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."

2/2/87
CHARLES J. CROVO SR.

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 ONSITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY."

MOUNT HEBRON, INC. 1/15/87 DATE

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

4-28-87
U.S. SOIL CONSERVATION SERVICE

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

4/28/87

GENERAL NOTES

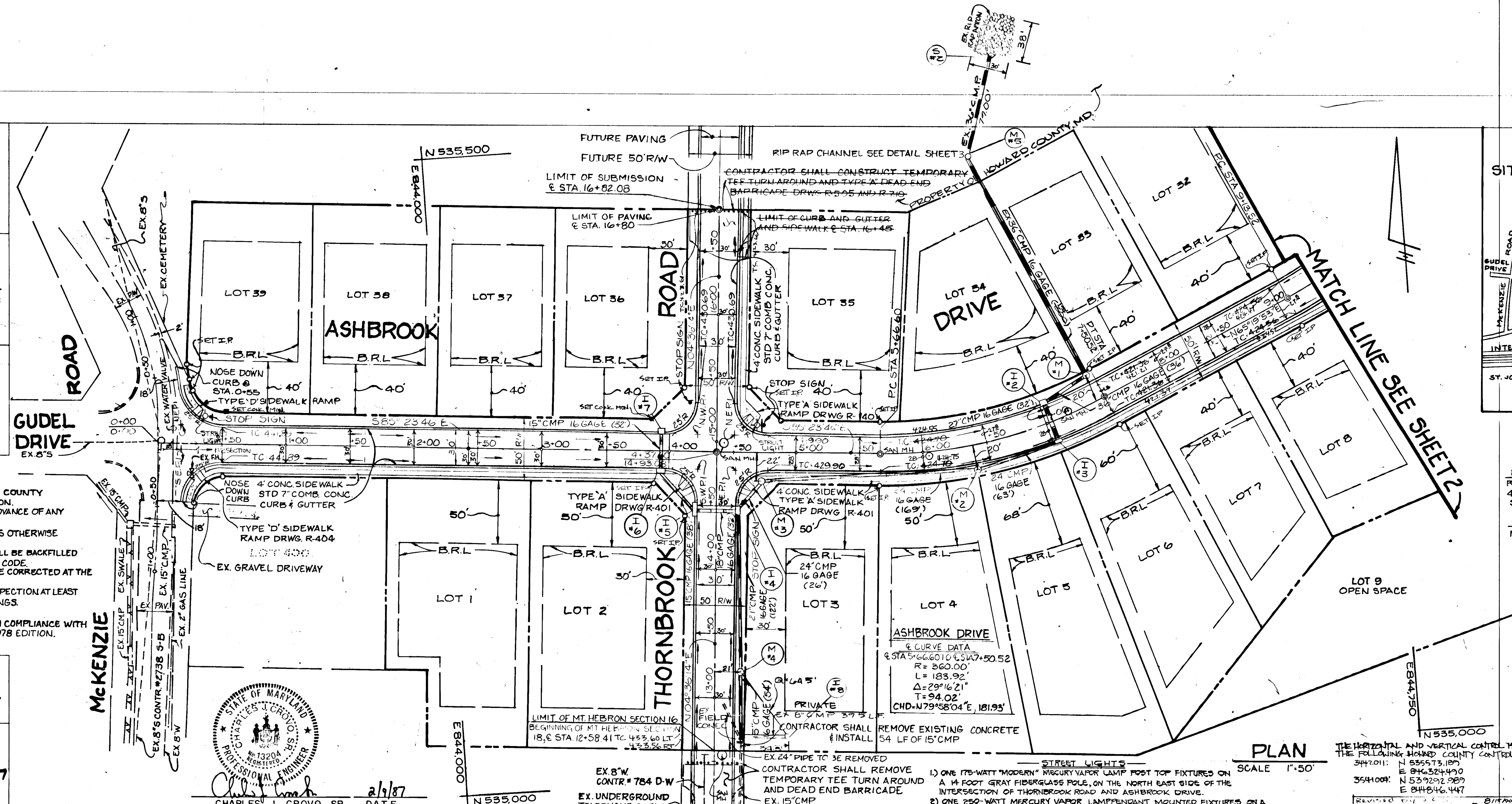
1) ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARD, SPECIFICATIONS, AND DETAILS FOR CONSTRUCTION.
2) ALL UTILITY COMPANIES MUST BE NOTIFIED 24 HOURS IN ADVANCE OF ANY CONSTRUCTION.
3) ALL INLETS SHALL BE HOWARD COUNTY STANDARD UNLESS OTHERWISE SHOWN. ALL "A" INLETS SHALL BE DEPRESSED.
4) STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAYS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
5) ANY DAMAGE TO PUBLIC RIGHTS-OF-WAYS OR PAVING WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
6) CONTRACTOR TO NOTIFY THE HOWARD COUNTY DEPT. OF INSPECTION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE 792-7272
7) ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1978 EDITION.

APPROVED
DEPARTMENT OF PUBLIC WORKS

5-15-87
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED
OFFICE OF PLANNING AND ZONING

ACTING 4-28-87
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE



STATE OF MARYLAND — CHARLES J. CROVO SR. — No. 13204 — REGISTERED PROFESSIONAL ENGINEER

CHARLES J. CROVO SR. 2/9/87 DATE

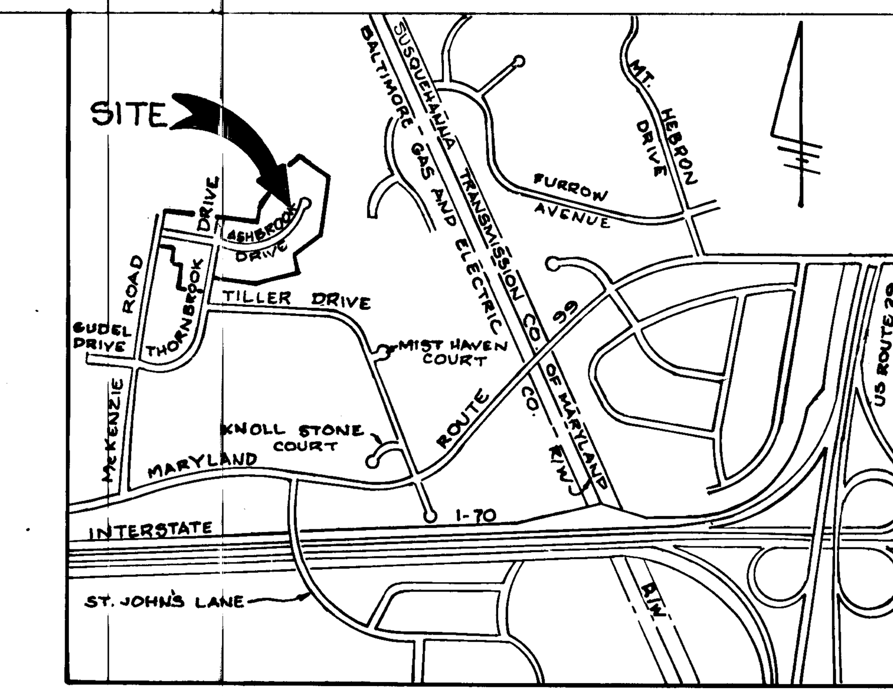
STREET LIGHTS

1.) ONE 175-WATT "MODERN" MECURY VAPOR LAMP POST TOP FIXTURES ON A 14 FOOT GRAY FIBERGLASS POLE, ON THE NORTH EAST SIDE OF THE INTERSECTION OF THORNBROOK ROAD AND ASHBROOK DRIVE.
2) ONE 250-WATT MERCURY VAPOR LAMPPENDANT MOUNTED FIXTURES ON A 25-FOOT GALVANIZED STEEL POLE, ON THE NORTH EAST SIDE OF THE INTERSECTION OF ASHBROOK DRIVE AND Mc KENZIE ROAD.

PLAN
SCALE 1"=50'

THE HORIZONTAL AND VERTICAL CONTROL IS BASED ON THE FOLLOWING HOWARD COUNTY CONTROL STATIONS:
3442011: N 535573.189 E 846324.490
3541004: N 539292.989 E 844846.447

Revised by ... 8/15/90 Added I-8, S-2 & M-5



VICINITY MAP
SCALE 1"=1200'

BENCH MARKS

B.M. "MH-1" ELEV: 432.57
REBAR SET AT TRAVERSE POINT "MH-1" LOCATED 45'± TO THE WEST OF PROPOSED THORNBROOK ROAD AT LIMIT OF SUBMISSION STA. 12+58.41 FOR LOCATION SEE SHEET 5 OF 6.

B.M. "MH-8" ELEV: 412.29
MH RIM @ EX. MANHOLE #10 LOCATED 170'± FROM THE REAR OF LOTS 15 & 16. FOR LOCATION SEE SHEET 6 OF 6.

MT. HEBRON SECTION 18
LOTS 1 - 39
2ND. ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

ASHBROOK DRIVE PLAN & PROFILE	THORNBROOK ROAD PLAN

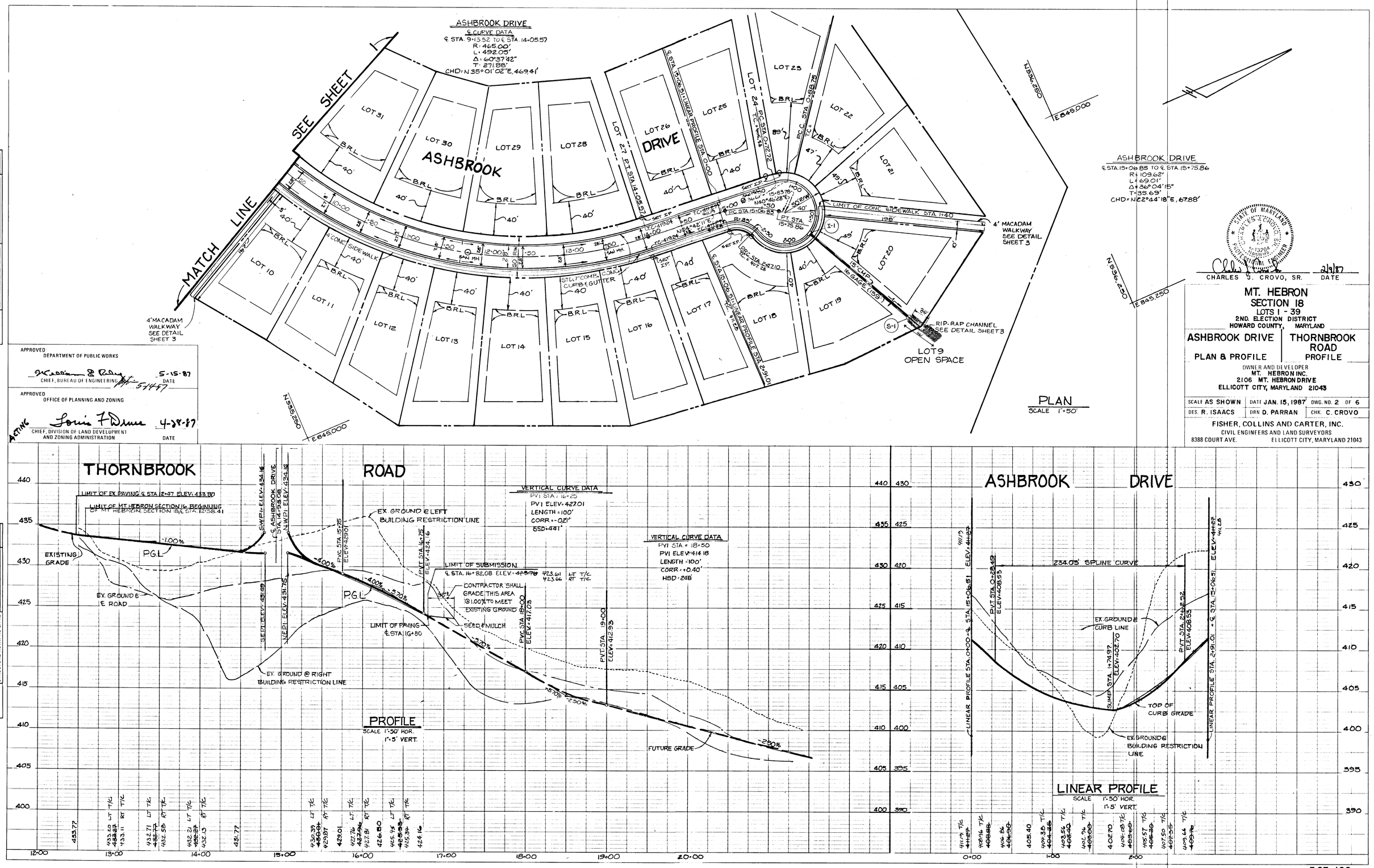
OWNER AND DEVELOPER
MT. HEBRON INC.
2106 MT. HEBRON DRIVE
ELLICOTT CITY, MARYLAND 21043

SCALE AS SHOWN	DATE JAN. 15, 1987	DWG. NO. 1 OF 6
DES. R. ISAACS	DRN. D. PARRAN	CHK. C. CROVO

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

F 87-122

AS-BUILT DEC. 11, 1991



PLAN
NOTE BOOK NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
NOTE BOOK NO.
SURVEYED
PLOTTED
GRADES CHECKED
B.M.'s NOTED
STRUCTURE NOTATNS CH'KD
BY
DATE

APPROVED
DEPARTMENT OF PUBLIC WORKS
William E. Riley 5-15-87
CHIEF, BUREAU OF ENGINEERING DATE
5-14-87

APPROVED
OFFICE OF PLANNING AND ZONING
ACTING Louis F. Drnec 4-28-87
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

STATE OF MARYLAND
CHARLES J. CROVO, SR.
No. 13204
REGISTERED PROFESSIONAL ENGINEER

Charles J. Crovo 2/9/87
CHARLES J. CROVO, SR. DATE

MT. HEBRON
SECTION 18
LOTS 1 - 39
2ND. ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

ASHBROOK DRIVE	THORNBROOK ROAD
PLAN & PROFILE	PROFILE

OWNER AND DEVELOPER
MT. HEBRON INC.
2106 MT. HEBRON DRIVE
ELLICOTT CITY, MARYLAND 21043

SCALE AS SHOWN	DATE JAN. 15, 1987	DWG. NO. 2 OF 6
DES. R. ISAACS	DRN D. PARRAN	CHK. C. CROVO

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

16

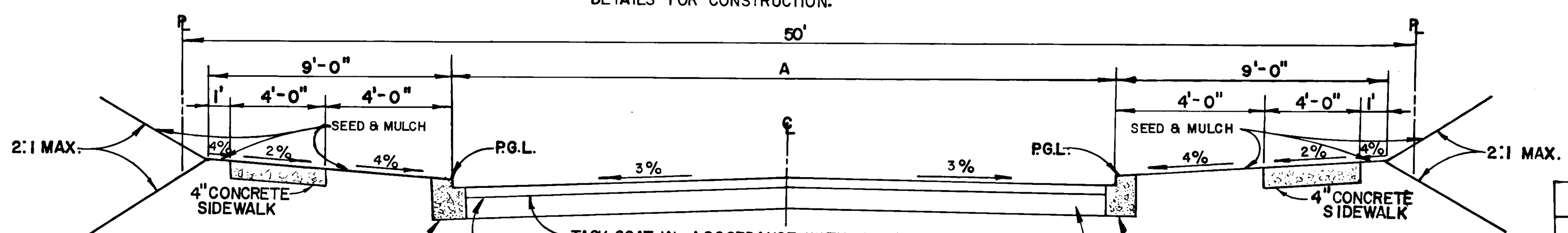
F 87-122

AS-BUILT DEC. 11, 1991

TYPICAL ROADWAY SECTION

—NO SCALE—

ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.



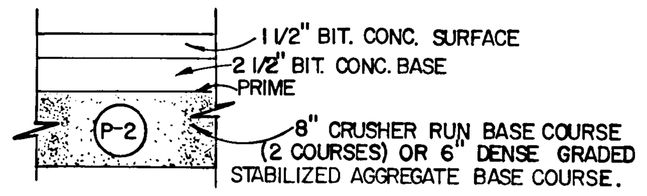
STD. 7" COMB. CONCRETE CURB & GUTTER, SEE DETAIL THIS SHEET.

TACK COAT IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV.

BASE WILL BE PRIMED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV.

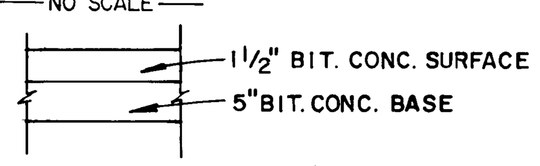
PAVING SECTION SHALL BE IN ACCORDANCE WITH SECTION NUMBER P-2 DRWG. R-2.01

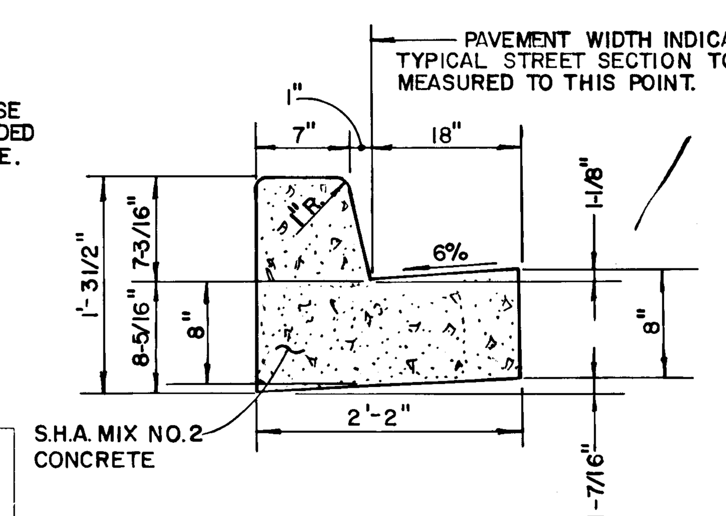
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STA. LIMITS	A
THORNBROOK ROAD	LOCAL ROAD	30 M.P.H.	R-20	12+58.41 TO 16+82.08	30'
ASHBROOK DRIVE	LOCAL ROAD	30 M.P.H.	R-20	0+00 TO 4+37.60	30'
ASHBROOK DRIVE	CUL-DE-SAC	30 M.P.H.	R-20	4+37.60 TO 15+06.51	28'



PAVING SECTION P-2

—NO SCALE—





STANDARD 7" COMB. CONC. CURB & GUTTER

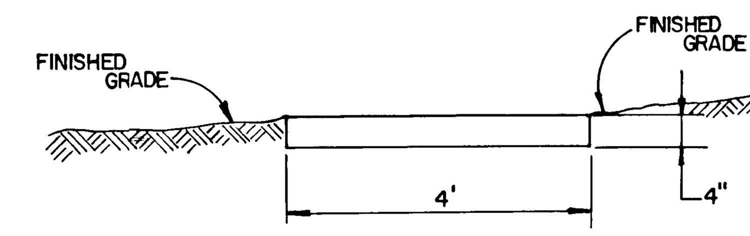
—NO SCALE—

APPROVED
DEPARTMENT OF PUBLIC WORKS

[signature] 5-15-87
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED
OFFICE OF PLANNING AND ZONING

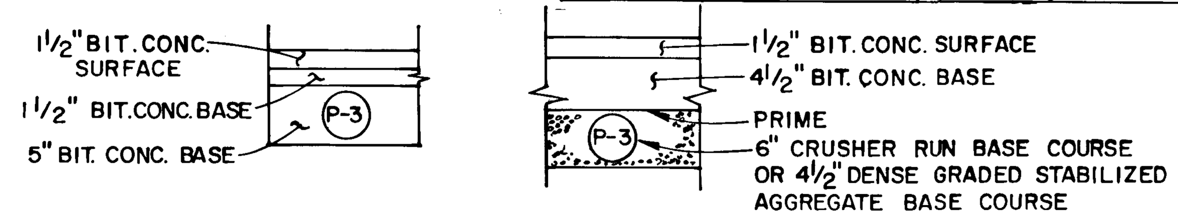
ACTING [signature] 4-24-87
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE



MACADAM WALKWAY DETAIL

—NO SCALE—

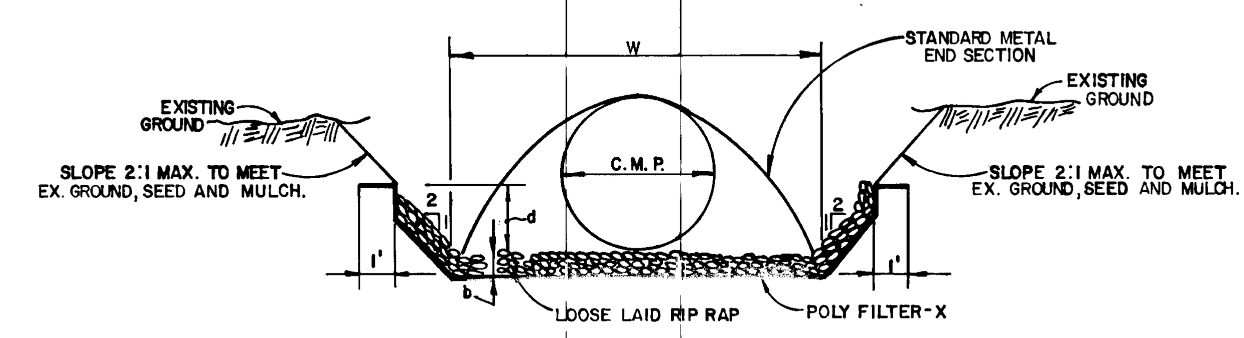
STRUCTURE SCHEDULE						
NO.	TYPE	INVERT IN	INVERT OUT	℄ TOP ELEV	℄ ROAD STATION	REMARKS
M-1	STANDARD MANHOLE	~~411.67~~ 57	~~411.42~~ 37	~~421.54~~ 37	7+~~45.15~~ 46 ASHBROOK DR.	G.5.02
M-2	STANDARD MANHOLE	~~415.92~~ 416.08	415.~~60~~ 88	422.~~31~~	6+~~40.03~~ 42 ASHBROOK DR.	G.5.01
M-3	STANDARD MANHOLE	420.~~72~~ 59	420.~~47~~ 43	430.~~44~~ 63	14+71.50 THORNBROOK RD. ~~4+72.00 ASHBROOK DR.~~	G.5.01
M-4	STANDARD MANHOLE	426.84	422.60	432.86	13+20.00 THORNBROOK RD.	G.5.01
I-1	A-5	— —	398.~~78~~ 91	402.~~70~~ 81	L.P. STA. 1+~~74.97~~ 75 ASHBROOK DRIVE	S.D. 4.01
I-2	A-5	~~412.71~~ 412.62	~~411.96~~ 412.09	~~421.00~~ 420.92	~~7+03.64~~ 7+04 ASHBROOK DR.	S.D. 4.01
I-3	A-10	414.~~03~~ 28	~~413.78~~ 412.86	421.~~00~~ 02	~~7+03.64~~ 7+04 ASHBROOK DR.	S.D. 4.02
I-4	A-5	424.~~41~~ 01	421.~~37~~ 22	~~431.79~~ 431.61	14+~~47.58~~ 46 THORNBROOK RD.	S.D. 4.01
I-5	A-10	~~427.00~~ 426.31	426.~~75~~ 24	431.~~79~~ 78	14+~~47.58~~ 46 THORNBROOK RD.	S.D. 4.02
I-6	A-5 W/DEFLECTORS	430.~~49~~ 01	429.~~79~~ 01	436.~~26~~ 15	3+94.60 ASHBROOK DR.	S.D.4.01 & S.D. 4.83
I-7	A-5 W/DEFLECTORS	——	430.~~72~~ 36	436.~~26~~ 25	3+94.60 ASHBROOK DR.	S.D.4.01 & S.D. 4.83
S-1	STANDARD METAL END SECTION	388.~~55~~ 65	~~388.41~~ 388.52	~~389.80~~ 391.52	——	S.D. 5.61
S-2	STANDARD METAL END SECTION	~~410.17~~ 410.91	~~409.67~~ 410.90	~~411.68~~ 413.90	——	S.D. 5.61
I-8	INLET	——	428.74	429.81	60' RT OFF ℄ STA. 12+70 THORNBROOK ROAD	
M-5	STD. MANHOLE	409.37	408.99	417.65	SEE PLAN	G5.01



PAVING SECTION P-3

NO SCALE

Revised by: J.C.S 8/15/90
Added M-5 & I-8 to Profile and Structure schedule. Changed S-2.



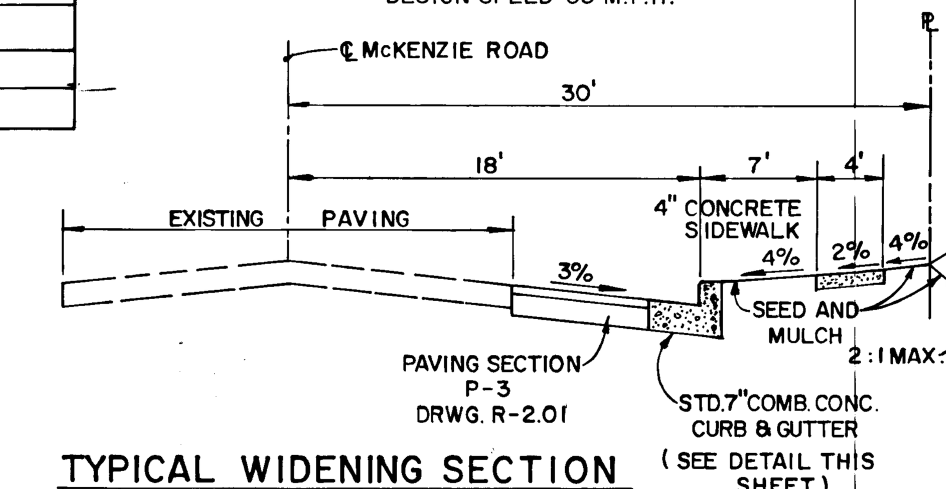
RIP-RAP CHANNEL DETAIL

—NO SCALE—

RIP RAP CHANNEL DESIGN DATA

Struct.	A□'	P'	R	R2/3	S	S1/2	n	Q	V	d	w	Rip Rap Size d50	Rip Rap Size dmax.	b
S-1	3.25	6.77	.4797	.6113	1.00%	.100	.04	7.38c.f.s.	2.27 f.p.s.	.62'	4.00'	6"	9"	14"
S-2	10.50	12.97	.8094	.8679	1.00%	.100	.04	33.81c.f.s.	3.22 f.p.s.	1.00'	8.50'	6"	9"	14"

TYPE OF TRAFFICWAY: MINOR COLLECTOR ZONED R-20
DESIGN SPEED 35 M.P.H.



TYPICAL WIDENING SECTION ALONG McKENZIE ROAD

NO SCALE

STATE OF MARYLAND CHARLES J. CROVO, SR. No. 13204 REGISTERED PROFESSIONAL ENGINEER

[signature] 2/9/87
CHARLES J. CROVO SR. DATE

MT. HEBRON
SECTION 18
LOTS 1 - 39
2ND. ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

STORM DRAIN PROFILES, ROADWAY SECTION AND DETAILS

OWNER AND DEVELOPER
MT. HEBRON INC.
2106 MT. HEBRON DRIVE
ELLICOTT CITY, MARYLAND 21043

SCALE AS SHOWN	DATE JAN.15, 1987	DWG. NO. 3 OF 6
DES. D. VANDE RYT	DRN R. ISAACS	CHK. C. CROVO

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

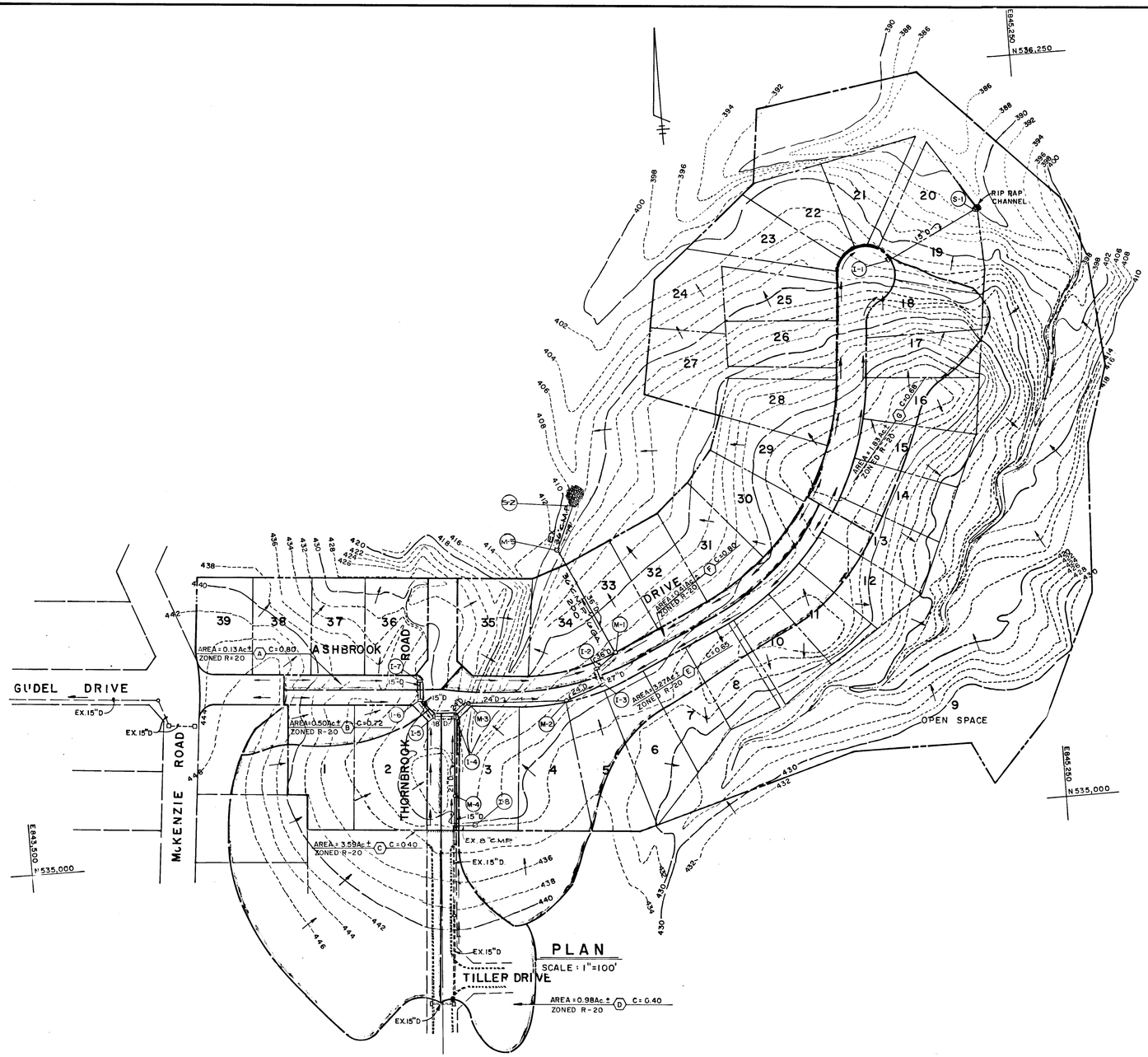
PLAN			
SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED	BY	DATE	
NOTE BOOK / NO.			

PROFILE			
SURVEYED / PLOTTED / GRADES CHECKED / B.M.s NOTED / STRUCTURE NOTAT'NS CH'KD	BY	DATE	
NOTE BOOK / NO.			

16

F 87-122

AS-BUILT DEC. 11, 1991



PLAN
SCALE: 1"=100'

APPROVED
DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING — DATE 5-15-87

APPROVED
OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 4-28-87

OWNER AND DEVELOPER
MT. HEBRON, INC.
2106 MT. HEBRON DRIVE
ELLICOTT CITY, MARYLAND 21043

DRAINAGE AREA MAP

MT. HEBRON
SECTION 18, LOTS 1-39
2ND. ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN SHEET 4 OF 6 JAN. 15, 1987

STATE OF MARYLAND — CHARLES J. CROVO, SR. — No. 13204 — REGISTERED PROFESSIONAL ENGINEER

CHARLES J. CROVO, SR. — DATE 2/9/87

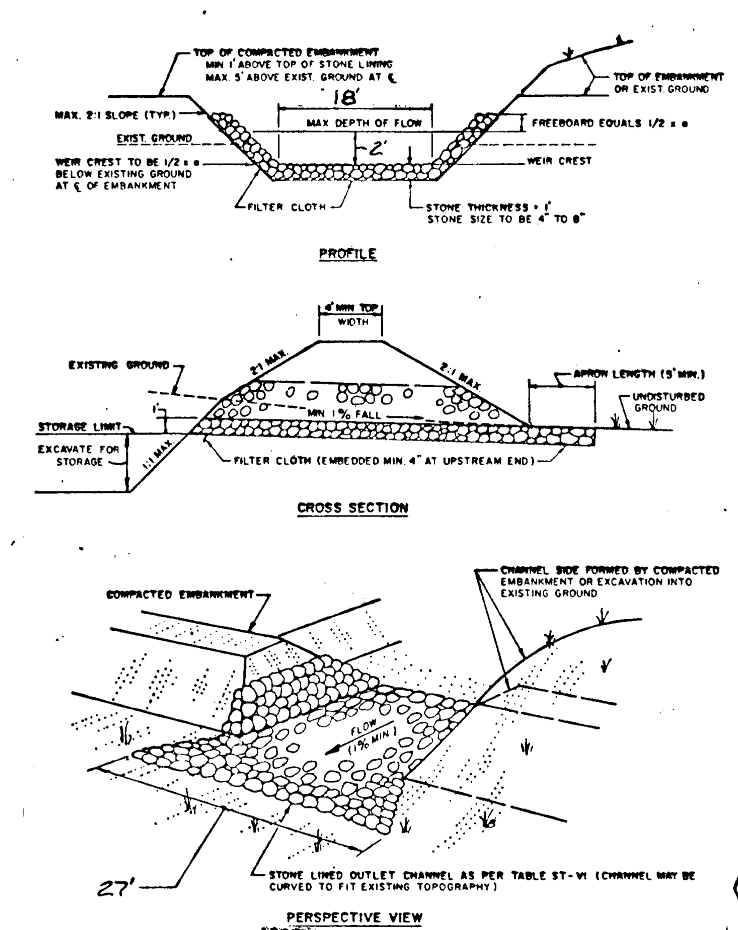
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
8388 COURT AVENUE
ELLICOTT CITY, MARYLAND 21043

REVISED BY ... ADDED M 56 S-2 8-15-88

AS-BUILT DEC. 11, 1991 F 87-122

16

RIPRAP OUTLET SEDIMENT TRAP ST-VI



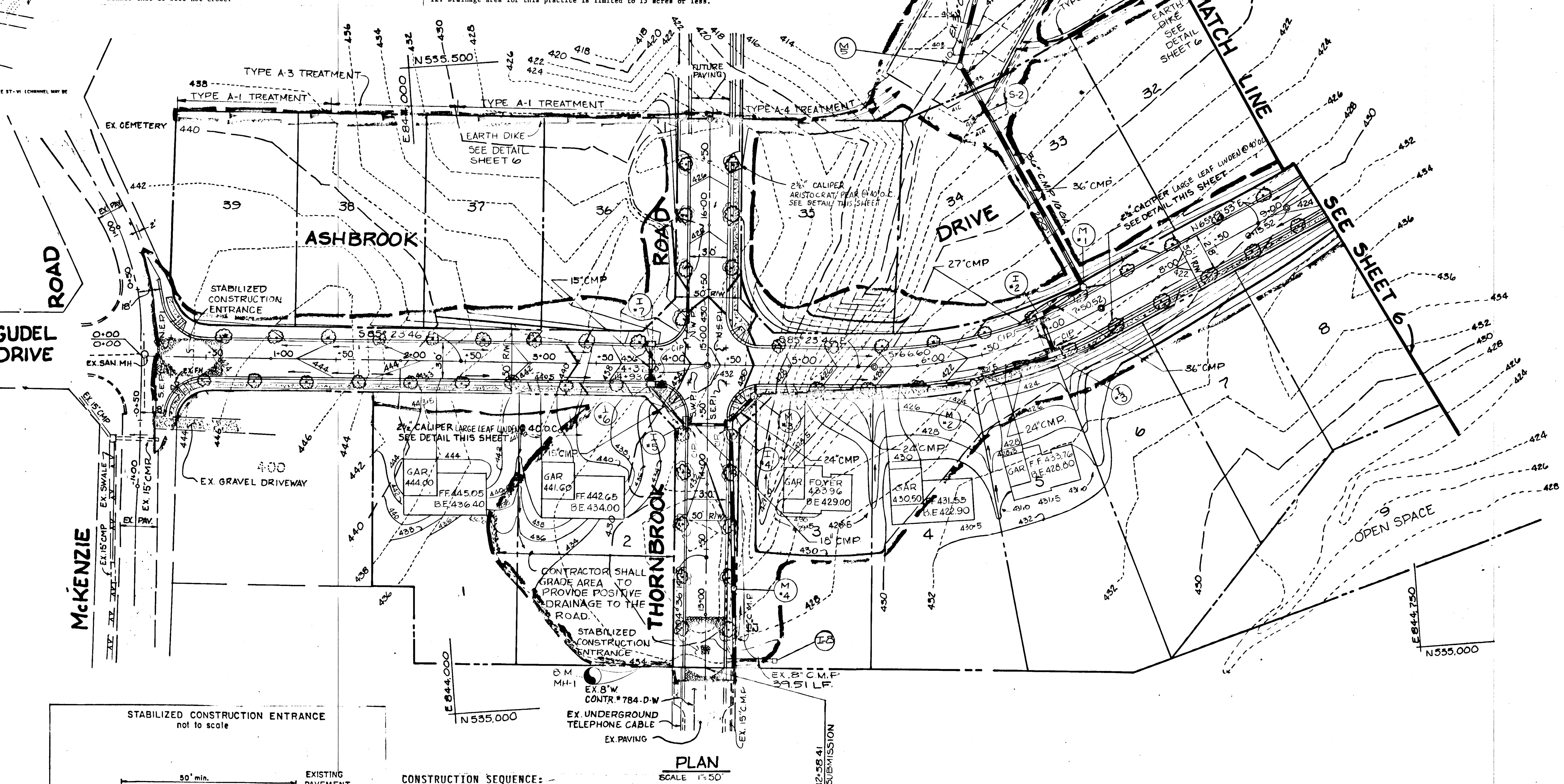
CONSTRUCTION SPECIFICATIONS FOR ST-VI

1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
3. All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
4. Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
5. Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.
6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
7. Stone used in the outlet channel shall be four (4) to eight(8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
8. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
9. The structure shall be inspected after each rain and repaired as needed.
10. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
12. Drainage area for this practice is limited to 15 acres or less.

RIP RAP OUTLET SEDIMENT TRAP

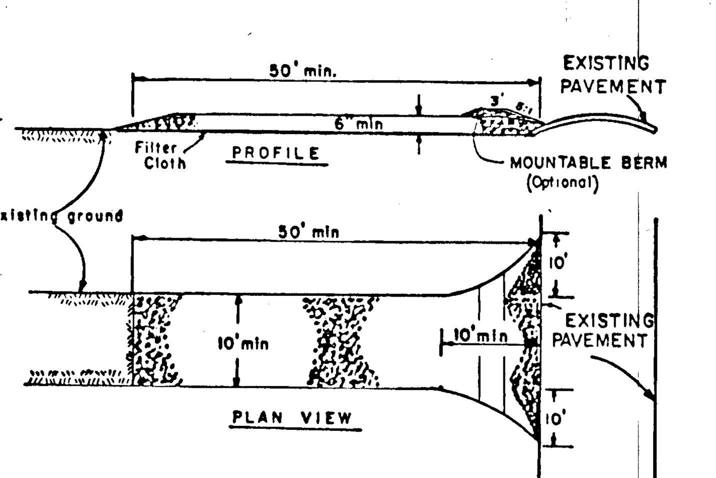
DRAINAGE AREA	14.9 AC.±
VOLUME REQUIRED	993 CU.YDS.
VOLUME PROVIDED	997 CU.YDS.
TOP DIMENSIONS	VARIES
BOTTOM DIMENSIONS	VARIES
SIDE SLOPES	1:1
DEPTH	3.5'
WEIR CREST ELEVATION	409.00
BOTTOM ELEVATION	404.50
CLEANOUT ELEVATION	406.25

NOTE: THE OUTFALL AREA OF S-2 SHOULD BE GRADED FOR POSITIVE DRAINAGE AFTER THE SEDIMENT TRAP IS REMOVED



PLAN
SCALE 1"=50'

STABILIZED CONSTRUCTION ENTRANCE
not to scale

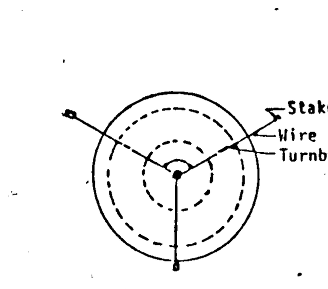


CONSTRUCTION SPECIFICATIONS

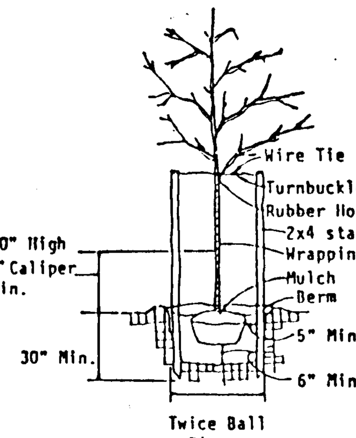
1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than 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.

CONSTRUCTION SEQUENCE:

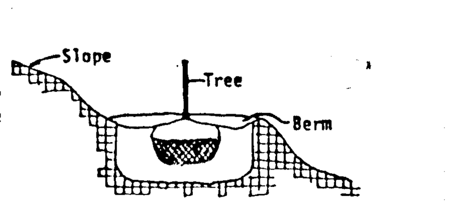
1. OBTAIN GRADING PERMIT.
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND STRAW BALE DIKES/SILT FENCE AS SHOWN ON PLAN.
3. INSTALL EARTH DIKES AND CONSTRUCT SEDIMENT TRAPS AS SHOWN.
4. CONSTRUCT STORM DRAIN SYSTEM.
5. THE CONTRACTOR SHALL PLACE STRAW BALE DIKES OR SILT FENCE DOWNGRADE OF ANY DISTURBED AREA DURING CONSTRUCTION OF THE STORM DRAIN SYSTEM.
6. GRADE ROADS TO SUBGRADE.
7. INSTALL INLET PROTECTION DEVICES.
8. BEGIN BUILDING CONSTRUCTION. CONSTRUCT CURB AND GUTTER AND INSTALL BASE COURSE.
9. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT TRAPS WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED.
10. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON, AFTER EACH RAINFALL AND ON A DAILY BASIS.
11. THE SEDIMENT TRAP SHALL BE DEWATERED BY PUMPING. THE SEDIMENT FROM THE TRAPS SHALL BE PLACED UP-GRADE FROM THE SEDIMENT TRAPS IN SUCH A MANNER AS NOT TO INTERFERE WITH CONSTRUCTION OPERATIONS OR CAUSE EROSION DOWNGRADE FROM THE SEDIMENT TRAPS.
12. REMOVE SEDIMENT FROM ROADWAYS AND DRESS STONE CONSTRUCTION ENTRANCE AS REQUIRED.
13. REMOVE INLET PROTECTION DEVICES AND FLUSH STORM DRAIN SYSTEM TO REMOVE ANY TRAPPED SEDIMENT. INSTALL RIP RAP APRONS.
14. REMOVE STONE CONSTRUCTION ENTRANCE AND STRAW BALE DIKE/SILT FENCE. CLEAN BASE COURSE. APPLY TACK COAT TO BASE COURSE AND LAY SURFACE COURSE.
15. ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED WITH PERMANENT SEEDING MIXTURE.



STAKING DETAIL



Note: Remove Burlap from Top 1/3 of Ball



GRADING FOR PLANTING ON SLOPES

DENOTES APPROXIMATE LOCATION OF TILIA CORDATA (LARGE LEAF LINDEN) 21/2" CALIPER, PLANTED 40' ON CENTER.

DENOTES APPROXIMATE LOCATION OF PYRUS CALLERYANA (ARISTOCRAT PEAR) 2½" CALIPER, PLANTED 40' ON CENTER

TREE PLANTING DETAIL
NO SCALE

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FINAL LOCATIONS OF TREES MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL COMPLY WITH "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS". SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

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] 2/9/87
SIGNATURE OF ENGINEER — 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 DEEMED NECESSARY."

H. Jones Baker Jr. 1/15/87
SIGNATURE OF DEVELOPER — DATE

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

James M. Helm 4-28-87
U.S. SOIL CONSERVATION SERVICE — DATE

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

Stephen L. Hulen 4/28/87
DISTRICT — DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS.

William E. Riley 5-15-87
CHIEF, BUREAU OF ENGINEERING — DATE

APPROVED: OFFICE OF PLANNING AND ZONING

ACTING Louis F. Dunn 4-28-87
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE

SEDIMENT CONTROL NOTES:

1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (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, CHAPTER 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	24.856	ACRES
AREA DISTURBED	5.381	ACRES
AREA TO BE ROOFED OR PAVED	1.459	ACRES
AREA TO BE VEGETATIVELY STABILIZED	3.922	ACRES
TOTAL CUT	—	CU.YDS.
TOTAL FILL	—	CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	—	CU.YDS.

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 PROVIDE, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
10) 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.

BY: S.F.H.	REVISE TREE DETAIL AND PLAN	5/16/89
BY: J.C.S	Added I-8, S-2 + M-5	8/14/90

OWNER AND DEVELOPER
MT. HEBRON, INC.
2106 MT. HEBRON DRIVE
ELLICOTT CITY, MARYLAND 21043

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN

MT. HEBRON

SECTION 18, LOTS 1-39
2ND. ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

[signature] 2/9/87
CHARLES J. CROVO, SR. — DATE

SCALE: AS SHOWN SHEET 5 OF 6 JANUARY 15, 1987

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

AS-BUILT DEC. 11, 1991

F87-122

16

PERMANENT SEEDING NOTES:

APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL 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 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 50 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 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.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES:

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

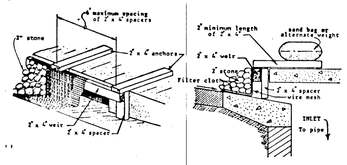
SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.)

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.

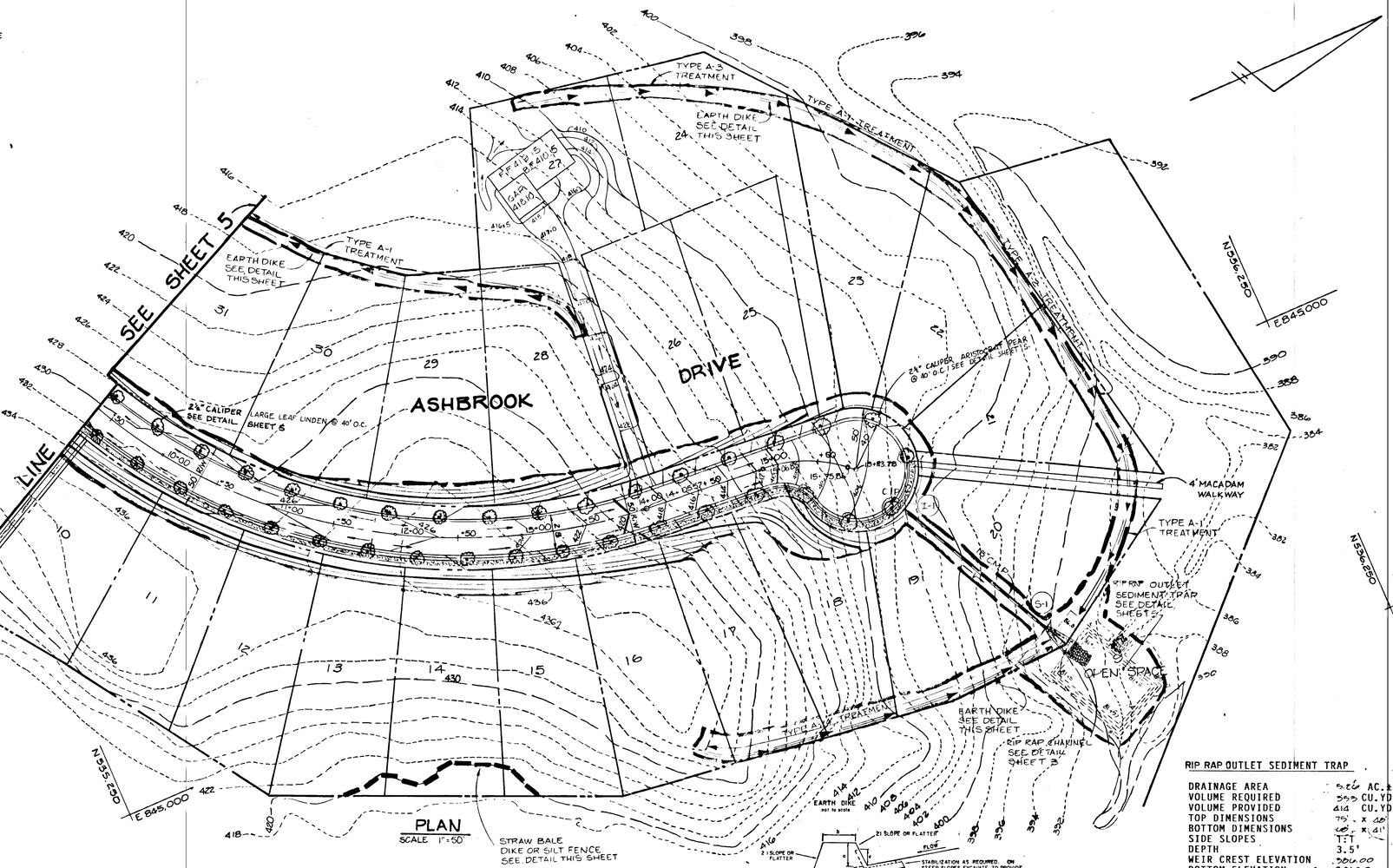
REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

CURB INLET PROTECTION DETAIL



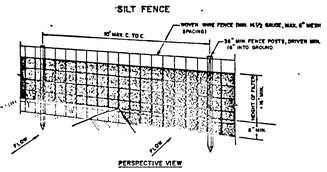
8. Curb Inlet Protection.

1. Attach a continuous piece of wire mesh (30" min. width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" on 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.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. 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.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.



RIP RAP OUTLET SEDIMENT TRAP

DRAINAGE AREA	5.66 AC.±
VOLUME REQUIRED	393 CU.YDS.
VOLUME PROVIDED	414 CU.YDS.
TOP DIMENSIONS	75' x 45'
BOTTOM DIMENSIONS	48' x 41'
SIDE SLOPES	1:1
DEPTH	3.5'
WEIR CREST ELEVATION	306.00
BOTTOM ELEVATION	301.50
CLEANOUT ELEVATION	305.25



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 MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

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

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

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

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

CONSTRUCTION SPECIFICATIONS

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

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5-5.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	5.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

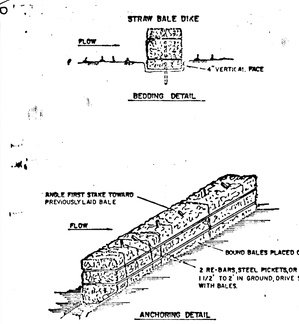
A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.

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

BM MH-8
EX MH #10

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND TIN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



OWNER AND DEVELOPER

MT. HEBRON, INC.
2106 MT. HEBRON DRIVE
ELLICOTT CITY, MARYLAND 21043

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN

MT. HEBRON

SECTION 18, LOTS 1-39
2ND. ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN SHEET 6 OF 6 JANUARY 15, 1987

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."

Charles J. Crovo — 2/9/87
SIGNATURE OF ENGINEER — 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 DEEMED NECESSARY".

D. Jones Baker Jr. — 1/15/87
SIGNATURE OF DEVELOPER — DATE

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

U.S. SOIL CONSERVATION DISTRICT — DATE 4-28-87

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: — 4/28/87
DISTRICT — DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — DATE 5-15-87

APPROVED: OFFICE OF PLANNING AND ZONING

ACTING CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 4-28-87

BY: S.H.	REVISE TREES ON ASHBROOK DRIVE	5/7/87

STATE OF MARYLAND — CHARLES J. CROVO, SR. — No. 13290 — REGISTERED PROFESSIONAL ENGINEER

Charles J. Crovo — 2/9/87
CHARLES J. CROVO, SR. — DATE

FISHER, COLLINS AND CARTER, INC.
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AS-BUILT DEC. 11, 1991

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