SHEET INDEX

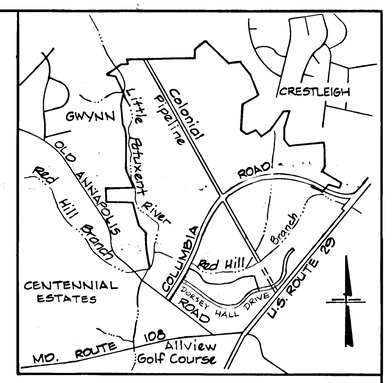
✿ Street Trees:
The location, type and number of trees shown on this plan are tentative and are used for bond purposes only. The final location and variety of trees may vary to accomodate field conditions and builders landscape program. Bond release is contingent upon Section 16.131 of the Howard County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

LOCATION MAP
SCALE: 1" = 400'

BENCH MARKS

W.R.&A. BM. KWG - Iron Pipe 150'± left of ℄ Sta. 23+00 Dorsey Hall Drive
Elev. 398.38

W.R.&A. BM. KWO - Iron Pipe 165'± right of ℄ Sta. 10+30 Dorsey Hall Drive
Elev. 401.97



VICINITY MAP
Scale: 1" = 2,000'

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 Road Code.
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 repaired immediately at the Contractor's expense.
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 diversion 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 5 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. Street Lights - 250 watt mercury vapor lamp pendant mounted fixtures on a 30 foot, bronze aluminum pole located no less than 6' from the edge of pavement at the following locations: south corner of Columbia Road and Dorsey Hall Drive, Stations 5+00 Rt, 9+50 Rt, 14+00 Rt and 18+50 Rt.

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

REV. DATE	REV. NO.	REVISION DESCRIPTION
11/4/86	2	As Per Planning, DPW & S.C.S. Comments
6/20/86	1	As Per Planning & Zoning, DPW, & S.C.S. Comments

DORSEY HALL
SECTION 2 AREA 3
ROAD CONSTRUCTION PLANS
2ND ELECTION DISTRICT
HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER
COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION
COLUMBIA, MARYLAND

DATE: SCALE: AS SHOWN

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218
Kenneth A. McCord
KENNETH A. McCORD
REGISTERED ENGINEER
NO. 1974

DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING — DATE 7-28-86
OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 7-24-86

F-86-192 5/8/86 SHEET 1 OF 11

STORM DRAIN STRUCTURE SCHEDULE

NO	TYPE	TOP EL	INV. IN	INV. OUT	LOCATION
* I-1	A-5 Inlet (Width 2.5') S.D. 4.01	371.51	357.41	352.87	℄ Inlet 33.92' Left ℄ Sta. 4+30
* I-2	A-5 Inlet (Width 2.5') S.D. 4.01	371.51	360.75	359.75	℄ Inlet 33.92' Right ℄ Sta. 4+30
* I-3	A-5 Inlet (Width 2.5') S.D. 4.01	377.48	370.91	370.16	℄ Inlet 33.92' Right ℄ Sta. 6+70
* I-4	A-5 Inlet (Width 2.5') S.D. 4.01	377.48	—	373.04	℄ Inlet 33.92' Left ℄ Sta. 6+70
S-1	Type "A" Headwall S.D. 5.11	357.00	352.50	352.48	See Plan & Profile

* Inlets with deflectors

℄ CURVE DATA

P.C. 0+00 TO P.T. 3+41.86
Δ = 30° 36' 17" Tan = 175.11'
R = 640.00' Chd = 337.81'
Arc = 341.86' Chd. Brg. = S 67° 46' 05" E

P.C. 9+82.24 to P.T. 17+21.39
Δ = 66° 10' 21" Tan = 416.99'
R = 640.00' Chd. = 698.75'
Arc = 739.15' Chd. Brg. = S 85° 33' 05" E

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — DATE 7-28-86

OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 7-24-86

NOTE:
FOR EXISTING COLUMBIA ROAD, SEE ROAD CONSTRUCTION DRAWINGS F 85-16.

NO.	DATE	REVISION DESCRIPTION
2	11/4/86	As Per Planning, D.P.W. & S.C.S. Comments
1	9/23/86	As Per Planning, D.P.W. & S.C.S. Comments

DORSEY HALL
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION

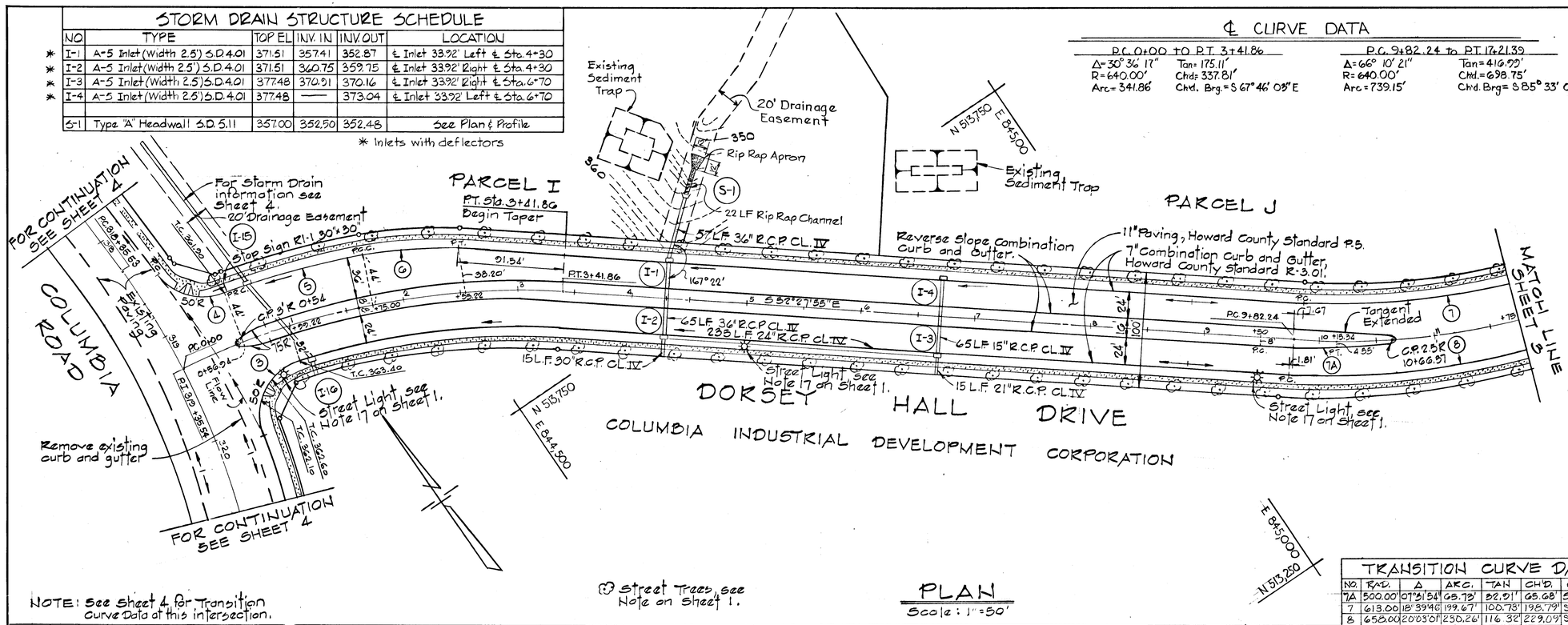
PROJECT AREA
SECTION 2 AREA 3

PROJECT TITLE
PLAN AND PROFILE
DORSEY HALL DRIVE
STA. 0+00 TO STA. 11+75

SCALE: AS SHOWN

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

KENNETH A. McCORD
Registered Engineer
NO. 1974

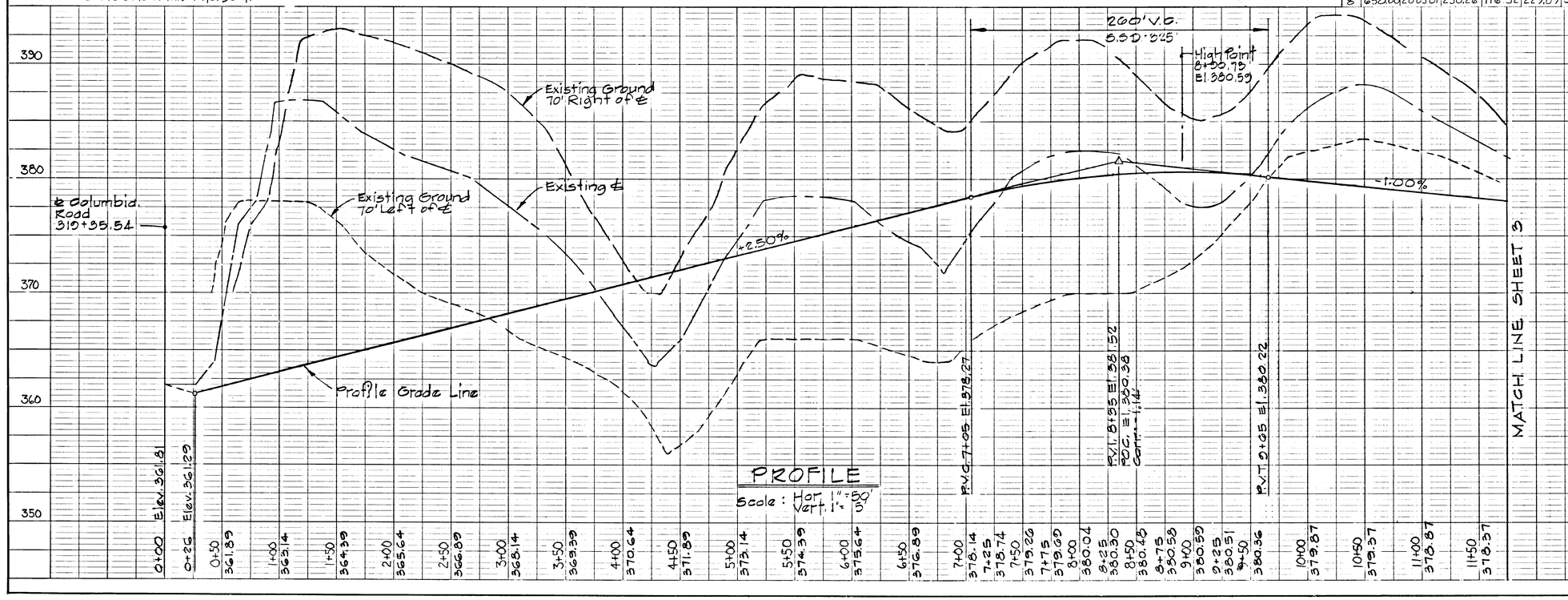


NOTE: See Sheet 4 for Transition Curve Data at this intersection.

PLAN
Scale: 1" = 50'

TRANSITION CURVE DATA

NO.	RAD.	Δ	ARC.	TAN	CH'D.	CH'D. BRG.
7A	500.00'	07°41'54"	65.78'	32.91'	65.68'	S56°13'52"E
7	613.00'	18°39'46"	199.67'	100.78'	198.79'	S61°47'48"E
8	658.00'	20°03'01"	230.26'	116.32'	229.09'	S62°29'26"E



0+00	0+25	0+50	1+00	1+50	2+00	2+50	3+00	3+50	4+00	4+50	5+00	5+50	6+00	6+50	7+00	7+25	7+50	7+75	8+00	8+25	8+50	8+75	9+00	9+25	9+50	10+00	10+50	11+00	11+50
Elev. 361.81	Elev. 361.29	361.89	362.14	362.39	365.64	366.89	368.14	369.39	370.64	371.89	373.14	374.39	375.64	376.89	378.14	378.74	379.26	379.60	380.04	380.30	380.45	380.58	380.59	380.51	380.36	379.87	379.37	378.87	378.37

PLAN: SURVEYED ___ PLOTTED ___ DESIGN CHECKED ___ R/W & PROP. CHECKED ___ NOTE BOOK ___ No. ___ BY ___ DATE ___

PROFILE: SURVEYED ___ PLOTTED ___ DESIGN CHECKED ___ R/W & PROP. CHECKED ___ NOTE BOOK ___ No. ___ STRUCTURE NOTATIONS CHECKED ___ BY ___ DATE ___

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APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — DATE 7-28-86

OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 7-24-86

NO.	DATE	REVISION DESCRIPTION
2	11/4/86	As Per Planning, DPW & SCS Comments
1	6/23/86	As Per Planning, DPW & SCS Comments

DORSEY HALL
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
COLUMBIA INDUSTRIAL
DEVELOPMENT CORPORATION

PROJECT AREA
SECTION 2 AREA 3

PROJECT TITLE
PLAN AND PROFILE
DORSEY HALL DRIVE
STA. 11+75 TO STA. 19+85

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

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

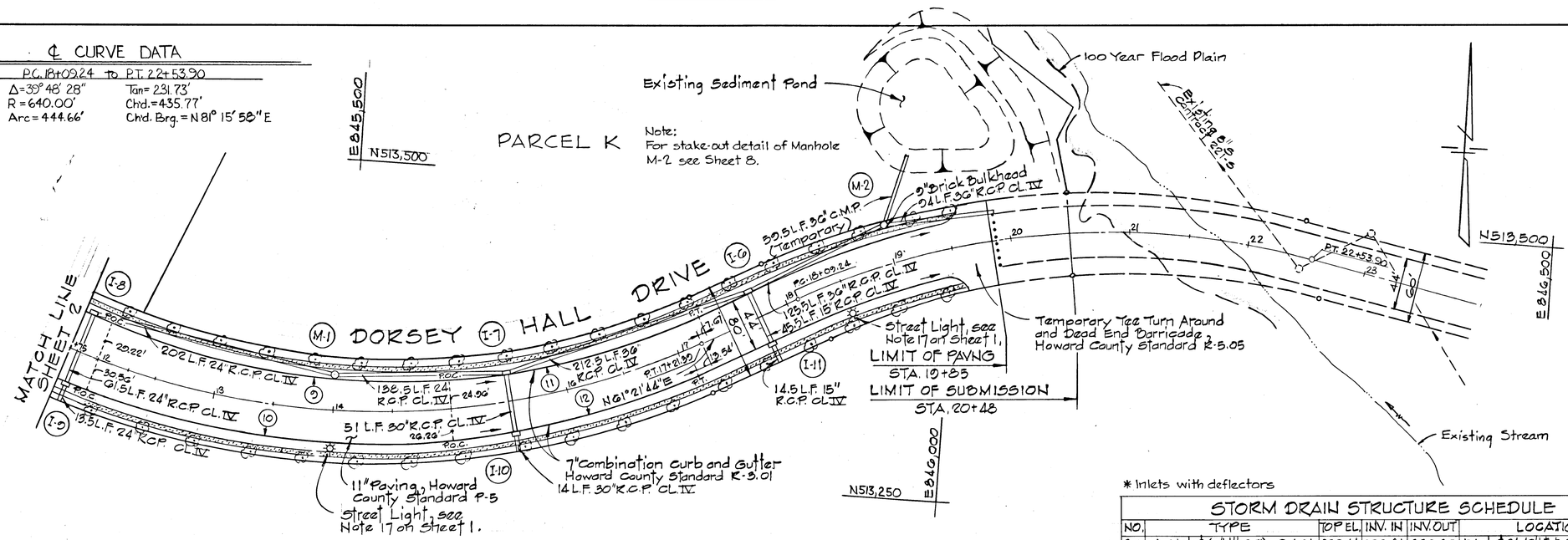
PLAN
SURVEYED
PLOTTED
FIELD CHECKED
OFFICE CHECKED
R/W'S NOTED
STRUCTURE NOTATIONS CHECKED
NOTE BOOK
No.
BY
DATE

PROFILE
SURVEYED
PLOTTED
FIELD CHECKED
OFFICE CHECKED
R/W'S NOTED
STRUCTURE NOTATIONS CHECKED
NOTE BOOK
No.
BY
DATE

℄ CURVE DATA

P.C. 18+09.24 to P.T. 22+53.90

Δ = 39° 48' 28" — Tan = 231.73'
R = 640.00' — Chd. = 435.77'
Arc = 444.66' — Chd. Brg. = N 81° 15' 58" E



COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION

TRANSITION CURVE DATA

NO	RAD.	Δ	ARC	TAN.	CH'D	CH'D BRG.
9	613.00'	26°51'23"	287.53'	146.36'	284.71'	S 84°33' 22" E
10	658.00'	27°17'39"	313.44'	159.75'	310.48'	S 86°09' 43" E
11	613.00'	20°39'18"	220.97'	111.70'	219.78'	N 71° 41' 20" E
12	658.00'	18°49'45"	216.24'	109.10'	215.27'	N 70°46' 37" E

PLAN

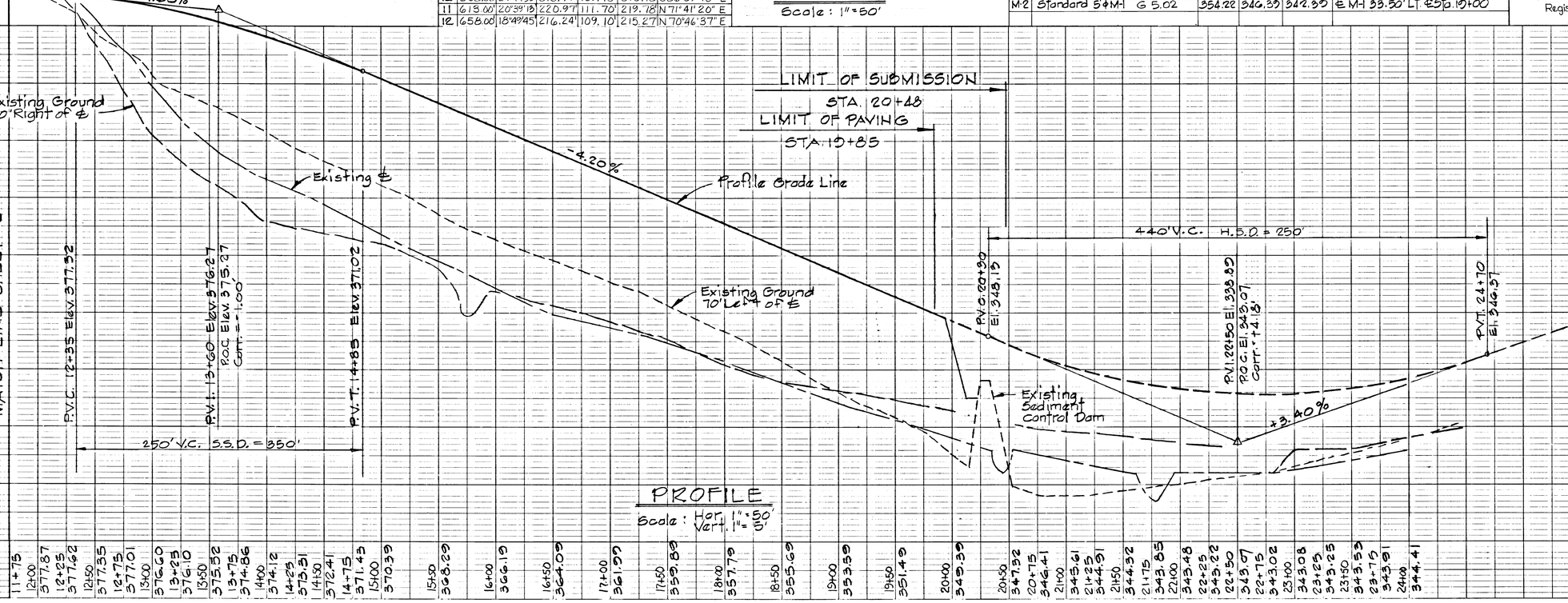
Scale: 1" = 50'

* Inlets with deflectors

STORM DRAIN STRUCTURE SCHEDULE

	NO.	TYPE	TOP EL.	INV. IN	INV. OUT	LOCATION
*	I-6	A-5 Inlet (Width 3.5) S.D. 4.01	359.44	352.81	350.80	℄ Inlet 24.42' Lt. ℄ Sta. 17+75
*	I-7	A-5 Inlet (Width 3.5) S.D. 4.01	368.30	361.93	360.93	℄ Inlet 26.44' Lt. ℄ Sta. 15+50
	I-8	A-5 Inlet (Width 2.5) S.D. 4.01	378.06	372.20	372.05	℄ Inlet 31.30' Lt. ℄ Sta. 11+82
	I-9	A-5 Inlet (Width 2.5) S.D. 4.01	378.06	372.81	372.61	℄ Inlet 32.66' Rt. ℄ Sta. 11+82
*	I-10	A-5 Inlet (Width 2.5) S.D. 4.01	368.30	362.17	361.97	℄ Inlet 27.25' Rt. ℄ Sta. 15+50
*	I-11	A-5 Inlet (Width 2.5) S.D. 4.01	359.44	355.00	354.80	℄ Inlet 28.92' Rt. ℄ Sta. 17+75
	M-1	Standard 4'ϕ M-H G 5.12	374.39	368.14	367.94	℄ M-H 31.38' Lt. ℄ Sta. 14+00
	M-2	Standard 5'ϕ M-1 G 5.02	354.22	346.39	346.39	℄ M-H 33.50' Lt. ℄ Sta. 19+00

Street Trees, see Note on Sheet 1.



PROFILE

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

K&E PLATE 1, PLAN PROFILE
KEUFFEL & ESSER CO.
46 7024 Made in U.S.A.

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F-86-192 5/8/86 SHEET 3 OF 11

TRANSITION CURVE DATA						
NO	RAD	Δ	ARC.	TAN	CH'D	CH'D BRG.
1	459.20	18°14'42"	146.23	73.74'	145.61'	S28°11'55" W
2	581.78	06°47'06"	68.90	34.49'	68.86'	N15°40'37" E
3	50.00	23°31'41"	21.62'	10.98'	21.46'	S57°02'54" W
4	50.00	75°03'11"	65.50'	38.40'	60.91'	N40°26'46" W
5	684.00	10°34'10"	126.18'	63.27'	126.00'	S72°41'16" E
6	328.01'	14°56'16"	85.75'	43.12'	85.51'	S55°53'03" E

℄ CURVE DATA

P.C. 318 + 35.53 TO P.T. 322 + 82.85

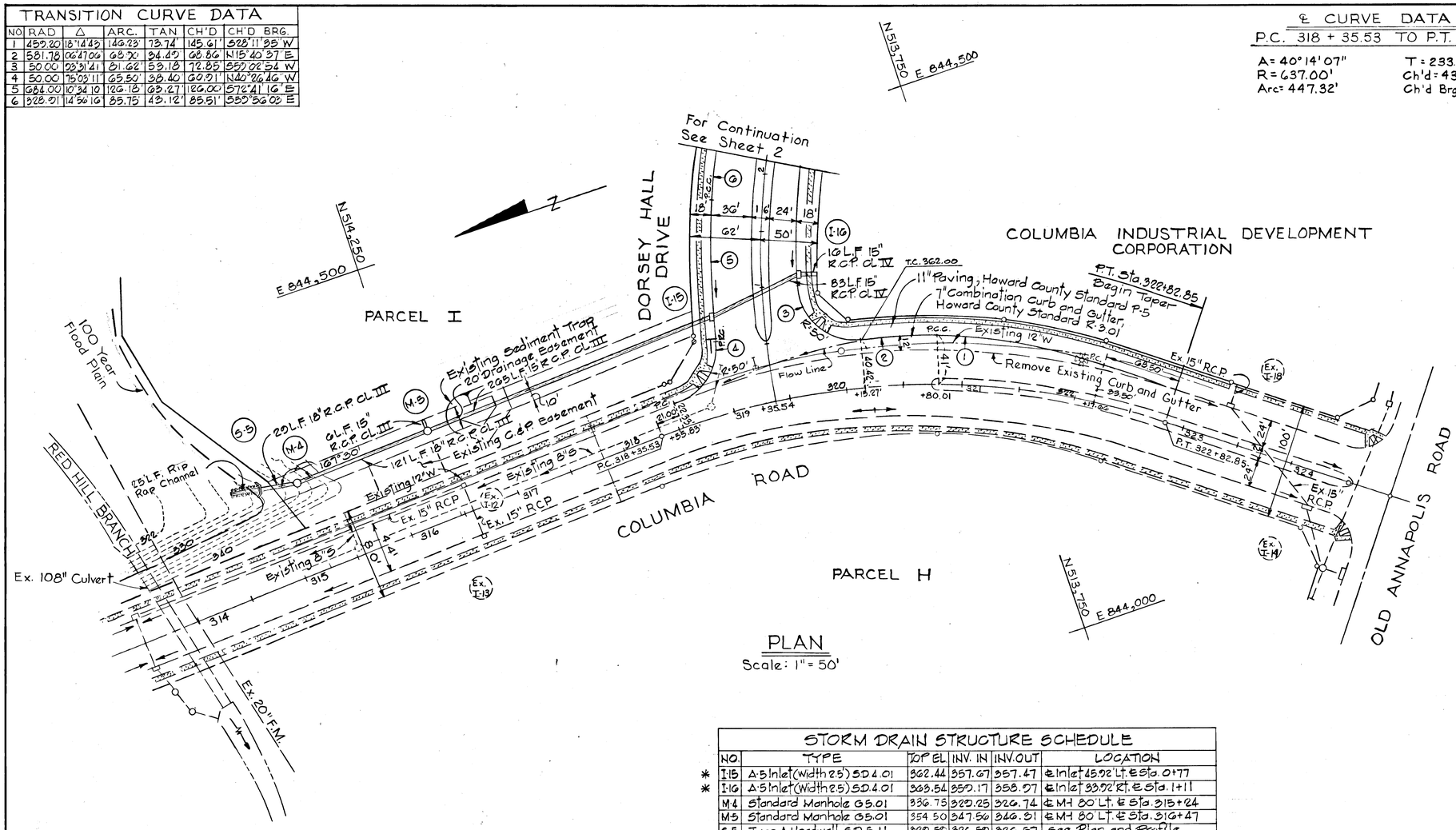
A = 40°14'07" T = 233.33'
R = 637.00' Ch'd = 438.19'
Arc = 447.32' Ch'd Brg = S 17°11'53" W

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — DATE 7-28-86

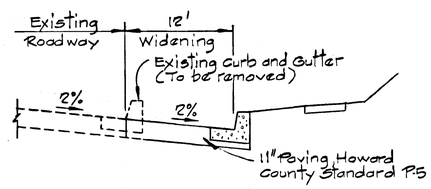
OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 7-24-86



PLAN

Scale: 1" = 50'



TYPICAL SECTION

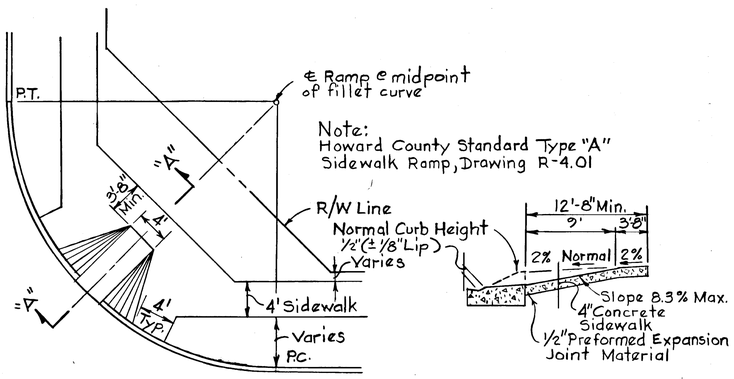
COLUMBIA ROAD RIGHT TURN LANE

STATION 320+15.27 TO STATION 320+80.01

No Scale

STORM DRAIN STRUCTURE SCHEDULE					
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	LOCATION
* I-15	A-5 Inlet (Width 2.5') S.D. 4.01	362.44	357.67	357.47	℄ Inlet 45.92' Lt. ℄ Sta. 0+77
* I-16	A-5 Inlet (Width 2.5) S.D. 4.01	363.54	359.17	358.97	℄ Inlet 33.92' Rt. ℄ Sta. 1+11
M-4	Standard Manhole G5.01	336.75	328.25	326.74	℄ MH 80' Lt. ℄ Sta. 315+24
M-5	Standard Manhole G5.01	354.50	347.56	346.31	℄ MH 80' Lt. ℄ Sta. 316+47
S-5	Type A Headwall S.D. 5.11	329.55	326.50	326.57	See Plan and Profile

* Inlets with deflectors



PLAN SECTION "A-A"

WHEEL CHAIR RAMP DETAIL

No Scale

REV. DATE	REV. NO.	REVISION DESCRIPTION
11/4/86	2	As per Planning, D.P.W. & S.C.D. Comments
6/23/86	1	As per Planning, D.P.W. & S.C.D. Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA
SECTION 2 AREA 3

PROJECT TITLE
PLAN
COLUMBIA ROAD RIGHT-TURN LANE AND STORM DRAINS

SCALE: 1" = 50' DATE:

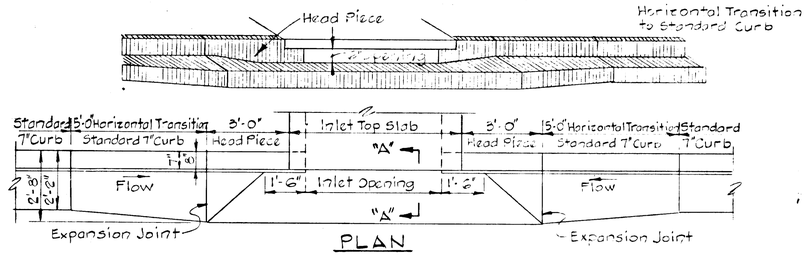
WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

Kenneth A. McCord
KENNETH A. McCORD
Registered Engineer
NO. 1974

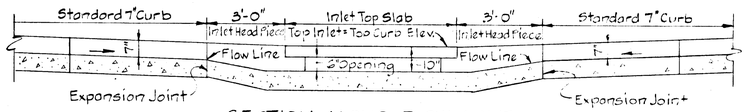
STATE OF MARYLAND — KENNETH ARMSTRONG McCORD — No. 1974 — REGISTERED ENGINEER AND LAND SURVEYOR

771

F-86-192 5/8/86 SHEET 4 OF 11

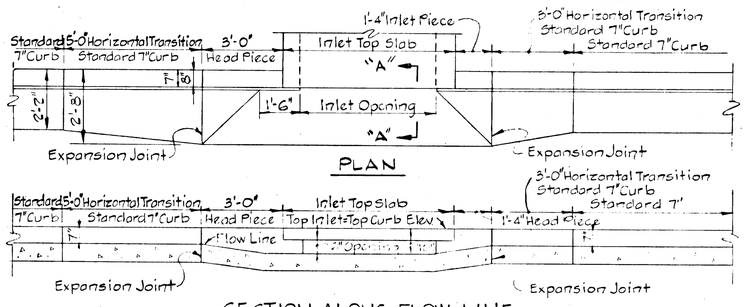


PLAN



SECTION ALONG FLOW LINE

SUMPED "A" INLETS - STANDARD CURB

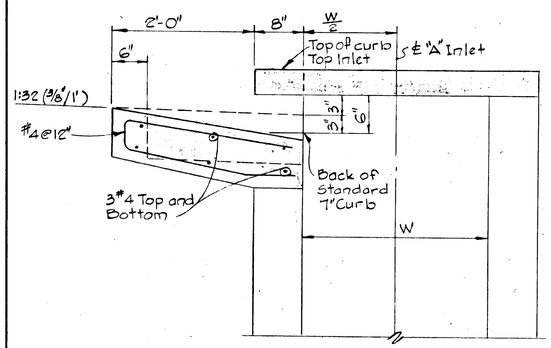


PLAN

SECTION ALONG FLOW LINE

"A" INLETS - STANDARD CURB

No Scale

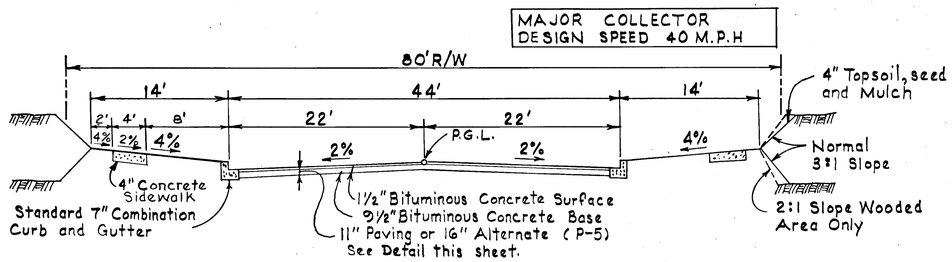


Note: For "A" Inlet dimensions and structural details see standard Howard County Standard ST. 1.01 & D4.02.

SECTION "A-A"

"A" INLET - STANDARD CURB

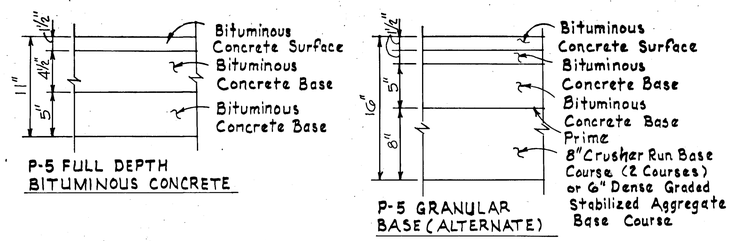
No Scale



TYPICAL SECTION - DORSEY HALL DRIVE

STATION 17+25 TO STATION 17+95

NO SCALE

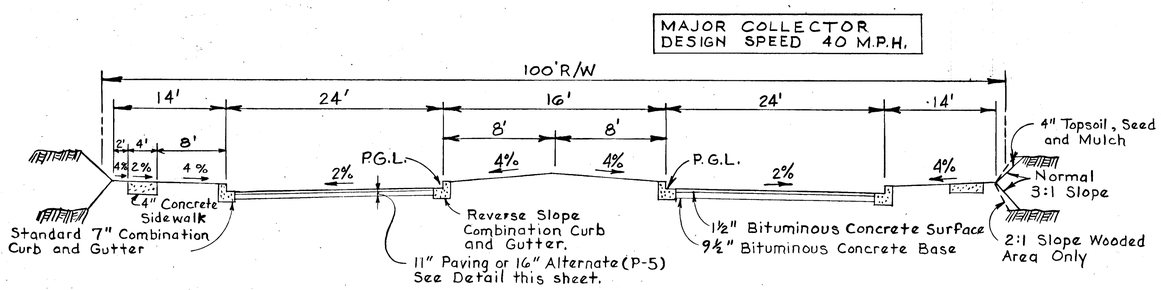


P-5 FULL DEPTH BITUMINOUS CONCRETE

P-5 GRANULAR BASE (ALTERNATE)

TYPICAL PAVING SECTIONS

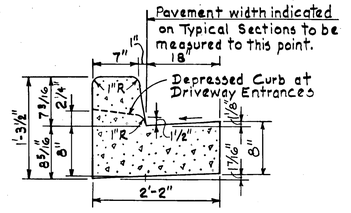
NO SCALE



TYPICAL SECTION - DORSEY HALL DRIVE

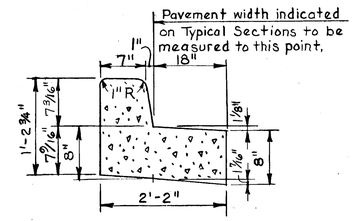
STATION 3+42 TO STATION 10+00

NO SCALE



STANDARD 7" COMBINATION CURB AND GUTTER

NO SCALE



REVERSE 7" COMBINATION CURB AND GUTTER

NO SCALE

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — DATE 2-22-86

OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — 7-24-86

Rev. Date	Rev. No.	Revision Description
11/4/86	2	As Per Planning, D.P.W. & S.C.S. Comments
9/29/86	1	As Per Planning, D.P.W. and S.C.S. Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA
SECTION 2 AREA 3

PROJECT TITLE
ROADWAY DETAILS
STORM DRAIN DETAILS

SCALE: As Shown DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
2315 ST. PAUL STREET
BALTIMORE, MARYLAND 21218

Kenneth A. McCord
KENNETH A. McCORD
Registered Engineer
No. 10774

771

F-86-192 5/8/86 SHEET 5 OF 11

APPROVED: DEPARTMENT OF PUBLIC WORKS

7-28-86
CHIEF, BUREAU OF ENGINEERING — DATE

OFFICE OF PLANNING & ZONING
7-24-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE

RED HILL BRANCH

100 Year Flood Plain, Drainage, Sewer and Utility Easement

COLUMBIA ROAD

PARCEL I

PARCEL J

PARCEL K

20' Drainage Easement

DORSEY HALL DRIVE

OLD ANNAPOLIS ROAD

U.S. ROUTE 29

MD. ROUTE 108

FUTURE

Future Culvert

Existing Sediment Basin

30'D (Temporary)

24' Culvert

RAMP "B"

LOOP "A"

N514,000
N513,500
N513,000
E844,000
E844,500
E845,000
E845,500
E846,000

REV. DATE	REV. NO.	REVISION DESCRIPTION
11/4/86	2	As Per Planning, DPW, and SCS Comments
9/29/86	1	As Per Planning, DPW, and SCS Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH
AND DEVELOPMENT CORPORATION

PROJECT AREA
SECTION 2 AREA 3

PROJECT TITLE
DRAINAGE AREA MAP

SCALE: 1"=100' DATE

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

KENNETH A. McCORD
Registered Engineer
No. 1974

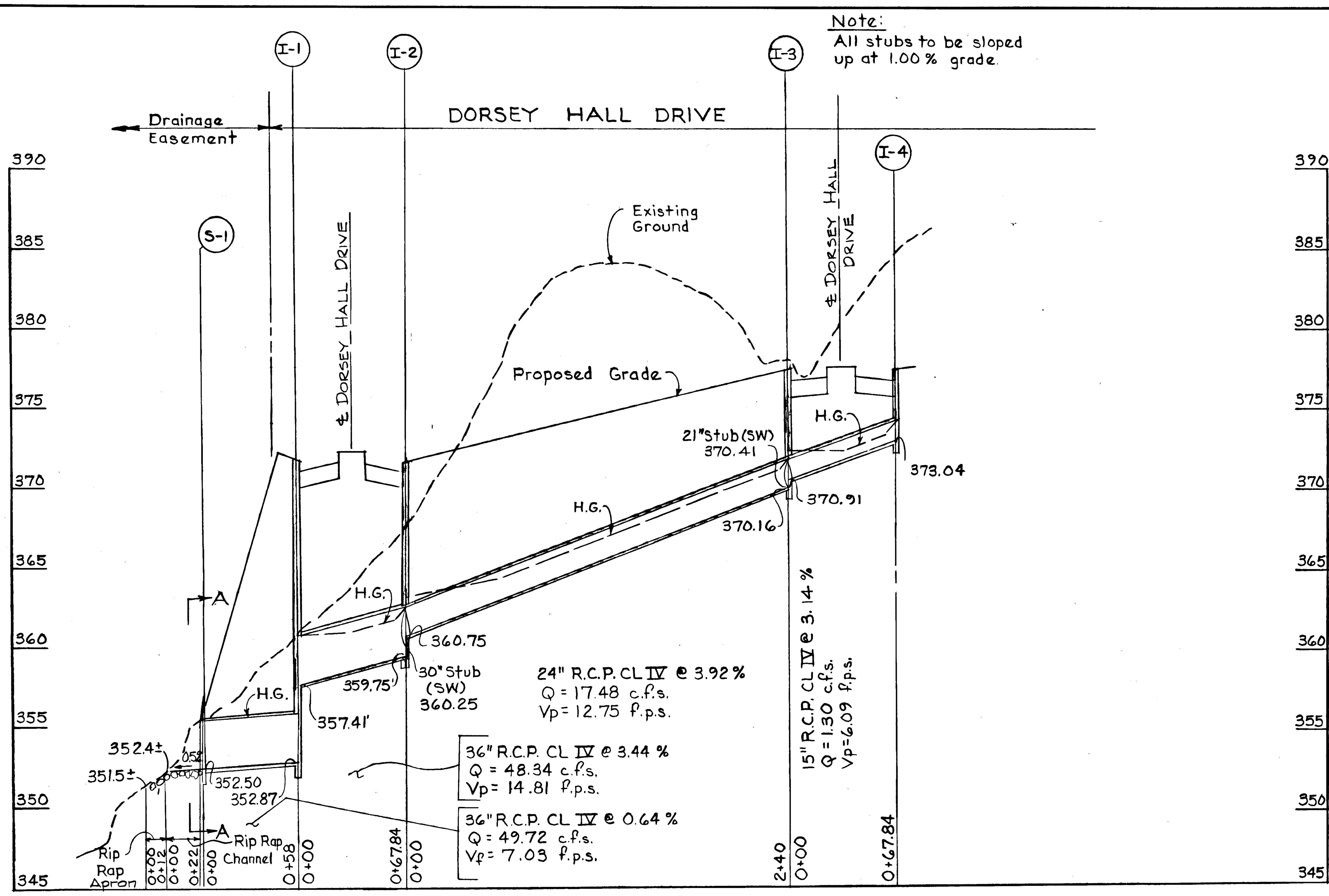
F-86-192 5/8/86 SHEET 6 OF 11

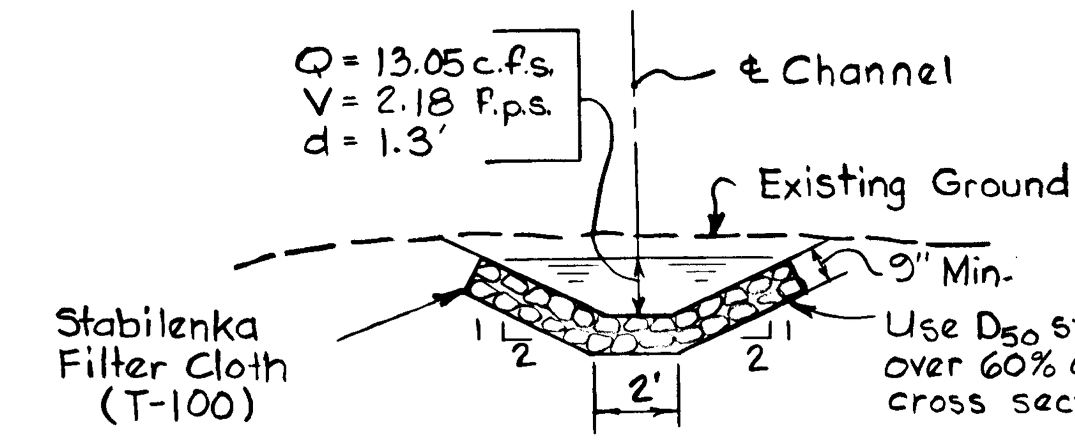
APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — DATE 7-28-86

OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 7-24-86





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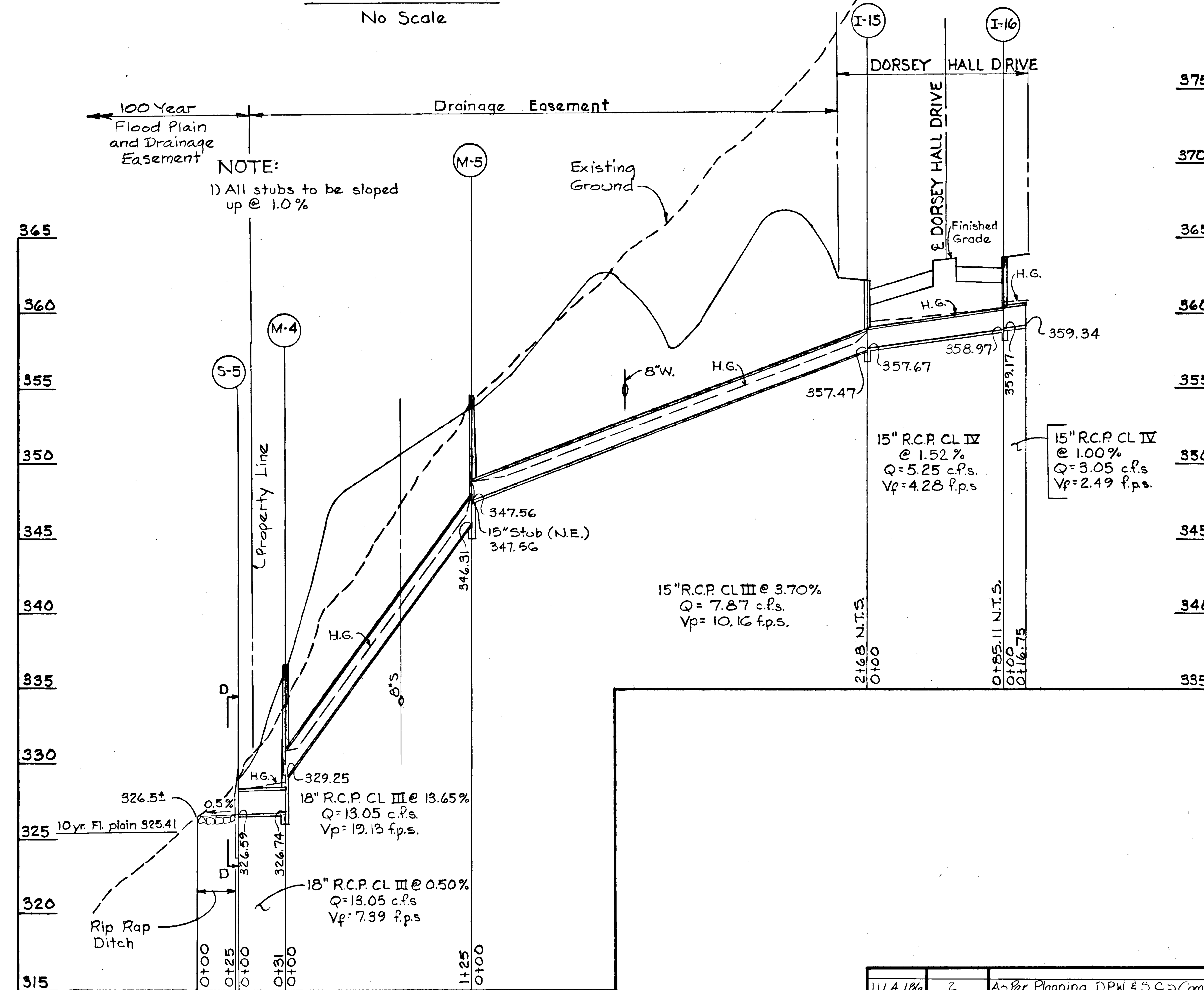

PROFILES
SCALE
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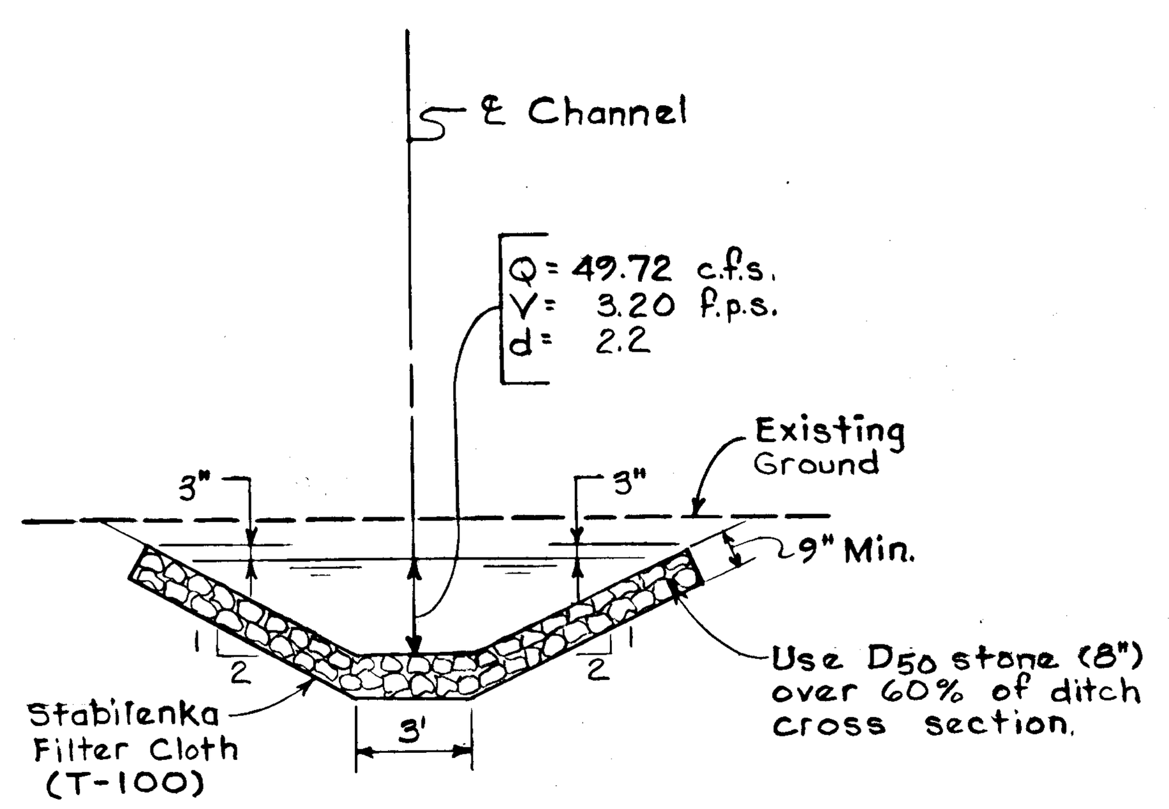
Vert = 1" = 5'



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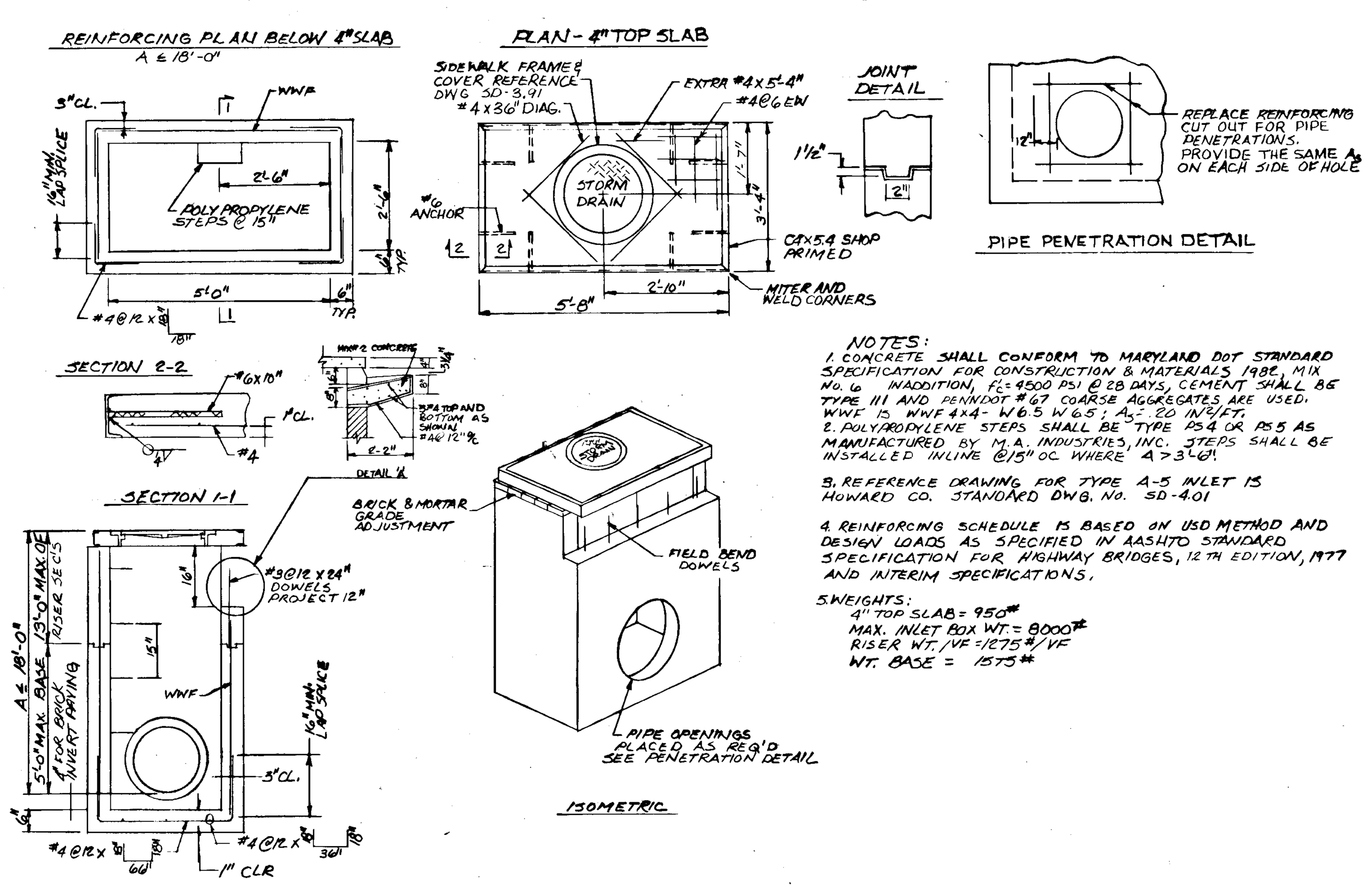


DETAIL PRECAST INLETS
(Inlets I-3 THRU I-16)

REV. DATE	REV. NO.	REVISION DESCRIPTION
11/4/86	2	As Per Planning, D.P.W. & S.C.S. Comments
6/23/86	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 CORPORATION

PROJECT AREA
SECTION 2 AREA 3

PROJECT TITLE
STORM DRAIN PROFILES

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

KENNETH A. McCORD
Registered Engineer
NO. 1974

F-86-192 5/8/86

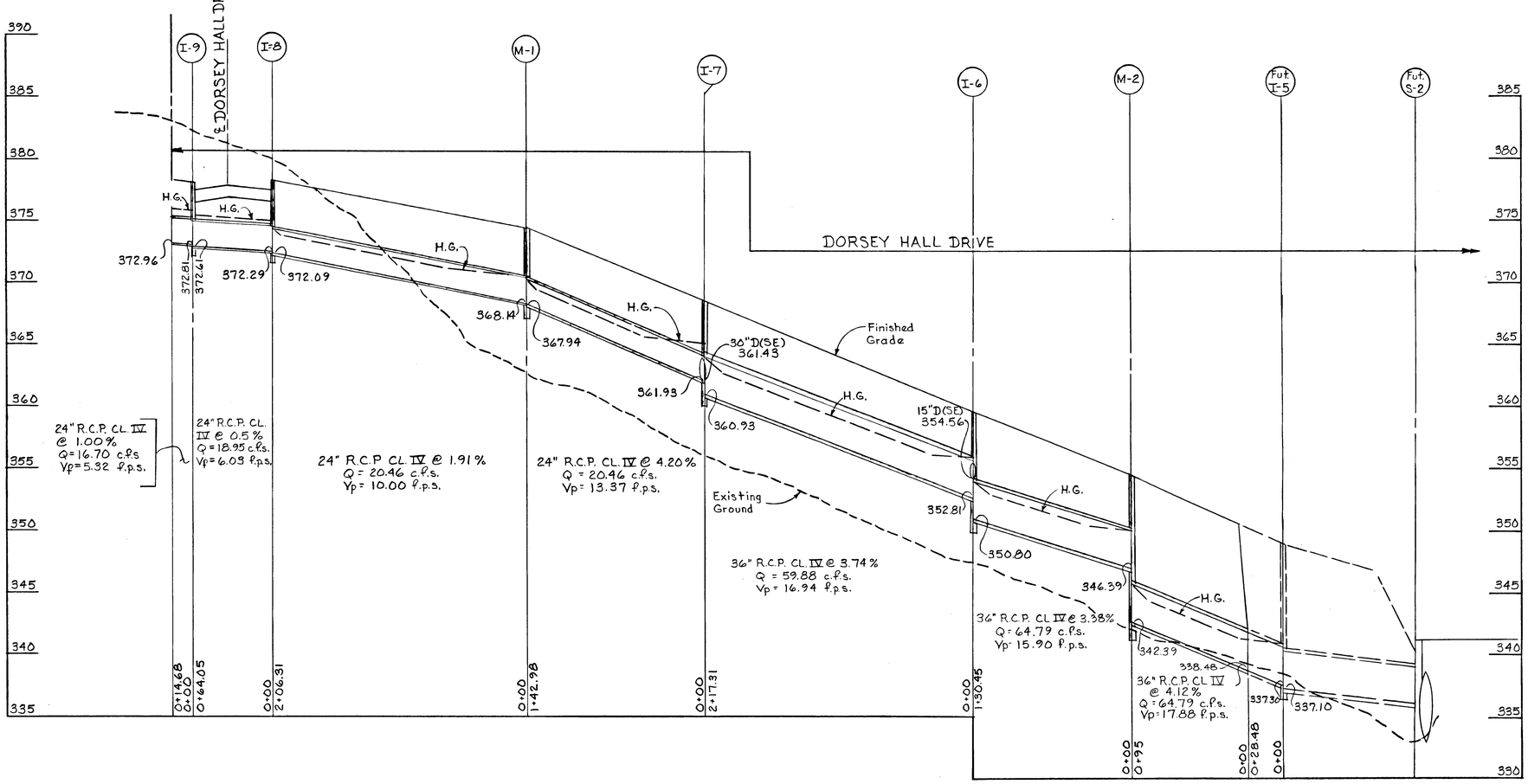
SHEET 7 OF 11

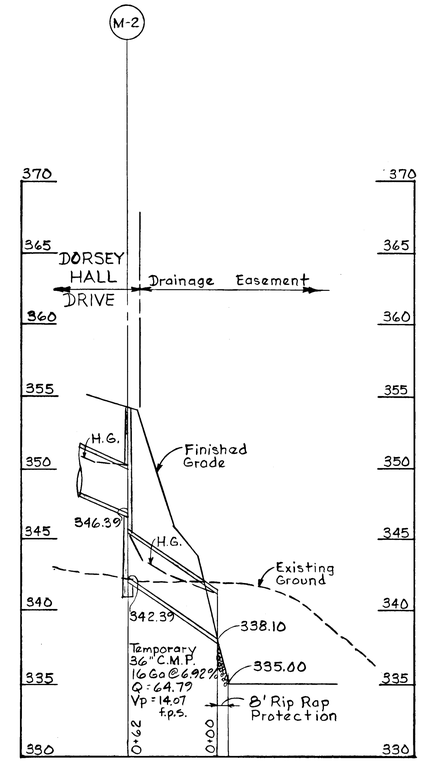
APPROVED: DEPARTMENT OF PUBLIC WORKS

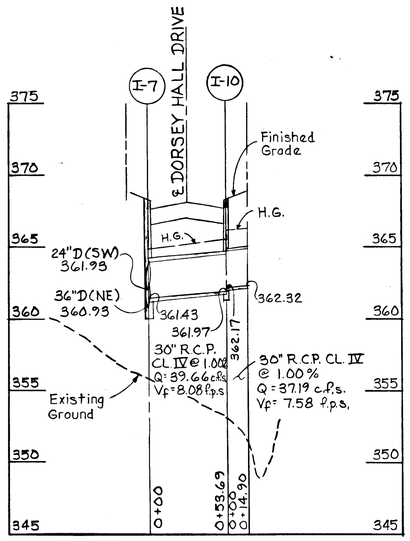
CHIEF, BUREAU OF ENGINEERING — DATE 9-28-86

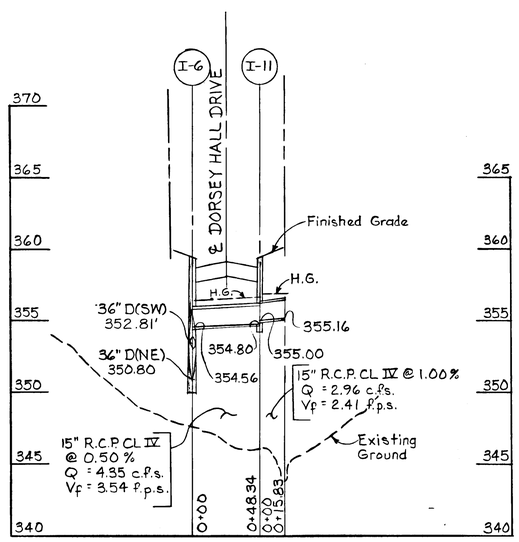
OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 7-24-86







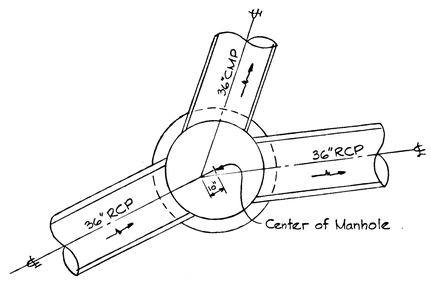


PROFILES

Scale

Hor.: 1" = 50'

Vert. 1" = 5'



STAKE-OUT PLAN M-2

Scale: 1/4" = 1'-0"

REV.DATE	REV. NO.	REVISION DESCRIPTION
11/4/86	2	As per Planning DPW & SCS Comments
9/23/86	1	As per Planning, DPW, & SCS Comments

COLUMBIA GATEWAY

6th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER

THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA

SECTION 2 AREA 3

PROJECT TITLE

STORM DRAIN PROFILES

SCALE: As Shown DATE:

WHITMAN, REQUARDT AND ASSOCIATES

ENGINEERS

BALTIMORE, MARYLAND 21218

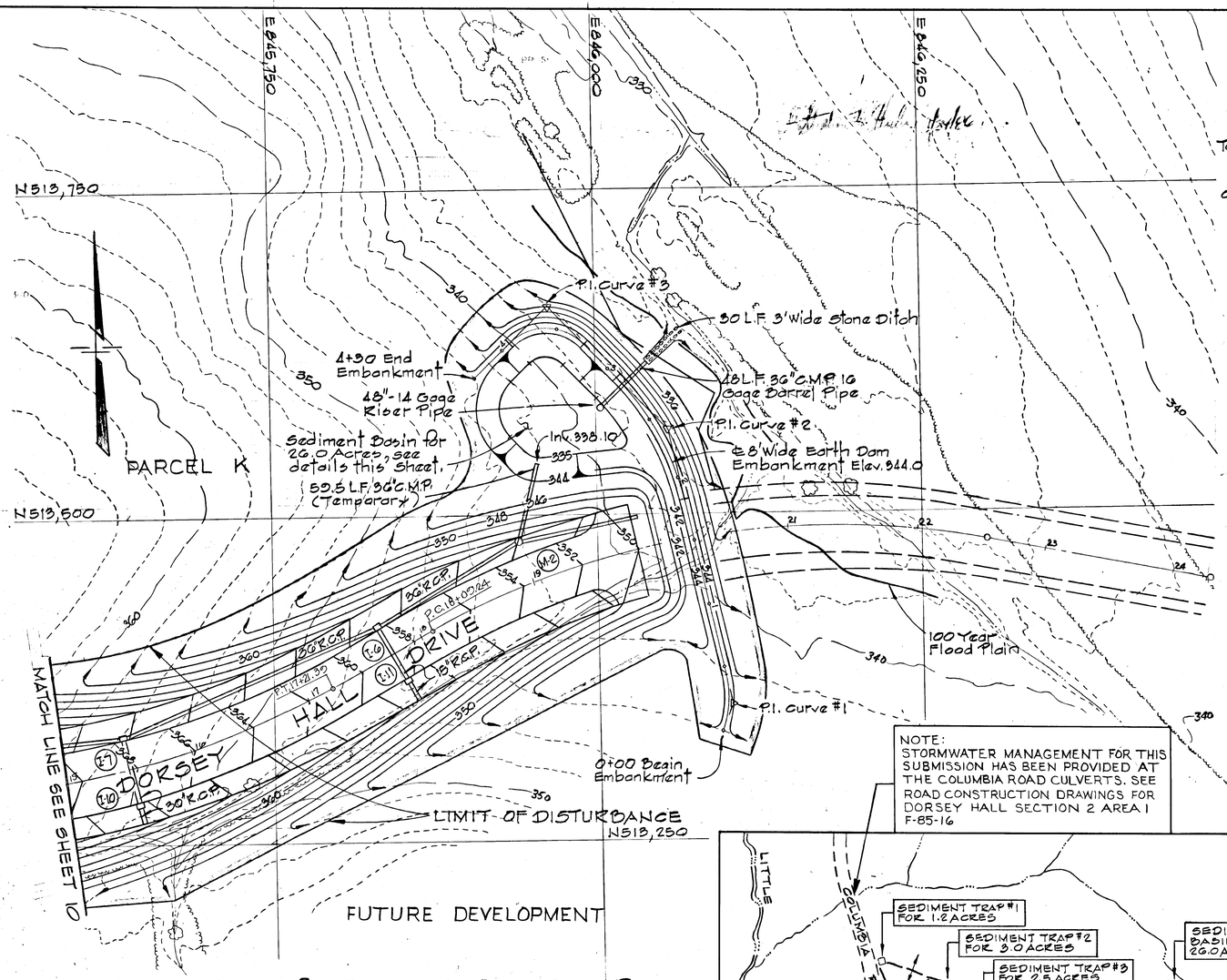
KENNETH A. McCORD

Registered Engineer

NO. 1974

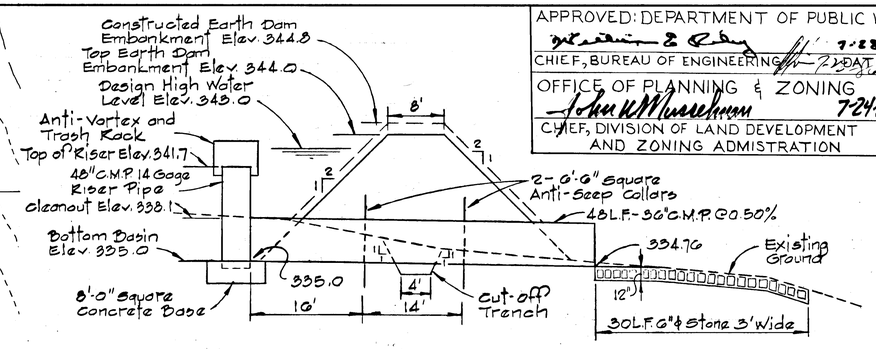
771

F-86-192 5/8/86 SHEET 8 OF 11



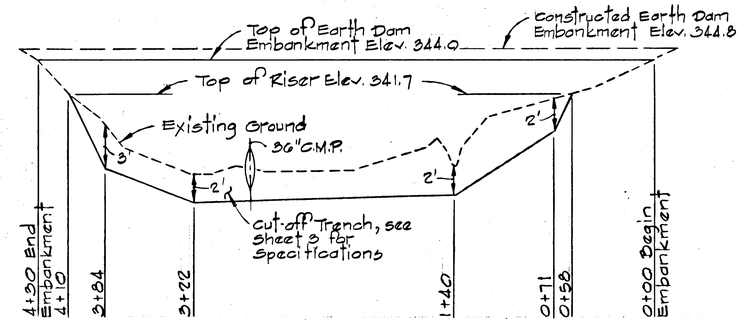
SEDIMENT CONTROL PLAN

Scale: 1"=50'



SECTION THRU EMBANKMENT @ 30" C.M.P.

Scale: Hor. 1"=10'
Vert. 1"=5'



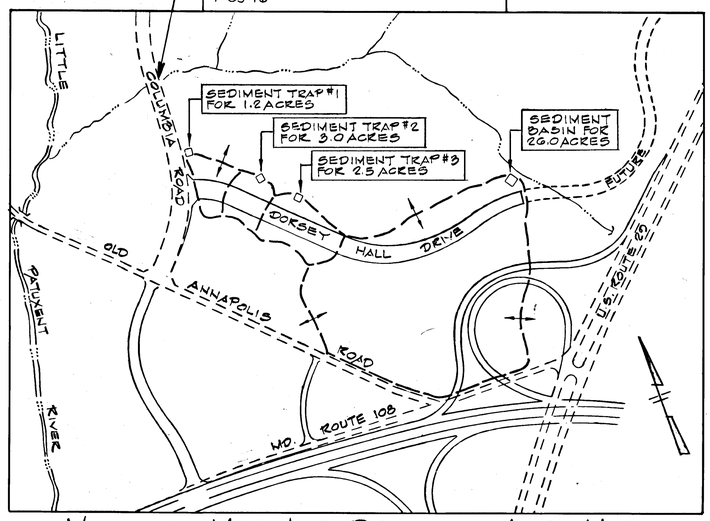
SECTION THRU EMBANKMENT AND CUT-OFF TRENCH

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

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. CLEAR AND GRUB AREAS FOR SEDIMENT CONTROL FACILITIES ONLY. (3 DAYS)
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE ON DORSEY HALL DRIVE. (1 DAY)
4. INSTALL SEDIMENT BASIN, TRAPS, SILT FENCE, EARTH DIKES AND TEMPORARY 15" AND 18" CMP. (10 DAYS)
5. STABILIZE EARTH DIKES WITH TEMPORARY SEEDING, SEE SPECIFICATIONS ON SHEET 11. (1 DAY)
6. STRIP AND ROUGH GRADE LIMITS OF CONSTRUCTION. (15 DAYS)
7. CONSTRUCT ALL UTILITIES EXCEPT STORM DRAIN 65' ABOVE MANHOLE 5. (20 DAYS)
8. FINE GRADE ROADS, CONSTRUCT CURB AND GUTTER, SIDEWALK AND SEED DISTURBED AREAS. (15 DAYS)
9. PAVE ROAD (6 DAYS)
10. REMOVE ALL SEDIMENT CONTROL FACILITIES AND TEMPORARY 15" AND 18" C.M.P. PIPES AFTER GRASS IS ESTABLISHED IN THE CONTRIBUTING DRAINAGE AREAS, COMPLETE 65' STORM DRAIN ABOVE MANHOLE 5 REMOVE 9" BRICK BULKHEAD FROM I-1. STABILIZE "SEDIMENT TRAP REMOVAL AREA" SEE PERMANENT SEEDING NOTES ON SHEET 11. (10 DAYS)

NOTE:
STORMWATER MANAGEMENT FOR THIS SUBMISSION HAS BEEN PROVIDED AT THE COLUMBIA ROAD CULVERTS. SEE ROAD CONSTRUCTION DRAWINGS FOR DORSEY HALL SECTION 2 AREA 1 F-85-16



VICINITY MAP AND DRAINAGE AREA MAP

Scale: 1"=400'

& EMBANKMENT CURVE DATA

CURVE #1	CURVE #2	CURVE #3
Δ = 34°00'00"	Δ = 31°00'00"	Δ = 90°00'00"
R = 75.00'	R = 200.00'	R = 40.00'
T = 22.93'	T = 55.46'	T = 40.00'
ARC = 44.50'	ARC = 108.21'	ARC = 62.83'

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING — DATE 7-28-86
OFFICE OF PLANNING & ZONING
John W. Mueller 7-24-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMISTRATION — DATE

REVIEWED FOR HOWARD S.C.D.
AND MEETS TECHNICAL REQUIREMENTS
7-24-86 DATE
U.S. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED 7/24/86
HOWARD S.C.D. DATE

CERTIFICATION 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 4-23-86
KENNETH A. McCORD DATE

CERTIFICATION BY THE DEVELOPER

"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 APPROVE 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."

Walter E. Woodford 4-23-86
WALTER E. WOODFORD DATE

NO.	DATE	REVISION DESCRIPTION
2	11/4/86	As Per Planning, DPW & S.C.S. Comments
1	9/23/86	As Per Planning, D.P.W. & S.C.S. Comments

DORSEY HALL
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION

PROJECT AREA
SECTION 2 AREA 3

PROJECT TITLE
SEDIMENT CONTROL FOR ROAD GRADING

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

Kenneth A. McCord
KENNETH A. McCORD
Registered Engineer
NO. 1974

771

F-86-192 5/8/86 SHEET 9 OF 11

CERTIFICATION BY THE DEVELOPER

"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 APPROVE 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."

Walter E. Woodford 4-23-86
WALTER E. WOODFORD DATE

CERTIFICATION 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 4-23-86
/ KENNETH A. McCORD DATE

REVIEWED FOR HOWARD S.C.D.

AND MEETS TECHNICAL REQUIREMENTS

7-24-86
DATE

U.S. SOIL CONSERVATION SERVICE

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

APPROVED Stephen I. Hahn 7-24-86
HOWARD S.C.D. DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

7-28-86
CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANNING & ZONING

7-24-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

DESIGN DATA FOR SEDIMENT TRAP #1

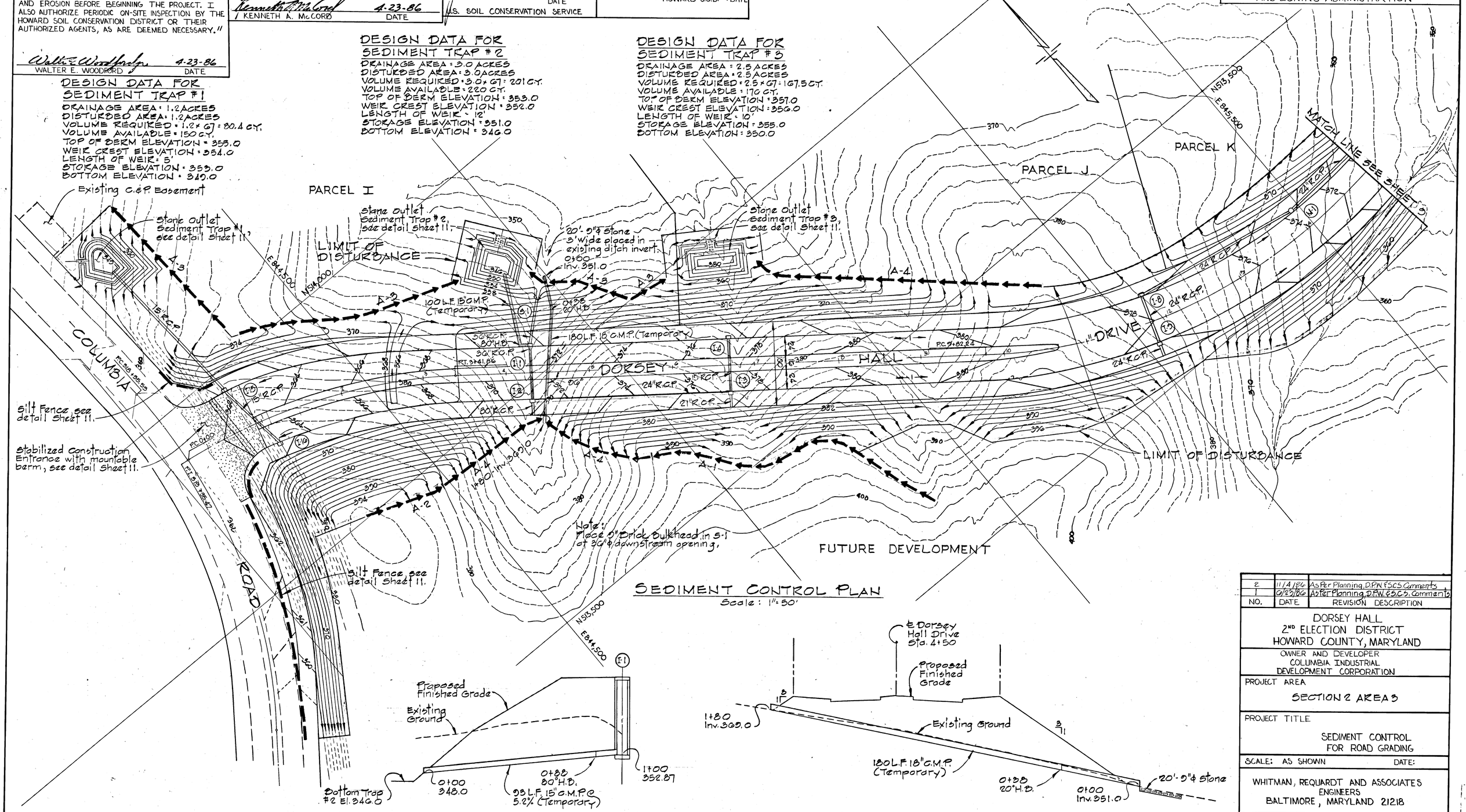
DRAINAGE AREA = 1.2 ACRES
DISTURBED AREA = 1.2 ACRES
VOLUME REQUIRED = 1.2 × 67 = 80.4 C.Y.
VOLUME AVAILABLE = 150 C.Y.
TOP OF BERM ELEVATION = 355.0
WEIR CREST ELEVATION = 354.0
LENGTH OF WEIR = 5'
STORAGE ELEVATION = 353.0
BOTTOM ELEVATION = 349.0

DESIGN DATA FOR SEDIMENT TRAP #2

DRAINAGE AREA = 3.0 ACRES
DISTURBED AREA = 3.0 ACRES
VOLUME REQUIRED = 3.0 × 67 = 201 C.Y.
VOLUME AVAILABLE = 220 C.Y.
TOP OF BERM ELEVATION = 353.0
WEIR CREST ELEVATION = 352.0
LENGTH OF WEIR = 12'
STORAGE ELEVATION = 351.0
BOTTOM ELEVATION = 349.0

DESIGN DATA FOR SEDIMENT TRAP #3

DRAINAGE AREA = 2.5 ACRES
DISTURBED AREA = 2.5 ACRES
VOLUME REQUIRED = 2.5 × 67 = 167.5 C.Y.
VOLUME AVAILABLE = 170 C.Y.
TOP OF BERM ELEVATION = 357.0
WEIR CREST ELEVATION = 356.0
LENGTH OF WEIR = 10'
STORAGE ELEVATION = 355.0
BOTTOM ELEVATION = 350.0



SEDIMENT CONTROL PLAN

Scale: 1" = 50'

PROFILE - TEMPORARY 15" C.M.P.

Scale: Hor. 1" = 20' Vert. 1" = 10'

PROFILE - TEMPORARY 18" C.M.P.

Scale: Hor. 1" = 20' Vert 1" = 10'

NO.	DATE	REVISION DESCRIPTION
2	11/4/86	As Per Planning, D.P.W. & S.C.S. Comments
1	9/29/86	As Per Planning, D.P.W. & S.C.S. Comments

DORSEY HALL
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION

PROJECT AREA
SECTION 2 AREA 3

PROJECT TITLE
SEDIMENT CONTROL FOR ROAD GRADING

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

Kenneth A. McCord
/ KENNETH A. McCORD
Registered Engineer
NO. 1974

F-86-192 5/8/86 SHEET 10 OF 11

APPROVED: DEPARTMENT OF PUBLIC WORKS

7-28-86

CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANING & ZONING

7-24-86

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

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.

Matinenance - Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)

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

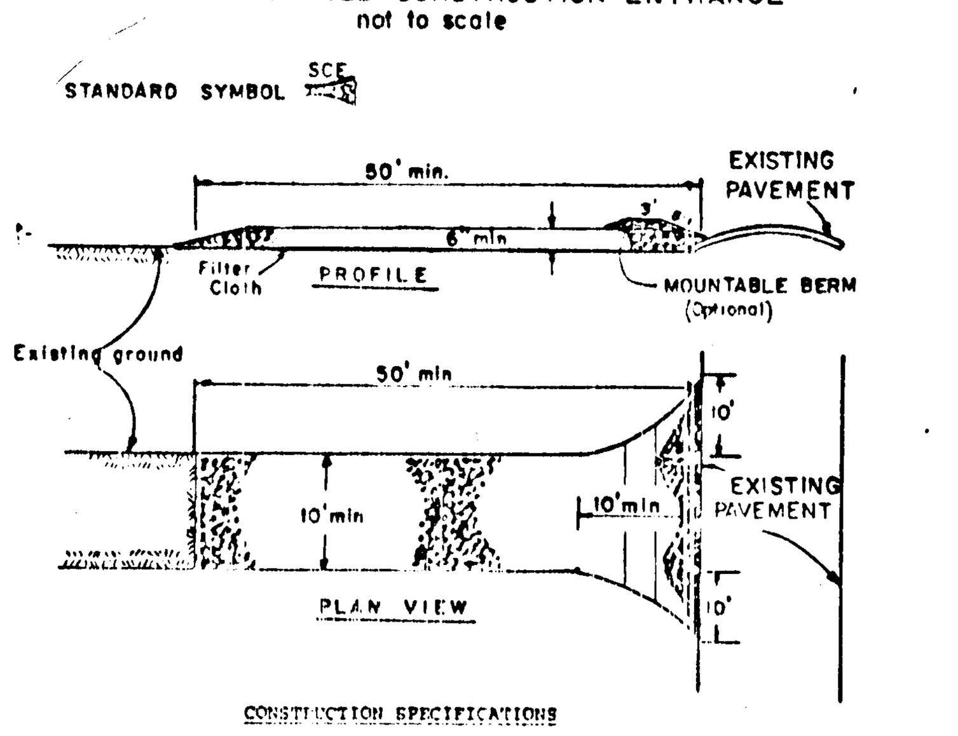
Mulching: Apply 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348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

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

SEDIMENT CONTROL NOTES

1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chaper 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52.) Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector
7) Site Analysis:
   - Total Area of Site 32.6 Acres
   - Area Disturbed 10.4 Acres
   - Area to be roofed or paved — Acres
   - Area to be vegetatively stabilized 10.4 Acres
   - Total Cut 40,000 Cu. yds
   - Total Fill 53,000 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.

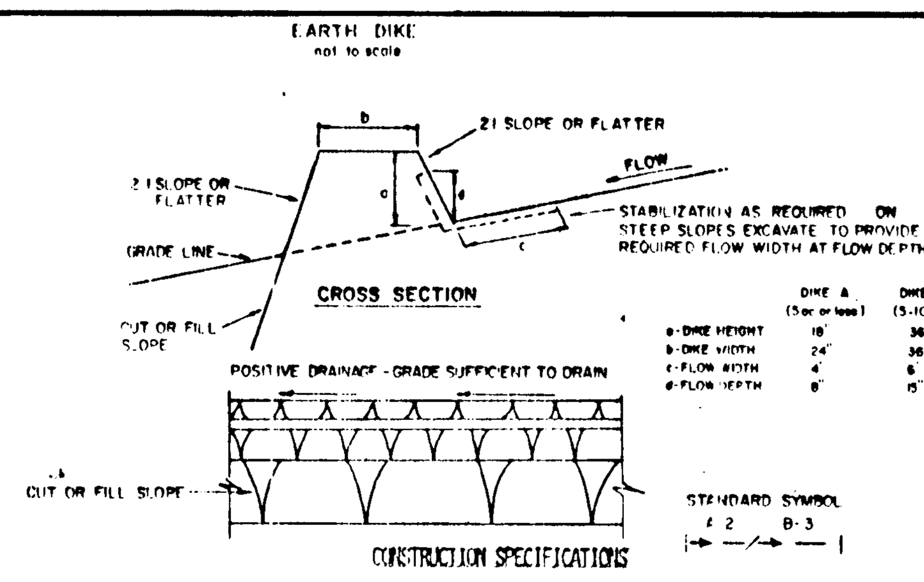
STABILIZED CONSTRUCTION ENTRANCE
not to scale



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.

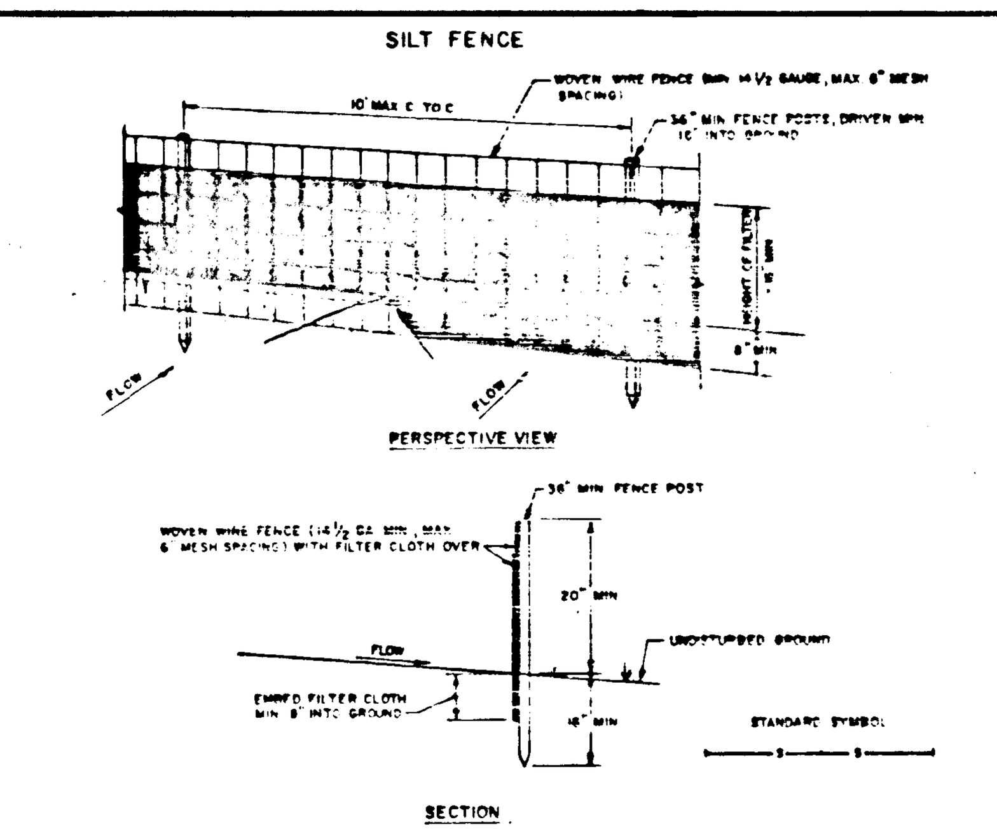
EARTH DIKE
not to scale



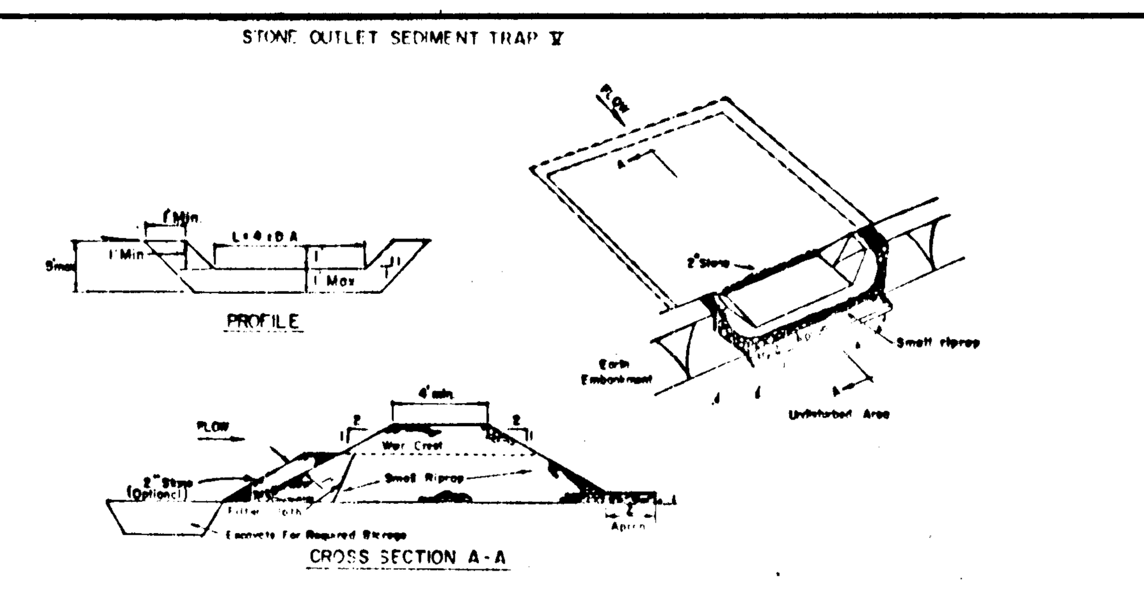
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

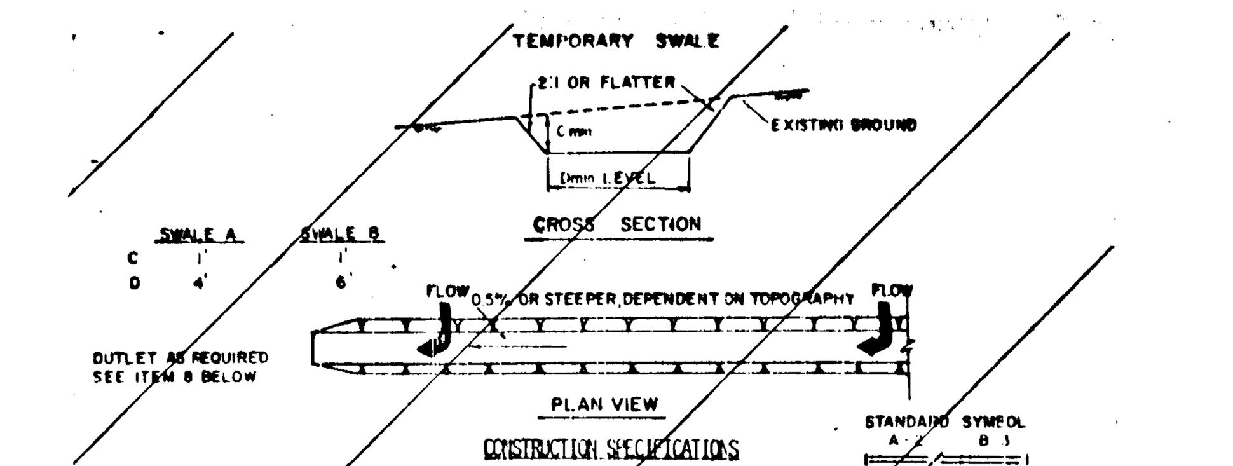
SILT FENCE



STONE OUTLET SEDIMENT TRAP



TEMPORARY SWALE



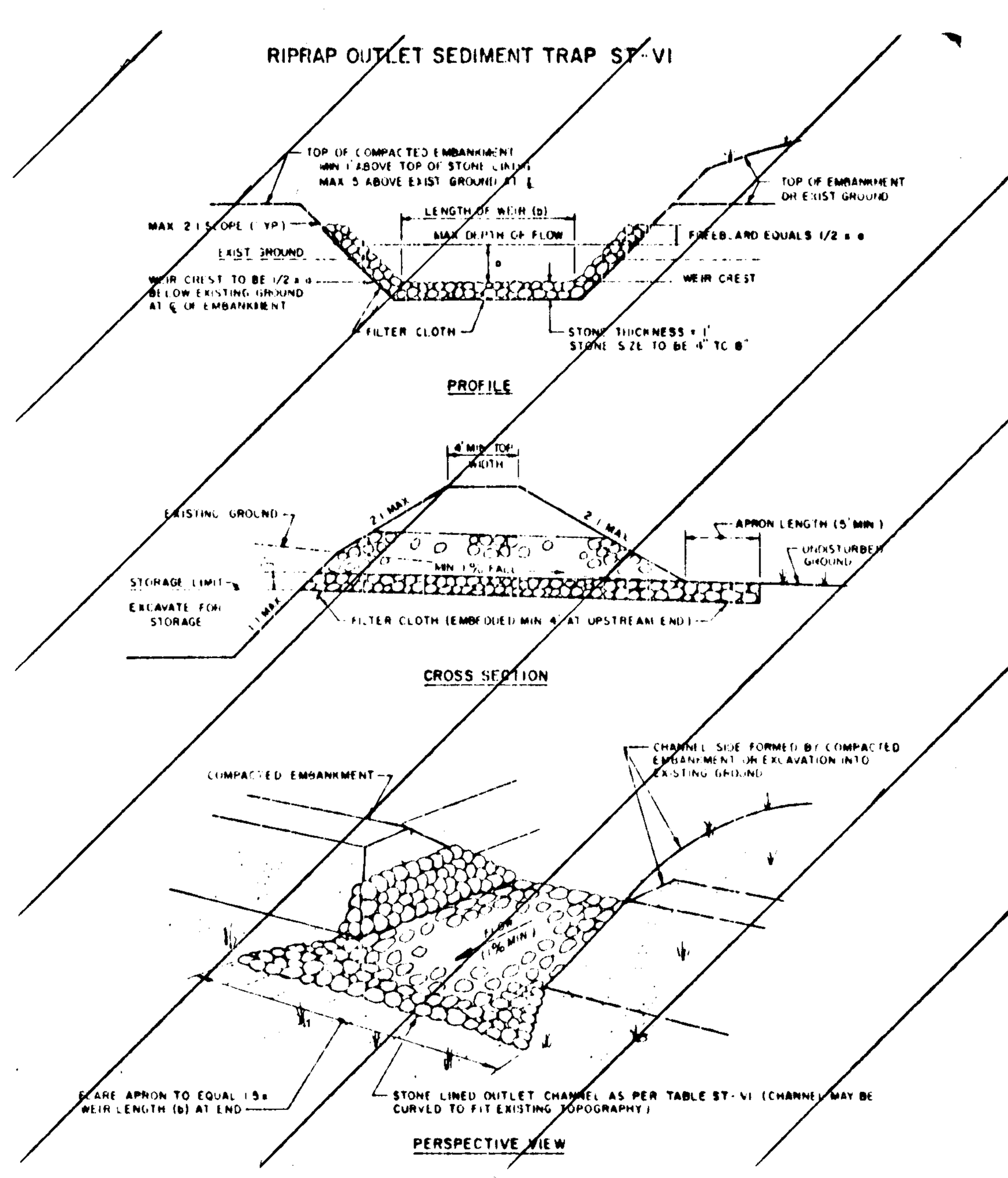
CONSTRUCTION SPECIFICATIONS

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" RECYCLED CONCRETE EQUIVALENT
4	8.1-20%	LINED 4-8" RIP-RAP	ENGINEERED DESIGN

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

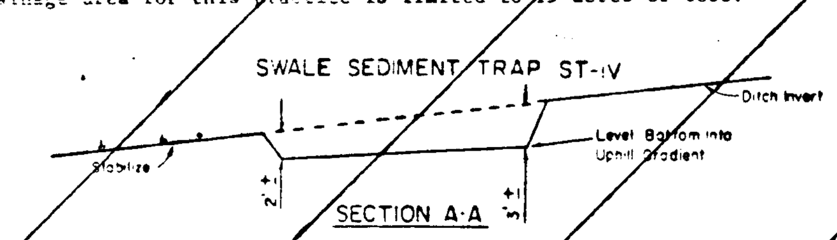
RIPRAP OUTLET SEDIMENT TRAP ST-VI



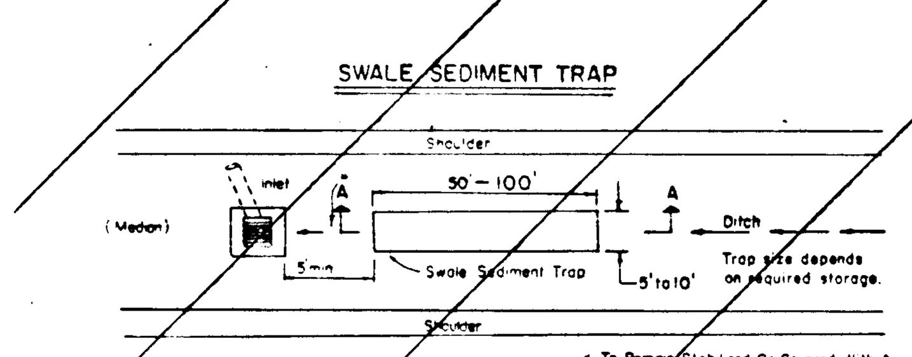
CONSTRUCTION SPECIFICATIONS FOR ST-VI

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.

SWALE SEDIMENT TRAP ST-IV



SWALE SEDIMENT TRAP



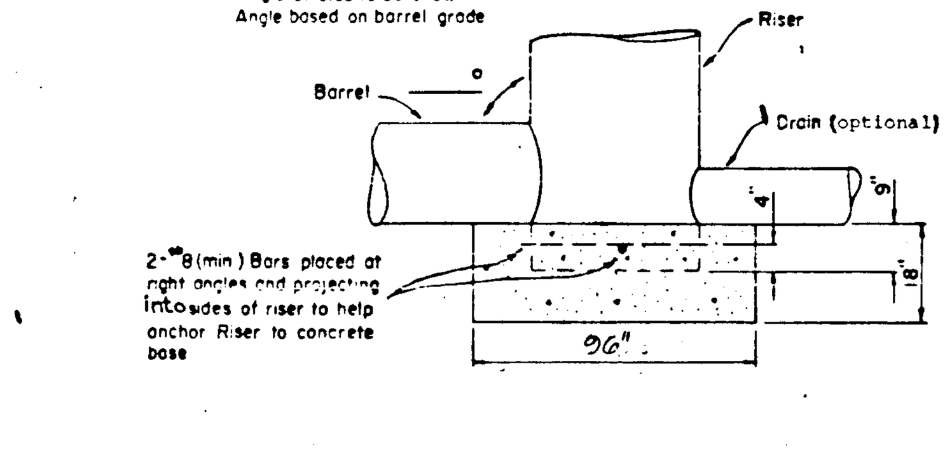
* To Remain Stabilized Or Covered With A 6" Lining Of 2" Stone

CONSTRUCTION SPECIFICATION FOR ST-IV

1. The swale sediment trap shall be constructed in accordance with the dimensions provided on the design drawings or sized to provide the minimum storage necessary 1800 cubic feet of storage for each acre of drainage area.
2. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to ½ 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.
3. The structure shall be inspected after each rain and repairs made as needed.
4. Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.
5. The sediment trap shall be removed and area stabilized when the contributory drainage area has been properly stabilized.
6. The swale sediment trap will be properly backfilled and the swale or ditch reconstructed.

Maximum Drainage Area: 2 Acres

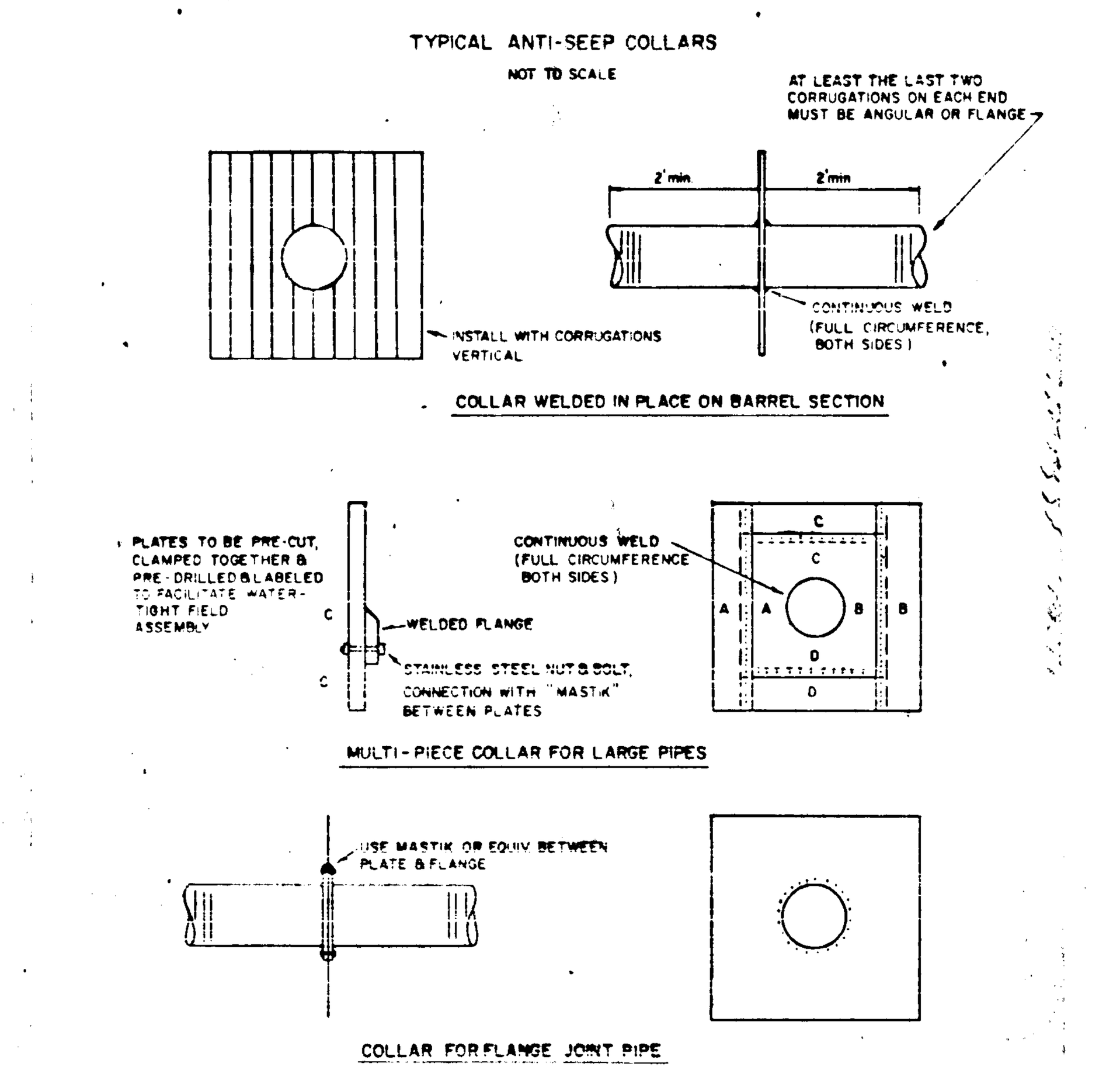
RISER BASE DETAIL



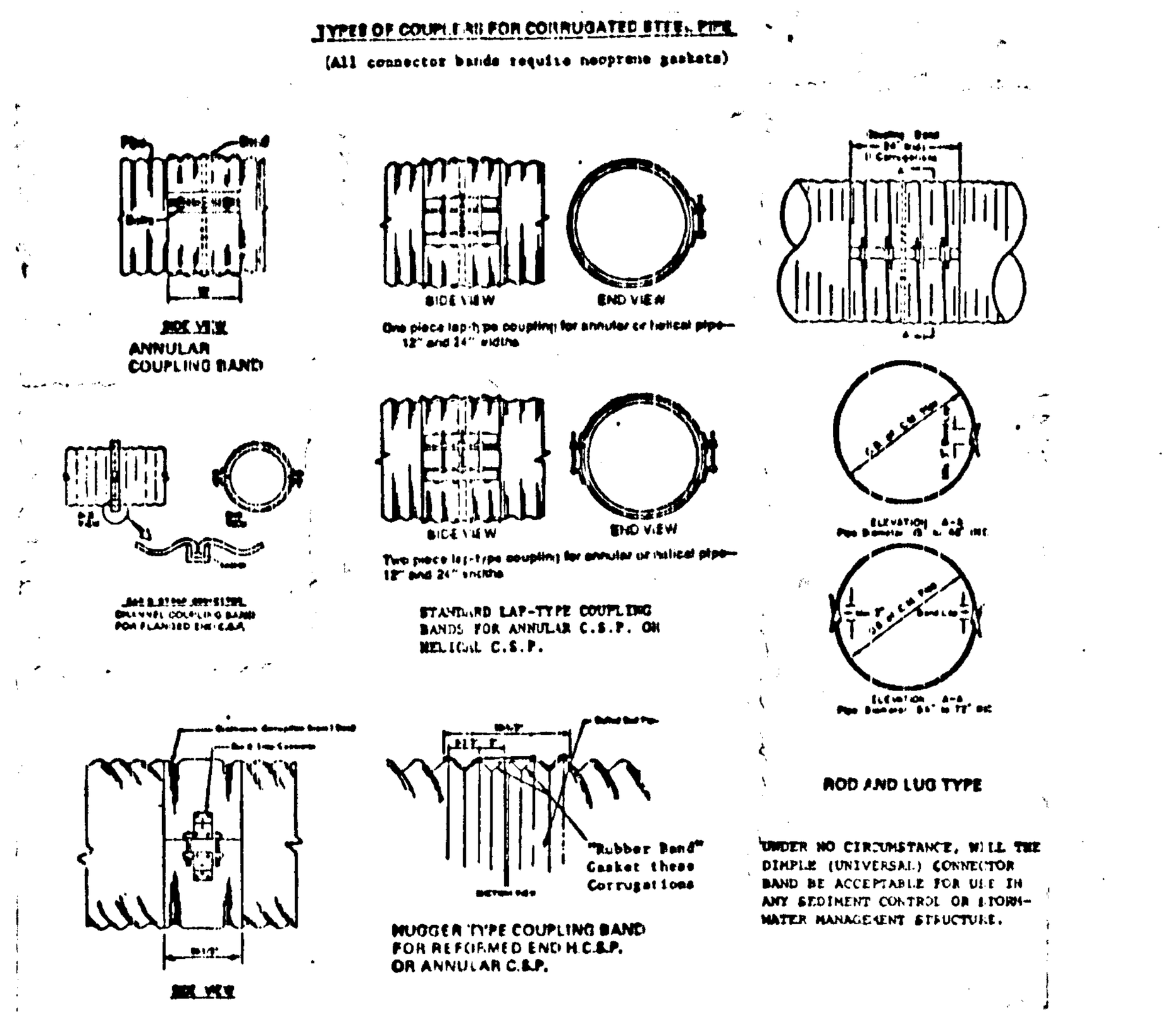
NOTES

1. The concrete base shall be poured in such a manner to insure that the concrete fills the bottom of the riser to the invert of the outlet pipe to prevent the riser from breaking away from the base.
2. Alm aluminum or aluminized pipe, the embedded section must be painted with zinc chromate or equivalent.
3. Riser base may be sized as computed using floatation with a factor of safety of 1.2.

TYPICAL ANTI-SEEP COLLARS
NOT TO SCALE

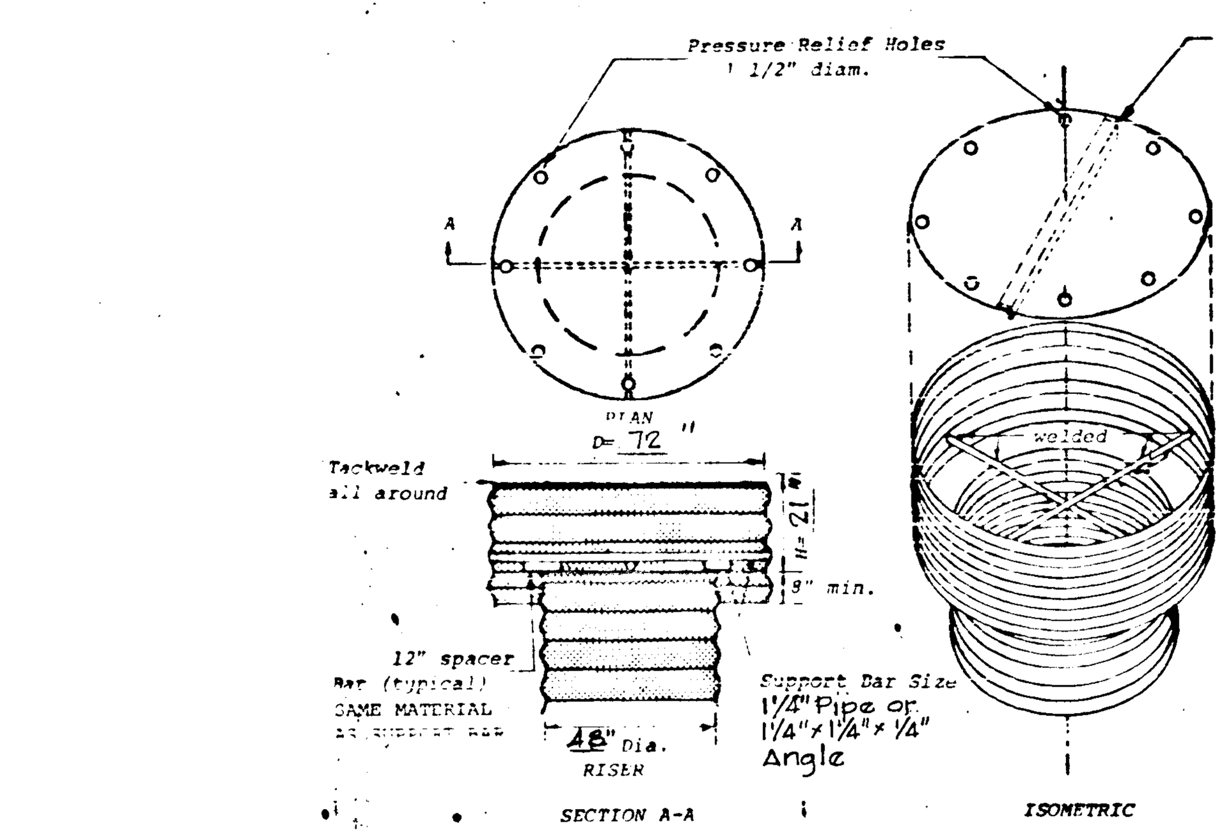


TYPES OF COUPLING FOR CORRUGATED STEEL PIPE



UNDER NO CIRCUMSTANCE, WILL THE DIMPLE (UNIVERSAL) CONNECTOR BAND BE ACCEPTABLE FOR USE IN ANY SEDIMENT CONTROL OR STORM-WATER MANAGEMENT STRUCTURE.

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE
(not to scale)



Top stiffener (if required) is angle welded to top and oriented perpendicular to corrugations.

Top is 10 gage corrugated metal or 1/8" steel plate. Pressure relief holes may be ommitted, if ends of corrugations are left fully open when corrugated top is welded to cylinder.

Cylinder is 14 gage corrugated metal pipe or fabricated from 1/8" steel plate.

Notes:
1) The cylinder must be firmly fastened to the top of the riser.
2) Support bars are welded to the top of the riser or attached by straps bolted to top of riser.

CONSTRUCTION SPECIFICATIONS

Site Preparation

Areas under the embankment shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots or other objectionable material. In order to facilitate clean-out and restoration, the pool area (measured at the top of the pipe spillway) will be cleared of all brush, trees, and other objectionable materials.

Cut-off-Trench

A cut-off trench shall be excavated along the centerline of earth fill embankments. The minimum depth shall be two feet. The cut-off trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be four feet, but wide enough to permit operation of excavation and compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for embankment. The trench shall be dewatered during the backfilling-compaction operations.

Embankment

The fill material shall be taken from approved areas shown on the plans. It shall be clean mineral soil free of roots, woody vegetation, oversized stones, rocks, or other objectionable material. Relatively pervious materials such as sand or gravel (Unified Soil Classes GW, GP, SW & SP) shall not be placed in the embankment. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material shall contain sufficient moisture so that it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Fill material shall be placed six-inch to eight-inch thick continuous layers over the entire length of the fill. Compaction shall be obtained by routing and hauling the construction equipment over the fill so that the entire surface of each layer of the fill is traversed by at least one wheel or tread track of the equipment or by the use of a compactor. The embankment shall be constructed to an elevation 10 percent higher than the design height to allow for settlement.

Pipe Spillways

The riser shall be securely attached to the barrel or barrel stub by welding the full circumference making a watertight structural connection. The barrel stub must be attached to the riser at the same percent (angle) of grade as the outlet conduit. The connection between the riser and the riser base shall be watertight. All connections between barrel sections must be achieved by approved watertight band assemblies. (See page 18.22 for details.) The barrel and riser shall be placed on a firm, smooth foundation of impervious soil. Pervious materials such as sand, gravel, or crushed stone shall not be used as backfill around the pipe or anti-seep collars. The fill material around the pipe spillway shall be placed in four inch layers and compacted under and around the pipe to at least the same density as the adjacent embankment.

A minimum depth of two feet of hand compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment. Steel base plates on risers shall have at least 2-1/2 feet of compacted earth, stone or gravel placed over it to prevent flotation.

Emergency Spillway

The emergency spillway shall be installed in undisturbed ground. The achievement of planned elevations, grades, design width, entrance and exit channel slopes are critical to the successful operation of the emergency spillway and must be constructed within a tolerance of ± 0.2 feet.

Vegetative Treatment

Stabilize the embankment and emergency spillway in accordance with the appropriate vegetative Standard and Specifications immediately following construction. In no case shall the embankment remain unstabilized for more than seven (7) days.

Erosion and Pollution Control

Construction operations shall be carried out in such a manner that erosion and water pollution will be minimized. State and local laws shall be complied with concerning pollution abatement.

Safety

State and local requirements shall be met concerning fencing and signs, warning the public of hazards of soft sediment and floodwater.

Maintenance

1. Repair all damages caused by soil erosion and construction equipment at or before the end of each working day.
2. Sediment shall be removed from the basin when it reaches the specified distance below the top of the riser. This sediment shall be placed in such a manner that it will not erode from the site. The sediment shall not be deposited downstream from the embankment, adjacent to a stream or flood plain.

Final Disposal

When temporary structures have served their intended purpose and the contributing drainage area has been properly stabilized, the embankment and resulting sediment deposits are to be leveled or otherwise disposed of in accordance with the approved sediment control plan. The proposed use of a sediment basin site will often dictate final disposition of the basin and any sediment contained therein. If the site is scheduled for future construction, then the basin material and trapped sediments must be removed, safely disposed of, and backfilled with a structural fill. When the basin area is to remain open space the pond may be pumped dry, graded and back filled.

CERTIFICATION 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 4-23-86 DATE

CERTIFICATION BY THE DEVELOPER

"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 DEPT. 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."

WALTER E. WOODFORD 4-23-86 DATE

REVIEWED FOR HOWARD SOIL AND MEETS TECHNICAL REQUIREMENTS

7-24-86 DATE

U.S. SOIL CONSERVATION SERVICE

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

APPROVED 7/24/86 HOWARD S.C.D. DATE

NO.	DATE	REVISION DESCRIPTION
2	11/4/86	As Per Planning, D.P.W. & S.C.S. Comments
1	6/23/86	As Per Planning, D.P.W. & S.C.S. Comments

DORSEY HALL
2nd ELECTION DISTRICT
HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER
COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION

PROJECT AREA
SECTION 2 AREA 3

PROJECT TITLE
SEDIMENT CONTROL DETAILS

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

KENNETH A. McCORD
Registered Engineer
NO. 1974

STATE OF MARYLAND — KENNETH ARMSTRONG McCORD — No. 1974 — REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

F-86-192 5/8/86