SHEET INDEX

Street Trees:

The location, type and number of trees shown on this plan are tentative and are used for bond purposes only. The final location and variety of trees may vary to accomadate field conditions and builders landscape program. Bond release is contingent upon Section 16.131 of the Howard County Subdivision Regulations, as approved by the Office of Planning and Zoning.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

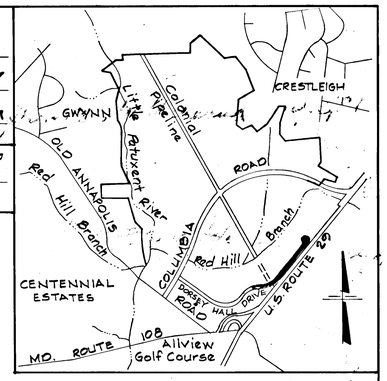
Chief, Land Development Division — Date 12-21-87

Chief, Bureau of Highways — Date 12/23/87

Chief, Bureau of Engineering — Date 12.23.87

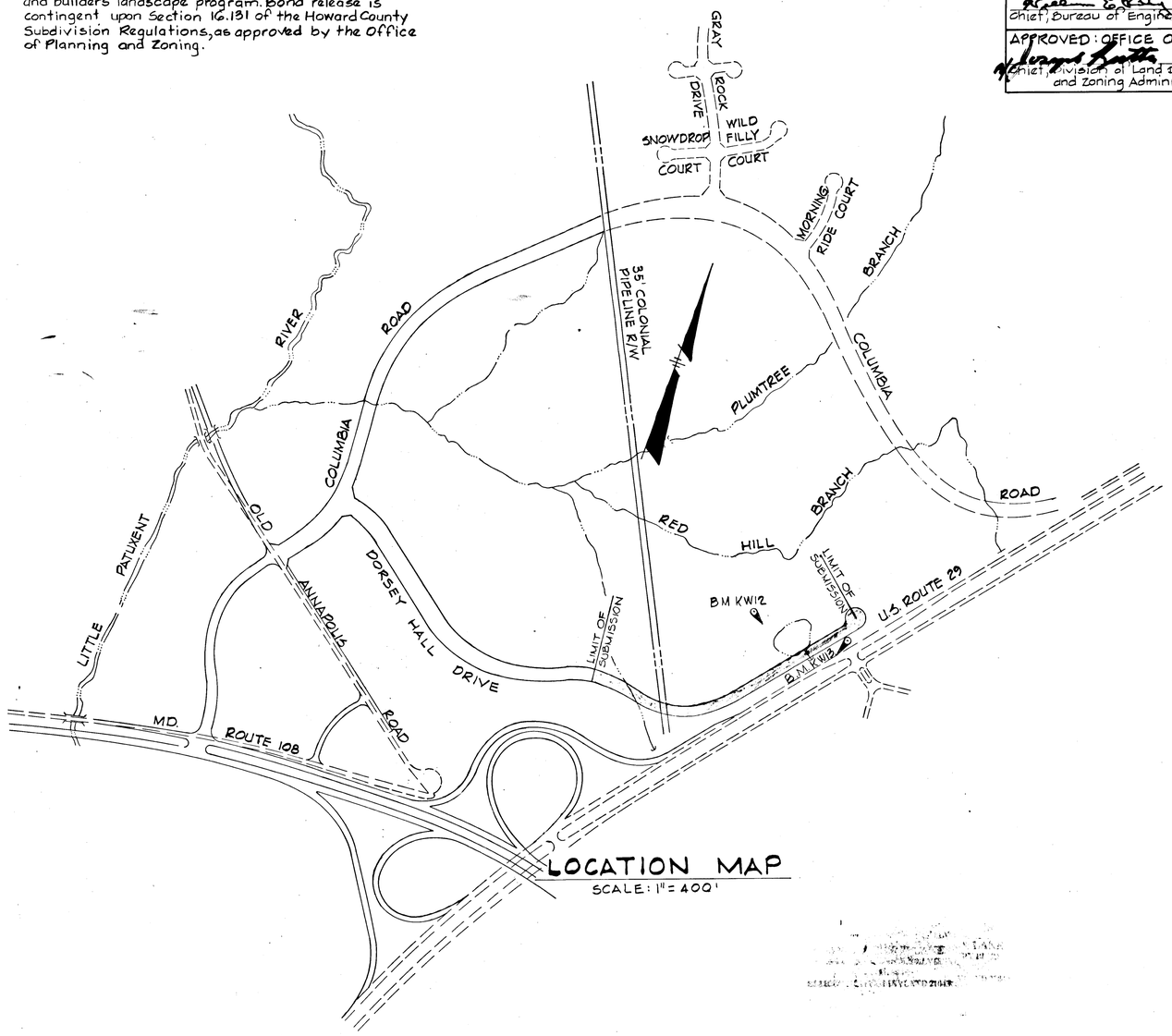
APPROVED: OFFICE OF PLANNING AND ZONING

Chief, Division of Land Development and Zoning Administration — Date 12/28/87



VICINITY MAP

Scale: 1" = 2,000



LOCATION MAP

SCALE: 1" = 400'

GENERAL NOTES

1. All work shall be performed in accordance with Howard County Standards, Specifications and Details for Construction.
2. All utility companies shall be notified 24 hours in advance of construction.
3. All inlets shall be Howard County Standard unless otherwise noted.
4. All street curb returns shall have a 30.0' radii unless otherwise noted.
5. Storm Drain trenches within road rights-of-way shall be backfilled and compacted in accordance with Howard County Design Manuals.
6. Approximate location of existing utilities are shown. The contractor shall take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to Contractor's operations shall be
7. The Contractor shall test pit existing utilities where directed by the Engineer a minimum of two weeks in advance of any construction.
8. Temporary compacted 18" high earth fill diversioin dikes shall be constructed above the lips of fill slopes on the R.O.W. concurrently with the initial grading and directed to undisturbed sod areas at the end of each day.
9. Contractor to notify the Howard County Department of Inspections and Permits at least 3 days before starting work shown on these drawings. Telephone No. 992-2436.
10. All disturbed slope areas to be stabilized as soon as grading is completed.
11. All reinforced concrete for storm drain structures shall have a minimum of 28 days strength of 3500 psi.
12. All swales and slopes shall be permanently seeded. See the seed specifications on Sheet 11.
13. Traffic control devices and their installation shall be in accordance with the manual on uniform traffic control devices, 1978 revised edition.
14. Stabilenka (Filter Cloth T-100) or equal shall be placed under all stone rip-rap (full width and length of stone).
15. Stone for rip-rap shall be as specified on the drawings. All rip-rap shall be unpaved.
16. Stubs for 6" P.V.C. underdrain pipe to be installed at center of each wall of every inlet.
17. Lamp Post 250-watt mercury vapor lamp pendant mounted on 30 foot bronze aluminum pole to be located at Sta 23+00 Rt, Sta 27+50 Rt, Sta 32+00 Rt, and Sta 36+50 Rt, Dorsey Hall Drive

ROAD AS-BUILT

Scott Shanaberger 12/6/93
SCOTT SHANABERGER
PROFESSIONAL LS # 10843 — DATE

STATE OF MARYLAND — SCOTT SHANABERGER — 10843 — PROFESSIONAL LAND SURVEYOR

HORIZONTAL & VERTICAL CONTROL

HOWARD COUNTY TRAVERSE POINT "COLUMBIA RESET 1966"
N 512 095.84
E 846 139.78

BENCH MARKS

BM WR&A #KW12 Elev 859.48
Iron Pipe 290(±) Left of & Dorsey Hall Sta 32+30(±)
514067.921 N, 846941.055 E

BM WR&A #KW13 Elev 864.73
P.K. Edge Paving U.S. Route 29, South Bound Lane, 30' Right of & Dorsey Hall Sta 35+40
514003.036 N, 847384.163 E

NOTE:
STORMWATER MANAGEMENT HAS BEEN PROVIDED. SEE ROAD CONSTRUCTION DRAWINGS FOR SECTION 2 AREA 1 (F-85-16)

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

Kenneth A. McCord
KENNETH A. McCORD
REGISTERED ENGINEER
NO. 19774

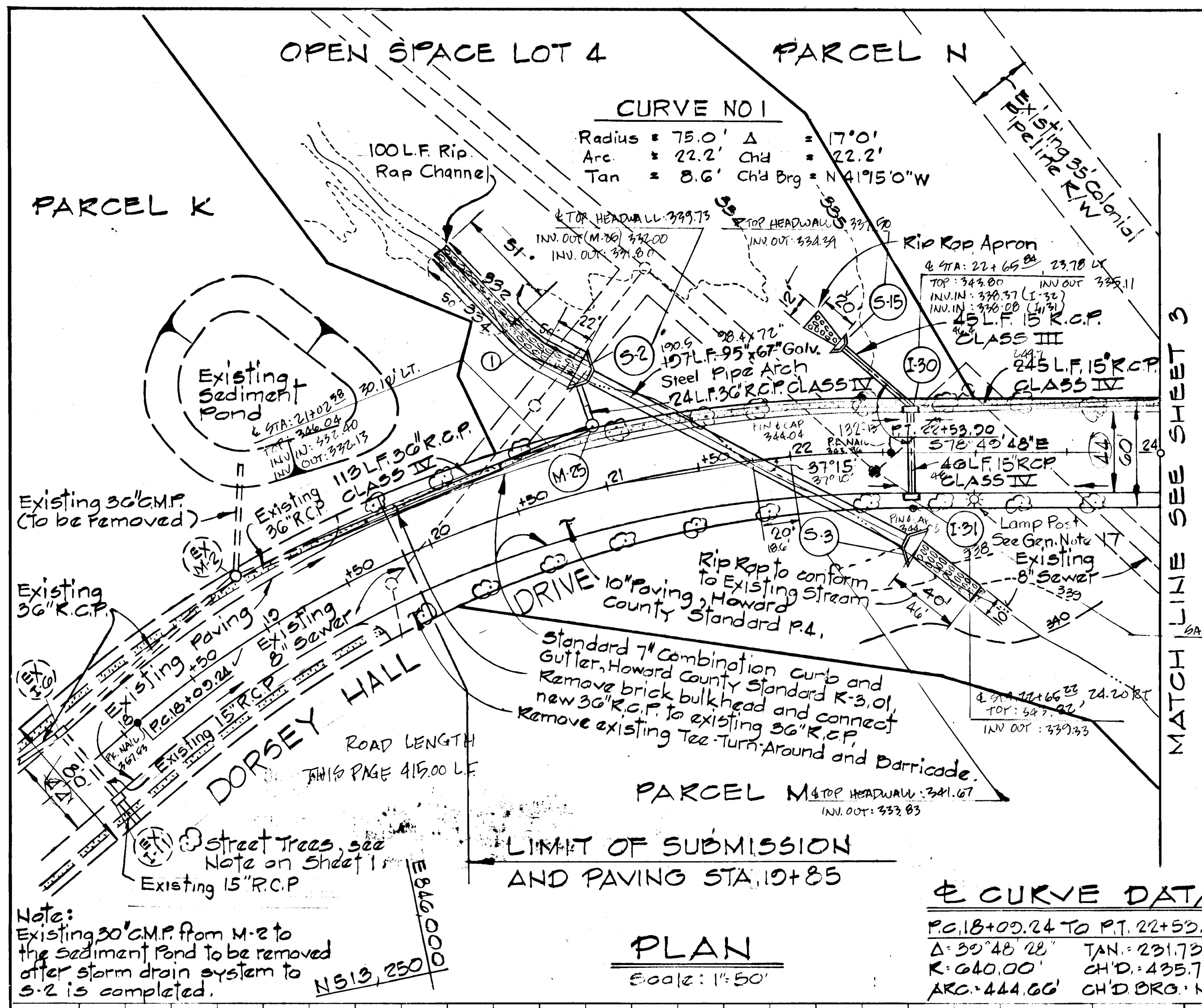
REV. DATE	REV. NO.	REVISION DESCRIPTION
10/19/87	1	As Per Planning, DPW & SC.S Comments

DORSEY HALL
SECTION 2 AREA 5
PARCELS N AND O
ROAD CONSTRUCTION PLANS
2ND ELECTION DISTRICT
HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH
AND DEVELOPMENT LAND COMPANY
COLUMBIA, MARYLAND

DATE: SCALE: AS SHOWN

F-88-37 8/4/87 AS-BUILT 11/21/93 SHEET 1 OF 11



PLAN

Scale: 1"=50'

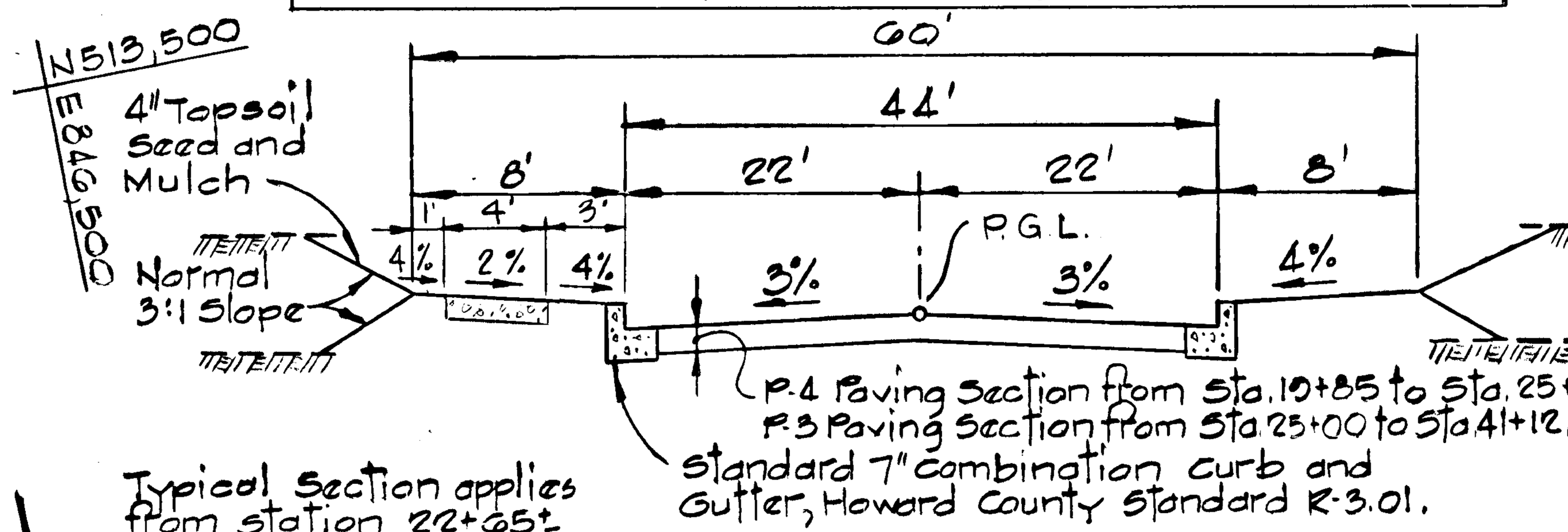
℄ CURVE DATA

P.C. 18+03.24 TO P.T. 22+53.90
Δ 30°48'28" TAN. 231.73'
R 640.00' CH'D. 435.77'
ARC. 444.66' CH'D BRG. N81°15'58"E

STORM DRAIN STRUCTURE SCHEDULE

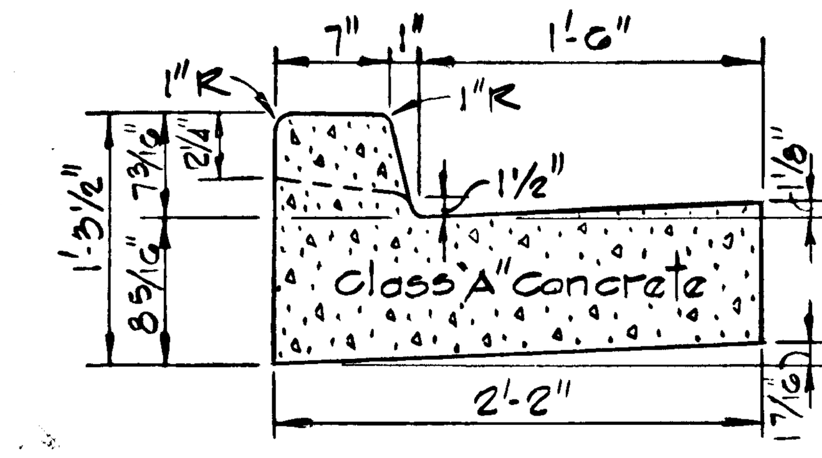
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	LOCATION
I-30	A-5 Inlet, width 2.5'(S.D.4.01)	343.92	338.02	335.27	℄ Inlet 23.92' Lt. ℄ Sta. 22+65.84
I-31	A-5 Inlet, width 2.5'(S.D.4.01)	343.92	—	335.28	℄ Inlet 23.92' Rt. ℄ Sta. 22+65.22
S-15	Type "A" Headwall (S.D.5.11)	337.81	334.81	334.78	See Plan and Profile
M-25	Standard Manhole (G.5.03)	346.41	333.72	332.32	℄ MH 33.26' Lt. ℄ Sta. 21+99.87
S-2	Special (See Sheet 7 of 11)	340.75	332.25	332.19	See Plan and Profile
S-3	Special (See Sheet 7 of 11)	342.40	333.96	333.90	See Plan and Profile

LOCAL ROAD - DESIGN SPEED 30 M.P.H. - ZONING POR
MINOR COLLECTOR - DESIGN SPEED 35 M.P.H. - ZONING POR



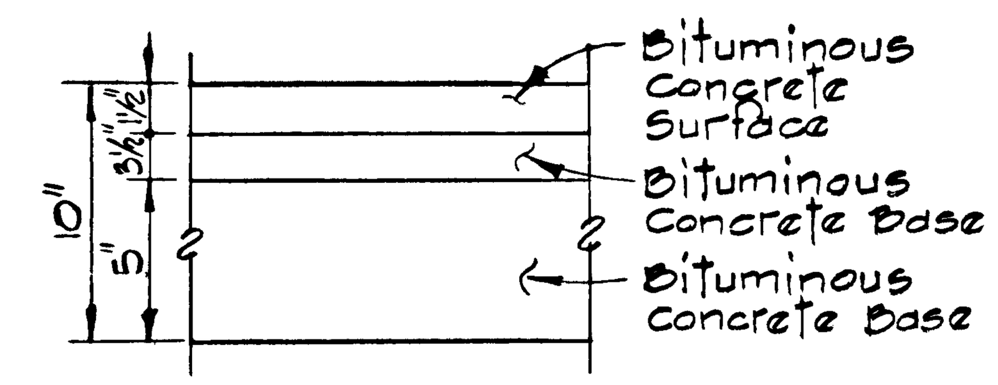
TYPICAL SECTION

No Scale



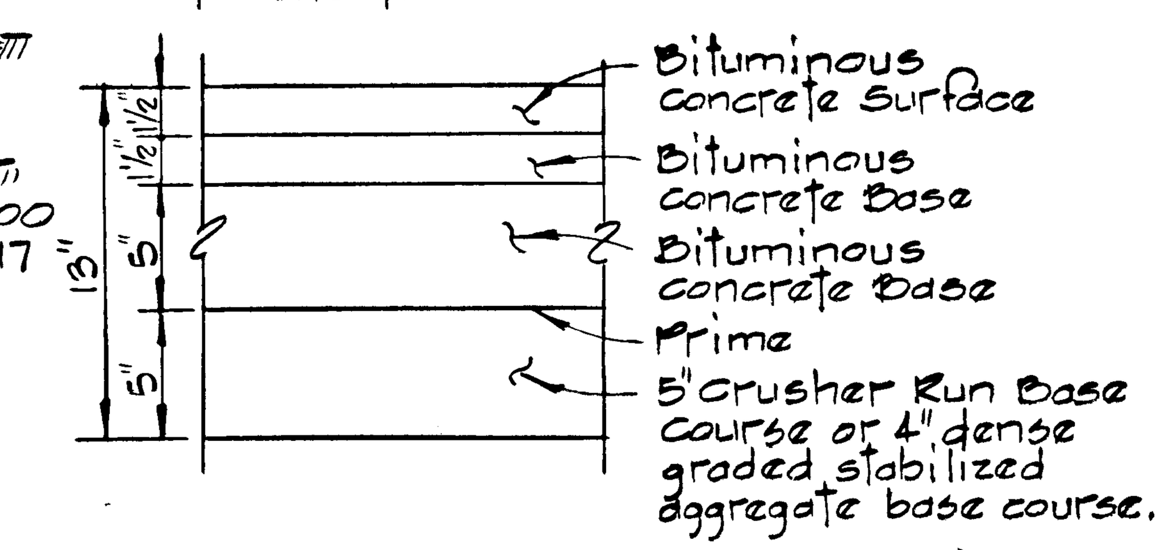
CURB & GUTTER DETAIL

No Scale



P-4 FULL DEPTH BITUMINOUS CONCRETE

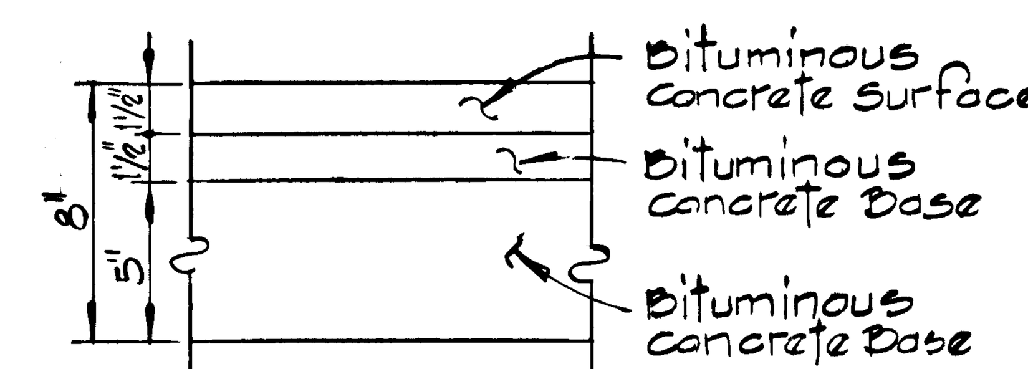
NOTES:
1. Base will be primed in accordance with Article 33.03 as provided in The Md. S.R.C. Specifications.
2. A tack coat will be applied in accordance with Section 33.07-3 as provided in The Md. S.R.C. Specifications.



P-4 GRANULAR BASE (ALTERNATE)

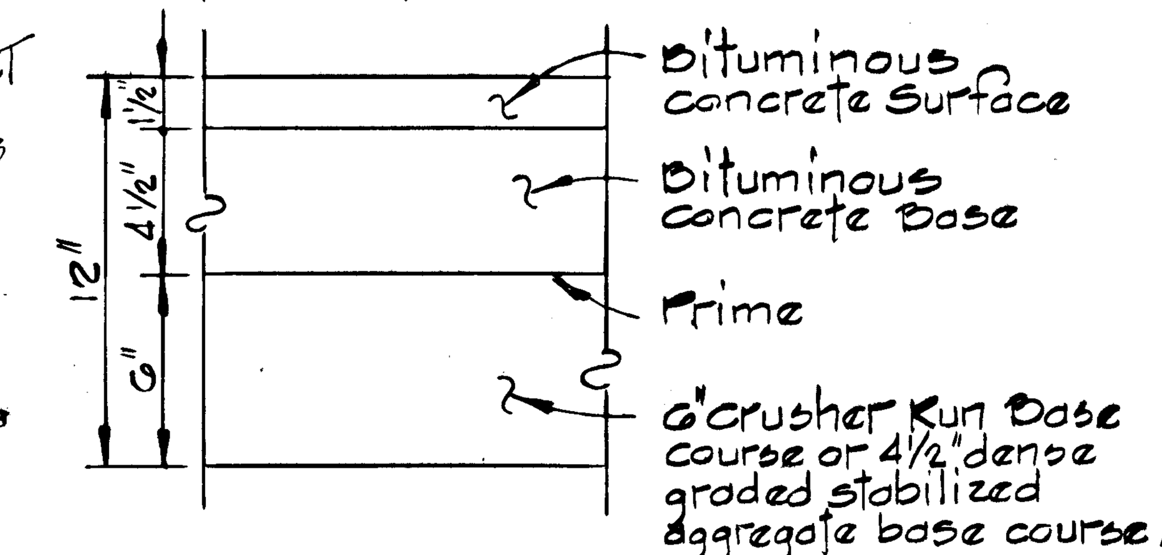
PAVING SECTION

No Scale



P-3 FULL DEPTH BITUMINOUS CONCRETE

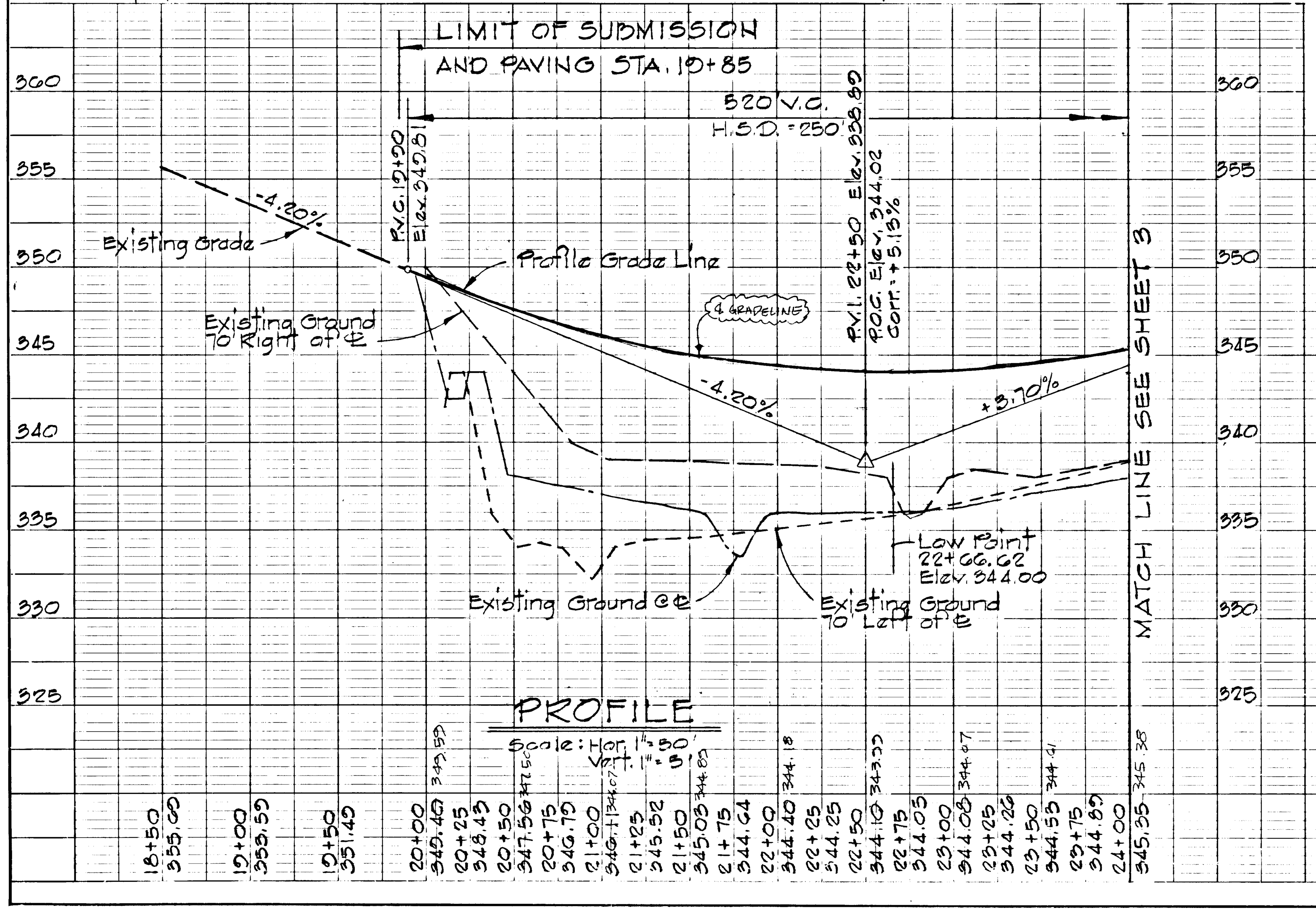
NOTES:
1. Base will be primed in accordance with Article 33.03 as provided in The Md. S.R.C. Specifications.
2. A tack coat will be applied in accordance with Section 33.07-3 as provided in The Md. S.R.C. Specifications.



P-3 GRANULAR BASE (ALTERNATE)

PAVING SECTION

No Scale



PROFILE

Scale: Hor. 1"=50'
Vert. 1"=5'

NOTE:
FOR EXISTING DORSEY HALL ROAD CONSTRUCTION DRAWINGS SEE SECTION 2 AREA 3 (F87-143).

ROAD AS-BUILT
G. Scott Shanaberger 2/3/93
PROFESSIONAL L.S. #10849

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division	12-21-87 Date
Chief, Bureau of Highways	12/23/87 Date
Chief, Bureau of Engineering	12/23/87 Date

APPROVED: OFFICE OF PLANNING AND ZONING

Chief, Division of Land Development and Zoning Administration	12/28/87 Date

REV. DATE	REV. NO.	REVISION DESCRIPTION
6/15/88	2	Revised Culvert
10/1/87	1	As Per Planning, DPW & SCS Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
SECTION 2 AREA 5
PARCELS N AND O

PROJECT TITLE
PLAN, PROFILE AND DETAILS
DORSEY HALL DRIVE
STATION 19+85 TO STATION 24+00

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

KENNETH A. McCORD
REGISTERED ENGINEER
NO. 1974

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

PROFILE	
NOTE BOOK	SURVEYED / PLOTTED / GRADES CHECKED / B.M.'s NOTED / STRUCTURE NOTATIONS CHECKED
No.	BY / DATE

771

NO.	TYPE	TOP EL.	INV. IN	INV. OUT	LOCATION
I-36	A-5 Inlet width 2.5' (S.D.4.01)	348.97 / 349.00	343.00 / 342.65	342.80 / 342.58	℄ Inlet 23.92' Left ℄ Sta. 33+85.63
I-37	A-5 Inlet width 2.5' (S.D.4.01)	348.97	—	344.71 / 344.21	℄ Inlet 23.92' Right ℄ Sta. 33+85.63
I-38	Modified S.H.A. Type "K" (See Sht. 8)	348.65 / 348.77	342.30 / 342.32	342.15 / 342.22	See Plan & Profile
S-6	Type "A" Headwall (S.D.5.11)	346.75 / 346.33	341.75	341.73	See Plan & Profile
S-7	Type "A" Headwall (S.D.5.11)	345.50 / 344.80	342.50	341.44 / 341.53	See Plan & Profile
* I-32	A-5 Inlet width 2.5' (S.D.4.01)	348.79 / 348.70	343.76 / 343.40	343.56 / 343.35	℄ Inlet 23.92' Left ℄ Sta. 25+20
* I-33	A-5 Inlet width 2.5' (S.D.4.01)	348.79	—	344.00 / 343.84	℄ Inlet 23.92' Right ℄ Sta. 25+20.35

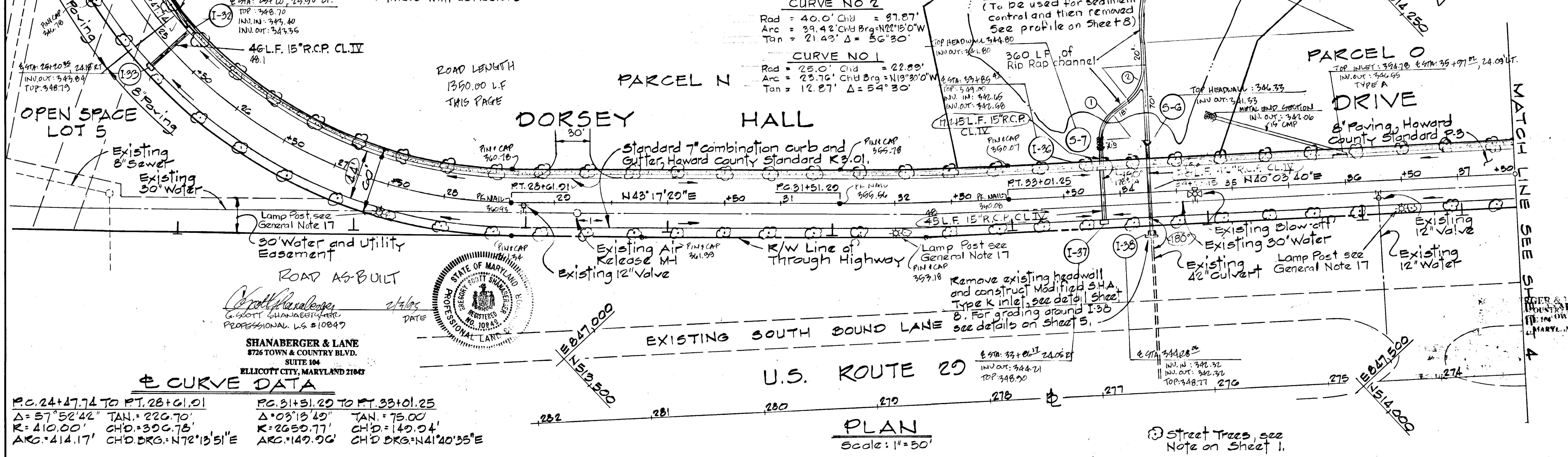
* Inlets with deflectors

CURVE NO 3
Rad = 185.0' Chd = 91.08'
Arc = 91.97' Ch'd Brg = N37°15'0"W
Tan = 46.98' Δ = 28°30'

CURVE NO 2
Rad = 40.0' Chd = 37.87'
Arc = 39.42' Chd Brg = N22°15'0"W
Tan = 21.49' Δ = 56°30'

CURVE NO 1
Rad = 25.0' Chd = 22.89'
Arc = 23.76' Chd Brg = N19°30'0"W
Tan = 12.87' Δ = 54°30'

Note:
For Pond removal, grading and new channel, see Sheet 5.
For removal sequence see sheet 11



C. SCOTT SHANABERGER
PROFESSIONAL L.S. #10847

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

℄ CURVE DATA

P.C. 24+47.74 TO P.T. 28+61.01
Δ = 57°52'42" TAN. = 226.70'
R = 410.00' CH'D = 396.78'
ARC = 414.17' CH'D BRG. = N72°13'51"E

P.C. 31+51.20 TO P.T. 33+01.25
Δ = 03°13'40" TAN. = 75.00'
R = 2650.77' CH'D = 149.04'
ARC = 149.96' CH'D BRG. = N41°40'35"E

PLAN
Scale: 1" = 30'

⊙ Street Trees, see Note on Sheet 1.

PROFILE
Scale: Hor. 1" = 50'
Vert. 1" = 5'

12/2/87	2	As per SCS Comments
10/19/87	1	As Per Planning, D.P.W. & SCS Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 12/4/87
Chief, Bureau of Highways — Date 12/23/87
Chief, Bureau of Engineering — Date 12/23/87

APPROVED: OFFICE OF PLANNING AND ZONING

Chief, Division of Land Development and Zoning Administration — Date 12/28/87

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
SECTION 2 AREA 5
PARCELS N AND O

PROJECT TITLE
PLAN AND PROFILE
DORSEY HALL DRIVE
STATION 24+00 TO STATION 37+50

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

KENNETH A. McCORD
REGISTERED ENGINEER
NO. 1974

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R. OF WAY CHECKED
NOTE BOOK No.

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M.'s NOTED
STRUCTURE NOTATIONS CHECKED
NOTE BOOK No.

771

K+E PLATE 1, PLAN PROFILE KEUFFEL & ESSER CO.
48 7024 Made in U.S.A.

F-88-37 8/4/87

AS-BUILT 1/21/93

℄ CURVE DATA

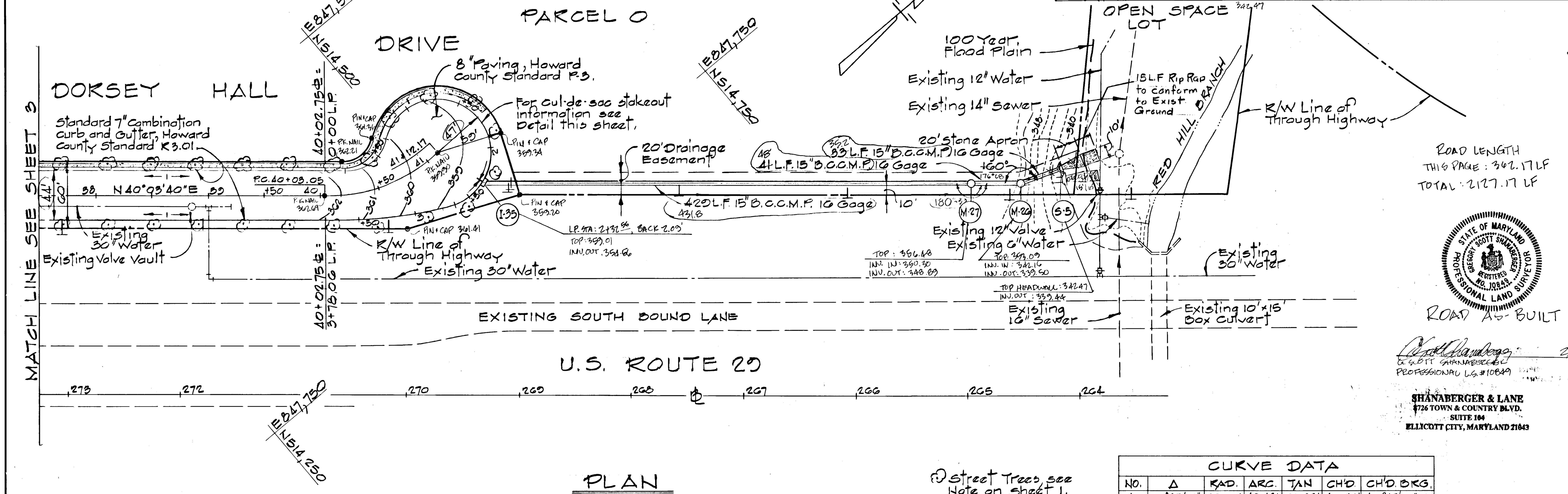
P.C. 40+03.05 TO 41+12.17
Δ: 43°36'18" TAN.: 57.36'
R: 143.38' CH'D.: 106.50'
ARC: 109.12' CH'D. BRG: N18°15'30"E

STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP EL.	INV. IN	INV. OUT	LOCATION
I-35	A-5 Inlet 2.5' width (SD.4.01)	358.95	—	354.75	℄ Inlet 1.92' back L.P. Sta. 2+34.12
M-26	Standard Manhole (G.5.01)	353.20	342.50	339.68	See Plan and Profile
M-27	Standard Manhole (G.5.01)	356.25	350.90	349.25	See Plan and Profile
S-5	Type A Headwall (SD.5.11)	342.51	339.51	339.50	See Plan and Profile

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Land Development Division — Date 12/4/87
Chief, Bureau of Highways — Date 12/23/87
Chief, Bureau of Engineering — Date 12-23-87

APPROVED: OFFICE OF PLANNING AND ZONING
Chief, Division of Land Development and Zoning Administration — Date 12/28/87

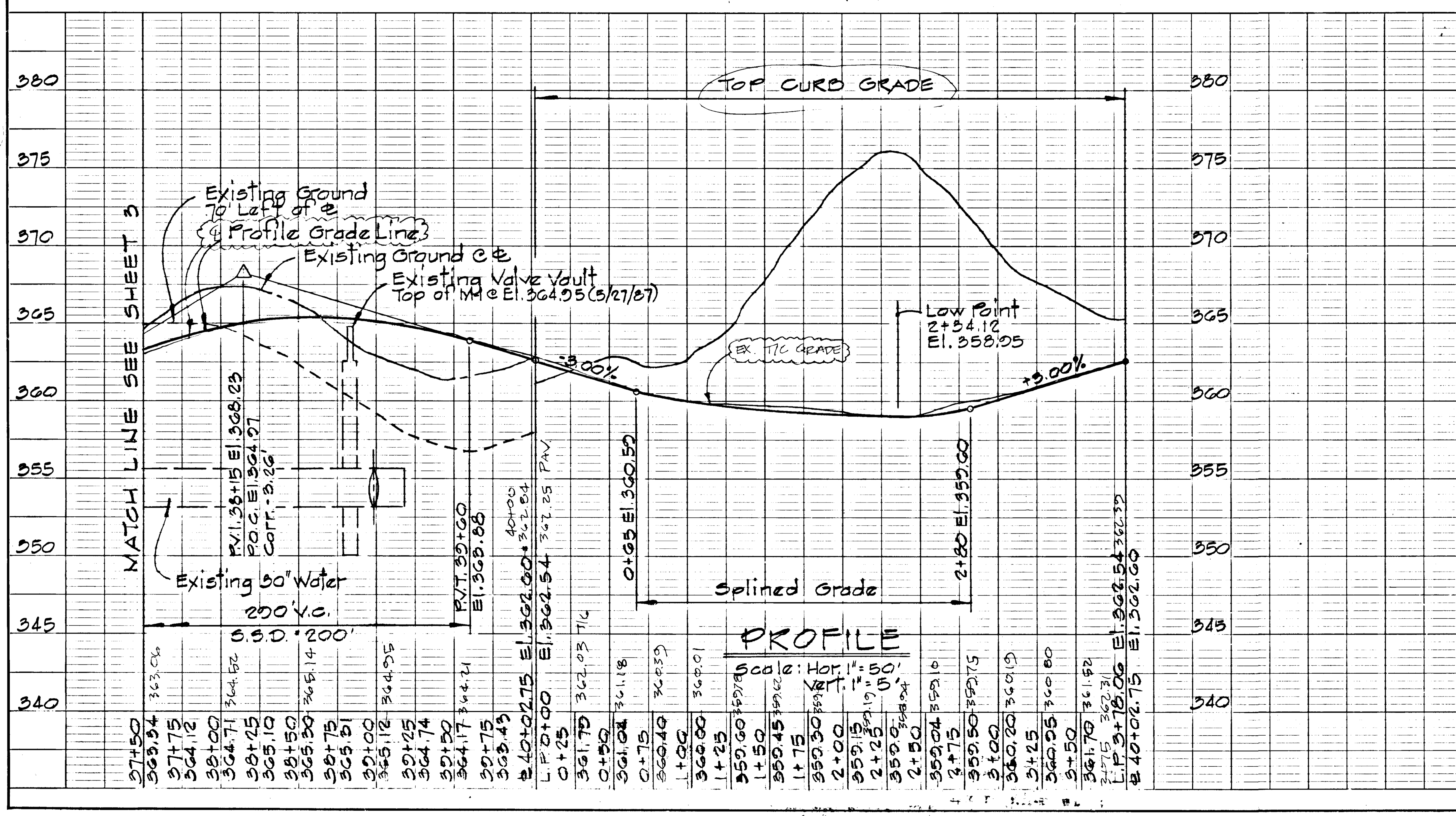


PLAN
Scale: 1"=50'

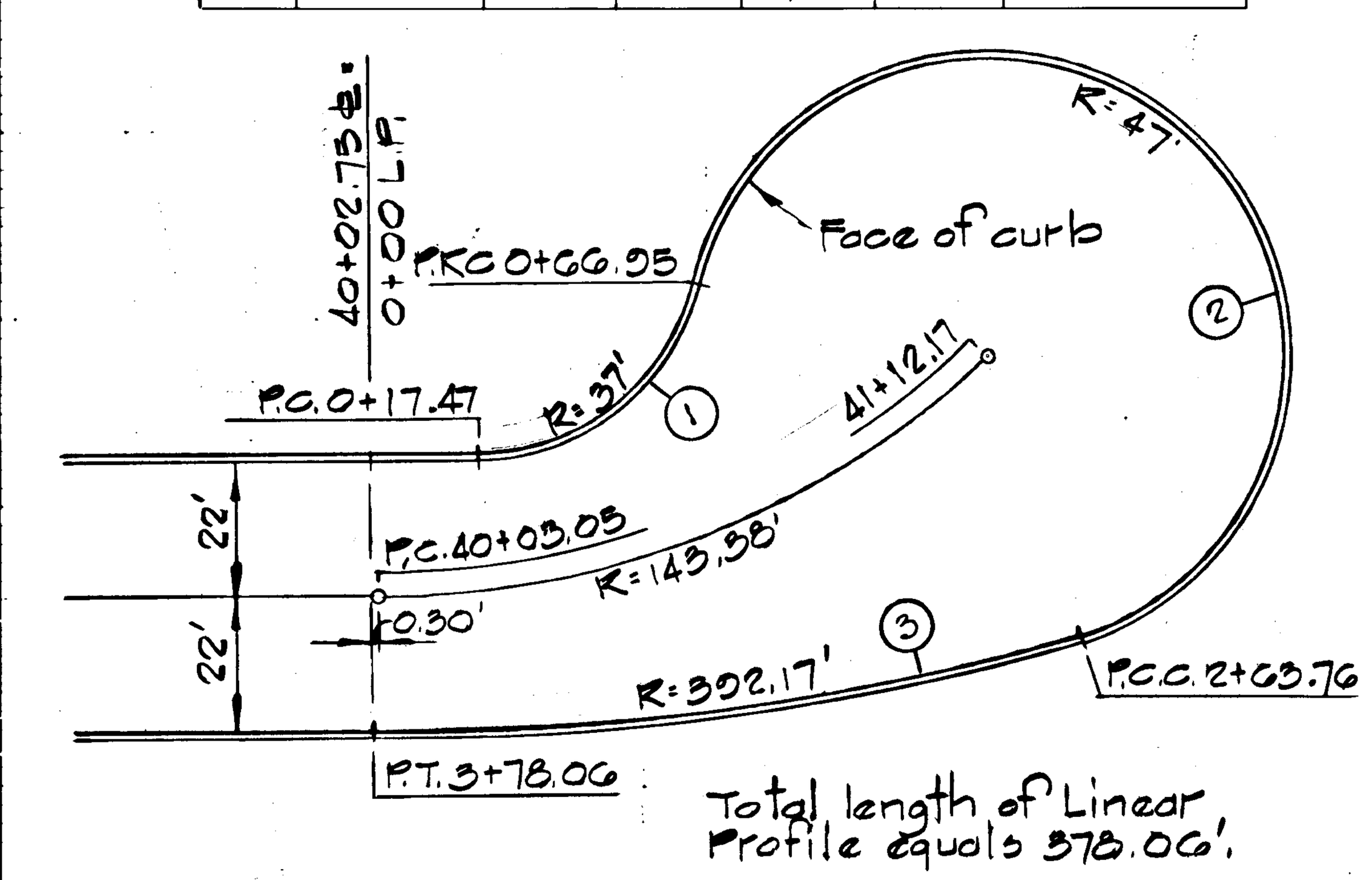
Street Trees, see Note on Sheet 1.

CURVE DATA

NO.	Δ	RAD.	ARC.	TAN	CH'D.	CH'D. BRG.
1	76°37'01"	37.00'	49.48'	29.23'	45.87'	N01°45'10"E
2	239°55'03"	47.00'	196.80'	—	—	—
3	16°41'58"	392.17'	114.30'	57.56'	113.90'	S31°42'41"W



PROFILE
Scale: Hor. 1"=50'
Vert. 1"=5'



DORSEY HALL DRIVE
CUL-DE-SAC STAKEOUT PLAN
Scale: 1"=50'

REV. DATE	REV. NO.	REVISION DESCRIPTION
10/19/87	1	As Per Planning, D.P.W. & S.C.S. Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
SECTION 2 AREA 3
PARCELS N AND O

PROJECT TITLE
PLAN AND PROFILE
DORSEY HALL DRIVE
STATION 37+50 TO STATION 41+12.17

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

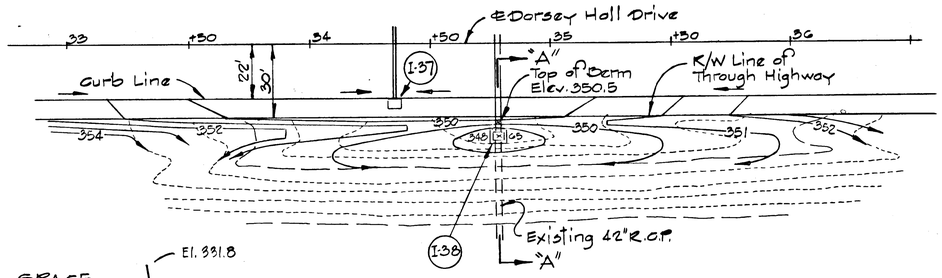
KENNETH A. McCORD
REGISTERED ENGINEER
NO. 1974

G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849 — 2/3/93 DATE

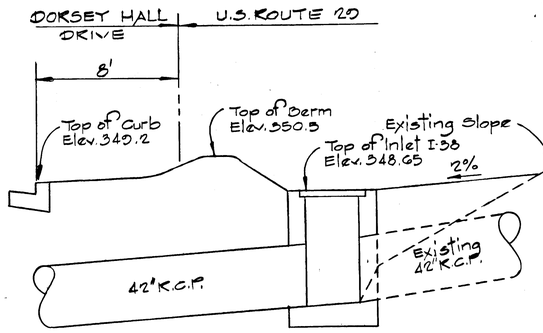
SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

F-88-37 8/4/87 SHEET 4 OF 11

AS-BUILT 1/21/93



PLAN
Scale: 1"=30'



SECTION "A-A"
Scale: 1"=4'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 12-28-87

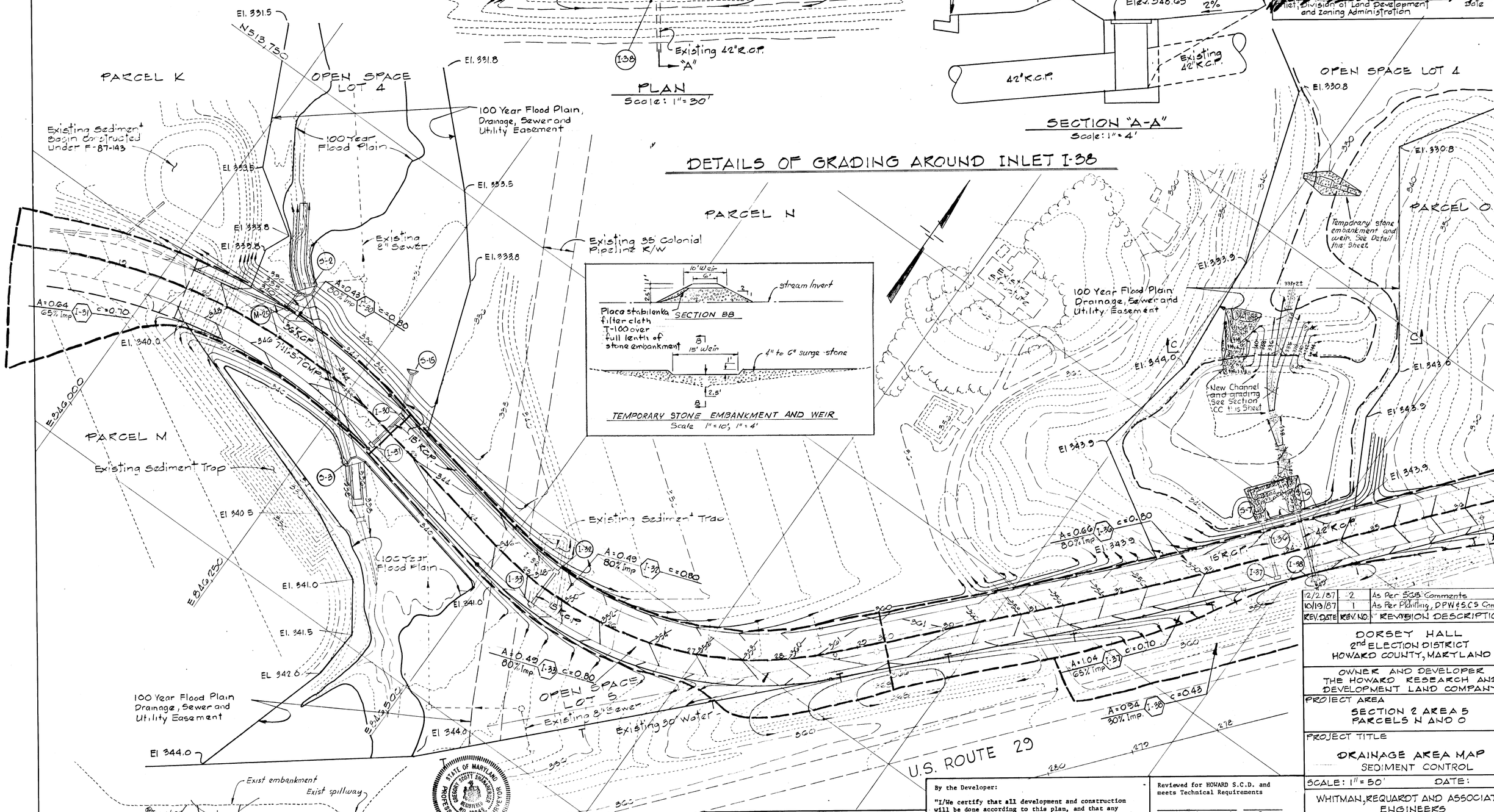
Chief, Bureau of Highways — Date 12/23/87

Chief, Bureau of Engineering — Date 12-23-87

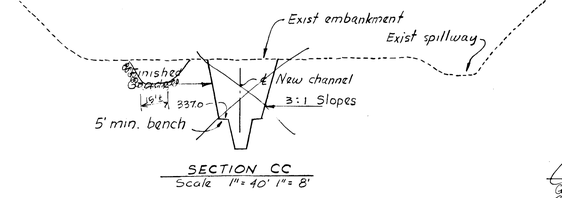
APPROVED: OFFICE OF PLANNING AND ZONING

Chief, Division of Land Development and Zoning Administration — Date 12/28/87

DETAILS OF GRADING AROUND INLET I-38



TEMPORARY STONE EMBANKMENT AND WEIR
Scale 1"=10', 1"=4'



SECTION CC
Scale 1"=40' 1"=8'

STATE OF MARYLAND — G. SCOTT SHANABERGER — REGISTERED No. 10649 — PROFESSIONAL LAND SURVEYOR

AS-BUILT

G. Scott Shanaberger
G. SCOTT SHANABERGER
PROFESSIONAL L.S. # 10649

7/6/93
DATE

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

By the Engineer:

"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."

Kenneth A. McCord — 8-4-87
Date

By the Developer:

"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 beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Gregory R. Klar — 8-4-87
Date

Reviewed for HOWARD S.C.D. and meets Technical Requirements

U.S. Soil Conservation Service — Date

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

Howard S.C.D. — Date 12/14/87

REV. DATE	REV. NO.	REVISION DESCRIPTION
12/2/87	2	As Per SCS Comments
10/13/87	1	As Per Planning, DPW & S.C.S Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
SECTION 2 AREA 5
PARCELS N AND O

PROJECT TITLE
DRAINAGE AREA MAP
SEDIMENT CONTROL

SCALE: 1"=50' DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

Kenneth A. McCord
KENNETH A. McCORD
REGISTERED ENGINEER
NO. 10174

F-88-37 8/4/87 AS-BUILT 1/21/93 SHEET 5 OF 11

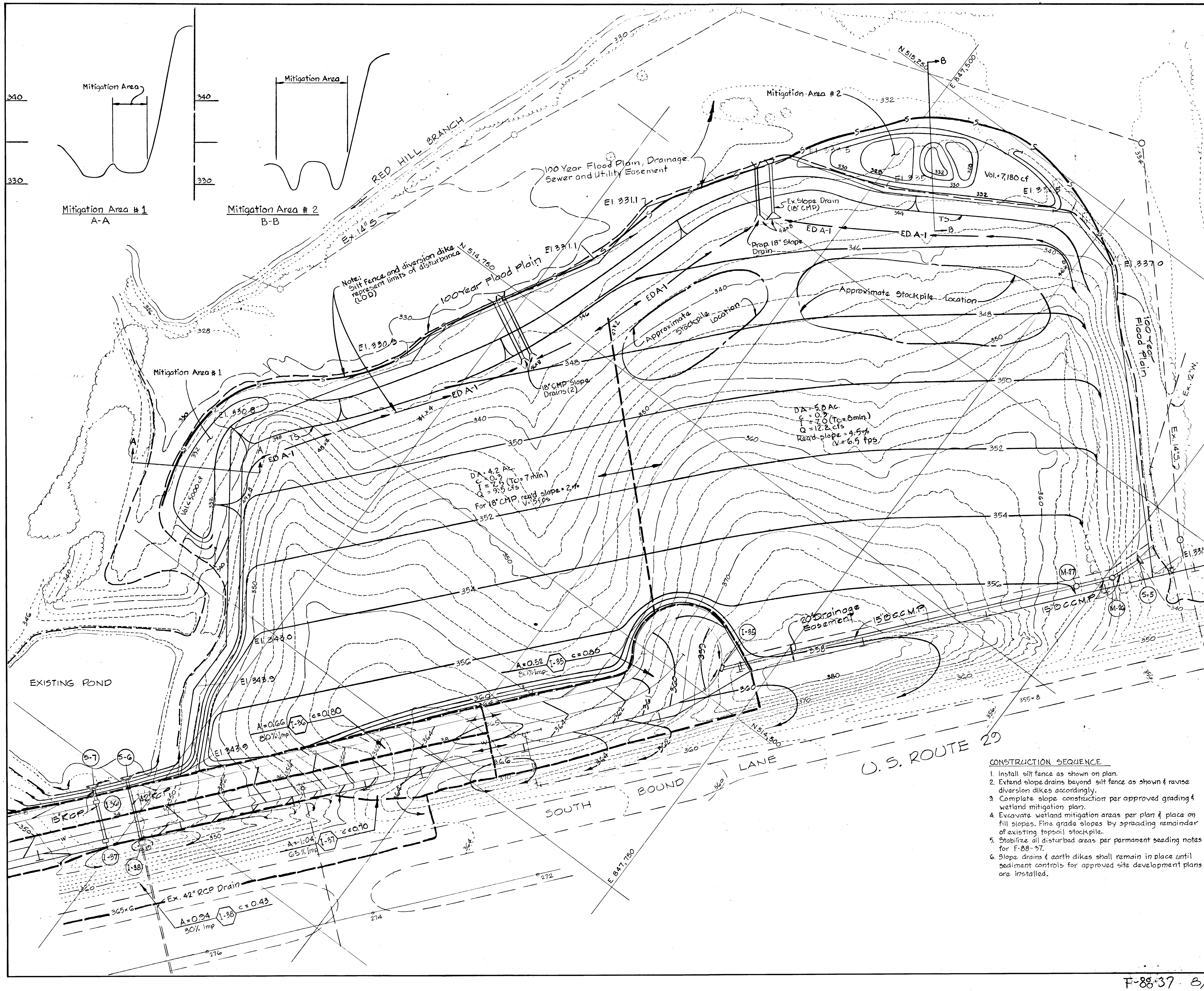
177

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division	Date
Chief, Bureau of Highways	12/23/87 Date
Chief, Bureau of Engineering	12-23-87 Date

APPROVED: OFFICE OF PLANNING AND ZONING

Chief, Division of Land Development and Zoning Administration	12/28/87 Date



CONSTRUCTION SEQUENCE

1. Install silt fence as shown on plan.
2. Extend slope drains beyond silt fence as shown & revise diversion dikes accordingly.
3. Complete slope construction per approved grading & wetland mitigation plan.
4. Excavate wetland mitigation areas per plan & place on fill slopes. Fine grade slopes by spreading remaindar of existing topsoil stockpile.
5. Stabilize all disturbed areas per permanent seeding notes for F-88-37.
6. Slope drains & earth dikes shall remain in place until sediment controls for approved site development plans are installed.

REV. DATE	REV. NO	REVISION DESCRIPTION
7/6/89	2	As Per D.P.W. Comments (5/24/89)
10/19/87	1	As Per Planning, D.PW & S.C.S Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
SECTION 2 AREA 5
PARCELS N AND O

PROJECT TITLE
DRAINAGE AREA MAP

SCALE: 1" = 30' DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

KENNETH A. McCORD
Registered Engineer
No 1974

F-88-37 8/4/87

771

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

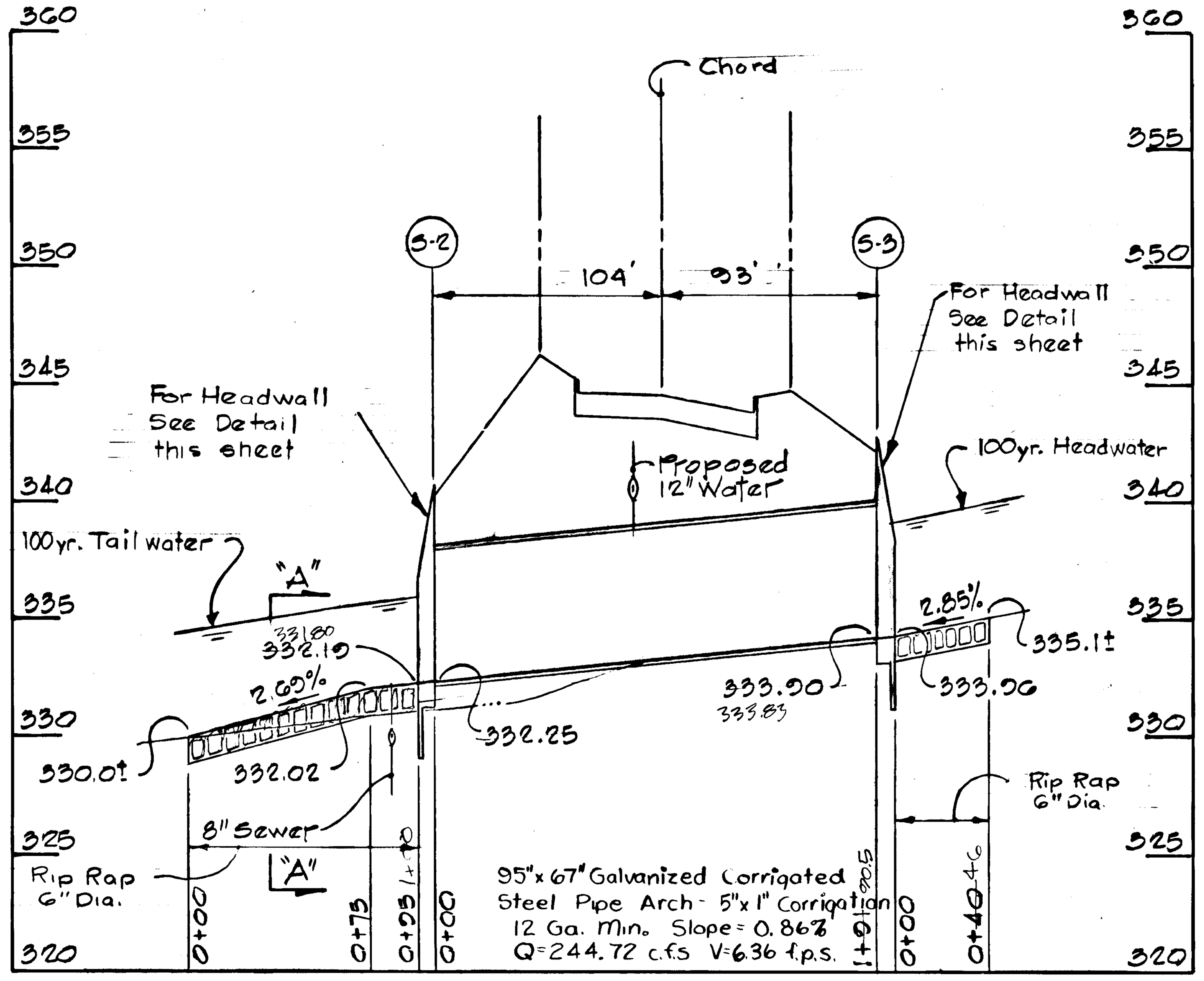
Chief, Land Development Division — Date 12/4/87

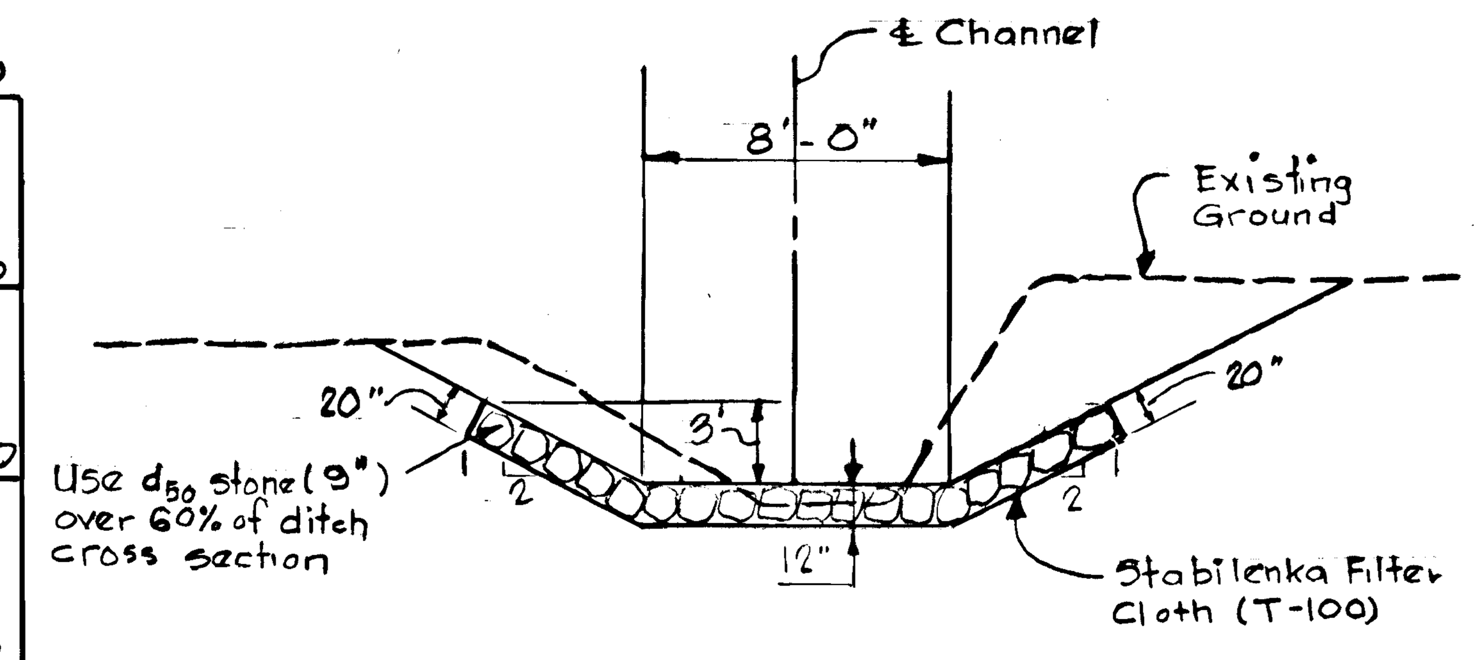
Chief, Bureau of Highways — Date 12/23/87

Chief, Bureau of Engineering — Date 12.23.87

APPROVED: OFFICE OF PLANNING AND ZONING

Chief, Division of Land Development and Zoning Administration — Date 12/28/87





SECTION "A-A"

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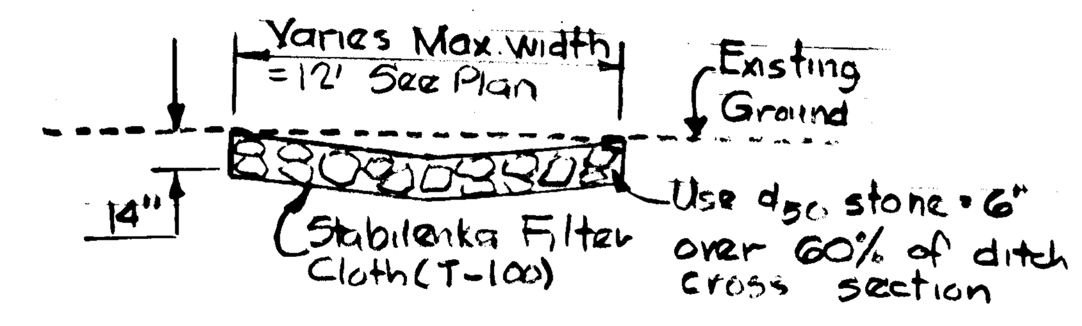
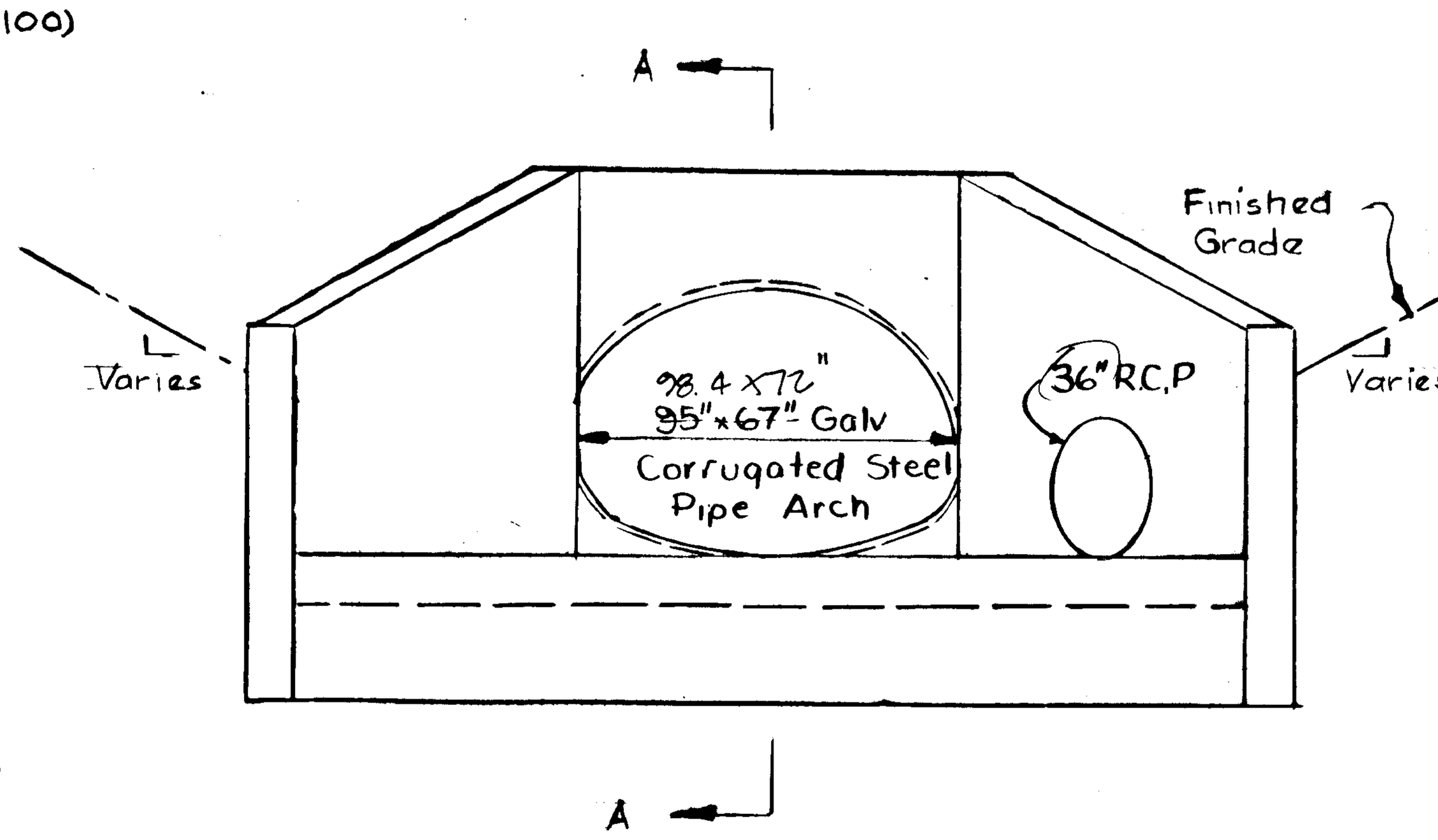
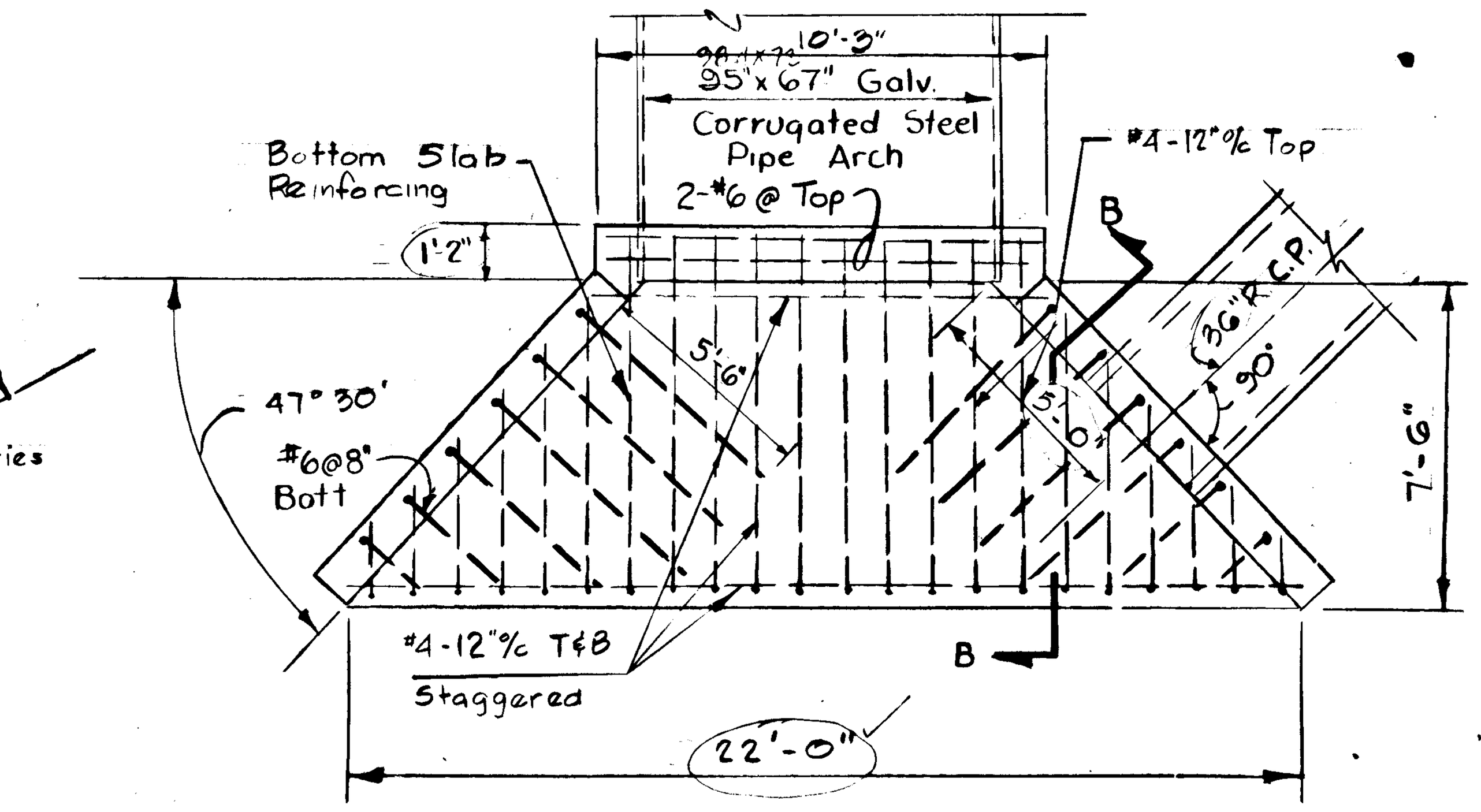


SECTION "B-B" (flared section)

No Scale

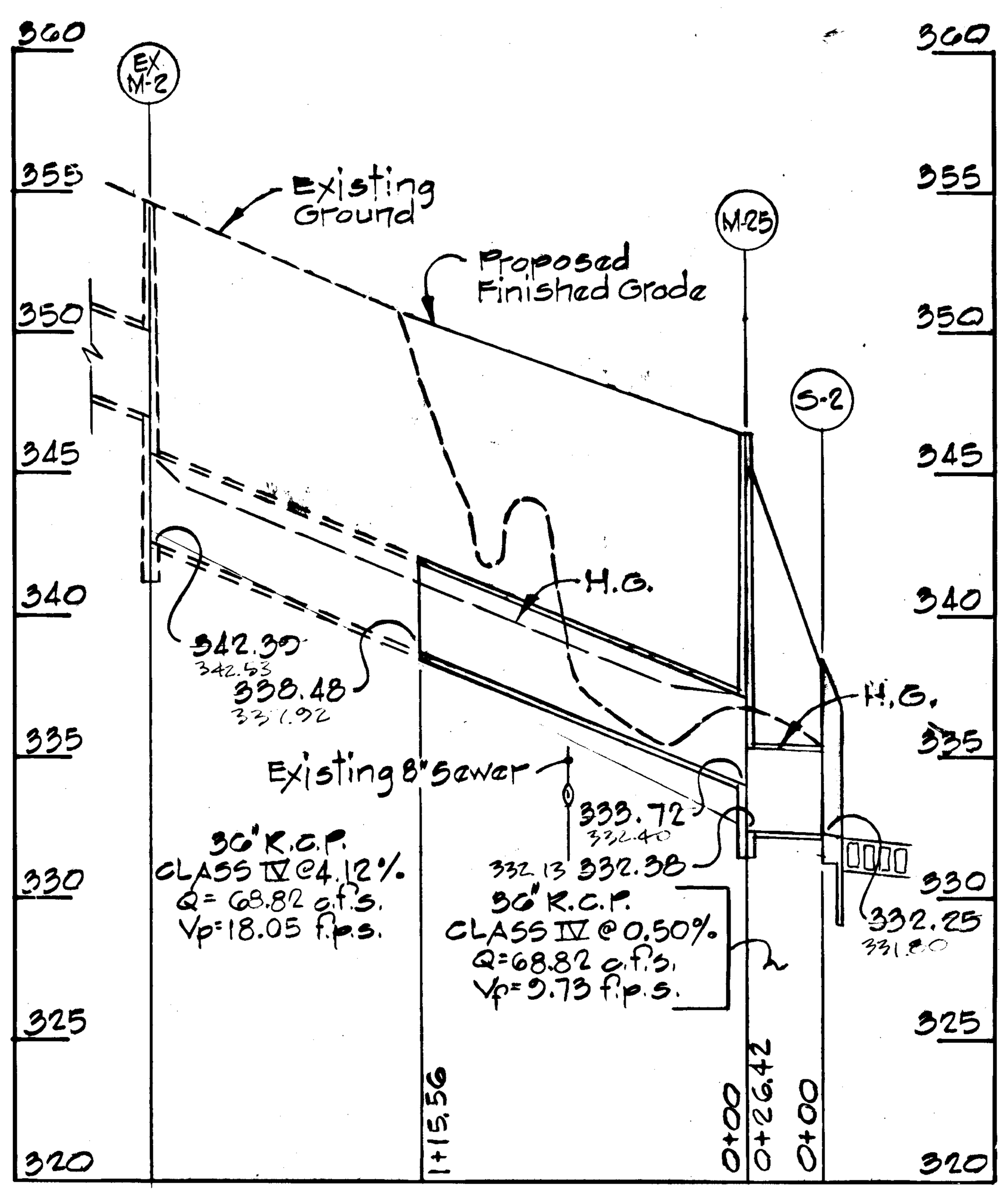


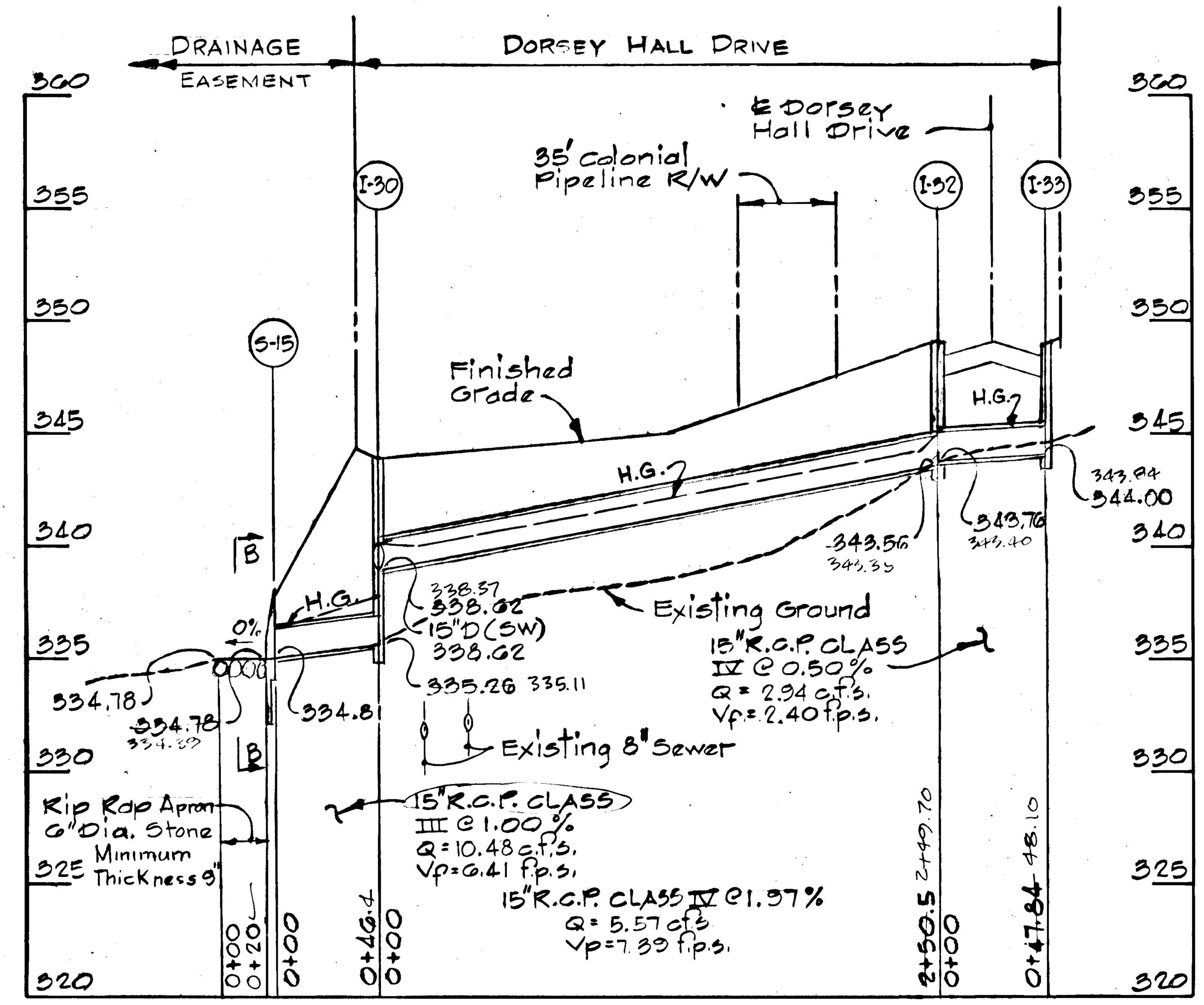
FRONT ELEVATION

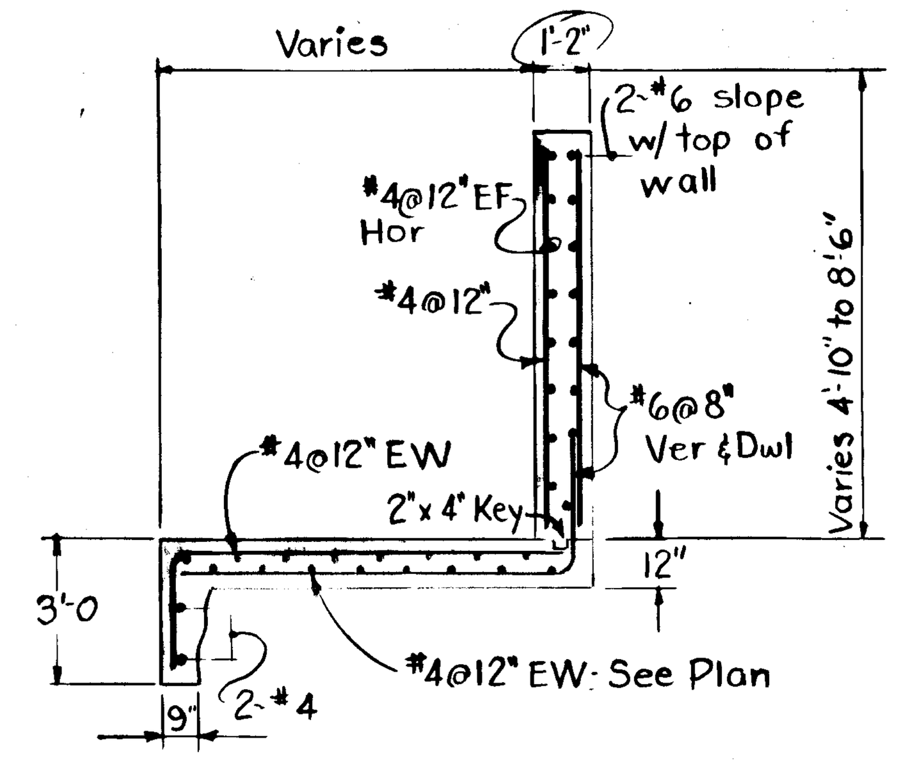


PLAN

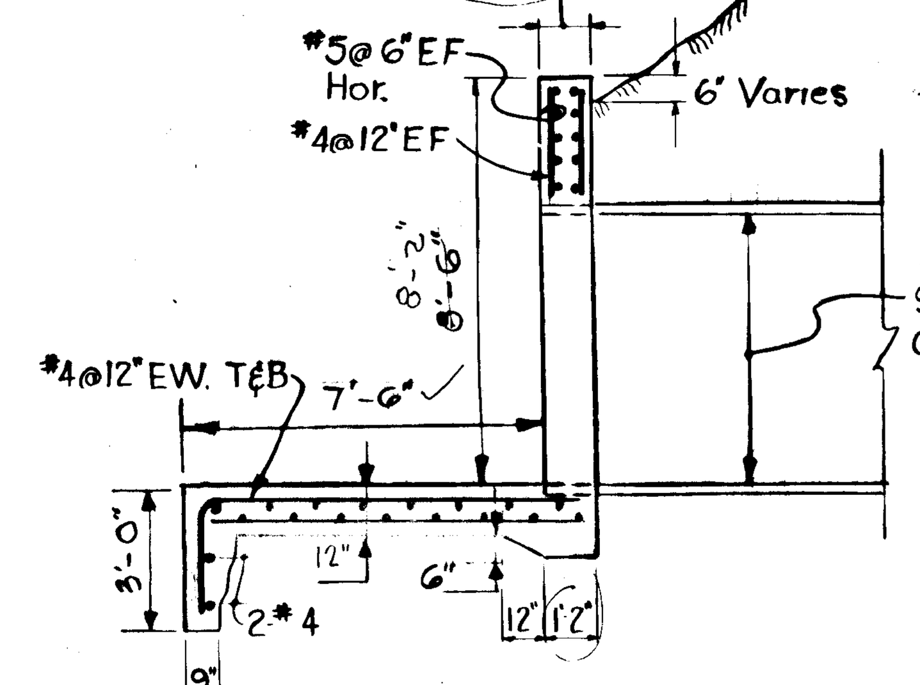
Note: 36" R.C.P. applies only to Structure S-2.







SECTION B-B



SECTION A-A

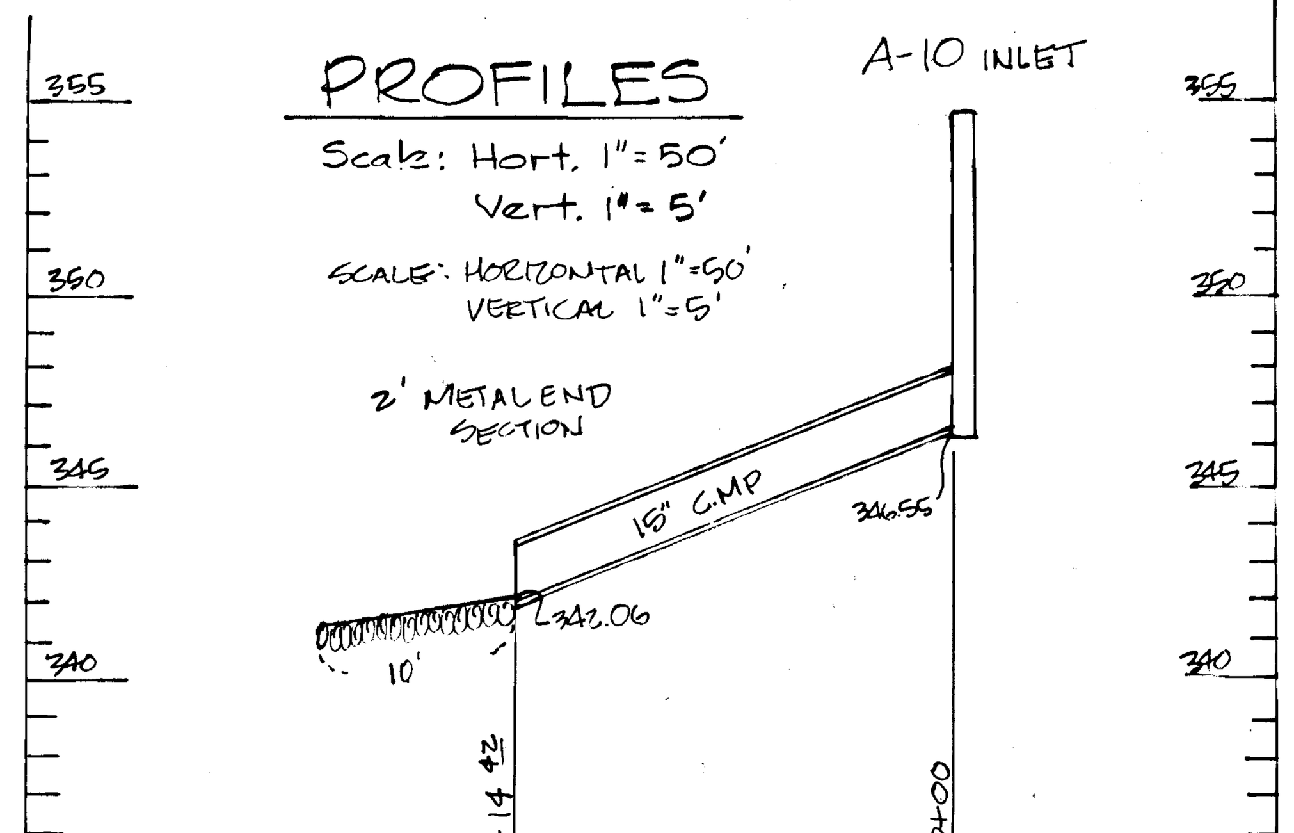
DETAIL STRUCTURES S-2 & S-3

Scale 1/4" = 1'-0"

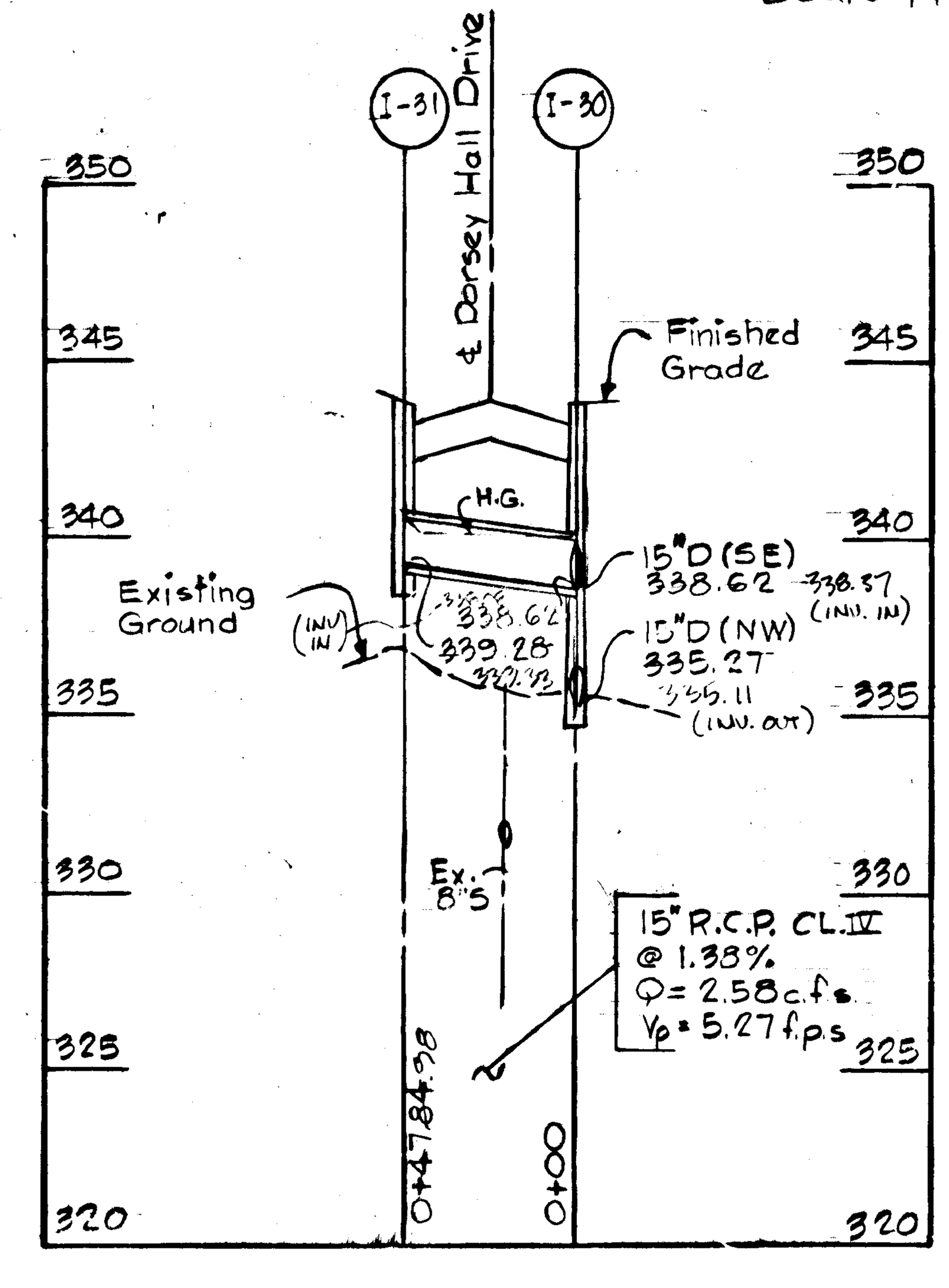
ROAD AS BUILT

G. SCOTT SHANABERGER, PROFESSIONAL L.S. #10849

SHANABERGER & LANE, 8726 TOWN & COUNTRY BLVD., SUITE 104, ELLICOTT CITY, MARYLAND 21043



Note: Type of bedding used for storm drain pipes shall be class "C" shaped subgrade. If rock is encountered the trench invert should be overexcavated 6 inches and the overexcavation of 6 inches refilled with granular material.



REV. DATE	REV. NO.	REVISION DESCRIPTION
12/2/87	2	As Per SCS Comments
10/13/87	1	As Per Planning, D.P.W. & SCS Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER: THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA: SECTION 2 AREA 5 PARCELS N AND O

PROJECT TITLE: STORM DRAIN PROFILES AND DETAILS

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218

KENNETH A. McCORD REGISTERED ENGINEER NO. 1974

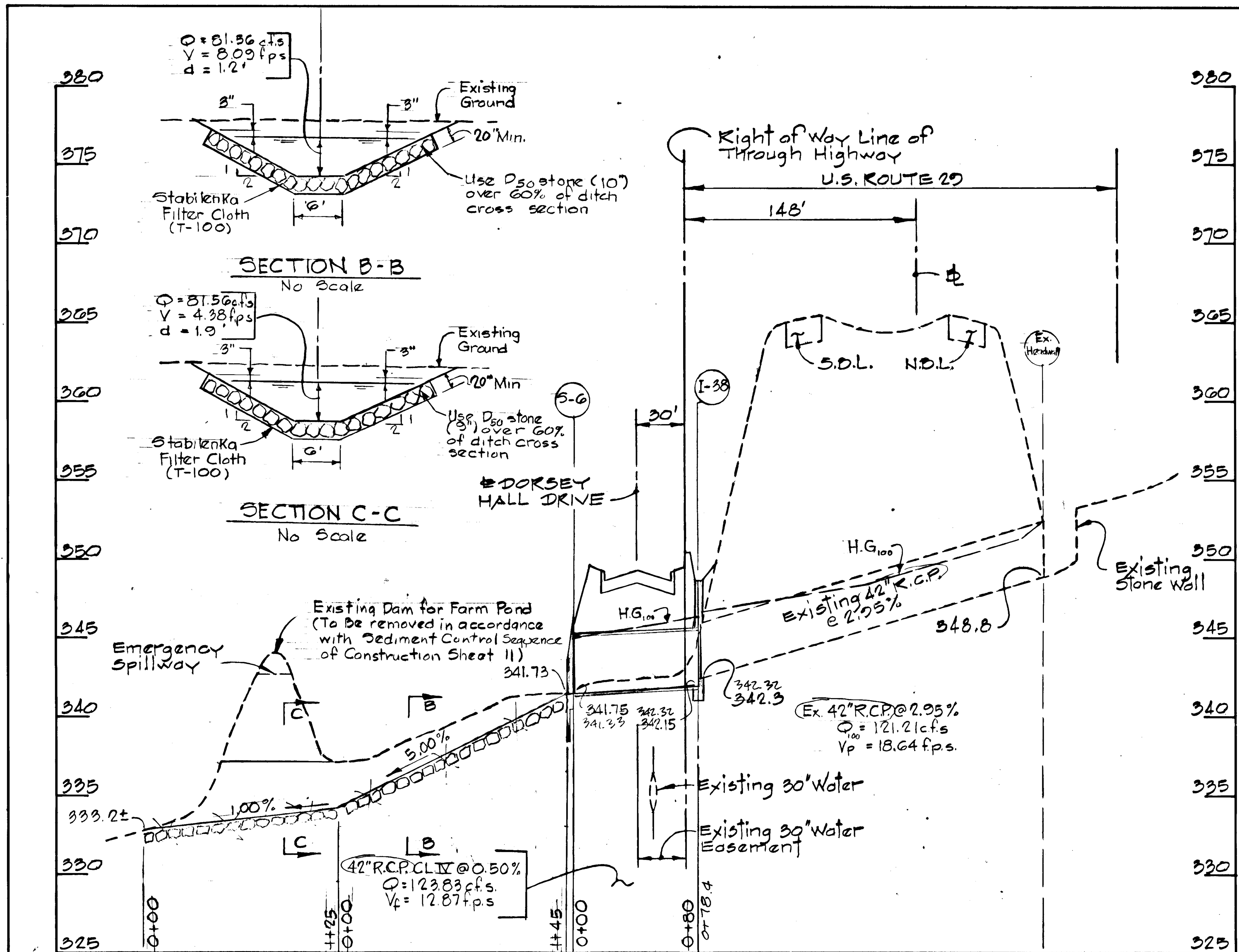
F-88-37 8/4/87 SHEET 7 OF 11

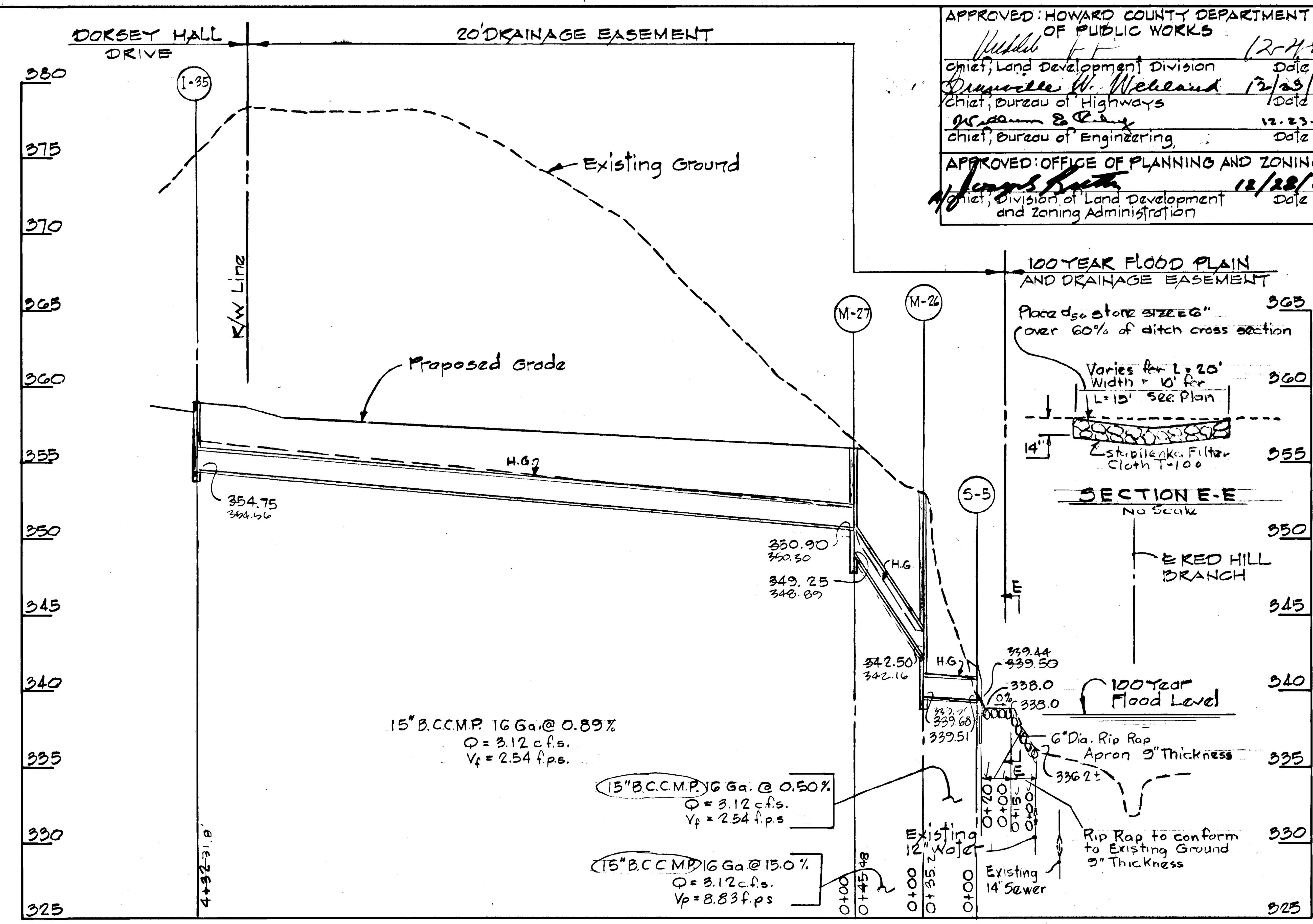
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Signature	Date
Chief, Land Development Division	12-4-87
Chief, Bureau of Highways	12/23/87
Chief, Bureau of Engineering	12-23-87

APPROVED: OFFICE OF PLANNING AND ZONING

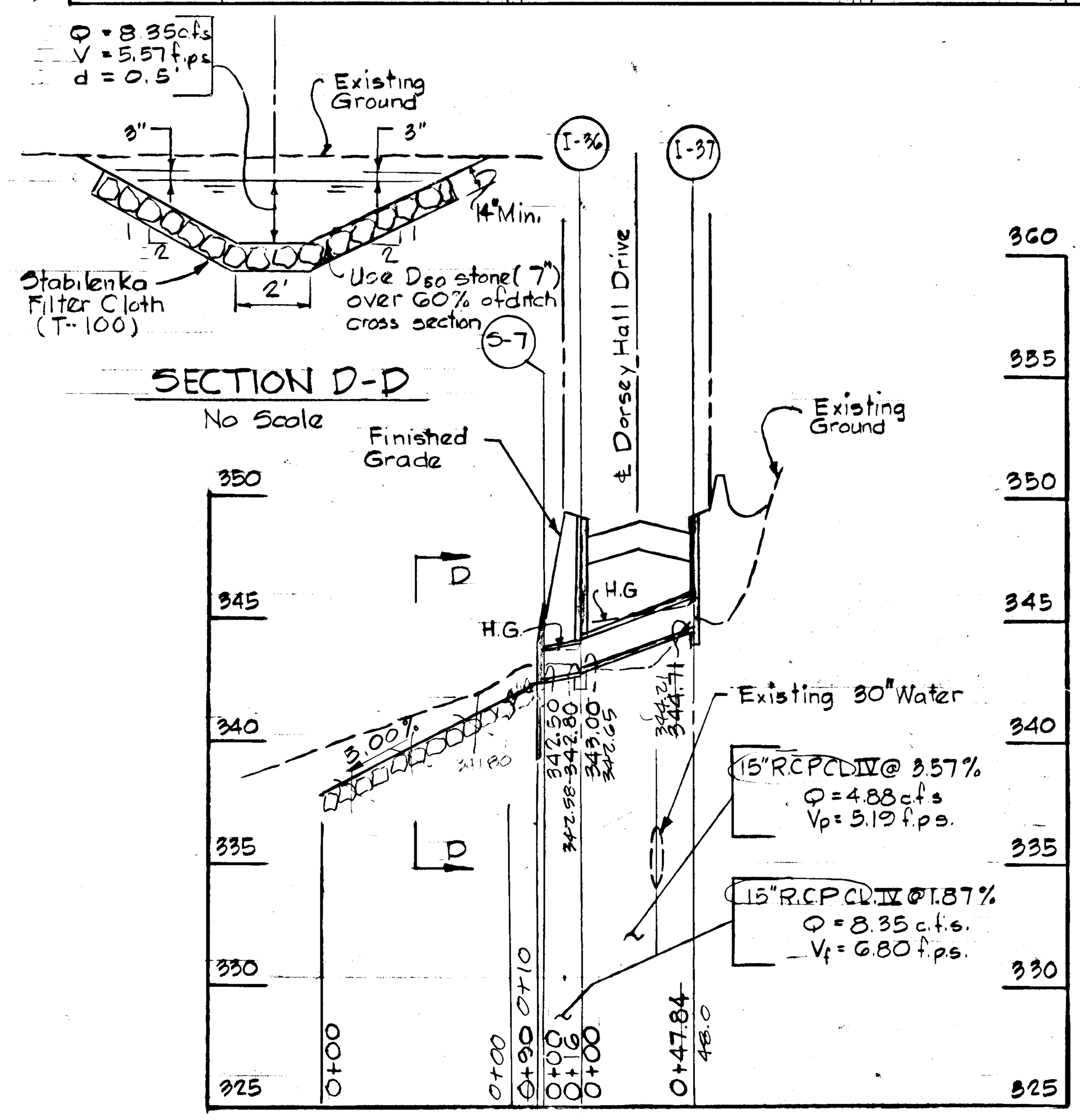
Signature	Date
Chief, Division of Land Development and Zoning Administration	12/28/87

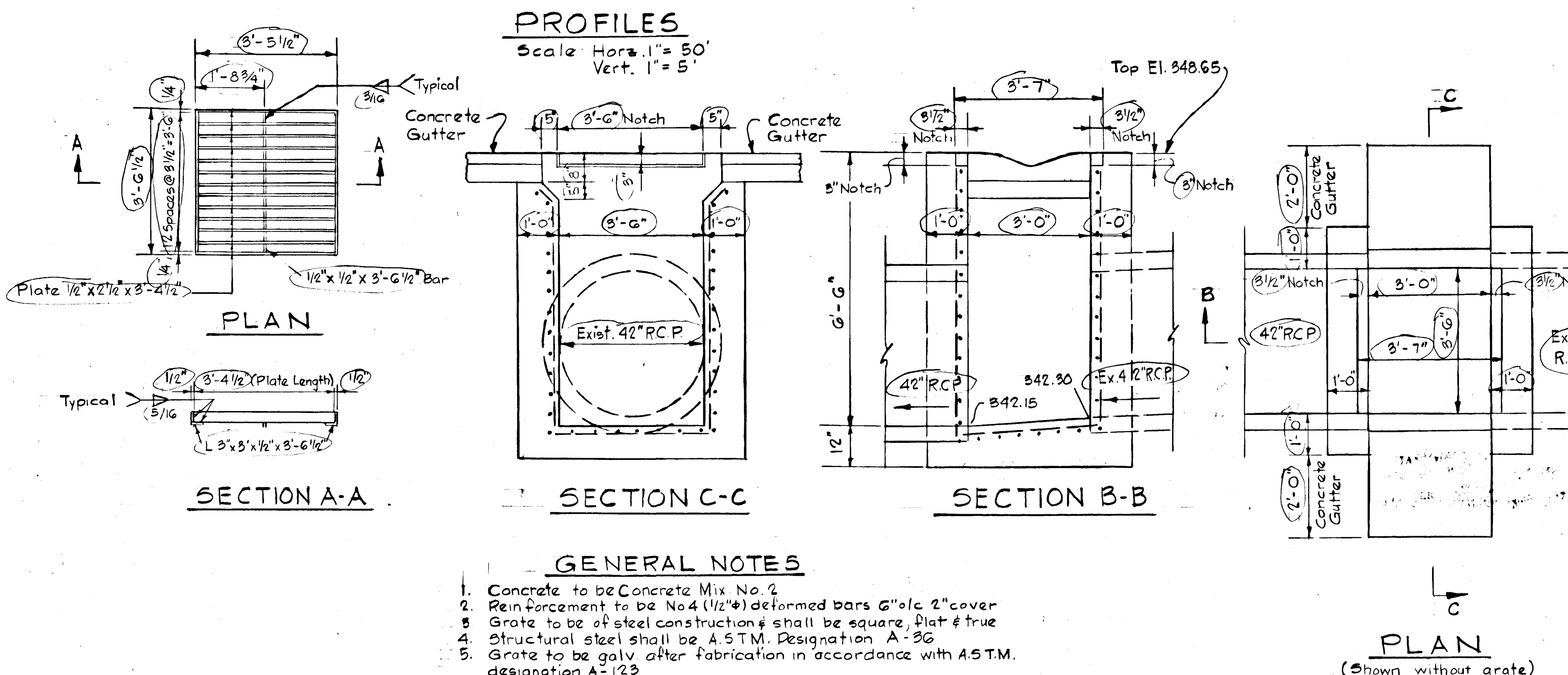




PROFILES

Scale Hor. 1" = 50'
Vert. 1" = 5'





GENERAL NOTES

1. Concrete to be Concrete Mix No. 2
2. Reinforcement to be No 4 (1/2"Φ) deformed bars 6" o/c 2" cover
3. Grate to be of steel construction & shall be square, flat & true
4. Structural steel shall be A.S.T.M. Designation A-36
5. Grate to be galv. after fabrication in accordance with A.S.T.M. designation A-123
6. See latest S.H.A. specifications.

DETAIL INLET I-38

MODIFIED S.H.A. STANDARD TYPE "K"

Scale 1/2" = 1'-0"

Note: Type of bedding used for storm drain pipes shall be class "C" shaped subgrade. If rock is encountered the trench invert should be overexcavated 6 inches and the overexcavation of 6 inches refilled with granular material.

STATE OF MARYLAND — REGISTERED PROFESSIONAL LAND SURVEYOR

ROAD AS-BUILT

G. Scott Shanaberger, Professional L.S. #10843 — 2/2/93

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

REV. DATE	REV. NO.	REVISION DESCRIPTION
12/2/87	2	As Per SCS Comments
10/19/87	1	As Per Planning, DPW & SCS Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
SECTION 2 AREA 5
PARCELS N AND O

PROJECT TITLE
STORM DRAIN PROFILES AND DETAILS

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

KENNETH A. McCORD
REGISTERED ENGINEER
NO. 10974

F-88-37 8/4/87 SHEET 8 OF 11

771

DESIGN DATA FOR SEDIMENT TRAP NO.1

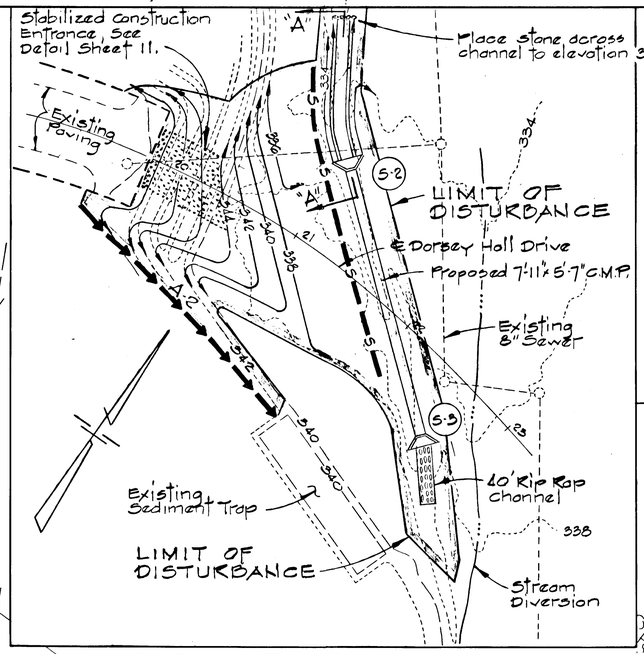
DRAINAGE AREA = 2.8 ACRES
DISTURBED AREA = 2.8 ACRES
VOLUME REQUIRED = 2.8 * 67 = 187.6 CY.
VOLUME AVAILABLE = 204 CY.
TOP DERM ELEVATION = 335.5
WEIR CREST ELEVATION = 334.2
LENGTH OF WEIR = 12'
STORAGE ELEVATION = 333.0
BOTTOM ELEVATION = 330.0

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 12-24-87
Chief, Bureau of Highways — Date 12/23/87
Chief, Bureau of Engineering — Date 12.23.87

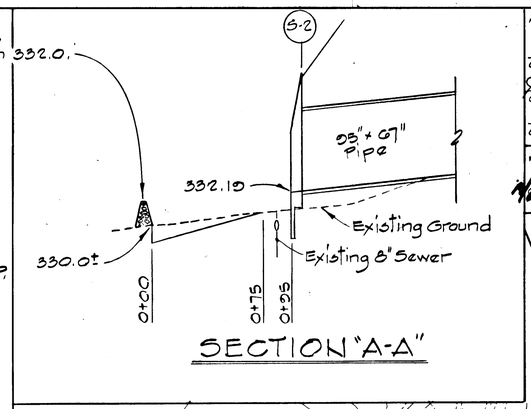
APPROVED: OFFICE OF PLANNING AND ZONING

Chief, Division of Land Development and Zoning Administration — Date 12/28/87

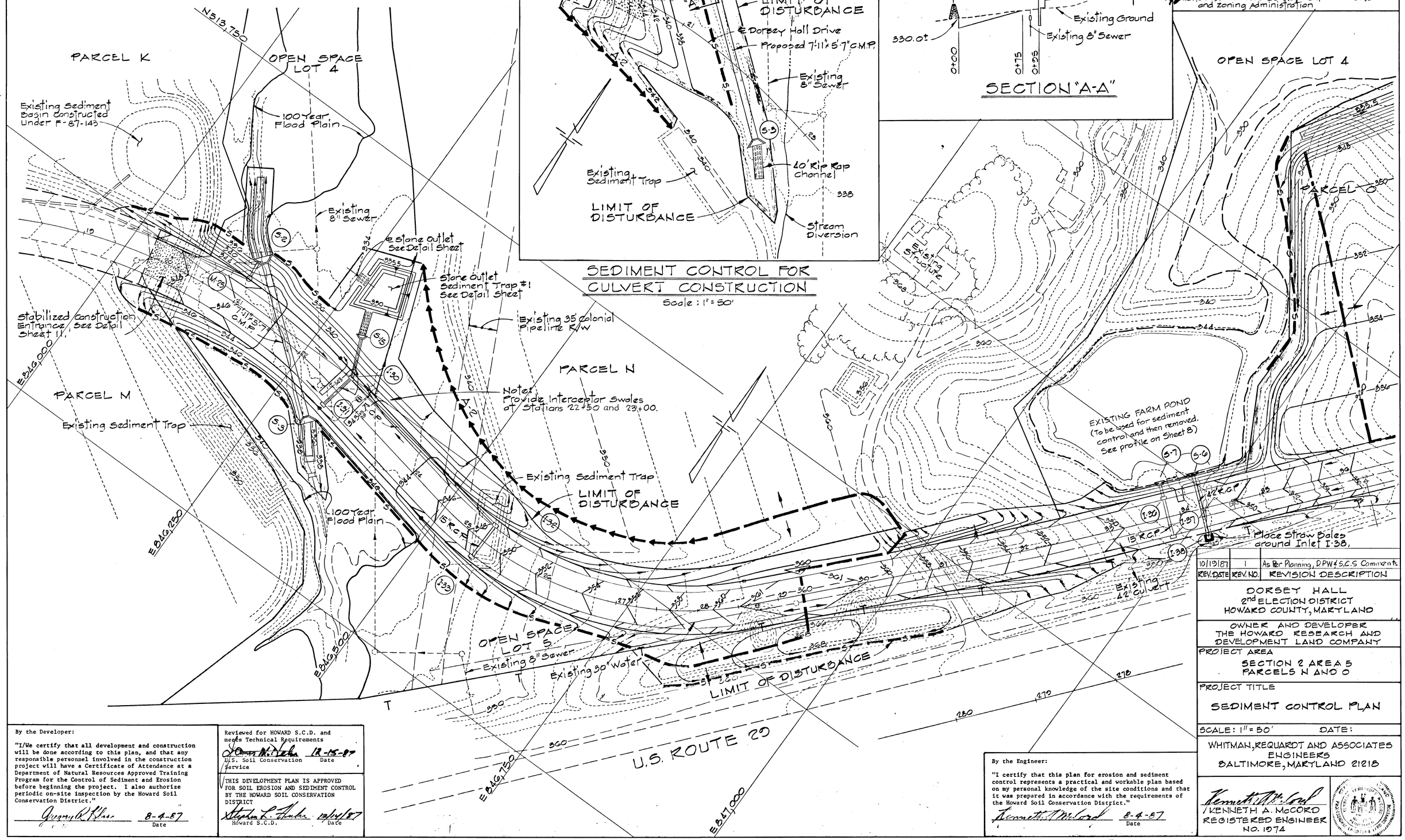


SEDIMENT CONTROL FOR CULVERT CONSTRUCTION

Scale: 1" = 50'



SECTION "A-A"



REV. DATE	REV. NO.	REVISION DESCRIPTION
10/13/87	1	As Per Planning, DPW & S.C.S Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
SECTION 2 AREA 5
PARCELS N AND O

PROJECT TITLE
SEDIMENT CONTROL PLAN

SCALE: 1" = 50' DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

By the Developer:

"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 beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Gregory R. Klar — 8-4-87 Date

Reviewed for HOWARD S.C.D. and meets Technical Requirements

U.S. Soil Conservation Service — 12-15-87 Date

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

Howard S.C.D. — 12/14/87 Date

By the Engineer:

"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."

Kenneth A. McCord — 8-4-87 Date

Kenneth A. McCord
/ KENNETH A. McCORD
REGISTERED ENGINEER
NO. 10714

771

F-88-37 8/4/87 SHEET 9 OF 11

DESIGN DATA FOR SEDIMENT TRAP #2

DRAINAGE AREA = 12.3 ACRES
DISTURBED AREA = 12.3 ACRES
VOLUME REQUIRED = 12.3 × 67 = 824.1 C.Y.
VOLUME AVAILABLE = 845 C.Y.
TOP BERM ELEVATION = 335.5
WEIR CREST ELEVATION = 331.5
LENGTH OF WEIR = 14'
STORAGE ELEVATION = 330.5
BOTTOM ELEVATION = 326.0

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 12/9/87

Chief, Bureau of Highways — Date 12/23/87

Chief, Bureau of Engineering — Date 12.23.87

APPROVED: OFFICE OF PLANNING AND ZONING

Chief, Division of Land Development and Zoning Administration — Date 12/28/87

RED HILL BRANCH

Ex. 14" S

N 515,250

E 847,500

LIMIT OF DISTURBANCE

8' Rip Rap Outlet, See Detail Sheet 11.

N 514,750

LIMIT OF DISTURBANCE

100 Year Flood Plain

P.S.D.-18 Pipe Slope Drain See Standard Detail Sh't 11

Rip-Rap Outlet Sediment Trap #2, See Detail Sheet 11

PARCEL O

100 Year Flood Plain

Ex. 12" W.

Ex. 14" S

RED HILL BRANCH

E 848,000

EXISTING FARM POND (To be used for sediment control and then removed. See profile on Sheet 8)

LIMIT OF DISTURBANCE

Provide Inlet protection at I-35 See Detail on Sheet 11. 15" CCMP

LIMIT OF DISTURBANCE

S-7 S-6 S-5 M-20 M-21 I-35 I-36 I-37 I-38

42" RCP

15" RCP

Existing 30 Water See Enlarged Plan on Sheet 5 for grading around Inlet #38.

Ex. 42" RCP Drain

LIMIT OF DISTURBANCE

SOUTH BOUND LANE

U.S. ROUTE 29

E 847,750

NOTE:
PROVIDE INLET PROTECTION AT INLETS 35, 36 AND 37. PLACE STRAW BALES AROUND INLET 38.

By the Engineer:

"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."

Kenneth A. McCord — 8-4-87 Date

Reviewed for HOWARD S.C.D. and meets Technical Requirements

U.S. Soil Conservation Service — 12-15-87 Date

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

Howard S.C.D. — 12-14-87 Date

By the Developer:

"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 beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Gregory A. Klar — 8-4-87 Date

REV. DATE	REV. NO	REVISION DESCRIPTION
12/2/87	2	As Per SCS Comments
10/7/87	1	As Per Planning, DPW & SCS Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
SECTION 2 AREA 5
PARCELS N AND O

PROJECT TITLE
SEDIMENT CONTROL PLAN

SCALE: 1" = 50' DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

Kenneth A. McCord
KENNETH A. McCORD
Registered Engineer
No 19774

F-88-37 8/4/87 SHEET 10 OF 11

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) and (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	17.4	Acres
Area Disturbed	17.4	Acres
Area to be roofed or pa ed	2.2	Acres
Area to be vegetatively stabilized	15.2	Acres
Total Cut	35,000	Cu. yds
Total Fill	35,000	Cu. yds
Offsite waste/borrow area location		

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.
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.

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.

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 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.

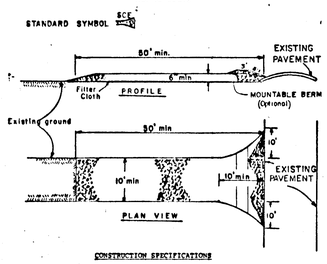
Mulching: Apply 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348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

STABILIZED CONSTRUCTION ENTRANCE

not to scale

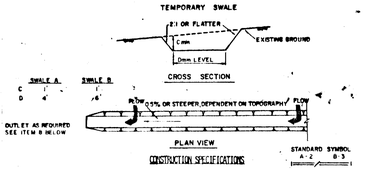
STANDARD SYMBOL SCE



CONSTRUCTION SPECIFICATIONS

1. Stone Size – Use 2" stone, or reclained 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 occure.
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.

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-erosive 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 bank 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:

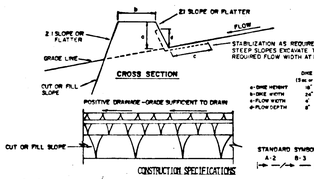
FLOW CHANNEL STABILIZATION

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 4-8"
4	8.1-20%	Lined 4-8" Rip-Rap	Engineered Design

9. Periodic inspection and required maintenance must be provided after each rain event.

EARTH DIKE

not to scale



CONSTRUCTION SPECIFICATIONS

1. All dikes shall be compacted by earth-moving equipment.
2. All dikes shall have positive drainage to an outlet.
3. Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction traffic.
4. Field location should be adjusted as needed to utilize a stabilized safe outlet.
5. Earth dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
6. Stabilization shall be: (A) in accordance with standard specifications for seed and straw mulch or other irregularities which will impede normal flow. required to meet the criteria specified herein and be free of bank projections (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%	Sod 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.

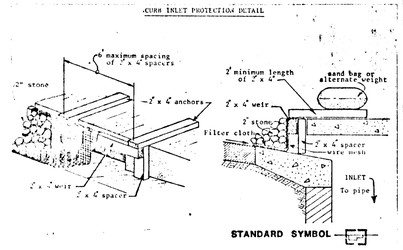
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 12/7/87
Chief, Bureau of Highways — Date 12/23/87
Chief, Bureau of Engineering — Date 12/23/87

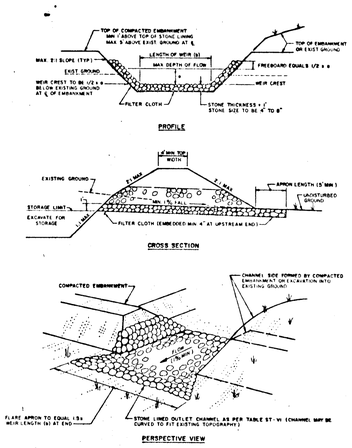
APPROVED: OFFICE OF PLANNING AND ZONING

Chief, Division of Land Development and Zoning Administration — Date 12/28/87

CURB INLET PROTECTION DETAIL



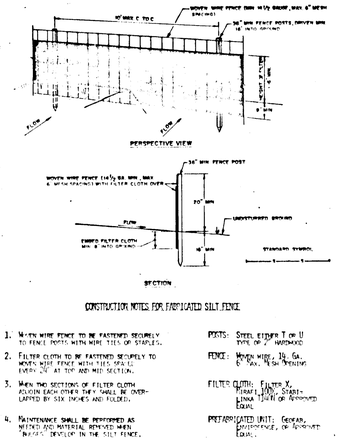
RIPRAP OUTLET SEDIMENT TRAP ST-VI



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.

SILT FENCE

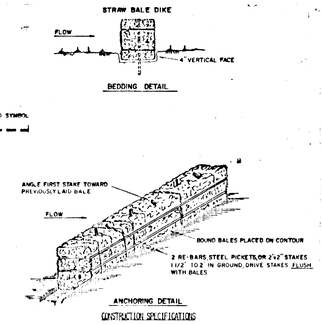


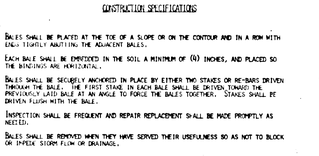
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

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 MATERIAL REMOVED WHEN DEPOSITS DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14½ GA. MIN. 36" HIGH
FILTER CLOTH: FILTER X, TYPAR, OR APPROVED EQUAL
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

STRAW BALE DIKE

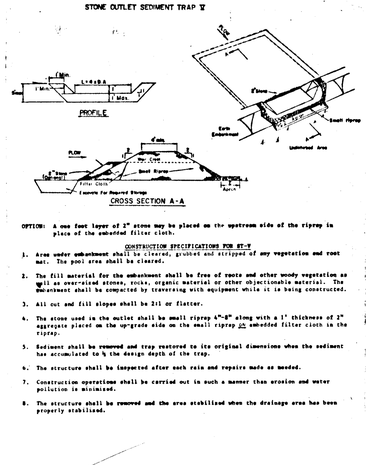




CONSTRUCTION SPECIFICATIONS

1. Bales shall be placed at the toe of a slope or on the contour and in 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.

STONE OUTLET SEDIMENT TRAP 'S'



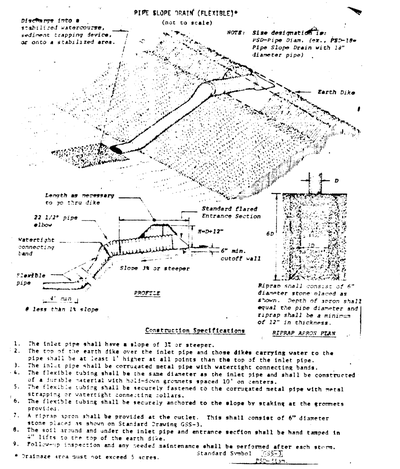
OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

CONSTRUCTION SPECIFICATIONS FOR ST-S

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

PIPE SLOPE DRAIN (FLEXIBLE)*

(not to scale)



Construction Specifications

1. The inlet pipe shall have a slope of 3% or steeper.
2. The top of the earth dike over the inlet pipe and chose dikes carrying water to the pipe shall be at least 1' higher at all points than the top of the inlet pipe.
3. The inlet pipe shall be corrugated metal pipe with watertight connecting bands.
4. The flexible tubing shall be the same diameter as the inlet pipe and shall be constructed of a durable material with hold-down grommets spaced 10' on centers.
5. The flexible tubing shall be securely fastened to the corrugated metal pipe with metal strapping or watertight connecting collars.
6. The flexible tubing shall be securely anchored to the slope by staking at the grommets provided.
7. A riprap apron shall be provided at the outlet. This shall consist of 6" diameter stone placed as shown on Standard Drawing (SS-1).
8. The soil around and under the inlet pipe and entrance section shall be hand tamped to 24" inches above the top of the earth dike.
9. Follow-up inspection and any needed maintenance shall be performed after each storm.

* Drainage area shall not exceed 5 acres.

Standard Symbol PSD-12w

** POND REMOVAL (See Sheet 5 for plan and details)

1. Remove water from existing pond by pumping. It is estimated that the pond can be drained in approximately 24 hours using a 4-inch or 6-inch pump, (400 gpm rating).
2. Construct temporary stone embankment and weir 200 feet downstream of the earth dam embankment.
3. Excavate earth dam embankment to elev. 337.0
4. Construct temporary one foot deep ditch to outfalls S-6 and S-7. Allow several days for pond bottom to dry.
5. Construct rip rap channel to outfalls S-6 and S-7.
6. Stabilize all graded surfaces with permanent seeding.
7. After the area is stabilized, remove temporary stone embankment and weir.

SEQUENCE OF CONSTRUCTION

CULVERT CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. CLEAR AND GRUB AREAS FOR SEDIMENT CONTROL FACILITIES FOR CULVERT CONSTRUCTION ONLY.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
4. DIVERT EXISTING STREAM AND INSTALL SILT FENCE AND EARTH DIKE.
5. CONSTRUCT CULVERT, STRUCTURES S-2 AND S-3 AND RIP RAP CHANNELS.
6. REMOVE EARTH DIKE AND SILT FENCE.

ROADWAY CONSTRUCTION AND PARCEL O ROUGH GRADING

1. CLEAR AND GRUB AREAS FOR SEDIMENT CONTROL FACILITIES,
2. MODIFY STABILIZED CONSTRUCTION ENTRANCE AS REQUIRED.
* 3. CONSTRUCT SEDIMENT TRAPS 1 AND 2, EARTH DIKES, SILT FENCE AND SWALES TO TRAP NO.2.
4. STABILIZE EARTH DIKES WITH TEMPORARY SEEDING, SEE SPECIFICATIONS ON SHEET 11.
5. STRIP AND ROUGH GRADE LIMITS OF CONSTRUCTION AND PROVIDE INTERCEPTOR SWALE AT STATIONS 23+00 AND 34+06,
6. ROUGH GRADE PARCEL O AND STABILIZE WITH TEMPORARY SEEDING (SPECS ON SH'T. 11) CONSTRUCT DIVERSION DIKES TO TRAP 4 AND CONSTRUCT PIPE SLOPE DRAINS
7. CONSTRUCT ALL UTILITIES,
8. PROVIDE INLET PROTECTION AT INLETS 55, 36 AND 37. PLACE STRAW BALES AROUND INLET 38.
9. PAVE ROAD,
** 10. WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROL FACILITIES AFTER GRASS IS ESTABLISHED IN THE CONTRIBUTING DRAINAGE AREAS,

* Existing farm pond to also be used for sediment control.

Reviewed for HOWARD S.C.D. and meets Technical Requirements
U.S. Soil Conservation Service — Date 12-15-87

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
Howard S.C.D. — Date 12-14-87

By the Developer:

"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 beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Gregory R. Ware — Date 8-4-87

By the Engineer:

"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."

Kenneth A. McCord — Date 8-4-87

REV. DATE	REV. NO.	REVISION DESCRIPTION
12/2/87	2	As Per SCS Comments
10/15/87	1	As Per Planning, DPW & SCS Comments

DORSET HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
SECTION 2 AREA 5
PARCELS N AND O

PROJECT TITLE
SEDIMENT CONTROL DETAILS

SCALE: — DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

Kenneth A. McCord
KENNETH A. McCORD
REGISTERED ENGINEER
NO. 10774

F-88-37 8/4/87 SHEET 11 OF 11