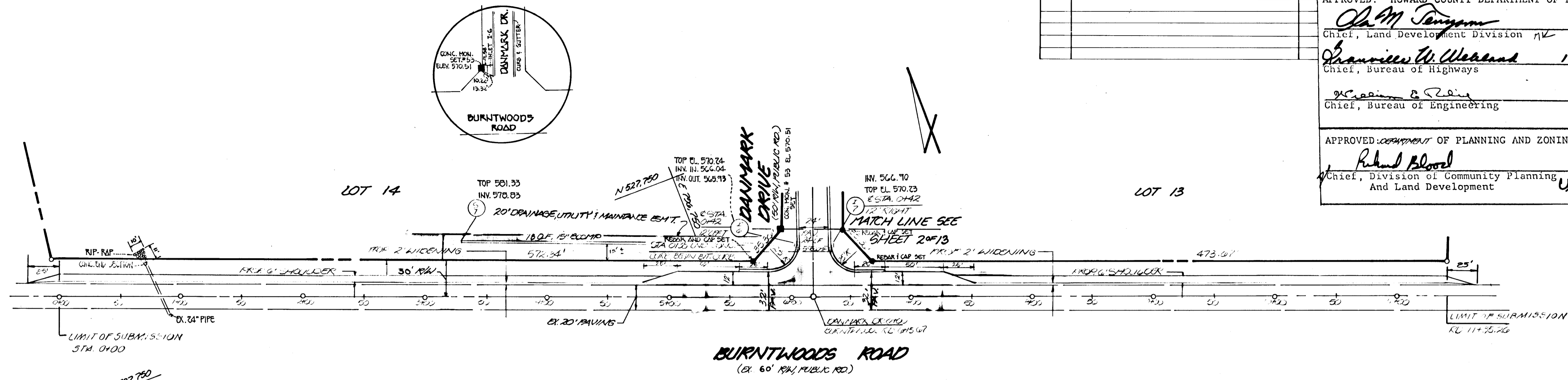
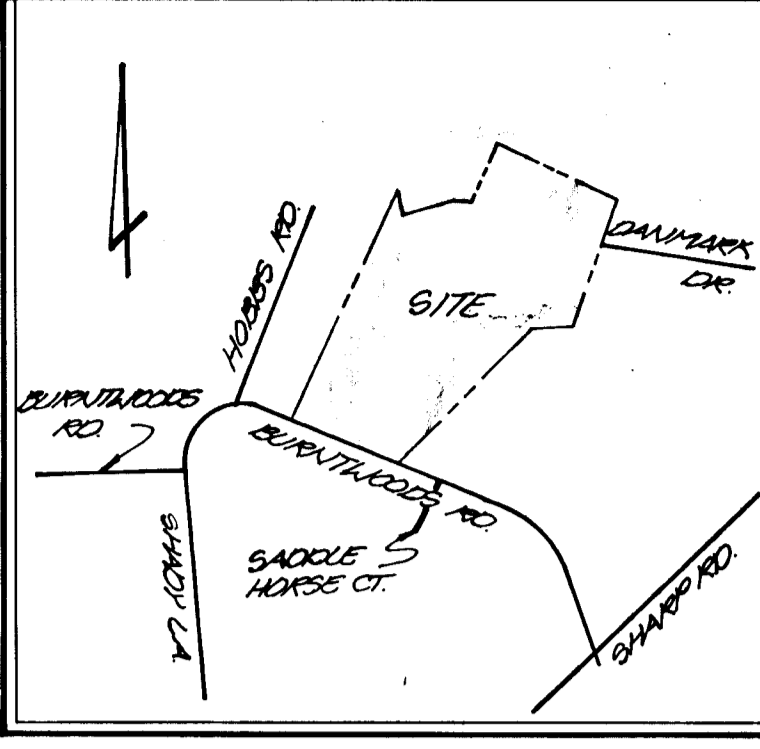


DATE	REVISION	BY

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John M. Tangeman* 1/18/91  
 Chief, Land Development Division  
*Francis W. Weiland* 12/7/90  
 Chief, Bureau of Highways  
*William B. Reine* 1-22-91  
 Chief, Bureau of Engineering  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Richard Blood* 2/7/91  
 Chief, Division of Community Planning  
 And Land Development



PLAN:  
 SCALE: 1" = 50'

OWNER/DEVELOPER:  
 SAMS ON COMPANY, INC.  
 90 DR. BYDAYS RD  
 15004 NEW HAMPSHIRE AVE.  
 SILVER SPRING, MD 20904  
 TELE: 445-5000



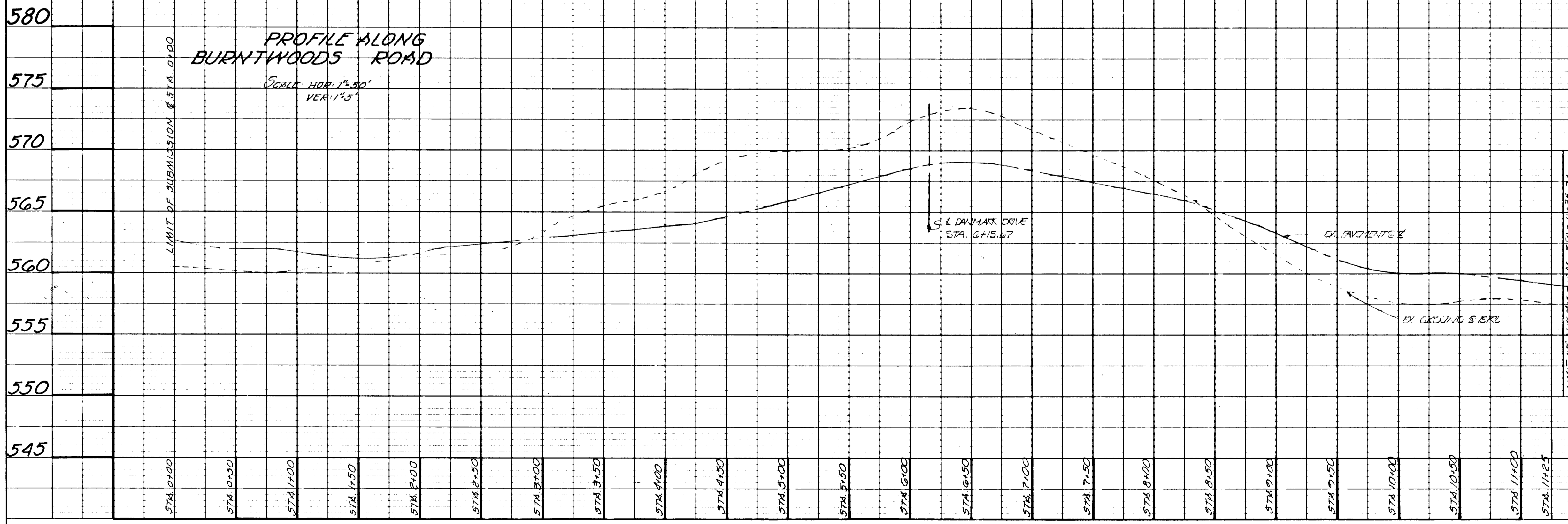
TITLE: ROAD CONSTRUCTION PLAN				
PROJECT: CHOI PROPERTY				
LOCATION: 4TH ELECTION DISTRICT		TAX MAP: 19 HOWARD CO., MD.		
SCALE: AS SHOWN	DESIGNED BY: J.R.S.	DRAWN BY: DWELSH	CHECKED BY:	DATE: FEB. 1988
FIELD BOOK: 63	PAGE NO.: 11	JOB NO.: 8562	DRAWING NO.: 1 OF 13	

boender associates  
 inc.  
 consulting engineers  
 land surveyors  
 land planners  
 COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD. 21043  
 (301) 485-7777

NOTES:  
 1. FOR SECTIONS AND DETAILS SEE SHEET 11 OF 13.  
 2. FOR GENERAL NOTES SEE SHEET 5 OF 13.  
 3. THE WETLANDS AND STREAM BUFFERS INDICATED ON THIS PLAN DOES NOT AFFECT THE INITIAL CONSTRUCTION OF A RESIDENTIAL UNIT ON A LOT. IT DOES PROVIDE SUBSEQUENT CLEARING, GRADING OR CONSTRUCTION IN THE BUFFER AREA. MAINTENANCE OF RESIDENCES, LANDSCAPING AND UTILITIES IS PERMITTED.

THE COORDINATES SHOWN HEREON ARE BASED ON MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY CONTROL STATION:

5333001	N 52° 27' 19.27"	E 73° 21' 0.14"
5333002	N 52° 11' 55.176"	E 77° 04' 08.072"



1609

PLAN  
 SURVEYED, PLOTTED, CHECKED, AND NOTED BY: [Name]  
 DATE: [Date]

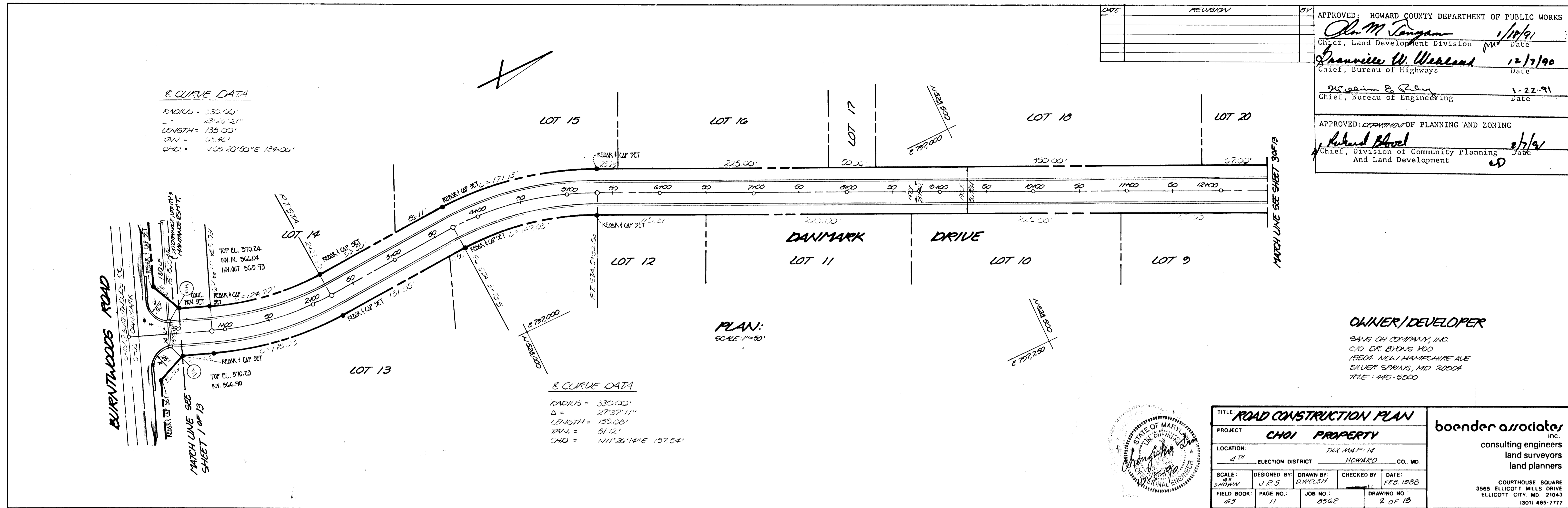
PROFILE  
 SURVEYED, PLOTTED, CHECKED, AND NOTED BY: [Name]  
 DATE: [Date]

DATE	REVISION	BY

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Alan M. Langman* 1/18/91  
 Chief, Land Development Division Date  
*Francis W. Weiland* 12/7/90  
 Chief, Bureau of Highways Date  
*William E. Reay* 1-22-91  
 Chief, Bureau of Engineering Date  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Richard Bluel* 2/1/91  
 Chief, Division of Community Planning  
 And Land Development Date

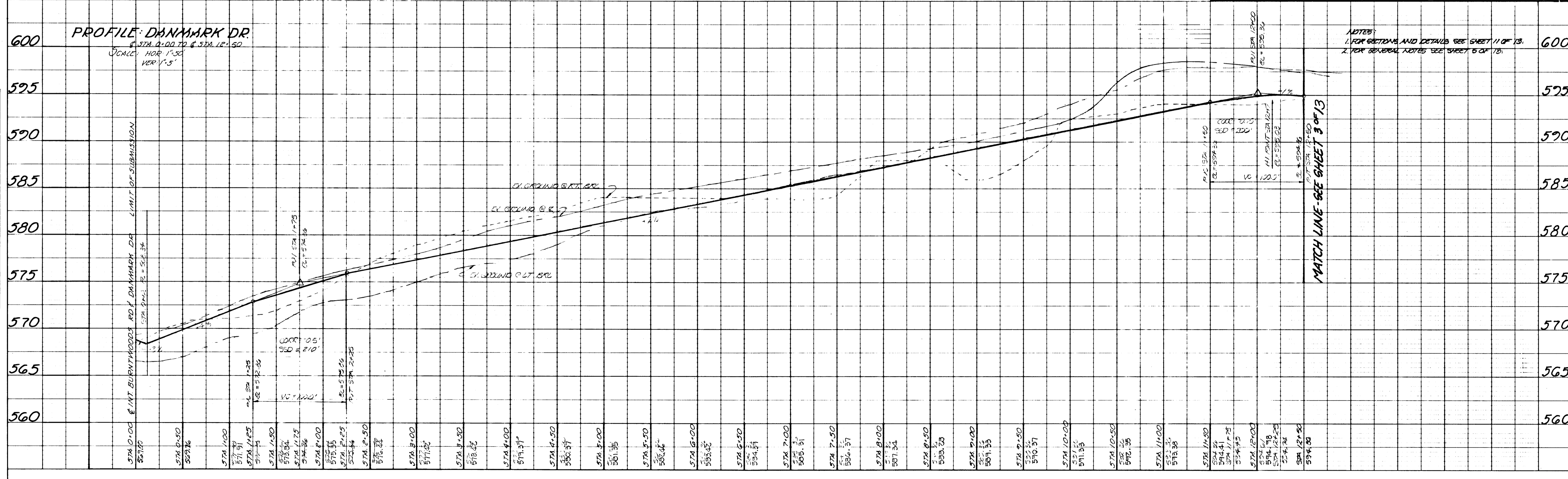
E CURVE DATA  
 RADIUS = 330.00'  
 Δ = 23°26'21"  
 LENGTH = 135.00'  
 TAN = 65.96'  
 CHD = N05°20'50"E 134.00'

E CURVE DATA  
 RADIUS = 330.00'  
 Δ = 27°37'11"  
 LENGTH = 159.05'  
 TAN = 61.12'  
 CHD = N11°26'14"E 157.54'



TITLE: ROAD CONSTRUCTION PLAN			
PROJECT: CHOI PROPERTY			
LOCATION: 4 <sup>TH</sup> ELECTION DISTRICT		TAX MAP: 14 HOWARD CO., MD.	
SCALE: AS SHOWN	DESIGNED BY: J.R.5	DRAWN BY: DWELSH	CHECKED BY: DATE: FEB. 1988
FIELD BOOK: 63	PAGE NO.: 11	JOB NO.: 8562	DRAWING NO.: 2 OF 13

boender associates inc.  
 consulting engineers  
 land surveyors  
 land planners  
 COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD 21043  
 13011 465-7777



PLAN  
 SUBMITTED BY: DATE: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 NO. \_\_\_\_\_

PROFILE  
 SUBMITTED BY: DATE: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 NO. \_\_\_\_\_

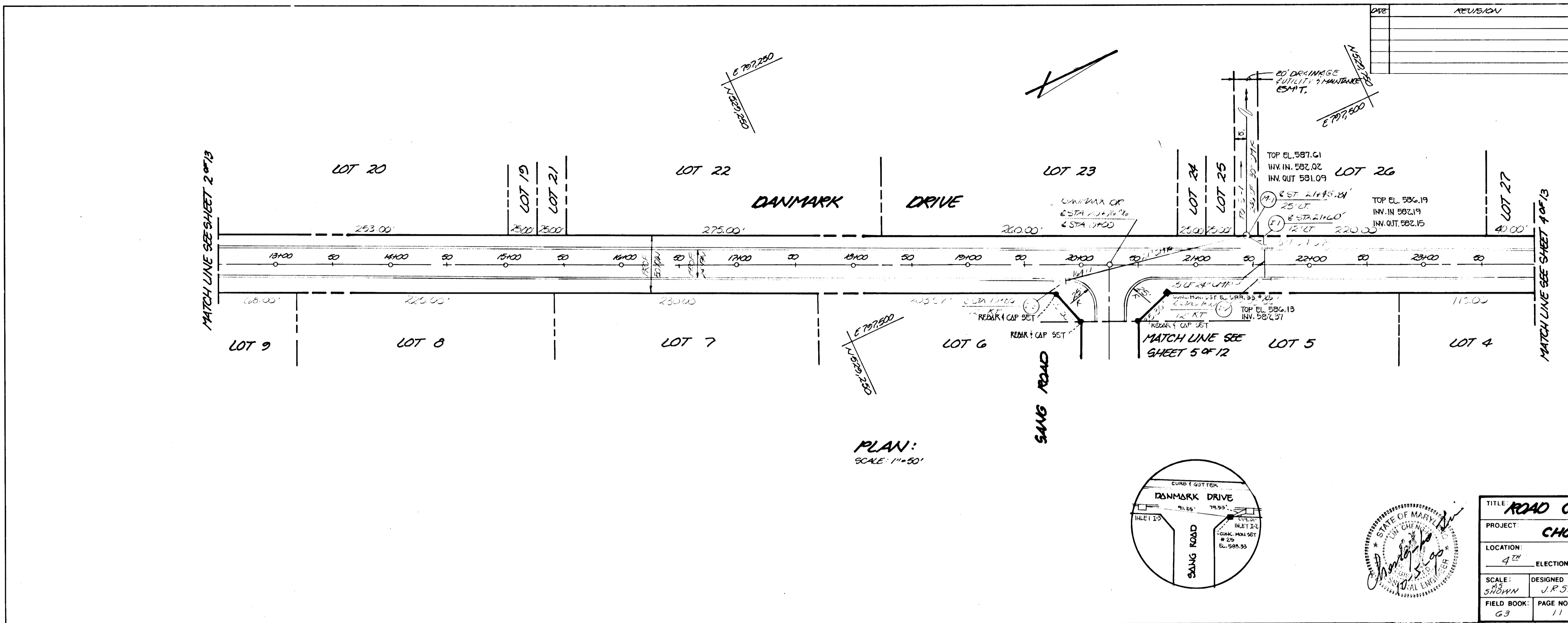
1609

1/18/91  
 F-87-167

PLAN  
 SUBMITTED BY DATE  
 PLOTTED BY DATE  
 NOTE BOOK ALIGNED CHECKED  
 NO. OF REVISIONS CHECKED  
 NO.

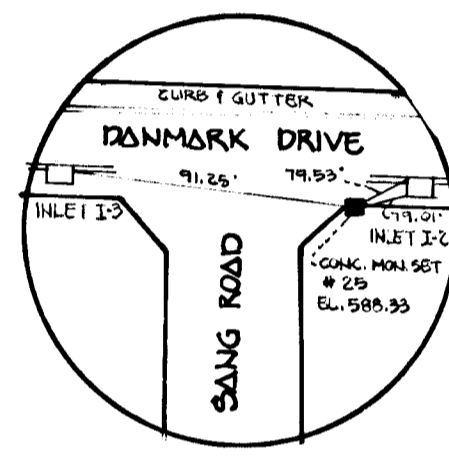
PROFILE  
 SUBMITTED BY DATE  
 PLOTTED BY DATE  
 NOTE BOOK GRADES CHECKED  
 NO. OF REVISIONS CHECKED  
 NO.

1609



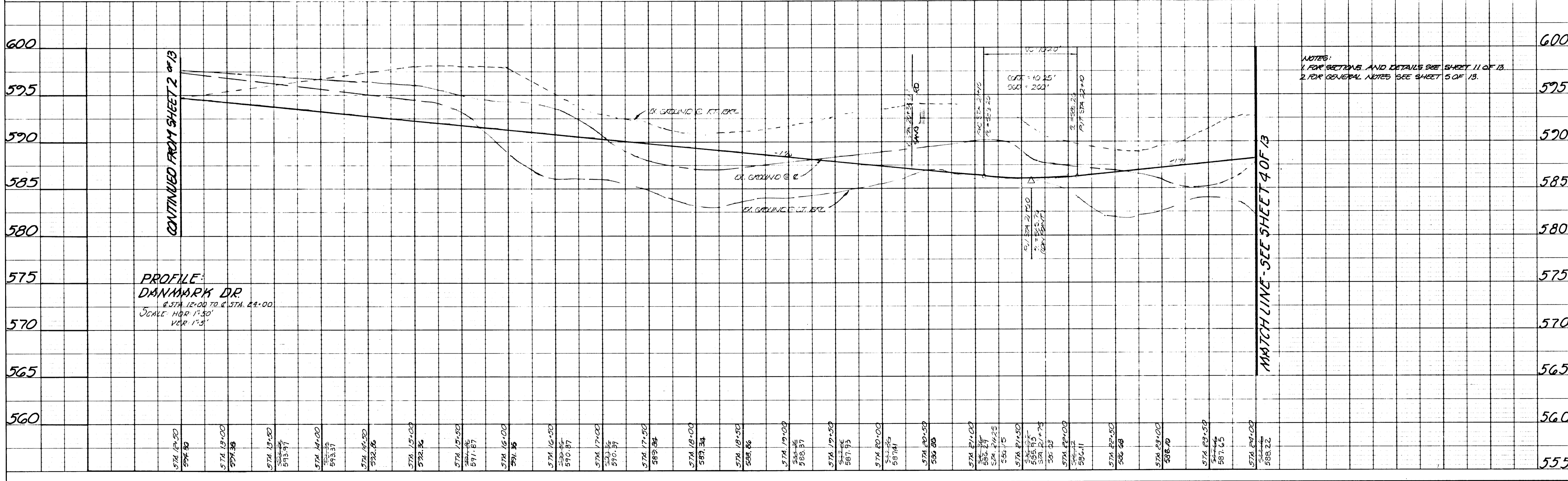
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John M. Sangam* 1/18/91  
 Chief, Land Development Division Date  
*Francis W. Wolcott* 12/17/90  
 Chief, Bureau of Highways Date  
*William E. Ryan* 1-22-91  
 Chief, Bureau of Engineering Date  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Richard Blood* 2/7/91  
 Chief, Division of Community Planning And Land Development Date

OWNER / DEVELOPER  
 SANG OH COMPANY, INC.  
 C/O DR. BYONG YOO  
 15501 NEW HAMPSHIRE AVE.  
 SILVER SPRING, MD 20904  
 TELE: 446-5300



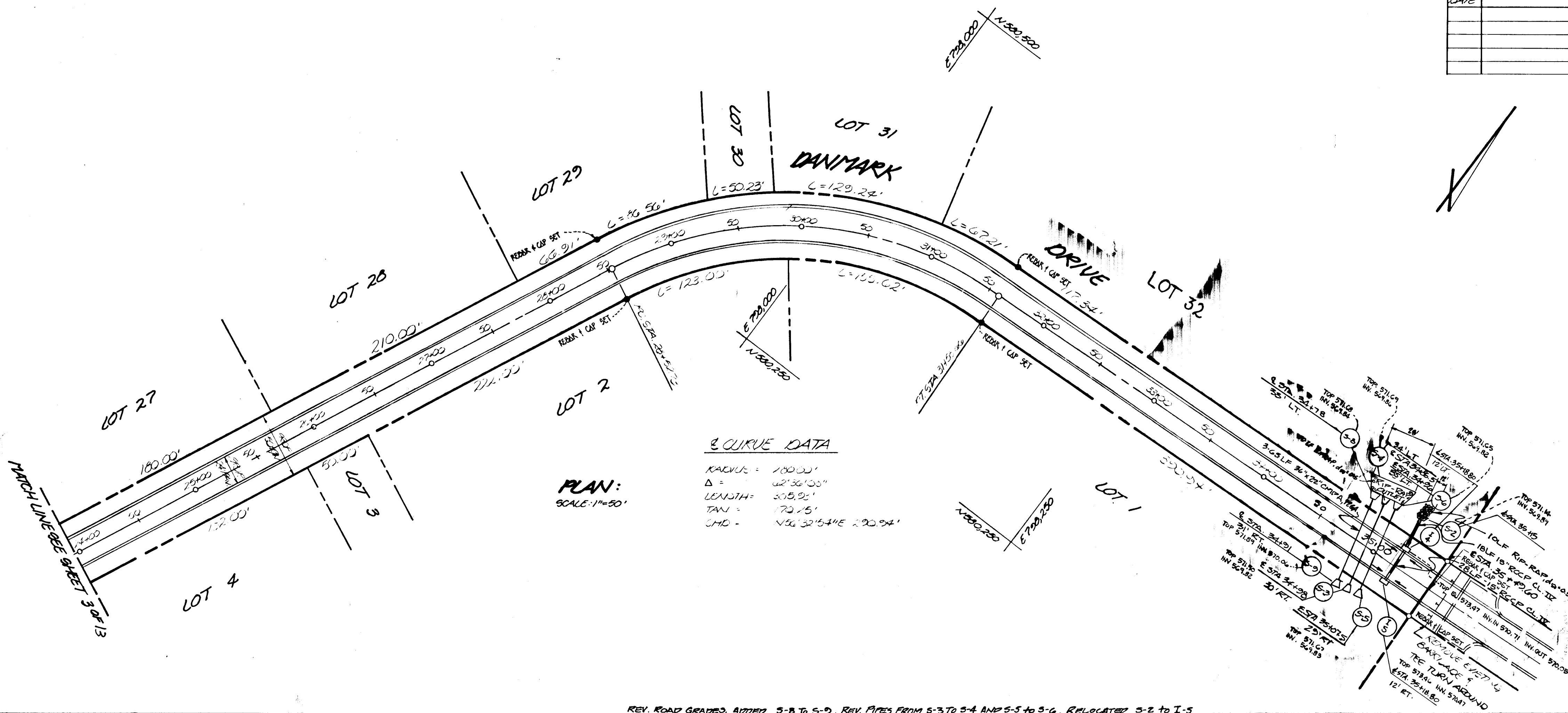
TITLE: ROAD CONSTRUCTION PLAN			
PROJECT: CHOI PROPERTY			
LOCATION: TMX MAP 14 HOWARD CO., MD.			
ELECTION DISTRICT: HOWARD CO., MD.			
SCALE: 5/8"=1'	DESIGNED BY: J.R.S.	DRAWN BY: D.WELSH	CHECKED BY: DATE: FEB 1988
FIELD BOOK: G3	PAGE NO.: 11	JOB NO.: 8562	DRAWING NO.: 2 OF 13

boender associates inc.  
 consulting engineers  
 land surveyors  
 land planners  
 COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD 21043  
 (301) 465-7177



DATE	
BY	
NO.	
DATE	
BY	
NO.	
DATE	
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NO.	

DATE	
BY	
NO.	
DATE	
BY	
NO.	
DATE	
BY	
NO.	



DATE	REVISION	BY

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John M. Dungan* 1/10/91  
 Chief, Land Development Division MK Date  
*Francis W. Aleland* 12/7/90  
 Chief, Bureau of Highways Date  
*William S. Clay* 1-22-91  
 Chief, Bureau of Engineering Date  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Richard Blosser* 2/2/91  
 Chief, Division of Community Planning And Land Development Date  
 CD

**OWNER/DEVELOPER**

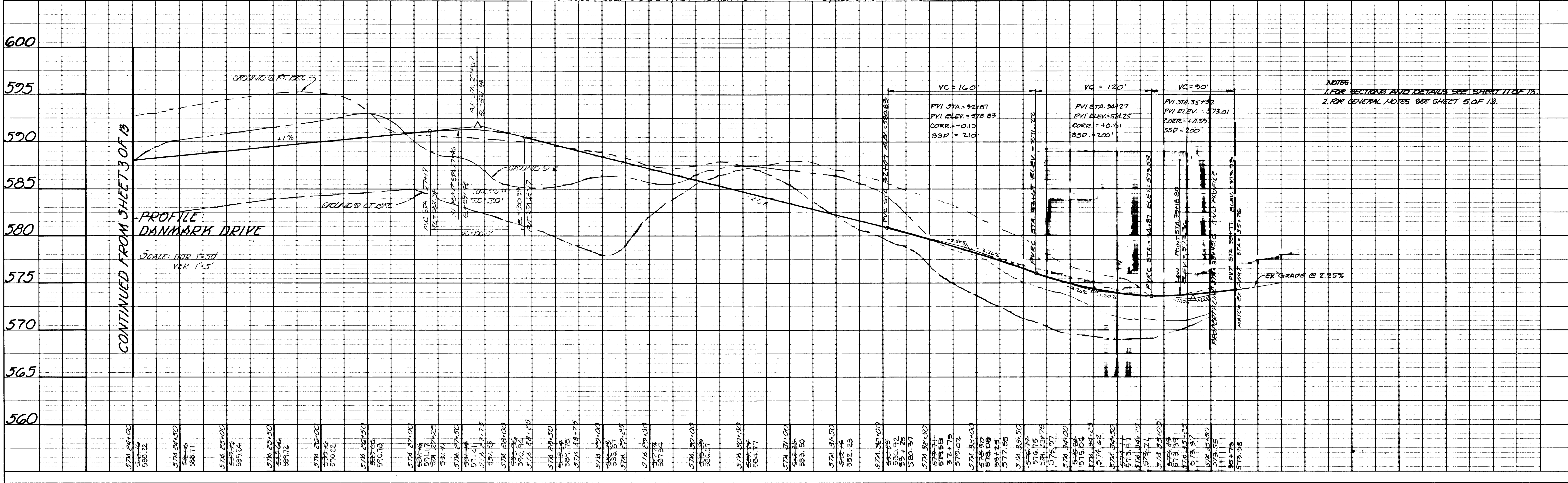
SANG OH COMPANY, INC.  
 C/O DR. BHOUS YOO  
 1800A NEW HAMPSHIRE AVE  
 SULLY SPRING, MD 20004  
 TELE: 445-8000



TITLE <b>ROAD CONSTRUCTION PLAN</b>			
PROJECT <b>CHOI PROPERTY</b>			
LOCATION <b>4TH ELECTION DISTRICT TAX MAP 14 HOWARD CO. MD.</b>			
SCALE: AS SHOWN	DESIGNED BY: J.R.S.	DRAWN BY: D.WELSH	CHECKED BY: DATE: FEB 1988
FIELD BOOK: 63	PAGE NO.: 11	JOB NO.: 8562	DRAWING NO.: 4 OF 13

**boender associates inc.**  
 consulting engineers  
 land surveyors  
 land planners  
 COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD 21043  
 (301) 465-7777

REV. ROAD GRADES, ADDED 5-8 TO 5-9, REV. PILES FROM 5-3 TO 5-4 AND 5-5 TO 5-6, RELOCATED 5-2 TO I-5



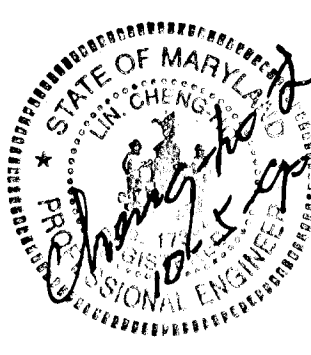
NOTES:  
 1. FOR SECTIONS AND DETAILS SEE SHEET 11 OF 13.  
 2. FOR GENERAL NOTES SEE SHEET 5 OF 13.

1609

PLAN  
 SURVEYED, LAYOUTED, & NOTED BY: [Signature]  
 CHECKED BY: [Signature]  
 DATE: [Date]  
 NOTE BOOK NO. [Number]

PROFILE  
 SURVEYED, LAYOUTED, & NOTED BY: [Signature]  
 CHECKED BY: [Signature]  
 DATE: [Date]  
 NOTE BOOK NO. [Number]

1609



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Land Development Division  
 Chief, Bureau of Highways  
 Chief, Bureau of Engineering  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Community Planning and Land Development

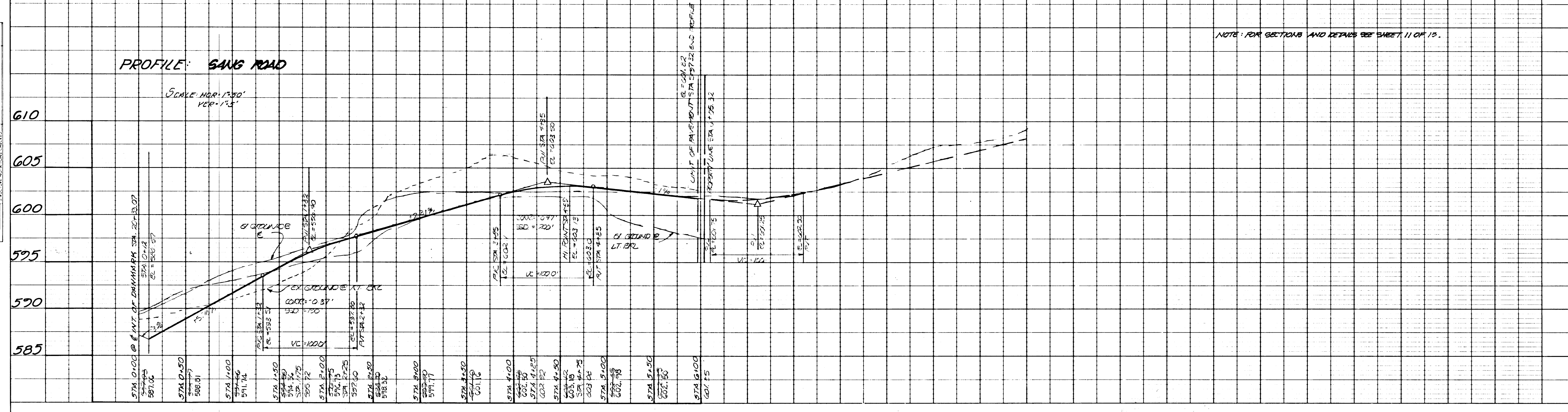
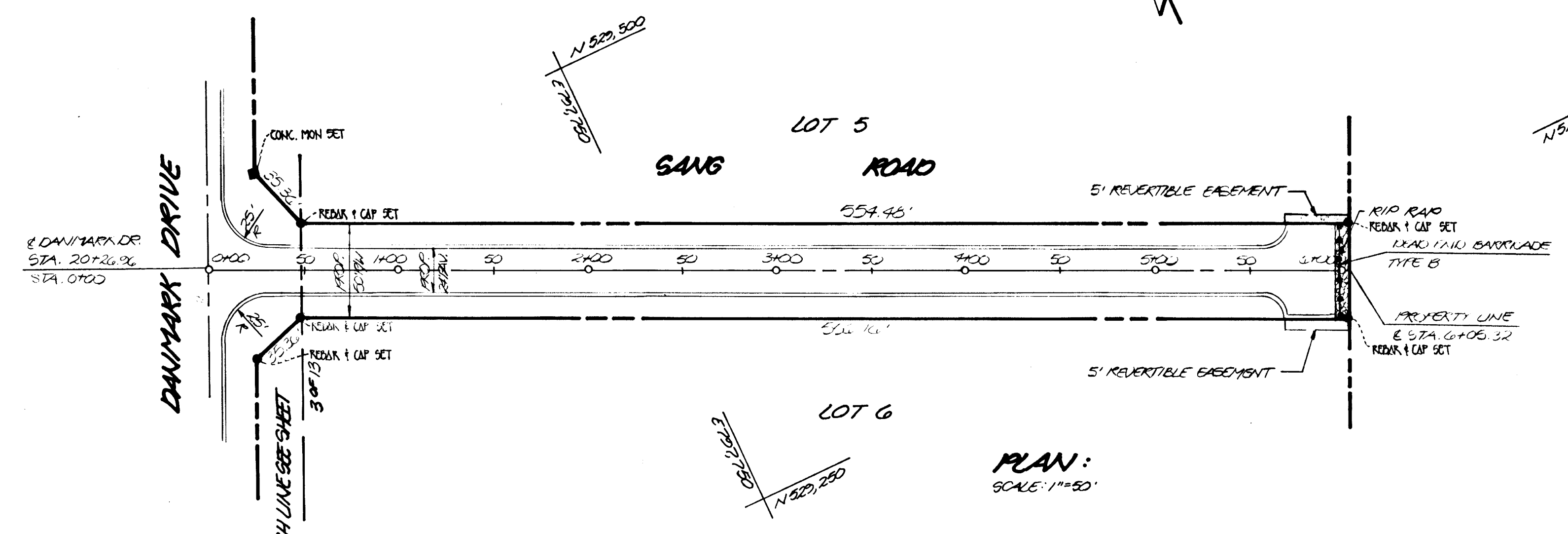
- GENERAL NOTES
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
  - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
  - THE CONTRACTOR SHALL TEST PIT FOR EXISTING UTILITIES AT LEAST FIVE (5) DAYS PRIOR TO STARTING WORK SHOWN ON THESE DRAWINGS.
  - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS PRIOR TO BEGINNING WORK SHOWN ON THESE DRAWINGS.
    - WESS UTILITY.....559-0100
    - BELL TELEPHONE SYSTEM.....393-3649
    - LONG DISTANCE CABLE DIVISION.....393-3553/3554
    - BALTIMORE GAS & ELECTRIC COMPANY.....539-8000
    - HOWARD COUNTY BUREAU OF UTILITIES.....992-2366
    - HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK).....792-7272
  - ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
  - ALL STREET CURB RETURNS SHALL HAVE 25' RADII UNLESS OTHERWISE NOTED.
  - STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
  - INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1978 EDITION (REVERSED).
  - PIPE SHALL NOT BE INSTALLED BY CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
  - DESIGN TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS. SEE SECTIONS, SHEET 11 OF 13.
  - ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G. S. MEAN SEA LEVEL DATUM, 1929.
  - ALL FILL AREAS WITHIN ROADWAYS AND/OR UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM 95% COMPACTION.
  - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
  - PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
  - SUBJECT PROPERTY ZONED R PER GO-02-05 COMPREHENSIVE ZONING PLAN.
  - NO PIPE SHALL BE LAID IN PLACE UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO WITHIN SIX (6) INCHES OF FINISHED GRADE ELEVATIONS.
  - ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS "C" AS SHOWN IN FIG. 11.2 OF THE HOWARD COUNTY DESIGN MANUAL, VOL. I, UNLESS OTHERWISE NOTED.

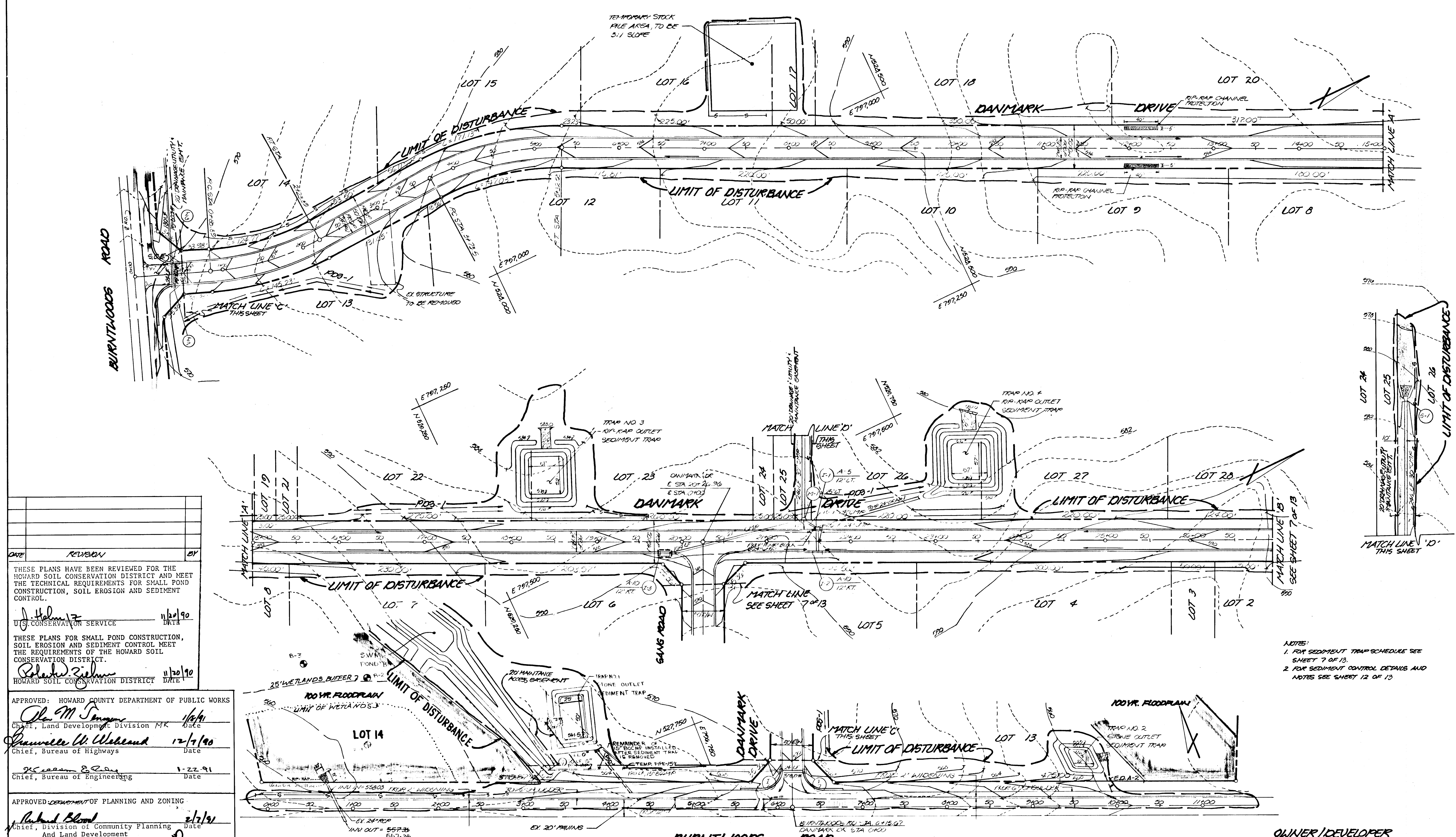
DATE	REVISION	BY

OWNER/DEVELOPER  
 SANG OH COMPANY, INC.  
 C/O DR. BYONG YOO  
 1000 NEW HAMPSHIRE AVE.  
 SILVER SPRING, MD 20904  
 TELE. 445-5000

TITLE: ROAD CONSTRUCTION PLAN  
 PROJECT: CHOI PROPERTY  
 LOCATION: TAX MAP 14, ELECTION DISTRICT HOWARD CO. MD.  
 SCALE: AS SHOWN  
 DESIGNED BY: J.R.S.  
 DRAWN BY: DWELSH  
 CHECKED BY: FEB 1988  
 FIELD BOOK: G3  
 PAGE NO.: 11  
 JOB NO.: 8562  
 DRAWING NO.: 5 OF 13

boender associates inc.  
 consulting engineers  
 land surveyors  
 land planners  
 COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD 21043  
 (301) 465-7777





DATE REVISION BY

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

J. Holm 11/20/90  
DATE

U.S. CONSERVATION SERVICE

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

Robert Zelman 11/20/90  
DATE

HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Alan M. Seng 1/6/91  
Date

Chief, Land Development Division MK

Lawrence W. Weiland 12/7/90  
Date

Chief, Bureau of Highways

1-22-91  
Date

Chief, Bureau of Engineering

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Richard Blood 2/2/91  
Date

Chief, Division of Community Planning And Land Development

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

10-4-90  
DATE

ENGINEER'S CERTIFICATE

"I 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 MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

10-4-90  
DATE

NOTES:

1. FOR SEDIMENT TRAP SCHEDULE SEE SHEET 7 OF 13.
2. FOR SEDIMENT CONTROL DETAILS AND NOTES SEE SHEET 12 OF 13.

OWNER/DEVELOPER

GANG OH COMPANY, INC  
C/O DR. BONG YOO  
16506 NEW HAMPSHIRE AVE.  
SILVER SPRING, MD 20904  
TELE: 445-6000

TITLE <b>GRADING &amp; SEDIMENT CONTROL PLAN</b>			
PROJECT: <b>CHOI PROPERTY</b>			
LOCATION: 474 ELECTION DISTRICT HOWARD CO. MD			
SCALE: 1"=50'	DESIGNED BY: J.R.S.	DRAWN BY: J.C.A.	CHECKED BY: DATE: AUG, 1990
FIELD BOOK:	PAGE NO.:	JOB NO.:	DRAWING NO.:
		8502	6 OF 13

boender associates, inc.  
consulting engineers  
land surveyors  
land planners

COURTHOUSE SQUARE  
3565 ELLICOTT CITY, MD 21043  
301 465-7777

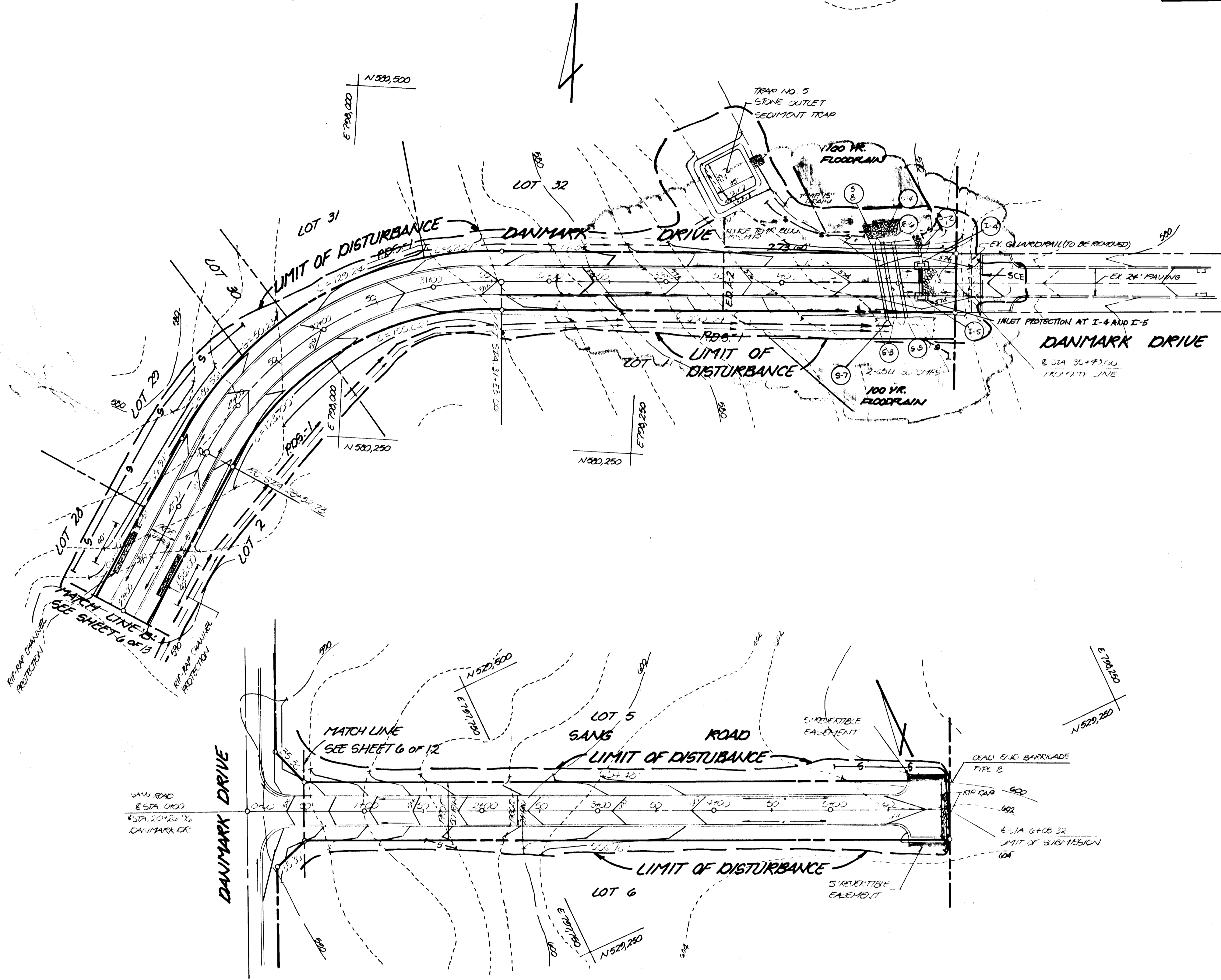
1609

11/8/95 F-89-167

**SEDIMENT TRAP SCHEDULE**

TRAP NO.	TYPE TRAP	D.A. (AC)	VOL. PROD. (CY)	VOL. PROD. (CY)	BOTTOM ELEV.	CREST ELEV.	CREST WIDTH	TOP BEAM ELEV.	CLEAN OUT ELEV.
1	STONE OUTLET SED. TRAP	2.80	5046	5426	561.5	565.5	12'	566.5	573.0
2	STONE OUTLET SED. TRAP	1.12	2016	2352	556.0	559.0	5'	N/A	557.5
3	KICKAPOO CREEK SED. TRAP	5.45	950	1016	578.0	582.0	4'	584.0	579.5
4	KICKAPOO CREEK SED. TRAP	6.36	1108	1107	575.0	578.0	16'	582.0	576.5
5	STONE OUTLET SED. TRAP	2.30	5220	5252	567.0	570.0	12'	N/A	568.5

NOTE: CREST ELEVATIONS FOR RIP-RAP TRAPS ARE AT BOTTOM OF STONE.



— — — — — INDICATES PERIMETER DIKE/BARRIAGE  
 — — — — — INDICATES SILT FENCE  
 — — — — — EARTH DIKE

9/28/73	REV. ROAD GRADES, ADDED S-14 to S-19, REV. FROM S-1 to S-4 AND S-5 to S-6, RELOCATED S-2 to S-5.	JRG
DATE	REVISION	BY

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

*J. Helms* 11/20/90  
 U.S. CONSERVATION SERVICE DATE

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

*Robert W. Zelman* 11/20/90  
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*William W. Weiland* 1/27/90  
 Chief, Bureau of Highways DATE

*William W. Weiland* 1-22-91  
 Chief, Bureau of Engineering DATE

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

*J. Ch. Agout* 10-5-90  
 DEVELOPER DATE

ENGINEER'S CERTIFICATE

"I 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 MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

*Chang-ho Choi* 10-5-90  
 ENGINEER DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Richard Abord* 2/1/91  
 Chief, Division of Community Planning and Land Development DATE

OWNER/DEVELOPER

SANS OH COMPANY, INC.  
 C/O DR. BONG YOO  
 1004 NEW HAMPSHIRE AVE.  
 SILVER SPRING, MD 20904  
 TELE: 445-5000

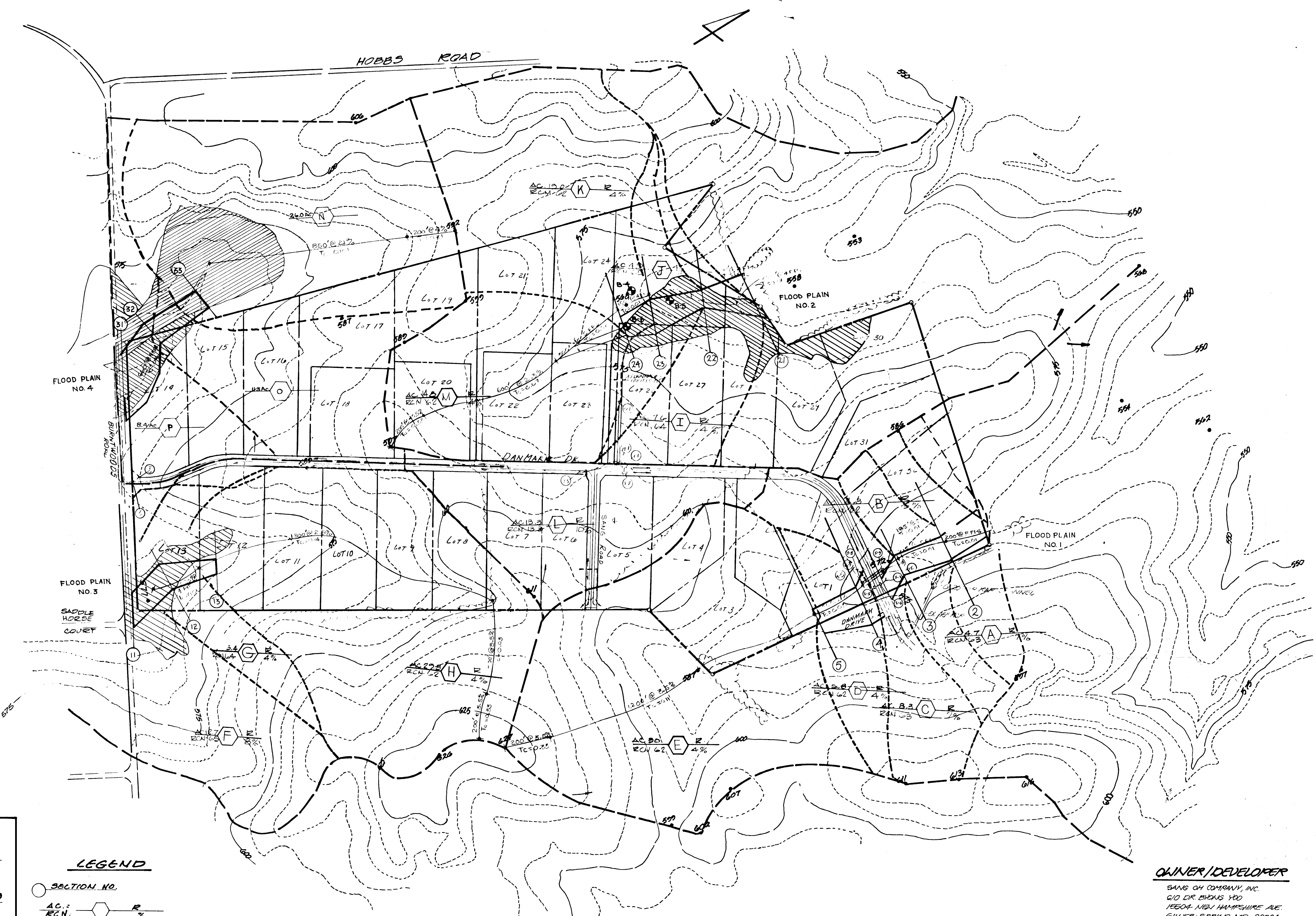


TITLE: GRADING & SEDIMENT CONTROL PLAN			
PROJECT: CHOI PROPERTY			
LOCATION: 4TH ELECTION DISTRICT, HOWARD CO., MD.			
SCALE: 1"=50'	DESIGNED BY: J.C.O.	DRAWN BY: J.C.O.	CHECKED BY: ALG./PSS
FIELD BOOK:	PAGE NO.:	JOB NO.: 8562	DRAWING NO.: 70' B

boender associates inc.  
 consulting engineers  
 land surveyors  
 land planners

COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD. 21043  
 1301 465-7177

16091



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Alan M. Torgerson* 1/19/91  
 CHIEF, LAND DEVELOPMENT DIVISION MK DATE

*Branville W. Welstead* 12/7/90  
 CHIEF, BUREAU OF HIGHWAYS DATE

*John E. Roney* 1-22-91  
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: DEPT. OF PLANNING AND ZONING  
*Richard Hood* 2/7/91  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

**LEGEND**

○ SECTION NO.

AC: RCN: R %

▨ 6" SOIL

▨ 0" SOIL

**QUINER/DEVELOPER**

BANG OH COMPANY, INC.  
 610 DR. BIRNEY YOD  
 17604 NEW HAMPSHIRE AVE.  
 GAITHER SPRING, MD 20884  
 TEL: 445-5000

STATE OF MARYLAND  
*Cheng Ho Lim*  
 10-5-90

TITLE: <b>100 YEAR FLOOD PLAIN</b>					
PROJECT: <b>CHOI PROPERTY</b>					
LOCATION: <b>4 TH ELECTION DISTRICT HOWARD CO. MD</b>					
SCALE: 1" = 200'	DESIGNED BY: JAG	DRAWN BY: JCO	CHECKED BY:	DATE: FEB. 1990	
FIELD BOOK: 63	PAGE NO: 11	JOB NO: 8562	DRAWING NO: 8 OF 13		



**boender associates, inc.**  
 consulting engineers  
 land surveyors  
 land planners

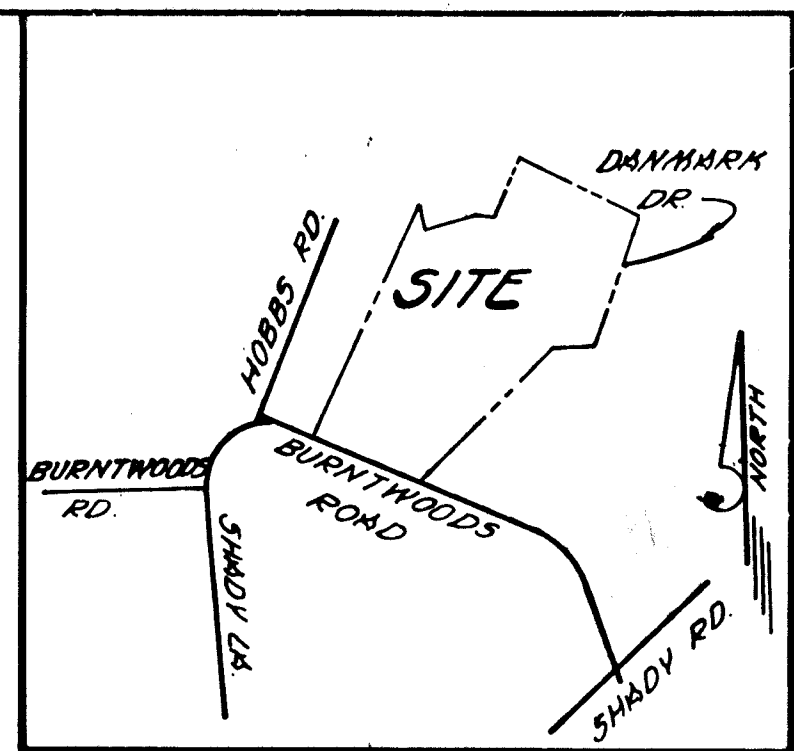
COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD 21043  
 (301) 465-7777

16091

F-89-167



LEGEND:  
 PERC AREA  
 HYDRIC SOILS  
 NOTE: SEE PRELIMINARY FOR ACTUAL SIZE & LOCATION OF PERC AREAS



NOTE: SOILS SHOWN ARE LOCATED ON SOILS MAP No. 13 OF THE HO. CO. SOILS SURVEY BOOK

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

*J. Halpin* 11/20/90  
U.S. CONSERVATION SERVICE DATE

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

*Robert Ziehm* 11/20/90  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Ch. M. Sangar* 1/16/91  
CHIEF LAND DEVELOPMENT DIVISION MFL DATE

*Granville W. Williams* 12/7/90  
CHIEF BUREAU OF HIGHWAYS DATE

*K. Dean & Ray* 1-22-91  
CHIEF BUREAU OF ENGINEERING DATE

APPROVED: DEPT. OF PLANNING AND ZONING

*Richard Blood* 2/7/91  
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

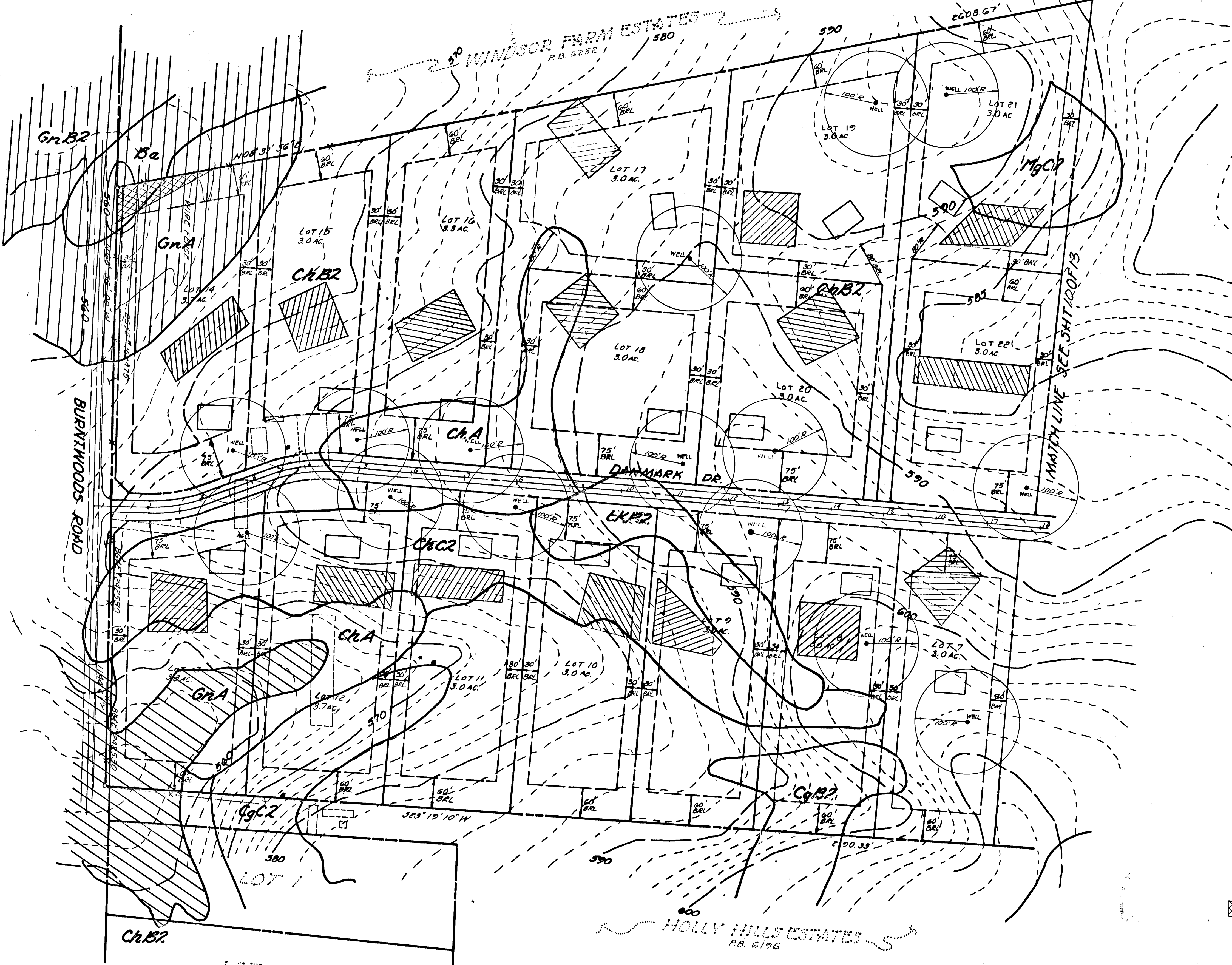


OWNER/DEVELOPER  
 SAUS OH COMPANY, INC.  
 C/O DR. BYRNS 400  
 15504 NEW HAMPSHIRE AVE.  
 SILVER SPRING, MD 20904  
 TELE: 445-8000

TITLE: Soils Map	
PROJECT: CHOI PROPERTY	
LOCATION: 4 <sup>TH</sup> ELECTION DISTRICT	TAX MAP: 14 HOWARD CO., MD.
SCALE: 1" = 100'	DESIGNED BY: DWELSH
DRAWN BY: DWELSH	CHECKED BY: DATE: FEB 1988
FIELD BOOK: 63	PAGE NO: 11
JOB NO: 8562	DRAWING NO: 9 OF 13

boender associates inc.  
 consulting engineers  
 land surveyors  
 land planners

COURTHOUSE SQUARE  
 3585 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD. 21043  
 (301) 485-7777



1691

NOTE: SOILS SHOWN ARE LOCATED ON SOILS MAP NO. 13 OF HO. CO. SOILS SURVEY BOOK

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

J. Helm 12 11/20/90  
U.S. CONSERVATION SERVICE DATE

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

Robert Zielin 11/20/90  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Alan M. Pansam 1/18/91  
CHIEF, LAND DEVELOPMENT DIVISION MK DATE

Granville W. Weiland 12/7/90  
CHIEF, BUREAU OF HIGHWAYS DATE

John P. Ryan 1-24-91  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: DEPT. OF PLANNING AND ZONING

Richard Blood 2/7/91  
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

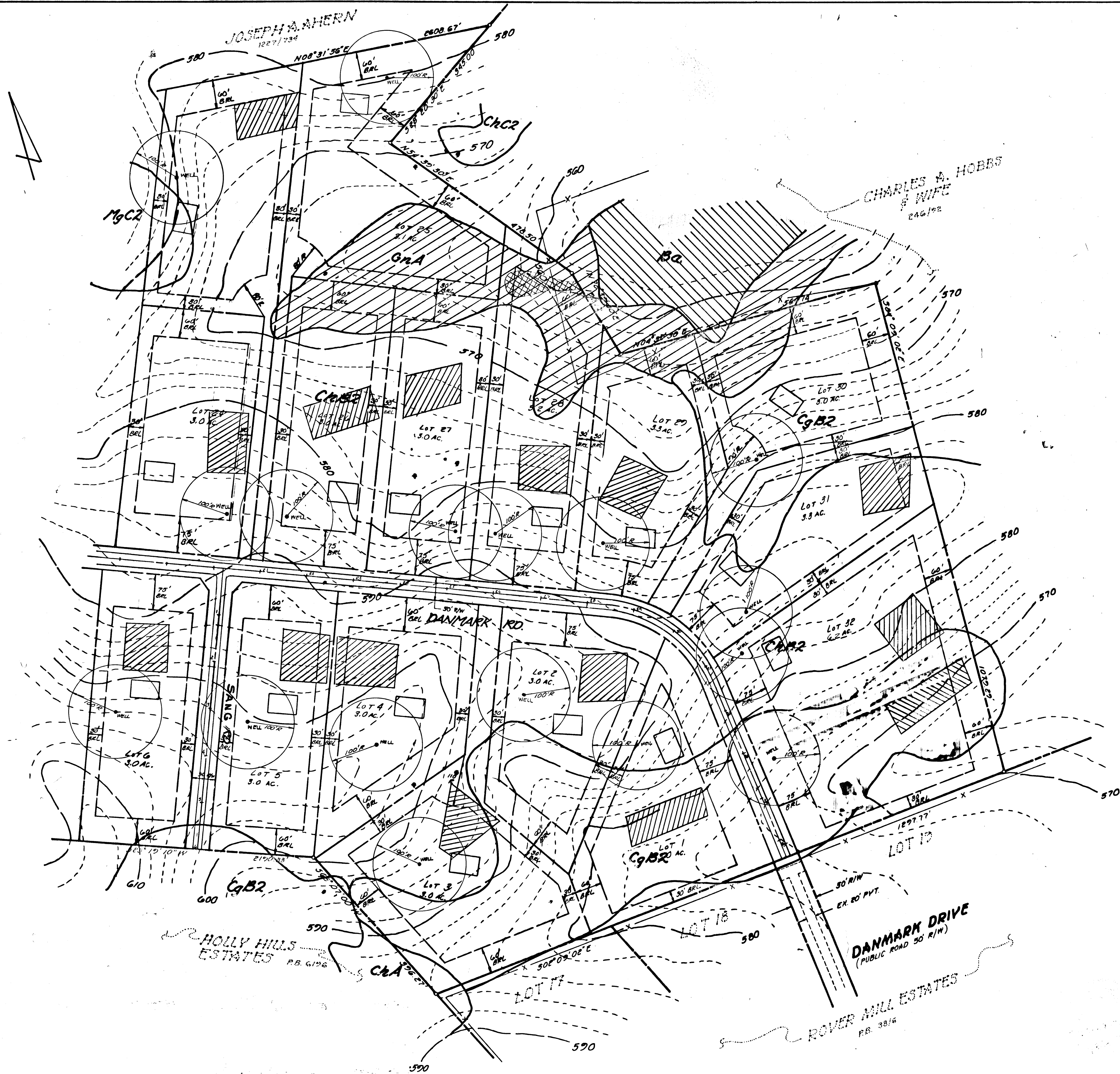
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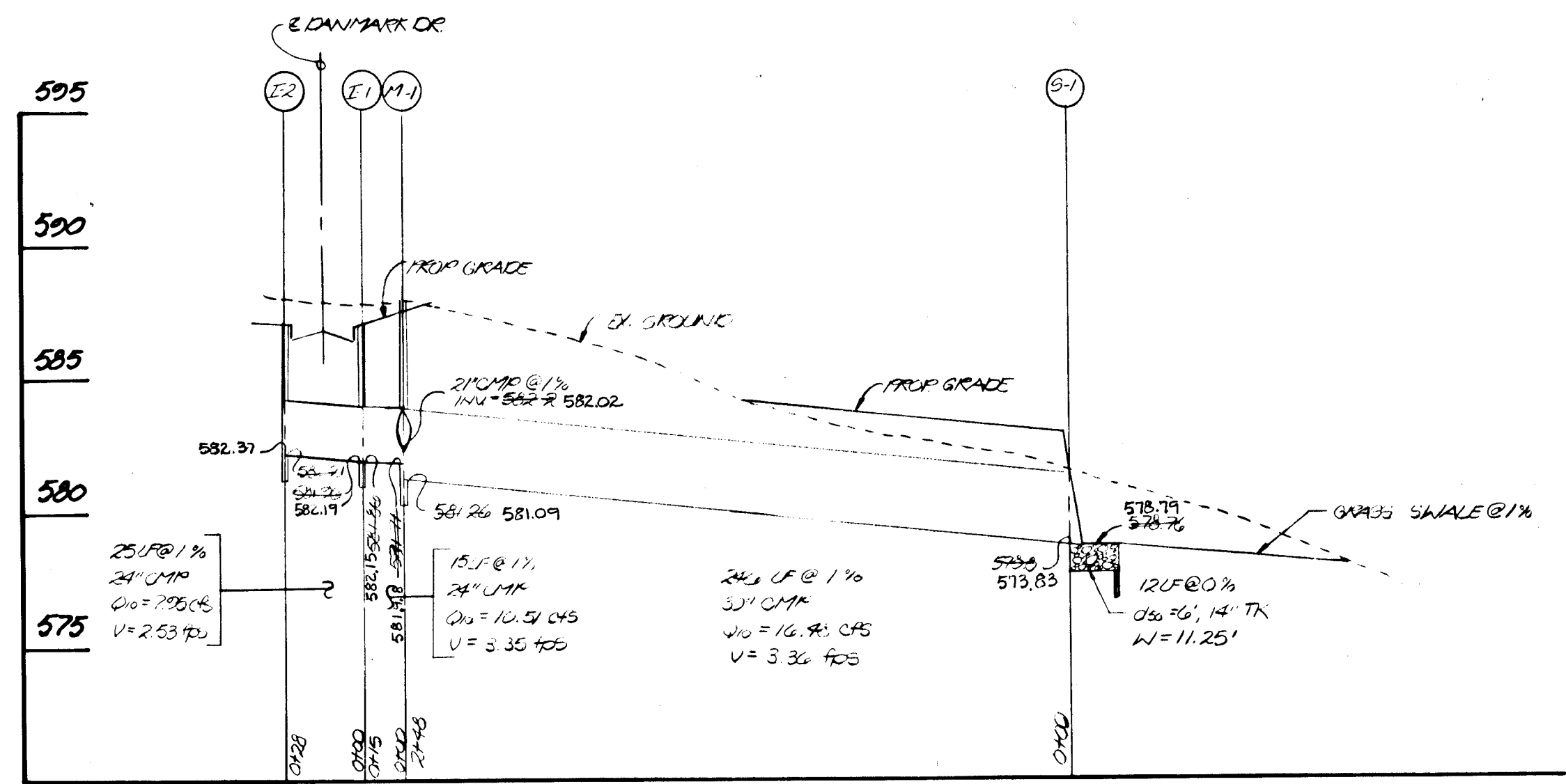
OWNER / DEVELOPER  
SANG OH COMPANY, INC.  
C/O DR. BYUNG HOO  
15504 NEW HAMPSHIRE AVE.  
SILVER SPRING, MD 20904  
TEL: 446-8000



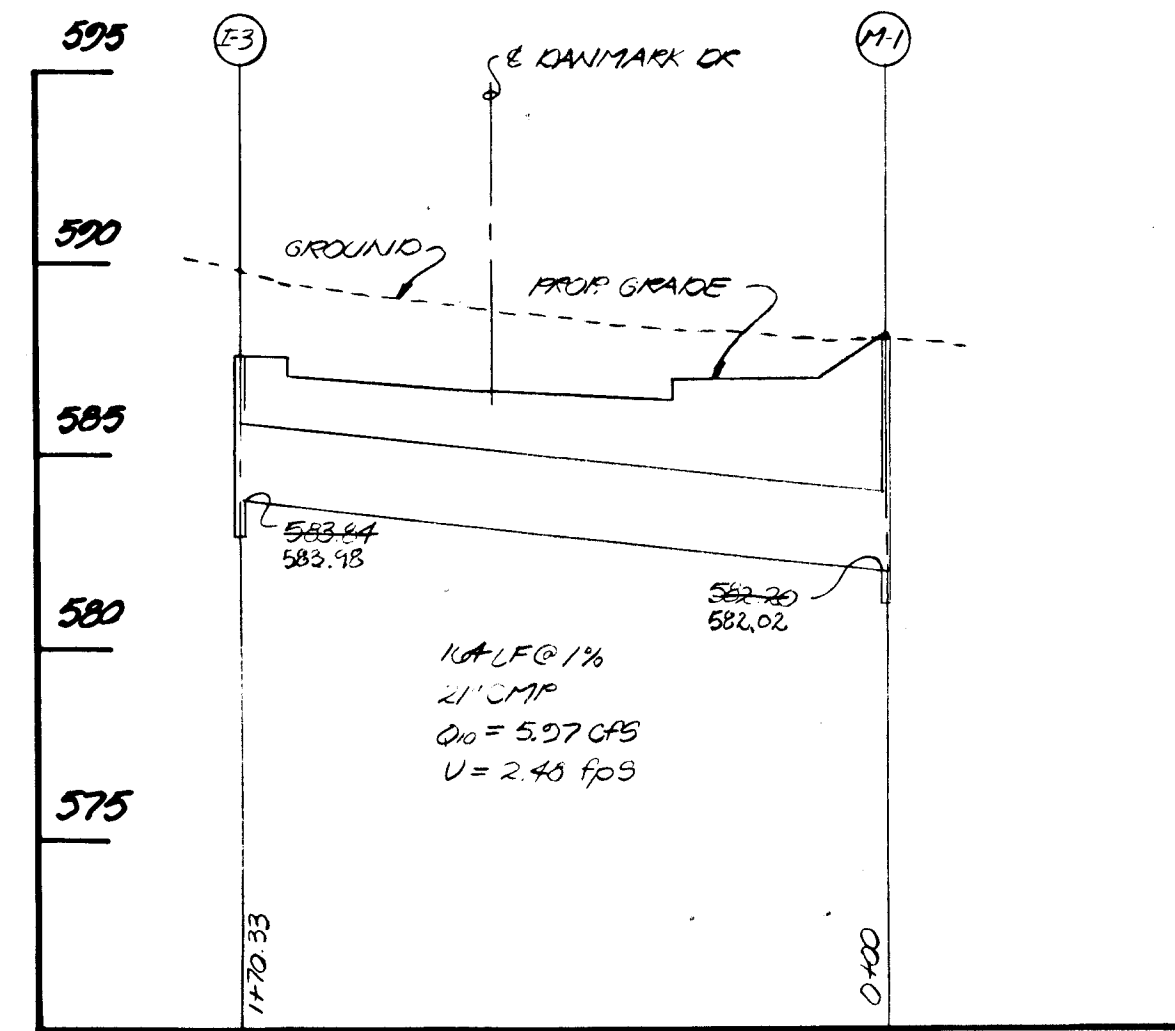
TITLE: <b>SOILS MAP</b>		boender associates inc.	
PROJECT: <b>CHOI PROPERTY</b>		consulting engineers land surveyors land planners	
LOCATION: <b>TAX MAP: 14</b> <b>4TH ELECTION DISTRICT HOWARD CO., MD.</b>		COURTHOUSE SQUARE 3565 ELLICOTT MILLS DRIVE ELLICOTT CITY, MD 21043 1301 465-7777	
SCALE: 1"=100'	DESIGNED BY: DWELSH	CHECKED BY: DATE: FEB 1998	
FIELD BOOK: G3	PAGE NO: 11	JOB NO: 8562	DRAWING NO: 10 OF 13

6091

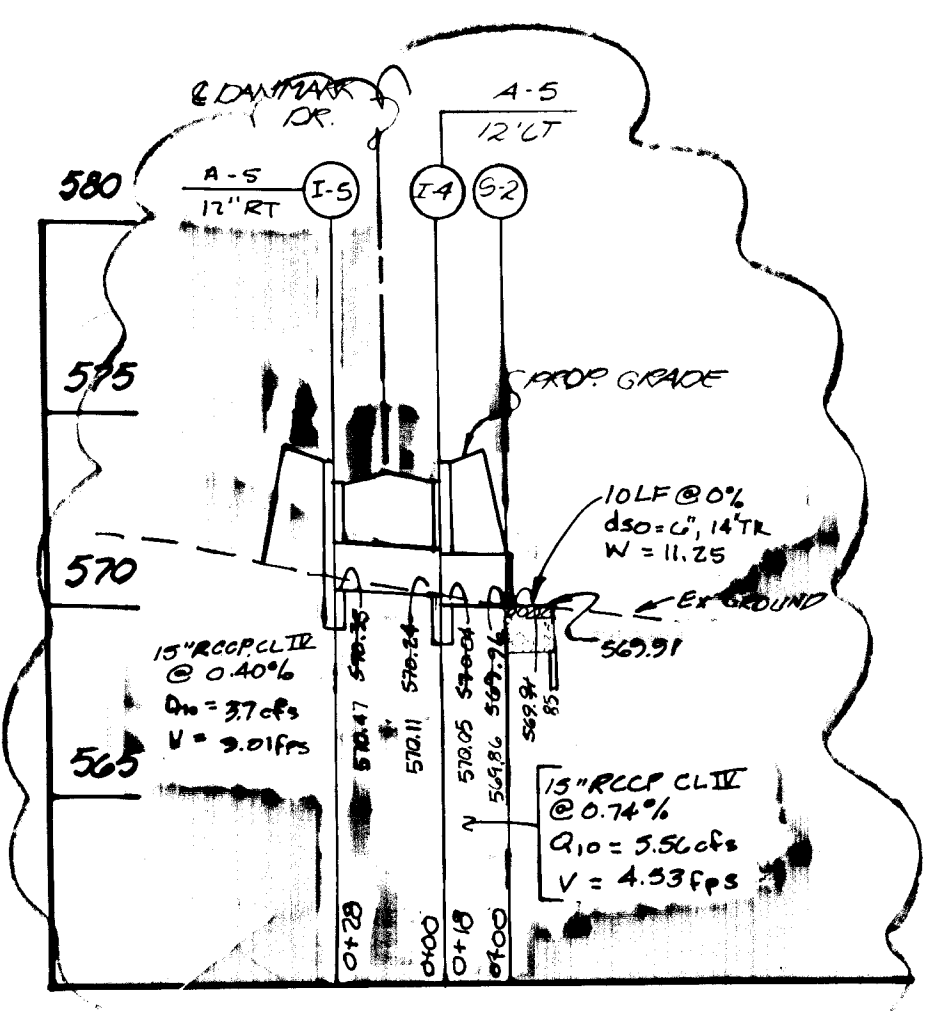




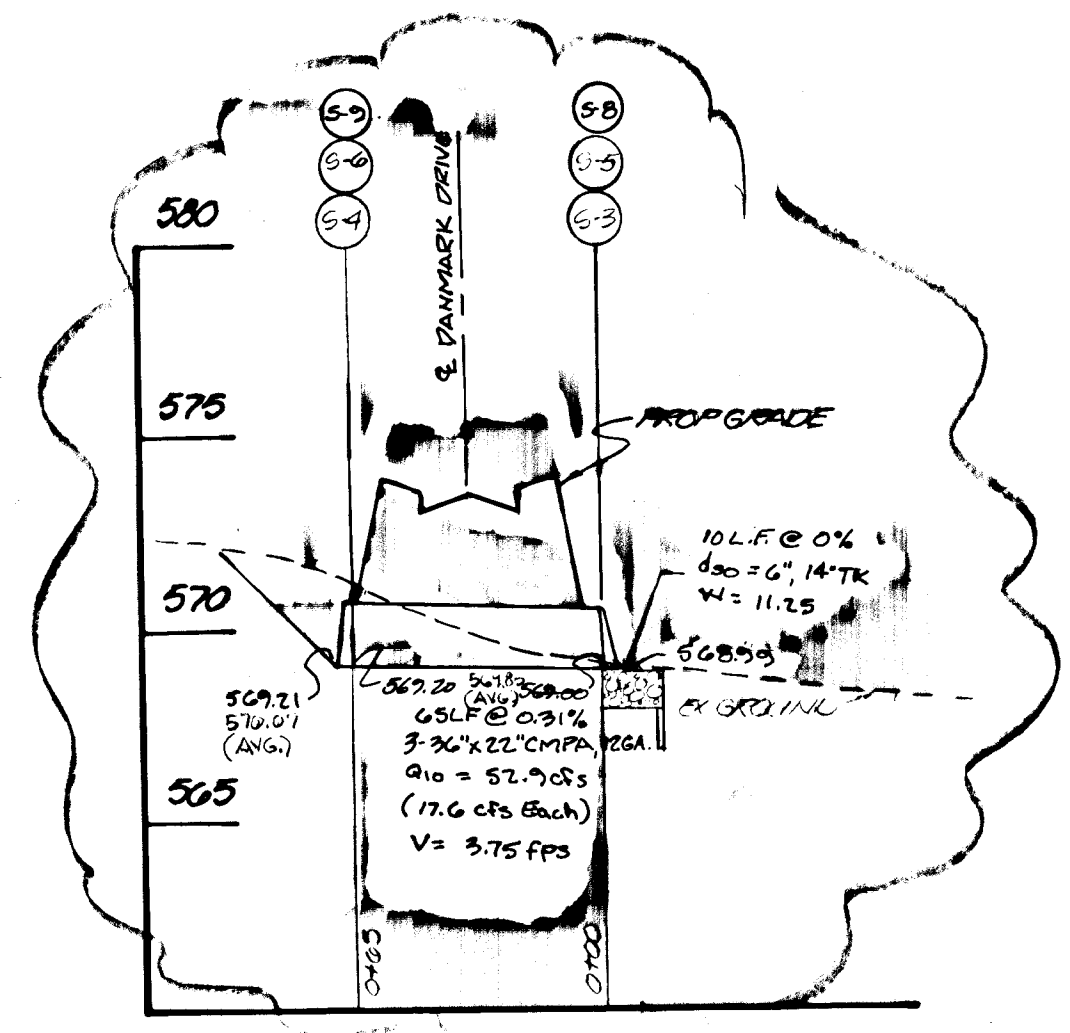
**PROFILE**  
SCALE: HOR: 1"=50'  
VERT: 1"=5'



**PROFILE**  
SCALE: HOR: 1"=50'  
VERT: 1"=5'



**PROFILE**  
SCALE: HOR: 1"=50'  
VERT: 1"=5'

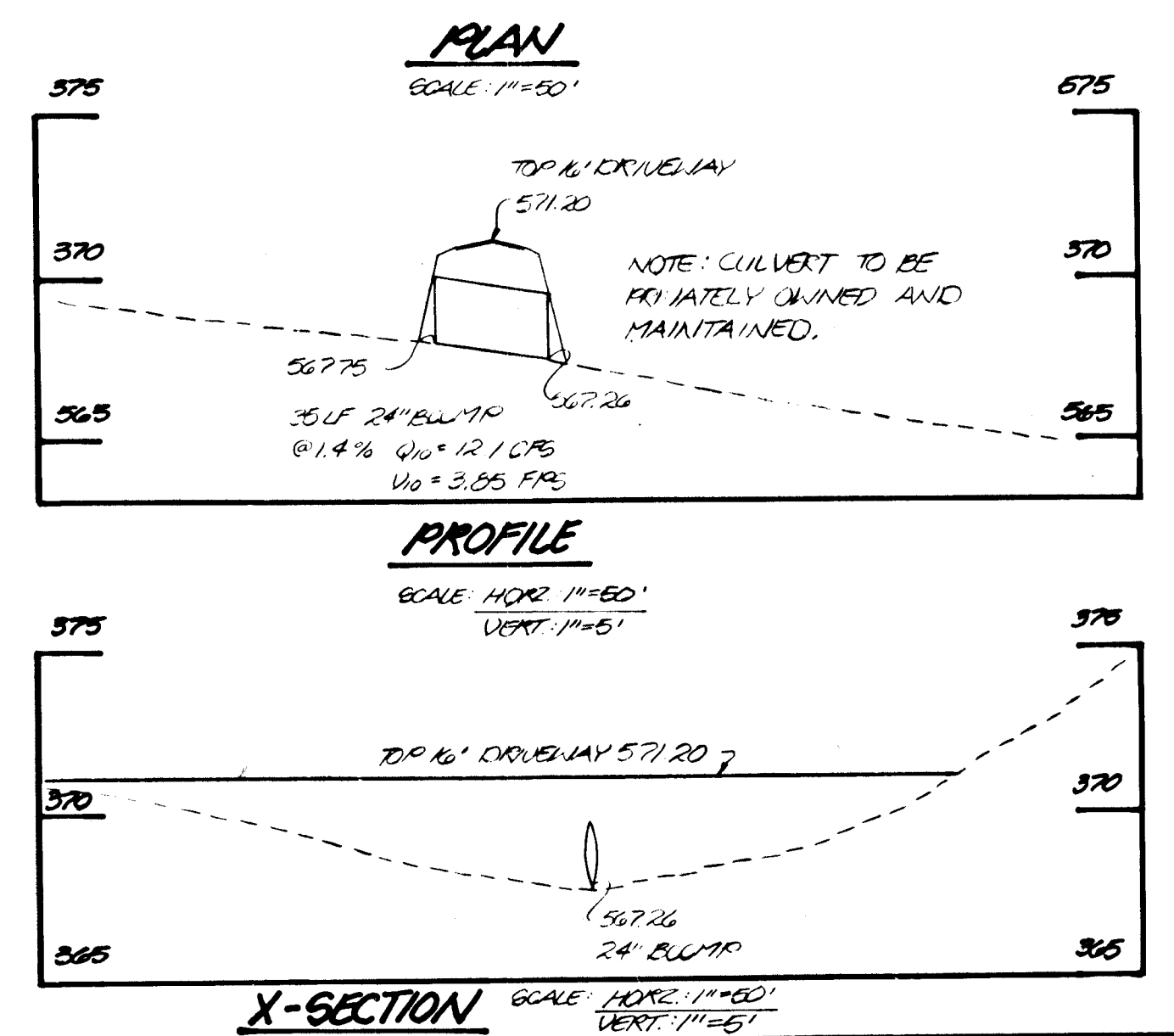
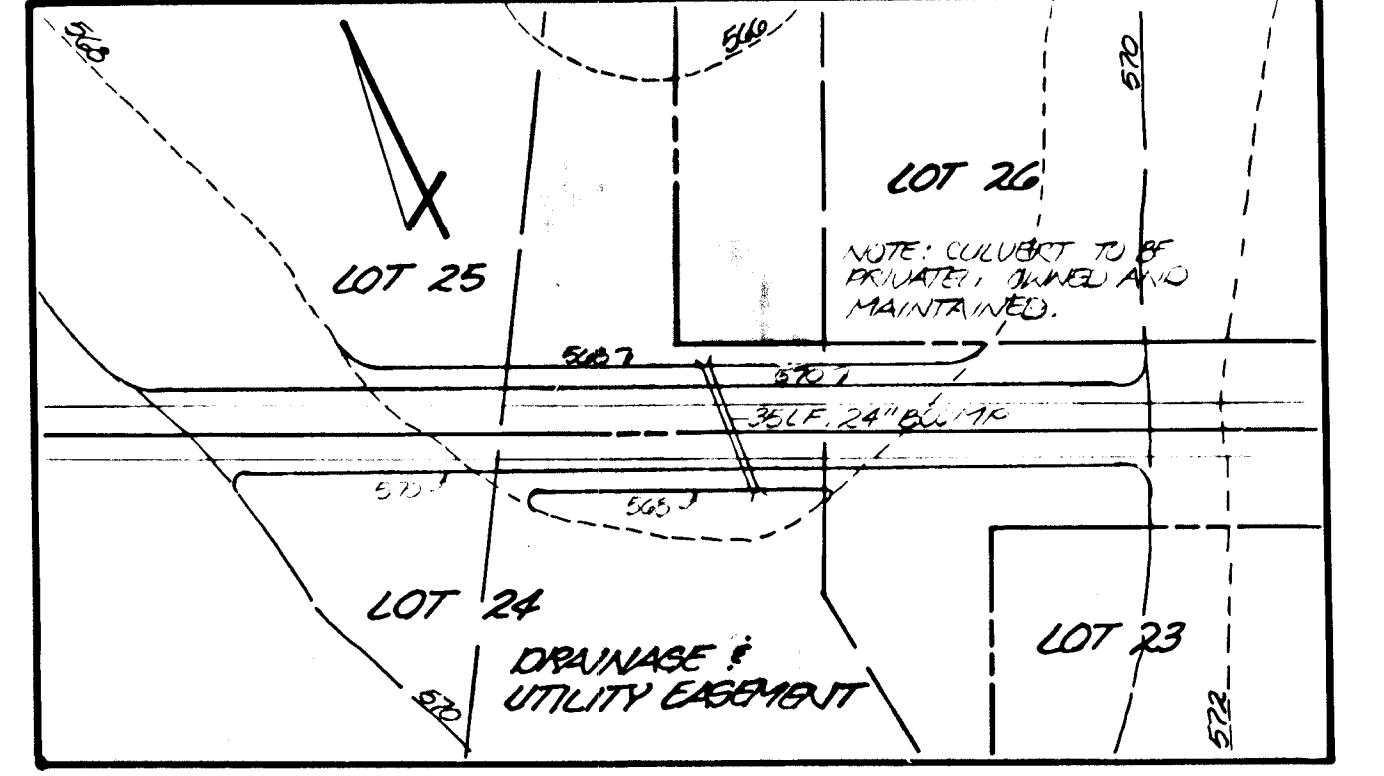


**PROFILE**  
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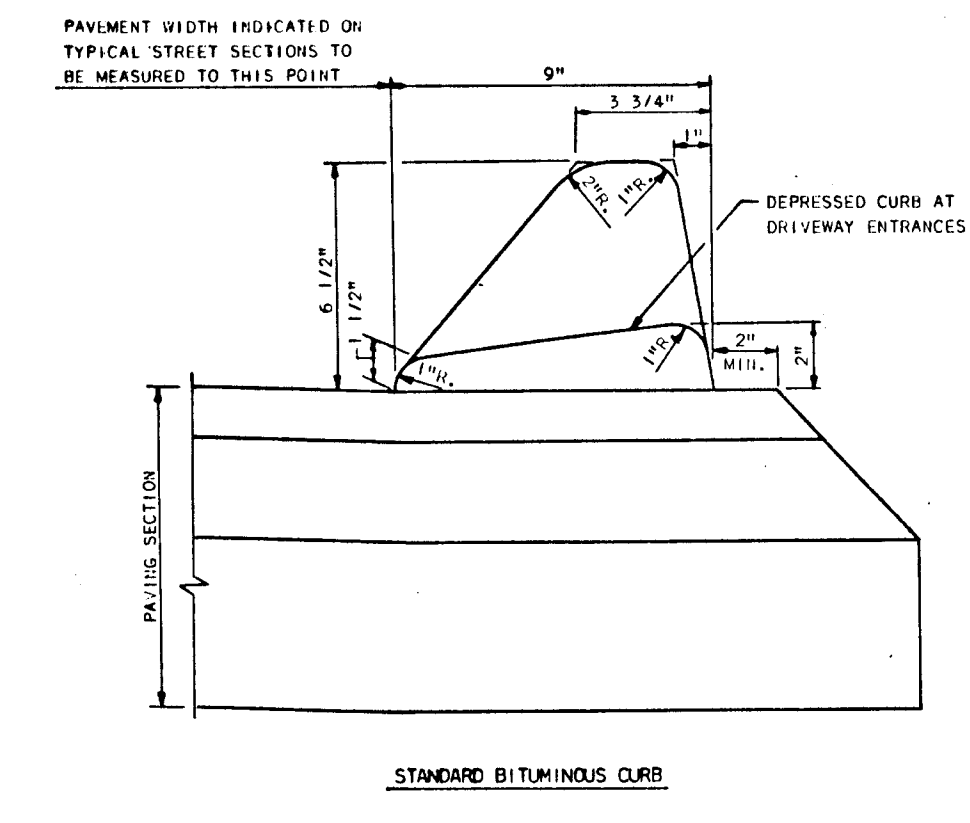
**STRUCTURE SCHEDULE**

STRUCTURE	TYPE	INVERT	OUT	JOB ELEV.	DETAIL NO.
S-8	END SECTION	569.60	570.43	570.65	SD-5-63
S-9	END SECTION	569.21	569.20	571.03	SD-5-63

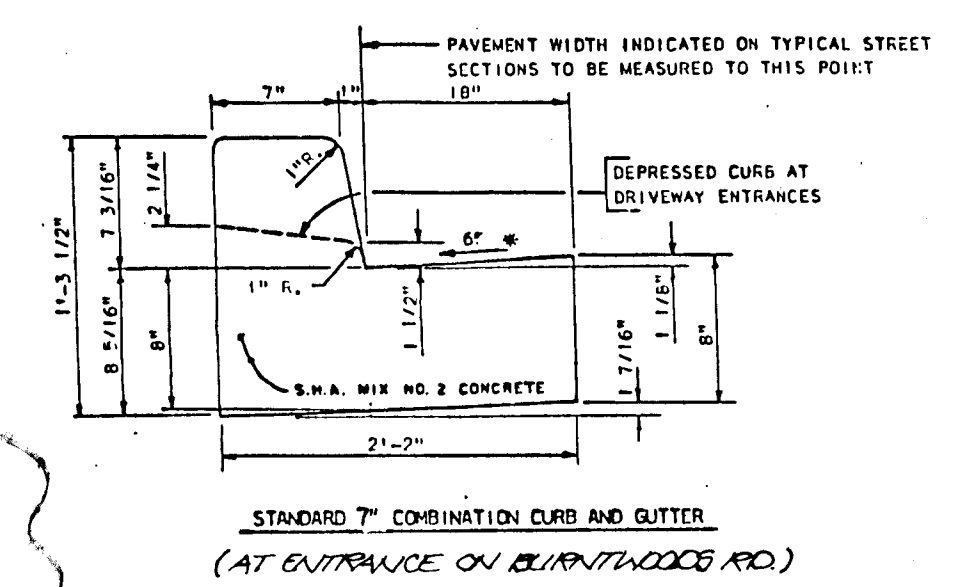
NOTE: EQUAL TO FALL SAK... (text partially obscured)



**X-SECTION** SCALE: HOR: 1"=50'  
VERT: 1"=5'

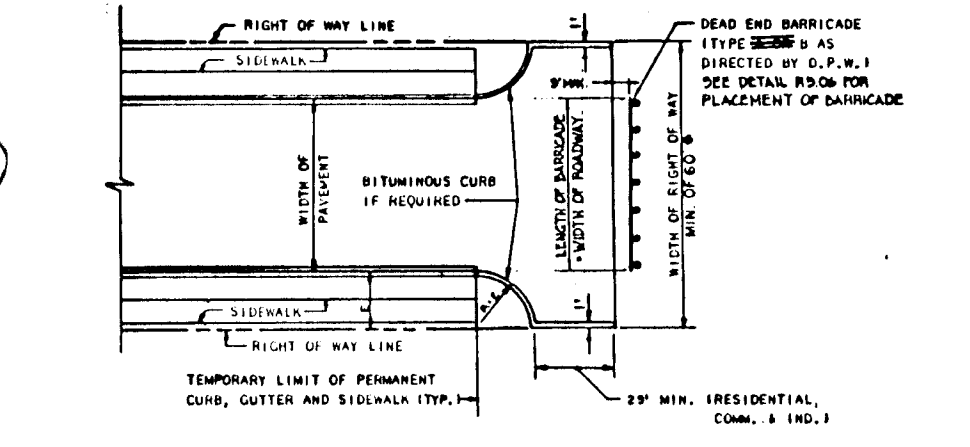


STANDARD BITUMINOUS CURB  
DANMARK DR - STA. 0+00 TO 3+00 S  
SANG OH CHOI RD - STA. 0+00 TO 6+37.00



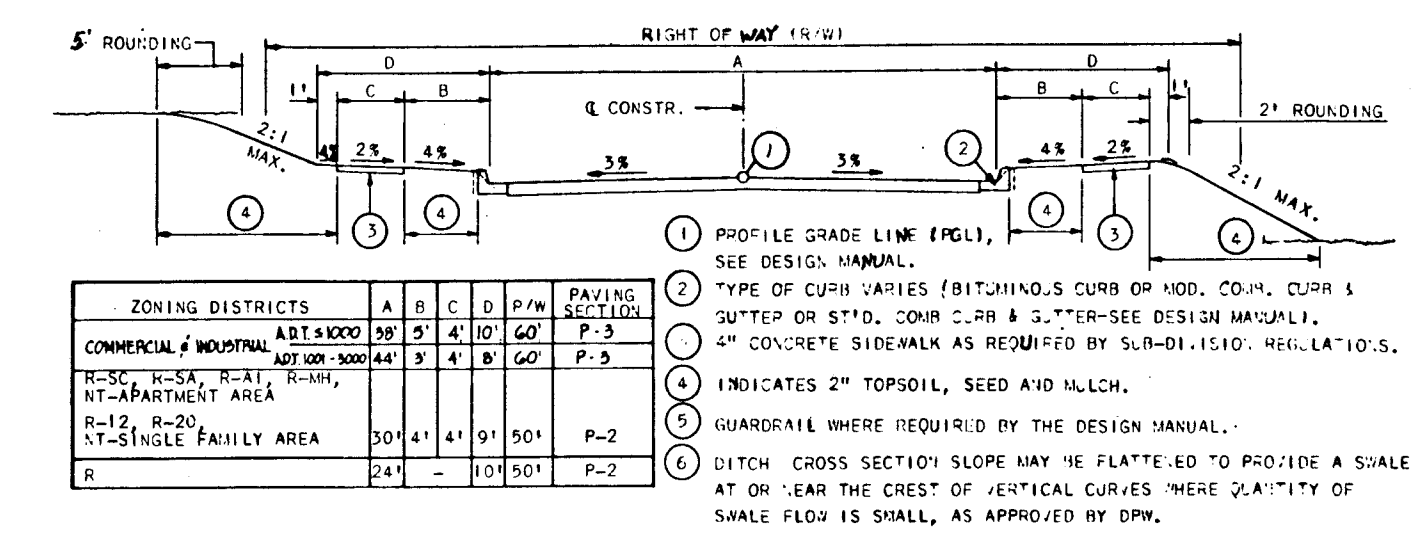
STANDARD COMBINATION CURB AND GUTTER  
(AT ENTRANCE ON BURNTWOODS RD.)

GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.



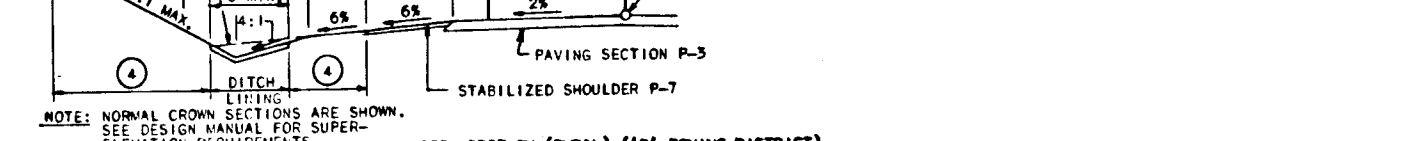
TEMPORARY TEE TURN-AROUND  
(SANG OH CHOI ROAD)

- NOTES:
- A TEE TURN-AROUND SHALL BE USED IN LIEU OF A CURB-OR-SAC ONLY IF THE STREET IS TO BE EXTENDED IN THE FUTURE.
  - BITUMINOUS CURB SHALL EXTEND AROUND THE TEE TURN-AROUND IF AND AS REQUIRED TO CONTROL CURB DISTANCE FROM THE ROADWAY SECTION.
  - REFER TO STANDARD # 308 FOR TYPICAL ROADWAY PROFILE OF TEMPORARY LANE OF TRAVEL.
  - FOR LOCAL ROADS, PROVIDE 6" REVERSIBLE EASEMENT EACH END OF THE TEE.
  - PROVIDE BARRICADES AS REQUIRED FOR PLACEMENT OF BARRICADE AND ANY NECESSARY ENDING (SEE DETAIL #5-04).



LOCAL ROAD: DANMARK DR - STA. 0+00 TO 35+00, SANG OH CHOI RD TO 6+00 S

- EXISTING ZONING: R
- DESIGN SPEED: 30 MPH
- NOT TO SCALE.

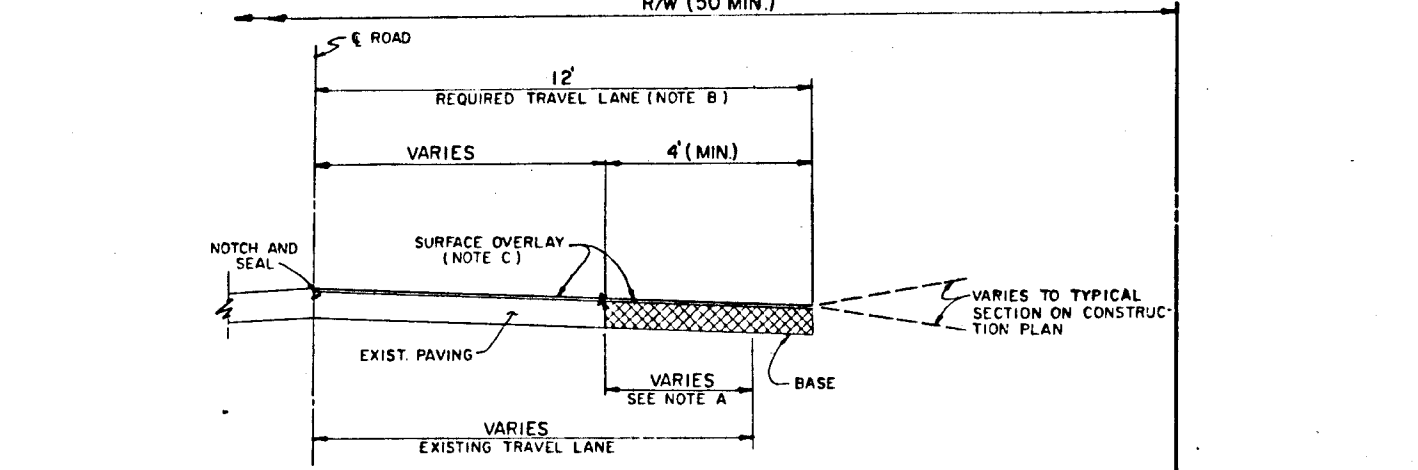


MAJOR COLLECTOR: BURNTWOODS RD. - STA. 0+00 TO 11+35.26

- EXISTING ZONING: R
- DESIGN SPEED: 50 MPH
- NOT TO SCALE.

ZONING DISTRICTS	A	B	C	D	R/W	PAVING SECTION
COMMERCIAL & INDUSTRIAL	44'	41'	41'	41'	60'	P-3
R-12, R-20	42'	41'	41'	41'	60'	P-3
RT-SINGLE FAMILY AREA	42'	41'	41'	41'	60'	P-3

ROAD WIDENING DETAIL  
(BURNTWOODS RD.)



NOTES: WHEN EXISTING TRAVEL LANE IS LESS THAN THE REQUIRED 12' LANE, CONTRACTOR SHALL REMOVE ENOUGH OF THE EXISTING ROAD BED TO PROVIDE A MINIMUM BASE WIDENING OF 4'.

NOTES: THE SURFACE OVERLAY SHALL BE CARRIED TO THE 6" OF THE ROAD AND NOTCHED AND SEALED.

NOTES: SURFACE OVERLAY COURSE TO BE EQUAL TO SURFACE COURSE OF TYPICAL PAVING SECTION OF SUBDIVISION.

ROAD WIDENING DETAIL  
(BURNTWOODS RD.)

PAVING SECTION	PAVING SECTION
P-2 (DANMARK DR & SANG OH CHOI RD)	1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE PRIME 6" CRACKER RAN BASE COURSE 1/2 COURSE OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE
P-3 (BURNTWOODS RD)	1 1/2" BIT. CONC. SURFACE 4 1/2" BIT. CONC. BASE PRIME 6" CRACKER RAN BASE COURSE OR 4 1/2" DENSE GRADED STABILIZED AGGREGATE BASE COURSE
P-7 (BURNTWOODS RD SHOULDER)	DOUBLE BIT SURFACE TREATMENT 6" CRACKER RAN BASE COURSE OR 4 1/2" DENSE GRADED STABILIZED AGGREGATE BASE COURSE

PAVING SECTIONS

**OWNER/DEVELOPER**  
SANG OH COMPANY, INC.  
C/O DR. BYONG YOO  
18504 NEW HAMPSHIRE AVE  
SILVER SPRING, MD 20904  
TELE: 442-5500

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

*J. Helms* 11/20/90  
U.S. CONSERVATION SERVICE DATE

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

*Robert J. Zelman* 11/20/90  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Ch. M. Sanger* 1/8/91  
Chief, Land Development Division MK Date

*Granville W. Wehner* 12/7/90  
Chief, Bureau of Highways Date

*Richard Blood* 2/1/91  
Chief, Division of Community Planning And Land Development Date

9/28/90 REV. ROAD GRADINGS APPROX 5-8 TO 5-9, REV. PIPES FROM 5-3 TO 5-4 AND 5-3 TO 5-6, RELOCATED 5-2 TO 5-3. JRG

DATE REVISION BY

**DEVELOPER'S CERTIFICATE**

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER: *Ch. Cole* AGENT 10-5-90 DATE

**ENGINEER'S CERTIFICATE**

"I 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 MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

ENGINEER: *Cheng-ho Lin* 10-5-90 DATE



**DETAILS**

PROJECT: **CHOI PROPERTY**

LOCATION: 477 ELECTION DISTRICT HOWARD CO., MD.

SCALE: AS SHOWN DESIGNED BY JCO DRAWN BY JCO CHECKED BY DATE: FEB/1998

FIELD BOOK: PAGE NO. JOB NO. 0502 DRAWING NO. 11 OF 13

**boender associates inc.**  
consulting engineers  
land surveyors  
land planners

COURTHOUSE SQUARE  
3565 ELLICOTT MILLS DRIVE  
ELLICOTT CITY, MD 21043  
(301) 465-7777

1609

**SEDIMENT CONTROL NOTES**

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2433).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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 fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper 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 of Site	11483 Acres
Area to be roofed or paved	1010 Acres
Area to be vegetatively stabilized	274 Acres
Total Cut	1280 Cu.Yds.
Total Fill	5000 Cu.Yds.
Offsite waste/borrow area location	
- Any sediment control practice which is disturbed by grading activity for placement of utilities shall be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County DPM 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.

**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

**Seedbed Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

**Soil Amendments:** Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq.ft.)

**Seeding:** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 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, or use sod.

**Mulching:** Apply 1 1/2 to 2 tons per acre 670 to 90 lbs/1000 sq ft. of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft.) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

**PERMANENT SEEDING NOTES**

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

**Seedbed Preparation:** Loosen up three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

**Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureiform fertilizer (9 lbs/1000 sq. ft.)
- Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) and 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 period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 1 thru February 28, protect site by: Option (1) 2 tons per acre of 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.

**Mulching -** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted 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 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

**Maintenance -** Inspect all seeded areas and make needed repairs, replacements and reseedings.

**CONSTRUCTION SEQUENCE**

- OBTAIN GRADING & BUILDING PERMIT.
- NOTIFY THE HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS & PERMITS AND THE CONSTRUCTION INSPECTIONS, SURVEYS DIVISION AT 792-7272 AT LEAST 24 HOURS PRIOR TO BEGINNING GRADING OPERATIONS.
- INSTALL TEMPORARY SEDIMENT CONTROL MEASURES (S.C.E., S.F., ST-II., PDS-1) **2 WEEKS**
- CLEAR AND ROUGH GRADE SITE. **1 WEEK**
- CONSTRUCT TWIN 36" PIPES **1 WEEK**
- INSTALL INLETS, TEMPORARILY DIVERT I-1 INTO S.T. 4 AND I-4 INTO S.T.5. PROVIDE PROTECTION ON REMAINING INLETS. **3 WEEKS**
- GRADE SWALES AND STABILIZE DISTURBED AREA AS SPECIFIED. **ON GOING**
- BRING ROADS TO SUBGRADE. **2 WEEKS**
- CONSTRUCT CONCRETE CURB AND GUTTER. **2 DAYS**
- CONSTRUCT BARRICADE END OF TEE TURN-AROUND **2 DAYS**
- PAVE ROAD. **2 WEEKS**
- CONSTRUCT BITUMINOUS CURB AND GUTTER. **1 WEEK**
- CONSTRUCT SWM FACILITIES A & B AND REMAINING 95 LF OF BCCMP **3 WEEKS**
- FINE GRADE SITE AND VEGETATIVELY STABILIZE DISTURBED AREA AS REQUIRED **1 WEEK**
- WITH APPROVAL OF HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS AND PERMITS, REMOVE TEMPORARY SEDIMENT CONTROL MEASURES AND STABILIZE REMAINING DISTURBED AREAS. **1 WEEK**

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

*J. Helms* 11/20/90  
U.S. CONSERVATION SERVICE DATE

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

*Robert Zelman* 11/20/90  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Chas M. Deman* 11/19/91  
Chief, Land Development Division M.K. DATE

*Branville W. Wehland* 12/7/90  
Chief, Bureau of Highways DATE

*William S. Reilly* 1-22-91  
Chief, Bureau of Engineering DATE

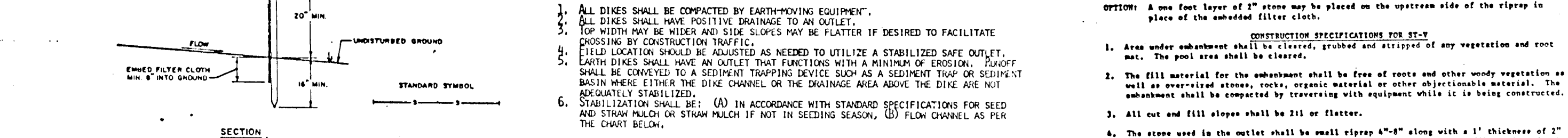
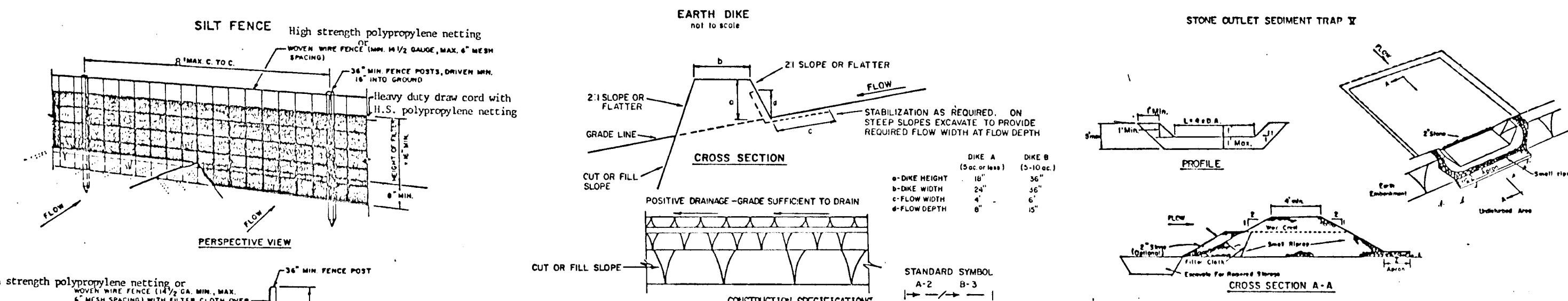
APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Richard Blood* 2/7/91  
Chief, Division of Community Planning And Land Development DATE

DATE	REVISION	BY

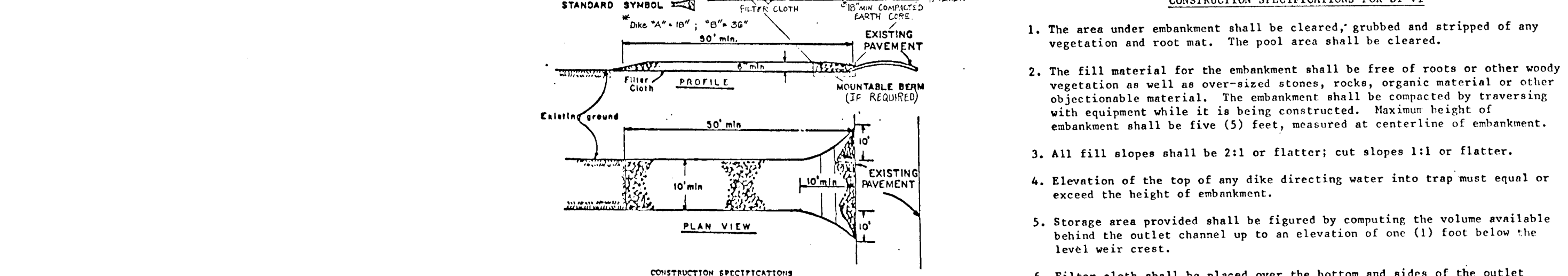
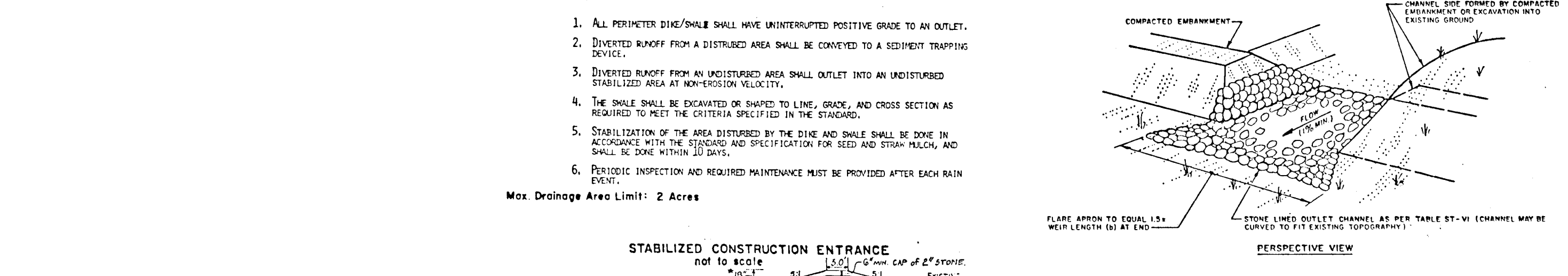
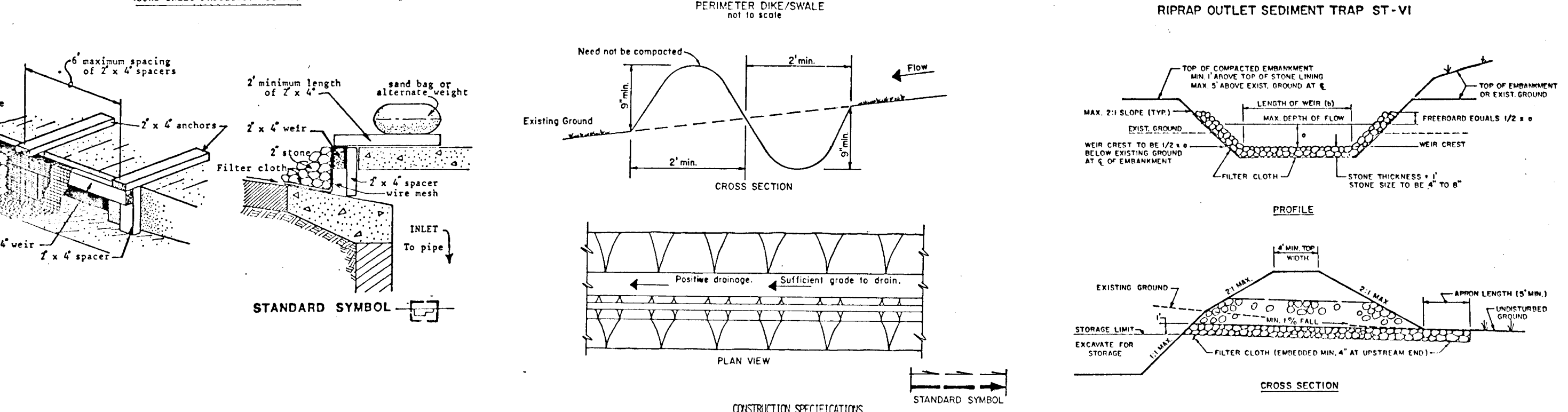
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DEVELOPER	<i>J. Cho</i> 10-5-90 DATE
ENGINEER'S CERTIFICATE	
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ENGINEER	<i>Chong Cho</i> 10-5-90 DATE



**FLAP CHANNEL STABILIZATION**

TYPE OF TREATMENT	CHANNEL SIZE	DIKE A	DIKE B
1	1.5-3.0ft	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0ft	SEED AND STRAW MULCH	SEED USING JUTE, OR EQUIVALENT, 300# 2" DIANE
3	5.1-8.0ft	SEED WITH JUTE, OR SOD, 2" DIANE	LINED RIP-RAP 4-8"
4	8.1-20ft	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. Stone to be 2 inch stone, or recycled concrete equivalent, in a layer at least 3 inches in thickness and be pressed into the soil with construction equipment.  
B. Rip-rap to be 1/2 inch in a layer at least 6 inches thick and be pressed into the soil.  
C. Provided equivalents can be substituted for any of the above materials.  
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.



**OWNER/DEVELOPER**  
GANG OH COMPANY, INC.  
C/O DR. BYONG YOO  
1609 NEW HAMPSHIRE AVE.  
SILVER SPRING, MD 20904  
TELE: 443-5000

**TITLE: SEDIMENT CONTROL DETAILS**

**PROJECT: CHOI PROPERTY**

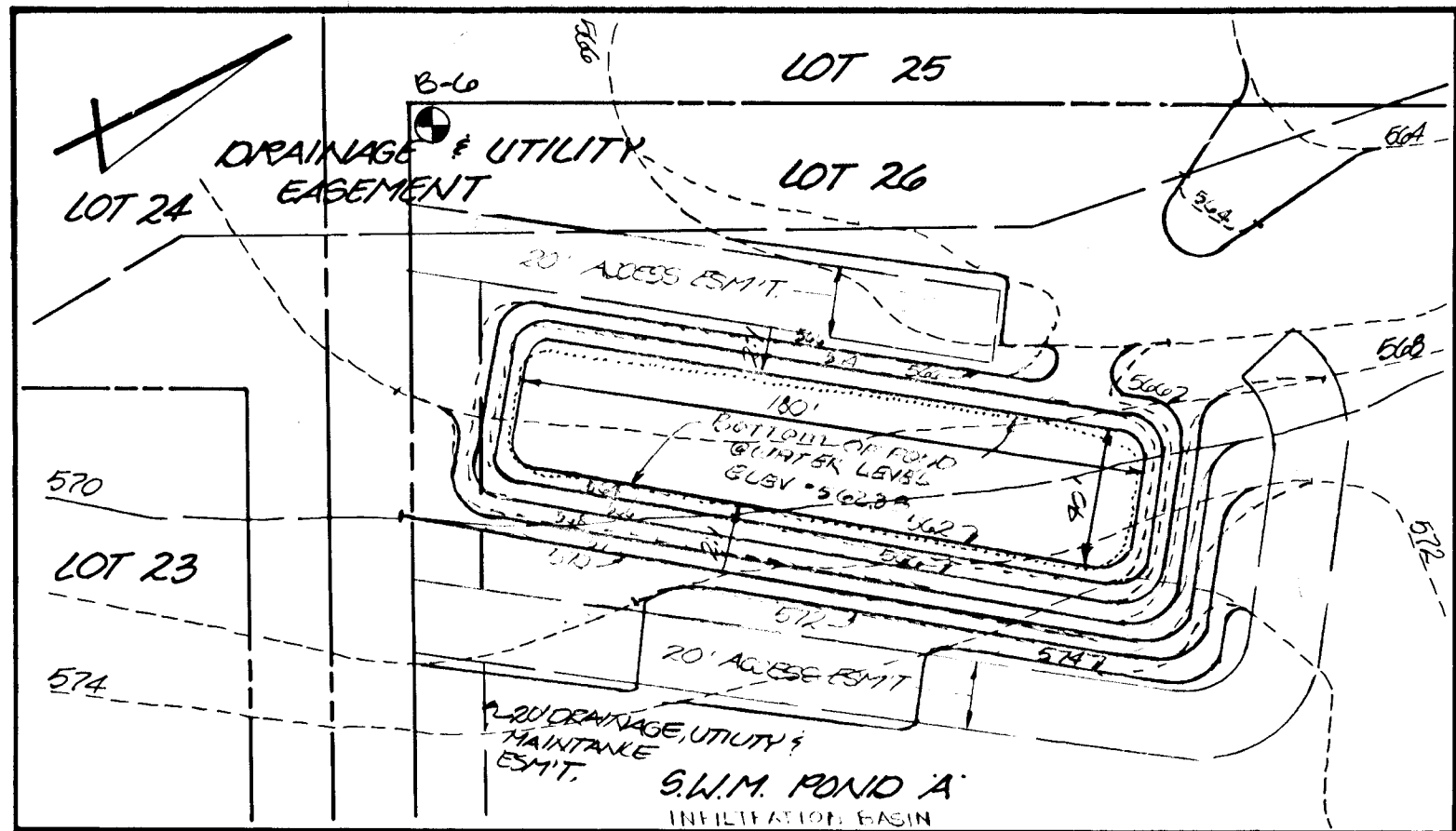
**LOCATION: 47th ELECTION DISTRICT HOWARD CO. MD**

**SCALE: AS SHOWN** **DESIGNED BY: J.C.O.** **CHECKED BY:** **DATE: FEB/1988**

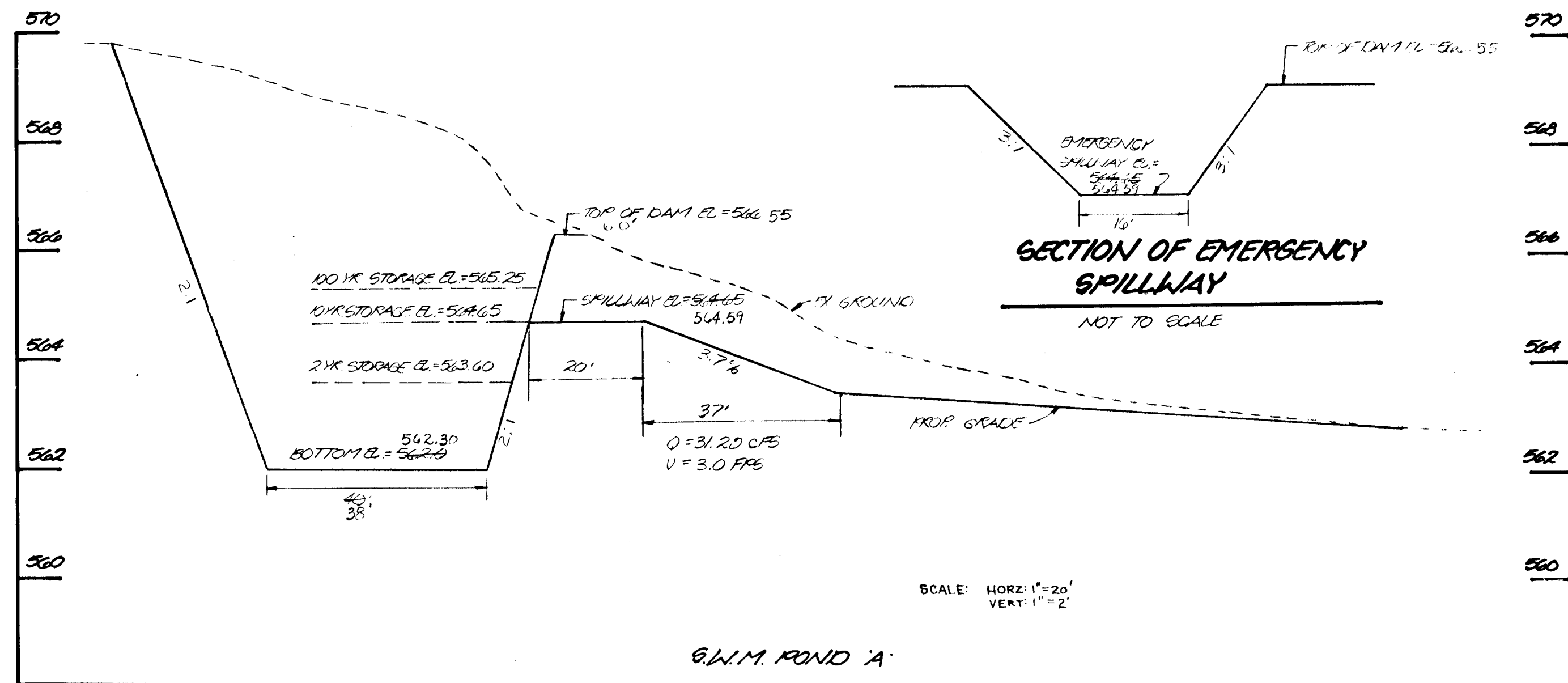
**FIELD BOOK:** **PAGE NO:** **JOB NO.: 8502** **DRAWING NO.: 12-13**

**boender & associates inc.**  
consulting engineers  
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land planners  
COURTHOUSE SQUARE  
3565 ELLICOTT MILLS DRIV  
ELLICOTT CITY, MD 21043  
13011 465-7777

1609

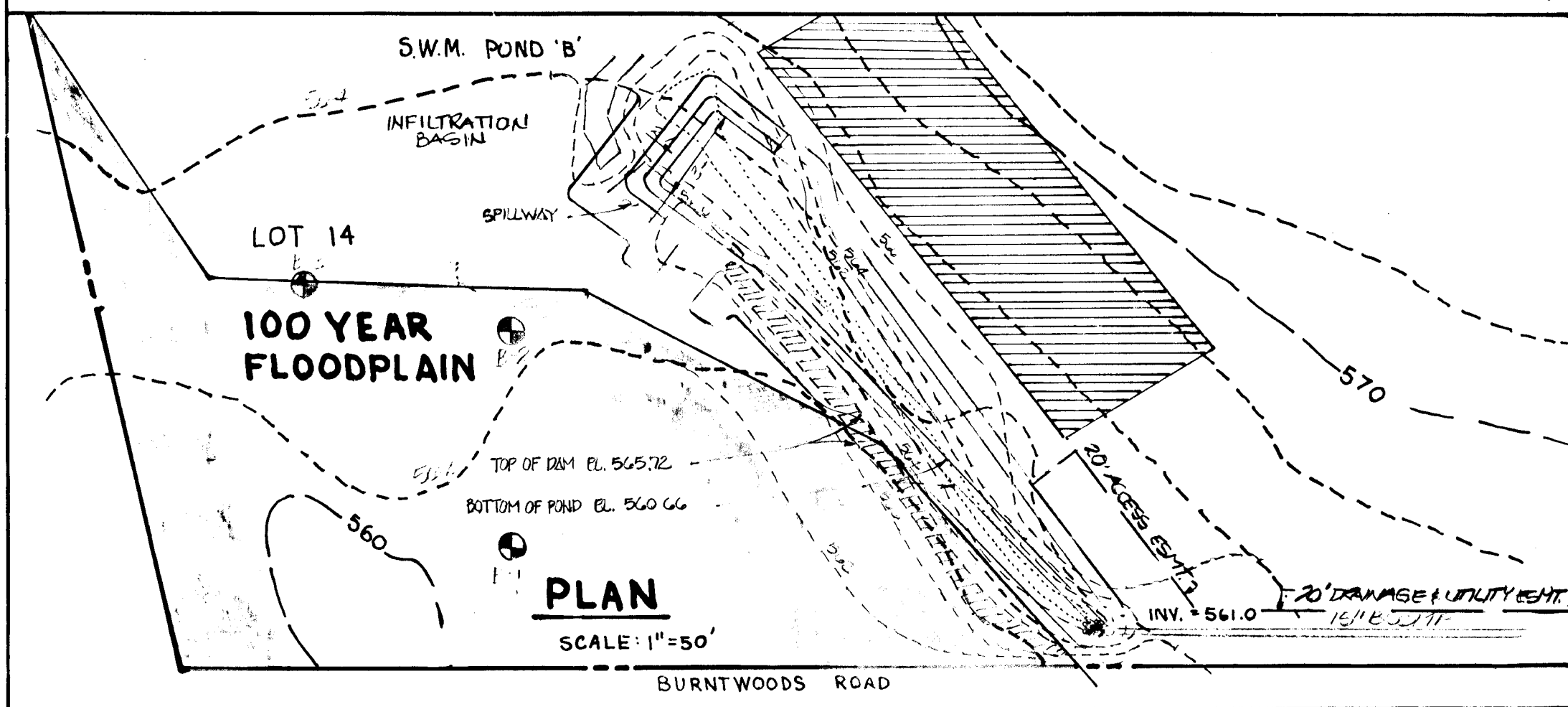


PLAN  
SCALE: 1"=40'

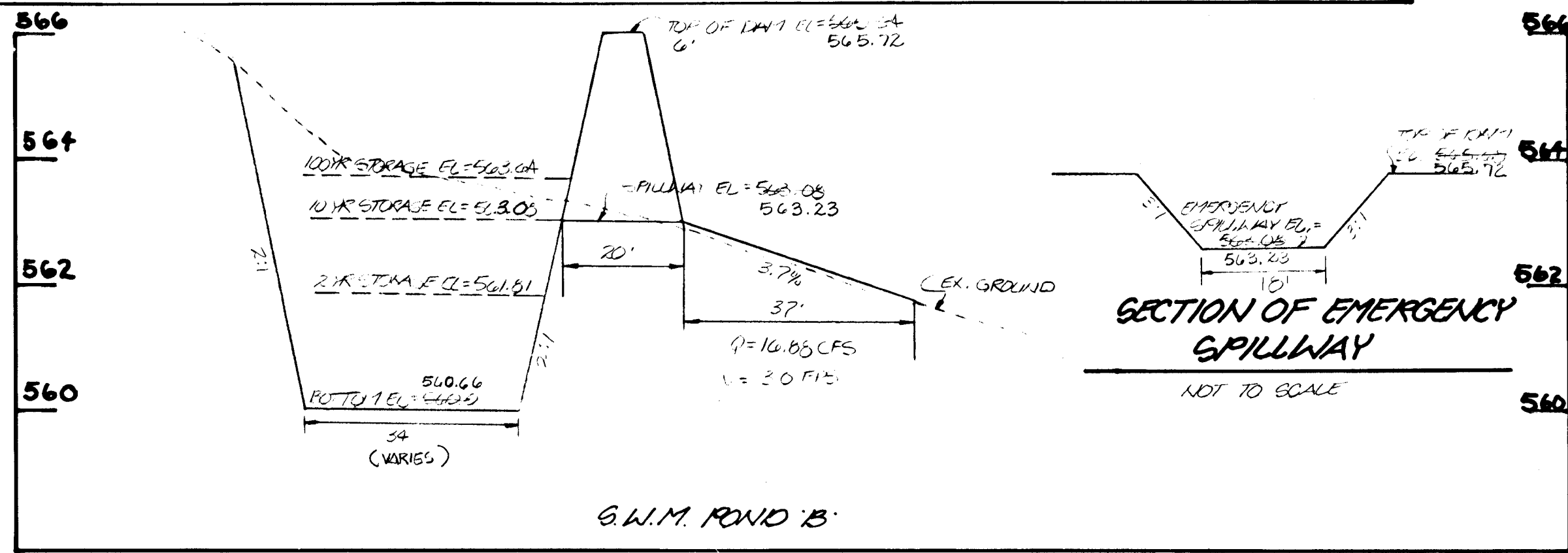


S.W.M. POND 'A'

PROFILE THRU EMERGENCY SPILLWAY

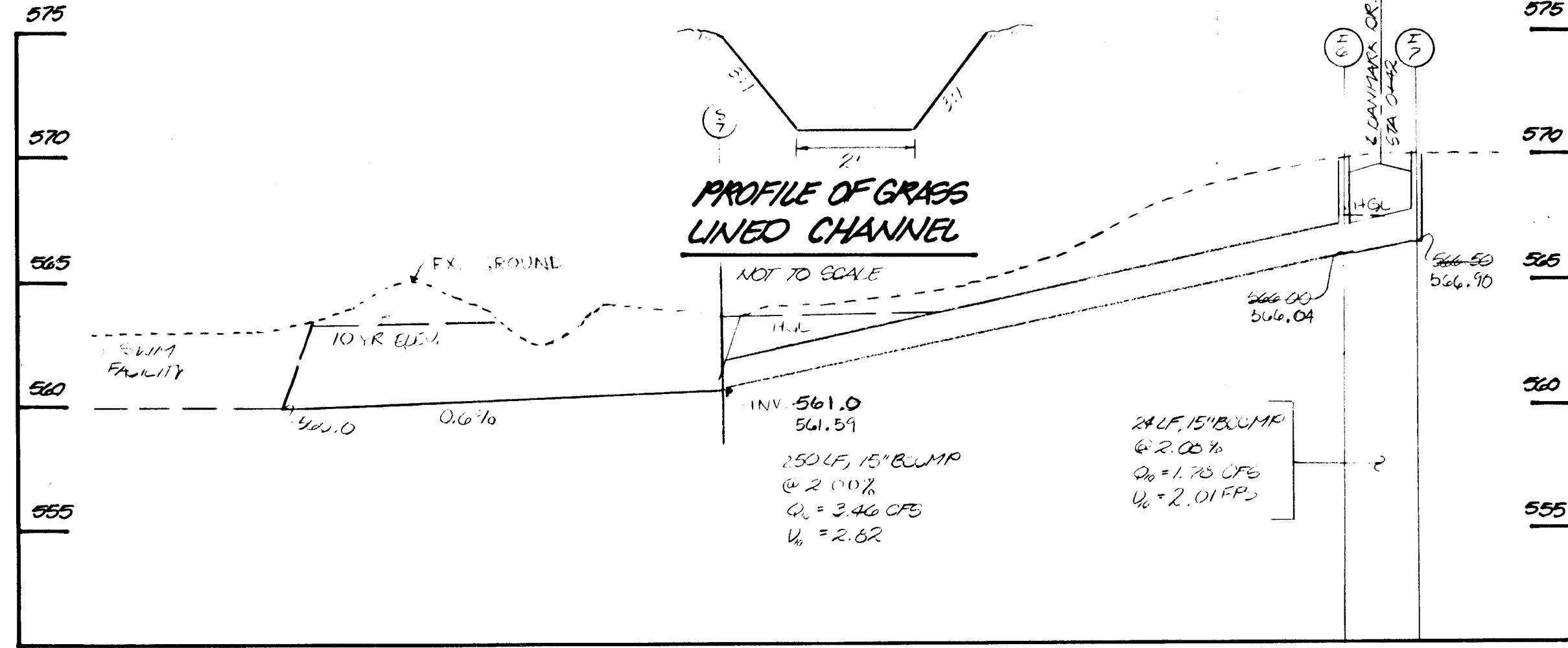


PLAN  
SCALE: 1"=50'



S.W.M. POND 'B'

PROFILE THRU EMERGENCY SPILLWAY



PROFILE

SCALE: 1"=20' HORIZ. 1"=2' VERT.

Depth	DESCRIPTION OF MATERIALS	Length (Feet)	Moisture (%)	Remarks
0.6	Organic Matter/Contaminated Soil	4		GROUNDWATER DATA
5	Brown to gray with orange and yellow brown staining fine sandy silty CLAY, slightly organic to 2.0 feet and slightly micaceous from 2.0 feet and slightly micaceous from 3.0 feet, moist, stiff	4-4	2.5	M/C - 25.5%
3	(LOAM)	4-4	4.0	
3	(CL)	2-3	7.5	M/C - 24.6%
8.0	Orange brown with gray to yellowish-orange brown slightly micaceous silty fine to medium SAND, wet, loose	3	10.0	M/C - 27.2%
15.0	(SANDY LOAM)	4	15.0	
15.0	BOHRING TERMINATED @ 15.0 FEET	5-5		

B-1

Depth	DESCRIPTION OF MATERIALS	Length (Feet)	Moisture (%)	Remarks
0.6	Organic Matter/Contaminated Soil	4		GROUNDWATER DATA
5	Brown to gray with orange and yellow brown staining fine sandy silty CLAY, slightly organic to 2.0 feet and slightly micaceous from 2.0 feet, moist, stiff	4-4	2.5	M/C - 18.8%
3	(LOAM)	4-4	4.0	
3	(CL)	3-3	7.5	M/C - 27.2%
2	(SH)	1-1	10.0	M/C - 27.5%
2	(SANDY LOAM)	2-2	15.0	
20.0	BOHRING TERMINATED @ 20.0 FEET	2-2	20.0	

B-2

Depth	DESCRIPTION OF MATERIALS	Length (Feet)	Moisture (%)	Remarks
0.7	Organic Matter/Contaminated Soil	4		GROUNDWATER DATA
3	Brown to light brownish-gray and gray with orange and yellow staining fine sandy silty CLAY, slightly organic to 2.4 feet and slightly micaceous from 2.8 feet, moist, stiff to medium stiff	5-6	2.5	M/C - 25.5%
3	(LOAM)	2-4	4.0	
7.0	(CL)	3	7.5	M/C - 25.3%
4	(SANDY LOAM)	5-6	10.0	
15.0	BOHRING TERMINATED @ 15.0 FEET	6-8	15.0	

B-3

Depth	DESCRIPTION OF MATERIALS	Length (Feet)	Moisture (%)	Remarks
0.7	Organic Matter/Contaminated Soil	4		GROUNDWATER DATA
5	Brown to light gray with orange brown fine to medium sandy silty CLAY, slightly organic above 2.0 feet, moist, stiff	4	4.0	M/C - 22.4%
4	(LOAM)	4-6	7.5	M/C - 19.0%
3	(SANDY LOAM)	4-5	10.0	
15.0	BOHRING TERMINATED @ 15.0 FEET	12	15.0	

B-4

Depth	DESCRIPTION OF MATERIALS	Length (Feet)	Moisture (%)	Remarks
0.7	Organic Matter/Contaminated Soil	4		GROUNDWATER DATA
4	Brownish-olive tan with some orange to gray with tan fine to medium sandy silty CLAY, slightly organic above 2.0 feet, moist, stiff	4-5	4.0	M/C - 24.7%
3	(LOAM)	5-5	7.5	
5	(SH)	4-5	10.0	M/C - 24.3%
14	(SANDY LOAM)	14	15.0	
20.0	BOHRING TERMINATED @ 20.0 FEET	14-20	20.0	

B-5

Depth	DESCRIPTION OF MATERIALS	Length (Feet)	Moisture (%)	Remarks
0.5	Organic Matter/Contaminated Soil	4		GROUNDWATER DATA
3	Brown to olive grayish-black and light olive tan slightly micaceous fine to medium SAND with some clayey silt and a trace of gravel, moist to wet to moist, medium dense	4-4	2.5	M/C - 21.3%
4	(LOAM)	4	4.0	
4	(SANDY LOAM)	5-5	6.5	M/C - 20.3%
10	(SANDY LOAM)	4	10.0	
15.0	BOHRING TERMINATED @ 15.0 FEET	10-15	15.0	

B-6

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

*J. Helms* 11/20/90  
S.O. CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Robert Zich* 11/20/90  
HOWARD SOIL CONSERVATION DISTRICT DATE

DEVELOPER'S CERTIFICATE  
"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
DEVELOPER: *V. G. Gagnier* 10-5-90 DATE

OWNER/DEVELOPER  
S&S OF COMPANY, INC.  
C/O DR. DONG YOO  
15504 NEW HAMPSHIRE AVE  
SILVER SPRING, MD 20904  
TELE: 445-8300

ENGINEER'S CERTIFICATE  
"I 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 MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."  
ENGINEER: *Chong-ho Lim* 10-4-90 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John M. Tompkins* 1/14/91  
Chief, Land Development Division DATE  
*Granville W. Walsland* 12/7/90  
Chief, Bureau of Highways DATE  
*William S. Reed* 1-22-91  
Chief, Bureau of Engineering DATE  
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Richard Blood* 2/1/91  
Chief, Division of Community Planning and Land Development DATE



TITLE: G.W.M. PROFILES  
PROJECT: CHOI PROPERTY  
LOCATION: 4TH ELECTION DISTRICT HOWARD CO, MD  
SCALE: AS SHOWN DESIGNED BY: J.C.B. DRAWN BY: J.C.C. CHECKED BY: DATE: FEB, 1988  
FIELD BOOK: PAGE NO.: JOB NO.: 8862 DRAWING NO.: 13 OF 13  
**Boender Associates**  
ENGINEERS - PLANNERS - SURVEYORS  
3230 BETHANY LANE  
ELLCOTT CITY, MD. 21043  
(301) 465-7777 FAX: (301) 465-7966

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