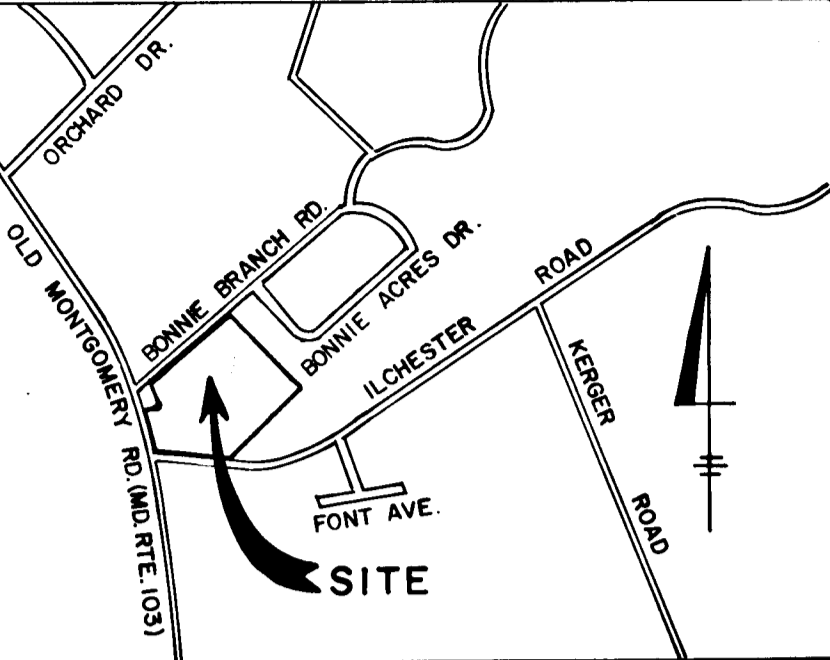
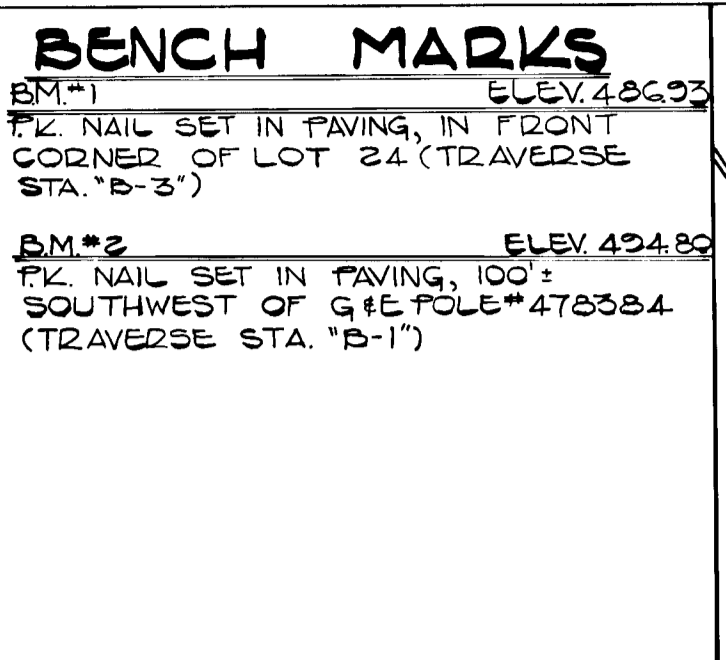
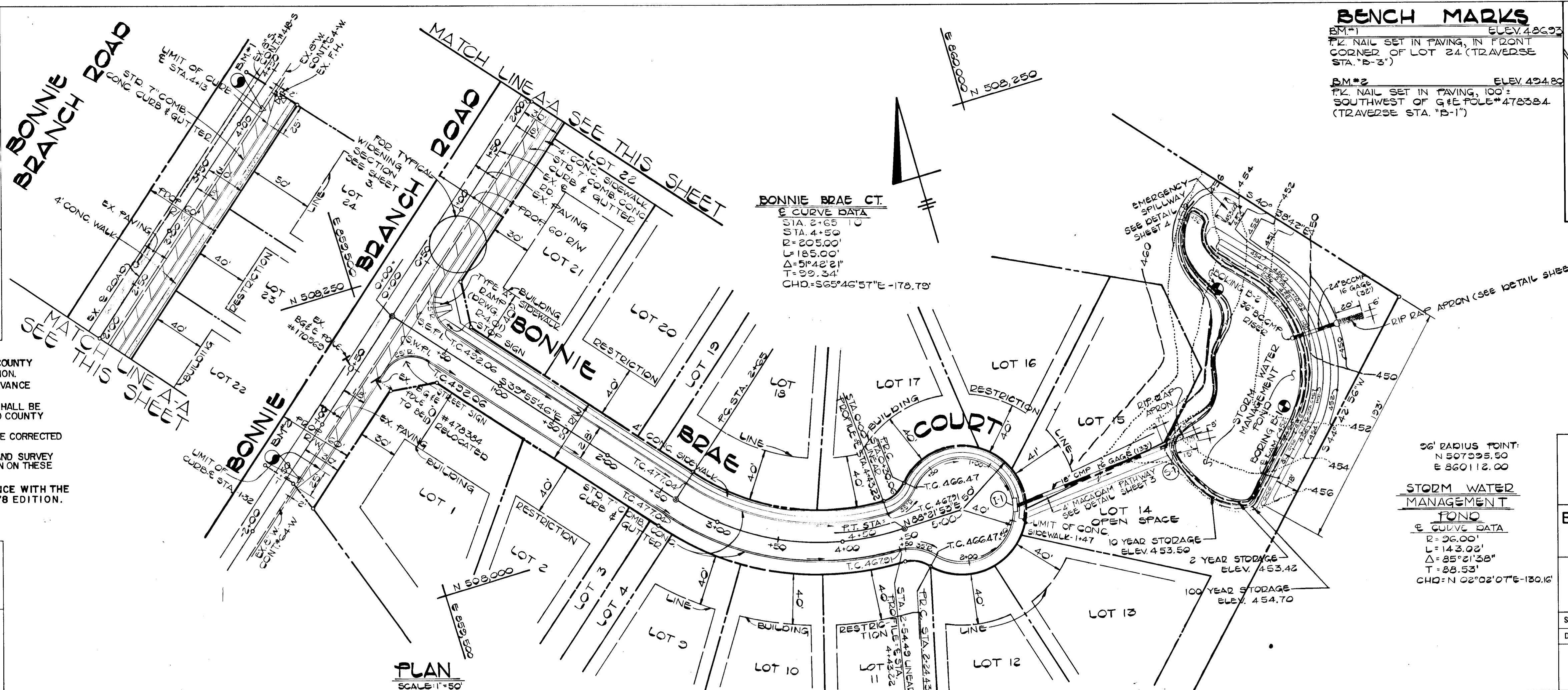


ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL AND WORKABLE PLAN BASED ON MY PERSONAL SURVEY AND FIELD CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 CHARLES J. CROVO SR. 4/4/85
 DEVELOPER'S CERTIFICATE
 I 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 EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY.
 Charles J. Crovo Sr. 10-31-85
 CARMAN ASSOCIATES DATE
 APPROVED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 Robert J. Zehm 12-18-85
 U.S. SOIL CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 Robert J. Zehm 12-18-85
 HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

- 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 RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
 4. ANY DAMAGE TO PUBLIC RIGHTS-OF-WAYS OR PAVING WILL BE CORRECTED AT THE CONTRACTORS 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. TRAFFIC CONTROL DEVICES SHALL BE IN COMPLIANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1978 EDITION.

APPROVED DEPARTMENT OF PUBLIC WORKS
 APPROVED OFFICE OF PLANNING AND ZONING
 APPROVED PROJECT
 DATE



STATE OF MARYLAND
 CHARLES J. CROVO, SR.
 PROFESSIONAL ENGINEER
 No. 13204
 DATE 4/4/85

BONNIE BRAE SECTION ONE LOTS 1-24
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

BONNIE BRANCH ROAD PLAN | **BONNIE BRAE COURT PLAN & PROFILE**

OWNER AND DEVELOPER
 CARMAN ASSOCIATES
 P.O. BOX 122
 ELLICOTT CITY, MD. 21043

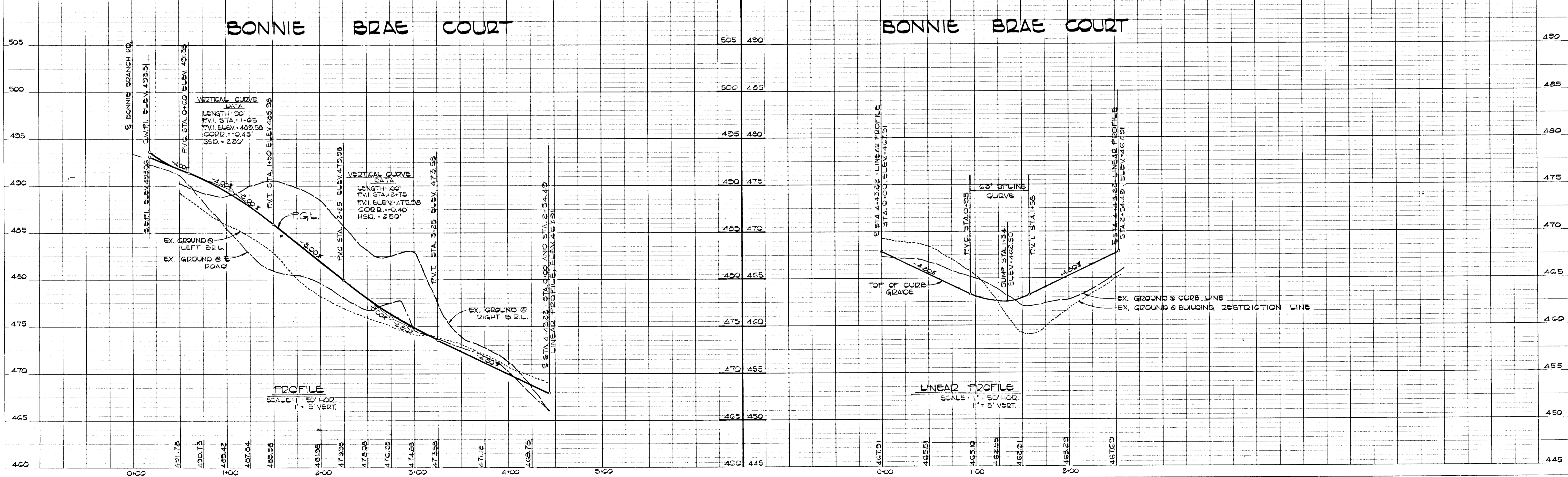
SCALE AS SHOWN DATE OCT. 25, 1985 DWG. NO. 1 OF 5
 DES. C. J. CROVO DRN. R. ISAACS CHK. R. CARTER

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

DATE	BY	REVISION

DATE	BY	REVISION

DATE	BY	REVISION



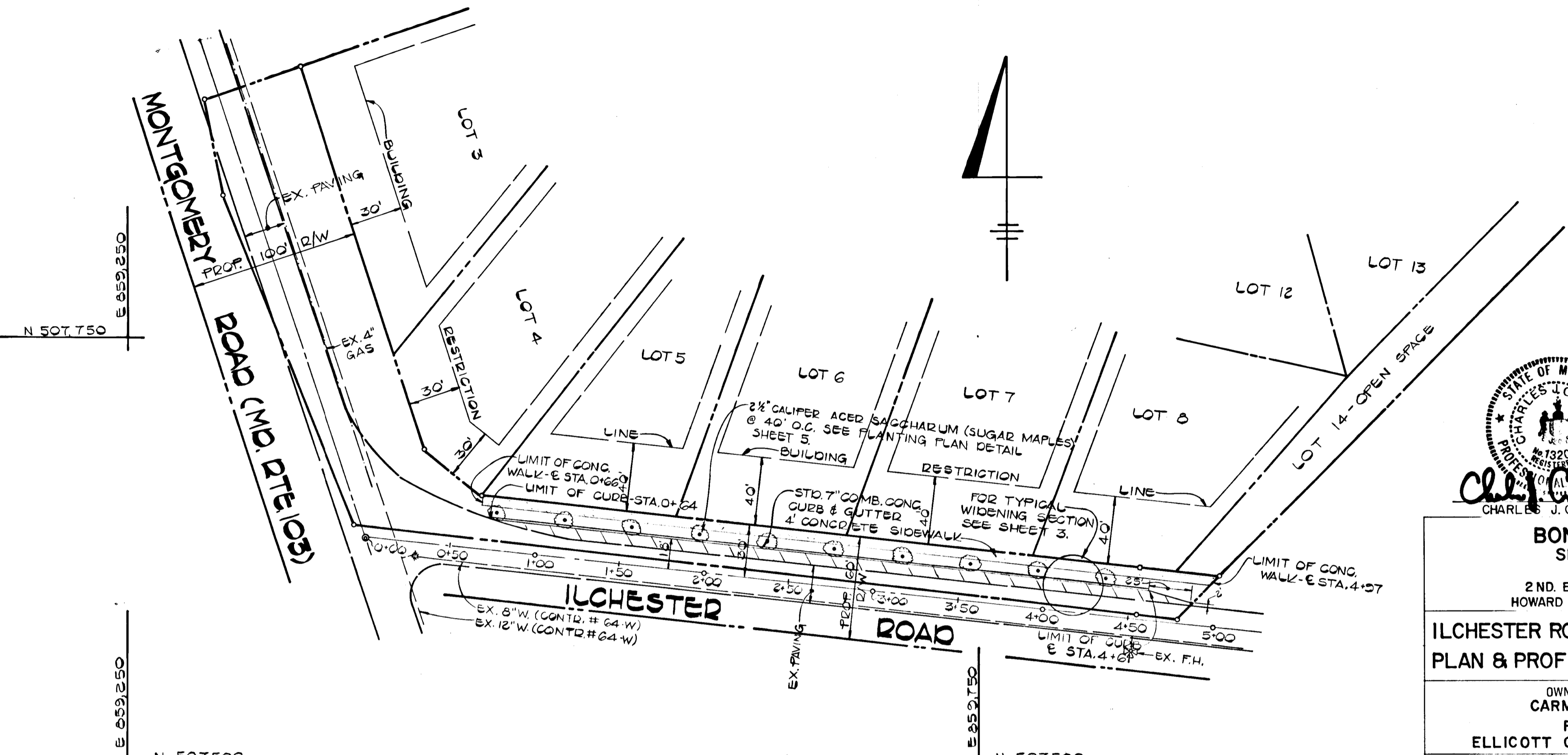
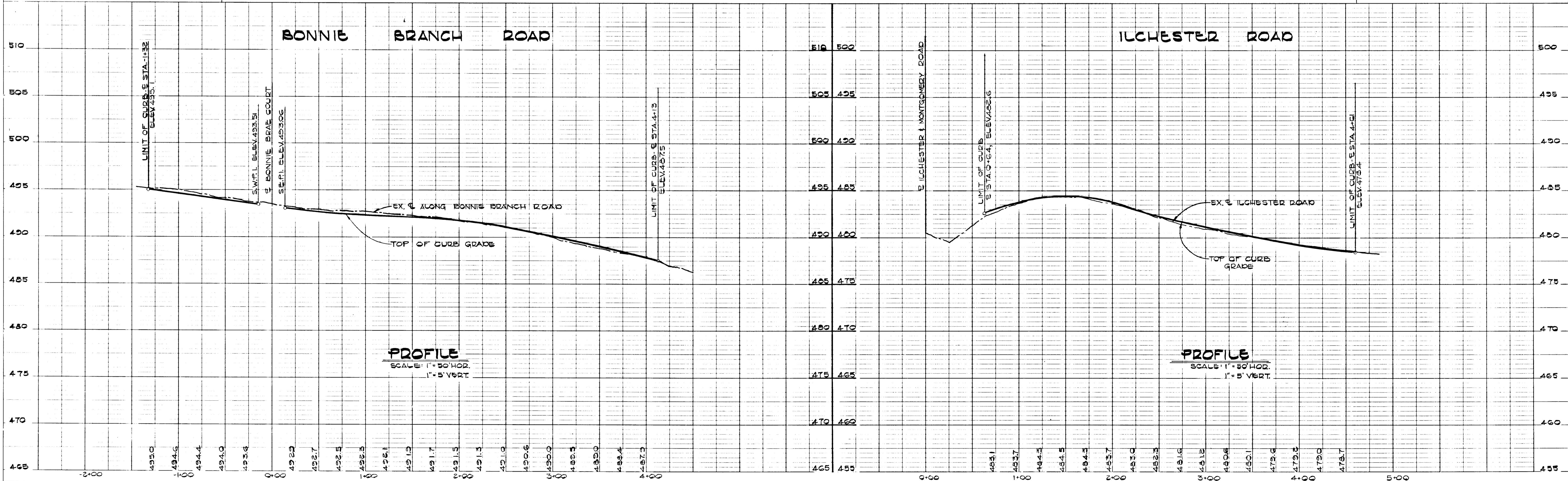
#1166

PLAN	BY	DATE
NO.		

APPROVED
DEPARTMENT OF PUBLIC WORKS
William B. R. [Signature] 12-19-85
DATE

APPROVED
OFFICE OF PLANNING AND ZONING
John W. [Signature] 12-19-85
DATE

PROFILE	BY	DATE
NO.		



STATE OF MARYLAND
CHARLES J. CROVO, SR.
11/1/85
DATE

BONNIE BRAE SECTION ONE
LOTS 1-24
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

ILCHESTER ROAD BONNIE BRANCH RD.
PLAN & PROFILE PROFILE

OWNER AND DEVELOPER
CARMAN ASSOCIATES
P.O. BOX 122
ELLCOTT CITY, MARYLAND 21043

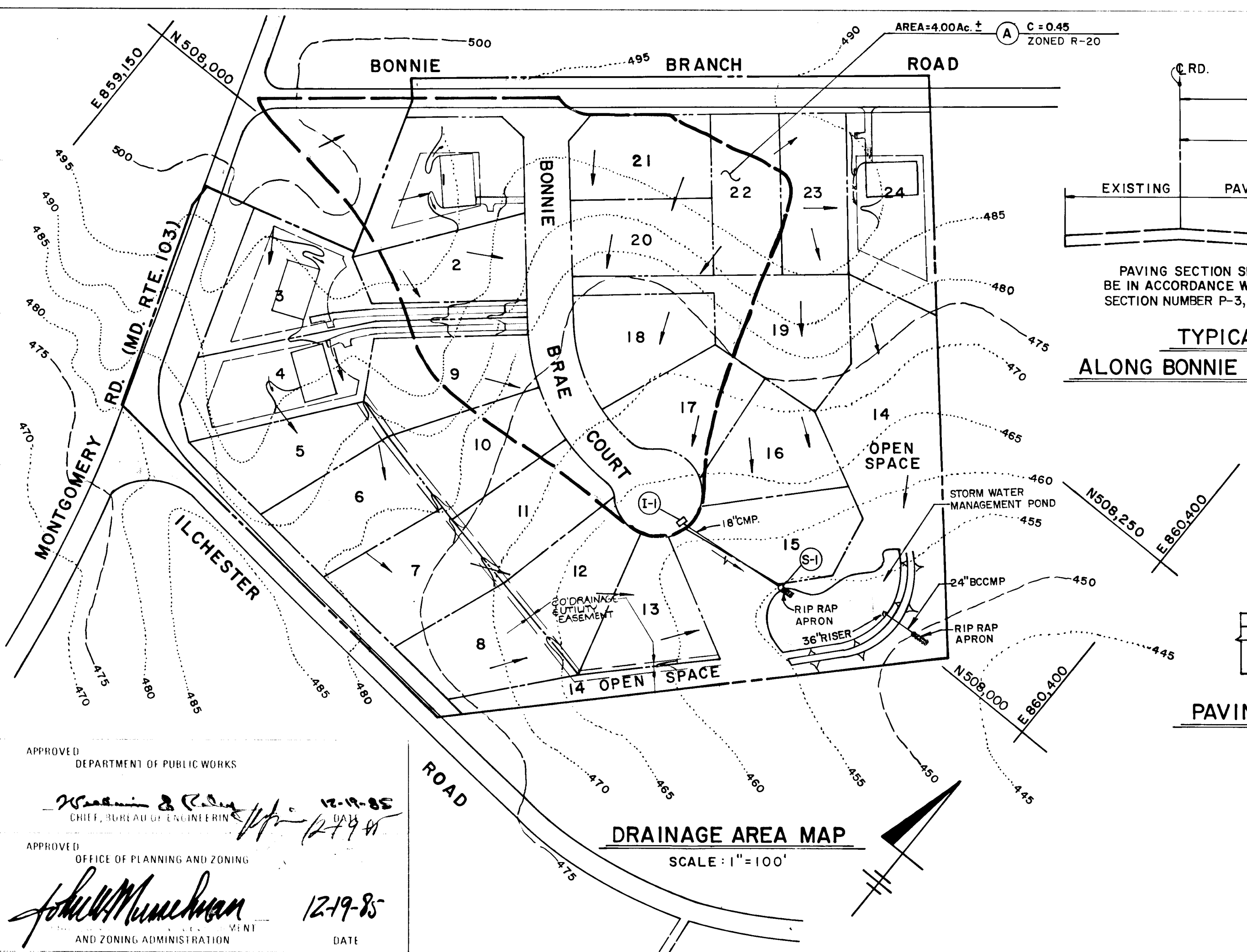
SCALE AS SHOWN DATE OCT. 25, 1985 DWG. NO. 2 OF 5
DES. C. J. CROVO DRN. R. ISAACS CHK. R. CARTER

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

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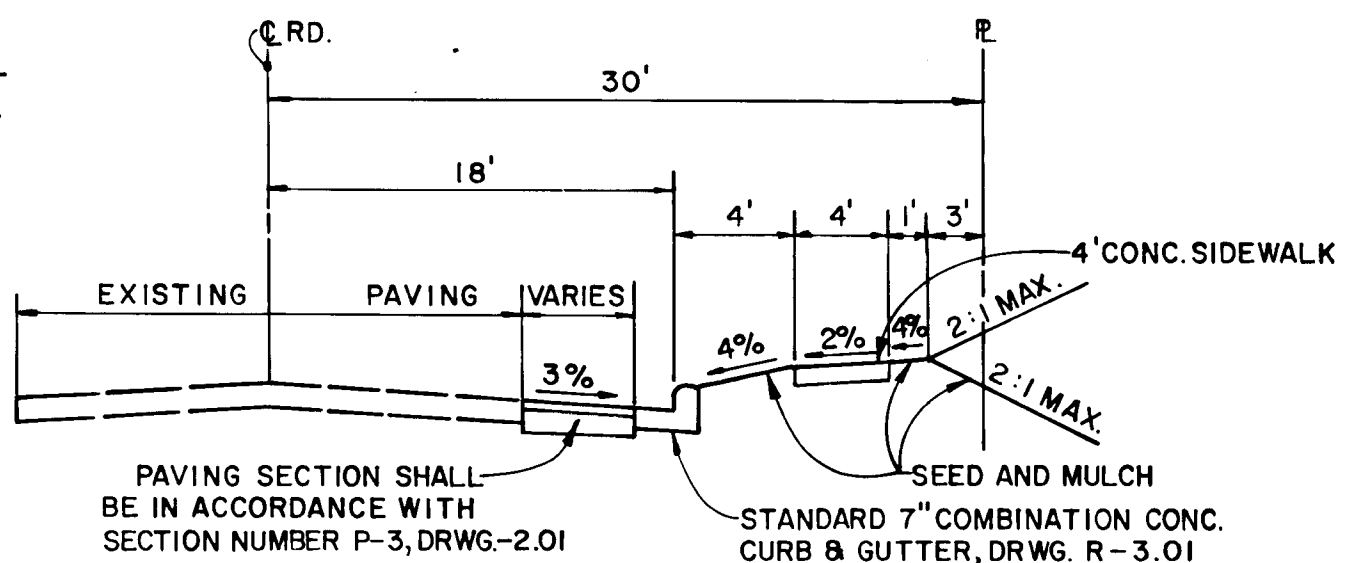
PLAN
 SURVEYED, ALIGNED, CHECKED, BY DATE
 NOTE BOOK NO. OF WAY CHECKED

PROFILE
 SURVEYED, GRADES CHECKED, BY DATE
 NOTE BOOK NO. STRUCTURE NOTATIONS CHECKED



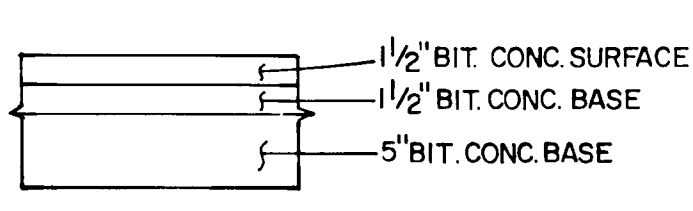
APPROVED DEPARTMENT OF PUBLIC WORKS
 [Signature] 12-19-85
 CHIEF, BUREAU OF ENGINEERING

APPROVED OFFICE OF PLANNING AND ZONING
 [Signature] 12-19-85
 AND ZONING ADMINISTRATION DATE

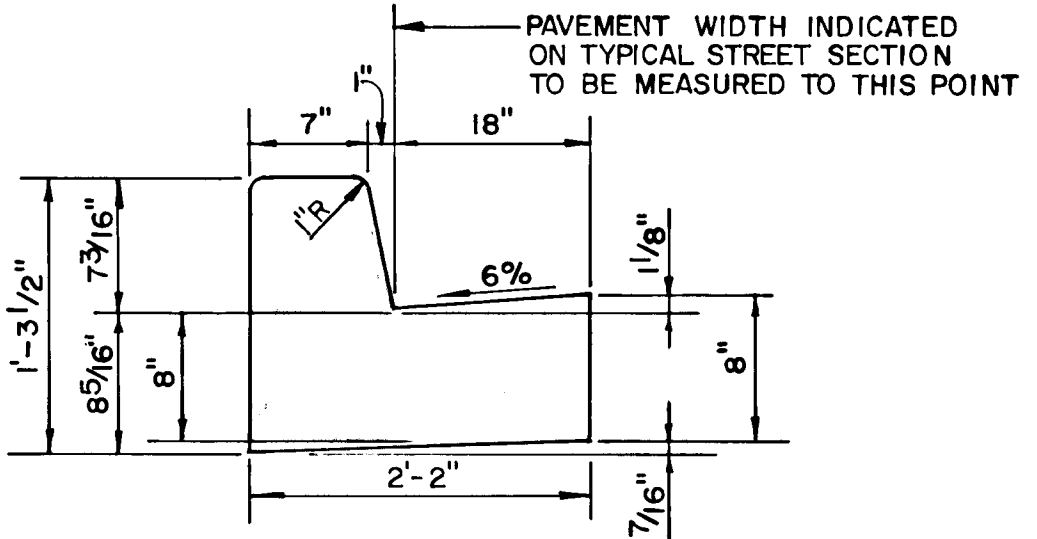


TYPICAL WIDENING SECTION
 ALONG BONNIE BRANCH ROAD AND ILCHESTER ROAD
 NO SCALE

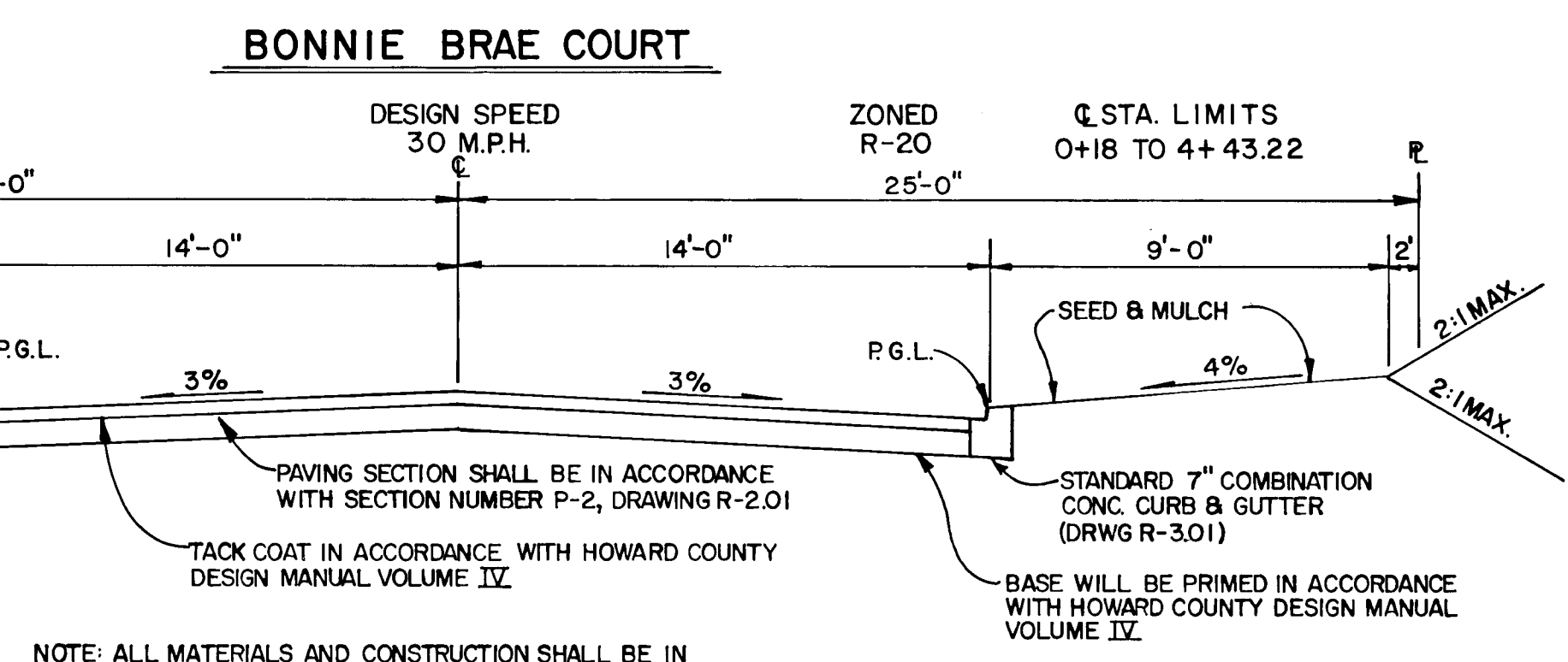
ROAD NAME	ROAD CLASSIFICATION	DESIGN SPEED	ZONING	STA. LIMITS
BONNIE BRANCH RD.	MINOR COLLECTOR	35 MPH.	R-20	0+00 TO -1+32 & 4+13
ILCHESTER ROAD	MINOR COLLECTOR	35 MPH.	R-20	0+64 TO 4+61



PAVING SECTION P-3
 NO SCALE

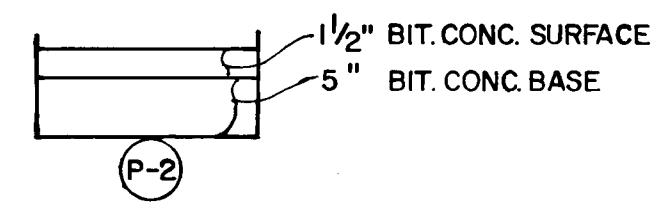


STANDARD SLOPE 7" COMB. CONC. CURB & GUTTER
 NO SCALE

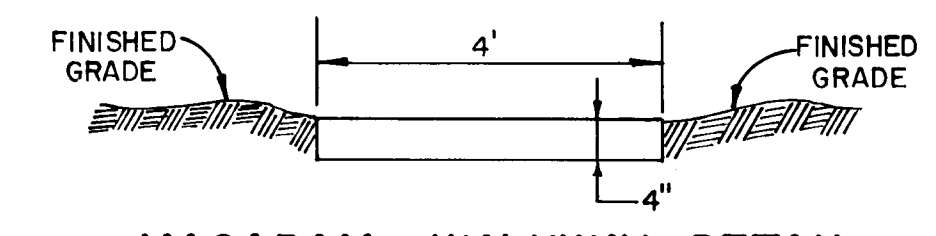


TYPICAL ROADWAY SECTION
 NO SCALE

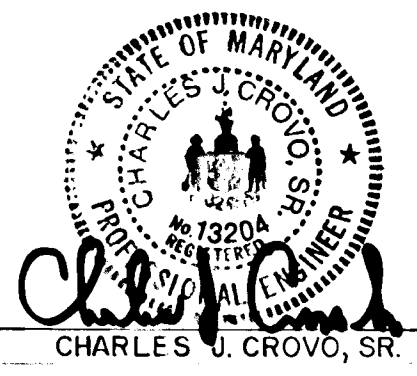
NOTE: ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.



PAVING SECTION P-2
 NO SCALE



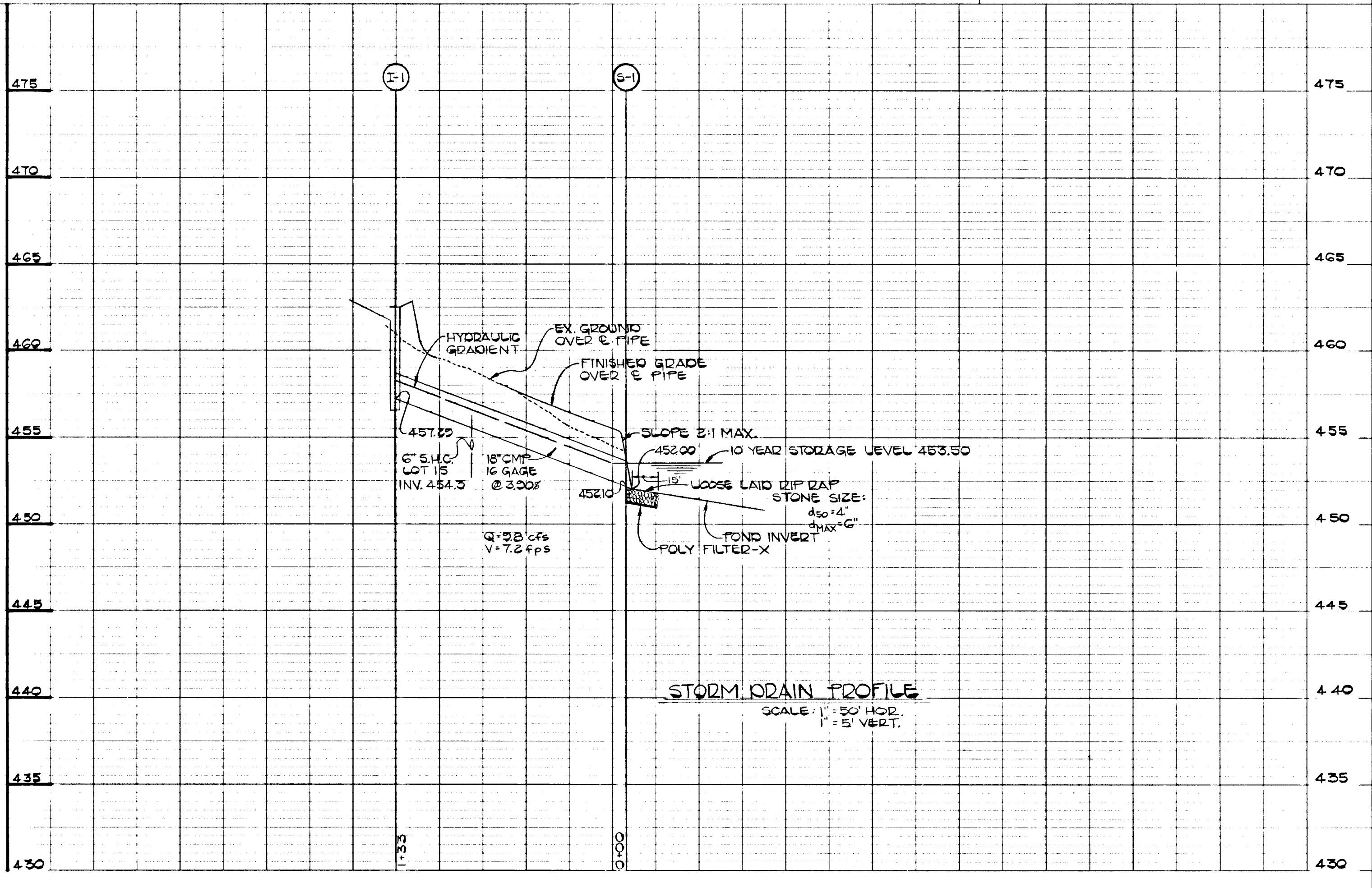
MACADAM WALKWAY DETAIL
 NO SCALE



BONNIE BRAE SECTION ONE
 LOTS 1-24
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
DRAINAGE AREA MAP, STORM DRAIN PROFILES AND DETAILS
 OWNER AND DEVELOPER:
 CARMAN ASSOCIATES
 P.O. BOX 122
 ELLICOTT CITY, MARYLAND 21043
 SCALE AS SHOWN DATE OCT. 25, 1985 DWG. NO. 3 OF 5
 DES. C. J. CROVO DRN. R. ISAACS CHK. R. CARTER
 FISHER, COLLINS AND CARTER, INC.
 CIVIL ENGINEERS AND LAND SURVEYORS
 8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

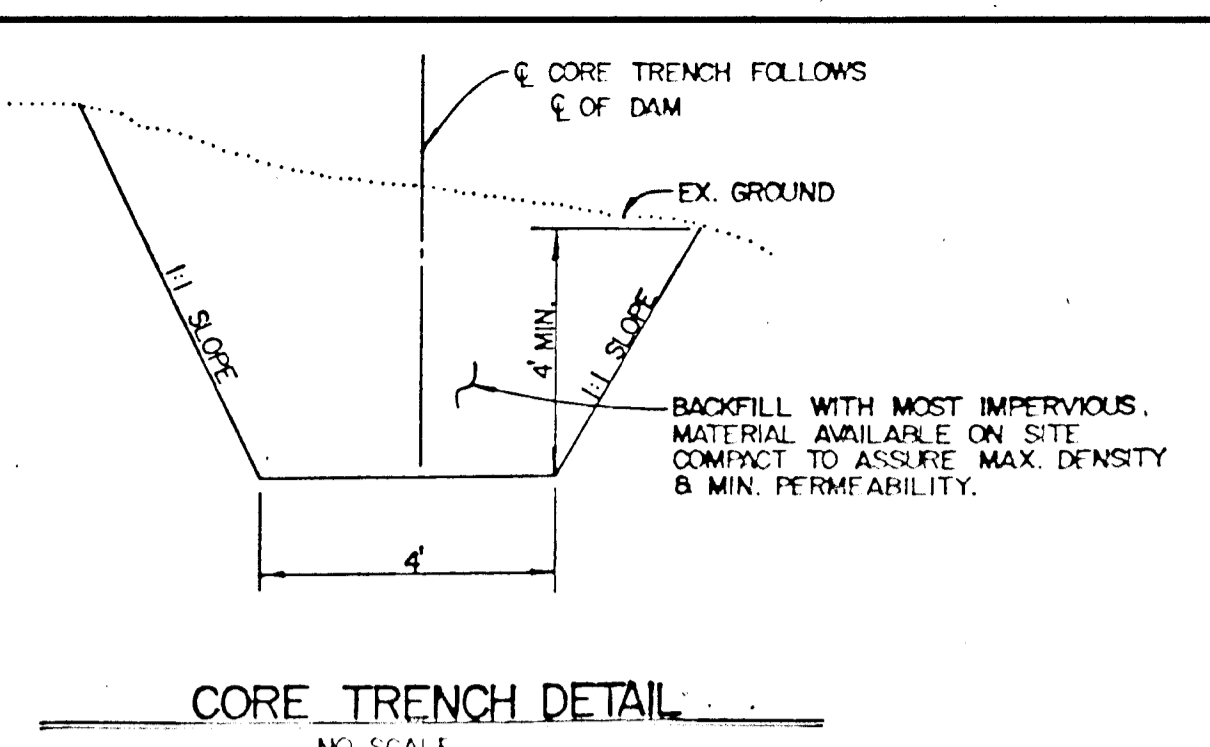
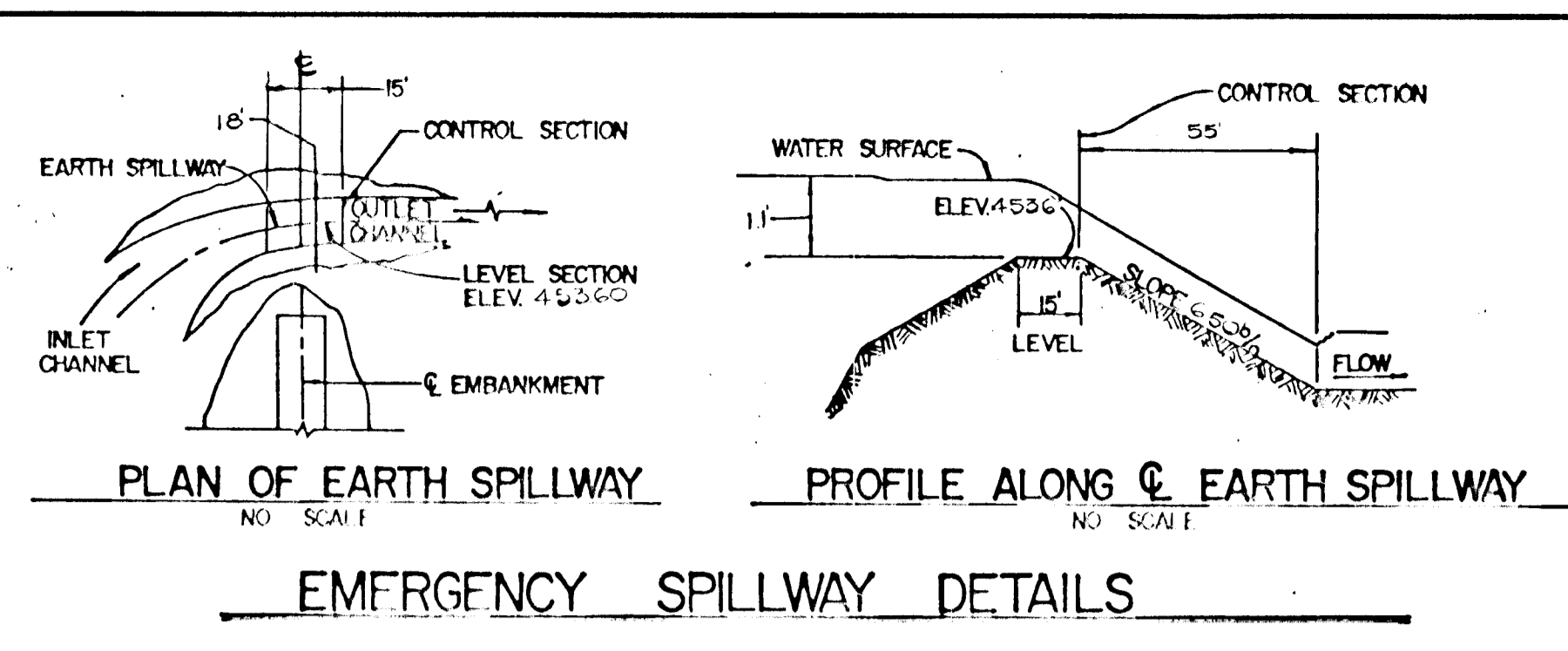
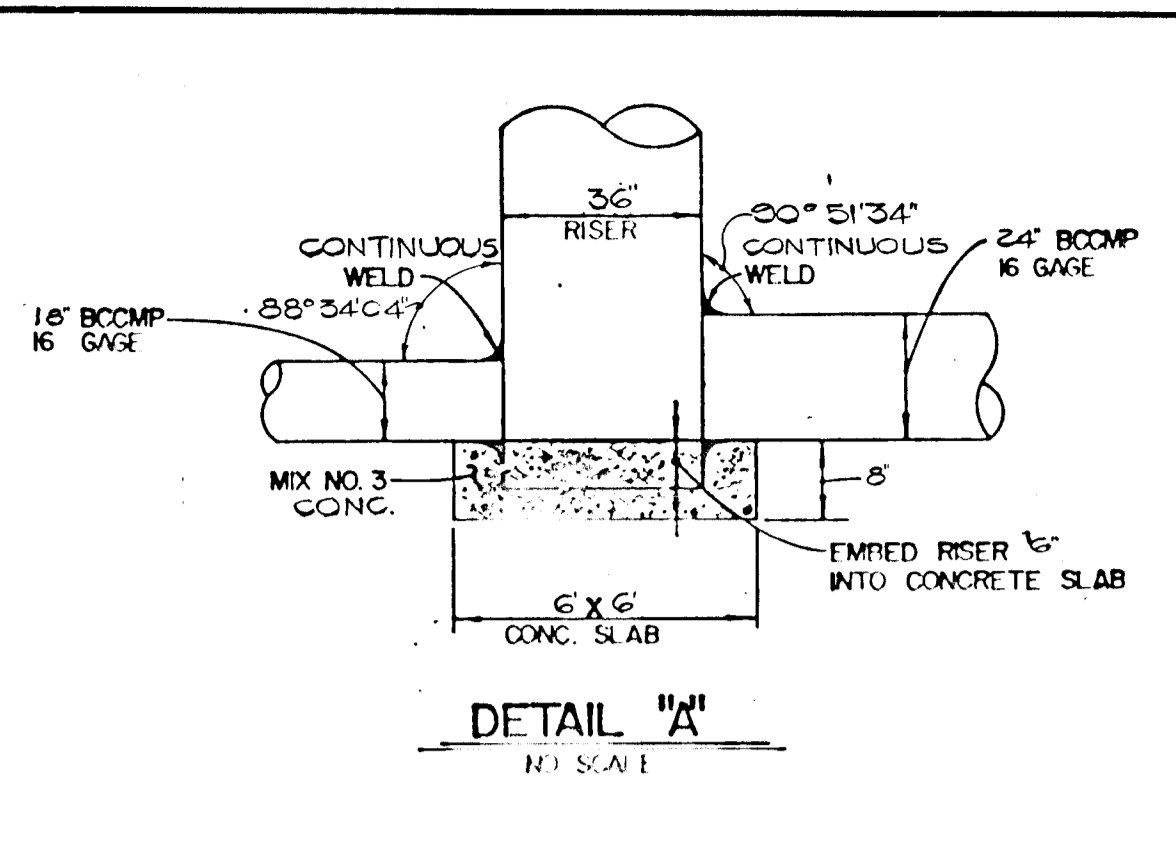
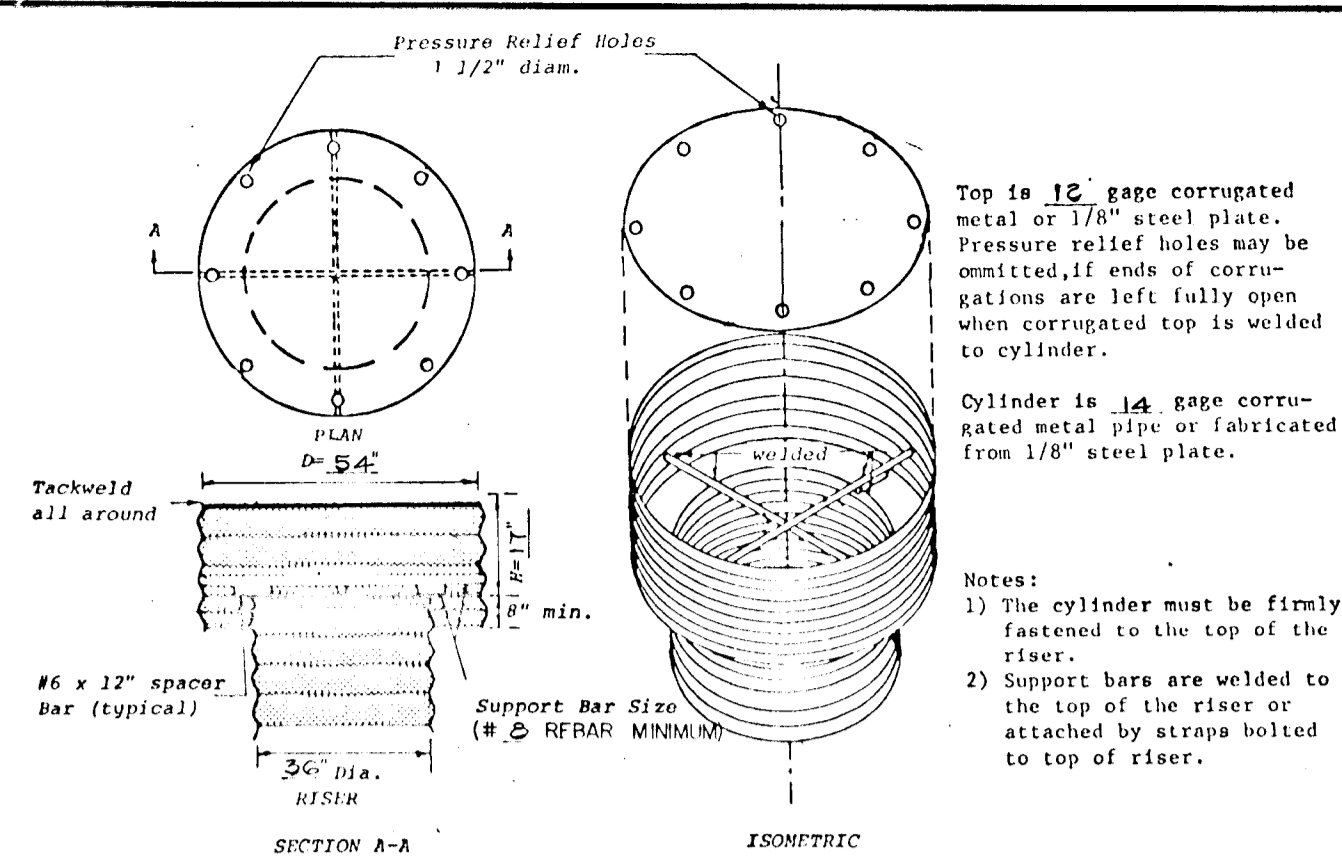
STRUCTURE SCHEDULE

NO.	TYPE	INVERT IN	INVERT OUT	TOP ELEV.	STATION	REMARKS
I-1	A-10	---	457.20	462.50	1+34 LINEAR PROFILE	DRWG. 504.92
B-1	METAL END SECTION	---	452.10	453.60	---	DRWG. 505.61



STORM DRAIN PROFILE
 SCALE: 1"=50' HOR. 1"=5' VERT.

#1166

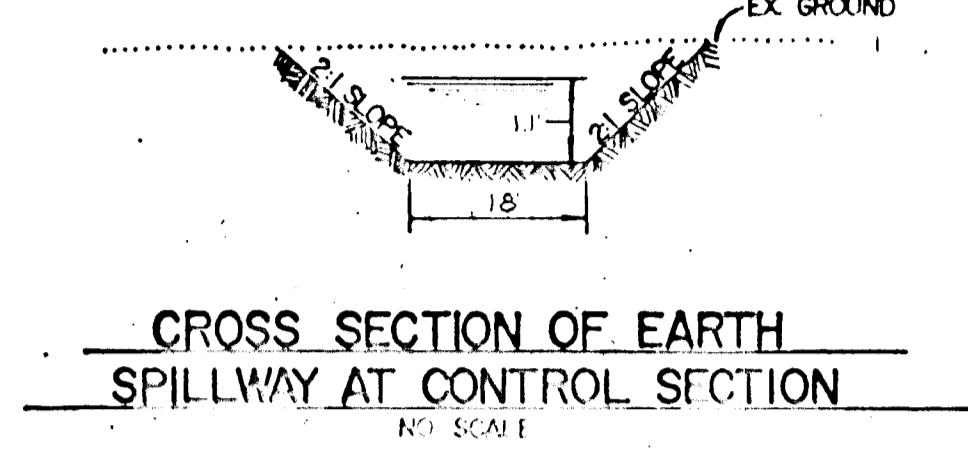


CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE DETAIL
NOT TO SCALE

POND SPECIFICATIONS

EMERGENCY SPILLWAY DETAILS

CORE TRENCH DETAIL



STORM WATER MANAGEMENT POND CERTIFICATION AND APPROVAL

DEVELOPER'S CERTIFICATE
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
Philip A. Mault 12-10-85

ENGINEER'S CERTIFICATE
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THE PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE ADVISED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
Charles J. And 12/10/85

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.
Kenneth M. Helm 12-18-85

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Robert W. Zick 12-18-85

APPROVED: DEPARTMENT OF PUBLIC WORKS
Robert W. Zick 12-18-85

APPROVED: OFFICE OF PLANNING AND ZONING
John W. Mueck 12-19-85

APPROVED: OFFICE OF PLANNING AND ZONING
John W. Mueck 12-19-85

I. SITE PREPARATION
Areas under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. To facilitate clean out and restoration, it is recommended that the permanent pool area be cleared of all brush and trees.

II. EARTH FILL
Material
The fill material shall be taken from approved designated borrow area or areas. It shall be free from roots, stumps, wood, rubbish, over-size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least 10 percent above the design elevation (including freeboard) unless otherwise shown on the plans. All fill material shall be CL or ML, as approved by Soils Engineer.

Placement
Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

Compaction
The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment, or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture so that it can be formed into a ball without crumbling. If water can be squeezed out of the ball, it is too wet to compact properly. Compact all fill material to 95% of AASHTO T-99 density.

Core Trench
Where specified, a core trench shall be excavated along or parallel to the centerline of the embankment, as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being 4-feet. The depth shall be at least 4-feet or as shown on the plans. The side slopes of the trench shall be 1:1 or flatter. The backfill material for the core trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability. Compact to 95% of AASHTO T-99 density. Materials shall be CL or ML as approved by Soils Engineer.

III. STRUCTURAL BACKFILL
Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed 4-inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than 4-feet to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a structure or pipe unless there is a compacted fill of 2-feet or greater over the structure or pipe.

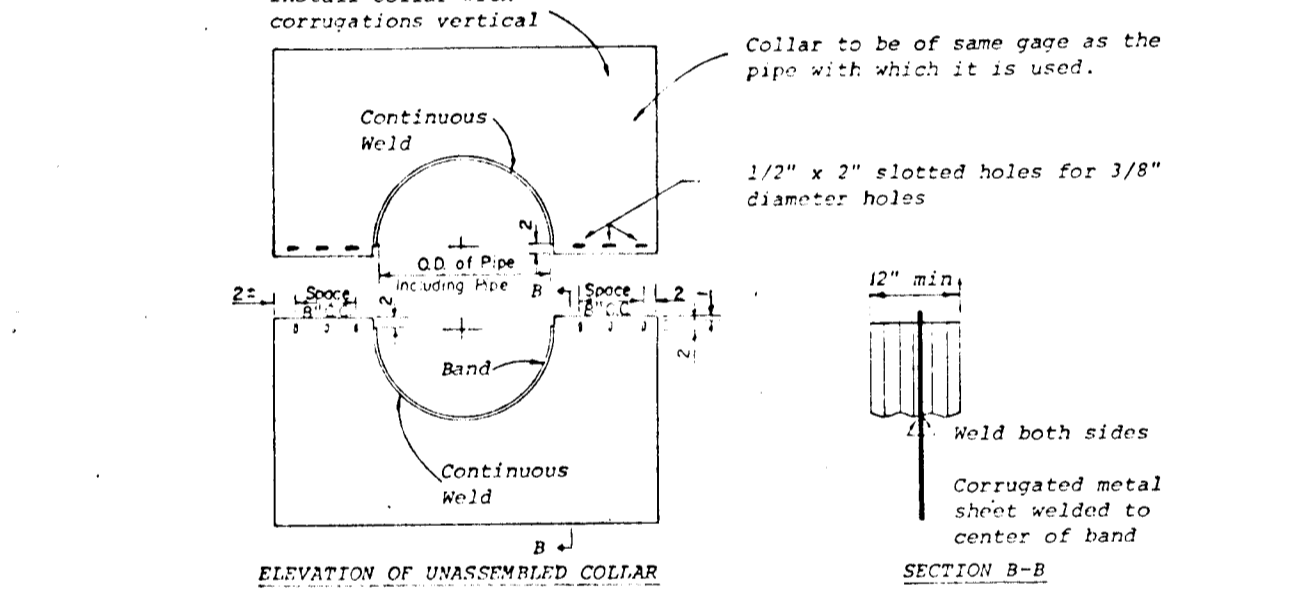
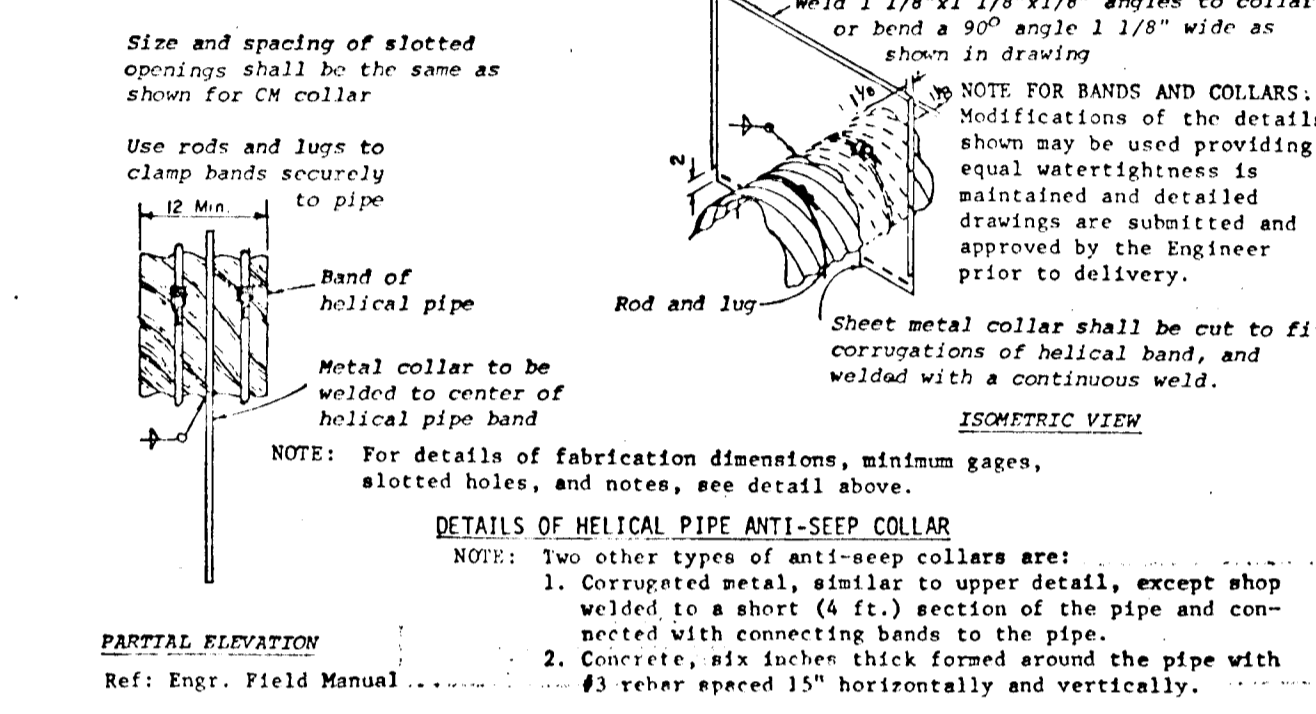
IV. PIPE CONDUITS
A. CORRUGATED METAL PIPE
1. Materials - METAL Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211, with watertight coupling bands.
2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the control structure shall be mortared all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.
5. Backfilling shall conform to structural backfill as shown above.
6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

V. CONCRETE
Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications for Materials, Highways, Bridges, and Incidental Structures, Article 20.07 (Portland Cement Concrete Mixtures), Mix No. 3.

VI. STABILIZATION
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by permanent seeding and applying straw mulch in accordance with "Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas" immediately after finish grading.

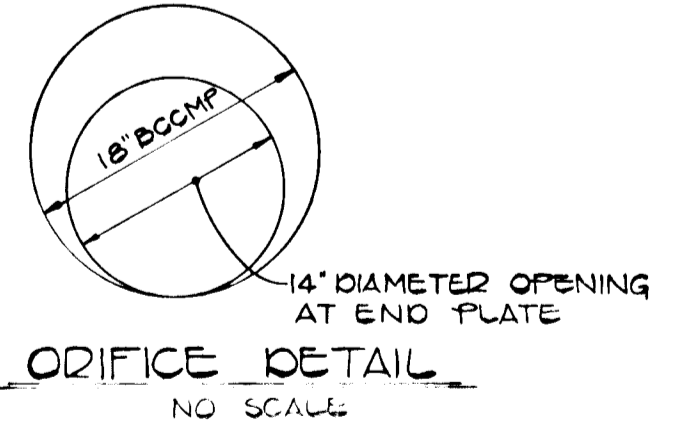
Fertilizer: 10-10-10 @ 11.5 lbs./1000 sq.ft.
Seed: Crownvetch inoculated @ 0.5 lbs./1000 sq.ft.
'KY-31' Tall Fescue @ 1.0 lbs./1000 sq.ft.
Mulch: Straw @ 80 lbs./1000 sq.ft.
Asphalt Tie-down: Slopes @ 8 gal./1000 sq.ft.
Flat areas @ 5 gal./1000 sq.ft.

VII. FENCING
A 3'-6" chain-link fence shall be constructed in the location specified on the plan. Materials and construction shall be in accordance with Maryland State Highway Administration Standard Details 690.01 and 690.02.

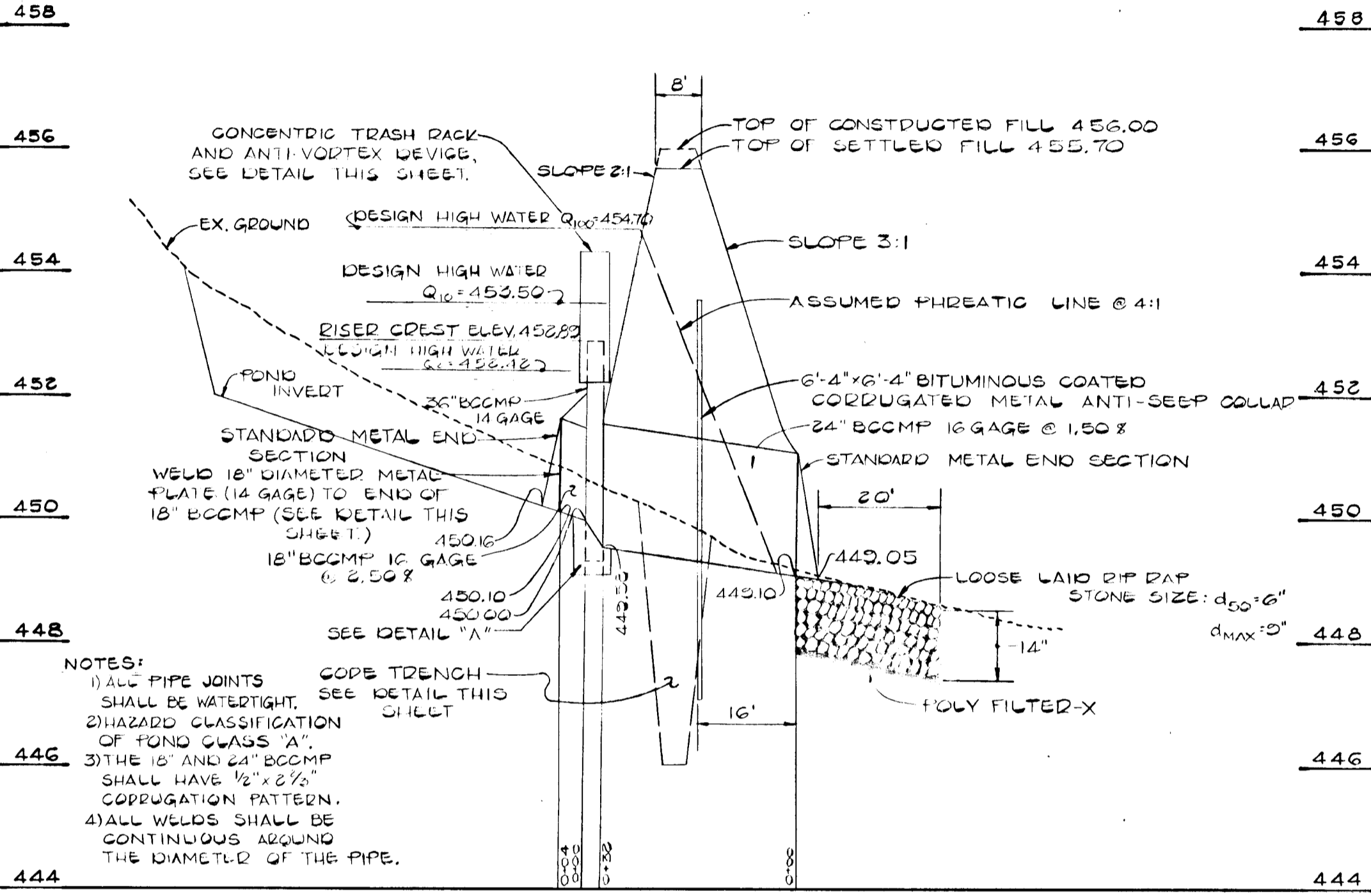


NOTES FOR COLLARS:
1. All materials to be in accordance with construction and construction material specifications.
2. When specified on the plans, coating of collars shall be in accordance with construction and construction material specifications.
3. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
4. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at time of installation.
5. Each collar shall be furnished with two 1/2" diameter rods with standard tank lugs for connecting collars to pipe.

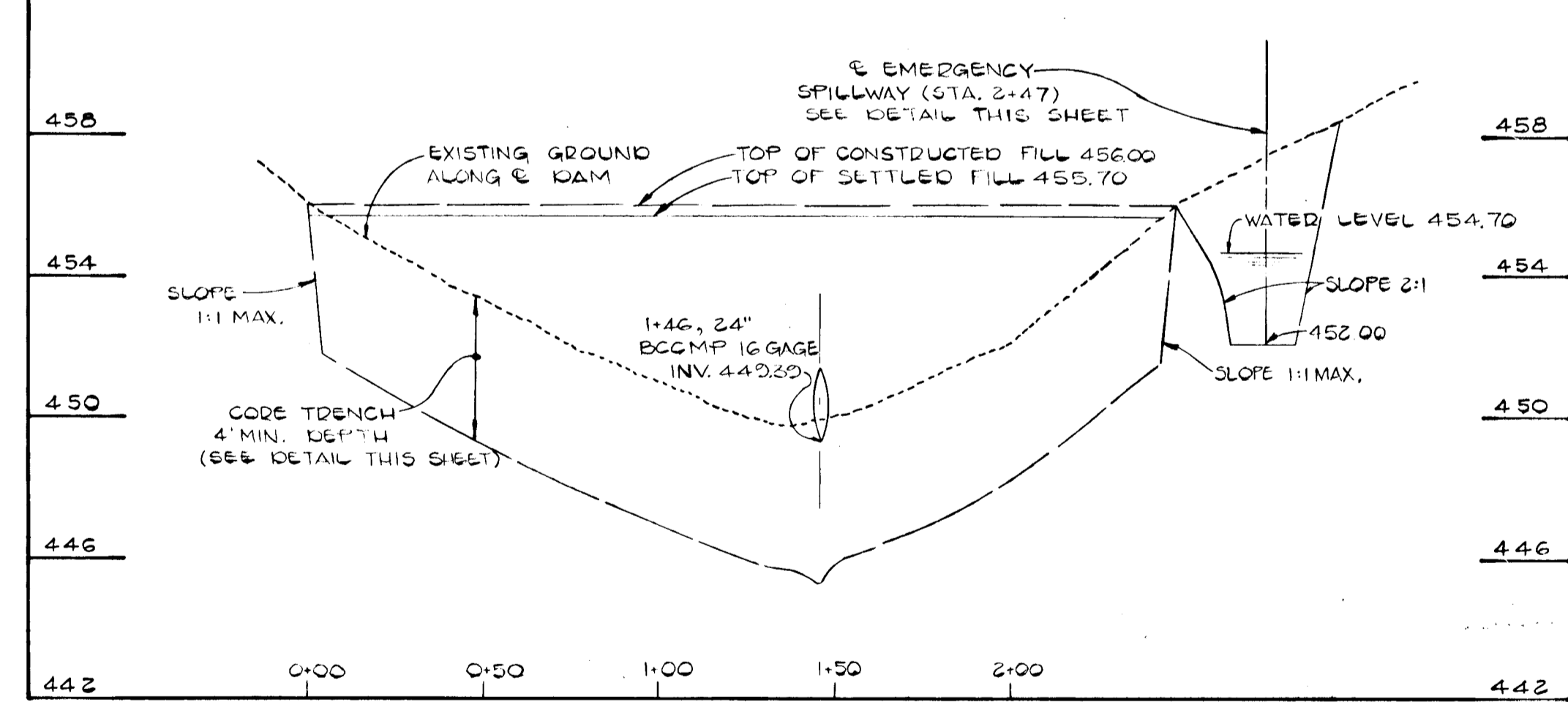
CORRUGATED METAL ANTI-SEEP COLLAR DETAIL
NO SCALE



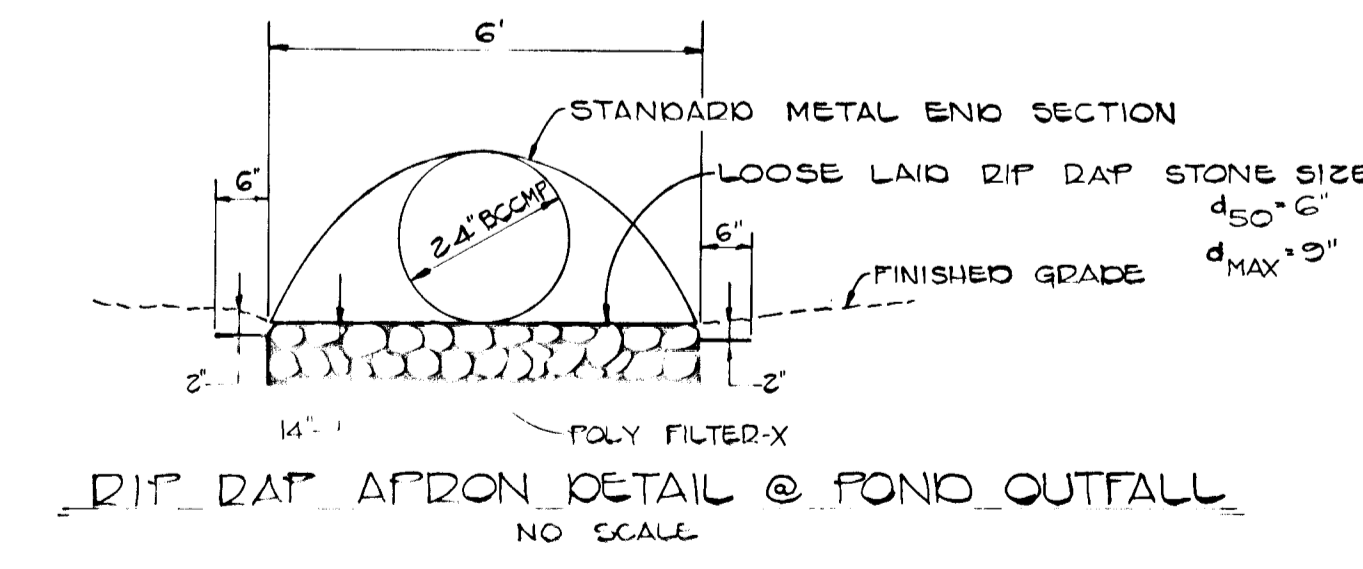
ORIFICE DETAIL
NO SCALE



STORM WATER MANAGEMENT POND PROFILE
SCALE: 1" = 20' HOR. 1" = 2' VERT.



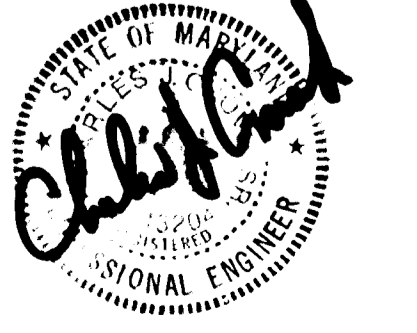
PROFILE ALONG C OF DAM
SCALE: 1" = 40' HOR. 1" = 4' VERT.



DIP RAP APPON DETAIL @ POND OUTFALL
NO SCALE

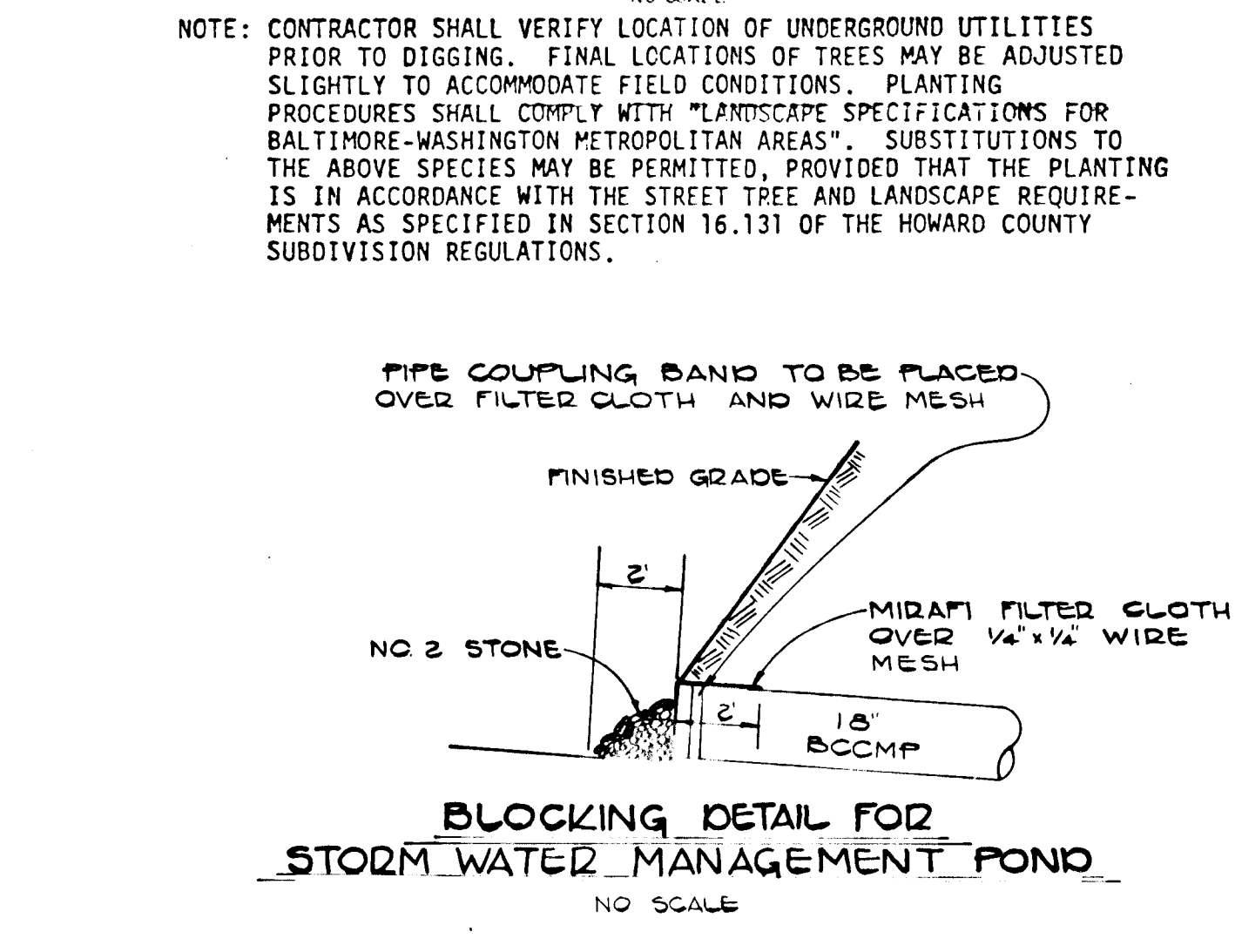
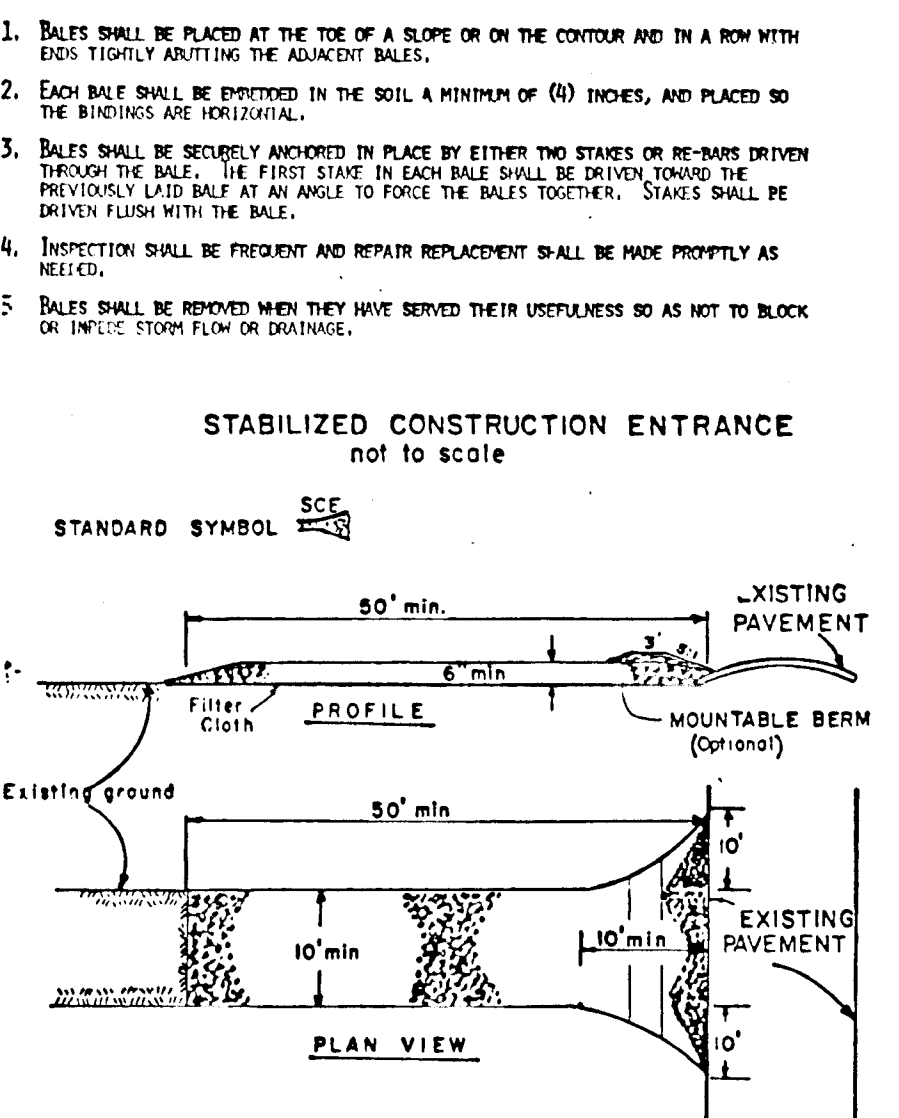
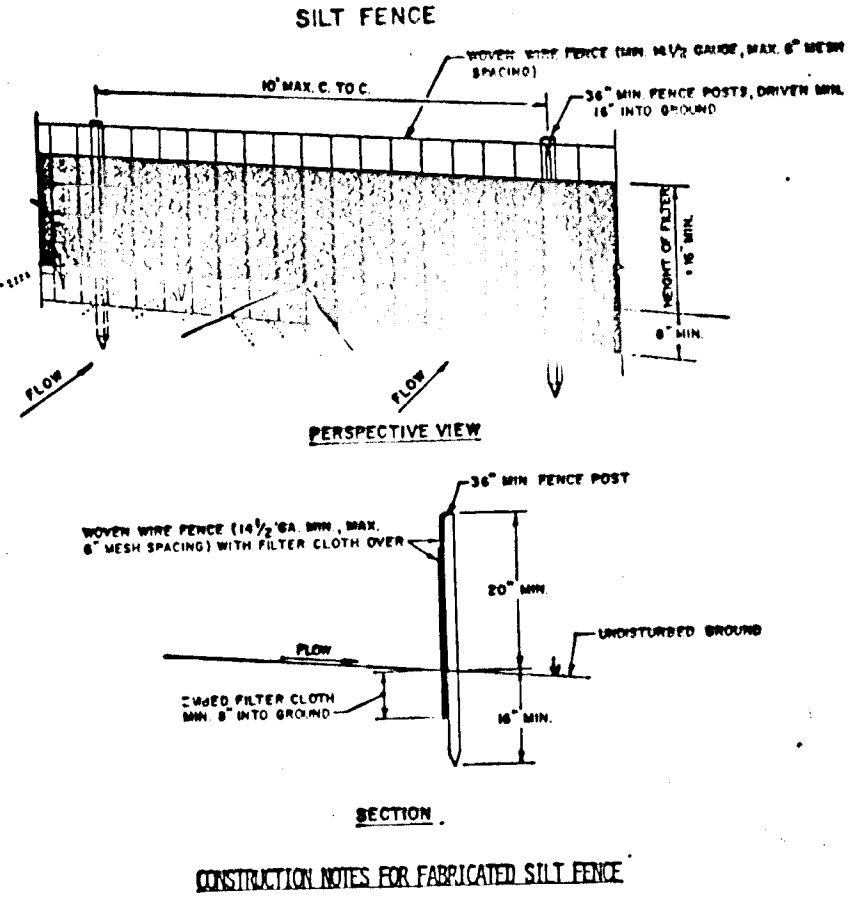
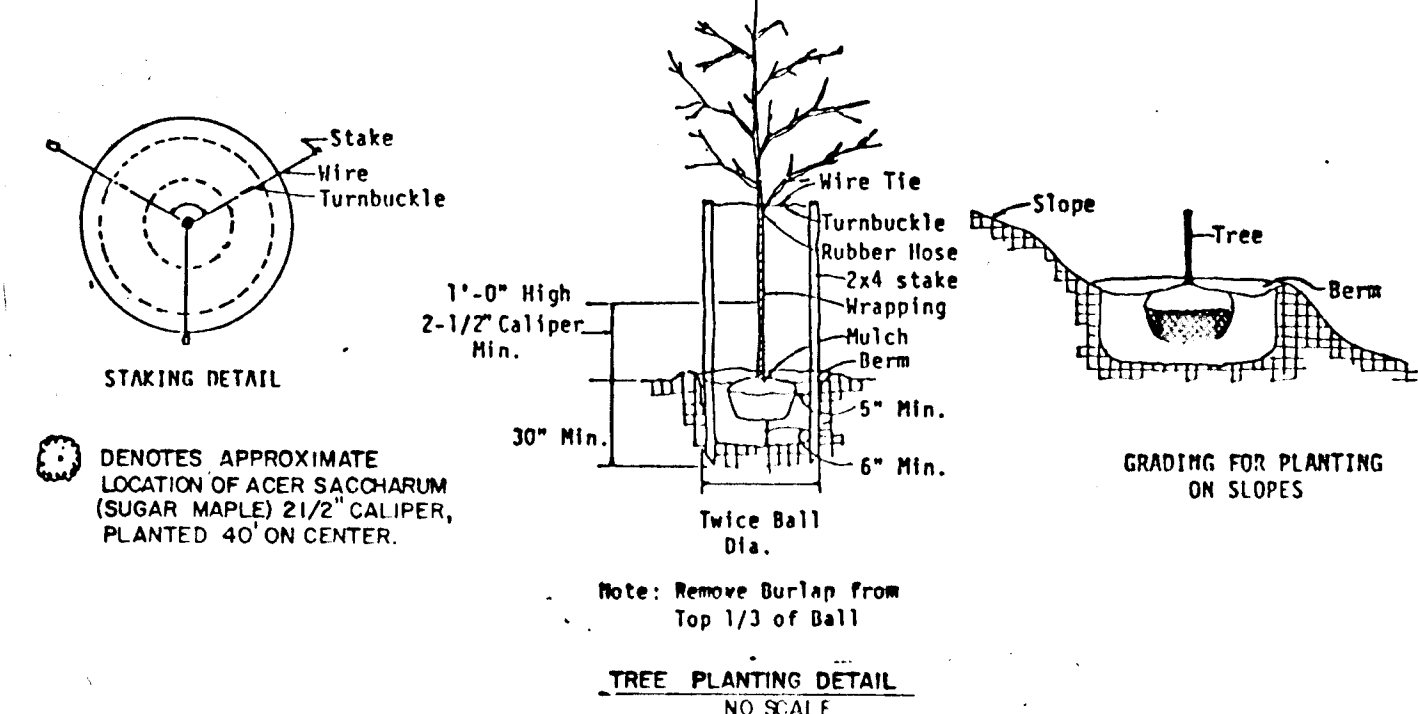
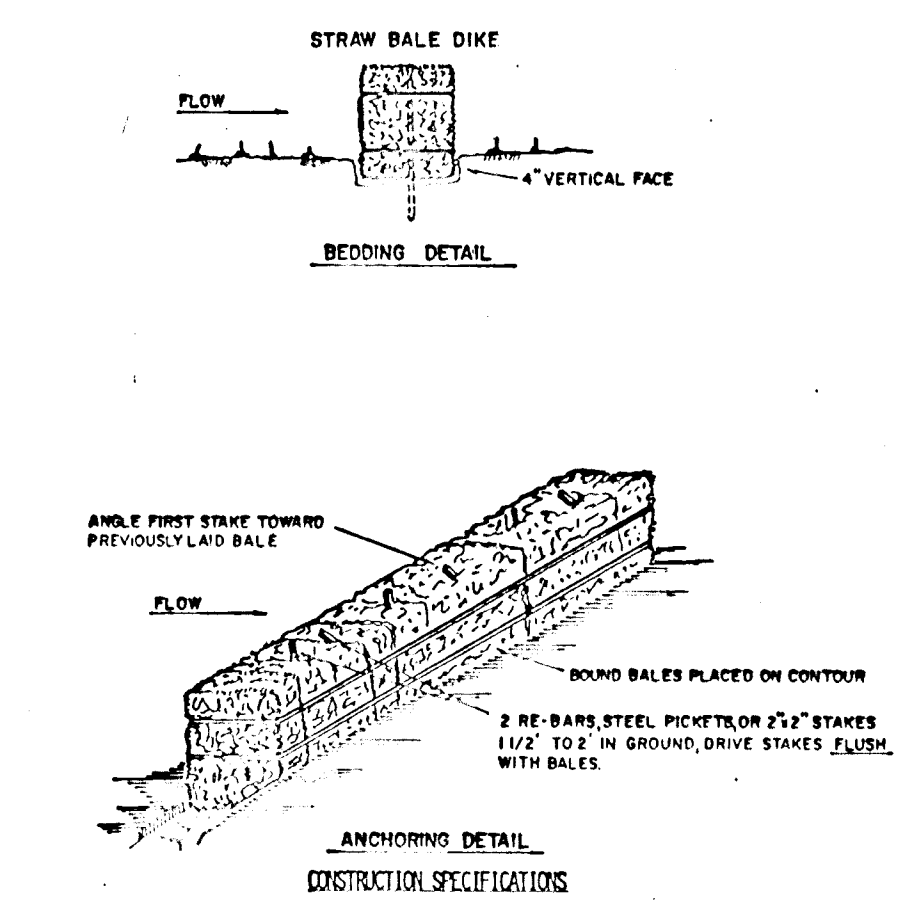
OWNER & DEVELOPER
CARMAN ASSOCIATES
P.O. BOX 122
ELLCOTT CITY, MD. 21043

STORM WATER MANAGEMENT POND
PROFILES AND DETAILS
BONNIE BRAE
SECTION ONE
2ND. ELECTION DISTRICT HOWARD COUNTY, MD.
SCALE: AS SHOWN OCTOBER 25, 1985
SHEET 4 OF 5



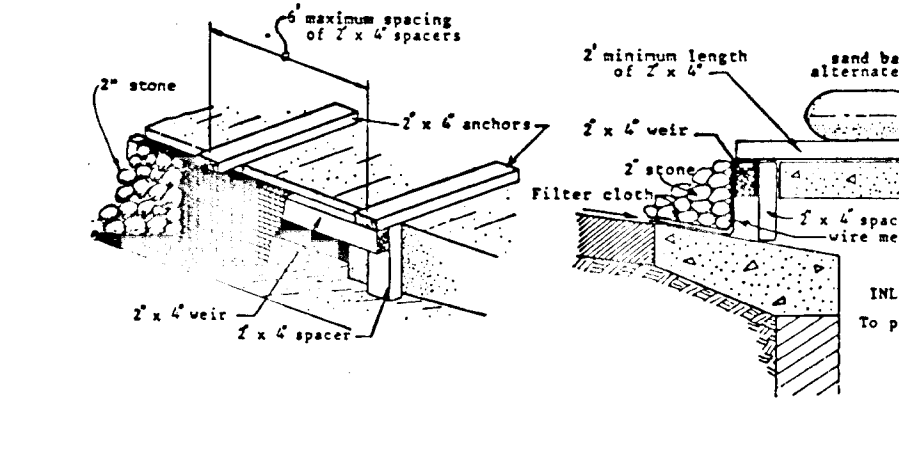
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
8388 COURT AVENUE
ELLCOTT CITY, MARYLAND 21043

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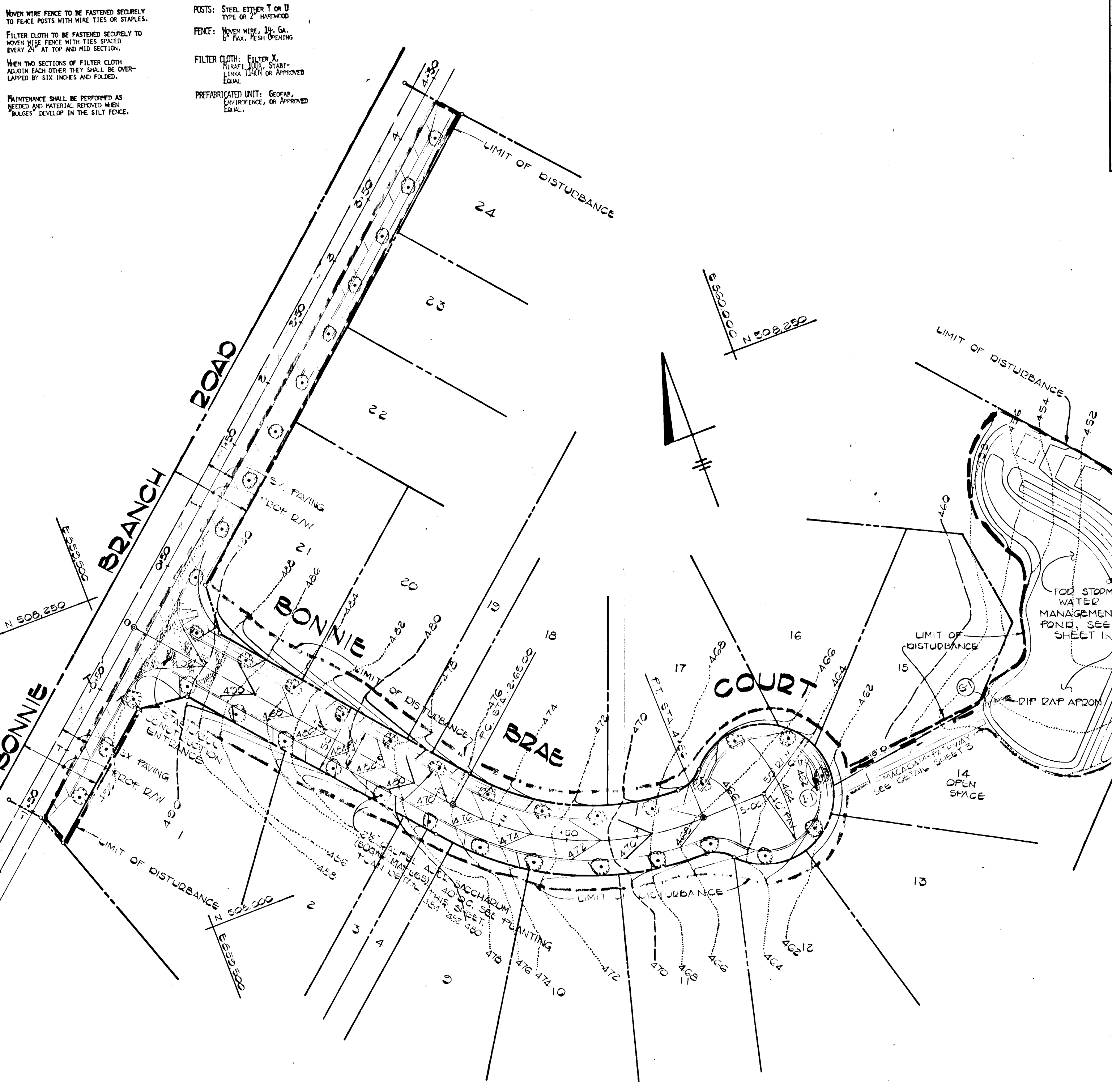
- CONSTRUCTION NOTES FOR FABRICATED SILTY FENCE:**
- When wire fence to be fastened securely to fence posts with wire ties or staples.
 - Filter cloth to be fastened securely to wire mesh fence with ties spaced every 24" at top and mid section.
 - When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
 - Maintenance shall be performed as needed and material removed when bales develop in the silty fence.

- CONSTRUCTION SPECIFICATIONS:**
- 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 30 foot minimum length would apply).
 - Thickness - Not less than six (6) inches.
 - Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
 - 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.
 - Surface Water - All surface water flowing or directed toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with six slopes will be permitted.
 - 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.
 - 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.
 - Periodic inspection and needed maintenance shall be provided after each rain.



- Curb Inlet Protection:**
- Attach a continuous piece of wire mesh (30" min. width by throat length plus 2") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
 - Place a piece of approved filter cloth (40-60 mesh) 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 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
 - Place the assembly against the inlet throat and nail (minimum 2" lengths 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 spacers 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 flow 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.

- CONSTRUCTION SEQUENCE:**
- OBTAIN GRADING PERMIT.
 - CONSTRUCT STONE CONSTRUCTION ENTRANCE AND STABILIZE USING TEMPORARY SEEDING.
 - CONSTRUCT STORM WATER MANAGEMENT POND AND STABILIZE USING TEMPORARY SEEDING.
 - THE 24" BCCMP SHALL BE BLOCKED IN ACCORDANCE WITH THE DETAIL ON THIS SHEET. THE 24" BCCMP SHALL REMAIN BLOCKED UNTIL SUCH A TIME WHEN THE SEDIMENT BASIN TRANSITIONS TO FUNCTION AS A STORM WATER MANAGEMENT POND.
 - GRADE ROADS TO SUBGRADE STABILIZING SLOPE AREAS BETWEEN EXISTING GROUND AND BACK OF CURB USING PERMANENT SEEDING. CONSTRUCT STORM DRAIN SYSTEM.
 - INSTALL INLET PROTECTION DEVICE AT STORM DRAIN INLET I-1.
 - CONSTRUCT CONCRETE CURB AND LAY BASE COURSE.
 - DURING CONSTRUCTION OF THE ROAD IMPROVEMENTS ALONG BONNIE BRANCH ROAD AND ILCHESTER ROAD, THE CONTRACTOR SHALL PLACE STRAW BALE DIKES OR SILTY FENCE DOWNGRADE OF ANY DISTURBED AREAS AT THE END OF EACH WORKING DAY.
 - UPON STABILIZATION OF GRADED AREAS, INLETS SHALL BE OPENED AND ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE STORM DRAIN SYSTEM.
 - DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM THE STORM WATER MANAGEMENT POND WHEN THE CLEANOUT ELEVATION 451.9 HAS BEEN REACHED.
 - DURING CONSTRUCTION AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON.
 - REMOVE STONE CONSTRUCTION ENTRANCE.
 - CLEAN BASE COURSE, APPLY TACK COAT TO BASE COURSE AND LAY SURFACE COURSE. STABILIZE ALL SHOULDERS USING PERMANENT SEEDING.
 - THE STORM WATER MANAGEMENT POND SHALL BE DETERAIED BY PUMPING.
 - THE SEDIMENT FROM THE STORM WATER MANAGEMENT POND SHALL BE PLACED ON LOT 14 AND STABILIZED WITH PERMANENT SEEDING. THE STORM WATER MANAGEMENT POND SHALL BE GRADED IN ACCORDANCE WITH THIS SHEET AND STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS IN THE SEDIMENT CONTROL NOTES. INSTALL RIP-RAP APRONS.
 - ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE ACCEPTED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; b) 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.



PLAN SCALE: 1"=50'

- SEDIMENT CONTROL NOTES:**
- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2437).
 - ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR 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.
 - 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.
 - ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 - SITE ANALYSIS:

TOTAL AREA OF SITE	12.3 ACRES
AREA DISTURBED	2.2 ACRES
AREA TO BE ROOFED OR PAVED	0.7 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.5 ACRES
TOTAL CUT	N/A
OFFSITE WASTE/BROWNE AREA LOCATION	N/A
 - ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
 - ADDITIONAL SEDIMENT CONTROL MEASURES MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPA SEDIMENT CONTROL INSPECTOR.

- 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 SCHEDULE:
 - 1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. 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 PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ. FT.) OF KEEPING 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 MULCH. APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 6 FT. OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ. FT.) 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.
- SEEDING PREPARATION:** LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:** APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.).
- SEEDING:** FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ. FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF KEEPING 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 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 6 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.

ENGINEER'S CERTIFICATE

THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL AND THE WORKABLE PLAN BASED ON MY PROFESSIONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Chadwick 12/10/85

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 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 COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Philip A. Marzetti 12-10-85

SIGNATURE OF DEVELOPER DATE

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

John M. Nels 12-18-85

U.S. DEPARTMENT OF AGRICULTURE

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

APPROVED: *Robert W. Ziehm* 12-18-85

DISTRICT HOWARD COUNTY SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS.

John M. Nels 12-19-85

CHIEF, BUREAU OF ENGINEERING

APPROVED: OFFICE OF PLANNING AND ZONING

John M. Nels 12-19-85

CHIEF, DIVISION OF PLANNING AND ZONING ADMINISTRATION

STREET TREE, GRADING, SEDIMENT CONTROL PLAN AND DETAILS

BONNIE BRAE

SECTION ONE

2ND ELECTION DISTRICT HOWARD COUNTY, MD.

SCALE: AS SHOWN

OCTOBER 25, 1985

SHEET 5 OF 5

FISHER, COLLINS AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8388 COURT AVENUE
ELLCOTT CITY, MARYLAND 21043
TELEPHONE: (301) 461-2855



OWNER & DEVELOPER

CARMAN ASSOCIATES
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