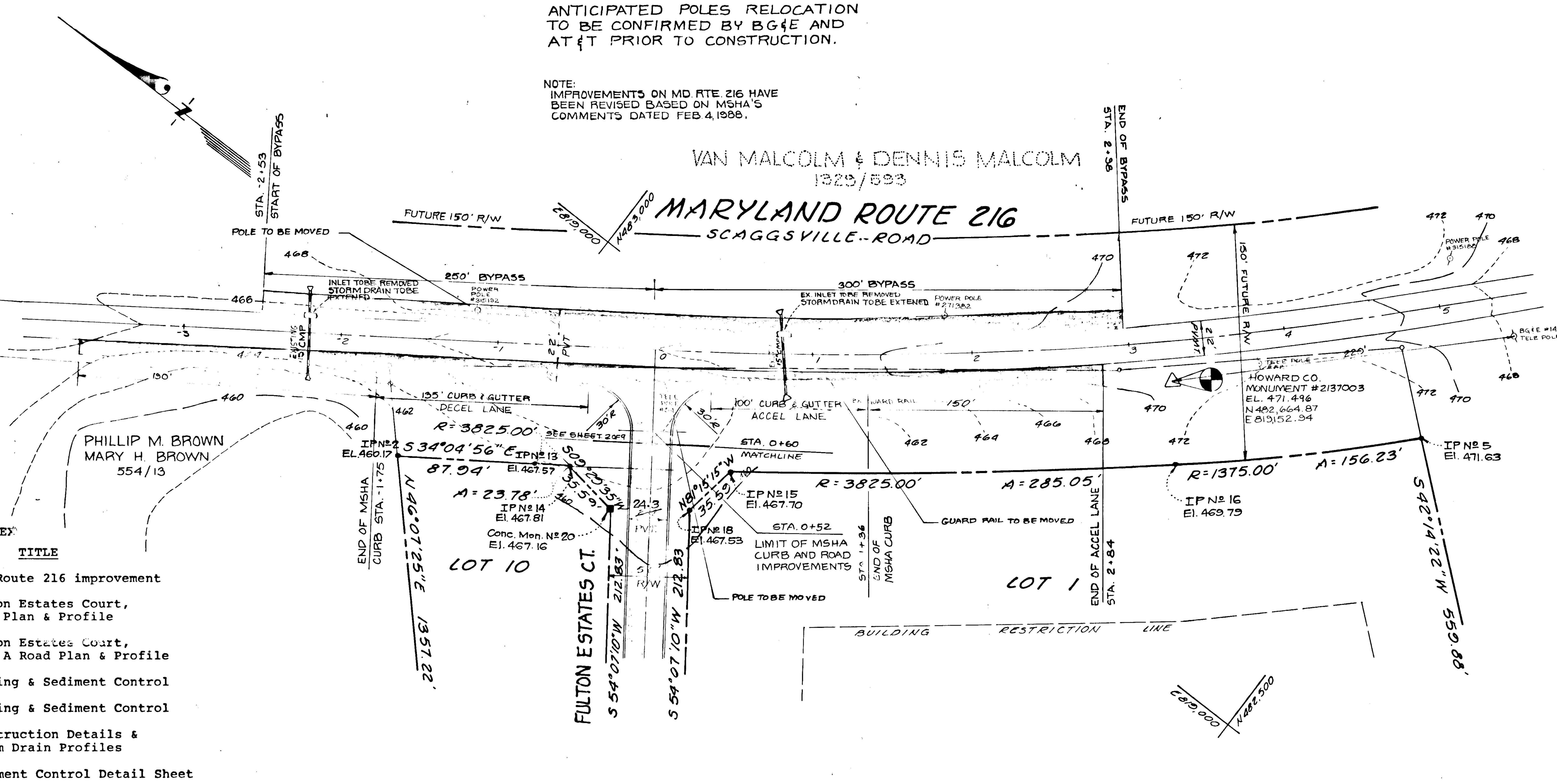
ANTICIPATED POLES RELOCATION TO BE CONFIRMED BY BG&E AND AT&T PRIOR TO CONSTRUCTION.

NOTE:
IMPROVEMENTS ON MD RTE 216 HAVE BEEN REVISED BASED ON MSHA'S COMMENTS DATED FEB 4,1988.

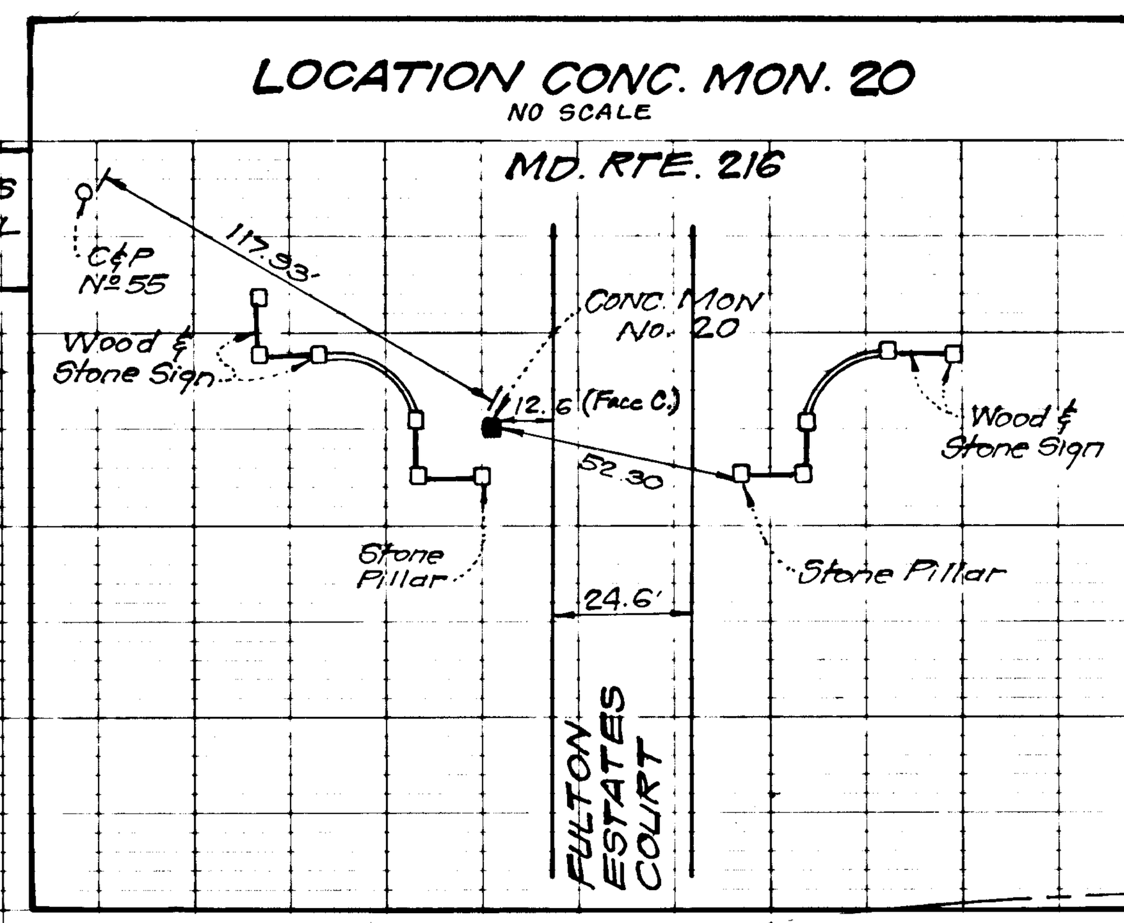


PLAN VIEW
1" = 50'

SHEET INDEX

SHEET	TITLE
1	MD. Route 216 improvement
2	Fulton Estates Court, Road Plan & Profile
3	Fulton Estates Court, Road A Road Plan & Profile
4	Grading & Sediment Control
5	Grading & Sediment Control
6	Construction Details & Storm Drain Profiles
7	Sediment Control Detail Sheet
8	Drainage Area Map
9	Soil Map

LOCATION CONC. MON. 20
NO SCALE

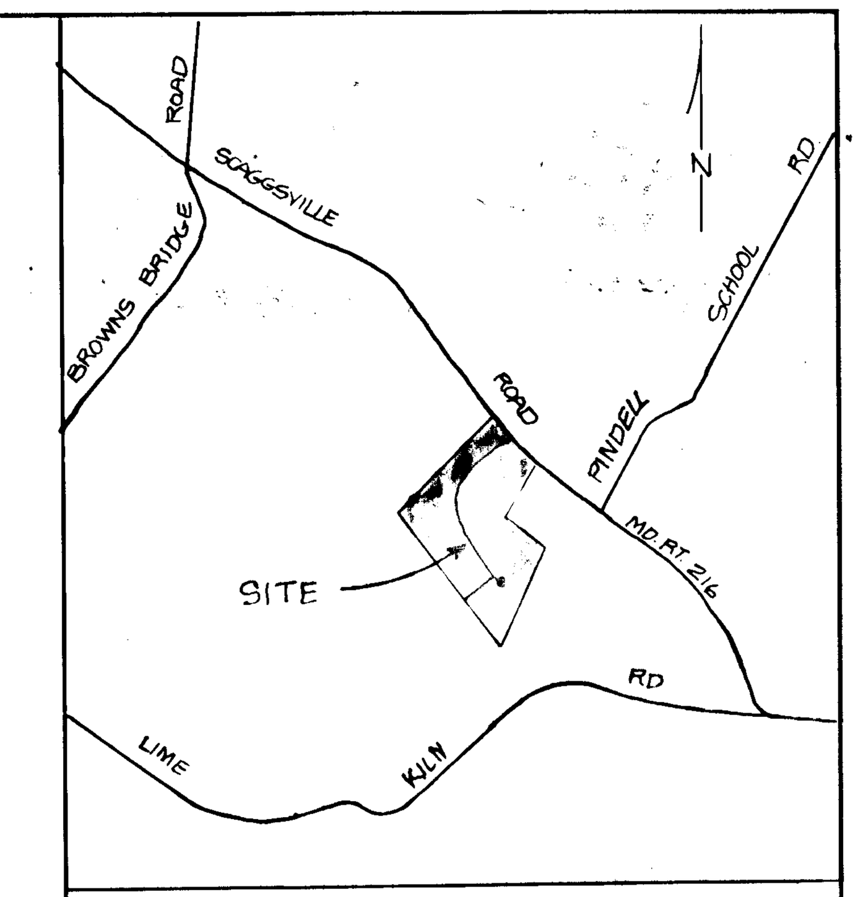


GENERAL NOTES

1. ALL STORM DRAIN & PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST DETAILS AND SPECIFICATIONS OF HOWARD COUNTY & MD. STATE HIGHWAY ADMINISTRATION.
2. TYPES OF STORM DRAIN STRUCTURES REFER TO THE STANDARD DETAILS OF HOWARD COUNTY & MD STATE HIGHWAY ADMINISTRATION.
3. TRENCH COMPACTION FOR STORM DRAINS WITHIN ROADS OR STREET RIGHT OF WAY LIMIT SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY ROAD CODE.
4. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS, BY HAND, AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF CONSTRUCTION.
5. ALL UTILITY COMPANIES SHALL BE NOTIFIED 24 HRS. IN ADVANCE OF CONSTRUCTION, AT 1-800-257-7777.
6. ALL TRAFFIC CONTROL SERVICES, PARKING AND SIGNING TO BE DONE IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1984 EDITION."
7. SAG & CREST VERTICAL CURVES WERE DESIGNED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME III, ROADS & BRIDGES.
8. MIN. COVER OF 12" SHALL BE PROVIDED OVER STORM DRAIN PIPES ON ALL AREAS NOT BEING FINAL GRADED BY THESE PLANS.
9. DESIGN SPEED: 30 M.P.H.
10. ALL HORIZONTAL AND VERTICAL CONTROLS BASED ON MARYLAND STATE DATUM.
11. TOPOGRAPHY ALONG PROPOSED AND EXISTING ROADS WAS SURVEYED BY KIDDE CONSULTANTS, INC. (100' ON BOTH SIDES OF THE CENTERLINE OF PROPOSED ROAD)
12. SEE ALSO: S-86-55 AND: P-87-14
13. ZONING: R 41.03 ACRES
14. A 4.0 FOOT LONG SECTION OF HO. CO. STD CONCRETE CURB AND GUTTER SHALL BE PROVIDED ON BOTH SIDES OF ALL INLETS.

NOTE: ALL MARYLAND ROUTE 216 ROAD IMPROVEMENTS ARE BASED ON STATE HIGHWAY ADMINISTRATION REQUIREMENTS. FOR MSHA CONCRETE CURB AND ROAD IMPROVEMENTS SECTIONS, REFER TO SHEET 6 OF 9.

* RELOCATION OF GUARD RAIL PER MSHA PERMIT.



VICINITY MAP
SCALE: 1"=2000'

OWNER/ DEVELOPER	WARREN MATZEN 10440 BALTIMORE AVENUE BELTSVILLE, MARYLAND 20705

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Chief, Division of Community Planning and Land Development — 5/11/88 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date

Chief, Bureau of Highways — 5/9/88 Date

Chief, Bureau of Engineering — 5-10-88 Date

MD. RT. 216 IMPROVEMENT

PLAN AND PROFILE

KCI JOB 1687105 — SHEET 1 OF 9

FULTON ESTATES

TAX MAP 41 — PARCELS 69, 203

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET / SUITE 100 / LAUREL MD 20707
(Wash.) (301) 953-1821 792-8086 (Balt.)

DATE JANUARY 1988 SCALE AS SHOWN

HORIZONTAL and VERTICAL CONTROLS BASED On HOWARD COUNTY CONTROL STATION Nos. 2137002 and 2137003.

PROFILE:
HORZ - 1" = 50'
VERT - 1" = 5'

PROFILE LEGEND:
PROFILE GRADE LINE
EX. GRADE @ ℄
EX. GRADE @ BRL LEFT
EX. GRADE @ BRL RIGHT

For "AS-BUILT" by Clark, Finefrock & Sackett, Inc.

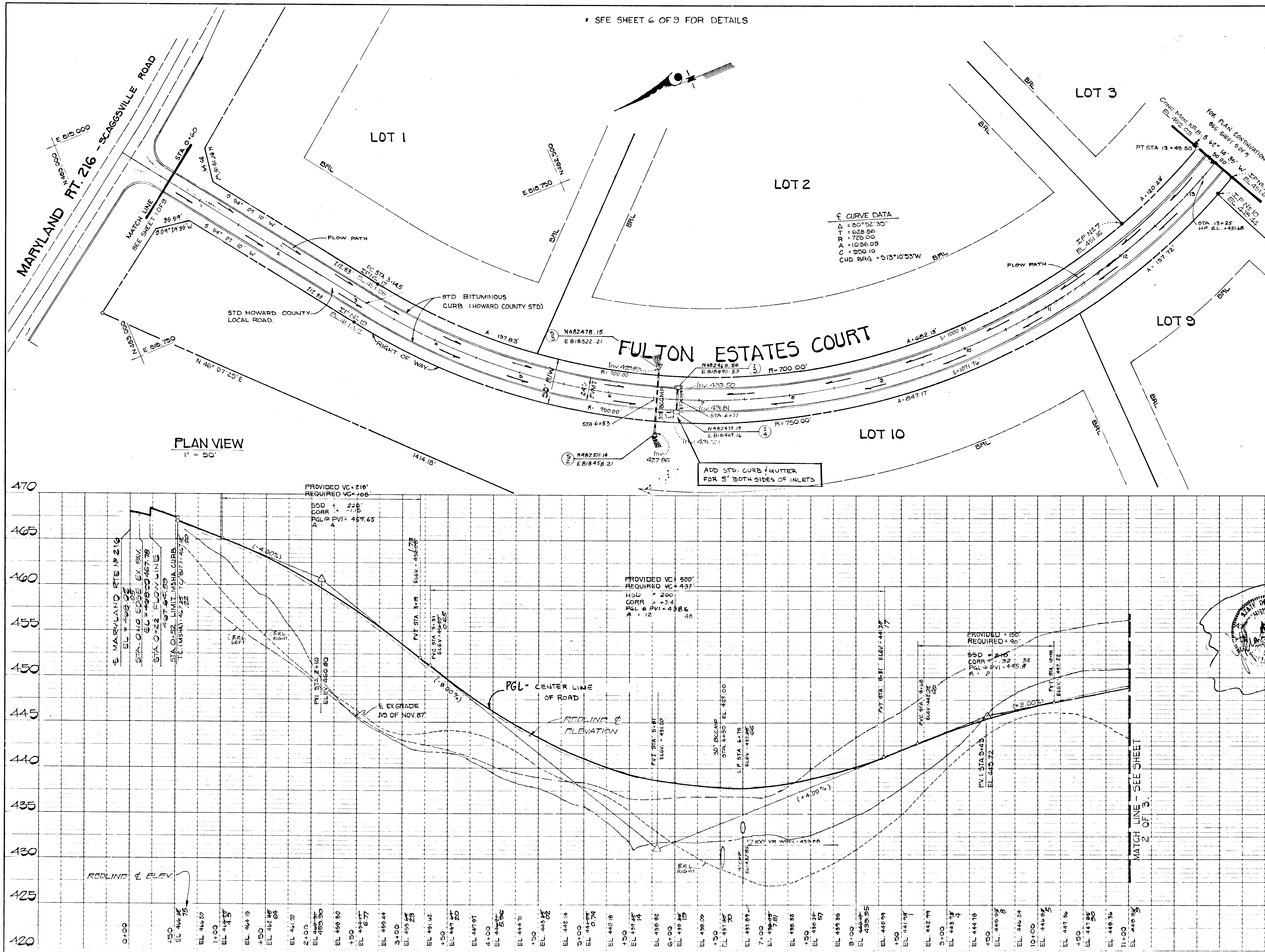
PLAN / NOTE BOOK No. — SURVEYED / PLOTTED / ALIGNMENT CHECKED / R/W CHECKED

PROFILE / NOTE BOOK No. — SURVEYED / PLOTTED / GRADES CHECKED / R/W NOTED / STRUCTURE NOTATIONS CHECKED

1360

Keuffel & Esser Company 48 7024 Made in U.S.A.

F-88-161 AS-BUILT



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 5-5-88

Chief, Bureau of Highways — Date 5/9/88

Chief, Bureau of Engineering — Date 5-10-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Chief, Division of Community Planning and Land Development — Date 5/11/88

OWNER/ DEVELOPER

WARREN MATZEN
10440 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705

FULTON ESTATES COURT

ROAD PLAN AND PROFILE

KCI JOB # 1687105 — SHEET 2 OF 8

FULTON ESTATES

TAX MAP 41 — PARCELS 69, 203

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

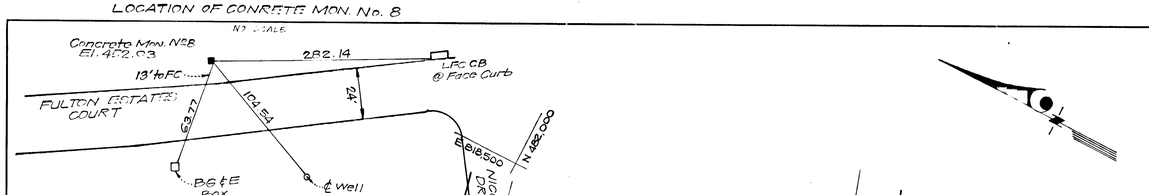
KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
(Wash.) (301) 953-1821 / 792-8086 (Balt.)

DATE JANUARY 1988 SCALE AS SHOWN

F-88-161 AS-BUILT

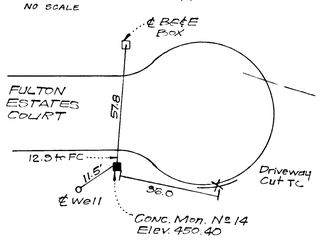
LOCATION OF CONRETE MON. No. 8

NO SCALE



LOCATION OF CONC. MON. No. 14

NO SCALE



PLAN VIEW

1" = 50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 5-9-88

Granville W. Wellons — Chief, Bureau of Highways — Date 5/9/88

Chief, Bureau of Engineering — Date 5-10-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Chief, Division of Community Planning and Land Development — Date 5/10/88 — LWS

OWNER/ DEVELOPER

WARREN MATZEN
10440 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705

FULTON ESTATES COURT & NICOLAR DRIVE

ROAD PLAN AND PROFILE

KCI JOB "1687105 — SHEET 3 OF 9

FULTON ESTATES

TAX MAP 41 — PARCELS 69, 203

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

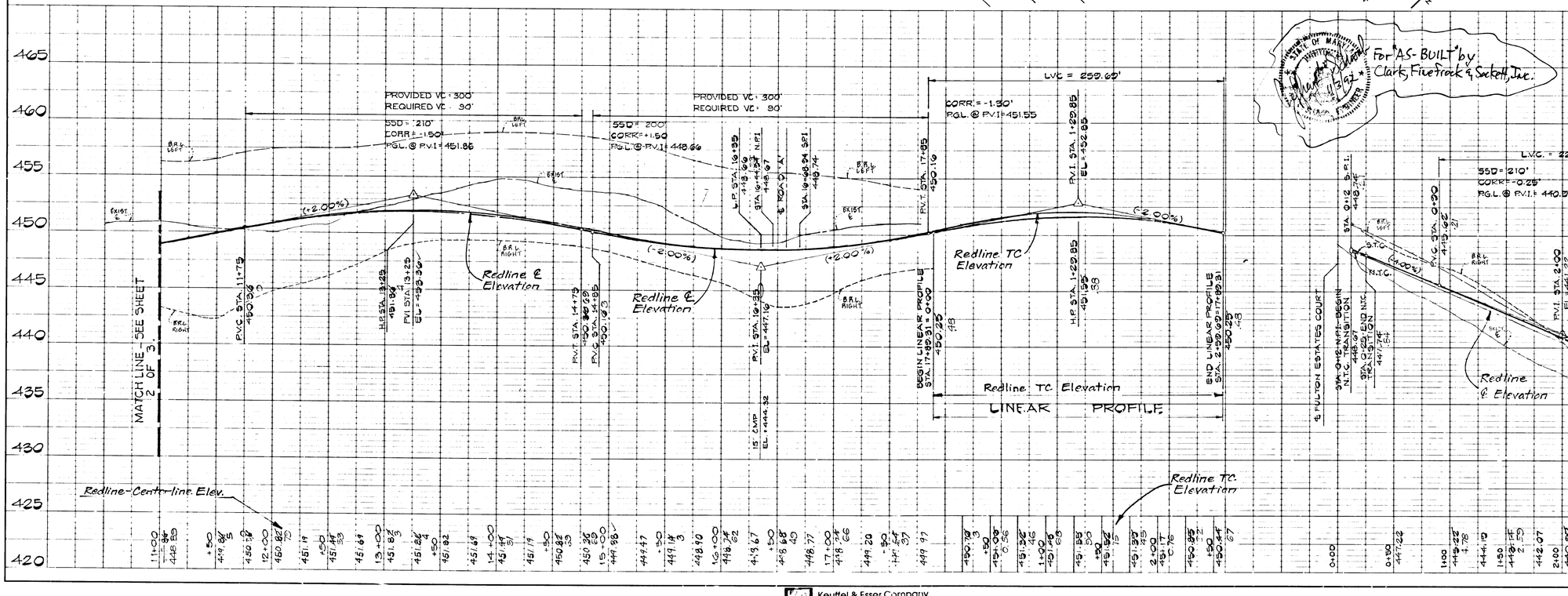
KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET SUITE 100 LAUREL MD 20707
(Wash.) (301) 953-1821 792-8086 (Balt.)

DATE JANUARY 1988 — SCALE AS SHOWN

PROFILE SURVEYED — NOTE BOOK PLOTTED — No. — STRUCTURE NOTATIONS CHECKED

PROFILE:
HORZ - 1" = 50'
VERT - 1" = 5'

PROFILE LEGEND:
PROFILE GRADE LINE — PGL
EX. GRADE @ ℄
EX. GRADE @ BRL LEFT
EX. GRADE @ BRL RIGHT

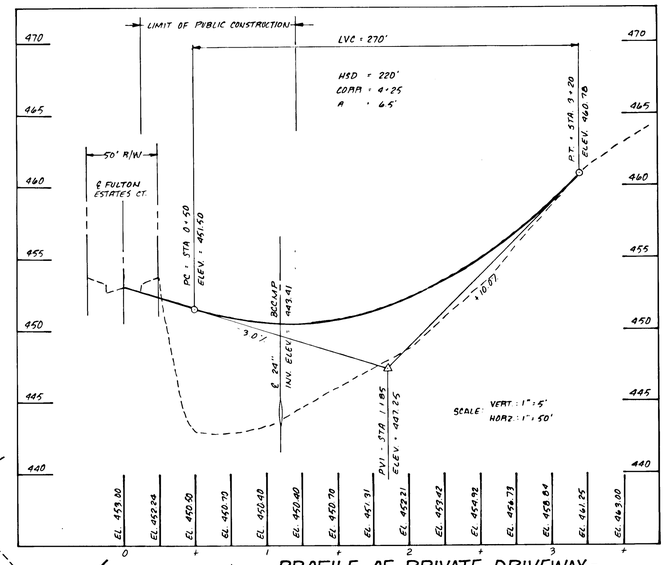


Keuffel & Esser Company
48 7024 Made in U.S.A.

1360

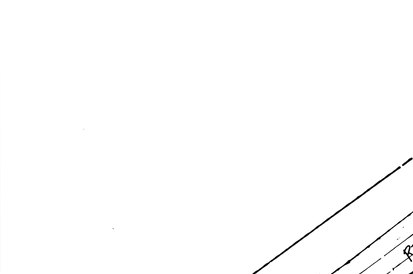
AS-BUILT — F-88-161

NOTE: See Approved Plan F-90-186 for construction to be done on lots 1 and 2.



PROFILE OF PRIVATE DRIVEWAY - LOT 1

SEE APPROVED PLAN F-90-186 FOR CONSTRUCTION TO BE DONE ON LOTS 1 and 2.



PROFILE OF LOT 1 - DRIVEWAY CULVERT

SCALE: VERT. = 1" = 5' HORZ. = 1" = 50'

SEE APPROVED PLAN F-90-186

SEDIMENT CONTROL TRAP SCHEDULE

TRAP NO.	1	2	3	4	5	6
TRAP TYPE	RIP-RAP	RIP-RAP	RIP-RAP	RIP-RAP	RIP-RAP	RIP-RAP
DRAINAGE AREA	.36 ACRES	.86 ACRES	1.88 ACRES	.86 ACRES	2.41 ACRES	.41 ACRES
STORAGE, CU.FT. REQUIRED:	648	1548	1880	1548	4338	738
STORAGE, CU.FT. PROVIDED:	658	1674	2016	1674	4341	770
BOTTOM DIM.	14X14	15X20	16X24	15X20	20X30	15X16
BOTTOM ELEV.	436	432	428	426	424	438
EMBANKMENT ELEV.	440	436	432	430	430	434
OUTLET WIDTH	4.0	4.0	4.0	4.0	5.0	4.0
OUTLET ELEV.	439.5	435	431	429	429	433
CLEANOUT ELEV.	437	433.5	429.5	427.5	426	431
STORAGE DEPTH	2.0	3.0	3.0	3.0	4.0	2.0

*Wetlands permit application is currently being processed by the Corps of Engineers. Water quality certification has been requested from the State of Maryland.

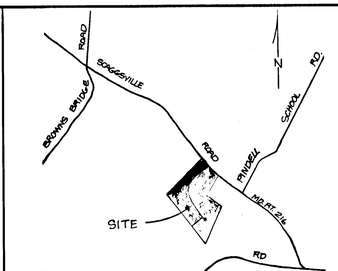
Note:

Approximate location of wetland allenation done by Kidde Consultants, Inc.

NOTE: STREAM WILL BE RELOCATED. SEE SEQUENCE OF CONSTRUCTION. (SHEET 6 OF 9)

EARTH DIKE TO SERVE 2 PURPOSES: UPSLOPE SIDE FOR CLEARWATER DIVERSION OF RUNOFF TO STREAM; DOWNSLOPE SIDE FOR DIVERSION OF SEDIMENT LADEN RUNOFF TO TRAP #2.

No.	REVISION	Date
⚠	Add note (See Approved Plan F-90-186)	11-27-90



VICINITY MAP

SCALE: 1" = 2000'

OWNER'S/DEVELOPER'S CERTIFICATION

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

Signature _____ Date 1/20/88
Name _____ Title _____ Phone No. _____
Firm _____ Complete Address _____

ENGINEERS CERTIFICATE

"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."

John E.C. Patmore 4/26/88
JOHN E.C. PATMORE Date
Registered Professional Engineer # 8978

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE 4-28-88 DATE

U.S. SOIL CONSERVATION SERVICE

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

Approved Howard S.C.D. 4/28/88 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division 5-5-88 Date
Granville W. Welsh 4/9/88
Chief, Bureau of Highways Date
5-10-88
Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

5/11/88
DIRECTOR, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

OWNER/ DEVELOPER

WARREN MATZEN
10440 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705

GRADING & SEDIMENT CONTROL

KCI JOB "1687105 SHEET 4 OF 9

FULTON ESTATES

TAX MAP 41 PARCELS 69, 203

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

STATE OF MARYLAND — JOHN E.C. PATMORE — No. 8978 — PROFESSIONAL ENGINEER

"As-BUILT" by Clark, Firestock & Sackett, Inc.

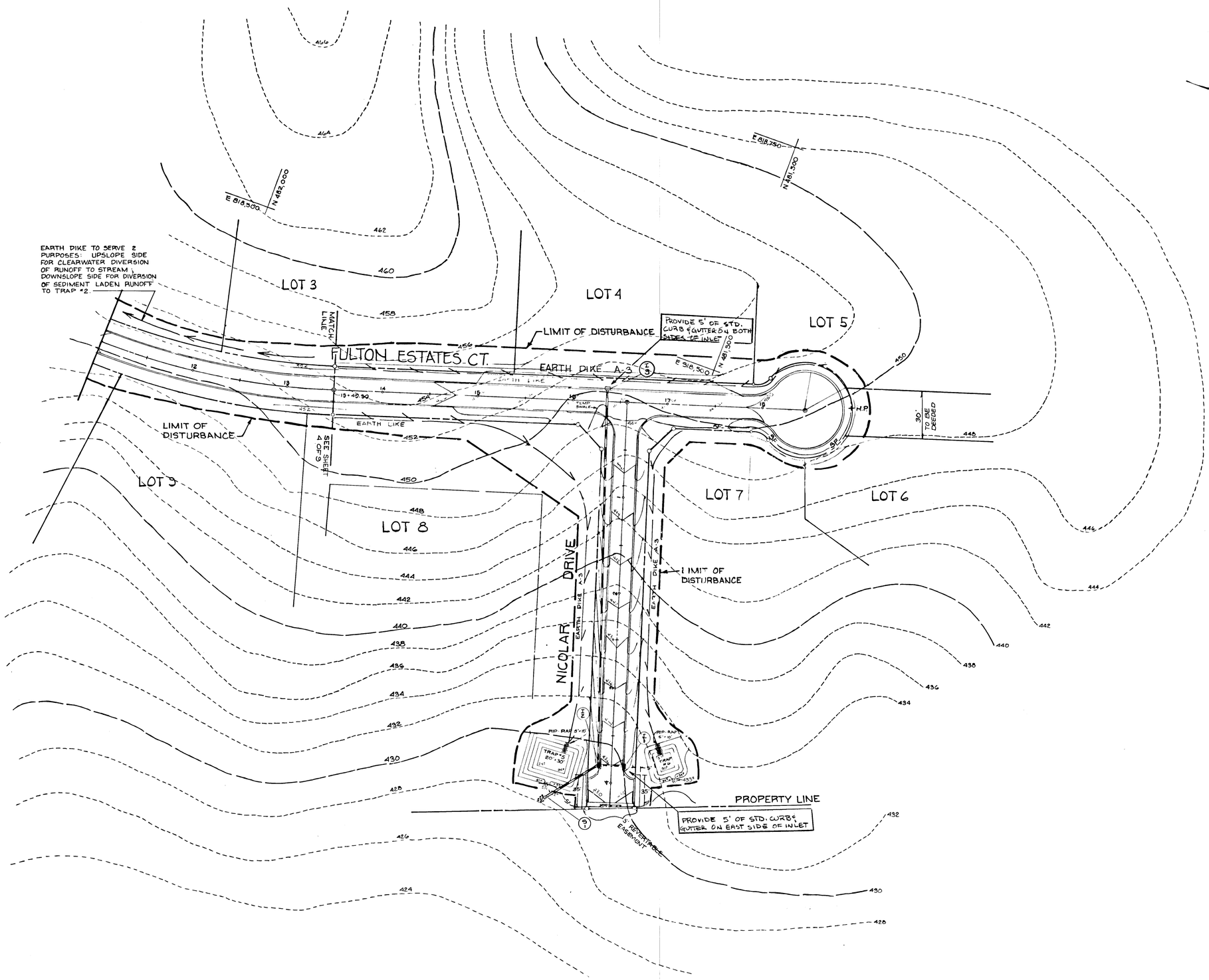
KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET SUITE 100 LAUREL, MD. 20707
(Wash.) (301) 953-1875 792-8088 (Balt.)

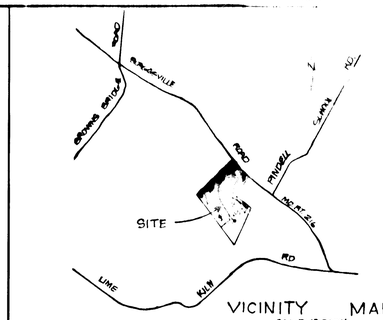
DATE JANUARY 1988 SCALE 1" = 50'

AS-BUILT

F-88-161

360





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John E.C. Patmore — 4/26/88
JOHN E.C. PATMORE — Date
Registered Professional Engineer # 8978

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE — 4-28-88 DATE

U.S. SOIL CONSERVATION SERVICE

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Approved Howard S.C.D. — 4/28/88 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — 5-5-88 Date
Chief, Bureau of Highways — 5/9/88 Date
Chief, Bureau of Engineering — 5.10.88 Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

5/11/88
DIRECTOR, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

OWNER/ DEVELOPER

WARREN MATZEN
10440 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705

GRADING & SEDIMENT CONTROL

KCI JOB #1687105 — SHEET 5 OF 9

FULTON ESTATES

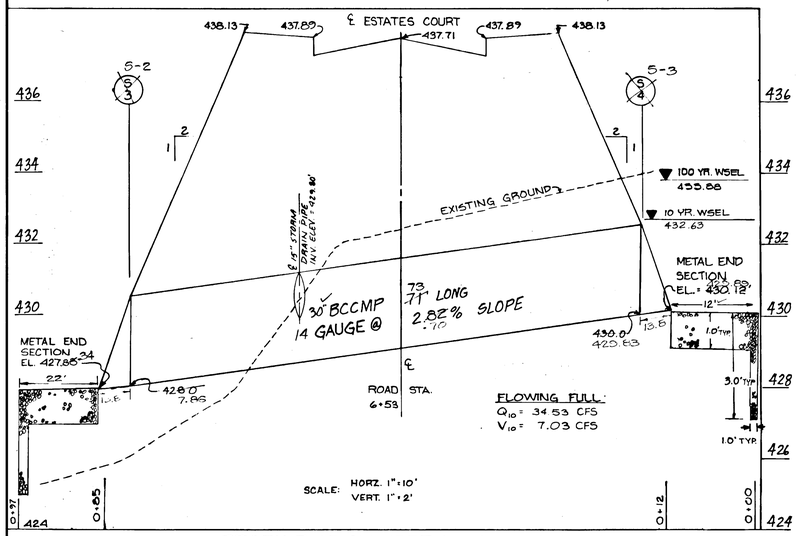
TAX MAP 41 — PARCELS 69, 203
5th ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET SUITE 100 LAUREL MD 20707
(Wash.) (301) 953 1820 792 8086 (Balt.)

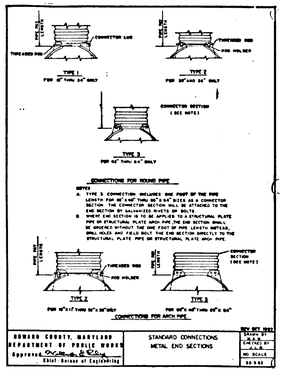
DATE JANUARY 1988 SCALE 1" = 50'

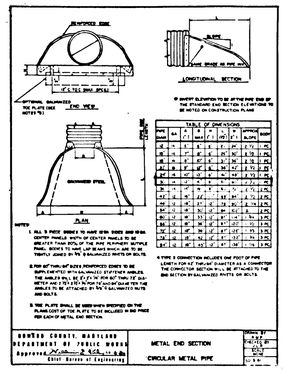
AS-BUILT

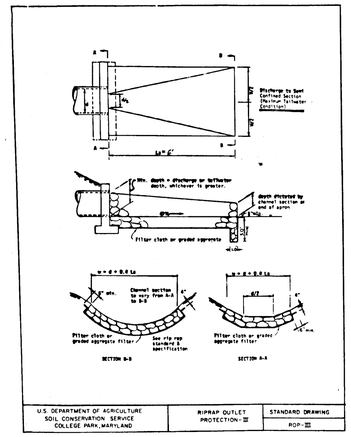
F-88-161

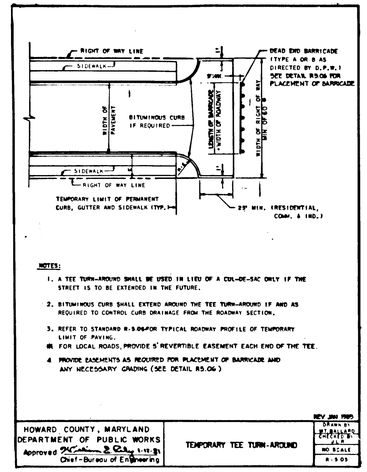


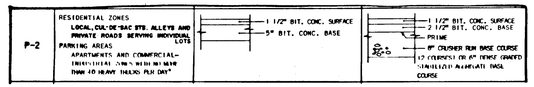
PROFILE OF CULVERT UNDER ESTATES COURT

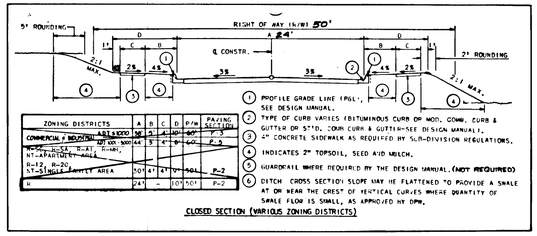




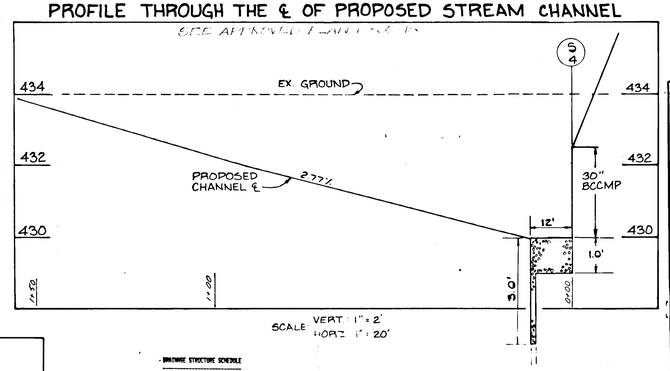


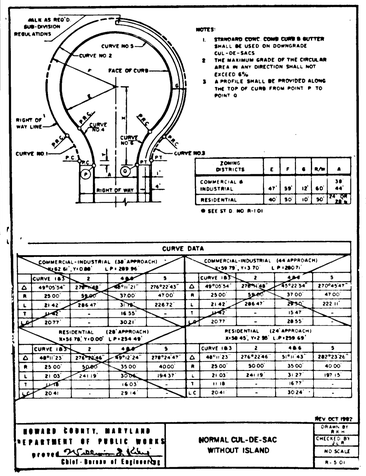


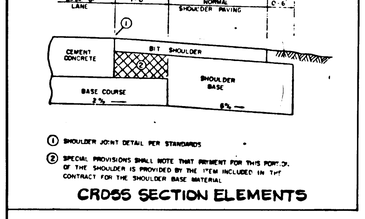




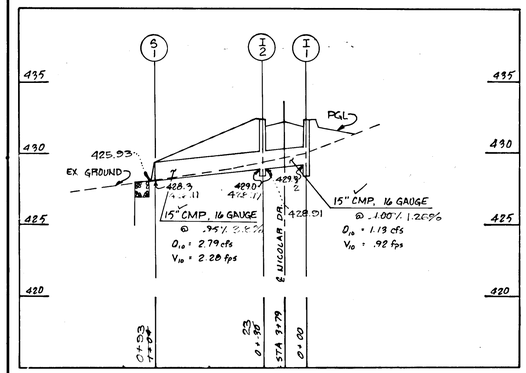
PROFILE THROUGH THE ℄ OF PROPOSED STREAM CHANNEL







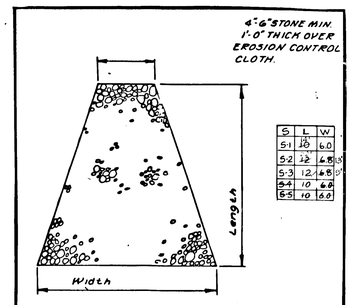
CROSS SECTION ELEMENTS



3" BIT. CONC. SURFACE	3" B.T. CONC. SURFACE
4" BIT. CONC. BASE	4" B. T. CONC. BASE
6" GRAVEL AGGREGATE BASE	7" BANK RUN GRAVEL BASE

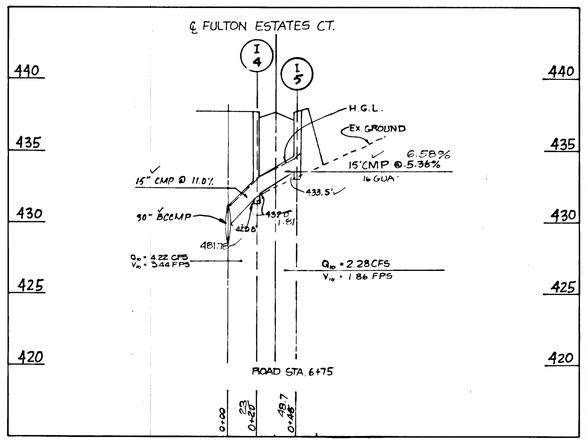
OR

MSHA PAVING SECTION



RIP-RAP & OUTFALL DETAIL

NOT TO SCALE



STORM DRAIN PROFILE

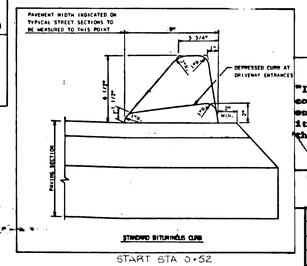
I- TO S-2

SCALE: HORZ. 1"=50'
VERT. 1"=5'

- DRAINAGE STRUCTURE SCHEDULE

NO.	TYPE	GRD. EL.	INV. OUT.	TOP ELEV	REMARKS
I-1	M-3 INLET	—	429.2	436.75	MD. CO. STD DETAIL 4.01
I-2	M-3 INLET	428.9 429.8'	428.7 429.5'	437.00	MD. CO. STD DETAIL 4.01
I-3	M-3 INLET	—	995.3	998.00	MD. CO. STD DETAIL 4.01
I-4	M-3 INLET	431.81 432.8'	431.75 432.5'	437.00	MD. CO. STD DETAIL 4.01
I-5	M-3 INLET	—	433.3	437.00	MD. CO. STD DETAIL 4.01
S-1	MD. CO. STD RET. END. SEC.	—	426.1 428.5'		MD. CO. STD DETAIL 3.41
S-2	MD. CO. STD RET. END. SEC.	—	427.86 428.8'		MD. CO. STD DETAIL 3.41
S-3	MD. CO. STD RET. END. SEC.	—	428.83 430.8'		MD. CO. STD DETAIL 3.41
S-4	MD. CO. STD RET. END. SEC.	—	992.8		MD. CO. STD DETAIL 3.41
S-5	MD. CO. STD RET. END. SEC.	—	994.8		MD. CO. STD DETAIL 3.41

SEE APPROVED PLANS F-88-186



STORM DRAIN PROFILE I-1 TO S-1

SCALE: VERT. 1"=5', HORZ. 1"=50'

SEQUENCE OF CONSTRUCTION

1) OBTAIN GRADING PERMIT.	
2) INSTALL CULVERT UNDER ESTATES COURT, STA 6+53. GRADE THE UPSTREAM CHANNEL IN ORDER TO DIVERT THE FLOW THROUGH THE CULVERT.	2 DAYS
3) INSTALL ALL SEDIMENT CONTROL DEVICES, INCLUDING SILT FENCE, EARTH DIKES AND SEDIMENT TRAPS 1-6. (SEE MODIFIED DIKE DETAIL SHT 7 OF 9)	1 WEEK
4) ROUGH GRADE THE SITE.	
5) INSTALL STORM DRAIN SYSTEM, I-2 TO S-1, AND I-4 TO S-4. IMMEDIATELY BLOCK ALL INLETS. (REFER TO SHT 7 OF 9 FOR BLOCKING DETAIL)	4 DAYS
6) FINE GRADE THE SITE AS PER GRADING PLAN.	1 WEEK
7) INSTALL MSHA CURB ALONG MD RT 216 AT SITE ENTRANCE.	3 DAYS
8) INSTALL BITUMINOUS CURB ALONG ESTATES COURT AND NICOLAR DRIVE.	1 WEEK
9) INSTALL ALL PAVING.	2 WEEKS
10) WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES AND UNBLOCK INLETS. IMMEDIATELY STABILIZE ALL AFFECTED AREAS.	10 DAYS

REVIEWED FOR HOWARD SOIL CONSERVATION AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE — DATE 4-28-88

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 4/28/88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/4/88

LMS

OWNER/ DEVELOPER

WARREN MATZEN
10440 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705

ENGINEERS CERTIFICATE

"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."

JOHN E.C. PATMORE — 4/26/88 Date

Registered Professional Engineer # 8978

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 5/9/88

Granville W. Wellard — Chief, Bureau of Highways — Date

5-10-88 — Chief, Bureau of Engineering — Date

DATE	REVISIONS

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
(Wash.) (301) 953-1821 / 792-8086 (Balt.)

DATE ____ SCALE ____

DESIGNED	RA
DRAWN	SK
CHECKED	DW
DATE	JAN., 1988

FULTON ESTATES

TAX MAP 41 PARCELS 69, 203

5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

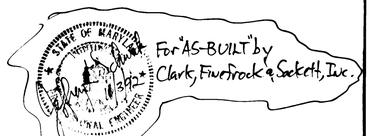
CONSTRUCTION DETAILS & STORM DRAIN PROFILES

(SEE SHT. 7 OF 9 FOR ADDITIONAL STORM DRAIN PROFILE)

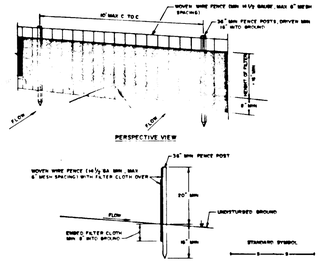
SCALE AS	SHOWN
DWG NO.	6 OF 9
JOB NO.	1687105
FILE NO.	

1360

AS-BUILT F-88-161



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 OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.

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

FENCE: WOVEN WIRE, 14½ GA. MIN. 6" MAX MESH OPENING

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

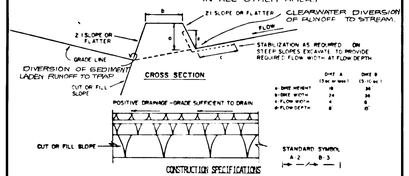
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

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

EARTH DIKE

not to scale

STA 7+00 TO STA 13+50 (REGULAR DIKE TO BE USED IN ALL OTHER AREA)



CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTHMOVING 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 OF 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 6-8"
4	8.1-20%	LINED RIP-RAP 6-8"	ENGINEERING DESIGN

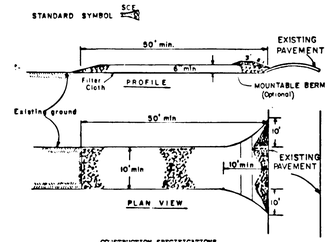
A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
B. RIP-RAP TO BE 6-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR 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

STABILIZED CONSTRUCTION ENTRANCE

not to scale

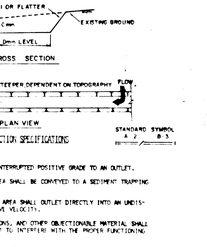


CONSTRUCTION SPECIFICATIONS

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	STABILIZED CONSTRUCTION ENTRANCE	Standard Drawing

TEMPORARY SWALE



CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED, STABILIZED AREA AT NON-ERODIBLE VELOCITY.
4. 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.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BARK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. STABILIZATION SHALL BE AS PER THE CHART BELOW.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC OR LESS)	B (5 AC - 10 AC)
1	0.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSIOR
3	5.1-8.0%	SEED WITH JUTE OR EXCELSIOR, SOD	LINED RIP-RAP 6-8" RECYCLED CONCRETE EQUIVALENT
4	8.1-20%	LINED 6-8" RIP-RAP	ENGINEERED DESIGN

9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	TEMPORARY SWALE	STANDARD DRAWING TS-1

PERMANENT SEEDING NOTES

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

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, IF NOT PREVIOUSLY LOOSENED.

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

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

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thre July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/ acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching - Apply 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

Matinenance - 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 sq ft)

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2½ bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

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

SEDIMENT CONTROL NOTES

1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chaper 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5) 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.
6) 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
7) Site Analysis:

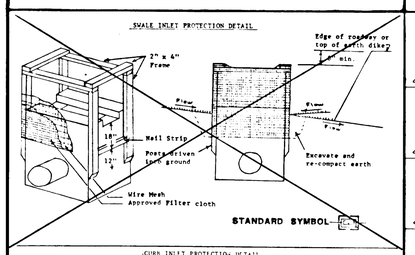
Total Area of Site	20.04	Acres
Area Disturbed	6.75	Acres
Area to be roofed or paved	1.35	Acres
Area to be vegetatively stabilized	5.36	Acres
Total Cut	1791	Cu. yds
Total Fill	2,640	Cu. yds
Offsite waste/borrow area location	N/A	

8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9) Additional sediment controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.

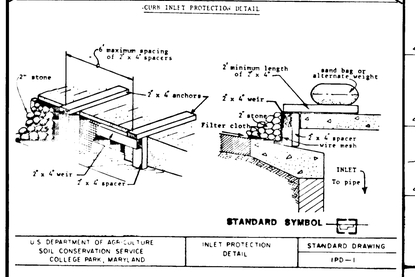
On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

NOTE: FOR SEQUENCE OF CONSTRUCTIONS, SEE SHEET 6 OF 9

SWALE INLET PROTECTION DETAIL



CURB INLET PROTECTION DETAIL



Construction Specifications

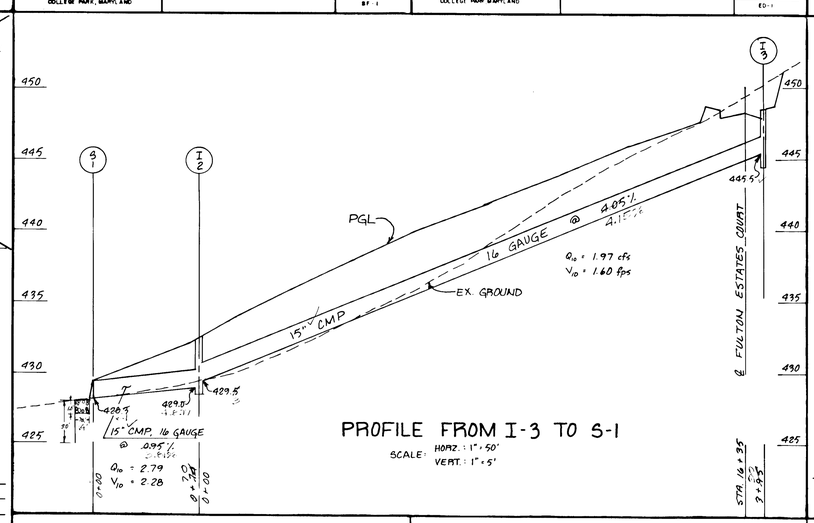
Materials

A. Wooden frame is to be constructed of 2"x4" construction grade lumber.
B. Plywood is to be a minimum thickness of 1/4" construction grade lumber.

Installation

1. Cut plywood to extend a minimum of 6" past throat along curb.
2. Attach to anchors in a secure manner which will insure a water tight fit against throat.
3. Brace securely using sandbag or alternate weight. If not watertight, use approved filter cloth under plywood and attach securely.

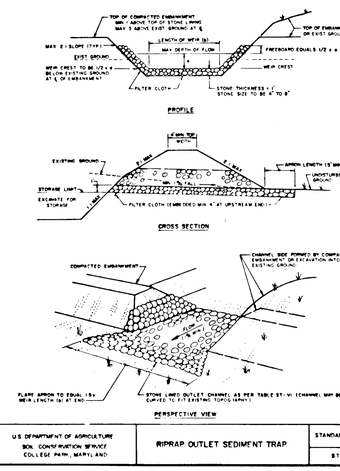
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	INLET PROTECTION DETAIL	STANDARD DRAWING IPD-1



PROFILE FROM I-3 TO S-1

SCALE: HORZ.: 1"=50'
VERT.: 1"=5'

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

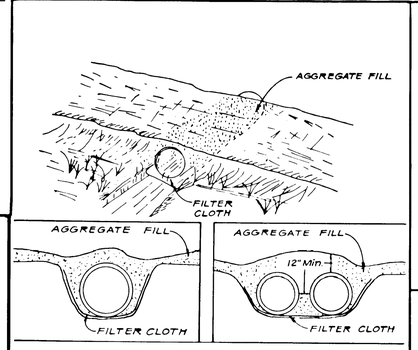
CONSTRUCTION SPECIFICATIONS FOR ST-VI

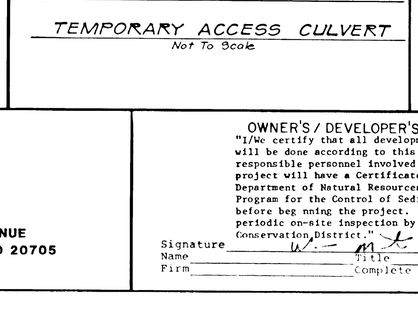
1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. 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.

Riprap Outlet Sediment Trap

ST-VI (for Stone Lined Channel)

Contributing Drainage Area (Acres)	Depth of Channel (Feet)	Length of Weir (b) (Feet)
1	1.5	4.0
2	1.5	5.0
3	1.5	6.0
4	1.5	10.0
5	1.5	12.0
6	1.5	14.0
7	1.5	16.0
8	2.0	10.0
9	2.0	10.0
10	2.0	12.0
11	2.0	14.0
12	2.0	14.0
13	2.0	16.0
14	2.0	16.0
15	2.0	18.0





TEMPORARY ACCESS CULVERT

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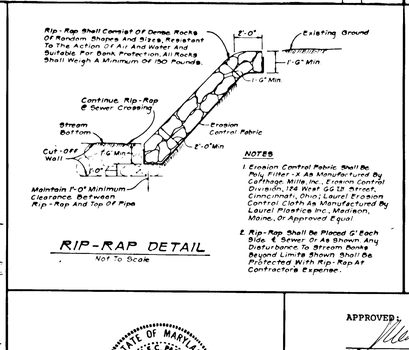
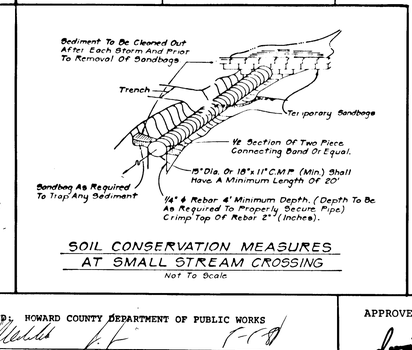


RIP-RAP DETAIL

Not To Scale



SOIL CONSERVATION MEASURES AT SMALL STREAM CROSSING

Not To Scale

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE _____ DATE 4-28-88

U.S. SOIL CONSERVATION SERVICE

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

Approved Howard S.C.D. _____ DATE 4/28/88

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division _____ Date

Granville W. Wehland 5/9/88
Chief, Bureau of Highways Date

Robert E. Riley 5-10-88
Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

4/ CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT _____ DATE 5/11/88

LMS

SEDIMENT CONTROL DETAIL SHEET

OWNER / DEVELOPER

WARREN MATZEN
10440 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705

OWNER'S / DEVELOPER'S CERTIFICATION

"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 Natural Resources Approved Training Program for the Control of Sediment and Erosion before beg nning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature W. Matzen Date 11/7/12
Name _____ Title _____ Phone No. _____
Firm _____ Complete Address _____

ENGINEER'S CERTIFICATE

"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".

John E. L. PALMORE 4/26/88
JOHN E. L. PALMORE Date
Registered Professional Engineer # 8978

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
(Wash.) (301) 953-1821 / 792-8086 (Balt.)

FULTON ESTATES

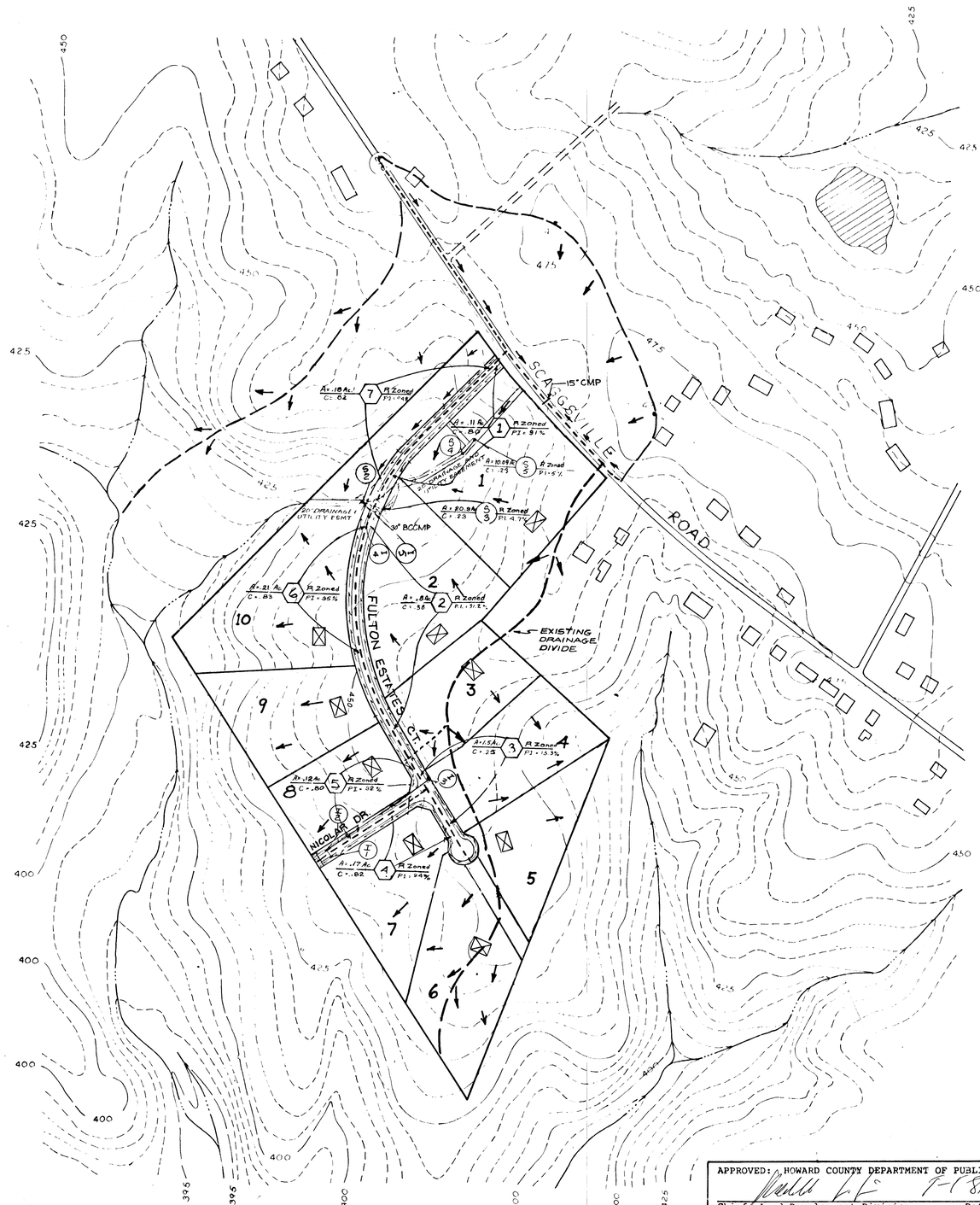
TAX MAP 41 **PARCELS 69, 203**

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

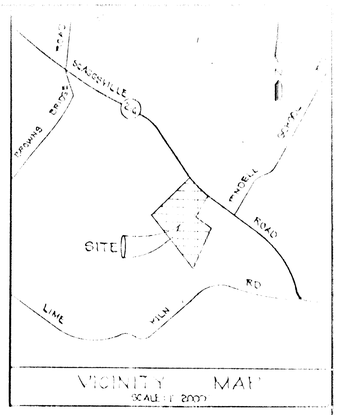
Drafting Initials	DATE	REVISIONS	SHEET	DATE	JOB NUMBER
Check RA			7		
Design			OF	SCALE	1686002
Check			9		

1360

AS-BUILT F-88-161



PLEASE REFER TO SHEETS 4 & 5 OF 9 FOR STRUCTURE DETAIL.



VICINITY MAP
SCALE: 1" = 2000'

DRAINAGE AREA MAP

FOR

FULTON ESTATES

TAX MAP NO. 41 PARCEL 69, 203
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SHEET 8 OF 9

OWNER/ DEVELOPER

WARREN MATZEN
10440 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705

LEGEND

- EXISTING DRAINAGE DIVIDE
- PROPOSED DRAINAGE DIVIDE
- LOT FLOW PATH
- ROAD FLOW PATH
- HOUSE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 7-7-88

Chief, Bureau of Highways — Date 5/9/88

Chief, Bureau of Engineering — Date 5-10-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Director, Division of Community Planning and Land Development — DATE 5/11/88

LKS

KCI CONSULTANTS, INC.
ENGINEERS, LAND PLANNERS & SURVEYORS
8401 SANDY SPRING ROAD / LAUREL, MD 20707
(301) 725-0555 / 792-1095

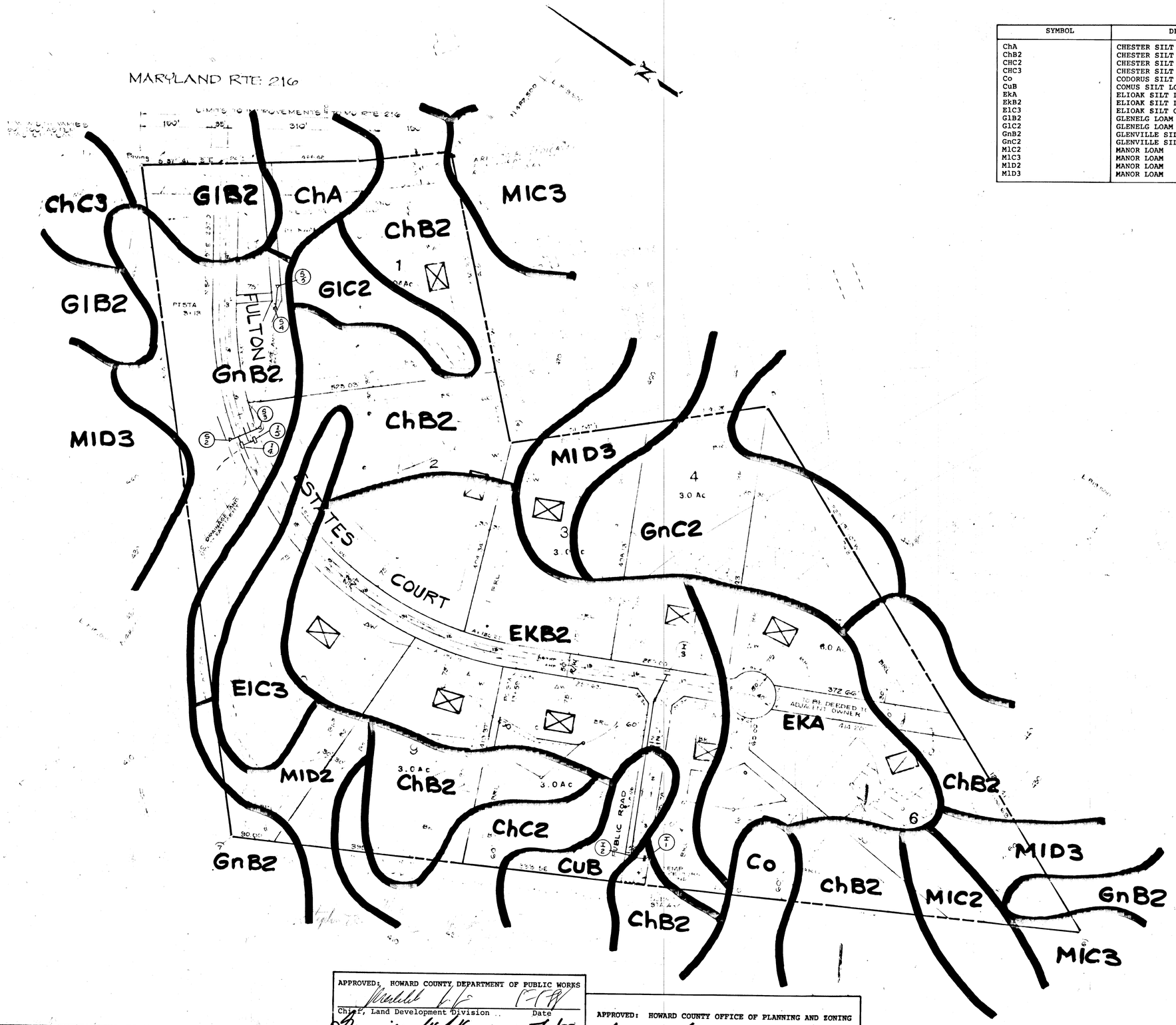
DESIGNED BY KCI
DRAWN BY SDH
CHECKED BY EMM
QUALITY CONTROL BY RA

DATE — DESCRIPTION — BY

DATE OCT., 1987 SCALE 1" = 200'

F-88-161

360



SYMBOL	DESCRIPTION	TYPE
ChA	CHESTER SILT LOAM 0-3% SLOPE	B
ChB2	CHESTER SILT LOAM 3-9% SLOPE	B
ChC2	CHESTER SILT LOAM 8-15% SLOPE	B
ChC3	CHESTER SILT LOAM 9-15% SLOPE	B
Co	CODORUS SILT LOAM	C
CuB	COMUS SILT LOAM 3-8% SLOPE	B
EkA	ELIOAK SILT LOAM 0-3% SLOPE	B
EkB2	ELIOAK SILT LOAM 3-8% SLOPE	B
E1C3	ELIOAK SILT CLAY LOAM 8-15% SLOPE	B
G1B2	GLENELG LOAM 3-8% SLOPE	B
G1C2	GLENELG LOAM 8-15% SLOPE	B
GnB2	GLENVILLE SILT LOAM 3-8% SLOPE	C
GnC2	GLENVILLE SILT LOAM 8-15% SLOPE	C
M1C2	MANOR LOAM 8-15% SLOPE	B
M1C3	MANOR LOAM 8-15% SLOPE	B
M1D2	MANOR LOAM 15-25% SLOPE	B
M1D3	MANOR LOAM 15-25% SLOPE	B

● WELL

PERC TEST LOCATIONS

SOILS MAP
FULTON ESTATES

TAX MAP # 41 PARCELS 69 203

5TH ELECTION DISTRICT HOWARD CO MD

SOILS BOOK SHEET # 28

SHEET 9 OF 9

KIDDE CONSULTANTS, INC.

SDH
RTT,JR
RA

OCT., 1987 1"=100'

F-88-161

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date

Chief, Bureau of Highways — Date 5/9/88

Chief, Bureau of Engineering — Date 5-10-88

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LKI

OWNER/ DEVELOPER

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BELTSVILLE, MARYLAND 20705

1360