve.
Fill materials for the cut-off trench and impervious core should be placed in 8-inch loose lifts and compacted to at least 95 percent of the maximum dry density in accordance with the Standard Proctor test method, ASTM D-698. We recommend that moisture content at the time of construction should generally be within the range of the optimum moisture content to 3 percentage points wet of the optimum moisture content. Placement and compaction of the cutoff trench and impervious core fill materials should be monitored by the Geotechnical Engineer on a full-time basis to ensure that fill materials are being placed and compacted in accordance with plans and specifications.
General Embankment Construction
According to the plans provided, it appears that the SWM pond is to be constructed to a configuration of SWM-11, primarily in a cut situation. However, embankments will be required at the east and west sides of the pond with a maximum of 7.5 feet of fill at the northeastern corner of the pond. The results of the borings indicated that the cut slopes should be suitable for the proposed 3H:1V. The fill slopes planned at 3H:1V should consist of embankment fill as recommended below.
Embankment soils placed outside the limits of the cut-off trench and impervious core should consist of soils classified as CL, ML, SC, SM, SP, or SU-SP in accordance with ASTM D-2487. Soils of these types should be readily available from excavated materials associated with the pond construction, although care will need to be exercised to ensure that the materials do not contain excessive amounts of organics.
Summary of SWM Pond Design
Based on the subsurface conditions encountered at the site and our review of the proposed Stormwater Management Plan, it is our opinion that the design for the proposed SWM ponds and embankments, with modifications as recommended herein, is in general accordance with Maryland Code 378 requirements with regard to geotechnical considerations. Careful observation of soil conditions exposed during construction will be needed to ensure that measures are taken to provide necessary improvement of soil conditions, especially in the areas of cut slopes and in areas of structural support.
Subgrade Preparation
Subgrade preparation in proposed embankment areas should generally include the removal of any soft, loose, or otherwise unsuitable materials from areas that are to receive fill. We recommend that the removal of unsuitable materials should extend at least 5 feet beyond the areas to receive fill, unless otherwise recommended by the Geotechnical Engineer.
Prior to the placement of any embankment fill materials, an authorized representative of the Geotechnical Engineer should examine the subgrade soils to verify that they are suitable. The exposed soils should be thoroughly profiled by a vehicle having an axle weight of at least 10 tons, such as a loaded tandem-axle dump truck. This procedure is intended to assist in identifying any localized unstable or yielding materials. In the event that unstable or yielding areas are encountered during the profiling operations, the subgrade should be either thoroughly densified in-place, disc/scraper and recomacted, or undercut to firm ground and replaced with controlled, compacted fill.
Fill Placement and Compaction
Prior to placement of compacted fill, representative bulk samples (about 50 pounds) should be taken off the proposed fill soils and laboratory tests should be conducted to determine Atterberg limits, natural moisture content, grain size distribution, and moisture-density relationships for compaction. In general, any materials to be used as structural fill should consist of those materials previously described in the previous sections pertaining to Cut-off Trench and Impervious Core Construction and General Embankment Construction. Materials acceptable for use in engineered fills should be free of organic matter (less than 3 percent by weight) and debris, containing no rocks greater than 4 inches in their largest dimension. Any off-site borrow soils, if required, should meet the same material requirements and should be approved by the Geotechnical Engineer.
The on-site soils generally should be acceptable for re-use as embankment fill, with the restrictions previously addressed. As previously mentioned, there appears to be an insufficient quantity of the on-site soils suitable for use in the construction of the cutoff trenches and impervious cores. This material will need to be imported to the project site. Bulk samples should be taken of the proposed impervious soils and submitted to the Geotechnical Engineer for approval prior to the importation of this material to the site.
Based on the results of the field testing program conducted for this site, and visual and laboratory classifications of the samples obtained, the on-site soils are generally considered to be suitable for re-use as embankment fill. Considering the laboratory test results, existing moisture contents for some of the on-site soils may be greater than the optimum moisture content, therefore, drying of the soils by aeration or by chemical methods such as quick lime or cement should be anticipated to reduce the moisture content of the on-site soils in order to achieve the required compaction. Any materials proposed for use as structural fill should be approved by the Geotechnical Engineer or his authorized representative.

DEWATERING STRATEGY
Description refers to the use of temporary and permanent structures on construction sites to remove water from areas of erosion or from sediment traps or basins on construction sites. Standards and specifications for critical Area Planning (MD-347) or as shown on the accompanying drawings.
Erosion and Sediment Control
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution will be minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.
Approved Practices for Dewatering of Excavated Areas
Designers shall specify the preferred procedures for dewatering on plans. In particular, designers shall identify procedures for dewatering sediment traps and basins prior to elimination of the total sediment control facility on the site or prior to cessation of sediment control facilities to stormwater management facilities. Recommended procedures shall be consistent with these standards. Applicable site conditions may require routine dewatering facilities. Dewatering measures not referenced in this standard may be used with the consent of the approved authority.
Approved Practices for Dewatering of Excavated Areas:
1. Designers shall specify on plans, and in sequences of construction included on plans, practices for dewatering of excavated areas. Plan reviewers shall check to see that procedures for dewatering are included on plans.
2. In all cases, water removed from excavated areas shall be discharged such that it shall pass through a sediment control device prior to entering receiving waters. Sediment control devices include sediment traps and basins, in addition to the practices in this section.
Approved Practices for Dewatering of Excavated Areas:
1. Pumping of water to an existing sediment basin or trap in which the entire volume of water from the area to be dewatered can be contained without discharge to receiving waters.
2. Pumping of water to an existing sediment basin or trap such that the entire volume of water from the area to be dewatered can be managed without exceeding the design outflow from the sediment control structure.
3. Removable Pumping Station? Standards and specifications for Removable Pumping Station are on Detail 20A.
4. Use of a Pump Pit? Standards and specifications for a pump pit are on Detail 20B.
5. Sediment Trap? Standards and specifications for a pump pit are on Detail 21.
Dewatering of Sediment Traps and Basins
Designers shall specify on plans, and in sequences of construction included on plans, the practices for dewatering of traps and basins. Plan reviewers shall check to see that procedures for dewatering are included on plans. In all cases, water removed from traps and basins shall be discharged to that it passes through a sediment control device prior to entering receiving waters.
Approved Practices for Dewatering of Traps and Basins
1. Removable pumping station.
2. Use of a Pump Pit.
3. Use of a floating suction hose to pump the clearer water from the top of the pond. As the clearer water is pumped the suction hose will extend and eventually sediment will settle.
When this happens the pumping operation will cease. Procedures shall be made to filter water.



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Geotechnical Construction Recommendations

Cut-Off Trench and Impervious Core Construction
According to the site grading plan, cut-off trenches and impervious cores will be required at the east and west sides of the proposed SWM pond.
In accordance with Maryland Code 378 requirements, the cutoff trench shall extend at least 4 feet below the principal spillway pipe, having a minimum width of 4 feet, and have side slopes of 1H:1V, or flatter. The impervious core shall extend vertically upward from the cutoff trench to the 10-year stormwater surface elevation. Fill materials for the cutoff trench and impervious core construction shall consist of GC, SC, CL, or CH soil types, having at least 30 percent by weight passing the No. 200 sieve.
Fill materials for the cut-off trench and impervious core should be placed in 8-inch loose lifts and compacted to at least 95 percent of the maximum dry density in accordance with the Standard Proctor test method, ASTM D-698. We recommend that moisture content at the time of construction should generally be within the range of the optimum moisture content to 3 percentage points wet of the optimum moisture content. Placement and compaction of the cutoff trench and impervious core fill materials should be monitored by the Geotechnical Engineer on a full-time basis to ensure that fill materials are being placed and compacted in accordance with plans and specifications.
General Embankment Construction
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Embankment soils placed outside the limits of the cut-off trench and impervious core should consist of soils classified as CL, ML, SC, SM, SP, or SU-SP in accordance with ASTM D-2487. Soils of these types should be readily available from excavated materials associated with the pond construction, although care will need to be exercised to ensure that the materials do not contain excessive amounts of organics.
Summary of SWM Pond Design
Based on the subsurface conditions encountered at the site and our review of the proposed Stormwater Management Plan, it is our opinion that the design for the proposed SWM ponds and embankments, with modifications as recommended herein, is in general accordance with Maryland Code 378 requirements with regard to geotechnical considerations. Careful observation of soil conditions exposed during construction will be needed to ensure that measures are taken to provide necessary improvement of soil conditions, especially in the areas of cut slopes and in areas of structural support.
Subgrade Preparation
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Fill Placement and Compaction
Prior to placement of compacted fill, representative bulk samples (about 50 pounds) should be taken off the proposed fill soils and laboratory tests should be conducted to determine Atterberg limits, natural moisture content, grain size distribution, and moisture-density relationships for compaction. In general, any materials to be used as structural fill should consist of those materials previously described in the previous sections pertaining to Cut-off Trench and Impervious Core Construction and General Embankment Construction. Materials acceptable for use in engineered fills should be free of organic matter (less than 3 percent by weight) and debris, containing no rocks greater than 4 inches in their largest dimension. Any off-site borrow soils, if required, should meet the same material requirements and should be approved by the Geotechnical Engineer.
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SOIL BORING LOG
NOT TO SCALE
The figure shows 19 soil borings (SWM-5 to SWM-19) with depth profiles and soil descriptions. Each boring shows soil layers from 0.33 to 100 feet depth with descriptions like 'Fine to Medium Sand, Trace Gravel, Dark Brown, Moist, Firm (SM)' or 'Clayey Sand, Trace Silt, Reddish Brown, Moist, Firm (SC)'. The borings are arranged in a grid with SWM-5 to SWM-12 in the top row, SWM-13 to SWM-17 in the middle row, and SWM-18 and SWM-19 in the bottom row.

SECTION THROUGH GABION FOREBAY BASIN #1
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'
The diagram shows a cross-section of a gabion forebay basin. It includes a 'TOP OF FOREBAY' line, a 'PROF. GRADE' line, and a 'DK. GROUND' line. A 'DRAINAGE CONTROL CHANNEL' is shown with a width of 36' and an elevation of 194.00. A 'BUILT GRADE & FOREBAY ELEV. = 193.00' is indicated. The elevation of the basin bottom is 192.00. The diagram also shows a 'UNDERLAY' and 'OR APPROVAL EQUIVALENT'.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 10/22/04
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 10/26/04
DIRECTOR
DATE: 10/27/04

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
BY THE DEVELOPER:
DATE: 10/22/04
DATE: 10/26/04
DATE: 10/27/04

BY THE ENGINEER:
I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PROFESSIONAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
NESTLE ICE CREAM COMPANY, L.L.C. by
DATE: 10/26/04
DATE: 10/26/04
DATE: 10/26/04

THE DENNIS GROUP, LLC
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801-531-8585 • FAX 801-531-8586
STATE OF MARYLAND
MICHAEL J. HARRIS
REGISTERED PROFESSIONAL ENGINEER
NO. 12345
DATE: 10/26/04

Geotechnical Construction Recommendations

Cut-Off Trench and Impervious Core Construction
According to the site grading plan, cut-off trenches and impervious cores will be required at the east and west sides of the proposed SWM pond.
In accordance with Maryland Code 378 requirements, the cutoff trench shall extend at least 4 feet below the principal spillway pipe, having a minimum width of 4 feet, and have side slopes of 1H:1V, or flatter. The impervious core shall extend vertically upward from the cutoff trench to the 10-year stormwater surface elevation. Fill materials for the cutoff trench and impervious core construction shall consist of GC, SC, CL, or CH soil types, having at least 30 percent by weight passing the No. 200 sieve.
Fill materials for the cut-off trench and impervious core should be placed in 8-inch loose lifts and compacted to at least 95 percent of the maximum dry density in accordance with the Standard Proctor test method, ASTM D-698. We recommend that moisture content at the time of construction should generally be within the range of the optimum moisture content to 3 percentage points wet of the optimum moisture content. Placement and compaction of the cutoff trench and impervious core fill materials should be monitored by the Geotechnical Engineer on a full-time basis to ensure that fill materials are being placed and compacted in accordance with plans and specifications.
General Embankment Construction
According to the plans provided, it appears that the SWM pond is to be constructed to a configuration of SWM-11, primarily in a cut situation. However, embankments will be required at the east and west sides of the pond with a maximum of 7.5 feet of fill at the northeastern corner of the pond. The results of the borings indicated that the cut slopes should be suitable for the proposed 3H:1V. The fill slopes planned at 3H:1V should consist of embankment fill as recommended below.
Embankment soils placed outside the limits of the cut-off trench and impervious core should consist of soils classified as CL, ML, SC, SM, SP, or SU-SP in accordance with ASTM D-2487. Soils of these types should be readily available from excavated materials associated with the pond construction, although care will need to be exercised to ensure that the materials do not contain excessive amounts of organics.
Summary of SWM Pond Design
Based on the subsurface conditions encountered at the site and our review of the proposed Stormwater Management Plan, it is our opinion that the design for the proposed SWM ponds and embankments, with modifications as recommended herein, is in general accordance with Maryland Code 378 requirements with regard to geotechnical considerations. Careful observation of soil conditions exposed during construction will be needed to ensure that measures are taken to provide necessary improvement of soil conditions, especially in the areas of cut slopes and in areas of structural support.
Subgrade Preparation
Subgrade preparation in proposed embankment areas should generally include the removal of any soft, loose, or otherwise unsuitable materials from areas that are to receive fill. We recommend that the removal of unsuitable materials should extend at least 5 feet beyond the areas to receive fill, unless otherwise recommended by the Geotechnical Engineer.
Prior to the placement of any embankment fill materials, an authorized representative of the Geotechnical Engineer should examine the subgrade soils to verify that they are suitable. The exposed soils should be thoroughly profiled by a vehicle having an axle weight of at least 10 tons, such as a loaded tandem-axle dump truck. This procedure is intended to assist in identifying any localized unstable or yielding materials. In the event that unstable or yielding areas are encountered during the profiling operations, the subgrade should be either thoroughly densified in-place, disc/scraper and recomacted, or undercut to firm ground and replaced with controlled, compacted fill.
Fill Placement and Compaction
Prior to placement of compacted fill, representative bulk samples (about 50 pounds) should be taken off the proposed fill soils and laboratory tests should be conducted to determine Atterberg limits, natural moisture content, grain size distribution, and moisture-density relationships for compaction. In general, any materials to be used as structural fill should consist of those materials previously described in the previous sections pertaining to Cut-off Trench and Impervious Core Construction and General Embankment Construction. Materials acceptable for use in engineered fills should be free of organic matter (less than 3 percent by weight) and debris, containing no rocks greater than 4 inches in their largest dimension. Any off-site borrow soils, if required, should meet the same material requirements and should be approved by the Geotechnical Engineer.
The on-site soils generally should be acceptable for re-use as embankment fill, with the restrictions previously addressed. As previously mentioned, there appears to be an insufficient quantity of the on-site soils suitable for use in the construction of the cutoff trenches and impervious cores. This material will need to be imported to the project site. Bulk samples should be taken of the proposed impervious soils and submitted to the Geotechnical Engineer for approval prior to the importation of this material to the site.
Based on the results of the field testing program conducted for this site, and visual and laboratory classifications of the samples obtained, the on-site soils are generally considered to be suitable for re-use as embankment fill. Considering the laboratory test results, existing moisture contents for some of the on-site soils may be greater than the optimum moisture content, therefore, drying of the soils by aeration or by chemical methods such as quick lime or cement should be anticipated to reduce the moisture content of the on-site soils in order to achieve the required compaction. Any materials proposed for use as structural fill should be approved by the Geotechnical Engineer or his authorized representative.

SPECIMEN TREES					
Key	Name	Scientific Name	Size	Condition	Remove/Remain
ST-1	Lulip Poplar	Liriodendron tulipifera	57"	Fair	Remove
ST-2	Tulip Poplar	Liriodendron tulipifera	36"	Good	Remove
ST-3	Red Oak	Quercus rubra	39"	Fair	Remove
ST-4	American Beech	Fagus grandifolia	30"	Fair	Remove
ST-5	American Beech	Fagus grandifolia	30"	Fair	Remove
ST-6	Red Oak	Quercus rubra	30"	Good	Remove
ST-7	Red Oak	Quercus rubra	51"	Fair	Remove
ST-8	Red Oak	Quercus rubra	32"	Poor	Remove
ST-9	Red Oak	Quercus rubra	31"	Fair	Remove
ST-10	Black Oak	Quercus velutina	35"	Fair	Remove
ST-11	Red Oak	Quercus rubra	31.5"	Poor	Remove
ST-12	Black Oak	Quercus velutina	34.5"	Fair	Remove
ST-13	Red Maple	Acer rubrum	36"	Fair	Remove
ST-14	Platanus occidentalis	Sycamore	37"	Fair	Remove
ST-15	Lulip Poplar	Liriodendron tulipifera	32.5"	Good	Remove
ST-16	Platanus occidentalis	Sycamore	36"	Fair	Remove
ST-17	Platanus occidentalis	Sycamore	37"	Good	Remove
ST-18	Red Maple	Acer rubrum	32"	Fair	Remove
ST-19	Black Oak	Quercus velutina	32.5"	Fair	Remove
ST-20	Black Oak	Quercus velutina	34"	Good	Remove
ST-21	Black Oak	Quercus velutina	34"	Poor	Remove
ST-22	White Oak	Quercus alba	35"	Fair	Remove
ST-23	Red Oak	Quercus rubra	30.5"	Fair	Remove
ST-24	American Beech	Fagus grandifolia	30"	Poor	Remove
ST-25	Black Oak	Quercus velutina	33"	Poor	Remove
ST-26	Black Oak	Quercus velutina	33"	Fair	Remove

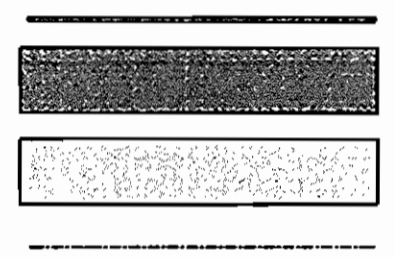
1"=50'

FOREST STAND BOUNDARY

FLOODPLAIN

STEEP SLOPES

SOIL TYPE BOUNDARY



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard County Seal

10/22/04
DATE

10/25/04
DATE

10/22/04
DATE

OWNERS

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REL. DATE BY APP. RELEASED FOR

9090 WHISKEY BOTTOM ROAD
LAUREL, MD 20723

Preyers

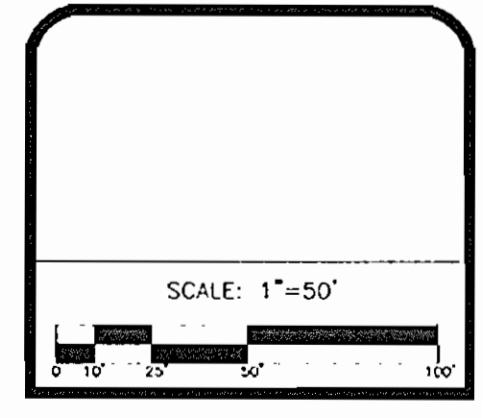
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FOREST STAND ANALYSIS TABLE

KEY	TYPE OF COMMUNITY	AREA	SOIL INFORMATION				EXISTING VEGETATION (Type and approx. %)	STAND CHARACTERISTICS			FOREST AREA IN SENSITIVE ENVIRONMENTS						
			SOIL TYPE	TYPICAL FOREST COVER	WOODLAND SUITABILITY INDEX	HABITAT VALUE		SIZE A.V.C. DIAM.	AGE	GENERAL CONDITIONS							
F1	Mixed Hardwood	3.04 Ac	CuB	Oaks and other mixed	85+ loblobly	Good	American Beech 20%	2-20+	60-80	Good. Well developed understory. Some invasives.	2.2 Ac in Wetland and Buffer, and Stream Buffer						
			Fa	Mixed Lowland	85+ loblobly	Good	Sweetgum 20%										
			SiD2	Mixed Hardwood	75-84 loblobly	Fair	Virginia Pine 10%										
F2	Pine Dominated Mixed Upland	1.75 Ac	CmC2	Oaks & other hardwood	75-84 loblobly	Fair	American Beech 10%	2-12	20-40	Fair. Limited understory.	0.4 Ac in Wetland and Buffer, and Stream Buffer						
			Fa	Mixed Lowland	85+ loblobly	Good	Sweetgum 10%										
			SiC2	Mixed Hardwood	75-84 loblobly	Good	Virginia Pine 60%										
			SsE	Mixed Hardwood	75-84 loblobly	Fair	Tulip 5%										
													Poplar 20%				
F3	Mixed Hardwood	19.00 Ac	CmC2	Oaks & other hardwood	75-84 loblobly	Fair	American Beech 25%	2-30+	180-200+	Excellent. Some invasives near edges.	1.6 Ac in Wetland and Buffer, and Stream Buffer						
			CuB	Oaks and other mixed	85+ loblobly	Good	Sweetgum 10%										
			Fa	Mixed Lowland	85+ loblobly	Good	Virginia Pine 10%										
			RuD2	Scrub Hardwood	75-84 loblobly	Fair	Tulip 15%										
			ScD	None	55-64 loblobly	Fair	Poplar 10%										
			SiC2	Mixed Hardwood	75-84 loblobly	Good	Red Maple 5%										
			SsE	Mixed Hardwood	75-84 loblobly	Fair	White Oak 10%										
F4	Pine Dominated Mixed Upland	1.76 Ac	ScD	None	55-64 loblobly	Fair	American Beech 5%	2-14	50-60	Fair. Some invasives near edges. Understory not well developed, but present. Pine dominant by far.	None						
													Sweetgum 20%				
													Virginia 50%				
F5	Mixed Upland	2.05 Ac	ScB	None	55-64 loblobly	Fair	American Beech 15%	2-24	110-120+	Fair. Some invasives near edges. Some areas younger but no distinct seperation.	None						
			ScD														
			F6	Mixed Upland	2.05 Ac	ScB	None					55-64 loblobly	Fair	Black Locust 25%	2-12	20-40	Poor. Many invasives. Little to no understory.
ScD																	
F7	Mixed Upland	0.54 Ac	ScB	None	55-64 loblobly	Fair	American Beech 15%	2-24+	130-150+	Good. Few invasives.	None						
			ScD														

Forest Stand Narrative

Except as noted, all stands are contiguous, having been differentiated based on variations in species composition.

F1 This 3.04 Ac stand contains a large area of wetland and buffer and a stream. Species are typical of wetland areas. Understory includes all overstory species, as well as Greenbriar, Multiflora Rose and both High- and Low-bush Blueberry. Invasives are found more on the edges in disturbed areas along the property boundary. Due to the wetland and stream, this stand would be considered high priority for retention.

F2 This 1.75 Ac stand is an area dominated by Virginia Pine, and includes wetland and stream buffer area. Overstory and understory species is limited due to the heavy pine cover, but all overstory species are represented as well as Lowbush Blueberry. Due to the buffer areas, this stand would be a high priority for retention.

F3 This 19.00 Ac forest has a diverse mix of species throughout. The species mix varies across the stand but not in a way as to differentiate smaller stand areas. Beech is found heavily in virtually all areas in both the over- and understory. Other understory species include all other overstory species, black cherry, flowering dogwood, rhododendron, blueberry and greenbriar. Invasives are limited to edges and disturbed areas. A number of specimen and near specimen trees are found within the stand. The areas near the stream and within the wetland and buffer would be high priority for retention, though most of the area would be of moderate priority.

F4 This 1.76 Ac stand is another area dominated by Virginia Pine, to the exclusion of other species in the over- and understory. In addition to the overstory species, the understory also includes American holly and black gum. There is some edge disturbance with minor invasive encroachment. The stand would be low priority for retention.

F5 This 2.05 Ac stand runs along the edge of a steep railroad right-of-way. Species composition varies somewhat from other stands. More invasives are found within the stand, including shrub honeysuckle and oriental bittersweet, especially in the area near the mobile homes. This would be an area of moderate priority for retention due to its being adjacent to steep slopes.



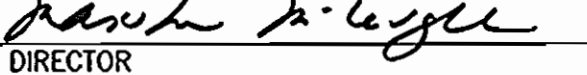
F6 This 1.48 Ac stand runs along the steep slopes adjacent to the railroad right-of-way. The area is highly disturbed, and heavily infested with invasives. Forest structure is barely present but there is a limited understory. Due to the high percentage of invasive species combined with the very steep slopes, this area would be high priority for retention but with management to take care of the invasives.

F7 This 0.54 Ac stand is found behind the mobile homes, isolated from the rest of the forest areas. The stand is in good condition with an understory including the overstory species as well as sassafras, American holly, blueberry, and flowering dogwood. This would be considered moderate priority for retention.

The remainder of the site is the home sites, roads and other associated grass and paved areas for the mobile home park. There are many specimen and near specimen trees located around the mobile homes, though most aren't in good condition.

Total acreage for existing forest on-site = 30.19 acres.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 10/22/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 10/25/04
 CHIEF, DIVISION OF LAND DEVELOPMENT
 10/27/04
 DIRECTOR



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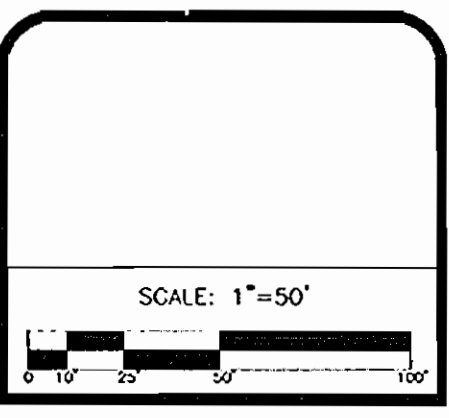
FOREST STAND DELINEATION

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