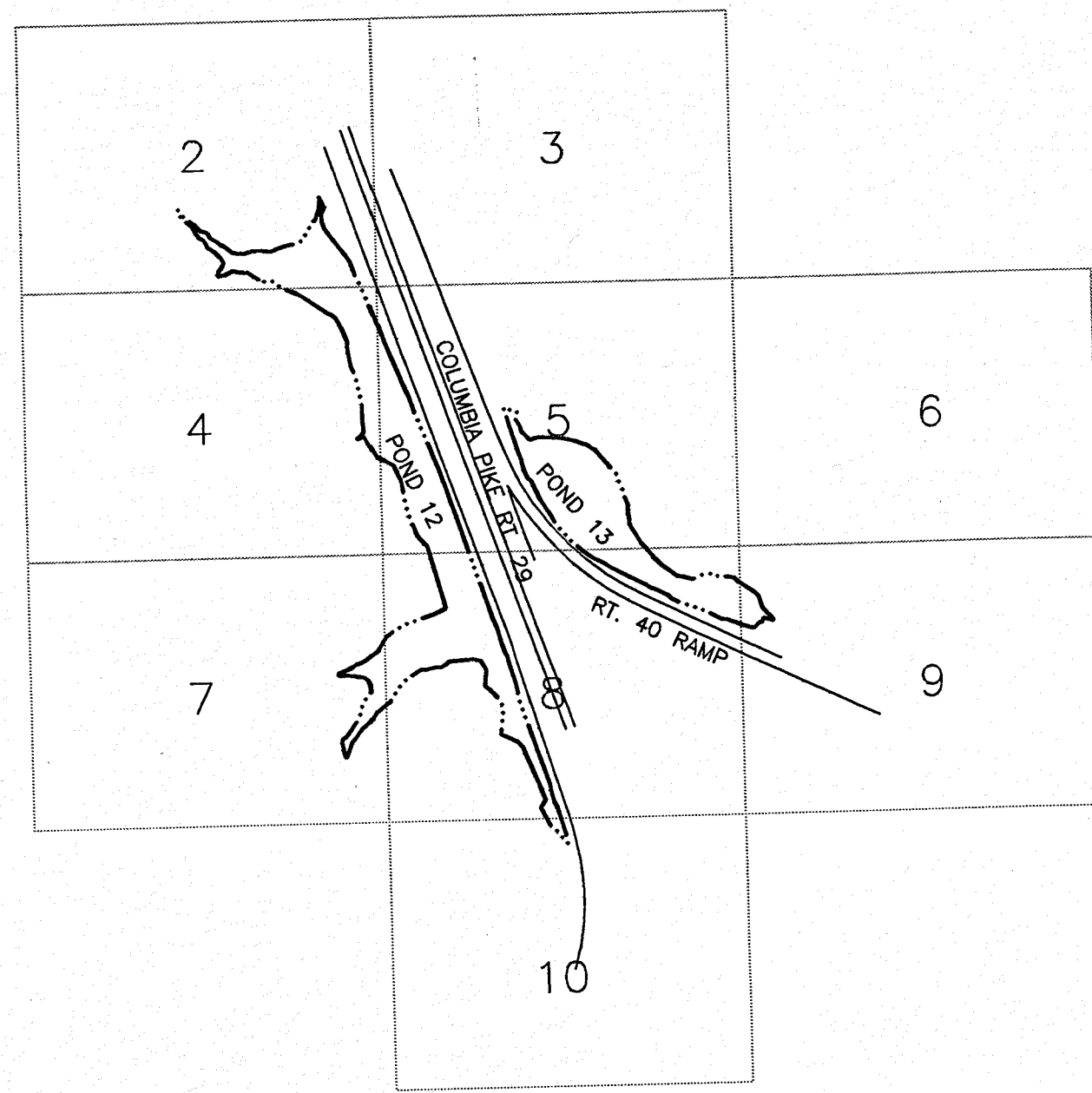
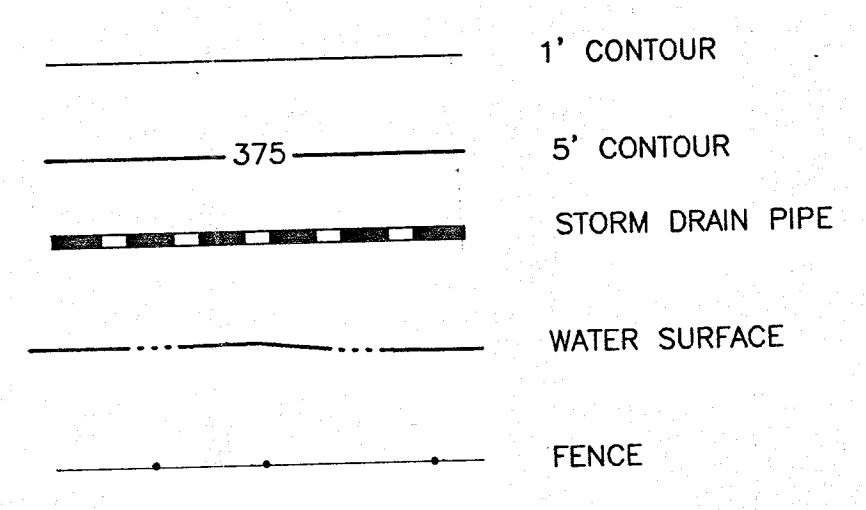


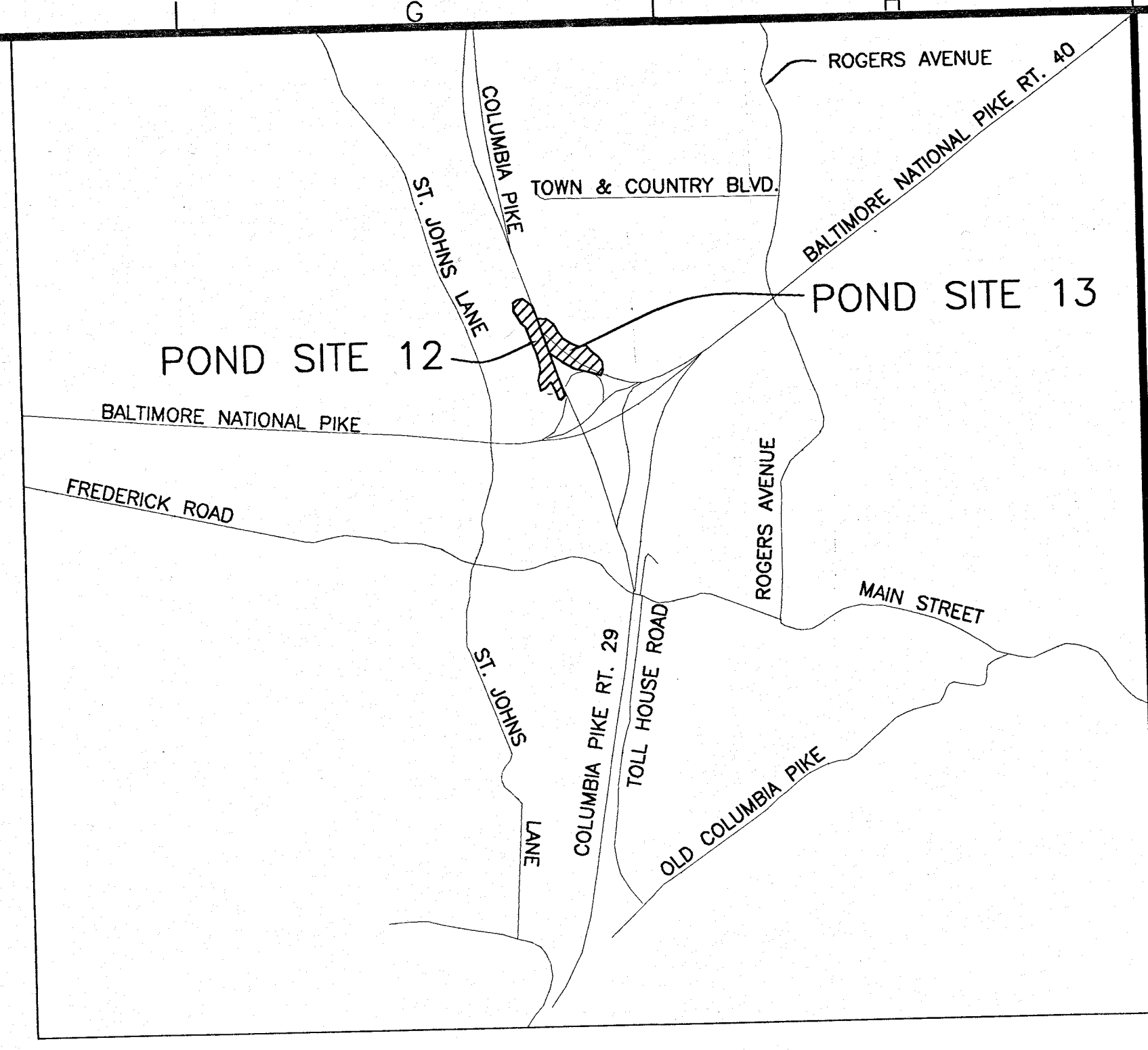
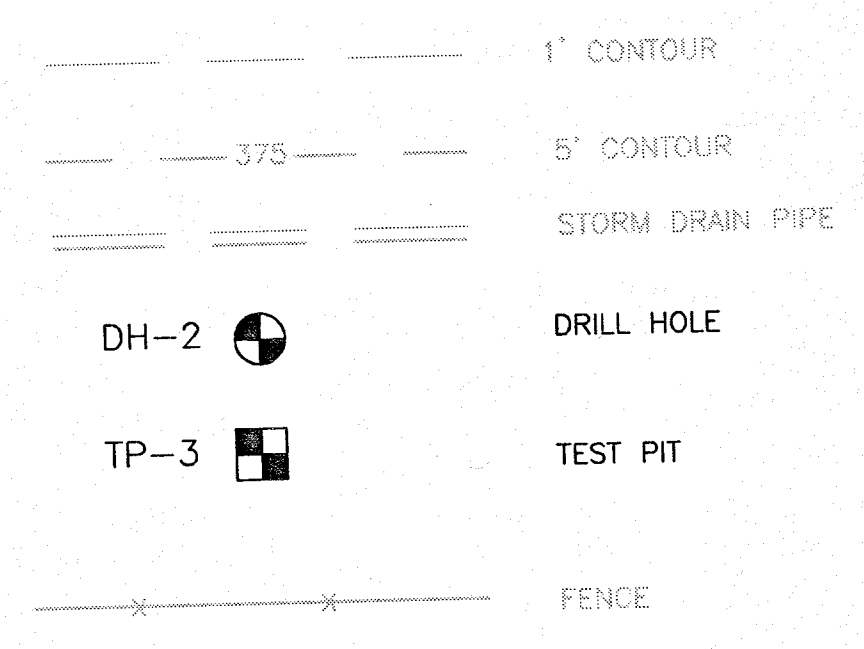
# SHEET LAYOUT PLAN FOR POND SITES 12 & 13



## LEGEND- PROPOSED FEATURES



## LEGEND- EXISTING FEATURES



VICINITY MAP  
SCALE: 1" = 2000'

## NOTES:

1. EXISTING CONDITIONS SURVEYED BY WILLIAM H. GORDON ASSOC. INC., 1998. HORIZONTAL CONTROL IS BASED ON MD. STATE PLANE, NAD 1927. VERTICAL CONTROL IS BASED ON NGVD 1929. LOCAL CONTROL WAS ESTABLISHED USING THE FAST STATIC METHOD UTILIZING TWO TRIMBLE 4800 DUAL FREQUENCY GPS RECEIVERS. THE NETWORK IS REFERENCED TO THE HOWARD COUNTY HIGH ACCURACY REGIONAL NETWORK (HARN) UTILIZING MONUMENTS ZIMMER; 26-46 AND 4-25.
2. NO WETLAND DELINEATIONS WERE PERFORMED.
3. BASED ON COUNTY MAPS, NO WATER OR SEWER PIPES EXIST WITHIN THE LIMITS OF CONSTRUCTION. NO OTHER UTILITIES WERE RESEARCHED.
4. STREAMS ARE USE I TRIBUTARIES OF THE HUDSON BRANCH.

## EXISTING STORM SEWER TABLE

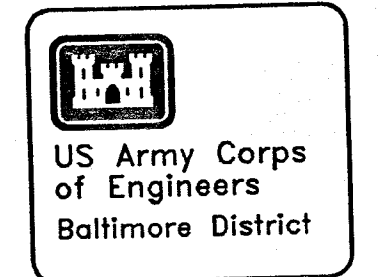
STRUCT. #	ELEVATION	DESCRIPTION	SIZE	MATERIAL	COMMENTS
1	389.37	TOP	36"	MANHOLE RCP	TO HEADWALL FROM STRUCT.2
	375.09	INV.OUT			
	382.78	INV.IN.			
2	400.41	TOP	36"	MANHOLE RCP	TO STRUCT. 2
	388.27	INV.OUT			
3	390.20	TOP	24"	MANHOLE RCP	TO POND FROM STRUCT. 4
	371.24	INV.OUT			
	373.74	INV.IN.			
4	381.72	TOP	24"	MANHOLE RCP	CURB INLET TO STRUCT. 3
	375.58	INV.OUT			
	375.76	INV.IN.			
5	381.60	TOP	15"	MANHOLE RCP	CURB INLET TO STRUCT. 4
	377.30	INV.OUT			
6	378.74	TOP	24"	GRATE CMP	TO CULVERT
	375.61	INV.OUT			
7	373.40	TOP	18"	GRATE RCP	
	369.30	INV.OUT			
8	372.83	TOP	18"	GRATE CMP	
	369.81	INV.OUT			
9	389.84	TOP	12"	MANHOLE CMP	TO CULVERT
	378.55	INV.OUT			
10	376.61	TOP	30"	GRATE RCP	UPPER GRATE FROM UPPER
	375.04	TOP			
	362.91	INV.OUT			
	362.01	INV.OUT			

## TRAVERSE DATA

NO.	NORTHING	EASTING	ELEV.	DESC.
101	527649.9936	850322.8145	408.62	REBAR & CAP
102	527161.7269	850604.5783	381.24	REBAR & CAP
103	526793.7188	850931.7900	388.15	REBAR & CAP
104	526439.3221	850108.2860	393.27	REBAR & CAP
105	527048.6206	850029.9016	378.89	REBAR & CAP
106	527524.9408	849703.8380	396.80	REBAR & CAP

## SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2-10	PLANS
11-12	HIGHWAY EMBANKMENT/CULVERT SECTIONS
13	FILTER DIAPHRAGM DETAILS
14-15	DRAINAGE AREA MAPS
16-17	ZONING AND SOILS MAPS



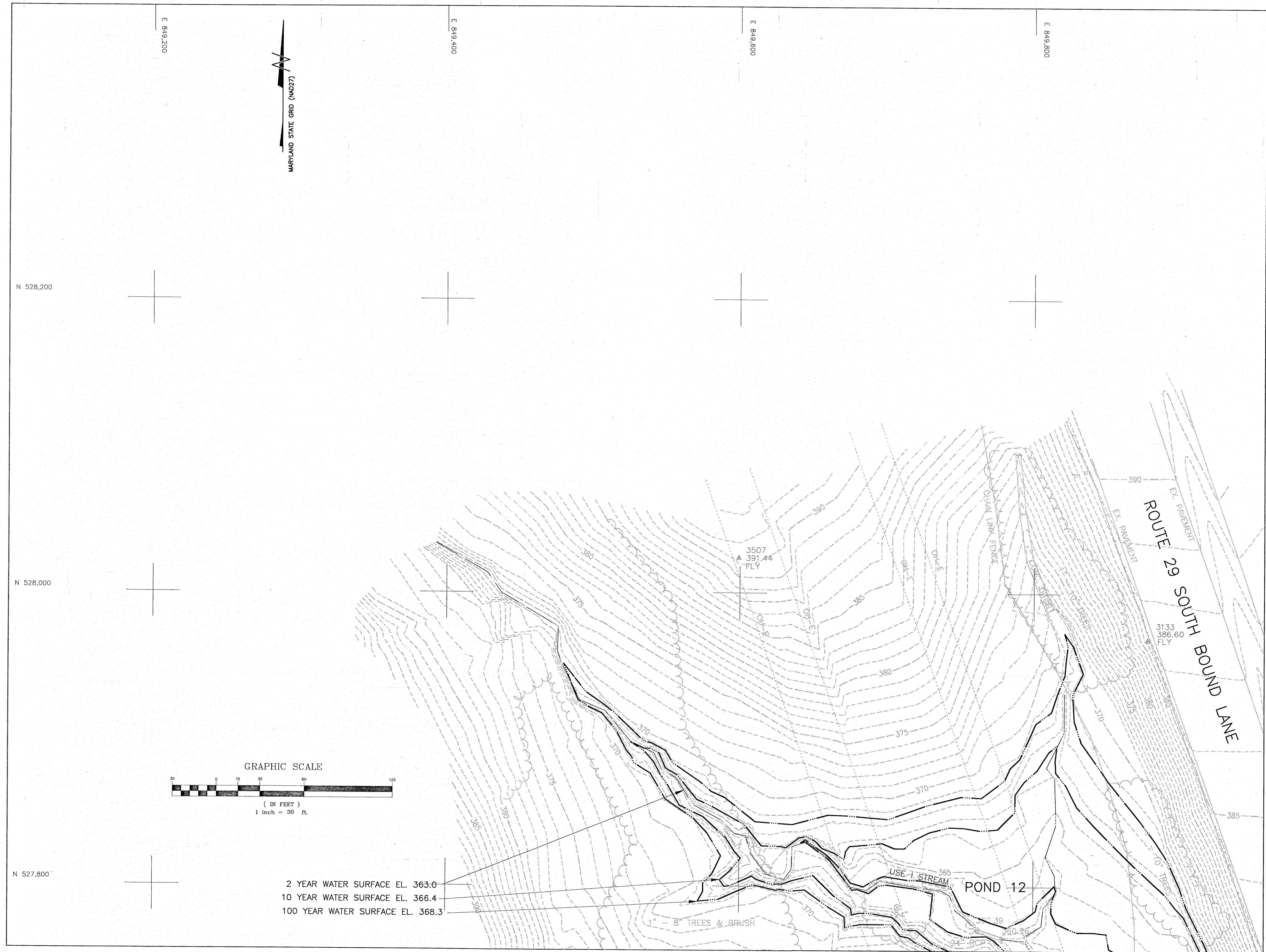
SYMBOL	REV.	DATE	DESCRIPTION	BY

U.S. ARMY ENGINEER DISTRICT BALTIMORE CORPS OF ENGINEERS BALTIMORE, MARYLAND	PLATE	DRAWING NUMBER	FILE NAME	PLT SCALE:
				DATE:

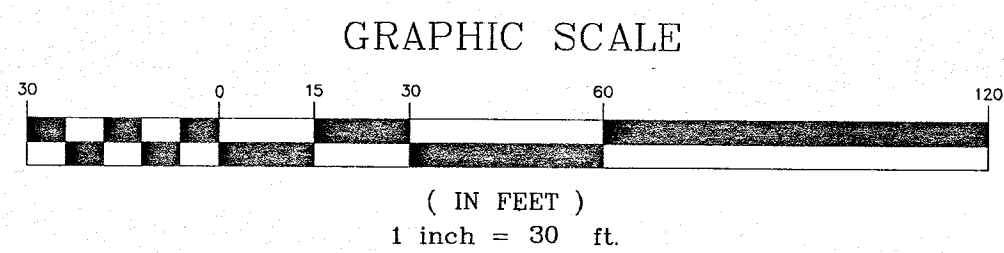
BALTIMORE METROPOLITAN WATER RESOURCES  
FEASIBILITY STUDY  
HOWARD COUNTY, MD  
DEEP RUN AND TIBER/HUDSON WATERSHEDS  
STORMWATER POND SITES 12 AND 13  
COVER SHEET

E 849200      A      B      E 849400      C      D      E 849600      E      F      E 849800      G      H      E 845000

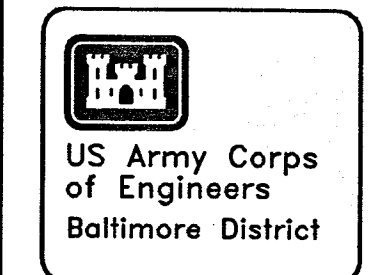
N 528400 6  
5  
4  
3  
2  
1  
N 527800



2 YEAR WATER SURFACE EL. 363.0  
10 YEAR WATER SURFACE EL. 366.4  
100 YEAR WATER SURFACE EL. 368.3



MATCH SHEET 4 OF 10



SYMBOL	REV.	DATE	DESCRIPTION	BY

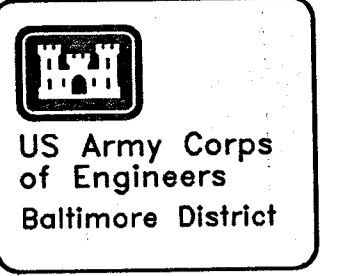
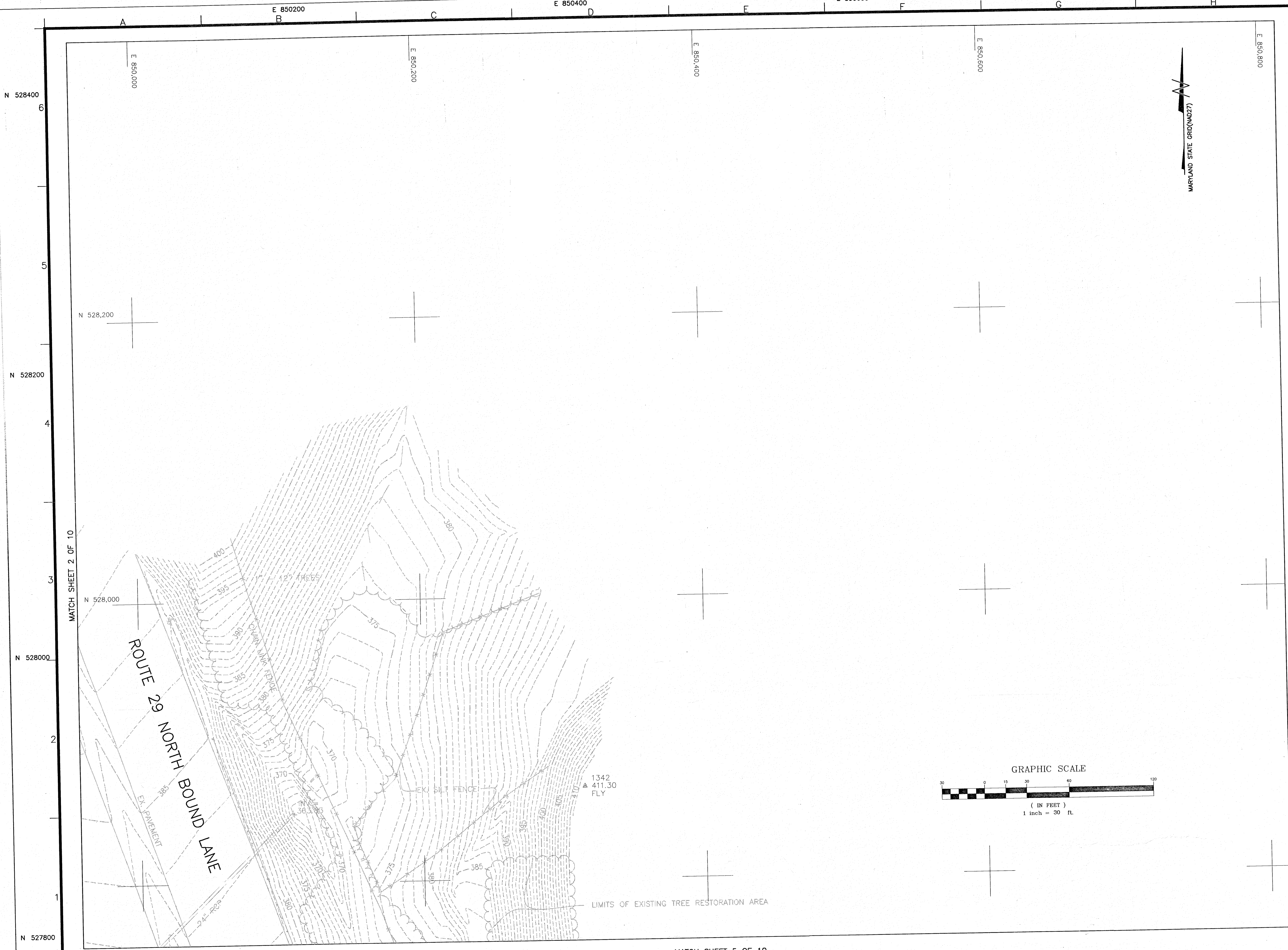
U.S. ARMY ENGINEER DISTRICT, BALTIMORE CORPS OF ENGINEERS BALTIMORE, MARYLAND			
PLATE	DRAWING NUMBER	FILE NAME	PLT SCALE:
SCALE:	DATE:	DATE:	PLT SCALE:

BALTIMORE METROPOLITAN WATER RESOURCES  
FEASIBILITY STUDY  
HOWARD COUNTY, MD  
DEEP RUN AND TIBERY/HUDSON WATERSHEDS  
STORMWATER POND SITES 12 AND 13  
PLAN

Sheet Number:  
2 OF 17

MATCH SHEET 3 OF 10





SYMBOL	REV.	DATE	DESCRIPTION	BY

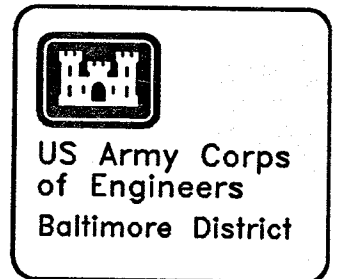
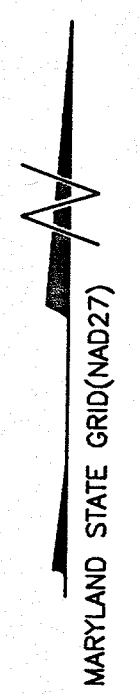
U.S. ARMY ENGINEER DISTRICT, BALTIMORE	
CORPS OF ENGINEERS	
BALTIMORE, MARYLAND	
PLATE	FILE NAME
DRAWING NUMBER	FILE NAME
SCALE:	DATE: APRIL 1998
	PLT SCALE:

BALTIMORE METROPOLITAN WATER RESOURCES  
 FEASIBILITY STUDY  
 HOWARD COUNTY, MD  
 DEEP RUN AND TIBBY/HUDSON WATERSHEDS  
 STORMWATER POND SITES 12 AND 13  
 PLAN

Sheet Number:  
 3 OF 17

E 849200 A B E 849400 C D E 849600 F G E 849800 H E 850000

MATCH LINE SHEET 2 OF 10

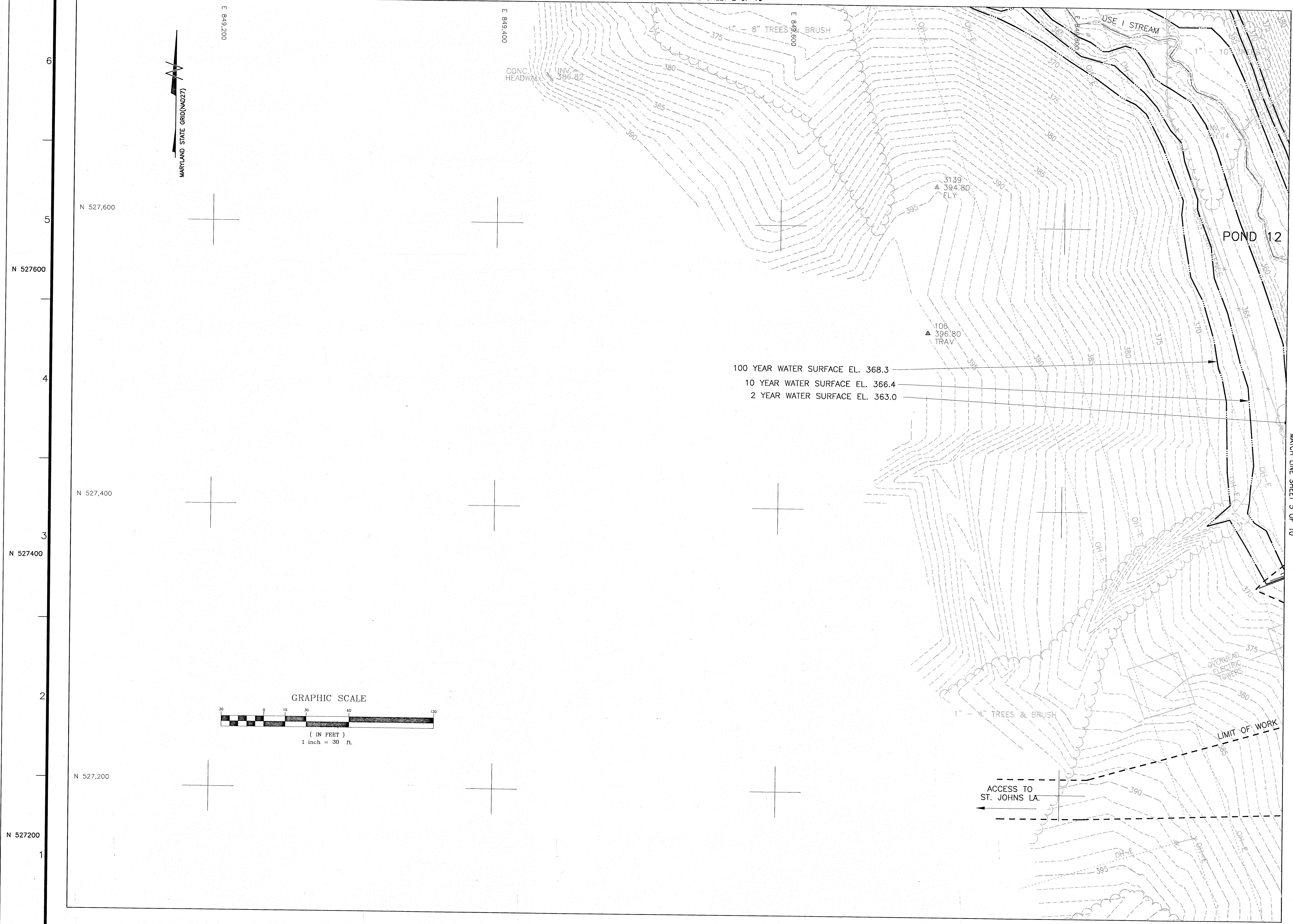


SYMBOL	REV.	DATE	DESCRIPTION

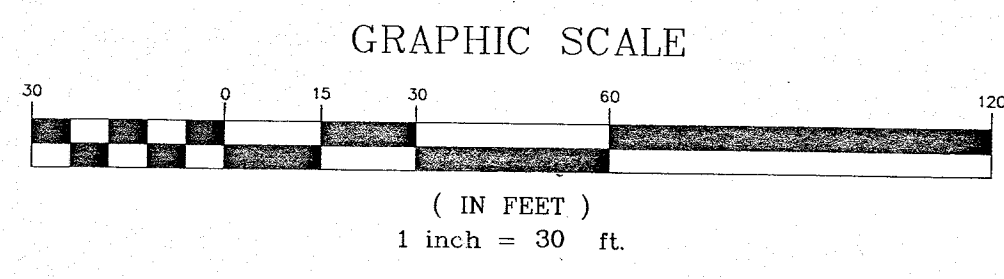
U.S. ARMY ENGINEER DISTRICT, BALTIMORE		CORPS OF ENGINEERS		BALTIMORE, MARYLAND	
PLATE	DRAWING NUMBER	DATE: APRIL 1998	FILE NAME	P.L.T. SCALE:	

BALTIMORE METROPOLITAN WATER RESOURCES  
 FEASIBILITY STUDY  
 HOWARD COUNTY, MD  
 DEEP RUN AND TIBBY/HUDSON WATERSHEDS  
 STORMWATER POND SITES 12 AND 13  
 PLAN

Sheet Number:  
 4 OF 17



100 YEAR WATER SURFACE EL. 368.3  
 10 YEAR WATER SURFACE EL. 366.4  
 2 YEAR WATER SURFACE EL. 363.0



MATCH LINE SHEET 7 OF 10

MATCH LINE SHEET 5 OF 10









E 849200

E 849400

E 849600

E 849800

E 850000

MATCH LINE 4 OF 10

E 849200

E 849400

E 849600

E 849800

N 527,000

N 527000

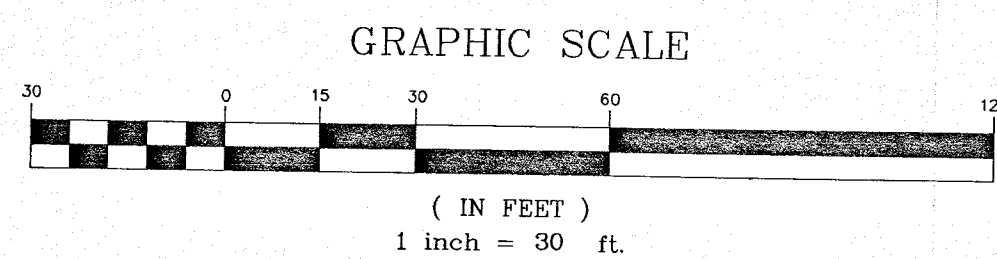
N 526,800

N 526800

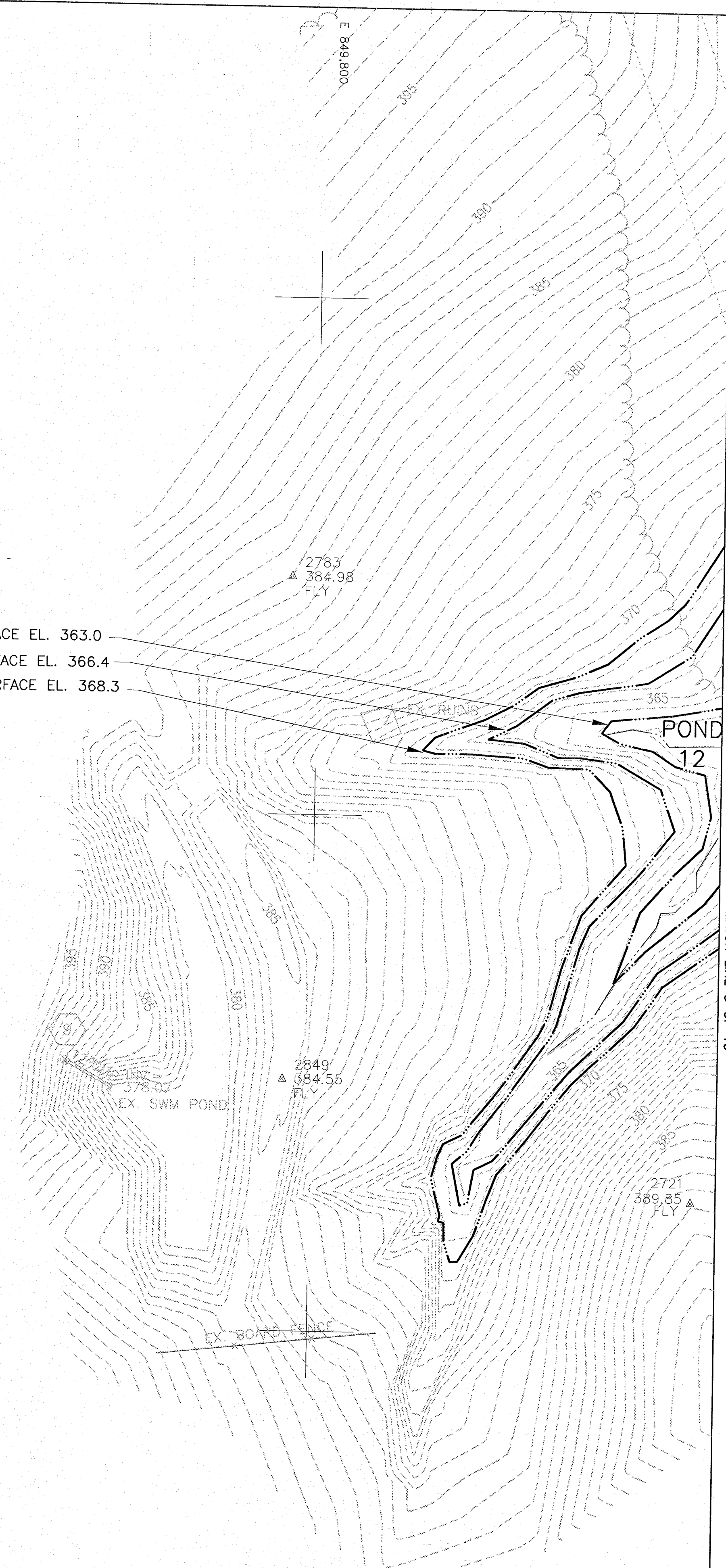
N 526,600

N 526600

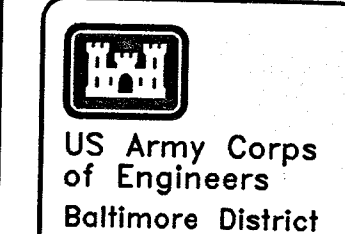
MARYLAND STATE GRID (NAD83)



2 YEAR WATER SURFACE EL. 363.0  
 10 YEAR WATER SURFACE EL. 366.4  
 100 YEAR WATER SURFACE EL. 368.3



MATCH LINE 8 OF 10

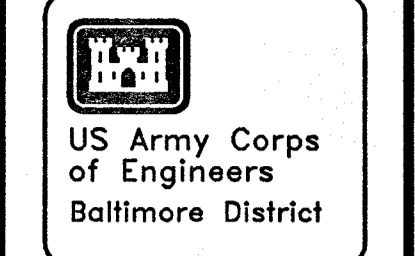
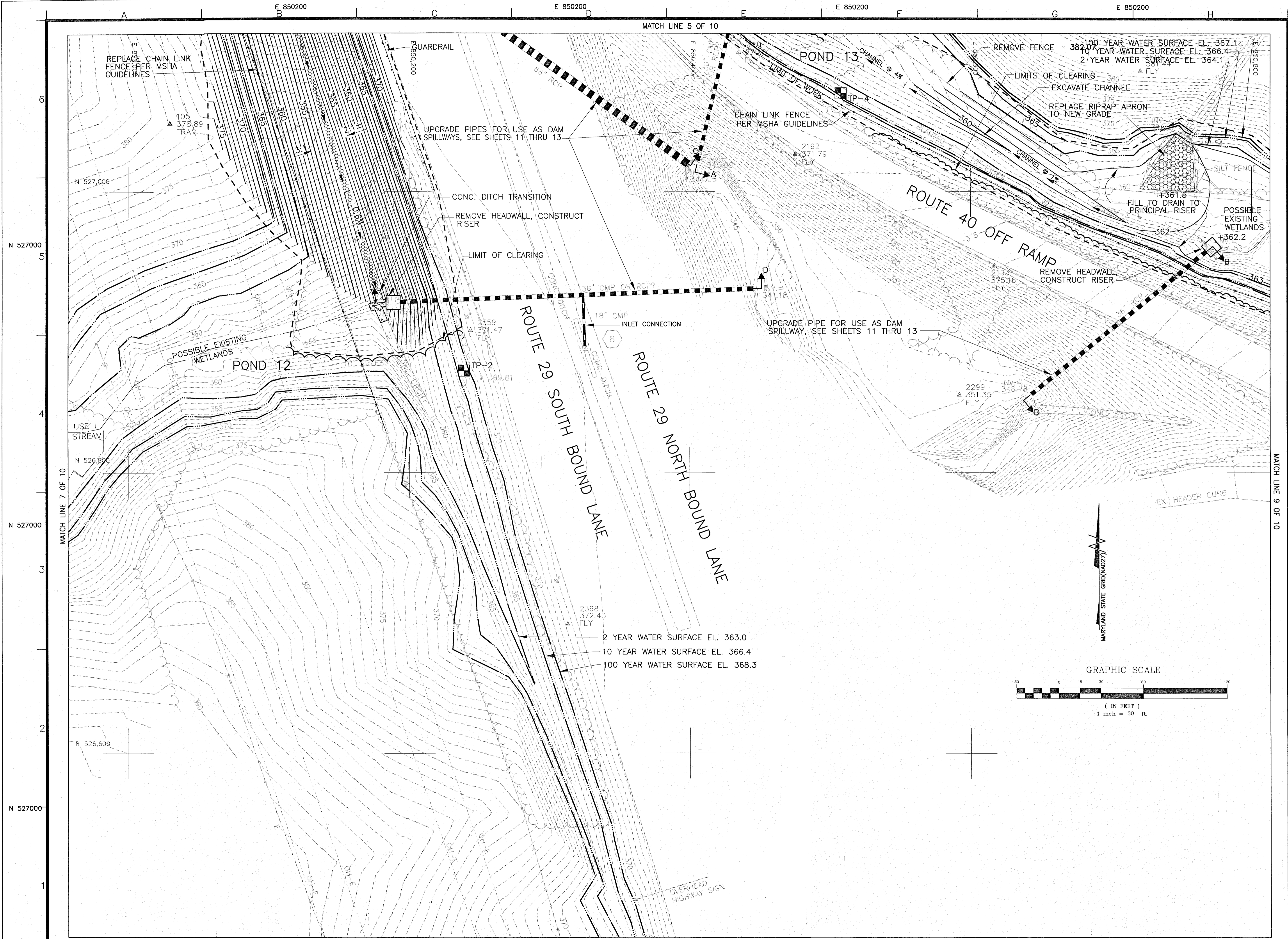


SYMBOL	REV.	DATE	DESCRIPTION	BY

U.S. ARMY ENGINEER DISTRICT, BALTIMORE	
CORPS OF ENGINEERS	
BALTIMORE, MARYLAND	
PLATE	FILE NAME
DRAWING NUMBER	
SCALE:	DATE: APRIL 1998
	PLT SCALE:

BALTIMORE METROPOLITAN WATER RESOURCES  
 FEASIBILITY STUDY  
 HOWARD COUNTY, MD  
 DEEP RUN AND TIBER/HUDSON WATERSHEDS  
 STORMWATER POND SITES 12 AND 13  
 PLAN



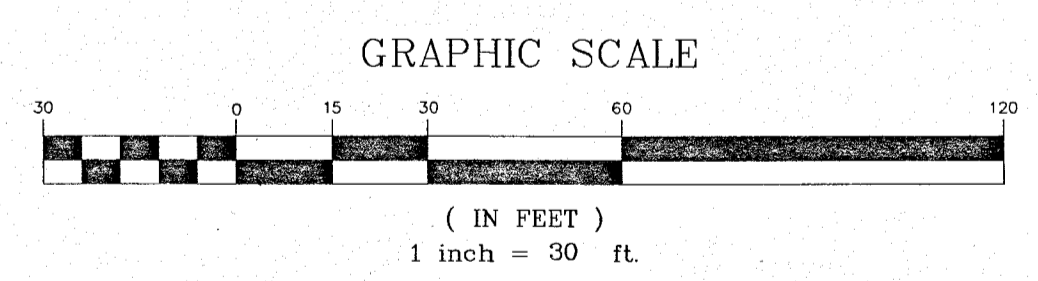


SYMBOL	REV.	DATE	DESCRIPTION	BY

U.S. ARMY ENGINEER DISTRICT, BALTIMORE		CORPS OF ENGINEERS	
BALTIMORE, MARYLAND		DRAWING NUMBER	
PLATE	FILE NAME	DATE:	PLT SCALE:

BALTIMORE METROPOLITAN WATER RESOURCES  
 FEASIBILITY STUDY  
 HOWARD COUNTY, MD  
 DEEP RUN AND TIBER/HUDSON WATERSHEDS  
 STORMWATER POND SITES 12 AND 13  
 PLAN

Sheet Number:  
 8 OF 17



MATCH LINE 7 OF 10

MATCH LINE 9 OF 10

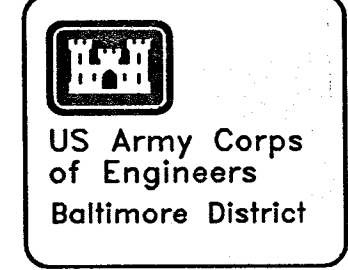
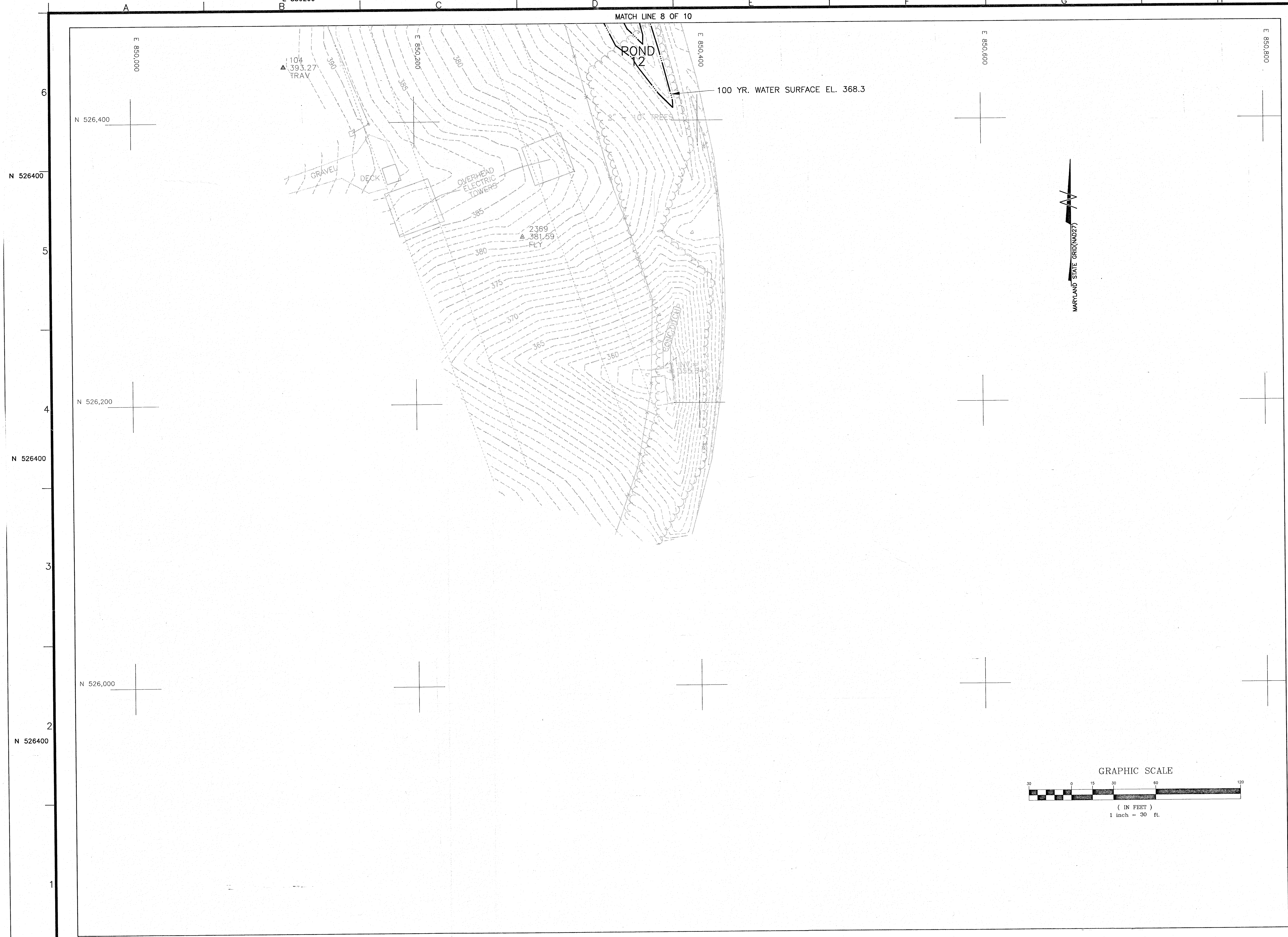
MATCH LINE 5 OF 10

MATCH LINE 10 OF 10









SYMBOL	REV.	DATE	DESCRIPTION	BY

U.S. ARMY ENGINEER DISTRICT, BALTIMORE		CORPS OF ENGINEERS		BALTIMORE, MARYLAND	
PLATE	DRAWING NUMBER	DATE: APRIL 1998	FILE NAME	File: p12-13	
SCALE:			PLT SCALE:		

BALTIMORE METROPOLITAN WATER RESOURCES  
 FEASIBILITY STUDY  
 HOWARD COUNTY, MD  
 DEEP RUN AND TIBER/HUDSON WATERSHEDS  
 STORMWATER POND SITES 12 AND 13  
**PLAN**

Sheet Number:  
**10 OF 17**

Updated: 10/7/98 ID = e1endwjd Plot: 12/07/98



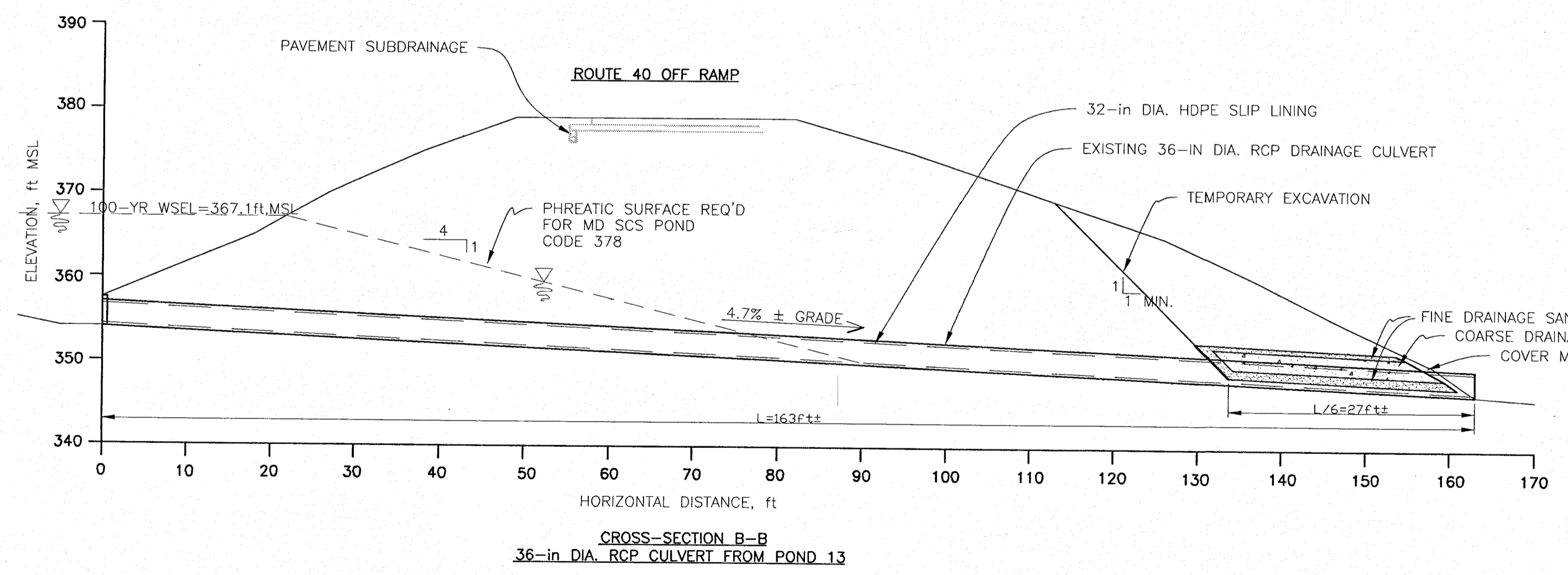
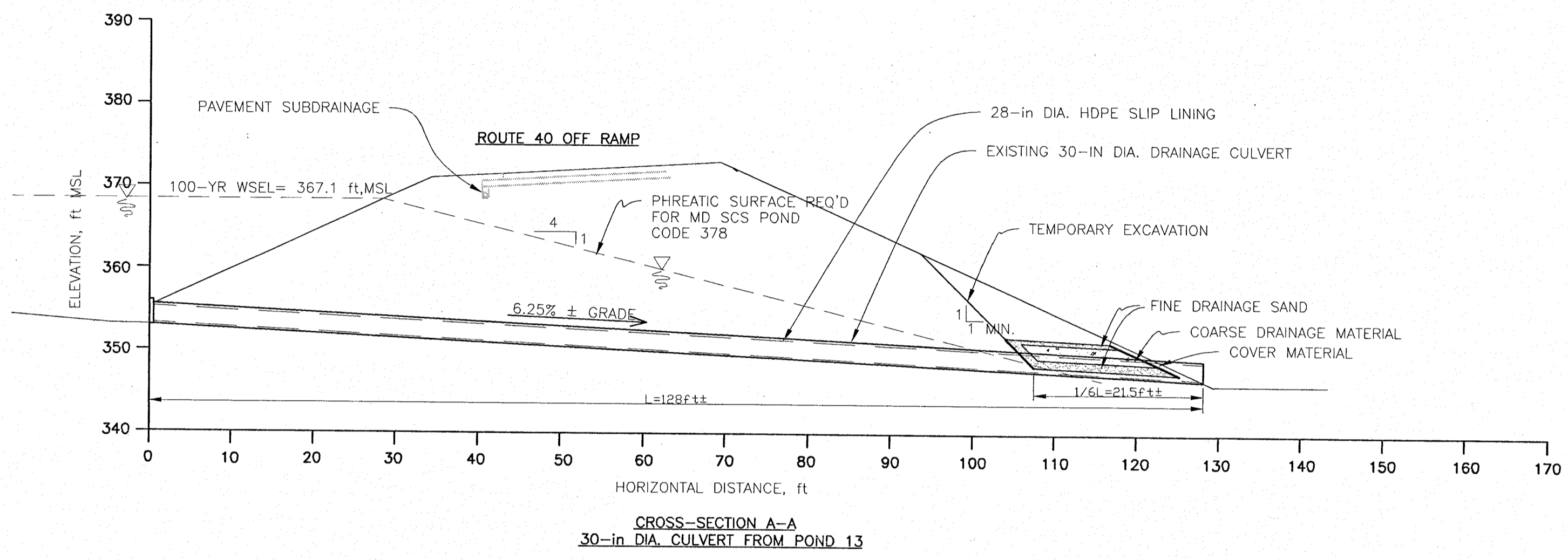




SYMBOL	REV.	DATE	DESCRIPTION

U.S. ARMY ENGINEER DISTRICT, BALTIMORE		CORPS OF ENGINEERS	
BALTIMORE, MARYLAND		FILE NAME	
DRAWING NUMBER	FILE: PLATE12	PLATE	FILE SCALE:
SCALE:	DATE:	DATE:	PLT SCALE:

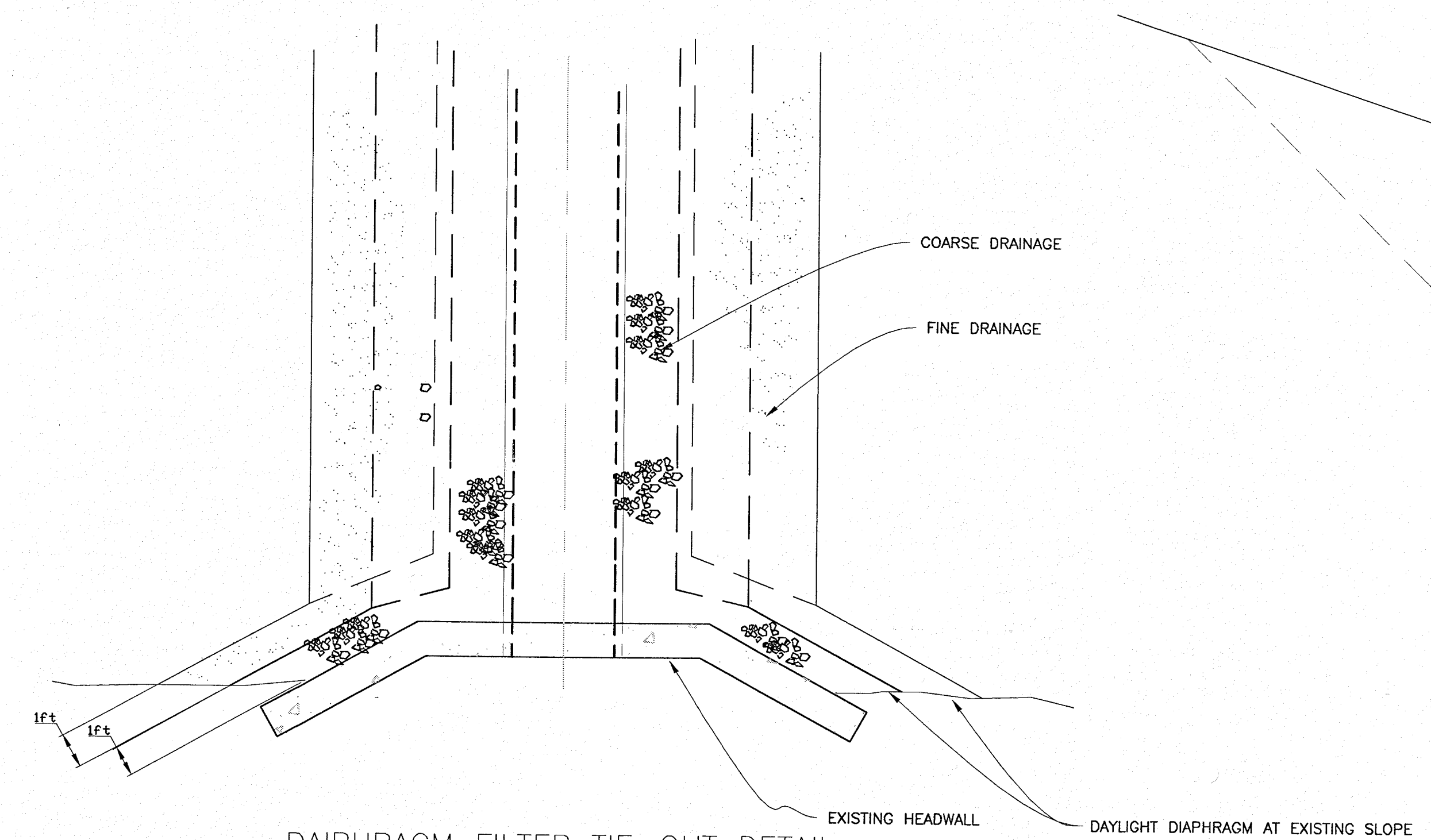
BALTIMORE METROPOLITAN WATER RESOURCES  
FEASIBILITY STUDY  
HOWARD COUNTY, MD  
DEEP RUN AND TIBER/HUDSON WATERSHEDS  
STORMWATER POND SITES 12 AND 13  
HIGHWAY EMBANKMENT/CULVERT SECTIONS



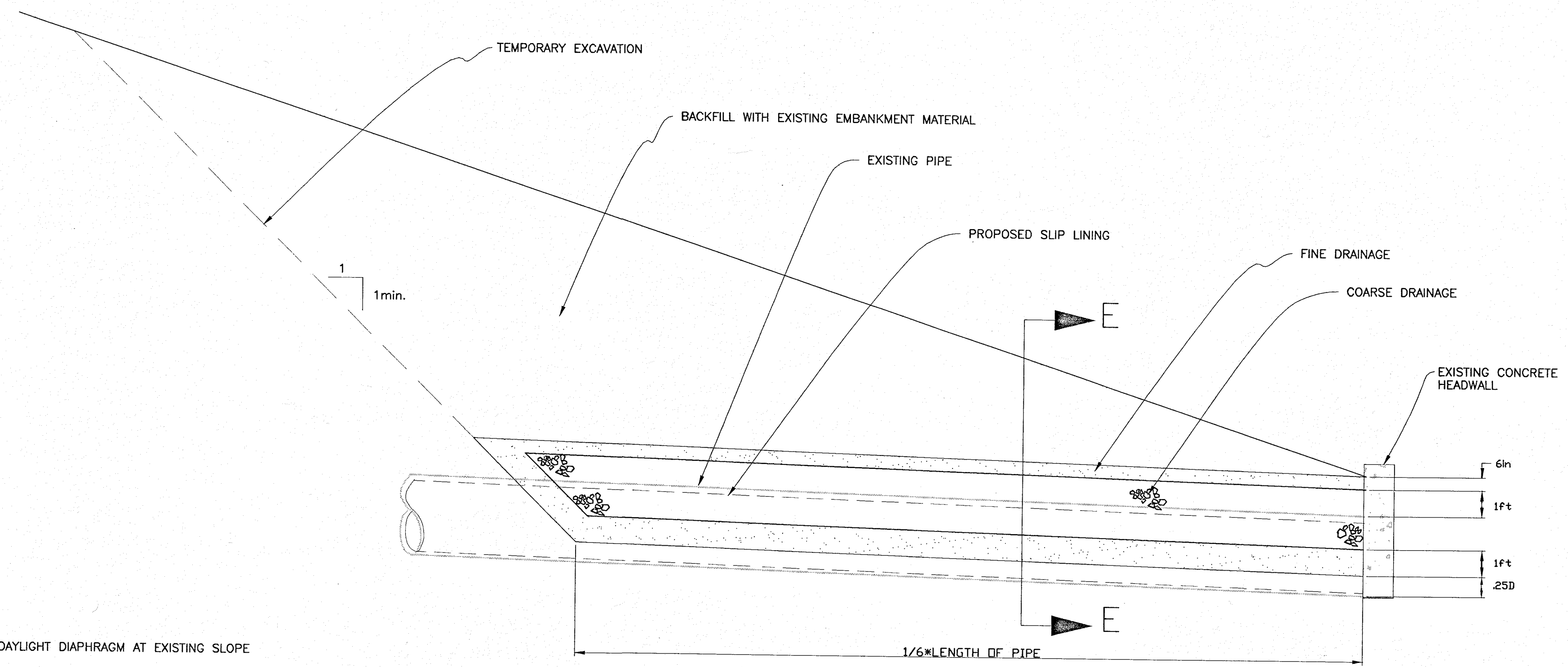


A B C D E F G H

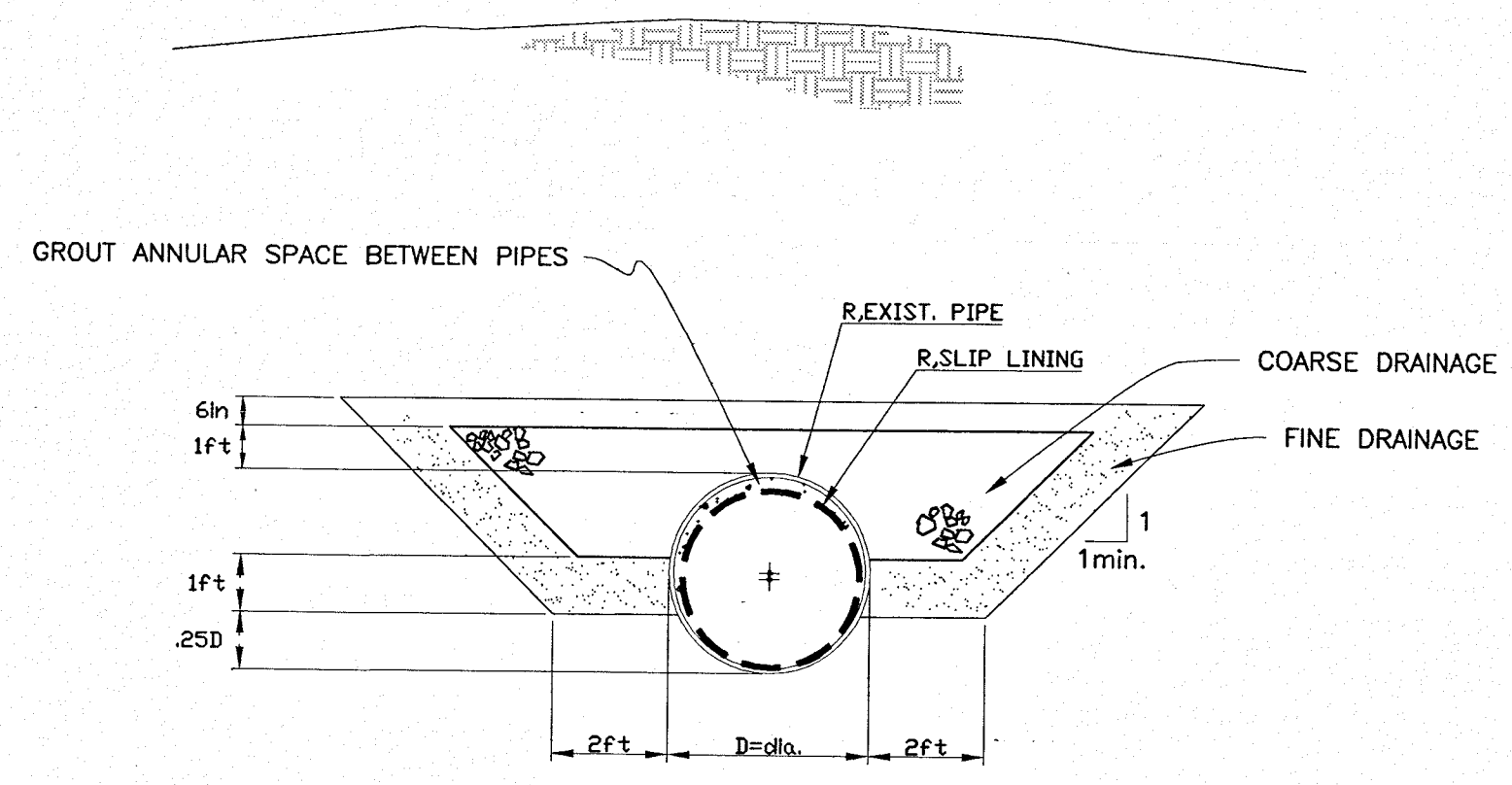
6  
5  
4  
3  
2  
1



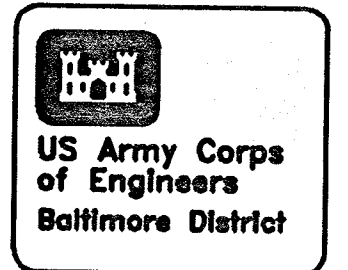
DAIPHHRAGM FILTER TIE-OUT DETAIL  
TOP VIEW  
NOT TO SCALE



DIAPHHRAGM FILTER TIE-OUT DETAIL  
PROFILE  
NOT TO SCALE



SECTION E-E  
NOT TO SCALE



SYMBOL	REV.	DATE	DESCRIPTION	BY

U.S. ARMY ENGINEER DISTRICT, BALTIMORE		FILE NAME	FILE: PLATE13
CORPS OF ENGINEERS		DRAWING NUMBER	PLT SCALE:
BALTIMORE, MARYLAND		DATE:	DATE:
PLATE	SCALE:	DATE:	DATE:

BALTIMORE METROPOLITAN WATER RESOURCES  
FEASIBILITY STUDY  
HOWARD COUNTY, MD  
DEEP RUN AND TIBER/HUDSON WATERSHEDS  
POND SITES 12 AND 13  
FILTER DIAPHRAGM DETAILS

Sheet Number:  
13 OF 17

Updated: 9/22/98 ID = e1endwid Plot: 12/09/98





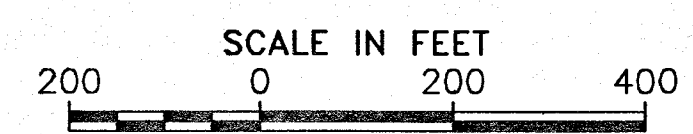
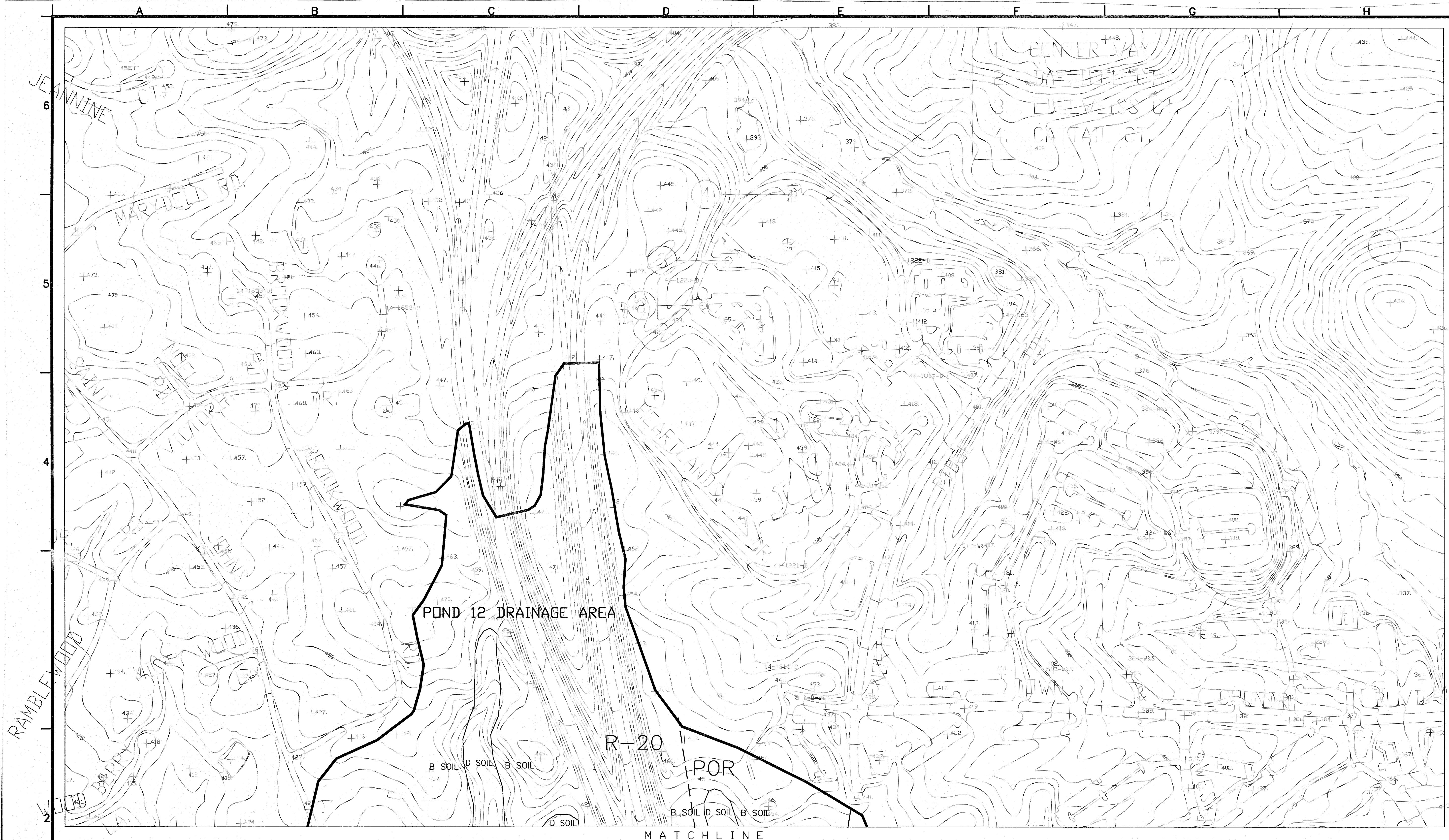






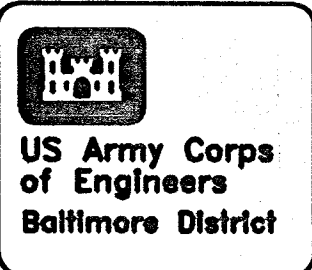






**NOTES**

1. CONTOURS, ROADS AND ZONING TAKEN FROM HOWARD COUNTY GIS, OBTAINED MARCH 1998. CONTOURS IGNORE BUILDINGS; THEREFORE, BUILDINGS ARE NOT SHOWN FOR CLARITY. SURFACE FEATURES SUCH AS TREE LINES AND ELECTRIC TOWERS ARE NOT SHOWN.
2. ZONING HAS BEEN OBTAINED FROM COUNTY GIS, OBTAINED MARCH 1998. ZONING HAS NOT BEEN VERIFIED WITH THE COUNTY ZONING DEPARTMENT.
3. SOILS INFORMATION OBTAINED FROM USDA SOIL SURVEY, HOWARD COUNTY, DATED JULY 1968. HYDROLOGIC SOIL GROUPS WERE OBTAINED FROM TR-55.



U.S. Army Corps of Engineers  
Baltimore District

SYMBOL	REV.	DATE	DESCRIPTION	BY

U.S. ARMY ENGINEER DISTRICT, BALTIMORE		CORPS OF ENGINEERS		BALTIMORE, MARYLAND	
PLATE	DRAWING NUMBER	FILE NAME	File: 12-13-bz		
SCALE:	DATE:	PLOT SCALE:			

BALTIMORE METROPOLITAN WATER RESOURCES  
FEASIBILITY STUDY  
HOWARD COUNTY, MD  
DEEP RUN AND TIBER/HUDSON WATERSHEDS  
STORMWATER POND SITES 12 AND 13  
ZONING AND SOILS MAP

Sheet Number:  
17 OF 17