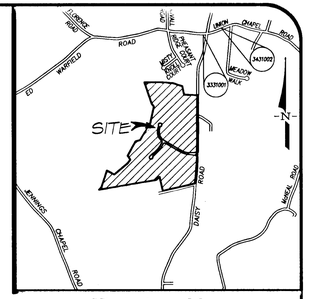
ROADS, STORM DRAIN & GRADING
WARFIELD'S GRANT
SECTION II
ELECTION DISTRICT NO. 4
HOWARD COUNTY, MARYLAND

HOWARD COUNTY BENCHMARK 3331001
ELEV = 543.772

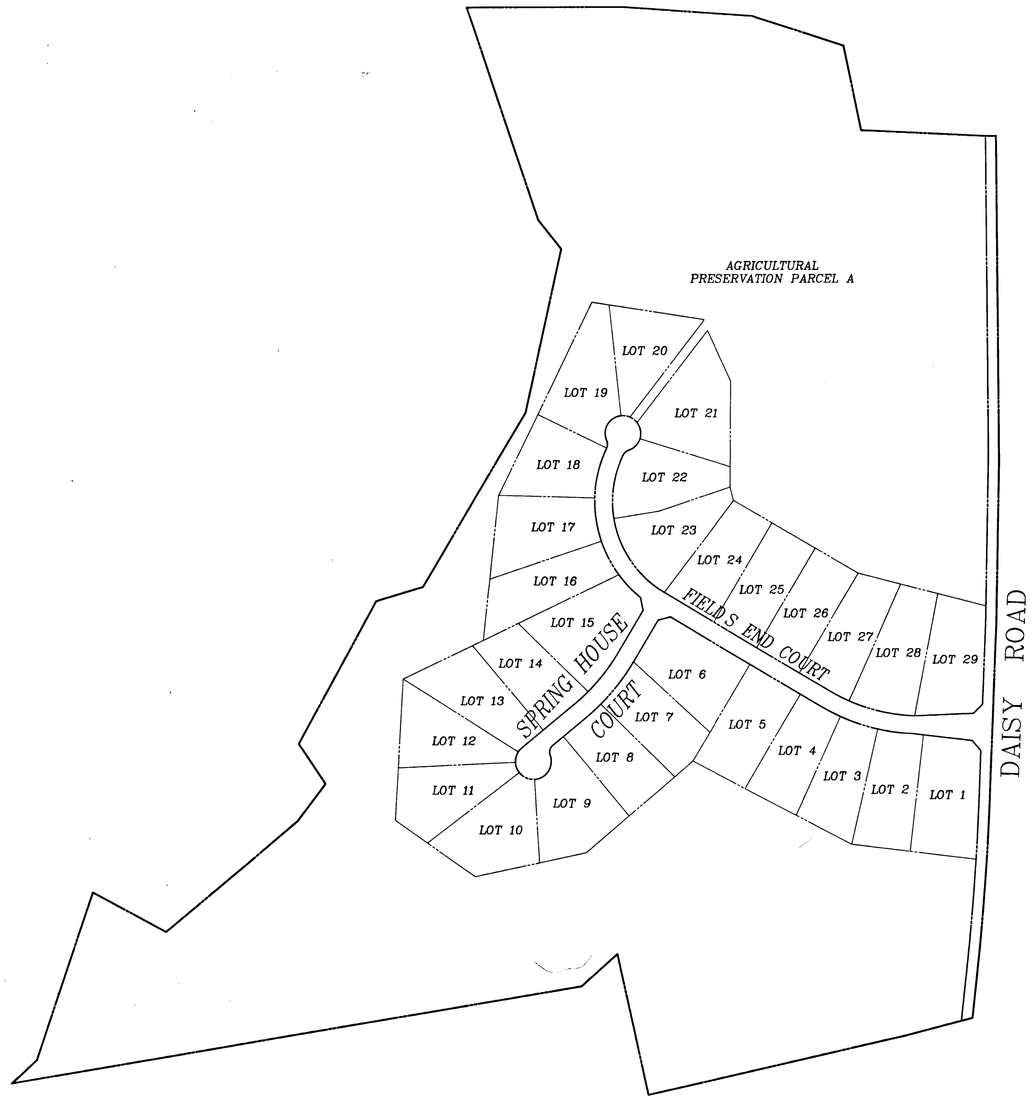
LOCATED ALONG ED WARFIELD ROAD
125'± WEST OF DAISY ROAD
MONUMENT IS 0.3' BELOW SURFACE

HOWARD COUNTY BENCHMARK 3431002
ELEV = 578.513

LOCATED ALONG UNION CHAPEL ROAD
400'± EAST OF DAISY ROAD
MONUMENT IS 14.5' OFF EDGE OF PAVING
FLUSH WITH GROUND



Vicinity Map
Scale: 1" = 2000'



LOCATION MAP
SCALE 1" = 200'

SHEET INDEX

1. COVER SHEET
2. FIELDS END COURT – PLAN & PROFILE
3. SPRING HOUSE COURT – PLAN & PROFILE
4. DAISY ROAD – ROAD IMPROVEMENTS
5. DAISY ROAD – ROAD IMPROVEMENTS
6. GRADING & SEDIMENT CONTROL PLAN/LANDSCAPING PLAN
7. GRADING & SEDIMENT CONTROL PLAN/LANDSCAPING PLAN
8. GRADING & SEDIMENT CONTROL PLAN/LANDSCAPING PLAN
9. GRADING & SEDIMENT CONTROL PLAN/LANDSCAPING PLAN
10. STORM DRAIN PROFILES
11. STORM DRAIN PROFILES AND ENDWALL DETAILS
12. SEDIMENT CONTROL DETAILS & NOTES
13. DRAINAGE AREA MAP, DETAILS

GENERAL NOTES

1. PROJECT BACKGROUND:
   TAX MAP 13 PARCEL 128
   ZONING: RC-DEO
   ELECTION DISTRICT: 4th
   TOTAL TRACT AREA: 108.0860 AC.±
   NUMBER OF PROPOSED LOTS: 29 (Buildable Lots)
   1 (Preservation Parcel)
   SKETCH PLAN, S-94-05, APPROVED ON NOVEMBER 3, 1993
   PRELIMINARY PLAN, P-94-11, APPROVED ON JUNE 15, 1994
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOL. IV. I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1990 AMENDMENTS.
3. 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. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
4. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS.
5. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

MISS UTILITY	1-800-257-7777
BELL TELEPHONE SYSTEM	393-3649
LONG DISTANCE CABLE DIVISION	393-3553 OR 3554
BALTIMORE GAS AND ELECTRIC CO.	539-8000
HOWARD COUNTY BUREAU OF UTILITIES	313-4900
HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (24 HOUR NOTICE PRIOR TO COMMENCEMENT OF WORK)	313-1880
COLONIAL PIPELINE	795-1390

6. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
7. STORM DRAIN TRENCHES WITHIN ROAD RIGHT-OF-WAYS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1990 AMENDMENTS.
8. INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1988 EDITION. ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
9. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
10. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
11. TOPOGRAPHIC SURVEY PROVIDED BY HOWARD COUNTY 1"=200' TOPO AND FIELD RUN TOPO BY FISHER, COLLINS AND CARTER, INC. ON OR ABOUT JANUARY, 1990 & R.M. MOCHI GROUP, P.C. ON OR ABOUT JULY, 1994 AND IS SHOWN AT 2' CONTOUR INTERVALS.
12. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS "C" AS SHOWN IN FIGURE 11.4 VOLUME I OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
13. 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 PAVING 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 BY THE OWNER.
14. A NON-CRITICAL FLOODPLAIN STUDY PROVIDED BY FISHER, COLLINS & CARTER, INC. WAS APPROVED UNDER F-90-58.
15. WETLANDS DELINEATED BY M.A. DIRCKS & CO., INC. & APPROVED ON 11/3/93.
16. TRAFFIC STUDY PROVIDED BY THE STREET TRAFFIC STUDIES, LTD. AND APPROVED ON 11/3/93.
17. WATER AND SEWER SERVICE SHALL BE PRIVATE WELL & SEPTIC.
18. THIS PROJECT CONFORMS TO THE LATEST EDITION OF THE AMERICANS WITH DISABILITIES ACT.
19. ALL DRIVEWAYS SHALL HAVE A 12" CMP DRIVEWAY CULVERT PLACED AS SHOWN IN HOWARD COUNTY STANDARD DETAIL R6.06, UNLESS OTHERWISE INDICATED ON THE GRADING AND SEDIMENT CONTROL PLAN.
20. THIS PROJECT HAS BEEN APPROVED FOR PAYMENT OF FEE-IN-LIEU OF STORMWATER MANAGEMENT PER A LETTER DATED JULY 11, 1994 FROM MR. JAMES M. IRVIN.

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 5/24/95
CHIEF, BUREAU OF HIGHWAYS — DATE 4-26-95
CHIEF, BUREAU OF ENGINEERING — DATE 5/24/95

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 5/25/95

OWNER/DEVELOPER
WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER
R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

F-95-36

1574

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project	94012.00	date	8/15/94
illustration	LJG	engineering	AMV
scale	1" = 200'	approval	RMM

no.	description	date
1	1st SUBMITTAL TO HOWARD COUNTY DPZ	12/23/94
2	SUBMITTED FOR SIGNATURES	4/6/95

revisions

SECTION II
WARFIELD'S GRANT
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 4
COVER SHEET

R.M. MOCHI GROUP, P.C.
Engineering Surveying Site Planning
3300 N. Ridge Road, Suite 235
Ellicott City, MD 21043-3305
(410) 461-0079
Fax: (410) 750-6340

1 OF 13

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 5/22/95

CHIEF, BUREAU OF HIGHWAYS — DATE 4-26-95

CHIEF, BUREAU OF ENGINEERING MK — DATE 5/24/95

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 5/25/95

(FOR CONTINUATION SEE SHEET 3 OF 13)

MATCH LINE SEE SHEET 3 OF 13

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 15 LOT 16 LOT 17 LOT 18 LOT 19 LOT 20 LOT 21 LOT 22 LOT 23 LOT 24 LOT 25 LOT 26 LOT 27 LOT 28 LOT 29

SPRING HOUSE COURT

FIELDS END COURT

DAISY ROAD (MAJOR COLLECTOR) (60' R/W)

(FOR CONTINUATION SEE SHEET 4 OF 13)

10' Tree Maintenance Easement

2' Shoulder

15' DRAINAGE & UTILITY EASEMENT

N59°19'43"W

S62°10'05"W 493.00'

S02°09'55"W 493.00'

BGE 92848

N 528600 E 779300

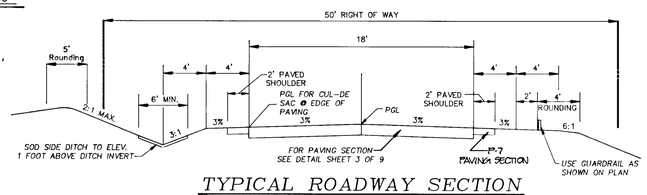
N 529000 E 779250

℄ Curve Data
STA. 2+19.30 to STA. 4+80.50

Radius = 525.00'
Length = 261.20'
Tan = 133.36'
Delta = 28°30'22"
Chord = S73°34'54"E, 258.51'

℄ Curve Data
STA. 10+24.86 to STA. 14+89.48

Radius = 320.00'
Length = 464.62'
Tan = 284.06'
Delta = 83°11'26"
Chord = S17°44'00"E, 424.87'



TYPICAL ROADWAY SECTION

NOT TO SCALE

FOR STREETS: FIELDS END COURT & SPRING HOUSE COURT

LOCAL STREET AND CUL-DE-SAC
HOWARD COUNTY STANDARD FIGURE 2.11
OPEN SECTION (RURAL) ("RR" ZONING DISTRICT)
MINIMUM DESIGN SPEED - 30 MPH

PLAN

SCALE: 1" = 50'

OWNER/DEVELOPER

WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER

R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

PROFILE

SCALE: 1" = 50' horiz.
1" = 5' vert.

FIELDS END COURT

PVI STA = 3+00
PVI ELEV = 561.30
A.D. = 4.00
K = 50.00
200.00' VC
SSD REQUIRED = 210'
SSD PROVIDED = 206'

LOW POINT ELEV = 543.80
LOW POINT STA = 7+50
PVI STA = 7+00
PVI ELEV = 541.30
A.D. = -7.50
K = 40.00
300.00' VC
HSD REQUIRED = 200'
HSD PROVIDED = 215'

PVI STA = 9+00
PVI ELEV = 546.30
A.D. = 1.50
K = 66.67
100.00' VC
SSD REQUIRED = 200'
SSD PROVIDED = 493'

HIGH POINT ELEV = 554.49
HIGH POINT STA = 1+40.77
PVI STA = 1+40.77
PVI ELEV = 554.74
A.D. = 4.00
K = 12.50
50.00' VC

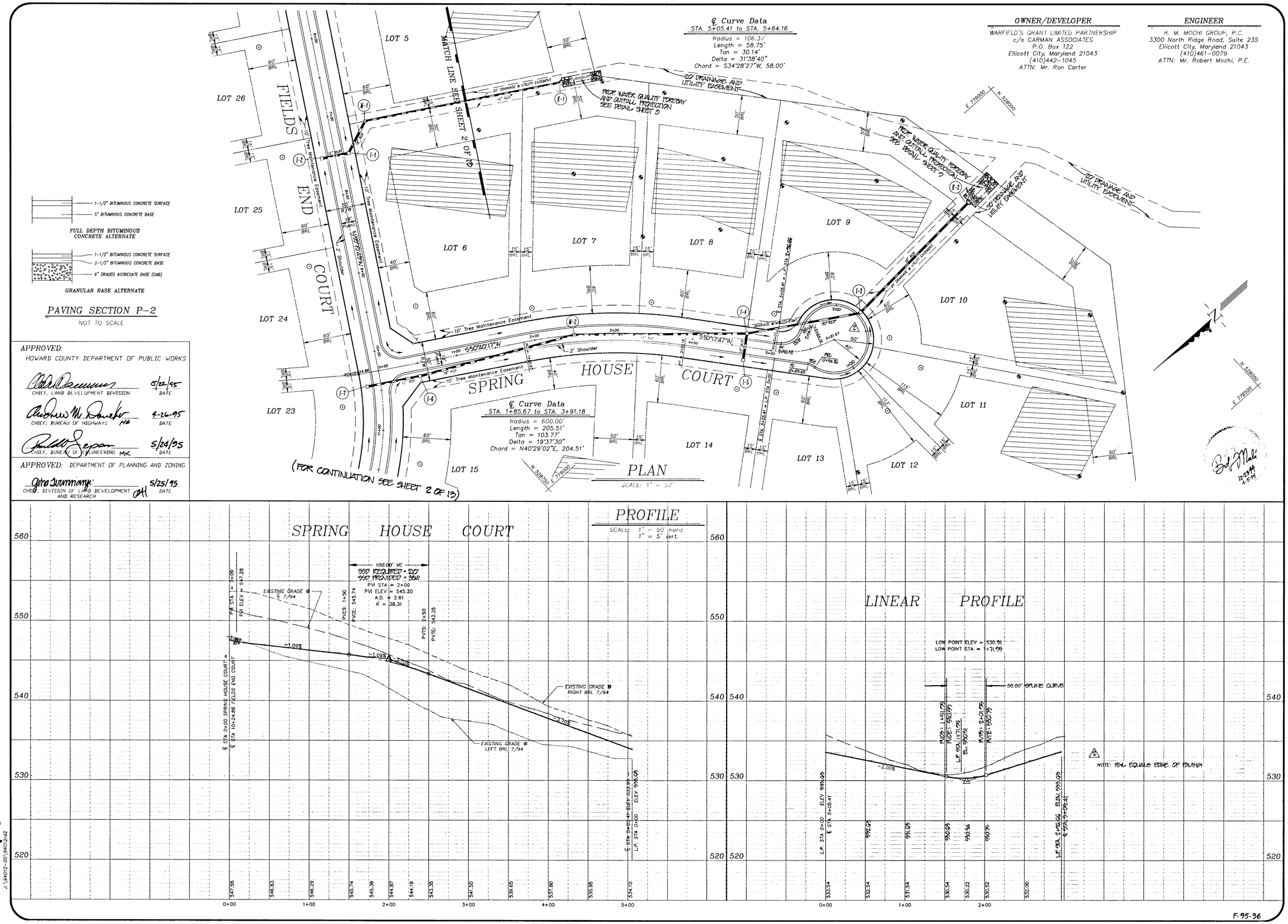
EXISTING GRADE @ RIGHT BRL 7/94

EXISTING GRADE @ LEFT BRL 7/94

EXISTING GRADE @ ℄ 7/94

LINEAR PROFILE

| | | |



project 94012.00 | date 8/15/94
illustration LJG | engineering AMV
scale as shown | approval RMM

REMOVE CURB & GUTTER ON SPRING HOUSE CT. 5/21/96
SUBMITTED FOR SIGNATURES 4/6/95
1st SUBMITTAL TO HOWARD COUNTY DPZ 12/23/94

no.	description	date
2	REMOVE CURB & GUTTER ON SPRING HOUSE CT.	5/21/96
1	SUBMITTED FOR SIGNATURES	4/6/95
0	1st SUBMITTAL TO HOWARD COUNTY DPZ	12/23/94

SECTION 2
WARFIELD'S GRANT
ELECTION DISTRICT No. 4 HOWARD COUNTY, MARYLAND
SPRING HOUSE COURT - PLAN & PROFILE

R.M. MOCHI GROUP, P.C.
3300 N. Ridge Road, Suite 235
Ellicott City, MD 21043-3305
(410) 461-0079
Fax: (410) 750-6340

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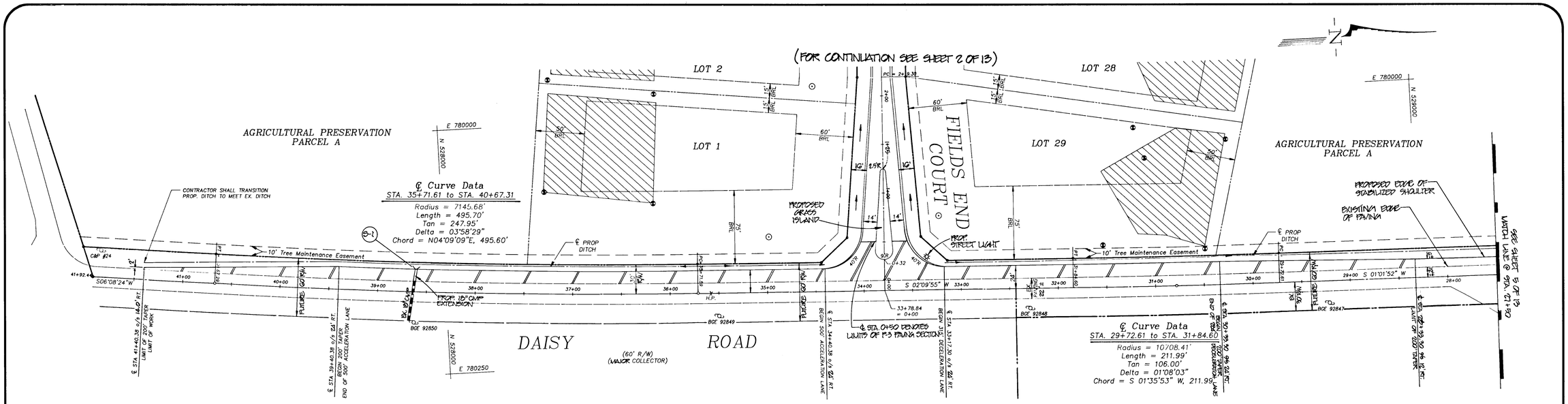


APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — 5/22/95 DATE

CHIEF, BUREAU OF HIGHWAYS — 4-26-95 DATE

CHIEF, BUREAU OF ENGINEERING — 5/24/95 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — 5/25/95 DATE

STREET LIGHT DATA
* 250 WATT HPS PENDENT FIXTURE MOUNTED ON A 30 FOOT GALVANIZED STEEL BURIAL POST LOCATED AT STA. 0+34 9'S 43' RT.

OWNER/DEVELOPER
WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER
R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

Robert Mochi 12274 4-25-95

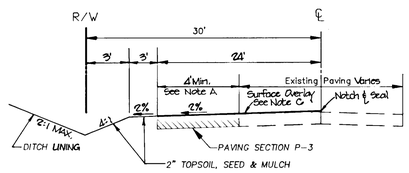
NOTE A - WHEN EXISTING TRAVEL LANE IS LESS THAN THE REQUIRED 12' LANE CONTRACTOR SHALL REMOVE ENOUGH OF THE EXISTING ROAD BED TO PROVIDE A MINIMUM BASE WIDENING OF 4'.

NOTE B - THE SURFACE OVERLAY SHALL BE CARRIED TO THE ℄ OF THE ROAD AND NOTCHED AND SEALED.

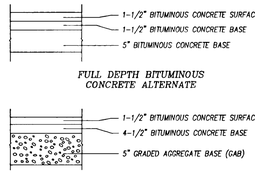
NOTE C - SURFACE OVERLAY COURSE TO BE EQUAL TO SURFACE COURSE OF TYPICAL PAVING SECTION OF SUBDIVISION.

NOTE D - ℄ OF ROAD TO BE MILLED AT DEPTH OF 1½" x 1" WIDE USING A MILLING MACHINE.

PLAN
SCALE: 1" = 50'

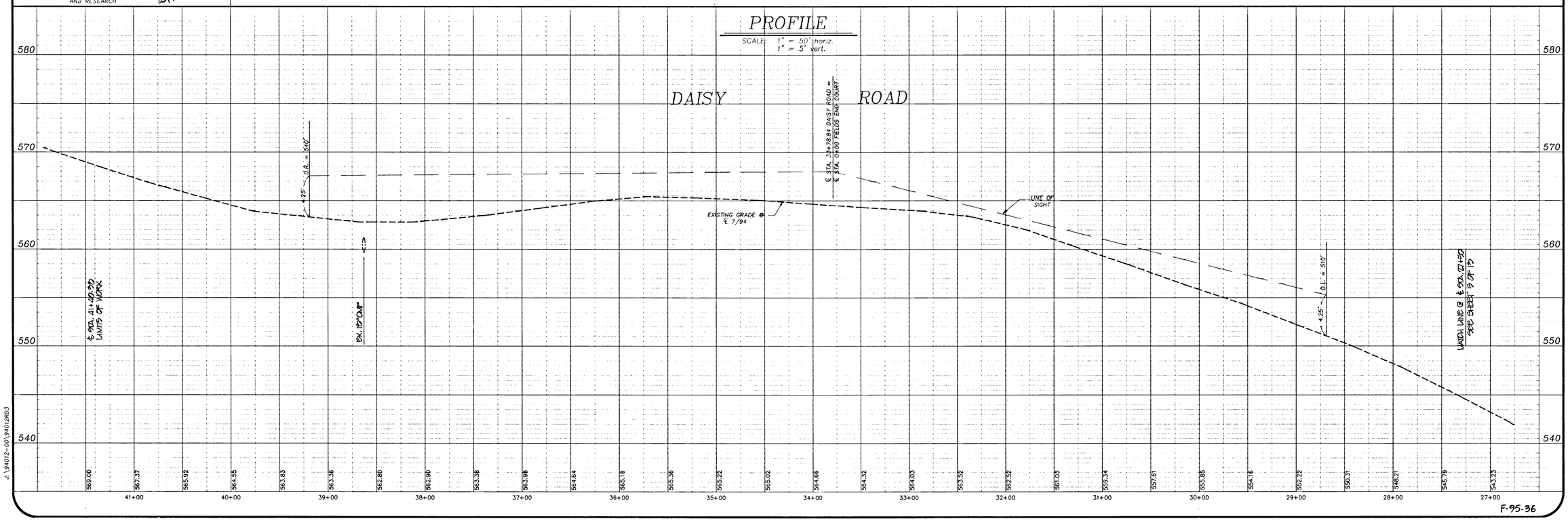


TYPICAL WIDENING SECTION
NOT TO SCALE
FOR DAISY ROAD
(STA. 22+33.30 TO STA. 41+40.38)
MAJOR COLLECTOR
HOWARD COUNTY STANDARD FIGURE 2.13 R-10.01
MINIMUM DESIGN SPEED = 50 MPH



PAVING SECTION P-3
NOT TO SCALE

PROFILE
SCALES: 1" = 50' horiz.
1" = 5' vert.



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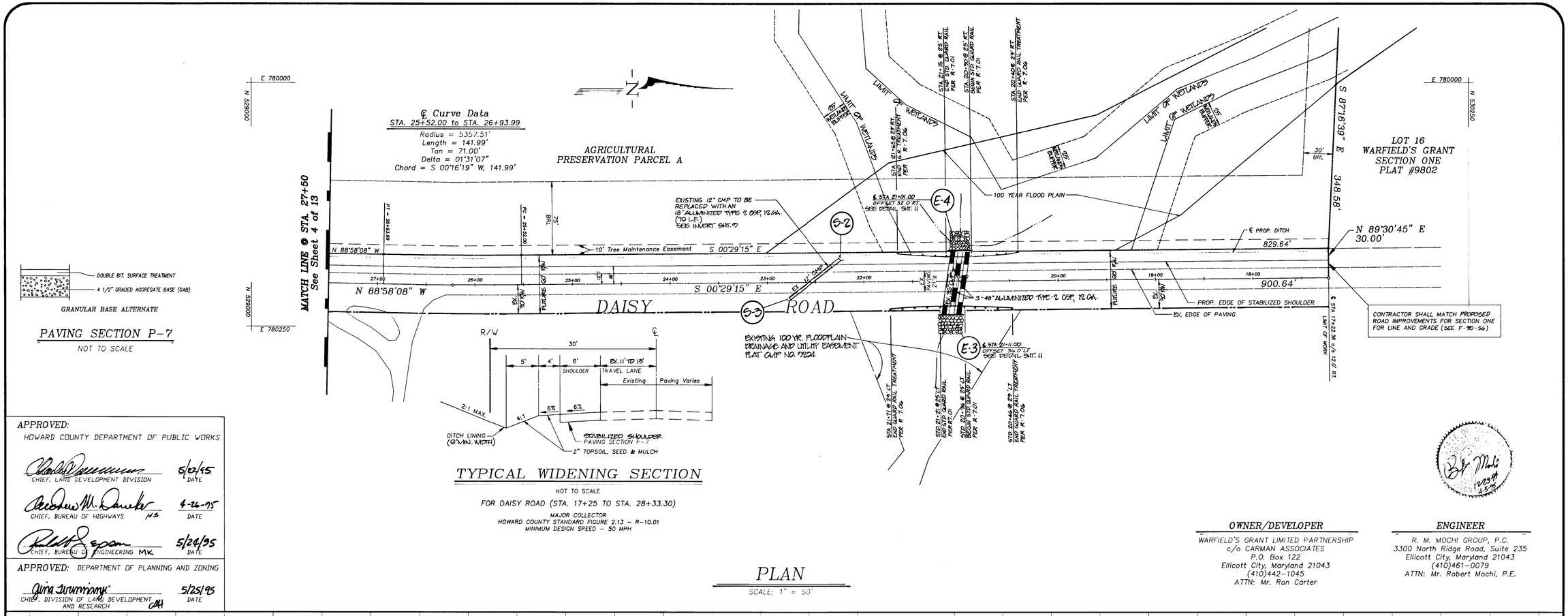
project	date
94012.00	8/15/94
illustration	engineering
LJG	AMV
scale	approval
as shown	RMM

no.	description	date
2	REVISED PER DPW REVIEW COMMENTS SUBMITTED FOR SIGNATURES	5/1/95
1	1st SUBMITTAL TO HOWARD COUNTY DPZ	10/25/94

SECTION 2
WARFIELD'S GRANT
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 4
DAISY ROAD — ROAD IMPROVEMENTS

R.M. MOCHI GROUP P.C.
CIVIL ENGINEERS LAND SURVEYORS
3300 N. Ridge Road, Suite 235
Ellicott City, MD 21043-3305
(410) 461-0079
Fax: (410) 750-6340



PAVING SECTION P-7

NOT TO SCALE

TYPICAL WIDENING SECTION

NOT TO SCALE

FOR DAISY ROAD (STA. 17+25 TO STA. 28+33.30)

MAJOR COLLECTOR
HOWARD COUNTY STANDARD FIGURE 2.13 – R-10.01
MINIMUM DESIGN SPEED – 50 MPH

PLAN

SCALE: 1" = 50'

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 5/22/95

CHIEF, BUREAU OF HIGHWAYS — DATE 4-26-95

CHIEF, BUREAU OF ENGINEERING — DATE 5/24/95

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 5/25/95

OWNER/DEVELOPER

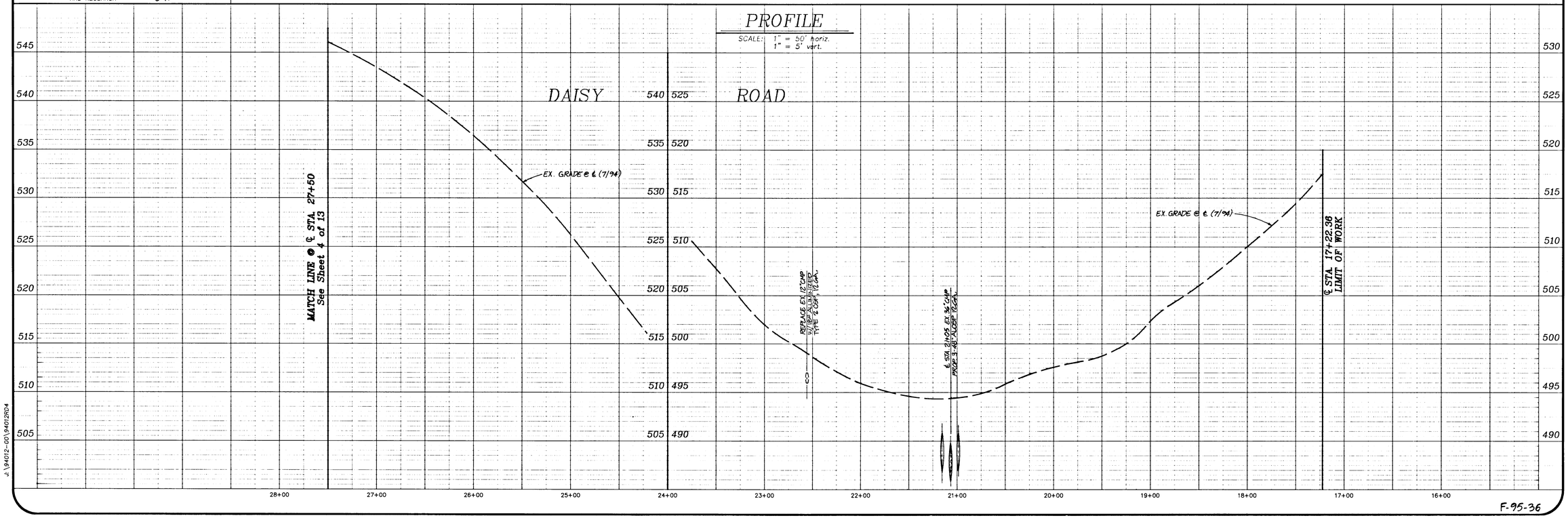
WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER

R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

PROFILE

SCALE: 1" = 50' horiz.
1" = 5' vert.



F-95-36

project	date
94012.00	12/6/94
illustration	engineering
MWZ	AMV
scale	approval
as shown	RMM

no.	description	date
1	REVISED PER DPW REVIEW COMMENTS	1/6/95
2	SUBMITTED FOR SIGNATURES	1/20/95
	PLAT SUBMITTAL TO HOWARD COUNTY DPZ	

SECTION 2
WARFIELD'S GRANT
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 4
DAISY ROAD – ROAD IMPROVEMENTS

R.M. MOCHI GROUP, P.C.
Site Planners
Civil Engineers
3300 N. Ridge Road, Suite 235
Ellicott City, MD 21043-3305
(410) 461-0079
Fax: (410) 750-8340

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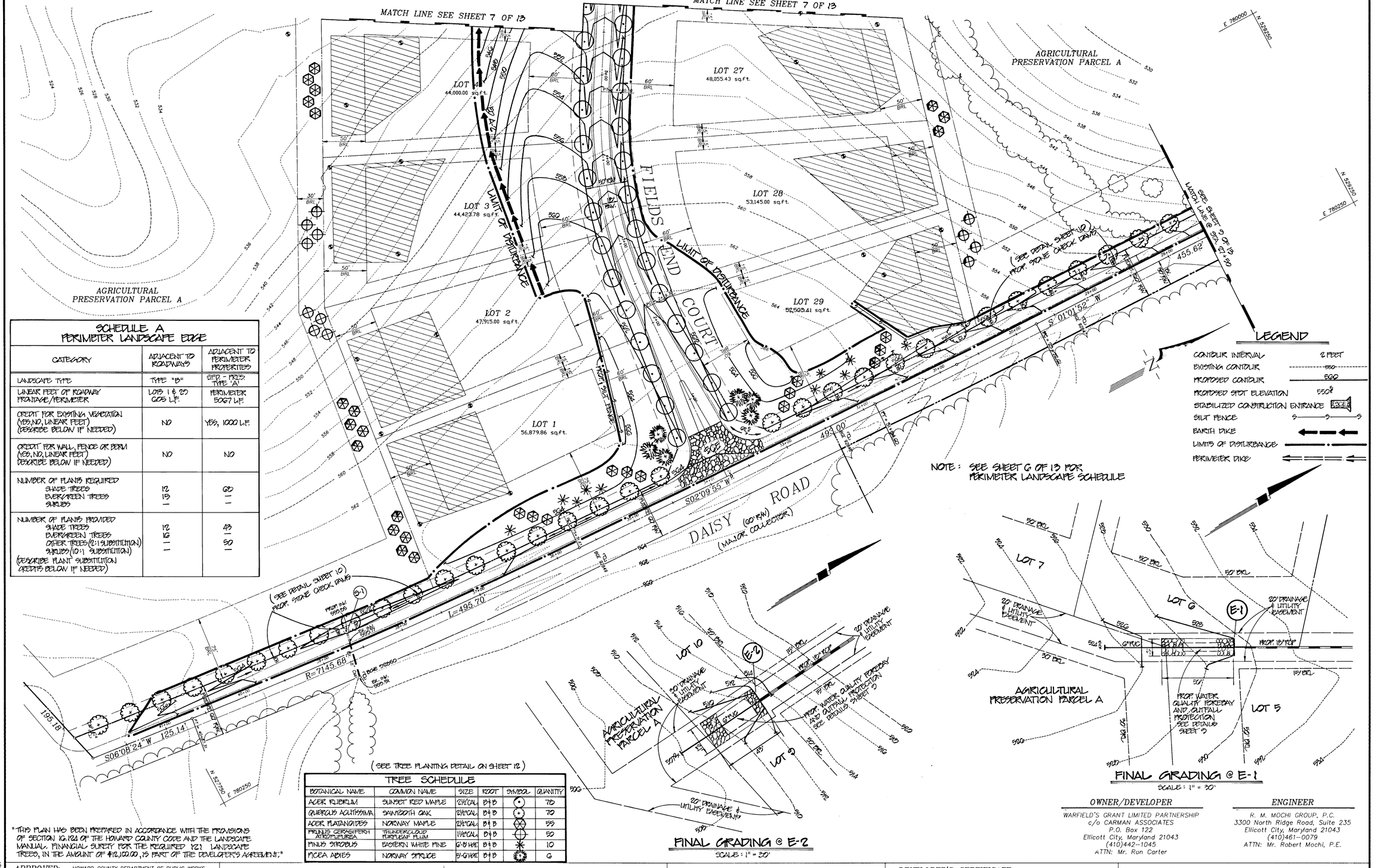

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	TYPE "B"	SFD - PROJ. TYPE "A"
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	LOTS 1 & 29 605 L.F.	PERIMETER 5067 L.F.
CREDIT FOR EXISTING VEGETATION (YES,NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES, 1000 L.F.
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) DESCRIBE BELOW IF NEEDED)	NO	NO
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	12 15 —	68 — —
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	12 16 —	43 — 50

"THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 12 LANDSCAPE TREES, IN THE AMOUNT OF $12,100.00, IS PART OF THE DEVELOPER'S AGREEMENT."

(SEE TREE PLANTING DETAIL ON SHEET 12)

TREE SCHEDULE

BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SYMBOL	QUANTITY
ACER RUBRUM	SUNSET RED MAPLE	2½"CAL.	B&B		78
QUERCUS ACUTISSIMA	SAWTOOTH OAK	2½"CAL.	B&B		70
ACER PLATANOIDES	NORWAY MAPLE	2½"CAL.	B&B		55
PRUNUS CERASIFERA ATROPURPUREA	THUNDERCLOUD PURPLELEAF PLUM	1¼"CAL.	B&B		50
PINUS STROBUS	EASTERN WHITE PINE	6'-8' HGT.	B&B		10
PICEA ABIES	NORWAY SPRUCE	5'-6' HGT.	B&B		6

LEGEND

- CONTOUR INTERVAL — 2 FEET
- EXISTING CONTOUR — 550
- PROPOSED CONTOUR — 550
- PROPOSED SPOT ELEVATION — 550.0
- STABILIZED CONSTRUCTION ENTRANCE — SCE
- SILT FENCE — S S S
- EARTH DIKE
- LIMITS OF DISTURBANCE
- PERIMETER DIKE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — 5/22/95 DATE

CHIEF, BUREAU OF HIGHWAYS — 5-26-95 DATE

CHIEF, BUREAU OF ENGINEERING MK — 5/22/95 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — 5/25/95 DATE

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

HOWARD SOIL CONSERVATION DISTRICT — 4/11/95 DATE

APPROVED: REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICES — 4/11/95 DATE

DEVELOPER'S CERTIFICATE

I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this 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 onsite inspection by the Howard County Soil Conservation District or their authorized agents, as are deemed necessary.

Signature of Developer — 4/21/1995 Date

ENGINEER'S CERTIFICATE

I hereby 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 County Soil Conservation District.

Robert M. Mochi, P.E. — 12-23-94 Date

OWNER/DEVELOPER

WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER

R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

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project 94012.00 | date 8/15/94
illustration BLP | engineering AMV
scale 1" = 50' | approval RMM

1 SUBMITTED FOR SIGNATURES 1/6/95
0 SUBMITTED TO HOWARD COUNTY DPZ 12/23/94
no. description date
revisions

SECTION 2
WARFIELD'S GRANT
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 4
GRADING, SEDIMENT CONTROL & LANDSCAPING PLAN

R.M. MOCHI GROUP, P.C.
ENGINEERING
PLANNING
LAND SURVEYING
3300 N. Ridge Road, Suite 235
Ellicott City, MD 21043-3350
(410) 461-0079
Fax: (410) 750-5340

6 OF 13

F-95-36

project	date
94012.00	8/15/94
illustration	engineering
BLP	AMV
scale	approval
1" = 50'	RMM

no.	description	date
1	REVISE CURB & GUTTER ON SPRING HOUSE CT. SUBMITTED FOR SIGNATURES	5/21/96
2	ADD SUBDIVISION TO SIGNATURES, ADD CITY DPZ	7/1/96
		10/29/96

SECTION 2
WARFIELD'S GRANT
ELECTION DISTRICT No. 4
HOWARD COUNTY, MARYLAND

GRADING, SEDIMENT CONTROL & LANDSCAPING PLAN

R.M. MOCHI GROUP, P.C.
CIVIL ENGINEERS
LAND PLANNERS
3300 N. Ridge Road, Suite 235
Ellicott City, MD 21043-3350
(410) 461-0079
Fax: (410) 750-8340

7 OF 13

F-95-36

1574

J:\94012-00\94012SC2

MATCH LINE SEE SHEET 5 OF 13

MATCH LINE SEE SHEET 6 OF 13

E 779000 N 529250

E 779250 N 529250

LOT 10 53,454.89 sq.ft.

LOT 11 46,175.00 sq.ft.

LOT 12 46,175.00 sq.ft.

LOT 13 49,037.71 sq.ft.

LOT 14 44,155.51 sq.ft.

LOT 15 57,784.23 sq.ft.

LOT 16 47,583.29 sq.ft.

LOT 17 50,589.83 sq.ft.

LOT 9 54,325.36 sq.ft.

LOT 8 44,000.00 sq.ft.

LOT 7 45,300.00 sq.ft.

LOT 6 54,243.89 sq.ft.

LOT 5 52,336.61 sq.ft.

LOT 23 47,180.16 sq.ft.

LOT 24 46,175.00 sq.ft.

LOT 25 45,162.18 sq.ft.

LOT 26 45,837.88 sq.ft.

SPRING HOUSE COURT (50' R/W)

FIELDS END COURT

LIMIT OF DISTURBANCE

ED A-2

I-1 I-2 I-3 I-4 I-5 I-6 I-7

E-1

W-1

60' DRAINAGE AND UTILITY EASEMENT

20' DRAINAGE AND UTILITY EASEMENT

AGRICULTURAL PRESERVATION PARCEL A

TEMP. SILT FENCE

STONE OUTLET SEDIMENT TRAP NO. 2

INITIAL DRAINAGE AREA =	1.80 AC.±
FINAL DRAINAGE AREA =	4.60 AC.±
STORAGE REQUIRED =	3,850 CU.FT.
STORAGE PROVIDED =	3,449 CU.FT.
BOTTOM DIMENSION =	56' X 25'
BOTTOM ELEVATION =	504.00
SIDE SLOPES =	2:1
STORAGE DEPTH =	4'
WEIR CREST ELEVATION =	508.00
TOP OF EMBANKMENT =	510.00
EXISTING GROUND @ TOP EMBANKMENT =	509.00±

RIP-RAP OUTLET SEDIMENT TRAP NO. 1

INITIAL DRAINAGE AREA =	4.40 AC.±
FINAL DRAINAGE AREA =	5.95 AC.±
STORAGE REQUIRED =	2,024 CU.FT.
STORAGE PROVIDED =	12,176 CU.FT.
BOTTOM DIMENSION =	40'X 45'
BOTTOM ELEVATION =	519.00
SIDE SLOPES =	2:1
STORAGE DEPTH =	4'
WEIR CREST ELEVATION =	524.00 LENGTH = 16'
TOP OF EMBANKMENT =	527.25
EXISTING GROUND @ TOP EMBANKMENT =	524.50 ±

N 528000 E 779250

NOTE: SEE SHEET 6 OF 13 FOR PERIMETER LANDSCAPE SCHEDULE

OWNER/DEVELOPER

WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER

R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — 5/22/95 DATE

CHIEF, BUREAU OF HIGHWAYS — 4-26-95 DATE

CHIEF, BUREAU OF ENGINEERING MK — 5/24/95 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH CDR — 5/25/95 DATE

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

HOWARD SOIL CONSERVATION DISTRICT — 9/11/95 DATE

APPROVED: REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICES — 4/11/95 DATE

DEVELOPER'S CERTIFICATE

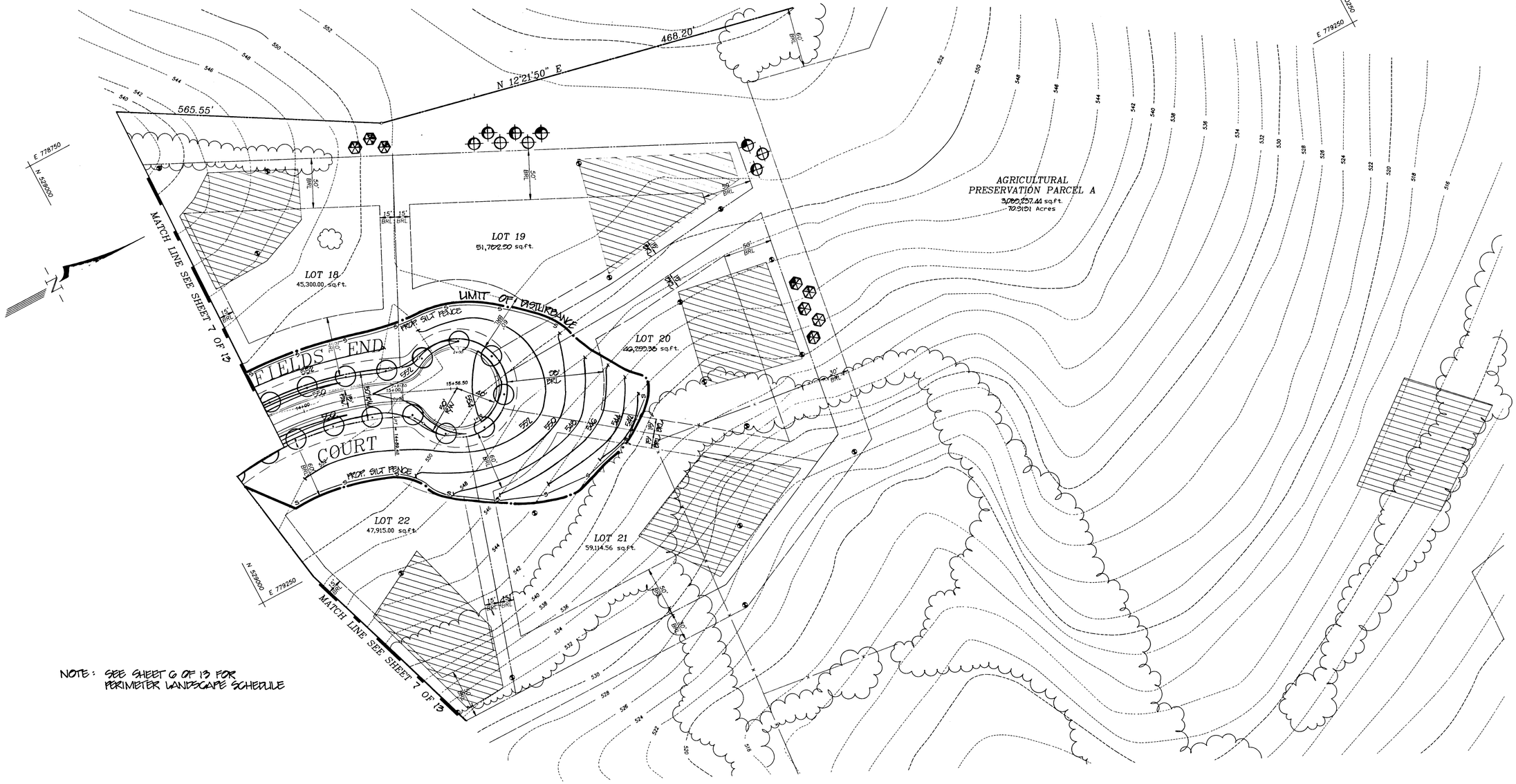
I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this project will have a certificate of attendance at a Department of the Environment approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic onsite inspection by the Howard County Soil Conservation District or their authorized agents, as are deemed necessary.

Signature of Developer — 9/21/1994 Date

ENGINEER'S CERTIFICATE

I hereby 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 County Soil Conservation District.

Robert M. Mochi, P.E. — 12-28-94 A.S.T.S. Date



NOTE: SEE SHEET 6 OF 13 FOR PERIMETER LANDSCAPE SCHEDULE

OWNER/DEVELOPER

WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER

R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — 5/22/95 DATE

CHIEF, BUREAU OF HIGHWAYS HP — 4-26-95 DATE

CHIEF, BUREAU OF ENGINEERING MK — 5/24/95 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH CH — 5/25/95 DATE

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

HOWARD SOIL CONSERVATION DISTRICT — 4/11/95 DATE

APPROVED: REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICES — 4/11/95 DATE

DEVELOPER'S CERTIFICATE

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Signature of Developer — 9/21/1994 Date

ENGINEER'S CERTIFICATE

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Robert M. Mochi, P.E. — 12-23-94 1595 Date

project 94012.00 | date 8/15/94
illustration BLF | engineering AMV
scale 1" = 50' | approval RMM

no.	description	date
1	SUBMITTED FOR SIGNATURES	4/11/95
0	1st SUBMITTAL TO HOWARD COUNTY DPZ	12/23/94

SECTION 2
WARFIELD'S GRANT
ELECTION DISTRICT No. 4 HOWARD COUNTY, MARYLAND
GRADING, SEDIMENT CONTROL & LANDSCAPING PLAN

R.M. MOCHI GROUP, P.C.
ENGINEERING SURVEYING LAND DEVELOPMENT AND SURVEYING
3300 N. Ridge Road, Suite 235 Ellicott City, Md. 21043-3359
(410) 461-0079 Fax: (410) 750-6540

8 OF 13

F-95-36

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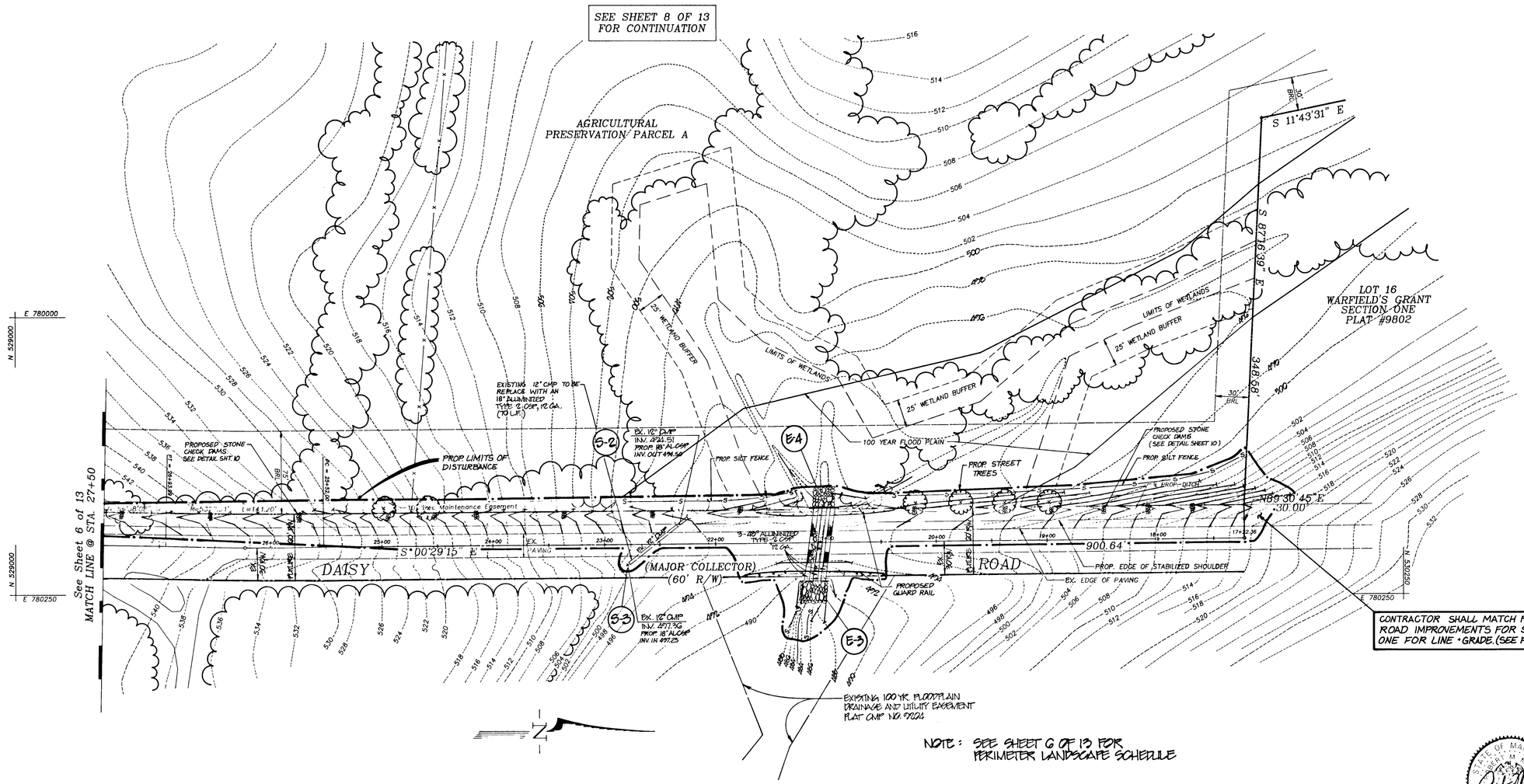

NOTE: SEE SHEET 6 OF 13 FOR PERIMETER LANDSCAPE SCHEDULE

OWNER/DEVELOPER

WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER

R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 5/22/95
CHIEF, BUREAU OF HIGHWAYS — DATE 4-26-95
CHIEF, BUREAU OF ENGINEERING — DATE 5/24/95

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 5/25/95

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 4/4/95

APPROVED: REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICES — DATE 4/4/95

DEVELOPER'S CERTIFICATE

I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this 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 onsite inspection by the Howard County Soil Conservation District or their authorized agents, as are deemed necessary.

Signature of Developer — Date 10/21/94

ENGINEER'S CERTIFICATE

I hereby 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 County Soil Conservation District.

Robert M. Mochi, P.E. — Date 12-23-94 4-5-95

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project	date
94012.00	12/7/94
illustration	engineering
MWZ	AMV
scale	approval
1" = 50'	RMM

no.	description	date
2	REVISED PER DPW REVIEW COMMENTS	5/10/95
1	SUBMITTED FOR SIGNATURES	4/6/95
0	1ST SUBMITTAL TO HOWARD COUNTY DPZ	10/20/94

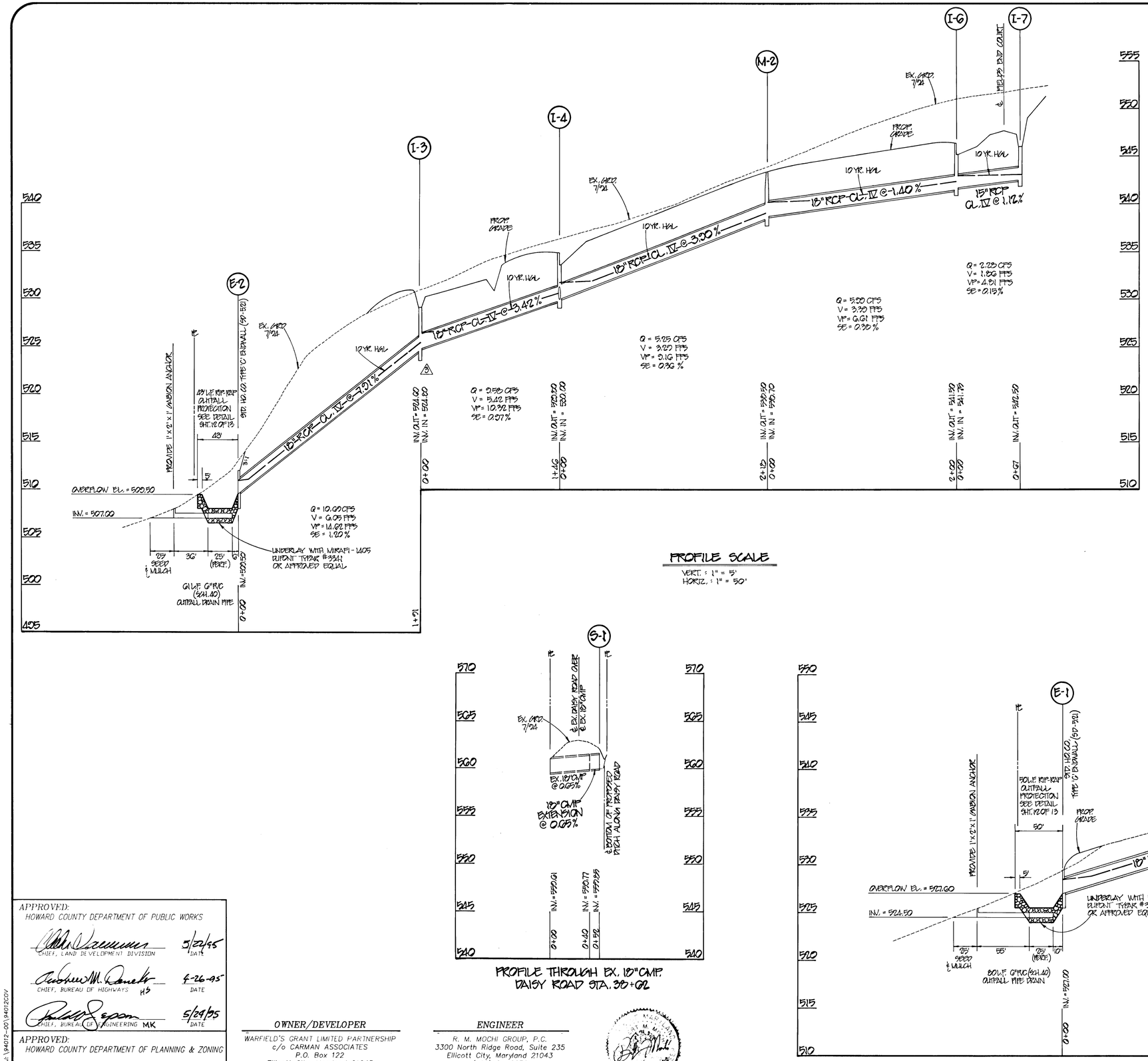
revisions

SECTION 2
WARFIELD'S GRANT
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 4
GRADING, SEDIMENT CONTROL & LANDSCAPING PLAN

R.M. MOCHI GROUP, P.C.
3300 N. Ridge Road, Suite 235
Ellicott City, MD 21043-3350
(410) 461-0079
Fax: (410) 750-6340

9 OF 13

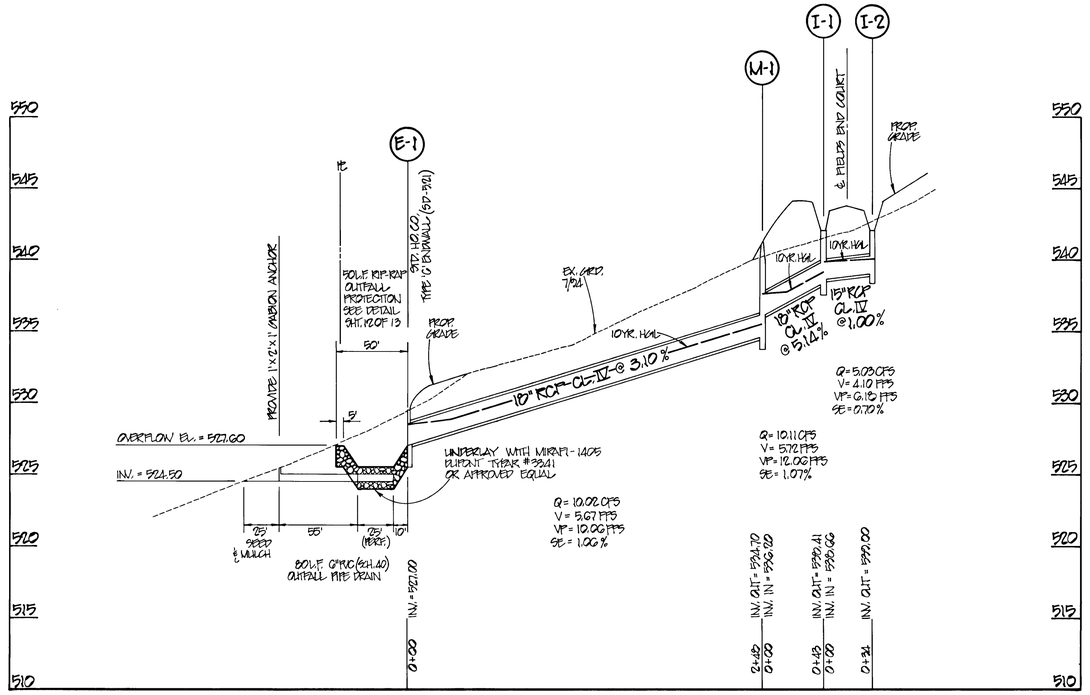
F-95-36



PROFILE SCALE

VERT. : 1" = 5'
HORIZ. : 1" = 50'

PROFILE THROUGH EX. 18" CMP. DAISY ROAD STA. 30+02



APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 5/22/95
CHIEF, BUREAU OF HIGHWAYS HS — DATE 4-26-95
CHIEF, BUREAU OF ENGINEERING MK — DATE 5/29/95

APPROVED:
HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 5/25/95

1574

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OWNER/DEVELOPER

WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER

R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

project	date
94012.00	8/11/94
illustration	engineering
BLP	AMV
scale	approval
AS SHOWN	RMM

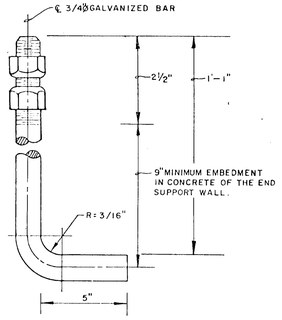
no.	revisions	date
1	REVISED GRID & CUTTER OU STRUCTURE LOCATIONS REVISED PER SCD REVIEW COMMENTS	5/21/96
0	1st SUBMITTAL TO HOWARD COUNTY DPZ	5/10/95 12/09/94

SECTION II
WARFIELD'S GRANT
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 4
STORM DRAIN PROFILES

R.M. MOCHI GROUP, P.C.
3300 N. Ridge Road, Suite 235
Ellicott City, MD 21043-3355
(410) 461-0079
Fax: (410) 750-5340

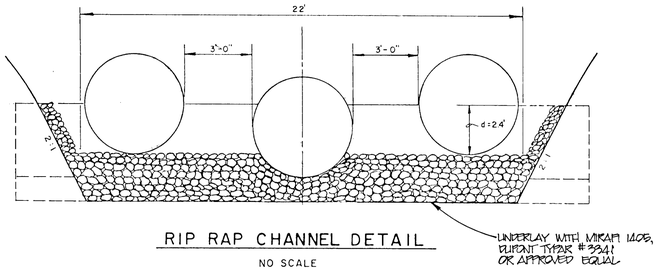
10 OF 13

F-95-36



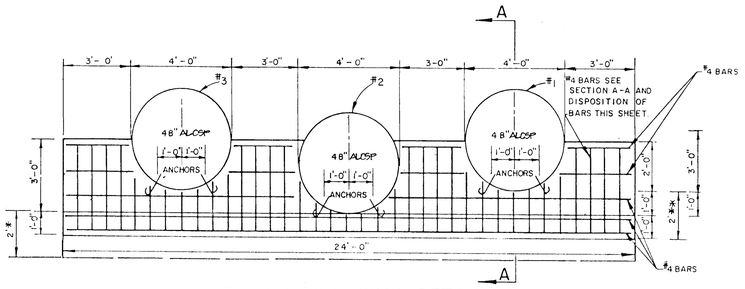
ANCHOR BOLT DETAIL

NO SCALE



RIP RAP CHANNEL DETAIL

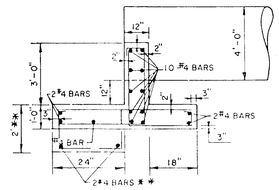
NO SCALE



END SUPPORT WALL DETAIL

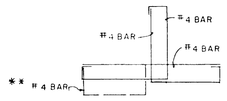
NO SCALE

** THIS DETAIL IS FOR END SUPPORT WALL E-3 ONLY.



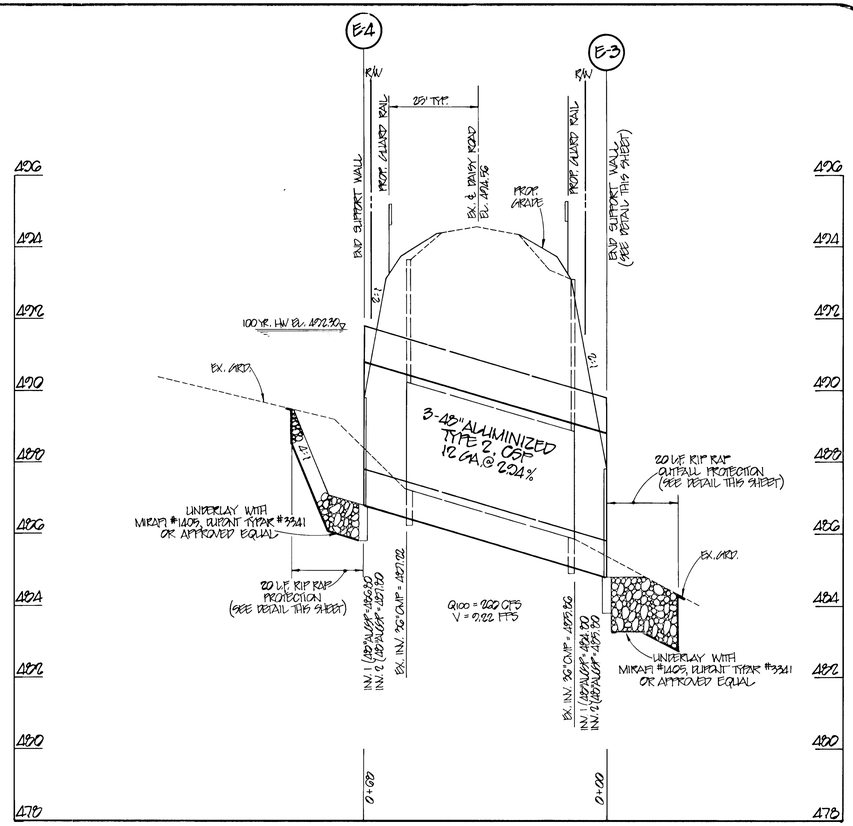
SECTION A-A

NO SCALE



DISPOSITION OF BARS

NO SCALE



PROPOSED CULVERT @ DAISY ROAD

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

RIP-RAP CHANNEL DESIGN DATA

STRUCTURE	A ℄	P FT.	R	R 2/3	S %	S 1/2	N	Q C.F.S.	V F.P.S.	D FT.	W FT.	RIP-RAP SIZE D 50	RIP-RAP SIZE D MAX.	t
E-3	55.91	25.45	2.06	1.62	0.3	0.0707	0.04	260.00	4.76	2.63	18'	9"	14"	20"
E-4	37.70	23.37	0.97	0.71	2.94	0.1715	0.04	260.00	5.76	4.50	18'	9"	14"	12"

STRUCTURE SCHEDULE

NO.	STD. TYPE	LOCATION	INV. IN	INV.OUT	TOP ELEV.	REMARKS
I-1	S.D.- 4.12	C/L STA. 7+50 O/S 17' Lt.	15"- 538.66	18"- 538.41	542.08	Type "K" Inlet
I-2	S.D.- 4.12	C/L STA. 7+50 O/S 17' Rt.	---	15"- 539.00	542.08	Type "K" Inlet
I-3	S.D.- 4.12	L.P. STA. 14+71.95	18"- 524.80	18"- 524.60	527.13	Type "K" Inlet
I-4	S.D.- 4.12	C/L STA. 4+67 O/S 17' Lt.	15"- 530.29 18"- 530.00	18"- 529.80	533.60	Type "K" Inlet
I-5	S.D.- 4.12	C/L STA. 4+67 O/S 17' Rt.	---	15"- 530.68	533.60	Type "K" Inlet
I-6	S.D.- 4.12	C/L STA. 0+50 @ 17' Rt.	15"- 541.75	18"- 541.50	545.11	Type "K" Inlet
I-7	S.D.- 4.12	C/L STA.10+41.86 @ 17' Rt.	---	15"- 542.50	546.00	Type "K" Inlet
M-1	S.G.- 5.12	N 528612.61 E 779496.50	18"- 536.20	18"- 534.70	541.50	Std. Manhole
M-2	S.G.- 5.12	C/L STA. 2+50	18"- 538.70	18"- 538.50	543.35	Std. Manhole
E-1	S.D.- 5.21	N 528399.31 E 779369.99	---	18"- 527.00	529.50	Type"C" Endwall
E-2	S.D.- 5.21	N 528118.87 E 778913.27	---	18"- 509.50	512.00	Type"C" Endwall
S-1	S.D.- 5.61	C/L STA.38+62 @ 25' Rt.	18"- 559.85	---	561.35	Std. End Section
S-2	S.D.- 5.61	C/L STA. 22+25 @ 24' Rt.	---	18"- 494.50	496.00	Std. End Section
S-3	S.D.- 5.61	C/L STA. 22+77 @ 17' Lt.	18"- 497.25	---	498.75	Std. End Section
E-3	SEE PLAN	C/L STA.21+11.00 @ 36' Lt.	---	48"(1) = 484.80 48"(2) = 485.80	SEE PLAN	Mod. Endwall
E-4	SEE PLAN	C/L STA.21+01.00 @ 32' Rt.	48"(1) = 486.80 48"(2) = 487.80	---	SEE PLAN	Mod. Endwall

NOTE: Top of Structure Elevations refer to:
A. Inlet - Top of curb elevation @ Centerline of inlet
- For "K" Inlets it denotes the throat elevation.
B. Manoles - Denotes Rim Elevation

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 5/24/95

CHIEF, BUREAU OF HIGHWAYS — DATE 4-26-95

CHIEF, BUREAU OF ENGINEERING — DATE 5/24/95

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 5/25/95

OWNER/DEVELOPER

WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER

R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

project	94012.00	date	12/6/94
Illustration	MWZ	engineering	AMV
scale	AS SHOWN	approval	RMM

no.	description revisions	date
1	REVISE CURB & GUTTER AT STELLA HOUSE DR. REVISED PER DPW, TE, DPZ COMMENTS RESUBMITTED PER 3 HANDLERS	5/10/95
2	1ST SUBMITTAL TO HOWARD COUNTY DPZ	12/20/94

SECTION II
WARFIELD'S GRANT
ELECTION DISTRICT No. 4 HOWARD COUNTY, MARYLAND
STORM DRAIN PROFILES AND DETAILS

R.M. MOCHI GROUP, P.C.
3300 N. Ridge Road, Suite 235
Ellicott City, MD 21043-3305
(410) 461-0079
Fax: (410) 750-6340

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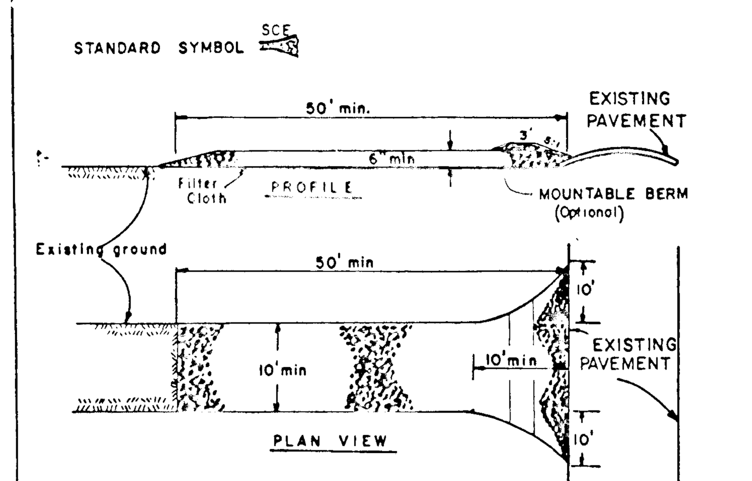
STABILIZED CONSTRUCTION ENTRANCE
not to scale

STANDARD SYMBOL SCE

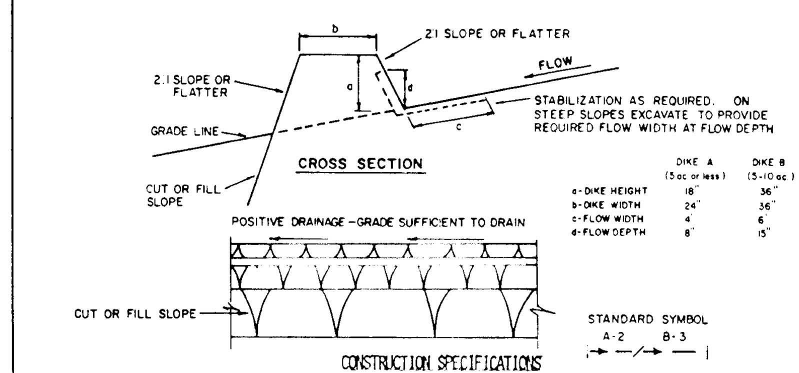


CONSTRUCTION SPECIFICATIONS

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 length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE College Park, Md.	STABILIZED CONSTRUCTION ENTRANCE	Standard Drawing SCE-1

EARTH DIKE
not to scale



CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

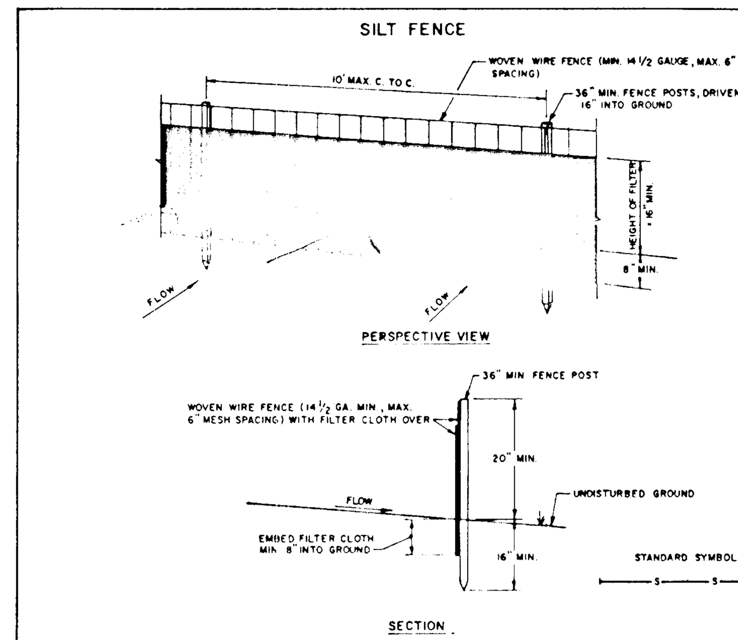
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	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 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	EARTH DIKE	STANDARD DRAWING ED-1

SILT FENCE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

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

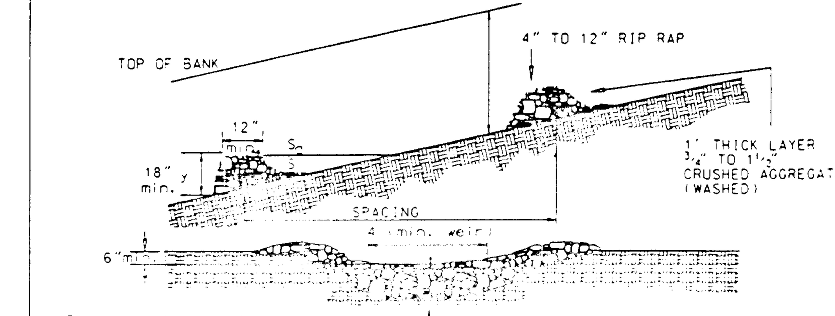
FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING

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

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	SILT FENCE	STANDARD DRAWING SF-1

DETAIL 7 - STONE CHECK DAM



* 3 acre maximum drainage area

STANDARD STONE CHECK DAM DESIGN

SLOPE	SPACING
2% or less	80'
2.1% to 4%	40'
4.1% to 7%	25'
7.1% to 10%	15'
over 10%	use lined waterway design

* NOTE: FOR USE OF SMALLER DIMENSIONS AND/OR LARGER DRAINAGE AREA LIMITS USE THE STONE CHECK DAM DESIGN.

Construction Specifications

1. Swales and ditches shall be prepared in accordance with the construction specifications described in Section A-2, Standards and Specifications for Temporary Swale.

2. The check dam shall be constructed of 4 inch to 12 inch rip rap. The rip rap shall be placed so that it completely covers the width of the channel and keyed into the channel banks.

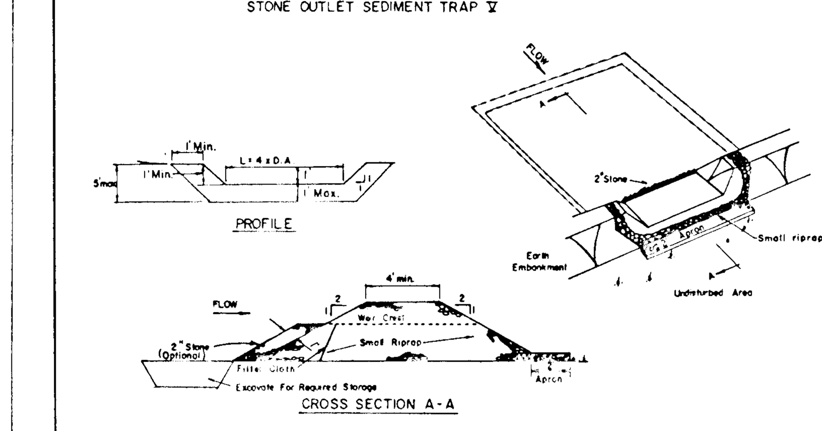
3. The top of the check dam shall be constructed so that the center is approximately 6 inches lower than the outer edges, forming a weir that water can flow across.

4. The maximum height of the check dam at the center shall not exceed 2 feet.

5. The upstream side of the check dam may be lined with approximately 1 foot of 3/4 to 1 1/2 inch crushed aggregate.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE B - 8 - 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STONE OUTLET SEDIMENT TRAP V



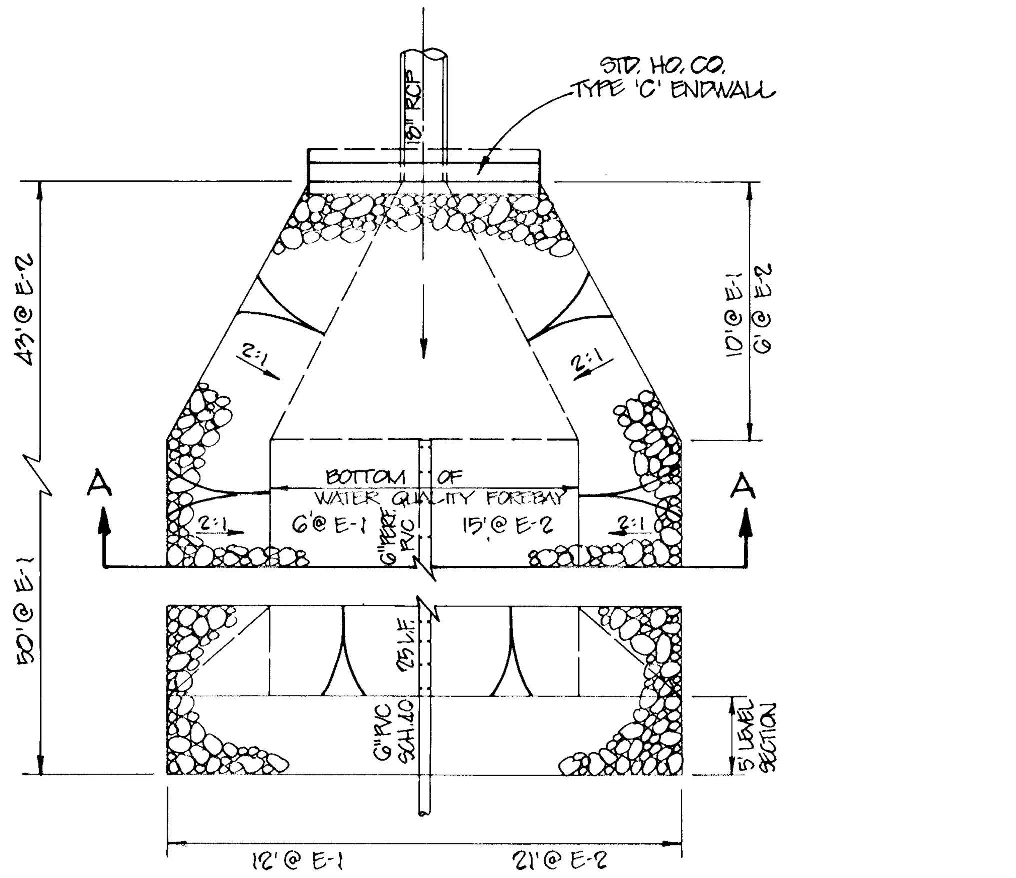
OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

CONSTRUCTION SPECIFICATIONS FOR ST-V

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small riprap 4"-8" along with a 1' thickness of 2" aggregate placed on the up-grade side on the small riprap OR embedded filter cloth in the riprap.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to ½ the design depth of the trap.
6. The structure shall be inspected after each rain and repairs made as needed.
7. Construction operations shall be carried out in such a manner than erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

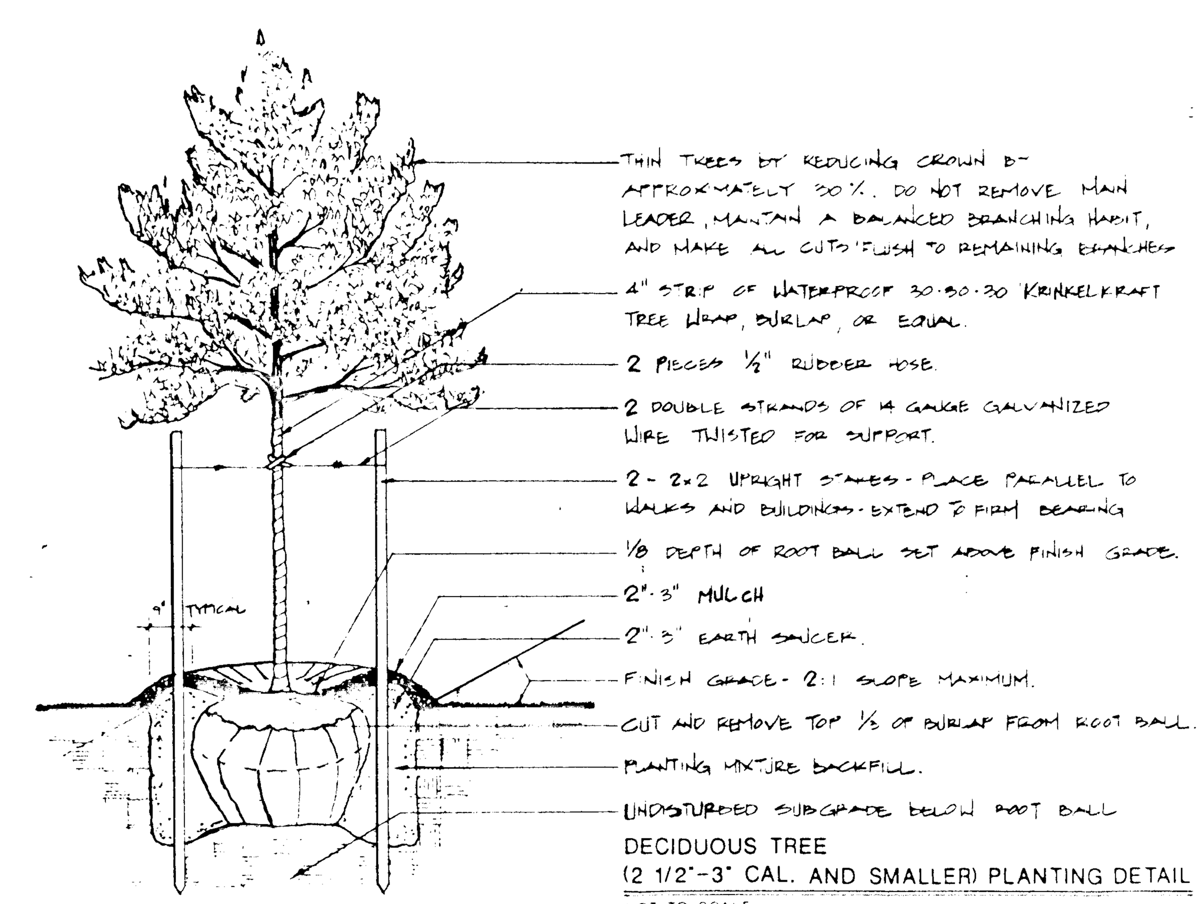
Maximum Drainage Area: 5 Acres

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	STONE OUTLET SEDIMENT TRAP	STANDARD DRAWING ST-V



WATER QUALITY FOREBAY & RIP-RAP OUTFALL PROTECTION

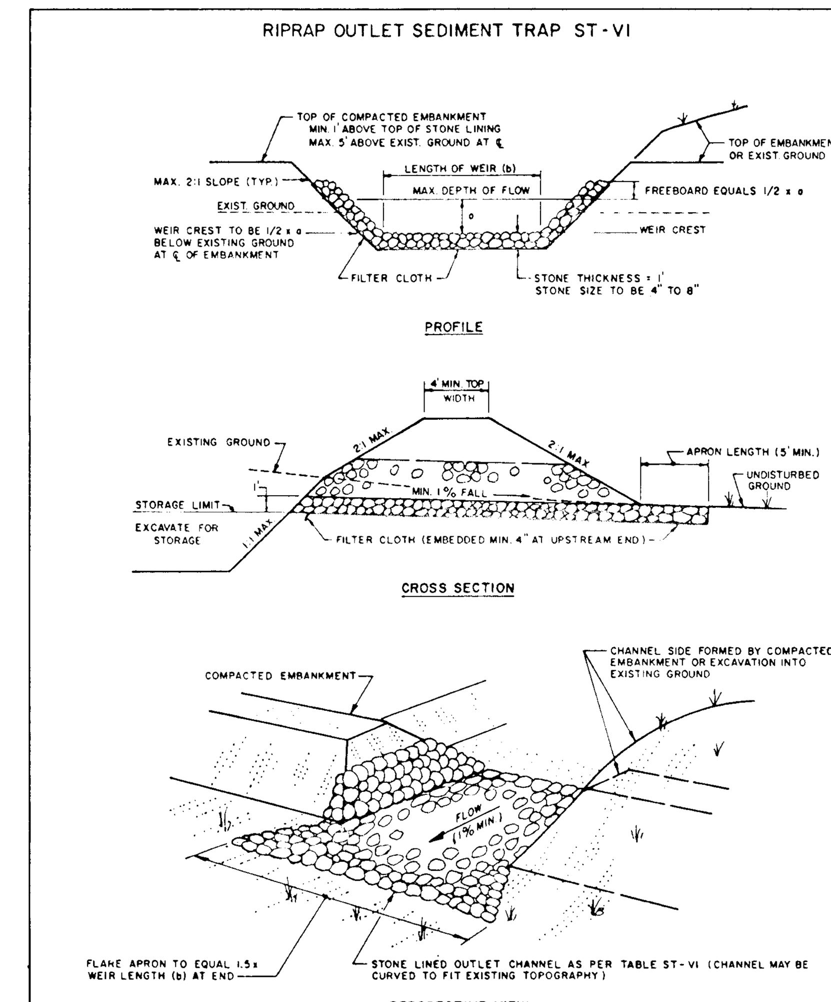
NOT TO SCALE



DECIDUOUS TREE
(2 1/2"-3" CAL. AND SMALLER) PLANTING DETAIL

NOT TO SCALE

RIPRAP OUTLET SEDIMENT TRAP ST-VI



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	RIPRAP OUTLET SEDIMENT TRAP	STANDARD DRAWING ST-VI

CONSTRUCTION SPECIFICATIONS FOR ST-VI

1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.

2. The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.

3. All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.

4. Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.

5. Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.

6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.

7. Stone used in the outlet channel shall be four (4) to eight(8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.

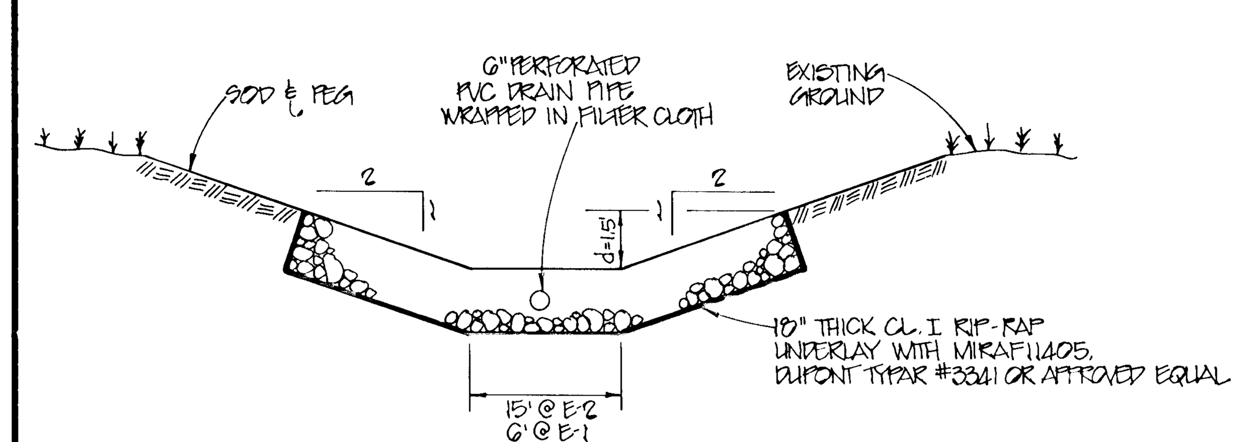
8. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

9. The structure shall be inspected after each rain and repaired as needed.

10. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.

11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

12. Drainage area for this practice is limited to 15 acres or less.



RIP-RAP TRAPEZOIDAL CHANNEL DETAIL A-A

NOT TO SCALE

OWNER/DEVELOPER

WARFIELD'S GRANT LIMITED PARTNERSHIP
c/o CARMAN ASSOCIATES
P.O. Box 122
Ellicott City, Maryland 21043
(410)442-1045
ATTN: Mr. Ron Carter

ENGINEER

R. M. MOCHI GROUP, P.C.
3300 North Ridge Road, Suite 235
Ellicott City, Maryland 21043
(410)461-0079
ATTN: Mr. Robert Mochi, P.E.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 5/22/95

CHIEF, BUREAU OF HIGHWAYS HG — DATE 4-26-95

CHIEF, BUREAU OF ENGINEERING MK — DATE 5/24/95

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH CAH — DATE 5/25/95

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 4/11/95

APPROVED: REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICES — DATE 4/11/95

DEVELOPER'S CERTIFICATE

I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this 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 onsite inspection by the Howard County Soil Conservation District or their authorized agents, as are deemed necessary.

Signature of Developer — Date 12/01/94

ENGINEER'S CERTIFICATE

I hereby 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 County Soil Conservation District.

Robert M. Mochi, P.E. — Date 4/4/95

project	date
94012.00	8/15/94
illustration	engineering
BLP	AMV
scale	approval
AS SHOWN	RMM

no.	description	date
1	SUBMITTED FOR SIGNATURES	4/6/95
0	1st SUBMITTAL TO HOWARD COUNTY DPZ	12/13/94
	revisions	

SECTION 2
WARFIELD'S GRANT
ELECTION DISTRICT No. 4 — HOWARD COUNTY, MARYLAND

SEDIMENT CONTROL DETAILS

R.M. MOCHI GROUP, P.C. — CIVIL ENGINEERS, LAND SURVEYORS, PLANNERS, ENVIRONMENTAL
3300 N. Ridge Road, Suite 235, Ellicott City, MD 21043-3350
(410) 461-0079 Fax: (410) 750-6340

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PERMANENT SEEDING NOTES

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

Seedbed Preparation: Loosen upper three inches of soil be raking, discing or other acceptable means before seeding. (If not previously loosened)

Soil Amendments: In lieu of soil test recommendations, use on the following schedules.

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

Seeding: For the periods March 1 through April 30 and August 1 through October 15, seed with 60 lbs per acre (1.4 lbs/1000 sf) of Kentucky 31 Tall Fescue. For the period May 1 through July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (0.05 lbs/1000 sf) of Weeping Lovegrass. During the period of October 16 through 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 1–1/12 to 2 tons per acre (70 to 90 lbs/1000 sf) 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 sf) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sf) for anchoring.

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

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed 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 sf).

Seeding: For periods March 1 through April 30 and from August 15 through November 15, seed with 2–1/2 bushel per acre of annual rye (3.2 lbs/1000 sf). For the period May 1 through August 14, seed with 3 lbs per acre of Weeping Lovegrass (0.07 lbs/1000 sf). For the period November 16 through 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 (70 to 90 lbs/1000 sf) 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 sf) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sf) for anchoring.

Refer to the 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control for rate and methods not covered.

SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction. (313–1855)
2. All vegetative and structural practices are to be installed accordingly 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.
3. Following initial soil disturbances or redisturbance, permanent or temporary stabilization shall be completed within: a) 72 hours for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 5 calendar days as to all other disturbed or graded areas on the project site.
4. 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) Sod (Sec. 54). Temporary Seeding (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.
5. 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.
6. Site Analysis:

Total Area of Site:	108.09 Ac.
Area to be Disturbed	55 Ac.±
Area to be roofed or paved:	1.6 Ac.±
Area to be vegetatively stabilized:	8.7 Ac.±
Total Cut:	9400 c.y. ±
Total Fill:	8100 c.y.±
Offsite Waste/Borrow Area:	None

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
8. Additional sediment controls must be provided, if deemed necessary by the Howard County DILP Sediment Control Inspector.
9. Quantities and estimates shown are for sediment control purposes only. Contractor shall prepare his/her own quantity estimates to his/her satisfaction.

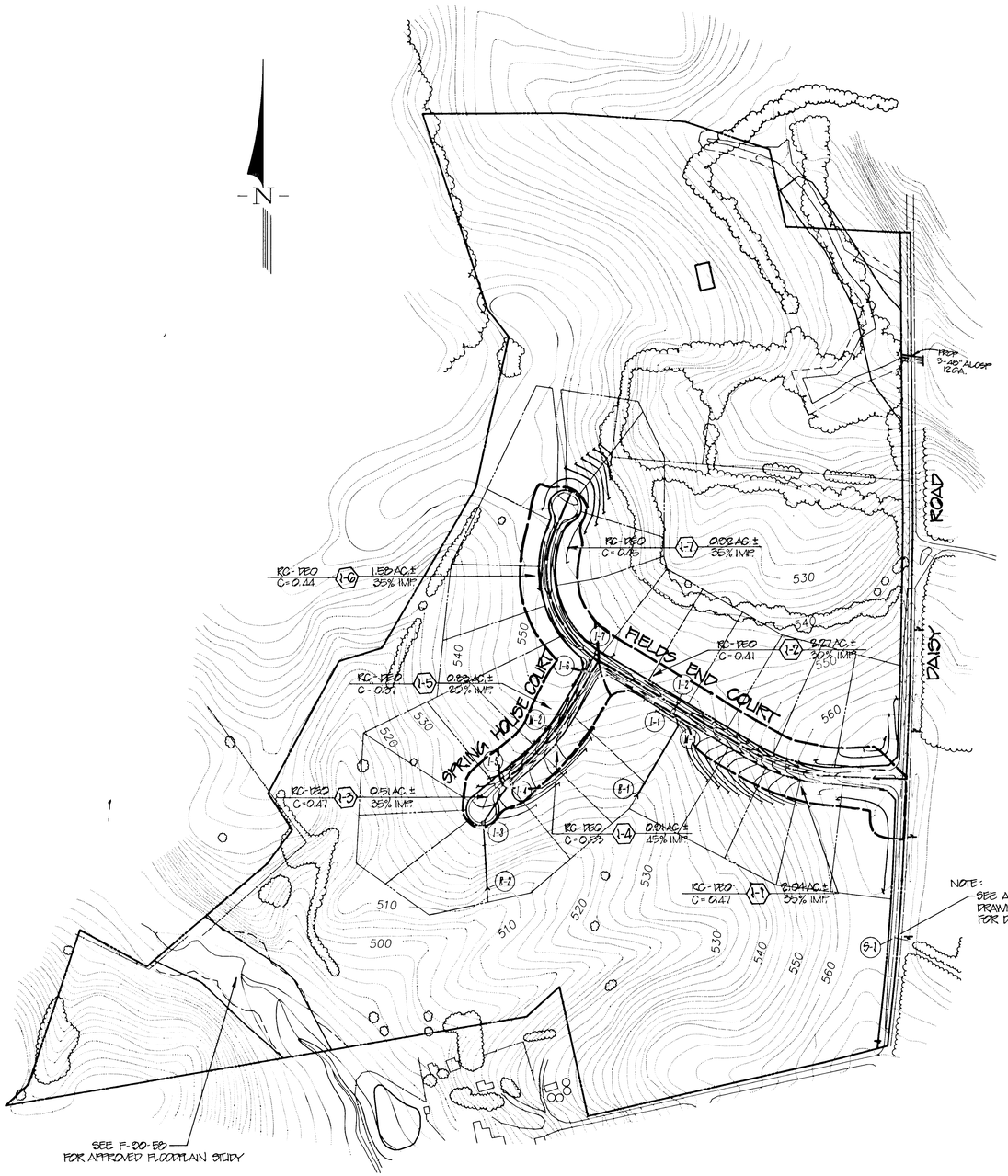
LANDSCAPE NOTES

1. Proposed locations of Street Trees and Perimeter Landscaped Edges are shown on sheets 4 and 5.
2. Tree Tabulation

A. Street Trees
Daisy Road
2350 L.F. of Right–of–Way
50 Street Trees required 40 feet apart
50 Quercus Acutissma / Sawtooth Oak proposed + CREDIT FOR EX. VEGATATION
Fields End Court
1560 L.F. of Right–of–Way
78 Street Trees required 40 feet apart
78 Acer Rubrum / Sunset Red Maple proposed
Spring House Court
600 L.F. of Right–of–Way
30 Street Trees required 40 feet apart
31 Quercus Acutissma / Sawtooth Oak proposed

SEQUENCE OF CONSTRUCTION

1. Obtain all required permits, approvals and licenses from appropriate agencies.
2. Notify Howard County Construction Inspection Division (313–1880) at least five (5) working days prior to starting work on these plans.
3. Clear and grub for sediment and erosion control measures only. Install stabilized construction entrance.
4. Install all sediment and erosion control measures and devices only as indicated on the plans. All sediment control devices are to be inspected daily and after each rainfall. Repair sediment devices as required.
5. Clear and grub for the remainder of the site.
6. Install proposed 48"ALOS® No. 1 next to the existing 36" CMP culvert. Divert flow from the existing 36" CMP to the now existing 48"ALOS® No.1.
7. Remove the existing 36" CMP and install the proposed 48"ALOS® pipes no. 2 and 3 and endwalls E-1 and E-2 as shown on these plans.
8. Replace the existing 12" CMP in Daisy Road with an 18" CMP as shown hereon.
9. Grade site to the proposed subgrade. Widen and grade Daisy Road according to the typical widening section shown hereon. Stabilize all slopes immediately upon completion of grading.
10. Construct storm drains and paving.
11. When all contributing areas to the sediment control devices have been stabilized and with the permission of the sediment control inspector, the device may be removed and/or backfilled and the area brought to final design grade. Stabilize all remaining areas in accordance with permanent seeding notes.
12. Notify Howard County Office of Inspections and Permits for final inspection of completed project.



DRAINAGE AREA MAP

SCALE : 1" = 200'

OWNER/DEVELOPER

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c/o CARMAN ASSOCIATES
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Ellicott City, Maryland 21043
(410)442–1045
ATTN: Mr. Ron Carter

ENGINEER

R. M. MOCHI GROUP, P.C.
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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — 5/22/95 DATE

CHIEF, BUREAU OF HIGHWAYS — 4-26-95 DATE

CHIEF, BUREAU OF ENGINEERING MK — 5/24/95 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH CDH — 5/25/95 DATE

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

HOWARD SOIL CONSERVATION DISTRICT — 4/11/95 DATE

APPROVED: REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICES — 4/11/95 DATE

DEVELOPER'S CERTIFICATE

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Signature of Developer — 12/21/94 Date

ENGINEER'S CERTIFICATE

I hereby 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 was prepared in accordance with the requirements of the Howard Soil Conservation District.

Robert M. Mochi, P.E. — 4/4/95 Date

project	date
94012.00	8/15/94
Illustration	engineering
LJG	AMY
scale	approval
1" = 200'	RMM

no.	description / revisions	date
2	REVISED PER DPW REVIEW COMMENTS	5/17/95
1	SUBMITTED FOR SIGNATURES	4/6/95
0	1st SUBMITTAL TO HOWARD COUNTY DPZ	12/20/94

SECTION 2
WARFIELD'S GRANT
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 4
DRAINAGE AREA MAP & SEDIMENT CONTROL NOTES

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LAND SURVEYORS
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Ellicott City, MD 21043–3350
(410) 461–0079
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