

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
2. ALL UTILITY COMPANIES MUST BE NOTIFIED 24 HRS IN ADVANCE OF ANY CONSTRUCTION.
3. STORM DRAINAGE TRENCHES WITHIN ROAD RIGHT-OF-WAYS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
4. ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
5. CONTRACTOR TO NOTIFY THE HOWARD COUNTY INSPECTION AND SURVEY DIVISION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TELEPHONE 792-7272.
6. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
7. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1978 EDITION.

THE HORIZONTAL CONTROL IS BASED ON THE FOLLOWING STATIONS:

STA. 2836001 N 508 630.95
E 809 428.38
STA. 2835001 N 508 373.27
E 807 789.01

-BENCH MARKS-

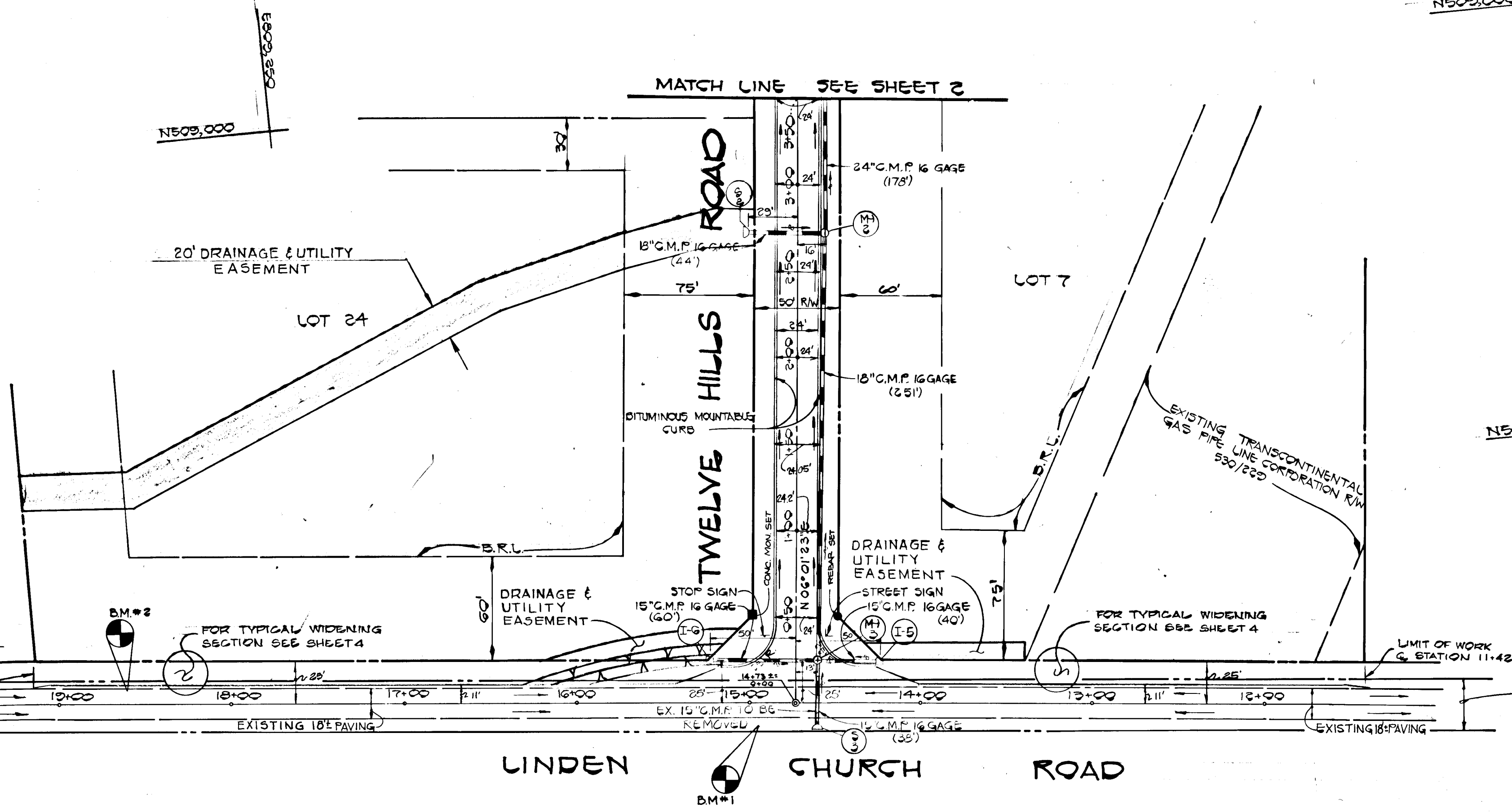
BM #1 HOWARD COUNTY MONUMENT # 2836001. ELEV. 533.79
BM #2 RAILROAD SPIKE SET IN EDGE OF PAVING AT E STA. 18+00 LINDEN CHURCH ROAD. ELEV. 540.75

APPROVED DEPARTMENT OF PUBLIC WORKS
Francis W. McLeod 10/14/87
CHIEF, BUREAU OF HIGHWAYS DATE

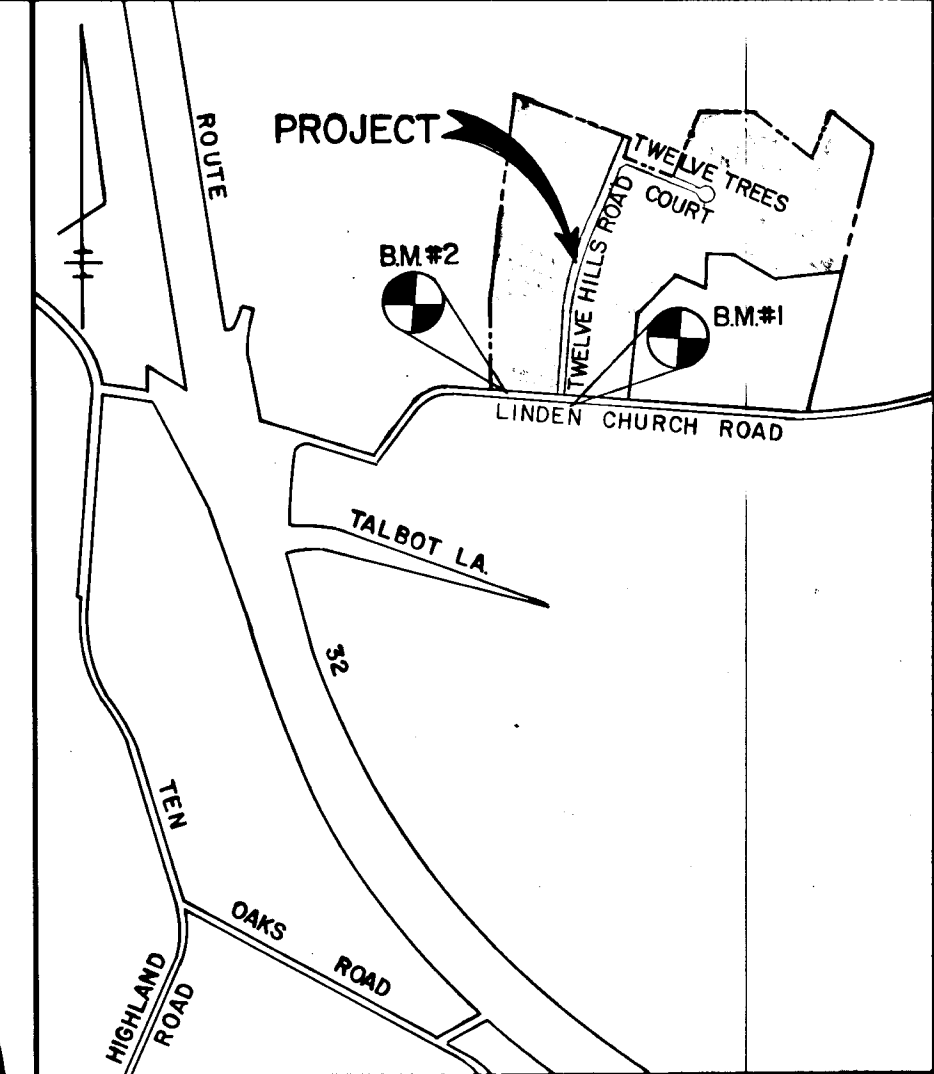
APPROVED DEPARTMENT OF PUBLIC WORKS
William S. Reay 10/15/87
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING
John M. Maclean 10-8-87
DIRECTOR AND ZONING ADMINISTRATION DATE

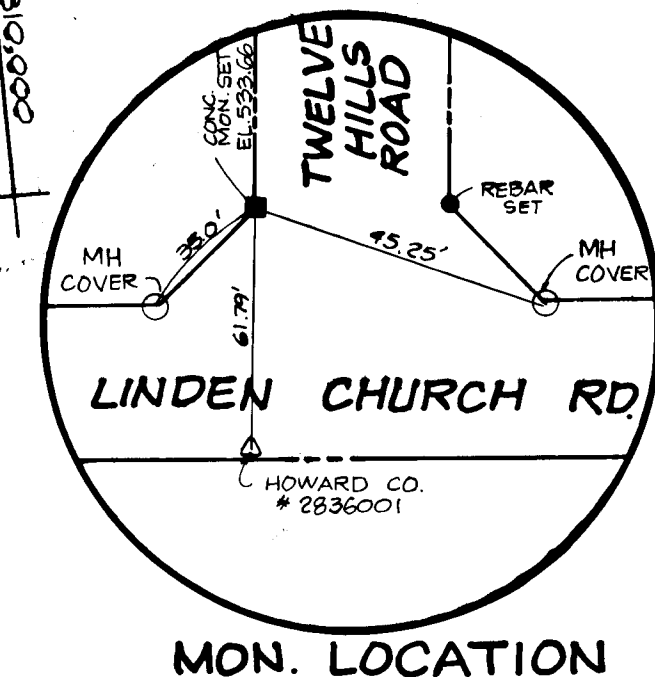
Approved Department of Public Works
Michelle L. F... 10-9-87
Chief, Land Development Div. DATE



PLAN SCALE 1"=50'



VICINITY MAP SCALE 1"=1200'



MON. LOCATION

TWELVE HILLS SECTION 2 LOTS 7-24
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
LINDEN CHURCH ROAD
PLAN & PROFILE

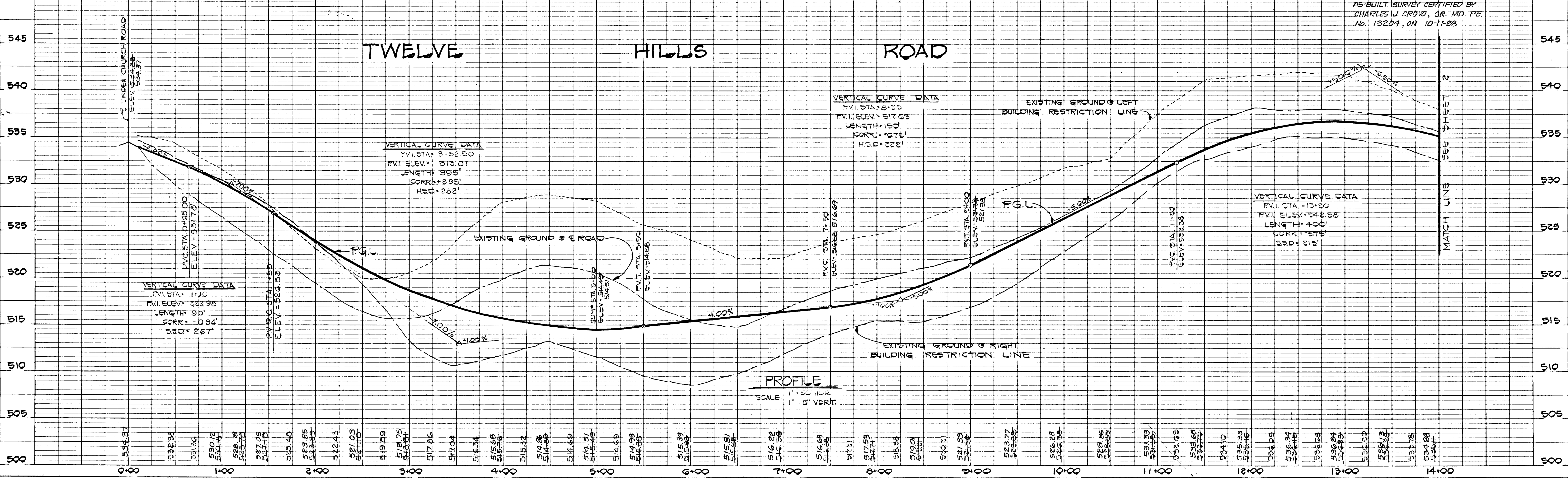
OWNER AND DEVELOPER
ALTOGETHER LIMITED PARTNERSHIP
C/O HOWARD COUNTY LAND SERVICES INC.
8307 MAIN STREET
ELLICOTT CITY, MARYLAND 21043

SCALE AS SHOWN DATE MAY 15, 1987 DWG. NO. 1 OF 6
DES. C. CROVO SR. DRN. D. NEWTON CHK. R. C. SHUMAKER

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043



CHARLES J. CROVO SR. DATE 7/2/87

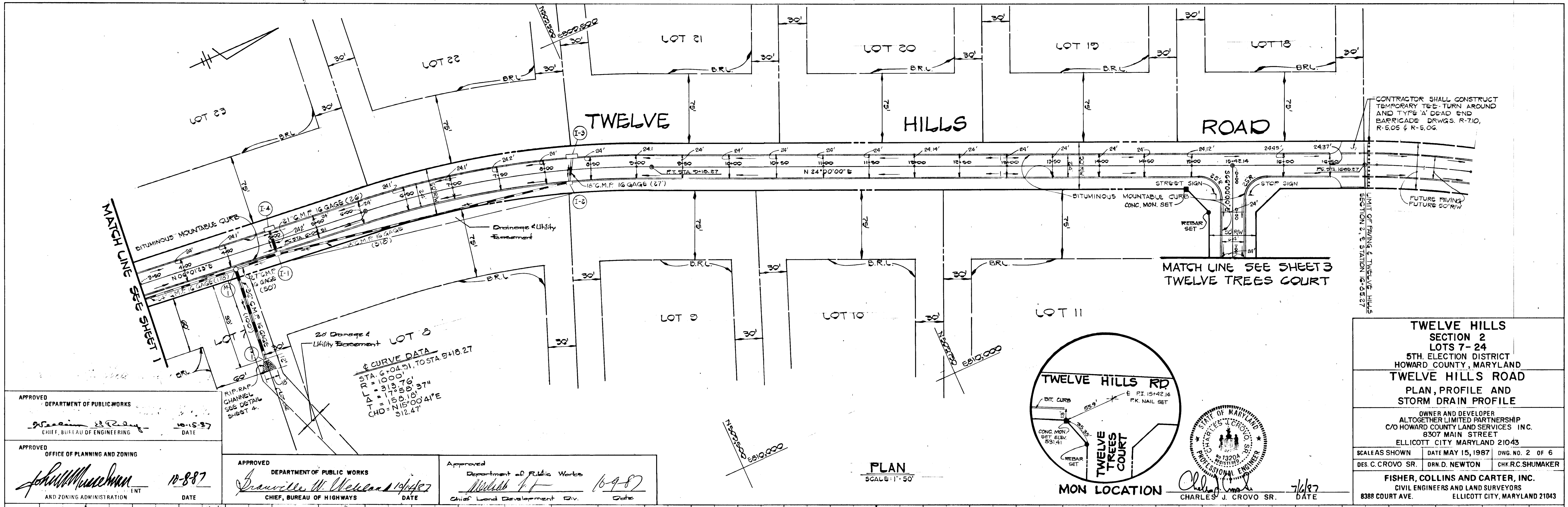


PROFILE SCALE 1"=50' HOR. 1"=5' VERT.

AS-BUILT SURVEY CERTIFIED BY CHARLES J. CROVO, SR. MD. PE No. 13204, ON 10-11-88

497

DATE	
BY	
SURVEYED	
PLOTTED	
ALIGNMENT CHECKED	
NOTE BOOK	
NO.	



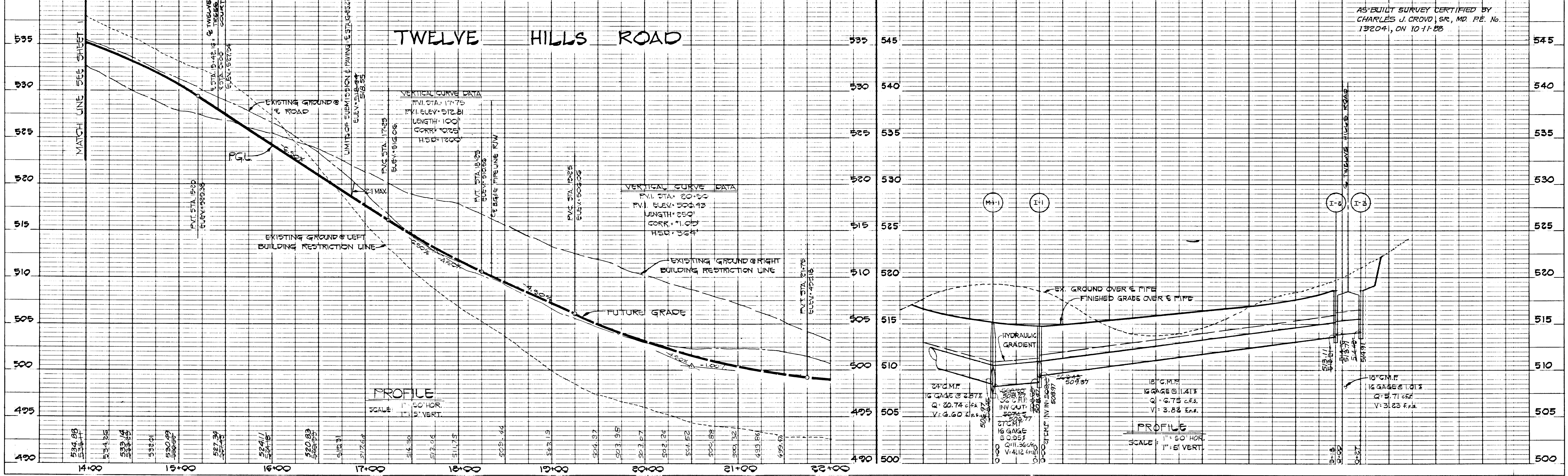
TWELVE HILLS SECTION 2 LOTS 7-24
5TH. ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
TWELVE HILLS ROAD
PLAN, PROFILE AND STORM DRAIN PROFILE

OWNER AND DEVELOPER
ALTOGETHER LIMITED PARTNERSHIP
C/O HOWARD COUNTY LAND SERVICES, INC.
8307 MAIN STREET
ELLCOTT CITY, MARYLAND 21043

SCALES SHOWN DATE MAY 15, 1987 DWG. NO. 2 OF 6
DES. C. CROVO SR. DRN. D. NEWTON CHK. R.C. SHUMAKER

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

DATE	
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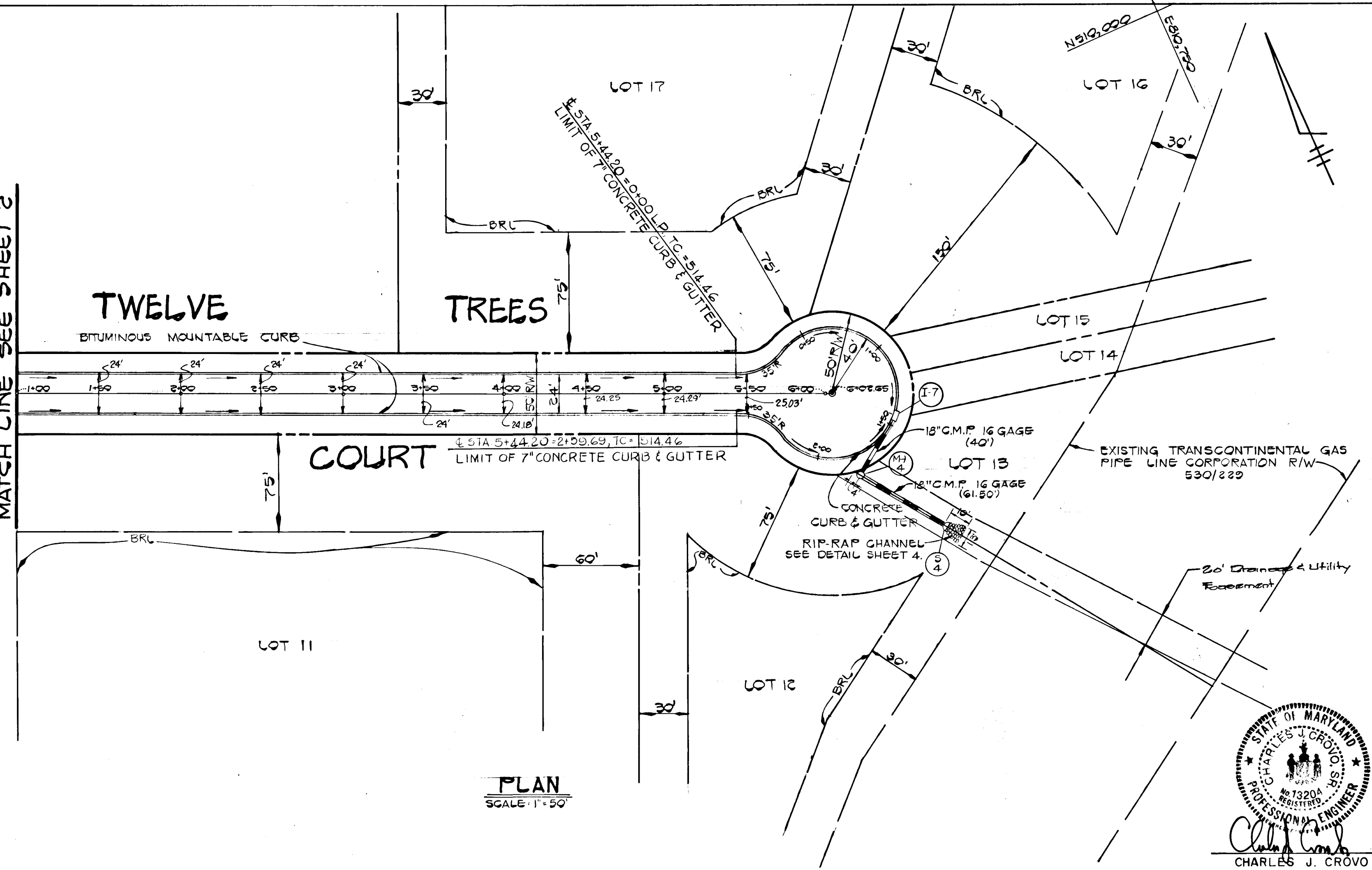
APPROVED
DEPARTMENT OF PUBLIC WORKS
James M. McLean 10/14/87
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED
DEPARTMENT OF PUBLIC WORKS
William R. Ray 10-15-87
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED
OFFICE OF PLANNING AND ZONING
John W. McManis 10-8-87
DATE

Approved
Department of Public Works
William F. F. 10-9-87
Chief, Land Development Div Date

MATCH LINE SEE SHEET 2



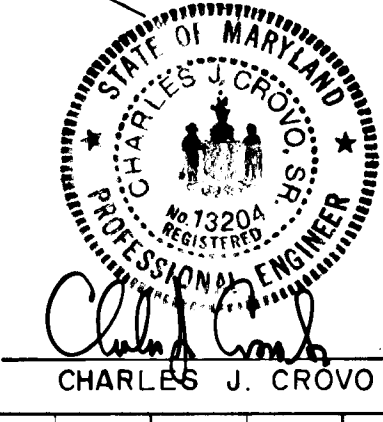
TWELVE HILLS SECTION 2 LOTS 7-24
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TWELVE TREES COURT
PLAN, PROFILE AND STORM DRAIN PROFILES

OWNER AND DEVELOPER
ALTOGETHER LIMITED PARTNERSHIP
C/O HOWARD COUNTY LAND SERVICES, INC.
8307 MAIN STREET
ELLCOTT CITY, MARYLAND 21043

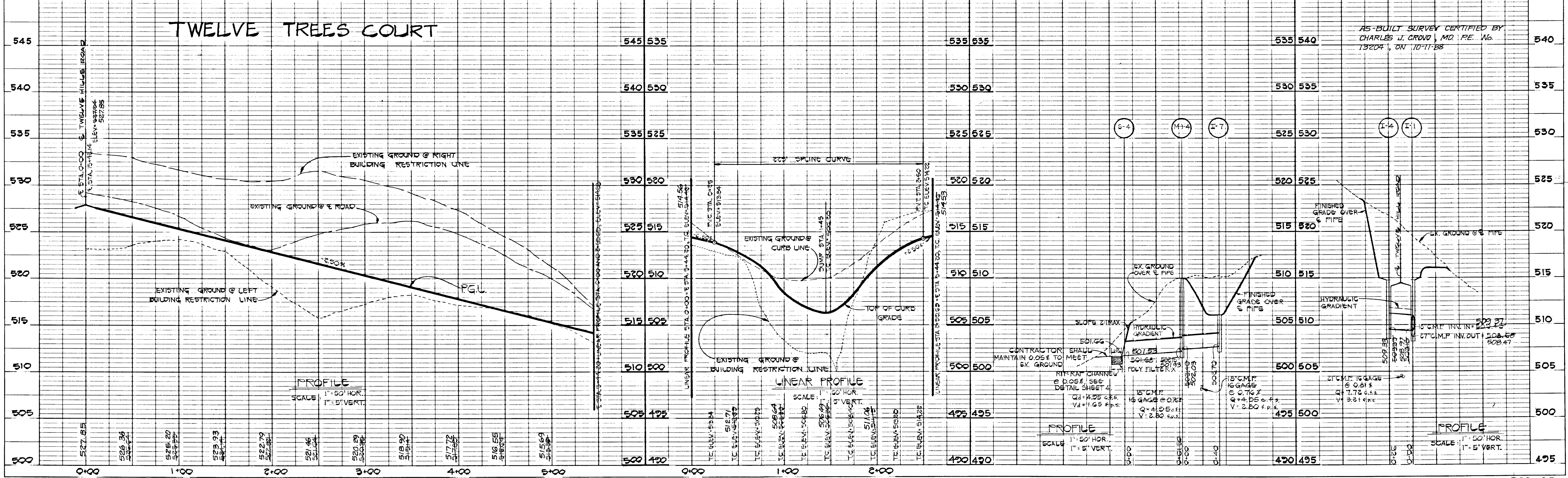
SCALE(S) SHOWN DATE MAY 15, 1987 DWG. NO. 3 OF 6
DES. C. CROVO SR. DRN. D. NEWTON CHK. R.C. SHUMAKER

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLCOTT CITY, MARYLAND 21043



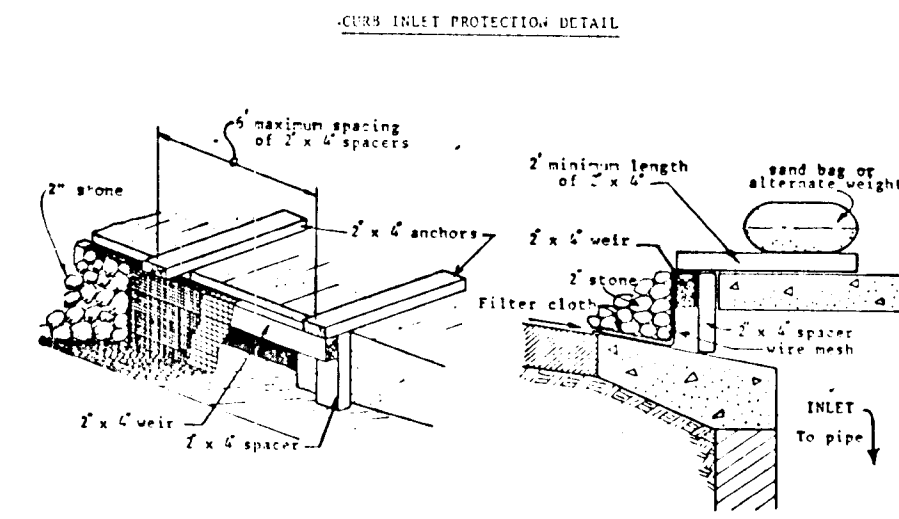
Charles J. Crovo Sr. 7/6/87
CHARLES J. CROVO SR. DATE

DATE	
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SURVEYED	
PLOTTED	
GRADES CHECKED	
NOTE BOOK	
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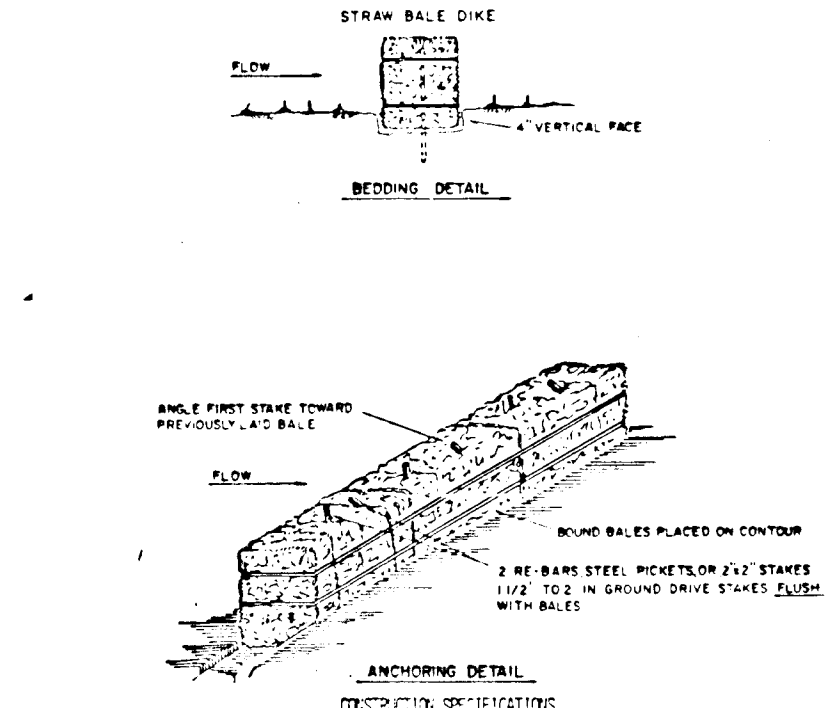


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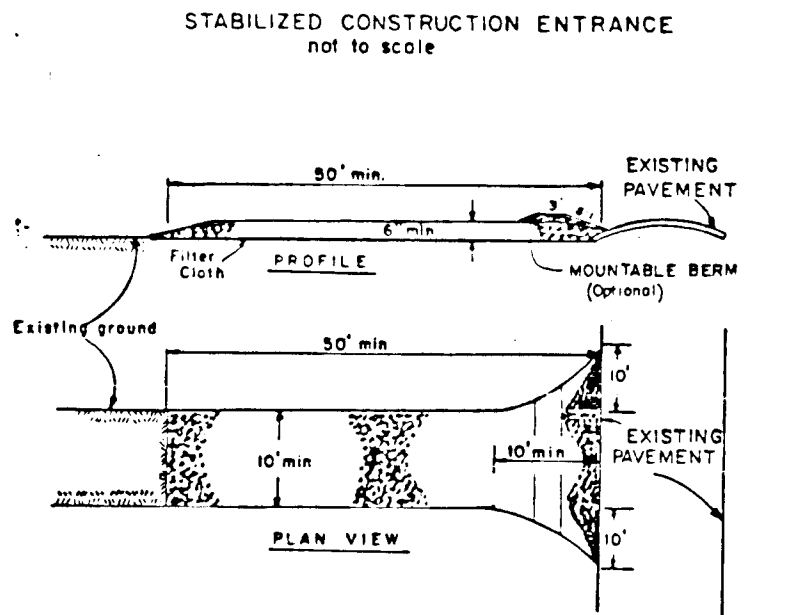
PERMANENT SEEDING NOTES:
 APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.
SEEDING PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
 (1) PREFERRED - APPLY 2 TONS PER ACRE 100-DIAMETER LIMESTONE (50 LBS/1000 SQ. FT.) AND 400 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE-INCHES OF SOIL.
 (2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (50 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 PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 THRU OCTOBER 15, SEED 2000 SEEDS PER ACRE (1 1/2 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 40 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (1.0 LBS/1000 SQ. FT.) OF MEETING 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 500 LBS/1000 SQ. FT. OF UNROTTED SMALL CORN 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 SLOPES, 8 FT. OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.
MULCHING: APPLY 14 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL CORN 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 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 RULES AND METHODS NOT COVERED.



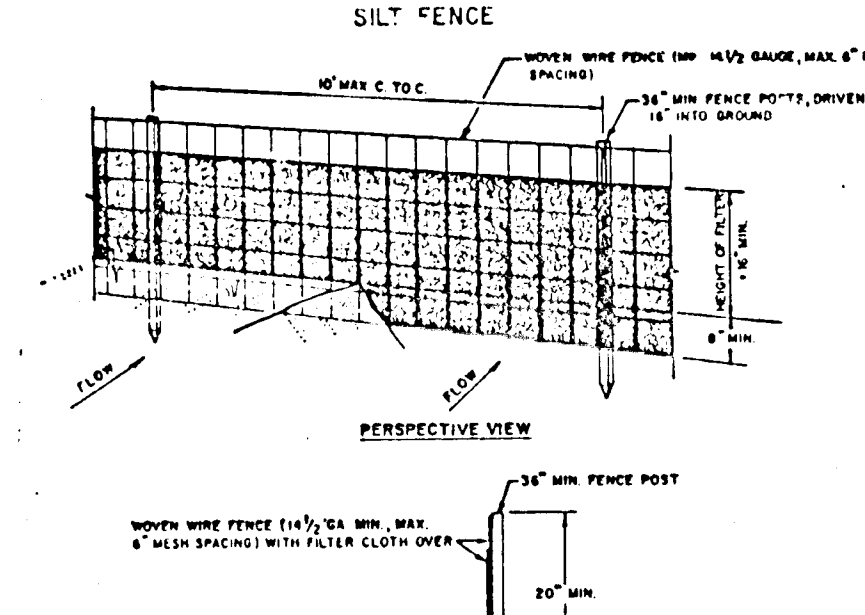
- Curb Inlet Protection.**
- Attach a continuous piece of wire mesh (30" x 48" with 2" x 4" mesh) to the curb length plus 4" to the 2" x 4" weir (measuring about length plus 2") as shown on the standard drawing.
 - Place a piece of approved filter cloth (40-85 stone) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
 - Securely nail the 2" x 4" weir to 8" long vertical anchors to be located between the weir and inlet face (max. 6" space).
 - Place the assembly against the inlet throat and nail (minimum 2" length of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
 - The assembly shall be placed so that the end anchors are a minimum 1" beyond both ends of the throat opening.
 - Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
 - This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
 - Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.



- Stream Dike Protection.**
- Each dike shall be placed on the toe of a slope or on the contour and in a row with 12" spacing between the dike stems.
 - Each dike shall be placed in the soil a minimum of 6" inches and placed so the dike stems are horizontal.
 - Diaks shall be securely anchored in place by either two 4" x 4" anchors driven through the dike stem first side in each dike stem or by driving the dike stem into the soil to a depth of 12" below the dike stem.
 - Inspection shall be frequent and repair replacement shall be made promptly as needed.
 - Diaks shall be removed when they have served their usefulness as not to block or restrict storm flow or drainage.



- Stabilized Construction Entrance.**
- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
 - Length - As required, but not less than 50 feet (except on a single residence lot where a 20 foot minimum length would apply).
 - Thickness - Not less than 6" inches.
 - Height - 12" (20" foot minimum, but not less than the full width at points where ingress or egress occurs).
 - Filter Cloth - Must be placed over the entire area prior to placing of stone. Filter cloth will not be required on a single family residence lot.
 - Surface Water - All surface water (flowing or directed) toward construction entrances shall be piped across the entrance. If piping is impractical, a mounds with 5:1 slopes will be permitted.
 - Maintenance - The entrance shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or removal of any materials used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
 - Washing - Washing 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 trap or device.
 - Periodic inspection and needed maintenance shall be provided after each rain.



- Silt Fence.**
- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
 - Length - As required, but not less than 50 feet (except on a single residence lot where a 20 foot minimum length would apply).
 - Thickness - Not less than 6" inches.
 - Height - 12" (20" foot minimum, but not less than the full width at points where ingress or egress occurs).
 - Filter Cloth - Must be placed over the entire area prior to placing of stone. Filter cloth will not be required on a single family residence lot.
 - Surface Water - All surface water (flowing or directed) toward construction entrances shall be piped across the entrance. If piping is impractical, a mounds with 5:1 slopes will be permitted.
 - Maintenance - The entrance shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or removal of any materials used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
 - Washing - Washing 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 trap or device.
 - Periodic inspection and needed maintenance shall be provided after each rain.

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 SOIL CONSERVATION DISTRICT.
 Signature of Engineer: *Charles J. Grovo* 10/6/87
 DATE

DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEMAILED NECESSARY.
 Signature of Developer: *William W. Wealand* 10/6/87
 DATE

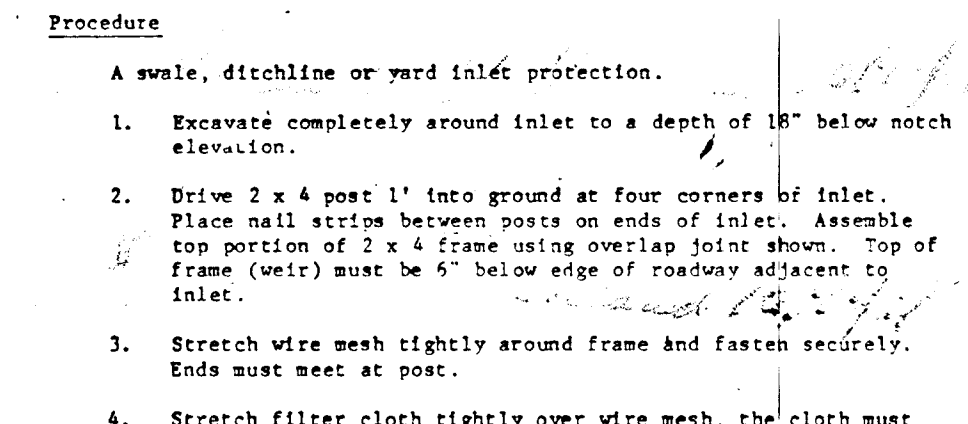
REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MET ALL TECHNICAL REQUIREMENTS.
 Signature of District Chief: *Stephen L. Fisher* 10-7-87
 U.S. SOIL CONSERVATION DISTRICT DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Approved: *William W. Wealand* 10-15-87
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: OFFICE OF PLANNING AND ZONING
 Signature of Planning and Zoning Chief: *John M. Munchman* 10-9-87
 CHIEF, DIVISION OF PLANNING AND ZONING ADMINISTRATION DATE

Procedure

- A swale, ditchline or yard inlet protection.
- Excavate completely around inlet to a depth of 18" below notch elevation.
- Drive 2 x 4 post 1' into ground at four corners of inlet. Place nail straps between posts on ends of inlet. Assemble top portion of 2 x 4 frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to inlet.
- Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
- Stretch filter cloth tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet notch elev. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down.
- Backfill around inlet in compacted 6" layers until layer of earth is even with notch elevation on ends and top elevation on sides.
- If the inlet is not in a low point, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (weir).
- This structure must be inspected frequently and the filter fabric replaced when clogged.

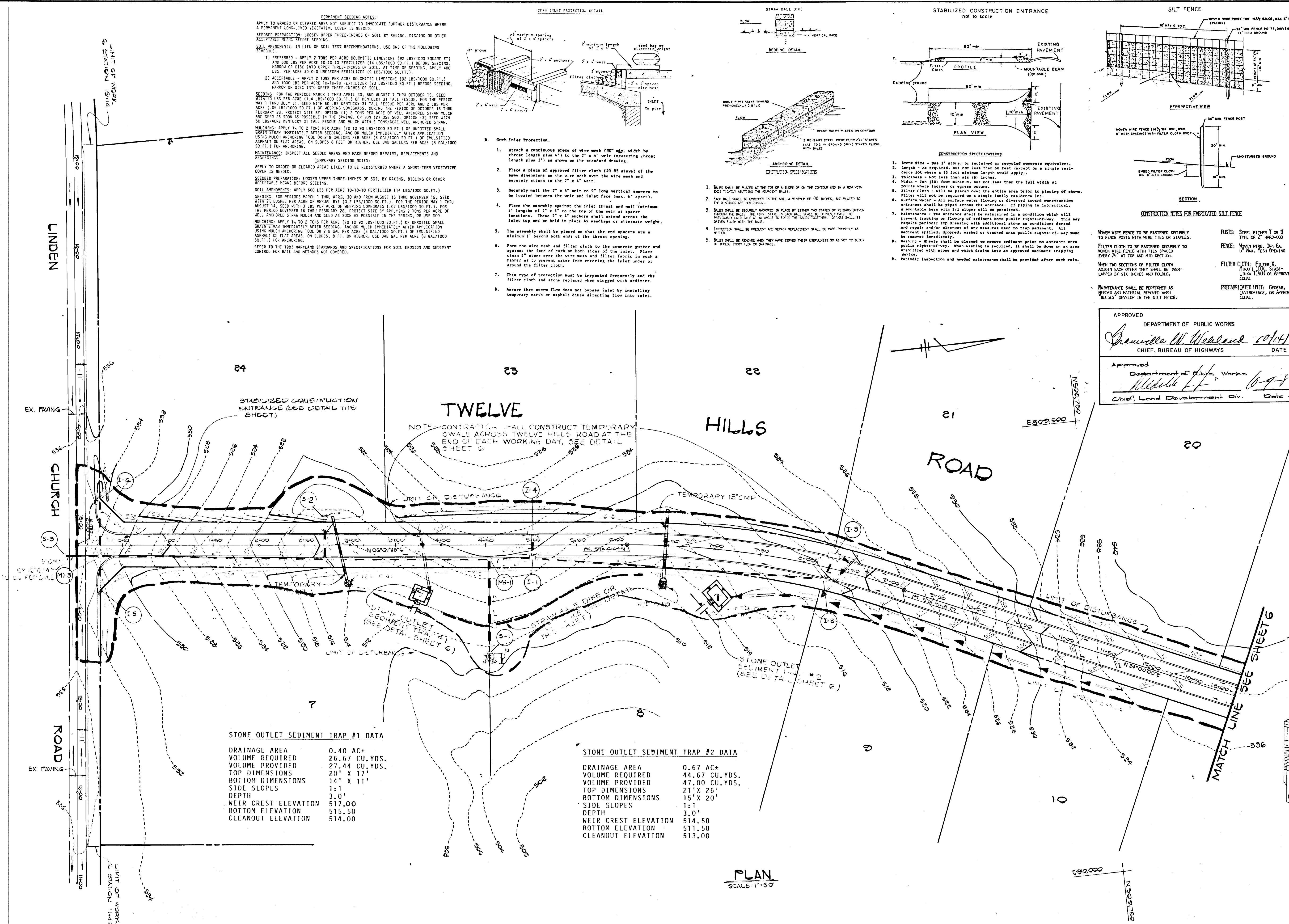


STONE OUTLET SEDIMENT TRAP #1 DATA

DRAINAGE AREA	0.40 AC±
VOLUME REQUIRED	26.67 CU. YDS.
VOLUME PROVIDED	27.44 CU. YDS.
TOP DIMENSIONS	20' X 11'
BOTTOM DIMENSIONS	14' X 11'
SIDE SLOPES	1:1
DEPTH	3.0'
WEIR CREST ELEVATION	517.00
BOTTOM ELEVATION	515.50
CLEANOUT ELEVATION	514.00

STONE OUTLET SEDIMENT TRAP #2 DATA

DRAINAGE AREA	0.67 AC±
VOLUME REQUIRED	44.67 CU. YDS.
VOLUME PROVIDED	47.00 CU. YDS.
TOP DIMENSIONS	21' X 26'
BOTTOM DIMENSIONS	15' X 20'
SIDE SLOPES	1:1
DEPTH	3.0'
WEIR CREST ELEVATION	514.50
BOTTOM ELEVATION	511.50
CLEANOUT ELEVATION	513.00



FISHER, COLLINS, AND CARTER, INC.
 CIVIL ENGINEERS AND LAND SURVEYORS
 8388 COURT AVENUE
 ELLICOTT CITY, MARYLAND 21043
 (301) 461-2855

OWNER AND DEVELOPER
 ALTOGETHER LIMITED PARTNERSHIP
 C/O HOWARD COUNTY LAND SERVICES INC.
 8307 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043

GRADING & SEDIMENT CONTROL PLAN
TWELVE HILLS
 SECTION 2
 LOTS 7-24
 FIFTH ELECTION DISTRICT
 MAY 15, 1987
 HOWARD COUNTY MARYLAND
 SCALE: AS SHOWN
 SHEET 5 OF 6

