

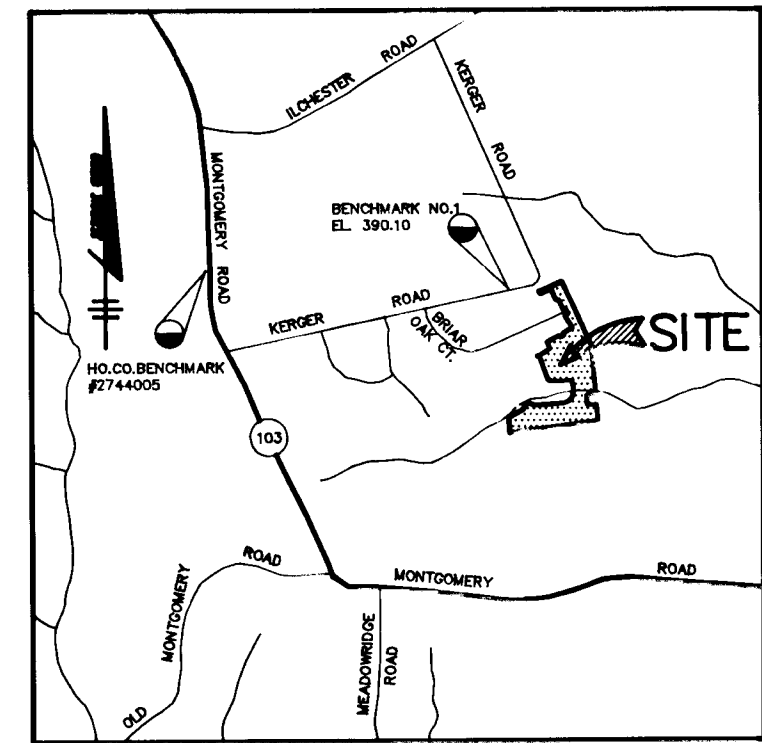
SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE OF SUNNY FIELD COURT
3	PLAN AND PROFILE BRIAR OAK COURT AND STORM DRAIN PROFILES
4	DRAINAGE AREA MAP
5	GRADING AND SEDIMENT CONTROL PLAN
6	CULVERT DETAILS
7	DETAIL SHEET

# ROADS & STORM DRAINAGE SUNNY FIELD ESTATES

## SECTION 3 LOTS 68 - 99 HOWARD COUNTY, MARYLAND

### BENCH MARK

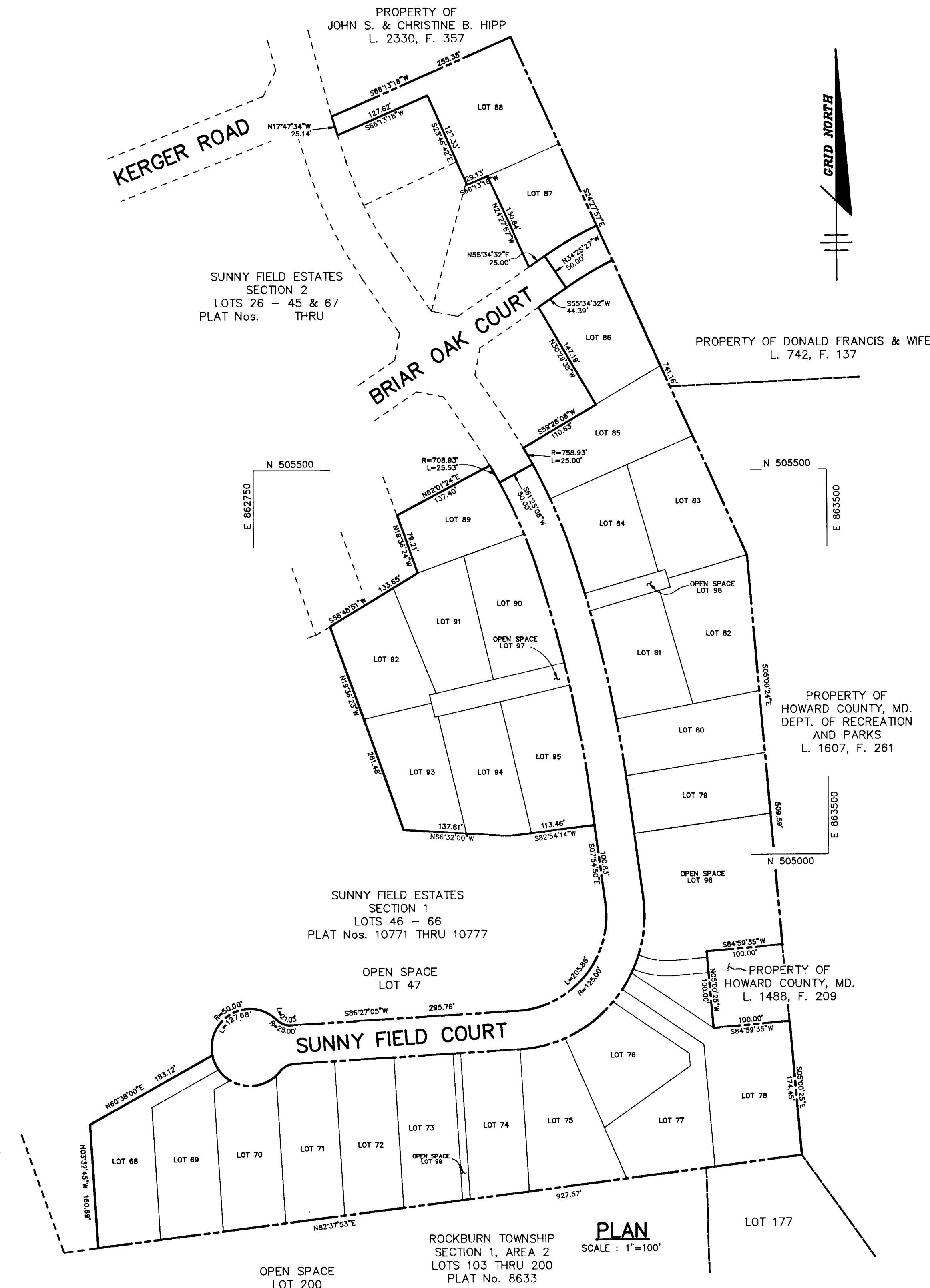
B.M. #1 ELEV. 390.10  
TOP OF BONNET BOLT OF EXISTING FIRE  
HYDRANT, NORTH SIDE OF KERGER ROAD  
CL. STATION 3+24



VICINITY MAP  
SCALE: 1"=2,000'

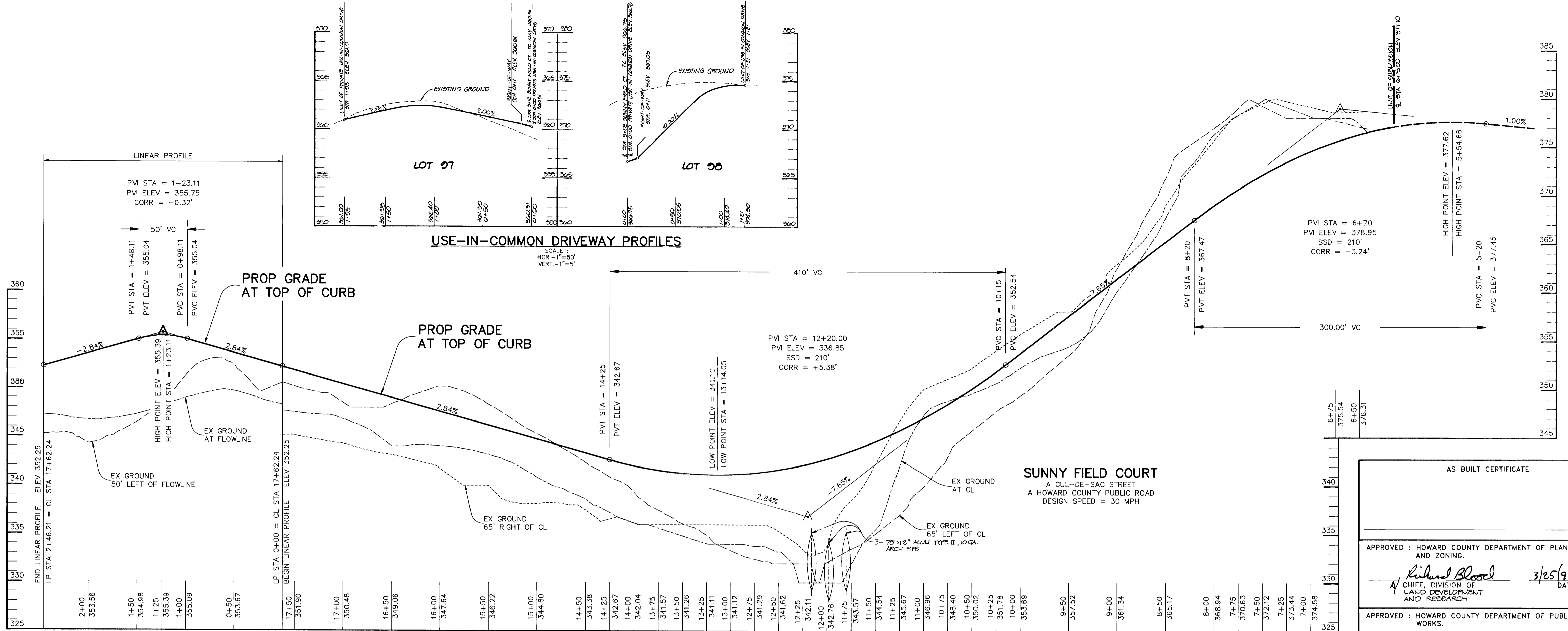
### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARD AND SPECIFICATIONS, IF APPLICABLE.
  - 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 CONTRACTORS OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
  - THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
  - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF CONSTRUCTION INSPECTION AT (410)313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
  - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- BELL TELEPHONE 393-3649  
LONG DISTANCE CABLE DIVISION 393-3553 OR 3554  
BALTIMORE GAS AND ELECTRIC CO. 539-8000  
HOWARD COUNTY BUREAU OF UTILITIES 313-4900  
COLONIAL PIPELINE 795-1390
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
  - 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 RIGHT-OF-WAYS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1990 AMENDMENTS.
  - PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
  - DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD DESIGN MANUAL VOLUME III  
ALL CUL-DE-SAC STREETS > 600' LONG 30 M.P.H.
  - ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
  - ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION AS DETERMINED BY ACHTCO T-100.
  - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
  - PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
  - SUBJECT PROPERTY ZONED R-20 PER 8-20-85 COMPREHENSIVE ZONING PLAN.
  - NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
  - ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS "C" AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
  - SEE DEPARTMENT OF PLANNING AND ZONING FILE NO(S) F-79-59, S-89-06, P-89-52, WP-89-184, F-02-232, WP-91-153, SOP 02-50, F-03-00, F-03-00.
  - LIGHT POLES AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME III - ROADS AND BRIDGES, PAGE 4A-26.
  - THE PAVEMENT DETAILS SHOWN ON THESE PLANS REFLECT THE HOWARD COUNTY MINIMUM STANDARD PAVEMENT SECTIONS AND ARE NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING, THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE. ANY PAVEMENT SECTIONS DETERMINED BY THE GEOTECHNICAL ENGINEER THAT IS LESS THAN THE HOWARD COUNTY MINIMUM STANDARD, SHALL FIRST BE APPROVED BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. THE TESTING AND GEOTECHNICAL ENGINEER SHALL BE FURNISHED THE OWNER.
  - TOPOGRAPHY SHOWN HEREON IS FROM FIELD SURVEY BY RIEMER MUEGGE & ASSOCIATES, INC. DATED APRIL, 1993.
  - PUBLIC WATER AND SEWER SYSTEMS WILL BE USED FOR THIS DEVELOPMENT.
  - STORMWATER MANAGEMENT FOR THIS DEVELOPMENT IS PROVIDED BY A DETENTION FACILITY, APPROVED UNDER F-89-232.
  - WP-89-184 WAS A WAIVER REQUEST WAIVING SECTION 16.112(C)(10) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS, WHICH STATES CUL-DE-SAC ARE NOT TO EXCEED 1200 FEET IN LENGTH, WHICH WAS APPROVED BY LETTER DATED 12/08/89.
  - WP-91-153 WAS A WAIVER REQUEST WAIVING SECTION 16.121(A)(4) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS WHICH STATES WITHIN 60 DAYS DEVELOPER/OWNER MUST SUBMIT PLANS FOR SIGNATURE. THE REQUEST ASKED FOR A 60 DAY EXTENSION WHICH WAS APPROVED BY LETTER DATED 05/16/91.
  - ALL SIDEWALKS TO MEET CURRENT ADA STANDARDS.
  - WETLANDS MITIGATION TO BE PROVIDED BY THE DEVELOPER IN ACCORDANCE WITH THE DEPARTMENT OF THE ARMY CORPS OF ENGINEERS PERMIT CEBA4-OP-RF-00-066-5 AND STATE OF MARYLAND DEPARTMENT OF ENVIRONMENT WATER QUALITY CERTIFICATION NUMBER 89-WQ-0204. THE MITIGATION WILL BE CONSTRUCTED AS SHOWN ON THE SITE DEVELOPMENT PLAN SOP-02-50. CEBA4-OP-RF-00-066-5 HAS BEEN RE-AUTHORIZED AND WILL EXPIRE ON SEPTEMBER 28, 1999. 89-WQ-0204 APPROVAL HAS BEEN EXTENDED TO SEPTEMBER 28, 1999.
  - CPR TESTING BY A SOILS ENGINEER WILL BE PERFORMED PRIOR TO CONSTRUCTION.

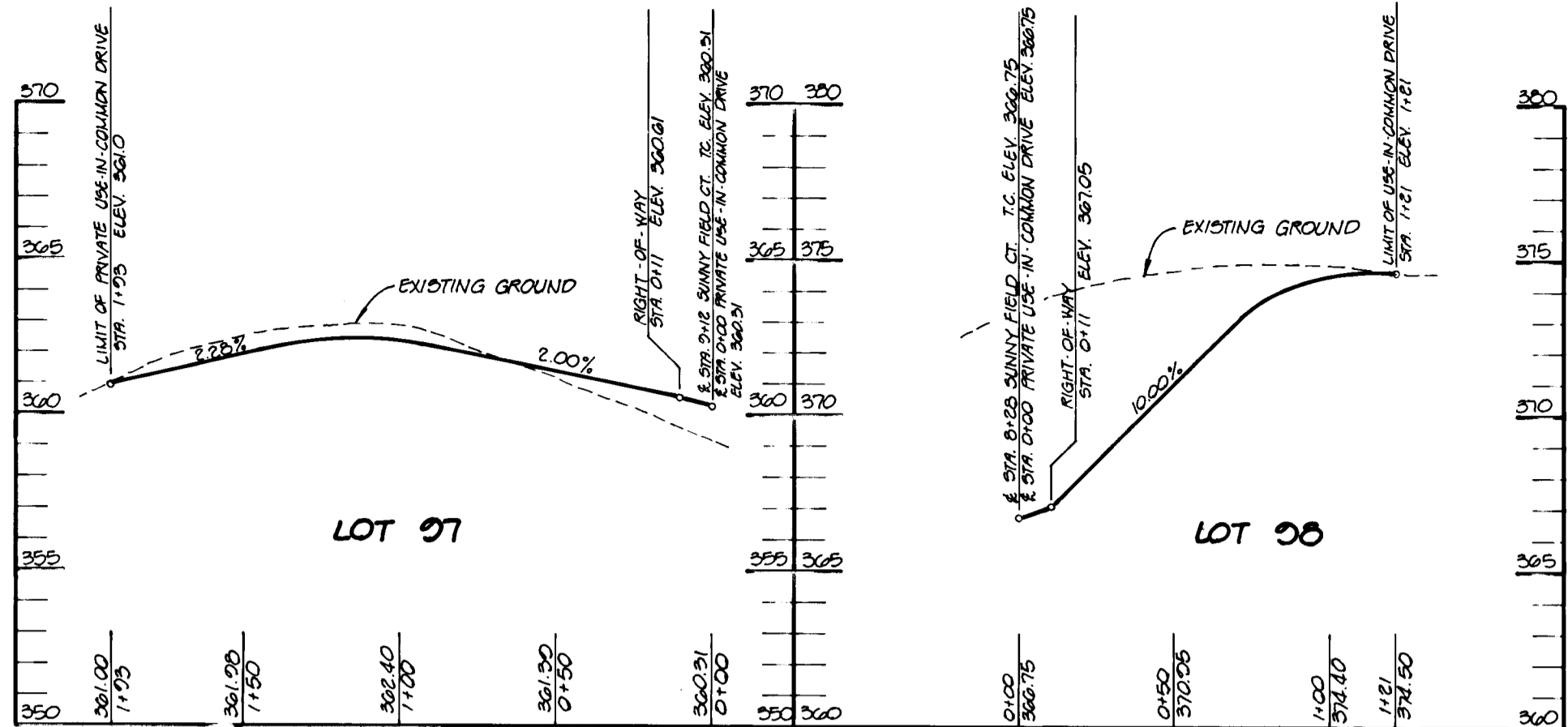


AS BUILT CERTIFICATE	
DATE	REVISION
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Richard Blood</i> 3/25/94 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH C.R.	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
<i>Chris L. ...</i> 3/23/94 CHIEF, LAND DEVELOPMENT DIVISION	DATE
<i>Andrew M. ...</i> 3-7-94 CHIEF, BUREAU OF HIGHWAYS	DATE
<i>Robert ...</i> 3/24/94 CHIEF, BUREAU OF ENGINEERING	DATE
DATE NO.	REVISION
OWNER / DEVELOPER	
R.G.M. DEVELOPMENT CORPORATION c/o KOREN DEVELOPMENT CORPORATION 8815 CENTRE PARK DRIVE SUITE 304 COLUMBIA, MARYLAND 21045 410-740-1010	
PROJECT	SUNNY FIELD ESTATES SECTION 3, LOTS 68 - 99
AREA	SECTION 3 ZONED R-20 TAX MAP NO. 31 PARCELS 57 & 757 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
TITLE	TITLE SHEET
RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282	
DATE	12.2.93
DESIGNED BY:	W.C.W.
DRAWN BY:	W.C.W.
PROJECT NO:	79710
DATE:	DECEMBER 2, 1993
SCALE:	AS SHOWN
DRAWING NO.	1 OF 7

1641



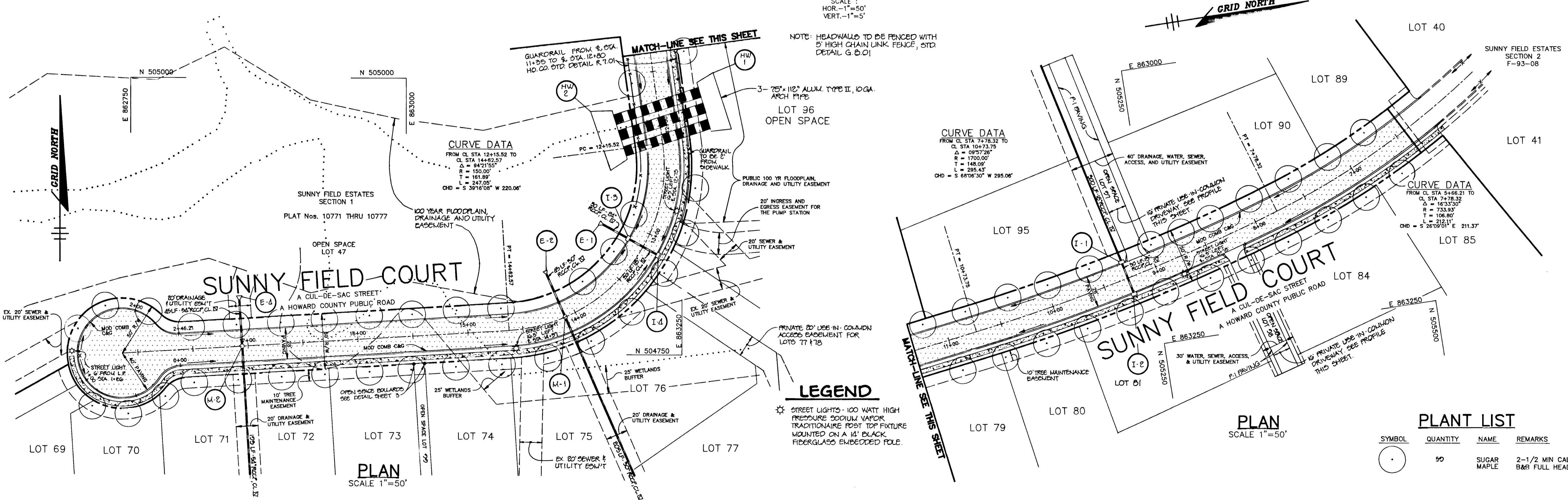
**USE-IN-COMMON DRIVEWAY PROFILES**



**PROFILE**

SCALE: HOR. - 1"=50' VERT. - 1"=5'

NOTE: HEADWALLS TO BE FENCED WITH 5' HIGH CHAIN LINK FENCE, STD DETAIL G.0.01



**LEGEND**

- STREET LIGHTS - 100 WATT HIGH PRESSURE SODIUM VAPOR TRADITIONAL POST TOP FIXTURE MOUNTED ON A 1/2" BLACK FIBERGLASS EMBEDDED POLE

**PLAN**

SCALE 1"=50'

**PLANT LIST**

SYMBOL	QUANTITY	NAME	REMARKS
○	90	SUGAR MAPLE	2-1/2" MIN CAL 8&8 FULL HEAD

**AS BUILT CERTIFICATE**

DATE: \_\_\_\_\_

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
*Richard Blood* 3/25/94  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
*William J. ...* 3/23/94  
 CHIEF, LAND DEVELOPMENT DIVISION

*Robert M. ...* 3-7-94  
 CHIEF, BUREAU OF HIGHWAYS

*Paul D. ...* 3/24/94  
 CHIEF, BUREAU OF ENGINEERING, M.K.

2-21-08	1	REV. TYPE OF CONCRETE PROPOSED
DATE	NO.	REVISION

OWNER / DEVELOPER  
 R.G.M. DEVELOPMENT CORPORATION  
 c/o KOREN DEVELOPMENT CORPORATION  
 8815 CENTRE PARK DRIVE  
 SUITE 304  
 COLUMBIA, MARYLAND 21045  
 410-740-1010

PROJECT  
**SUNNY FIELD ESTATES**  
 SECTION 3, LOTS 68 - 99

AREA  
 SECTION 3 ZONED R-20 PARCELS 57 & 757  
 TAX MAP NO. 31  
 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

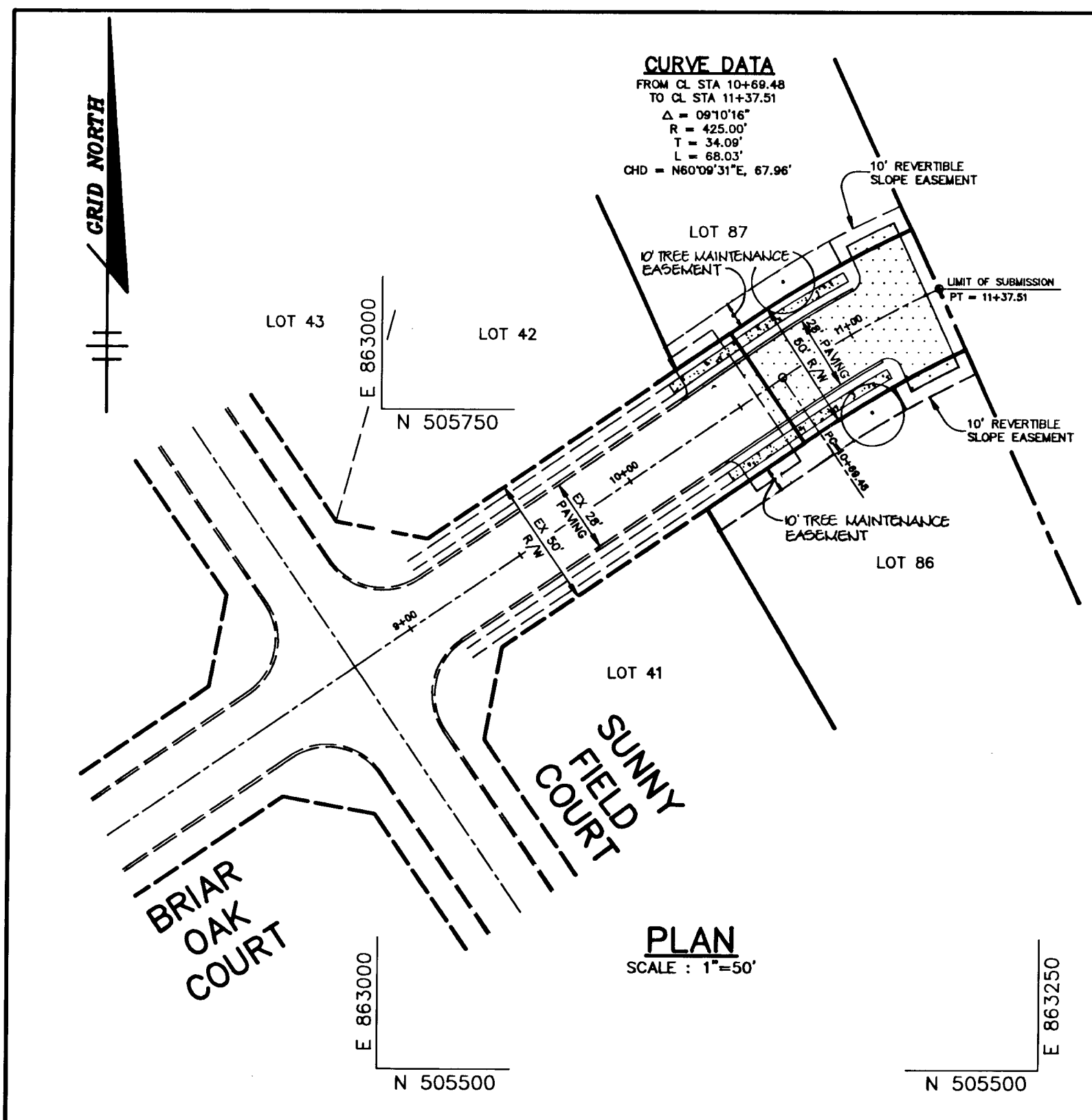
TITLE  
**PLAN AND PROFILE**  
**SUNNY FIELD COURT**

RIEMER MUEGGE & ASSOCIATES, INC.  
 A Land Planning, Engineering and Consulting Firm  
 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045  
 410-997-8900 FAX: 410-997-9282

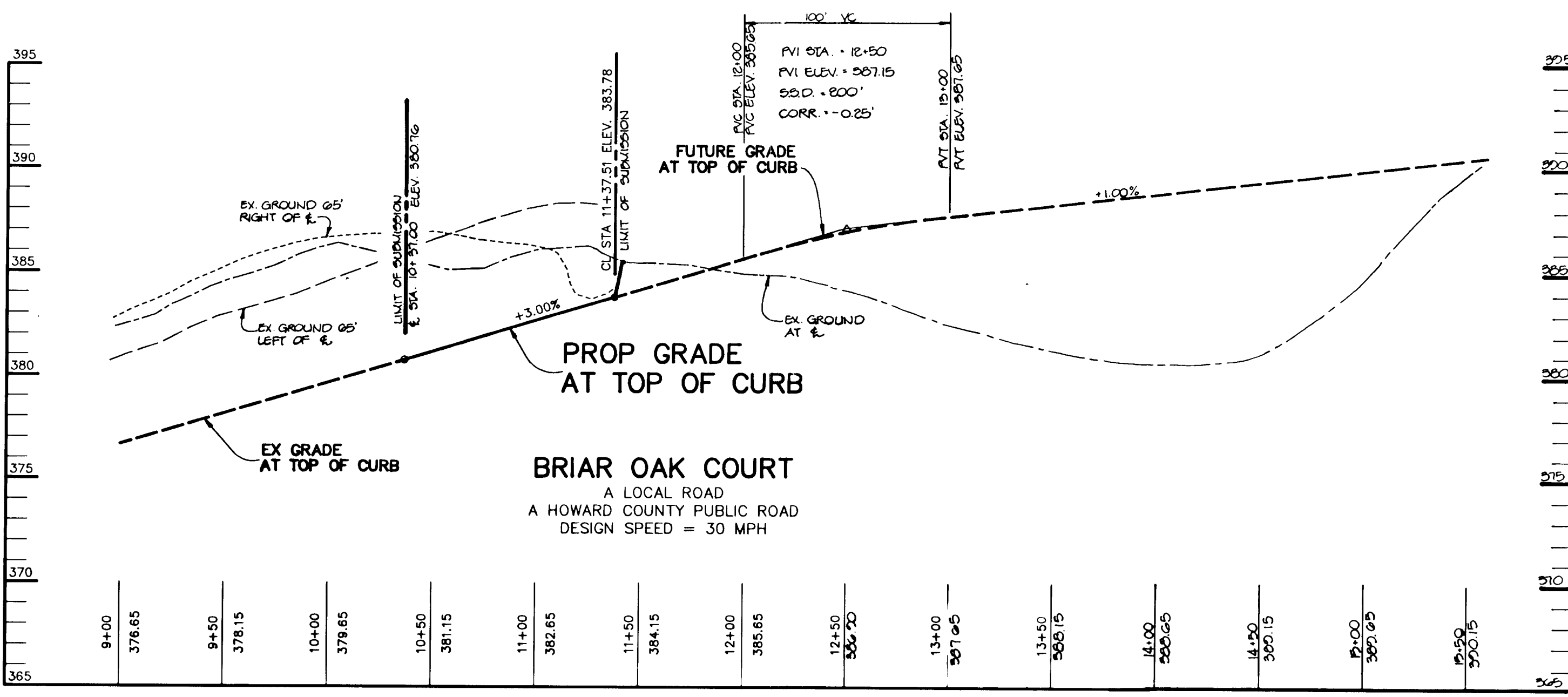
DATE: 12.9.93  
 DESIGNED BY: W.C.W.  
 DRAWN BY: W.C.W.  
 PROJECT NO: 79710  
 DATE: DECEMBER 9, 1993  
 SCALE: AS SHOWN  
 DRAWING NO. 2 OF 7

JAYKANT P. PAREKH #12148

7647



**CURVE DATA**  
 FROM CL STA 10+69.48  
 TO CL STA 11+37.29  
 $\Delta = 68.7916'$   
 $R = 425.00'$   
 $L = 34.09'$   
 $CHD = 1162.07 \pm 0.67, 67.96'$



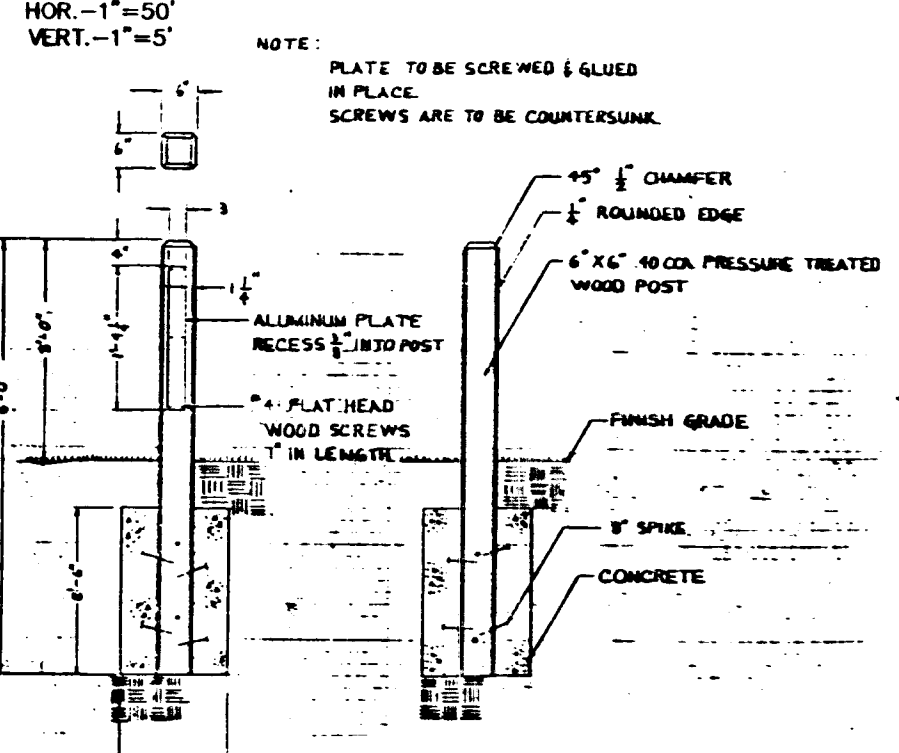
STRUCTURE SCHEDULE

No.	Type	Location	Invt. In	Invt. Out	Top	Remarks
I-1	A-10 W/DFEL	14.52' LT OF CL STA 9+27 SUNNY FIELD COURT	354.33	354.08	359.27	SEE HO CO STD DETAILS SD 4.02 & 4.83
I-2	A-10 W/DFEL	14.52' RT OF CL STA 9+27 SUNNY FIELD COURT	-	354.48	359.27	SEE HO CO STD DETAILS SD 4.02 & 4.83
I-3	A-5 W/DFEL	14.52' LT OF CL STA 13+14.05 SUNNY FIELD COURT	337.35	336.85	341.10	SEE HO CO STD DETAILS SD 4.01 & 4.83
I-4	A-10	14.52' RT OF CL STA 13+14.05 SUNNY FIELD COURT	-	337.50	341.10	SEE HO CO STD DETAIL SD 4.02
E-1	24" CONC. END SECTION	44.52' LT OF CL STA 14+09 SUNNY FIELD COURT	336.00	-	-	SEE HO CO STD DETAIL SD 5.51
E-2	30" CONC. END SECTION	45' LT OF CL STA 14+09 SUNNY FIELD COURT	336.00	-	-	SEE HO CO STD DETAIL SD 5.51
E-3	30" CONC. END SECTION	205' RT OF CL STA 14+09 SUNNY FIELD COURT	-	347.00	-	SEE HO CO STD DETAIL SD 5.51
E-4	54" CONC. END SECTION	45' LT OF CL STA 17+05 SUNNY FIELD COURT	343.00	-	-	SEE HO CO STD DETAIL SD 5.51
HW-3	TYPE 'A' HEADWALL	195' RT OF CL STA 17+05 SUNNY FIELD COURT	-	350.00	-	SEE HO CO STD DETAIL SD 5.11
M-1	5" STD. MANHOLE	CL STA 14+09 SUNNY FIELD COURT	336.40	336.30	342.27	SEE HO CO STD DETAIL G 5.13
M-2	BRICK MANHOLE	CL STA 17+05 SUNNY FIELD COURT	343.40	343.30	350.62	SEE HO CO STD DETAIL G 5.03

**LEGEND**

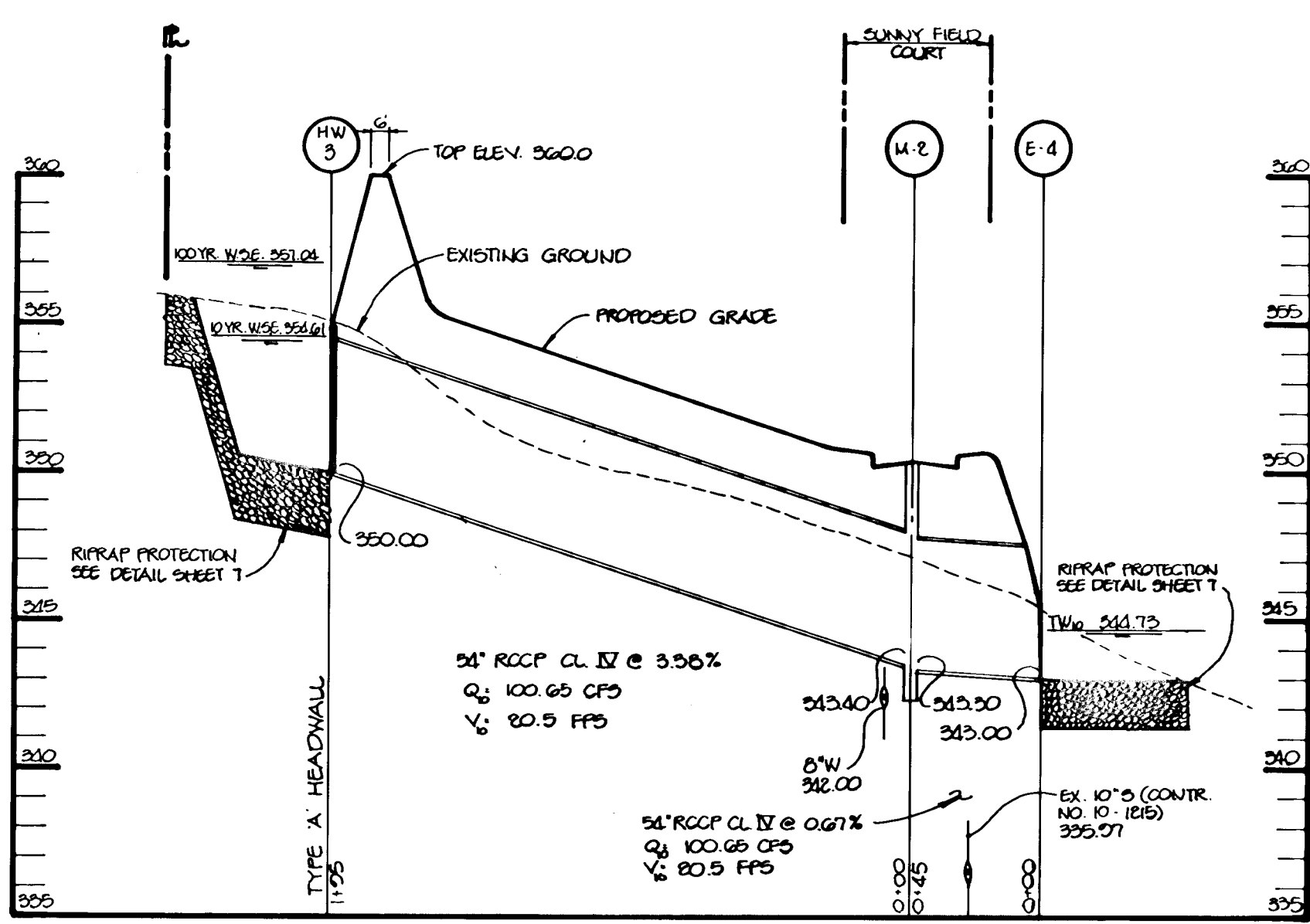
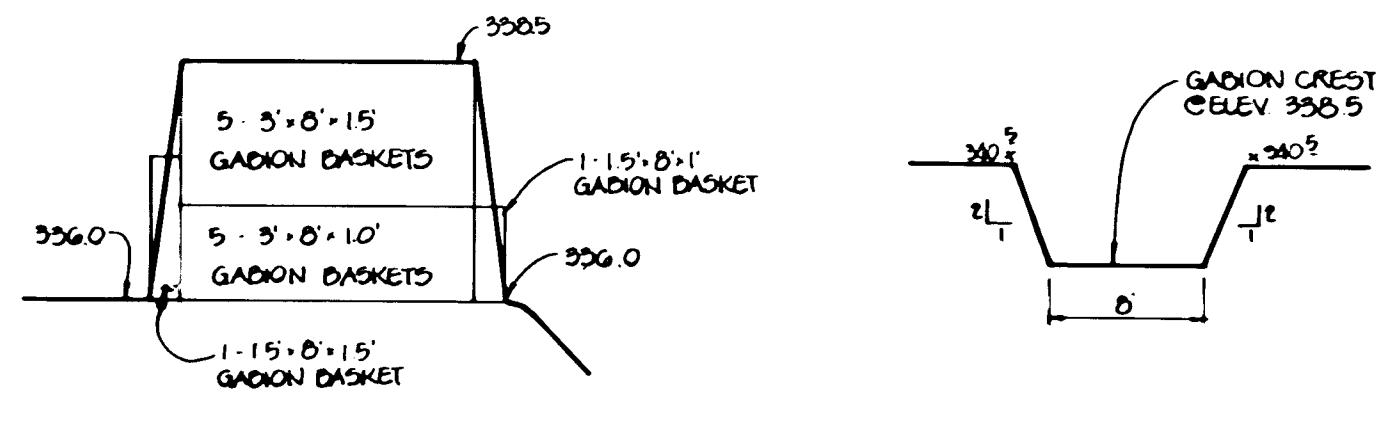
- STREET LIGHTS - 100 WATT HIGH PRESSURE SODIUM VAPOR TRADITIONAL POST TOP FIXTURE MOUNTED ON A 1 1/2" BLACK FIBERGLASS ENCASED POLE
- STREET TREE - SEE SHEET 2 FOR PLANT LIST

**PROFILE**

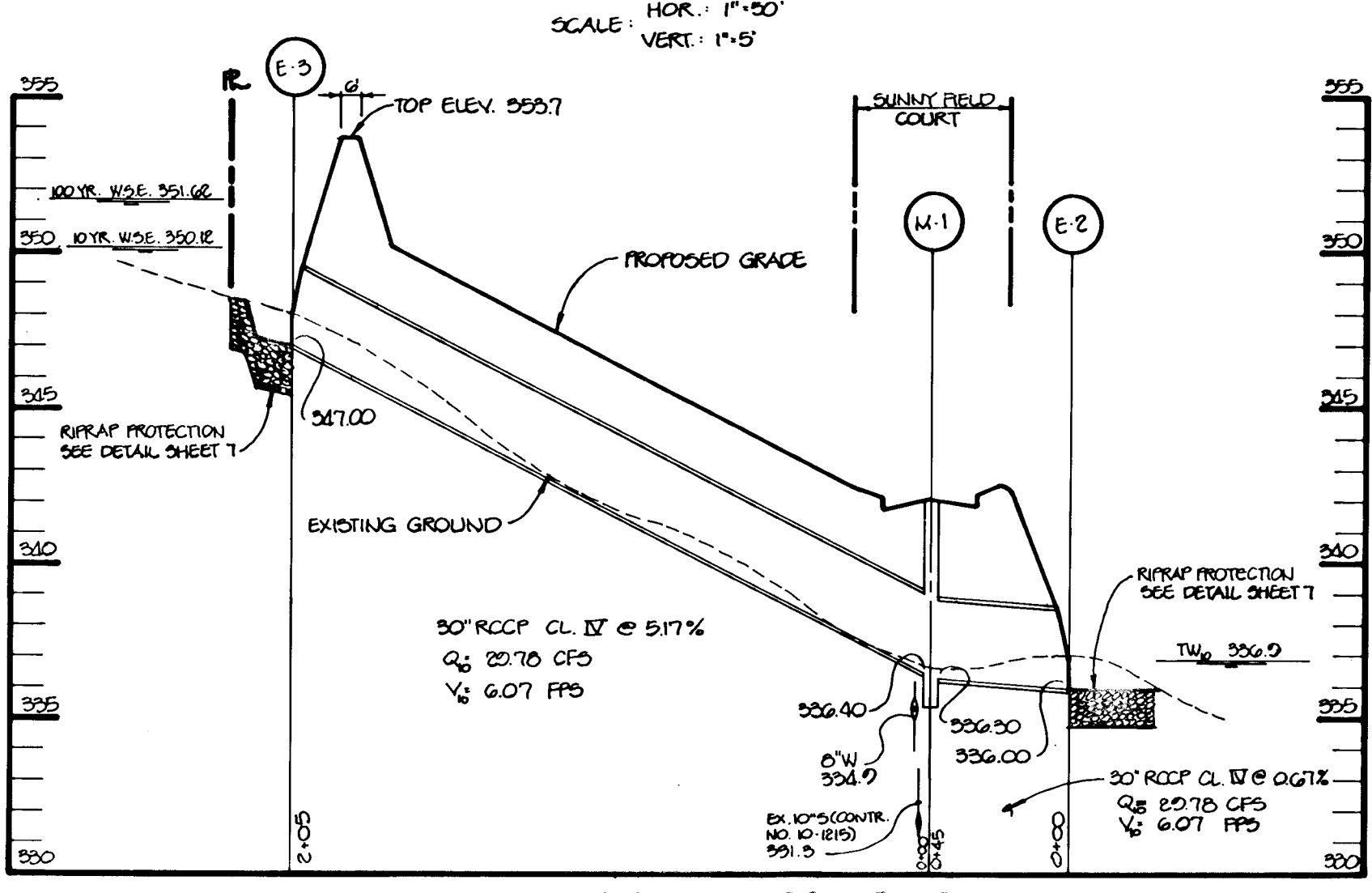


**OPEN SPACE BOLLARD**  
NO SCALE

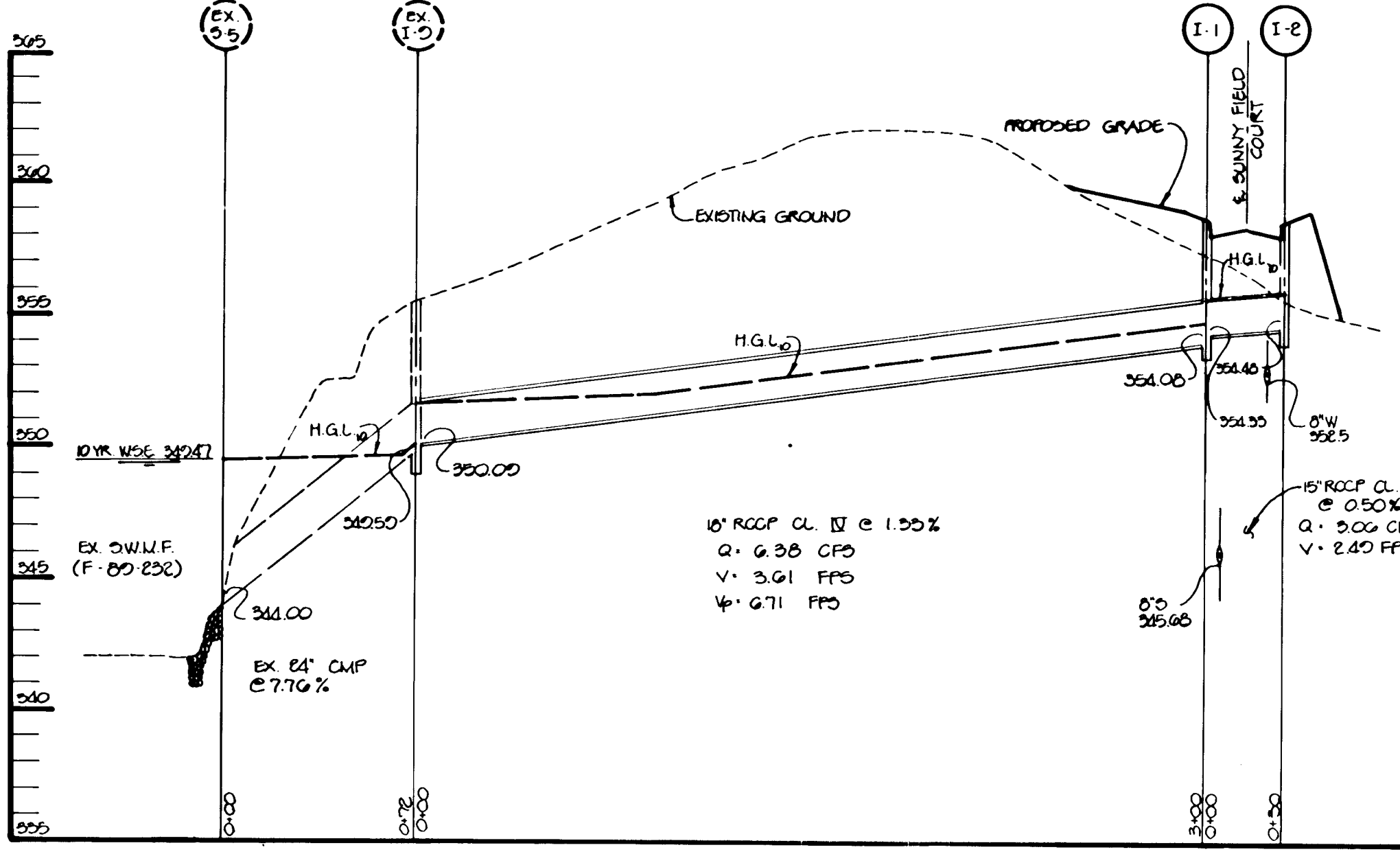
**GABION SPILLWAY DETAILS**  
NO SCALE



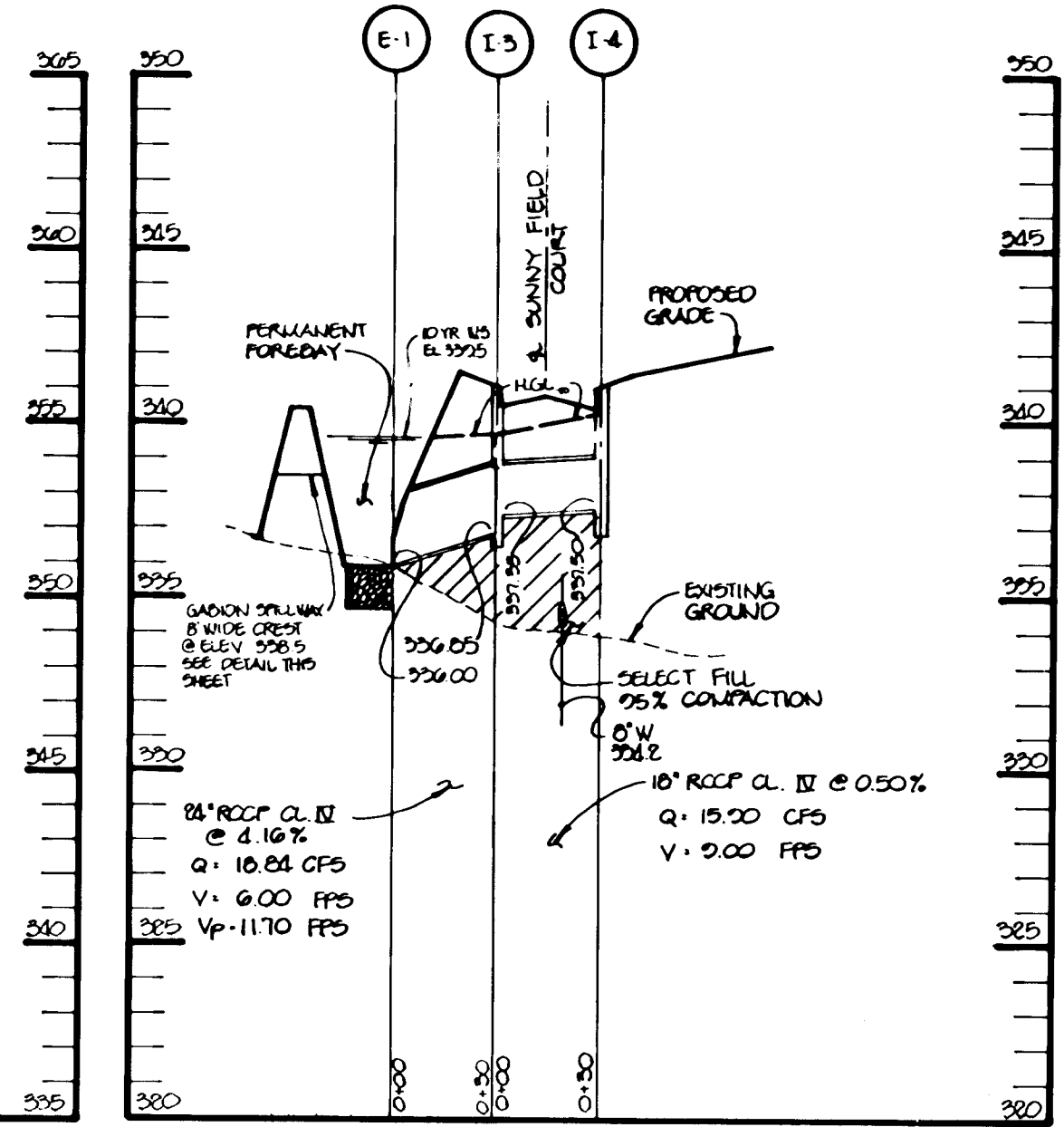
**STORM DRAIN PROFILE**



**STORM DRAIN PROFILE**



**STORM DRAIN PROFILE**



**STORM DRAIN PROFILE**

**AS BUILT CERTIFICATE**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
 Richard Blood, 3/25/94, CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 Chief, Land Development Division, 3/22/94  
 Chief, Bureau of Highways, 3-7-94  
 Chief, Bureau of Engineering, 3/24/94

OWNER / DEVELOPER  
 R.G.M. DEVELOPMENT CORPORATION  
 c/o KOREN DEVELOPMENT CORPORATION  
 8815 CENTRE PARK DRIVE  
 SUITE 304  
 COLUMBIA, MARYLAND 21045  
 410-740-1010

PROJECT  
**SUNNY FIELD ESTATES**  
 SECTION 3, LOTS 68 - 99

AREA SECTION 3 ZONED R-20  
 TAX MAP NO. 31 PARCELS 57 & 757  
 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE  
**PLAN AND PROFILE BRIAR OAK COURT AND STORM DRAIN PROFILES**

RIEMER MUEGGE & ASSOCIATES, INC.  
 A Land Planning, Engineering and Consulting Firm  
 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045  
 410-997-8900 FAX: 410-997-9282

DATE 12.5.93  
 DESIGNED BY: W.C.W.  
 DRAWN BY: W.C.W.  
 PROJECT NO: 79710  
 DATE: DECEMBER 9, 1993  
 SCALE: AS SHOWN  
 DRAWING NO. 3 OF 7

1641

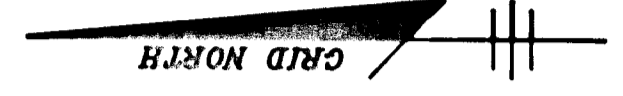
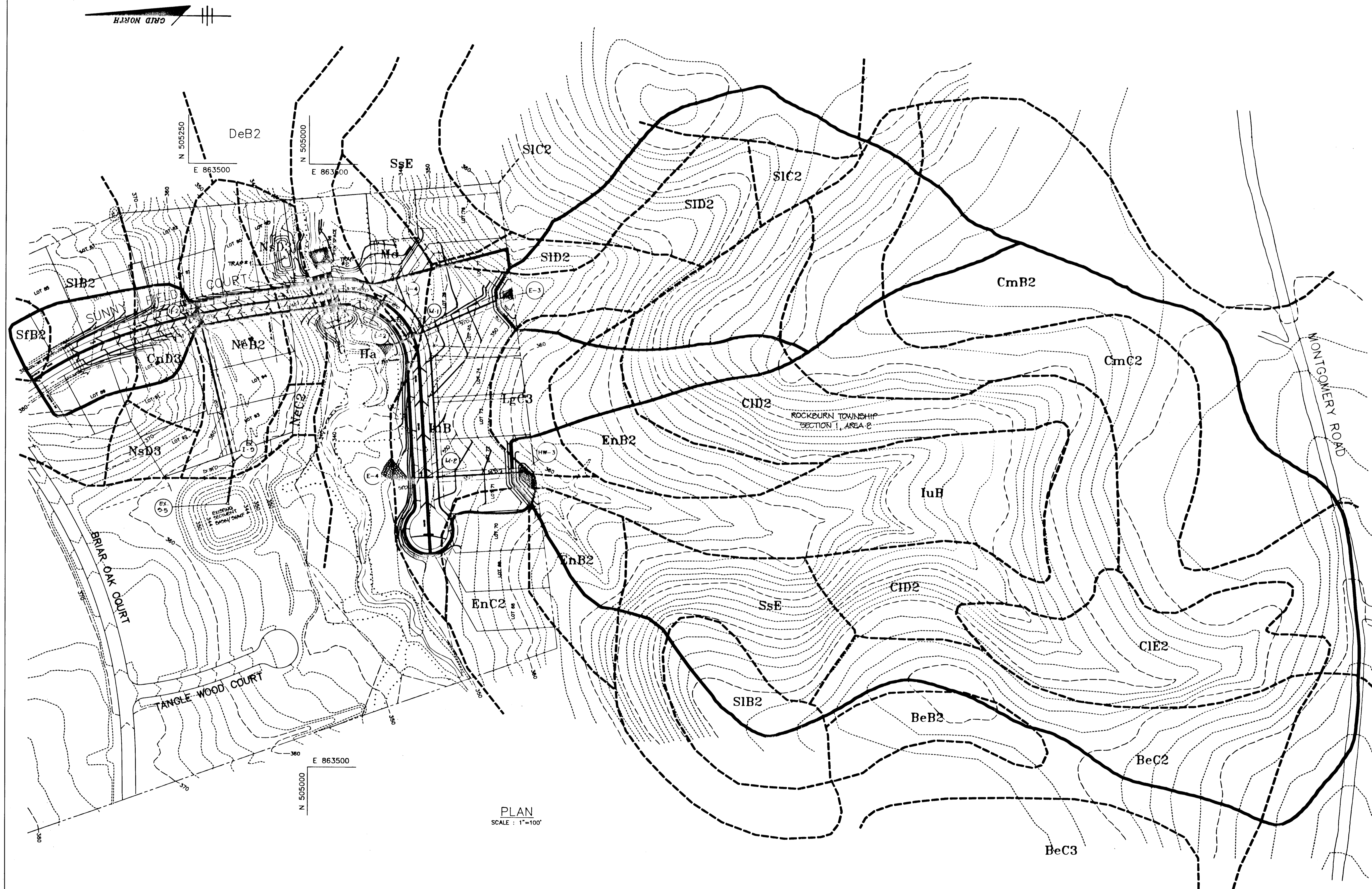
**SOILS CHART**

TYPE	DESCRIPTION
C	EeB2 Beltsville silt loam, 1 to 5% slopes, moderately eroded
C	BeC3 Beltsville silt loam, 5 to 10% slopes, severely eroded
C	ClD2 Chillum gravelly loam, 10 to 15% slopes, moderately eroded
C	ClE2 Chillum gravelly loam, 15 to 30% slopes, moderately eroded
C	CmC2 Chillum silt loam, 5 to 10% slopes, moderately eroded
D	EnB2 Eisinboro loam, 3 to 8% slopes, moderately eroded
D	EnC2 Eisinboro loam, 8 to 15% slopes, moderately eroded
C	IuB Iuka loam, local alluvium, 1 to 5% slopes
C	LgC3 Legore silty clay loam, 8 to 15% slopes, severely eroded
D	SIB2 Sassafras loam, 1 to 5% slopes, moderately eroded
D	SID2 Sassafras loam, 10 to 15% slopes, moderately eroded
D	SsE Sassafras soils, 15 to 40% slopes

**DRAINAGE AREA DATA**

NO.	AREA	C	% IMP	CN #
I-1	0.82	0.40	40	-
I-2	0.76	0.48	30	-
I-3	0.76	0.48	30	-
I-4	3.81	0.40	40	-
E-3	7.65	-	-	8.0
HW-5	28.8	-	-	800

\* AS APPROPRIATE, BASED ON ROCKBURN TOWNSHIP DEVELOPMENT



N 505250  
E 863500

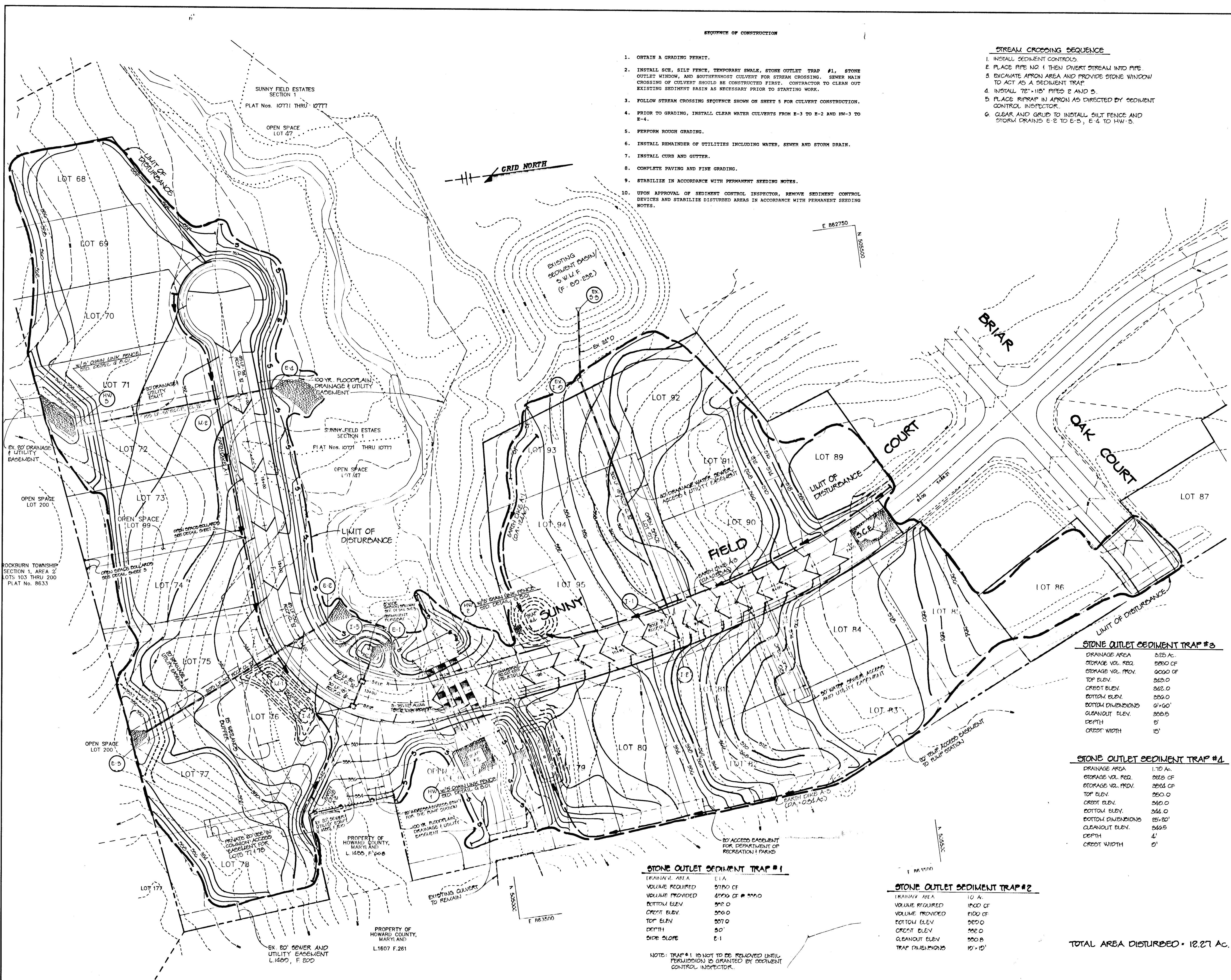
N 505000  
E 863500

N 505000  
E 863500

PLAN  
SCALE: 1"=100'

AS BUILT CERTIFICATE	
DATE	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Richard Blouel</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	3/25/94 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
<i>Charles ...</i> CHIEF, LAND DEVELOPMENT DIVISION	3/23/94 DATE
<i>Andrew M. ...</i> CHIEF, BUREAU OF HIGHWAYS	3-7-94 DATE
<i>Samuel ...</i> CHIEF, BUREAU OF ENGINEERING M.K.	3/24/94 DATE
DATE	REVISION
OWNER / DEVELOPER R.G.M. DEVELOPMENT CORPORATION c/o KOREN DEVELOPMENT CORPORATION 8815 CENTRE PARK DRIVE SUITE 304 COLUMBIA, MARYLAND 21045 410-740-1010	
PROJECT SUNNY FIELD ESTATES SECTION 3, LOTS 68 - 99	
AREA SECTION 3 ZONED R-20 TAX MAP NO. 31 PARCELS 57 & 757 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	
TITLE DRAINAGE AREA MAP	
RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282	
DATE 12.9.93	DESIGNED BY: W.C.W.
	DRAWN BY: W.C.W.
JAYKANT D. PAREKH #19148	PROJECT NO: 79710
	DATE: DECEMBER 9, 1993
	SCALE: AS SHOWN
	DRAWING NO. 4 OF 7

1641



- EQUIPMENT OF CONSTRUCTION**
- OBTAIN A GRADING PERMIT.
  - INSTALL SCS SILT FENCE, TEMPORARY SWALE, STONE OUTLET TRAP #1, STONE OUTLET WINDOW, AND SOUTHERNMOST CULVERT FOR STREAM CROSSING. SEWER MAIN CROSSING OF CULVERT SHOULD BE CONSTRUCTED FIRST. CONTRACTOR TO CLEAN OUT EXISTING SEDIMENT BASIN AS NECESSARY PRIOR TO STARTING WORK.
  - FOLLOW STREAM CROSSING SEQUENCE SHOWN ON SHEET 5 FOR CULVERT CONSTRUCTION.
  - PRIOR TO GRADING, INSTALL CLEAR WATER CULVERTS FROM E-3 TO E-2 AND HW-3 TO E-4.
  - PERFORM ROUGH GRADING.
  - INSTALL REMAINDER OF UTILITIES INCLUDING WATER, SEWER AND STORM DRAIN.
  - INSTALL CURB AND GUTTER.
  - COMPLETE PAVING AND FINE GRADING.
  - STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
  - UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.

- STREAM CROSSING SEQUENCE**
- INSTALL SEDIMENT CONTROL.
  - PLACE PIPE NO. 1 THEN DIVERT STREAM INTO PIPE.
  - EXCAVATE APRON AREA AND PROVIDE STONE WINDOW TO ACT AS A SEDIMENT TRAP.
  - INSTALL 72" x 118" PIPES 2 AND 3.
  - PLACE RIPRAP IN APRON AS DIRECTED BY SEDIMENT CONTROL INSPECTOR.
  - CLEAR AND GRAD TO INSTALL SILT FENCE AND STORM DRAINS E-2 TO E-3, E-4 TO HW-3.

**STONE OUTLET SEDIMENT TRAP #1**

DRAINAGE AREA	11.1 A.
VOLUME REQUIRED	5780 CF
VOLUME PROVIDED	4700 CF @ 5000
BOTTOM ELEV.	392.0
CREST ELEV.	396.0
TOP ELEV.	397.0
DEPTH	5.0'
SIDE SLOPE	2:1

**STONE OUTLET SEDIMENT TRAP #2**

DRAINAGE AREA	10 A.
VOLUME REQUIRED	1000 CF
VOLUME PROVIDED	1100 CF
BOTTOM ELEV.	392.0
CREST ELEV.	396.0
TOP ELEV.	397.0
DEPTH	5.0'
TRAP DIMENSIONS	10' x 10'

**STONE OUTLET SEDIMENT TRAP #3**

DRAINAGE AREA	8.25 A.
STORAGE VOL. REQ.	8950 CF
STORAGE VOL. PROV.	10000 CF
TOP ELEV.	313.0
CREST ELEV.	312.0
BOTTOM ELEV.	299.0
BOTTOM DIMENSIONS	6' x 60'
CLEANOUT ELEV.	302.5
DEPTH	6'
CREST WIDTH	15'

**STONE OUTLET SEDIMENT TRAP #4**

DRAINAGE AREA	1.70 A.
STORAGE VOL. REQ.	2825 CF
STORAGE VOL. PROV.	3808 CF
TOP ELEV.	350.0
CREST ELEV.	340.0
BOTTOM ELEV.	334.0
BOTTOM DIMENSIONS	25' x 20'
CLEANOUT ELEV.	346.5
DEPTH	4'
CREST WIDTH	9'

NOTE: TRAP #1 IS NOT TO BE REMOVED UNTIL PERMISSION IS GRANTED BY SEDIMENT CONTROL INSPECTOR.

TOTAL AREA DISTURBED = 12.27 AC.

**AS BUILT CERTIFICATE**

ARTHUR E. MUEGGE #8707 DATE \_\_\_\_\_

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*C. William Cupler* 12/19/93  
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*J. Farrell* 12-9-93  
ENGINEER DATE

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

*Vetonia Egler* 12/15/93  
U.S. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John P. Peltier* 12/23/93  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

*Richard Blood* 3/25/94  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

*Paul J. Lammus* 3/23/94  
CHIEF, LAND DEVELOPMENT DIVISION DATE

*Robert M. Carole* 3-7-94  
CHIEF, BUREAU OF HIGHWAYS DATE

*Paul J. Sisson* 3/24/94  
CHIEF, BUREAU OF CIVIL ENGINEERING M.K. DATE

DATE	NO.	REVISION
8-21-93	0	REV. TYPE OF CULVERT PROVIDED
11-01-93	1	ADDED SCS GRADING & SED CONTROL REV. L.O.D.

OWNER / DEVELOPER  
R.G.M. DEVELOPMENT CORPORATION  
c/o KOREN DEVELOPMENT CORPORATION  
8815 CENTRE PARK DRIVE  
SUITE 304  
COLUMBIA, MARYLAND 21045  
410-740-1010

PROJECT **SUNNY FIELD ESTATES**  
SECTION 3, LOTS 68 - 99

AREA SECTION 3 ZONED R-20  
TAX MAP NO. 31 PARCELS 57 & 757  
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE **GRADING AND SEDIMENT CONTROL PLAN**

**RIEMER MUEGGE & ASSOCIATES, INC.**  
A Land Planning, Engineering and Consulting Firm  
8818 Centre Park Drive • Suite 300 • Columbia, Md 21045  
410-997-8900 FAX : 410-997-9282

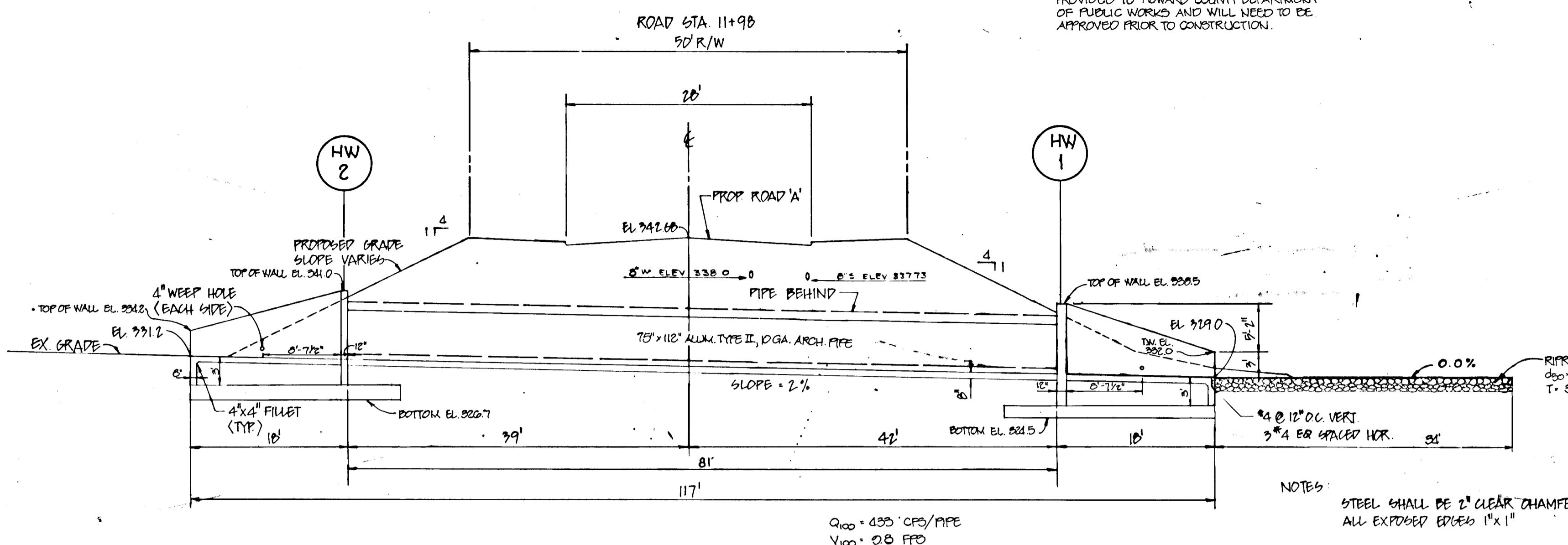
12-9-93 DATE

DESIGNED BY : W.C.W.  
DRAWN BY : W.C.W.  
PROJECT NO : 79710  
DATE : DECEMBER 9, 1993  
SCALE : 1"=50'  
DRAWING NO. 5 OF 7

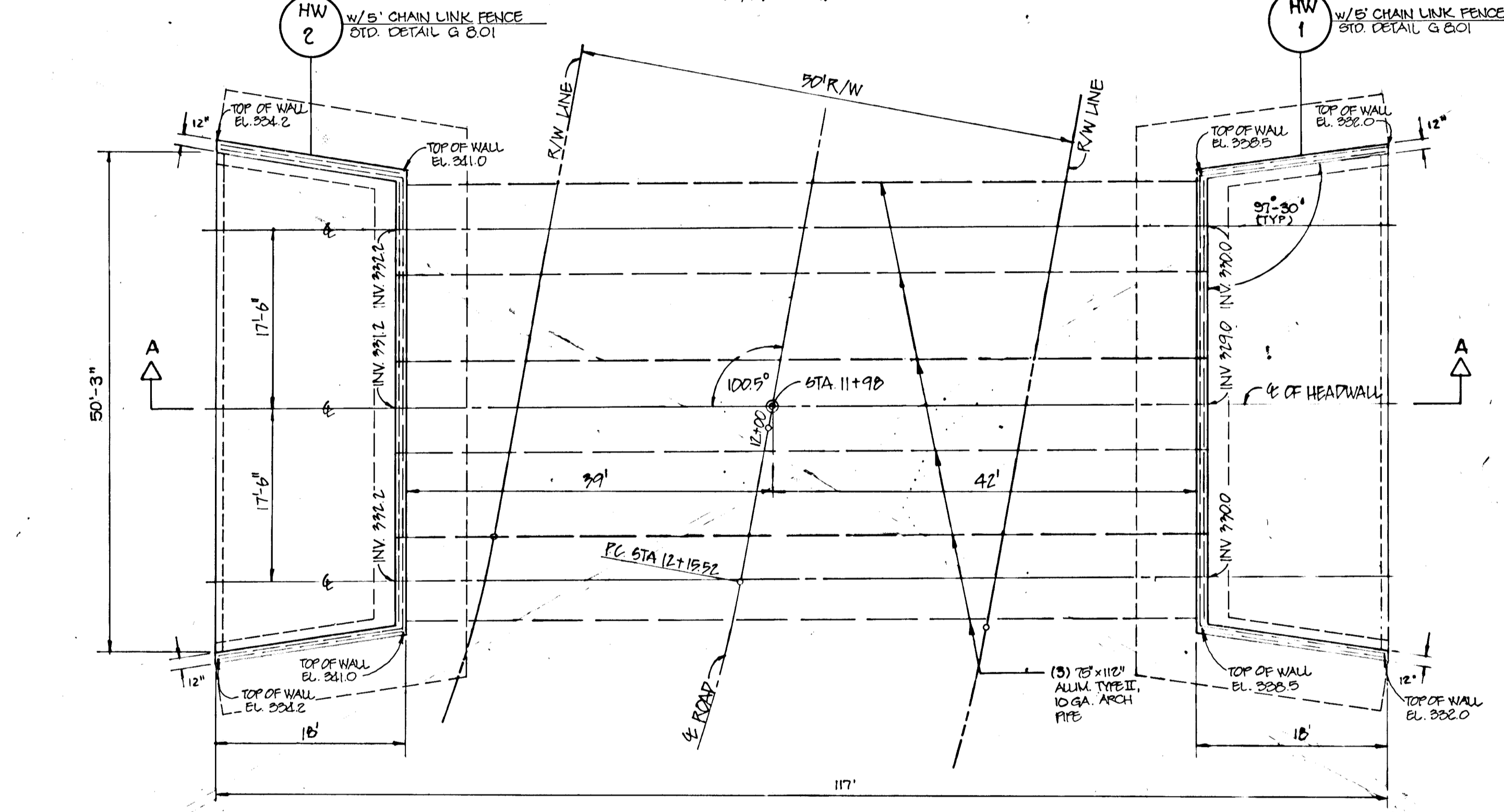
JAYKANT D. BAREKH #10126

1641

NOTE: PIPE SPECIFICATIONS AND DESIGN WILL BE PROVIDED TO HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND WILL NEED TO BE APPROVED PRIOR TO CONSTRUCTION.



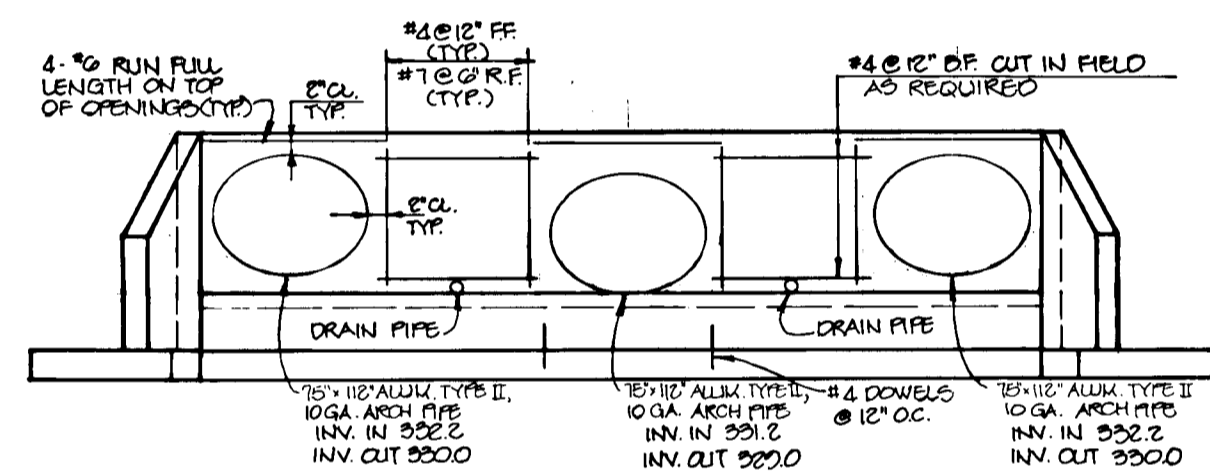
SECTION A-A  
SCALE: 1" = 10'



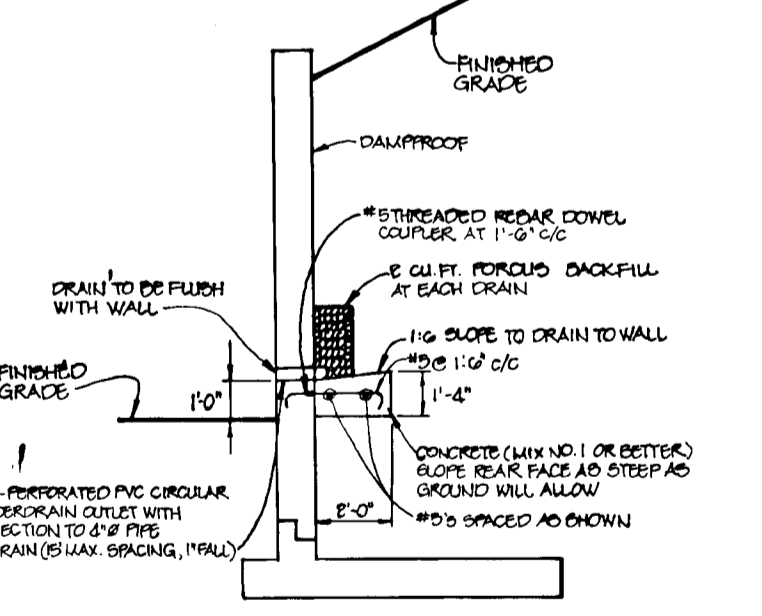
PLAN VIEW OF HEADWALL  
SCALE: 1" = 10'

**GENERAL NOTES**

1. MATERIALS: CONCRETE  $f_c = 3500$  psi FOR WING WALLS & HEADWALLS  
 $f_c = 3000$  psi FOR FOOTINGS  
REINFORCING STEEL  $f_y = 60,000$  psi
2. FOUR FOOTING CONCRETE AGAINST UNDISTURBED SOIL.
3. THE BACKFILL SHALL BE SUCH THAT ITS ANGLE OF INTERNAL FRICTION SHALL BE NO LESS THAN 20°.
4. THE BOTTOM OF A FOOTING ELEVATION SHALL BE AT SUCH AN ELEVATION WHERE THE ALLOWABLE BEARING PRESSURE IS NOT LESS THAN 3000 LBS PER SQ. FT.
5. THE CONTRACTOR SHALL LOCATE ALL THE UTILITIES AND PROVIDE SUPPORT FOR SUCH UTILITIES BEFORE EXCAVATING FOR FOOTINGS.
6. BACKFILL TO BE CR-G TAKEN FROM GENSTAR KARROTTVILLE QUARRY.
7. 1" WIDE BANDS WITH GASKETS AND OTG LUG NUT & BOLT CONNECTION.
8. DECIDING TO BE DETERMINED IN FIELD BASED ON FIELD CONDITIONS.



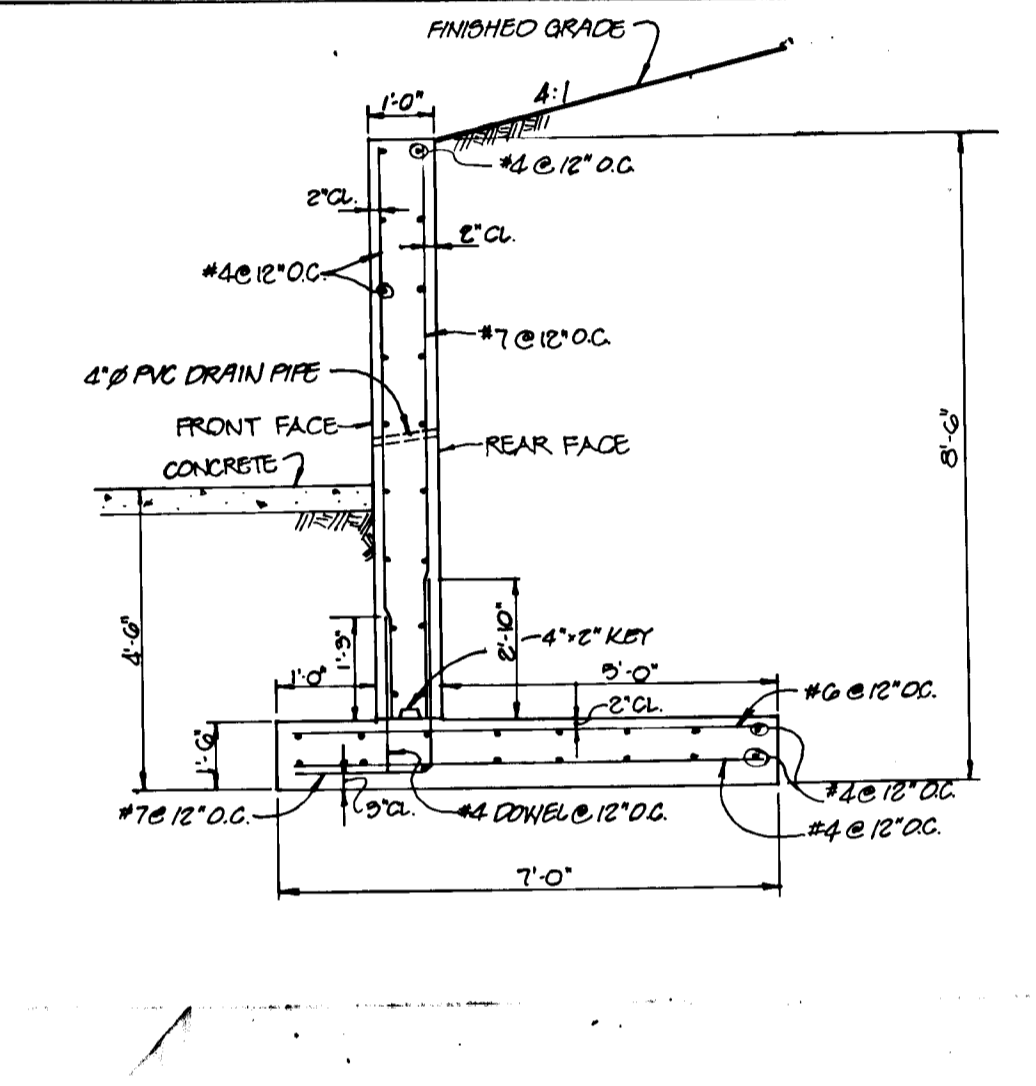
HEADWALL ELEVATION  
SCALE: 1" = 10'



- NOTED:
1. EXACT ELEVATION OF DRAIN TO BE DETERMINED BY ENGINEER IN FIELD.
  2. FORDOL BACKFILL SHALL BE STONE CONFORMING TO MASHOT M.45, NO. 57.

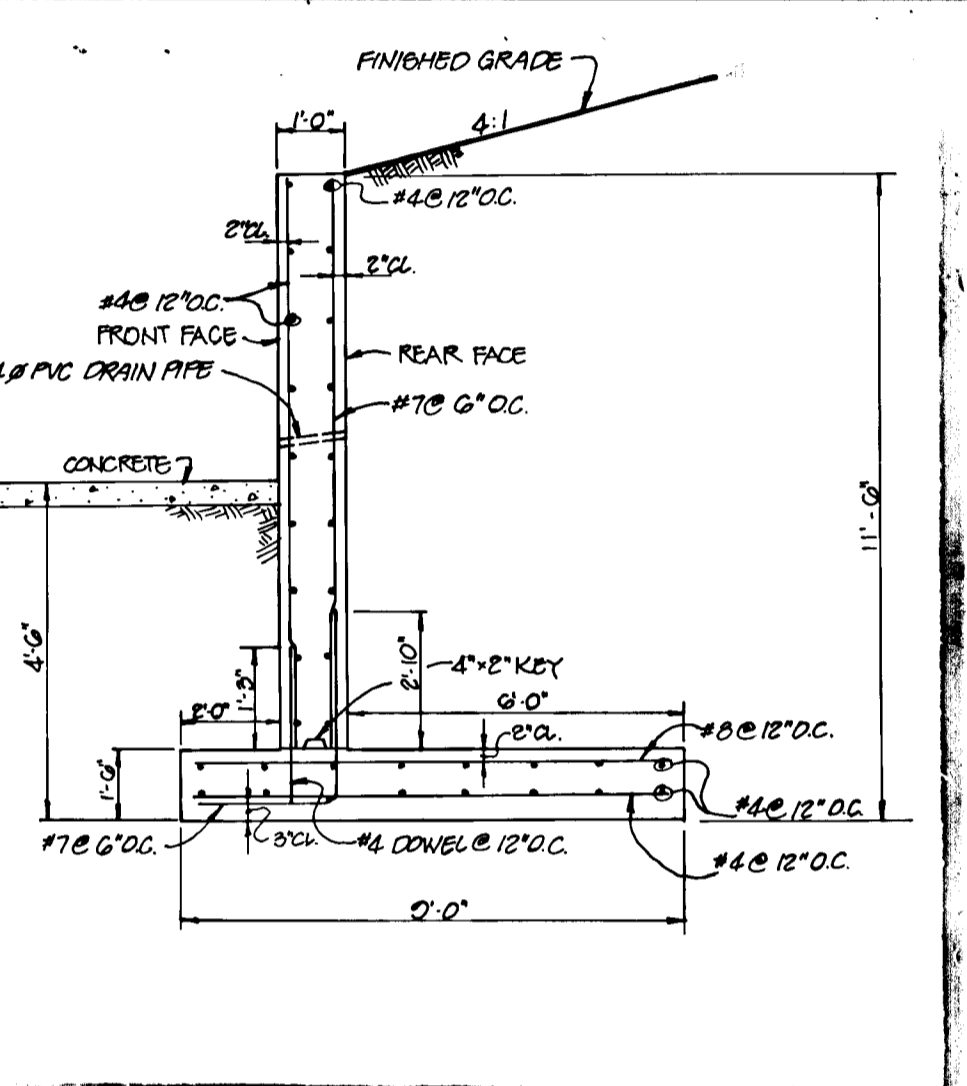
HEADWALL DRAINAGE SYSTEM  
NO SCALE

SECTION 3  
CORNER REINFO.  
NOT TO SCALE

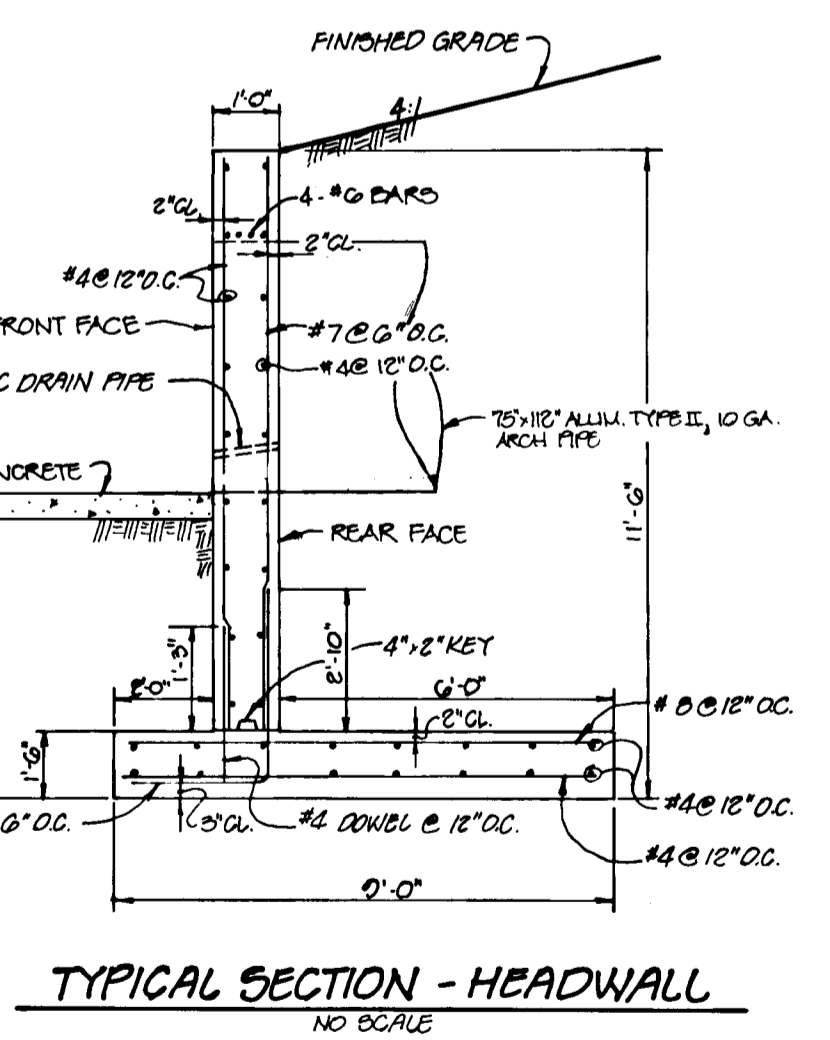


SECTION 2  
WALL SECTION (8'-6" & BELOW)  
NOT TO SCALE

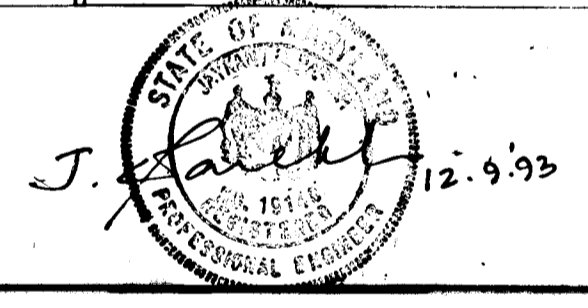
SECTION 4  
REINFO. AROUND OPENING  
NOT TO SCALE



SECTION 1  
WALL SECTION (11'-6" MAX.)  
NOT TO SCALE



TYPICAL SECTION - HEADWALL  
NO SCALE



APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Dauter* 3/23/94 DATE  
 CHIEF, LAND DEVELOPMENT DIVISION  
*Paul D. Sapon* 3/24/94 DATE  
 CHIEF, BUREAU OF HIGHWAYS  
 CHIEF, BUREAU OF ENGINEERING M.K.

APPROVED : HOWARD COUNTY DEPT. OF PLANNING AND ZONING  
*Richard Blood* 3/25/94 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

RIEMER MUEGG & ASSOCIATES, INC.  
 Engineers & Surveyors  
 8818 Centre Park Drive Suite 200 Columbia, Md 21045  
 410-997-8900 FAX: 410-997-9282

OWNER/DEVELOPER R.G.M. DEVELOPMENT CORPORATION 56 KOREN DEVELOPMENT CORPORATION 6815 CENTRE PARK DRIVE SUITE 200 COLUMBIA, MARYLAND 21045 410-740-1010	PROJECT NAME SUNNY FIELD ESTATES Section 3 Lots G8-99 T.M. #31 P. 57, 58, 516, 757 1 Elect. Dist. Ho.Co., MD
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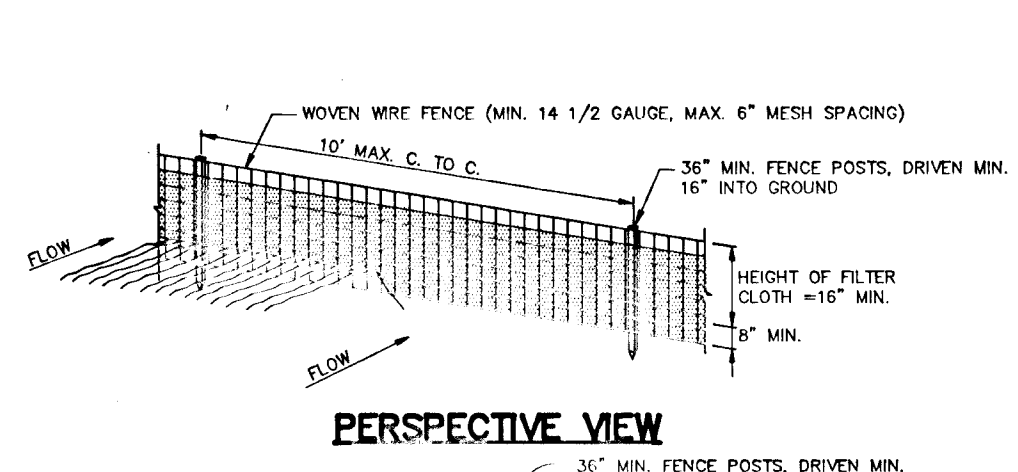
DEVELOPER  
  
 DIVISION OF ENGINEERING  
 6815 CENTRE PARK DRIVE SUITE 200 COLUMBIA, MD 21045  
 410-740-1010

TITLE: CULVERT DETAIL SHEET Final Plan  
 WP-89-184 S-89-06, P-89-52, F-89-232  
 DATE: 12-0-93 PROJECT: 20710  
 D.P.: WGV D.W.: EDJ  
 SCALE: 1" = 50' DRAWING: G 01 7

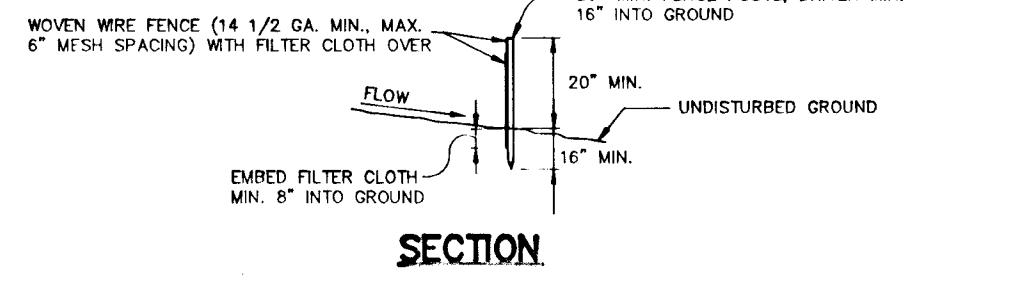
REV. TYPE OF CULVERT: PROPOSED

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed. Seeded Preparation... Loosen upper three inches of soil by raking...



PERSPECTIVE VIEW

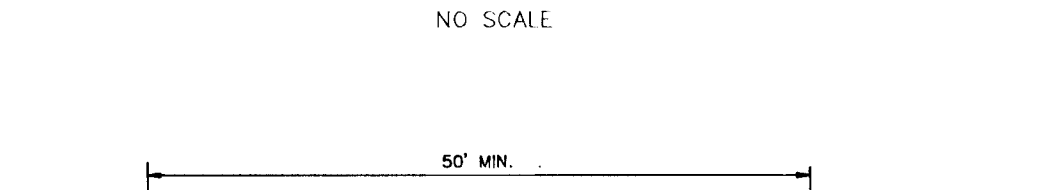


SECTION

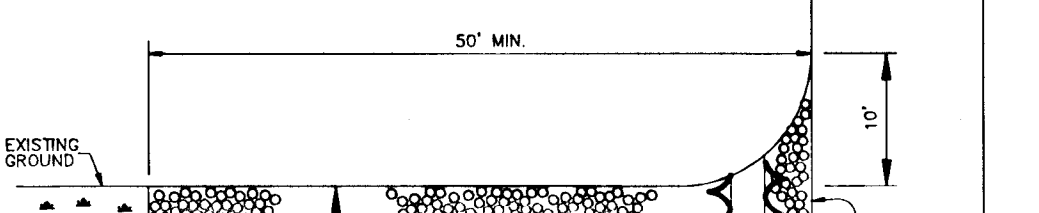
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- 1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES AND STAPLES. 2. FILTER CLOTH TO BE FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION...

SILT FENCE DETAIL



PROFILE

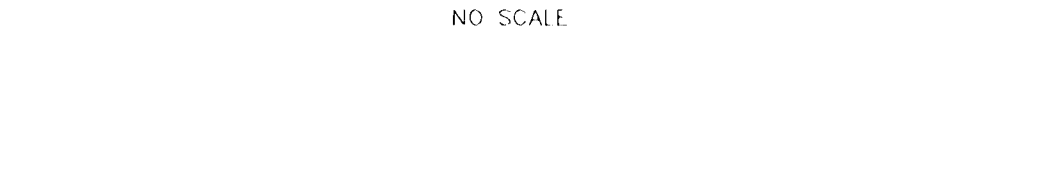


PLAN VIEW

CONSTRUCTION SPECIFICATIONS

- 1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES AND STAPLES. 2. FILTER CLOTH TO BE FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION...

STABILIZED CONSTRUCTION ENTRANCE



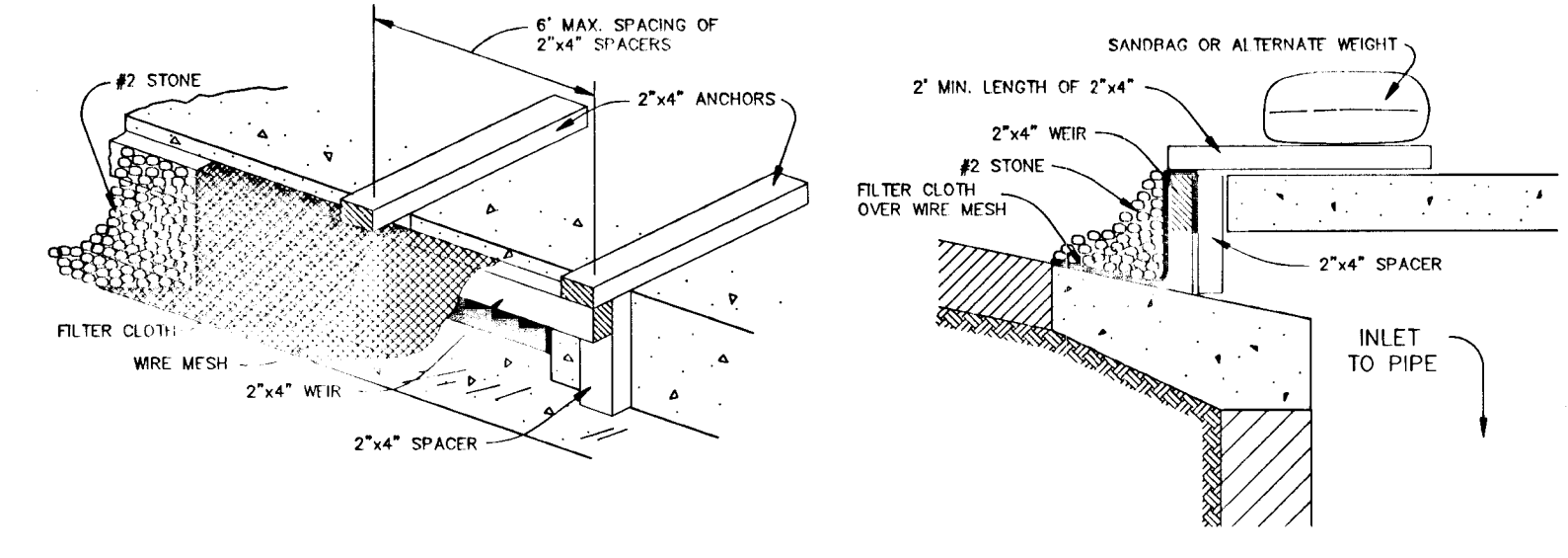
PROFILE



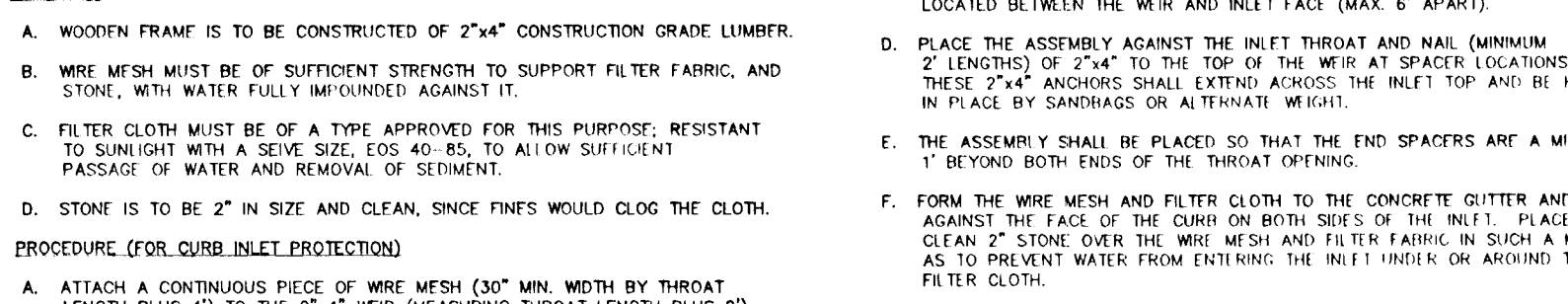
PLAN VIEW

CONSTRUCTION SPECIFICATIONS

- 1. STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. 2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM WOULD APPLY)...



PERSPECTIVE VIEW



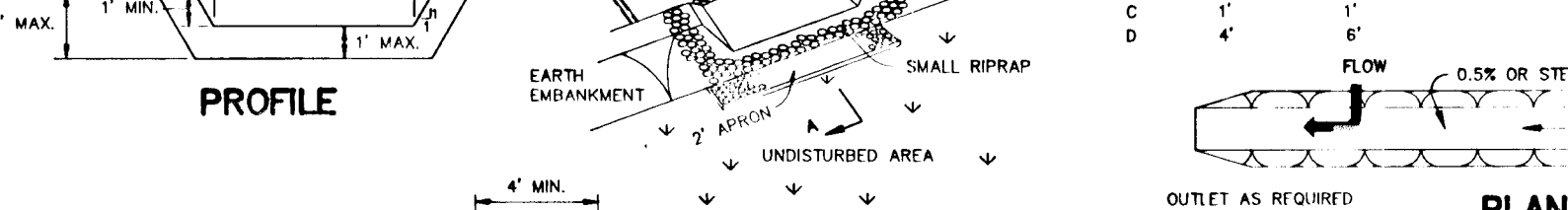
SECTION

CONSTRUCTION SPECIFICATIONS

- 1. MATERIALS A. WOODEN FRAME IS TO BE CONSTRUCTED OF 2"x4" CONSTRUCTION GRADE LUMBER. B. WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC...

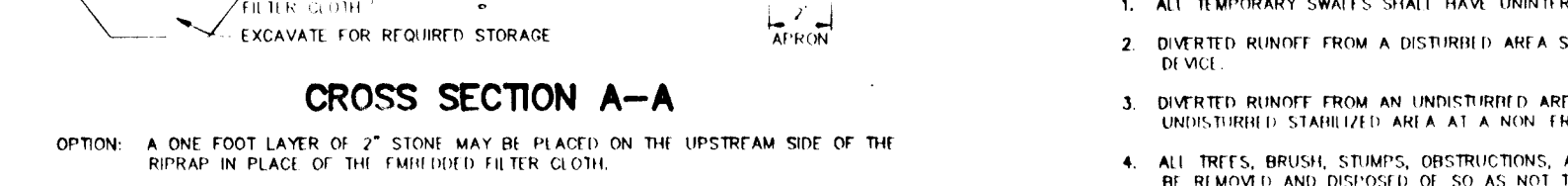


PROFILE



PLAN VIEW

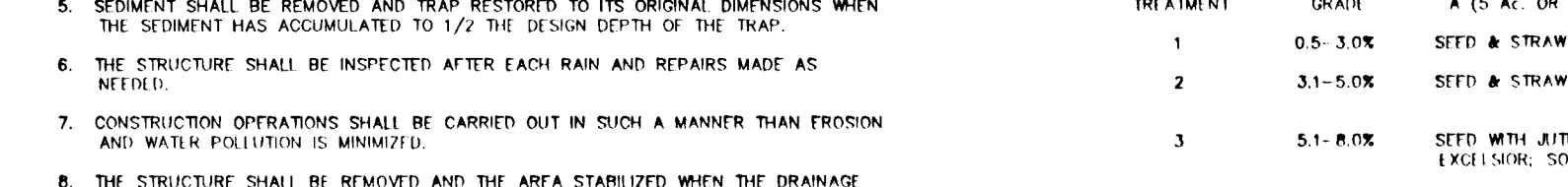
CROSS SECTION A-A



CONSTRUCTION SPECIFICATIONS

- 1. AREA UNDER ENHANCEMENT SHALL BE LEFT OPEN, UNGRADED AND UNIMPROVED OR ANY VEGETATION AS WELL AS OVER-SOIL, STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL...

STONE OUTLET SEDIMENT TRAP



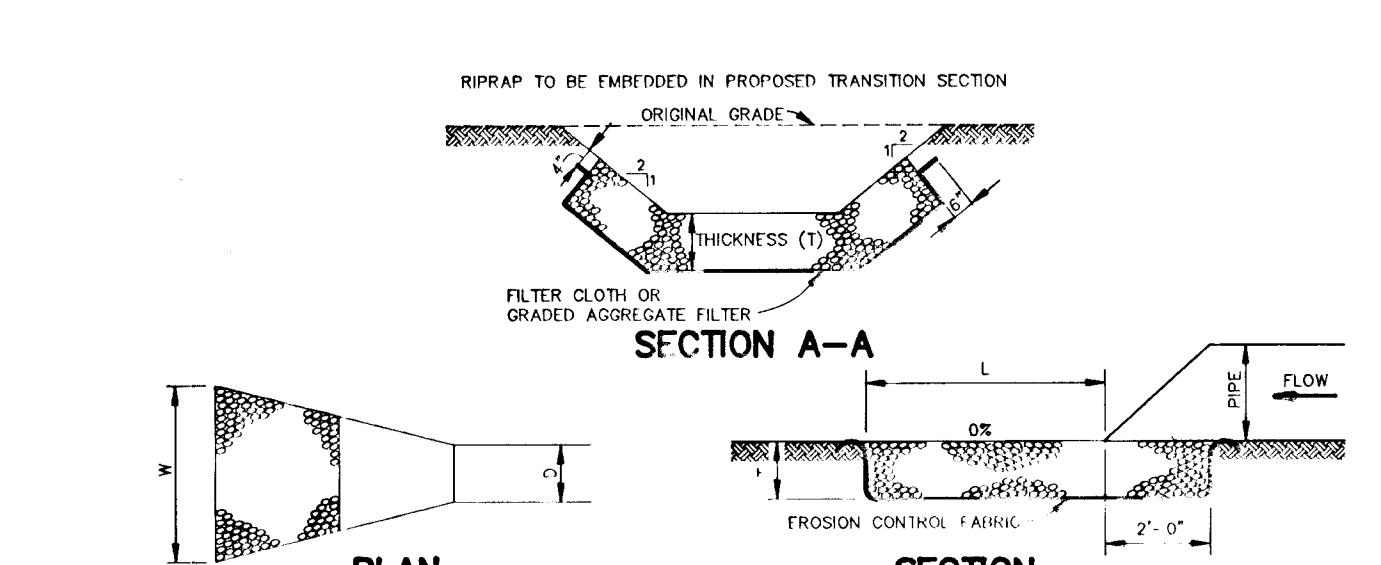
PROFILE



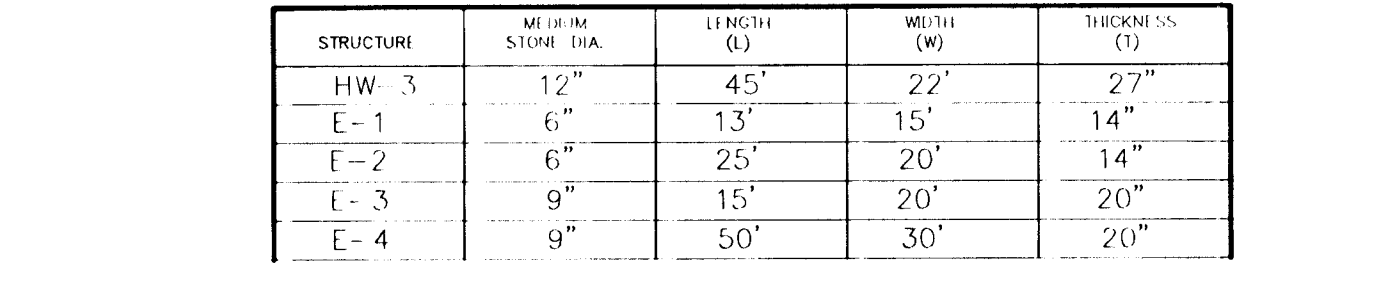
PLAN VIEW

CONSTRUCTION SPECIFICATIONS

- 1. AREA UNDER ENHANCEMENT SHALL BE LEFT OPEN, UNGRADED AND UNIMPROVED OR ANY VEGETATION AS WELL AS OVER-SOIL, STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL...



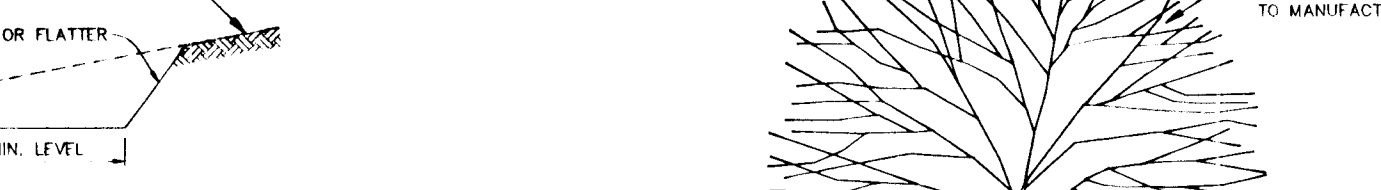
PERSPECTIVE VIEW



SECTION

CONSTRUCTION SPECIFICATIONS

- 1. ALL TEMPORARY SWALES SHALL HAVE UNIMPROVED EXISTING GRADE TO AN OUTLET. 2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE...



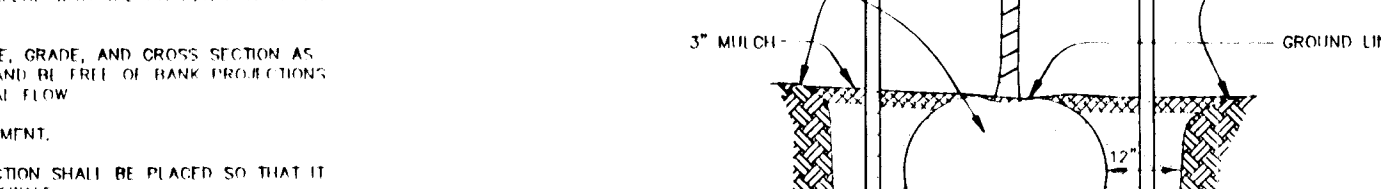
PROFILE



PLAN VIEW

CONSTRUCTION SPECIFICATIONS

- 1. ALL TEMPORARY SWALES SHALL HAVE UNIMPROVED EXISTING GRADE TO AN OUTLET. 2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE...



PROFILE



PLAN VIEW

TEMPORARY SWALE



PROFILE

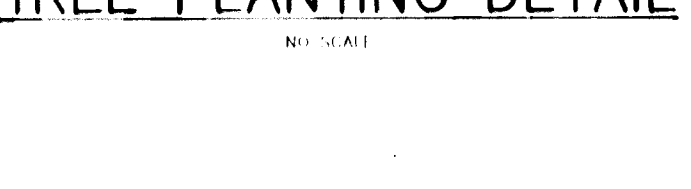


PLAN VIEW

CONSTRUCTION SPECIFICATIONS

- 1. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE DRAINAGE REQUIREMENTS AND BE FREE OF STONE, PROTRUSIONS OR OTHER OBSTRUCTIONS...

TREE PLANTING DETAIL



PROFILE



PLAN VIEW

CONSTRUCTION SPECIFICATIONS

- 1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE...

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-term vegetative cover is needed. Seeded Preparation... Loosen upper three inches of soil by raking...

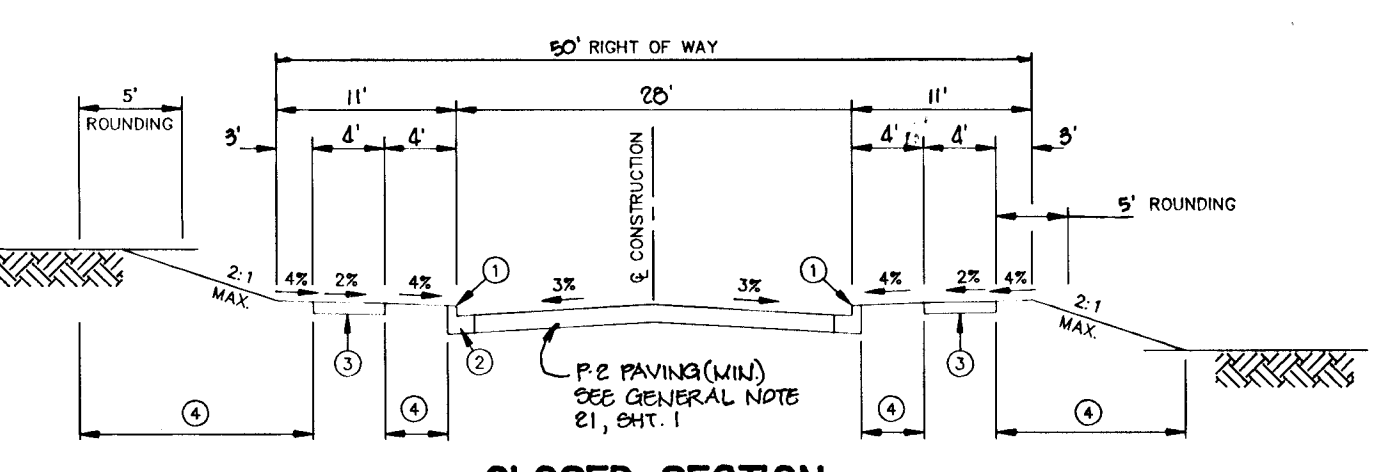
- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 800 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding...

SEEDING NOTES

- 1. A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (240-8000).

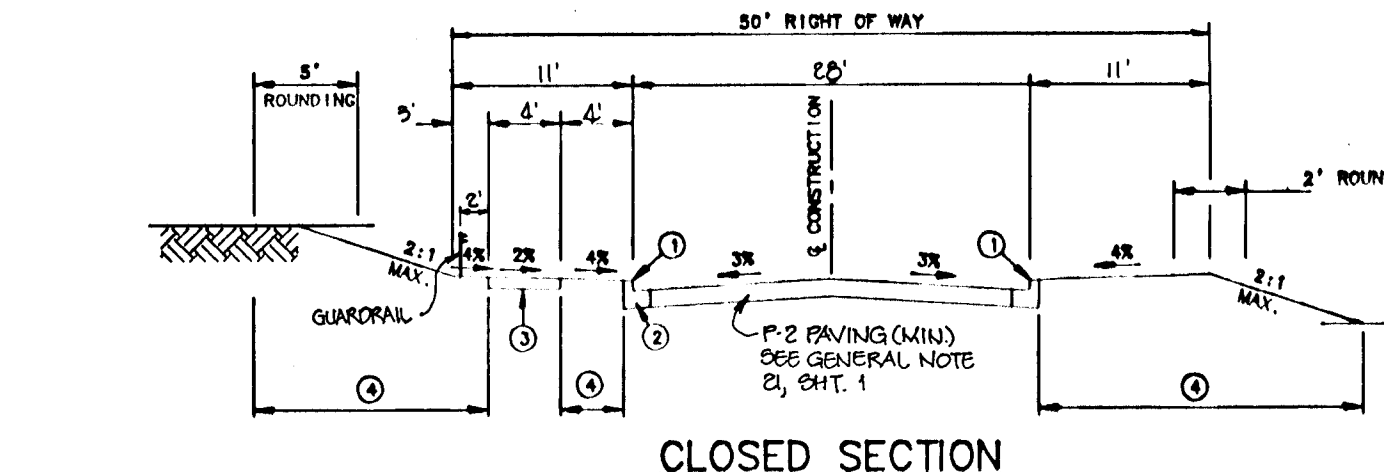
SEDIMENT CONTROL NOTES

- 1. A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (240-8000).



TYPICAL SECTION BRIAR OAK COURT

- 1) PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL. 2) TYPE OF CURB VARIES (BITUMINOUS CURB OR MOD. CORR. CURB & GUTTER OR STANDARD CORR. CURB & GUTTER - SEE DESIGN MANUAL)...



TYPICAL SECTION SUNNY FIELD COURT

- 1) PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL. 2) TYPE OF CURB VARIES (BITUMINOUS CURB OR MOD. CORR. CURB & GUTTER OR STANDARD CORR. CURB & GUTTER - SEE DESIGN MANUAL)...

AS BUILT CERTIFICATE

DATE

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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...

C. Wayne Carlin DEVELOPER 12/10/93 DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

J. Farrell ENGINEER 12-9-93 DATE

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

Patricia Edgar U.S. SOIL CONSERVATION SERVICE 12-15-93 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John K. Roberts HOWARD SOIL CONSERVATION DISTRICT 12/23/93 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Richard Blourel CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH 3/25/94 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Charles M. Danks CHIEF, BUREAU OF HIGHWAYS 3-7-94 DATE

Samuel Sepsom 3/24/94 DATE

DATE NO. REVISION

OWNER / DEVELOPER R.G.M. DEVELOPMENT CORPORATION c/o KORNIN DEVELOPMENT CORPORATION 8815 CENTRE PARK DRIVE SUITE 304 COLUMBIA, MARYLAND 21045 410-740-1010

PROJECT SUNNY FIELD ESTATES SECTION 5, LOTS 68-99

AREA SECTION 5, ZONED R-20 TAX MAP NO. 31 PARCELS 57 & 757 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE DETAIL SHEET

RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282

12-9-93 DATE

DESIGNED BY: W.C.W. DRAWN BY: W.C.W.

PROJECT NO.: 79710 DATE: DECEMBER 9, 1993

SCALE: AS SHOWN DRAWING NO. 7 OF 7



1641