

DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING DATE 1/2/84
 OFFICE OF PLANNING & ZONING
 JOHN W. MURPHY 1/14/84
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 AND ZONING ADMINISTRATION

"AS-BUILT" ELEVATIONS AS OF JUNE 3, 1986

KENNETH A. McCORD PE # 1974

DATE	REV. NO.	REVISION DESCRIPTION
4/11/85	3	As Per H.D. Comments
10/10/84	2	As Per D.P.W. Comments
5/13/84	1	As Per 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 1

PROJECT TITLE
 COLUMBIA ROAD
 STATION 294+55 TO STATION 302+00

SCALE: AS SHOWN DATE:
 WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

Kenneth A. McCord
 KENNETH A. McCORD
 REGISTERED ENGINEER
 NO. 1074



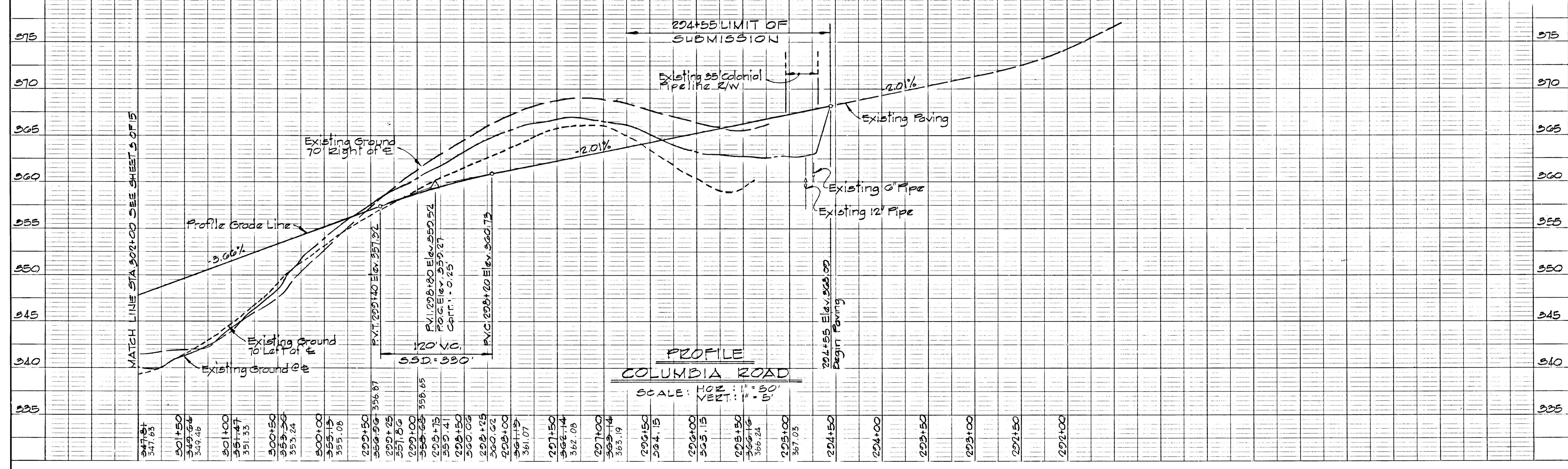
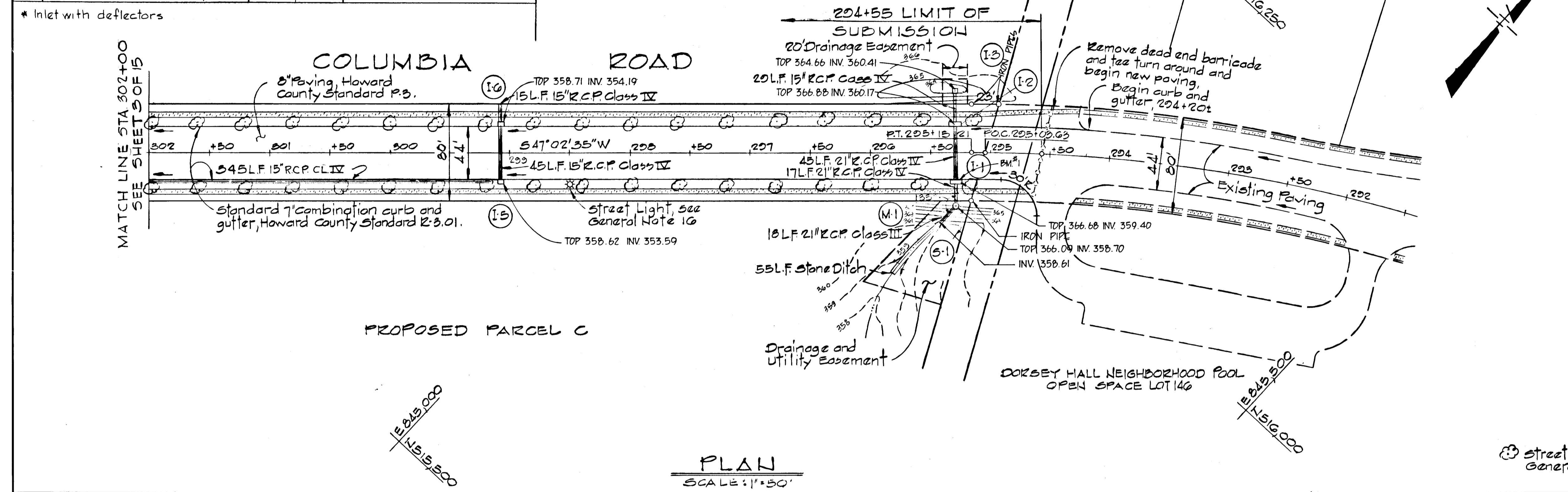
STORM DRAIN STRUCTURE SCHEDULE

NO	TYPE	TOP EL. INV. IN	INV. OUT	LOCATION
I-1	A-10 Inlet (width=4.5) 5D.4.01	366.87	359.40	Inlet 2392 Left & Sta. 295+29
I-2	A-10 Inlet (width=4.5) 5D.4.02	366.82	359.93	Inlet 2392 Right & Sta. 295+29
I-3	Type "D" Inlet 5D.4.11	364.83	360.53	Inlet 2392 Right & Sta. 295+29
I-5	A-5 Inlet (width=2.5) 5D.4.01	353.58	353.31	Inlet 2392 Left & Sta. 295+03
I-6	A-5 Inlet (width=2.5) 5D.4.01	353.58	353.35	Inlet 2392 Right & Sta. 295+03
M-1	Standard Manhole 63.01	366.50	353.70	Manhole 4332 Left & Sta. 295+29
S-1	Type "A" Headwall 5D.5.11	361.60	353.58	See Plan & Profile

NOTE:
 PAVING WIDTH - 44'
 LENGTH OF ROAD - 700'
 NO SEWER M.I. IN ROAD R/W

CURVE DATA

POC 205+03.03 TO PT. 205+15.21
 $\Delta = 00^{\circ}50'24''$ T = 5.70'
 $R = 1309.92$ Chd. 11.58'
 $\Delta R = 11.58'$ Chd. Orig. 147'17"32"E



DATE: _____ BY: _____
 SURVEYED: _____
 NOTE BOOK: _____
 ALIGNMENT CHECKED: _____
 REVISIONS: _____
 NO. _____

DATE: _____ BY: _____
 SURVEYED: _____
 NOTE BOOK: _____
 GRADE CHECKED: _____
 REVISIONS: _____
 NO. _____

DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING & ZONING
 John W. Musselman 1/14/84
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

'AS-BUILT' ELEVATIONS AS OF JUNE 3, 1986

KENNETH A. MCCORD PE #1974

REVDATE	REV. NO.	REVISION DESCRIPTION
4/11/85	3	As Per H.D. Comments
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9/19/84	1	As Per D.P.W. & S.G.S. Comments

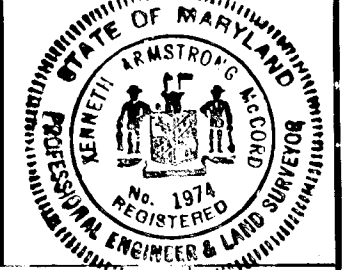
DORSEY HALL
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION
 PROJECT AREA
 SECTION 2 AREA 1

PROJECT TITLE
 COLUMBIA ROAD
 STATION 302+00 TO STATION 315+00

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

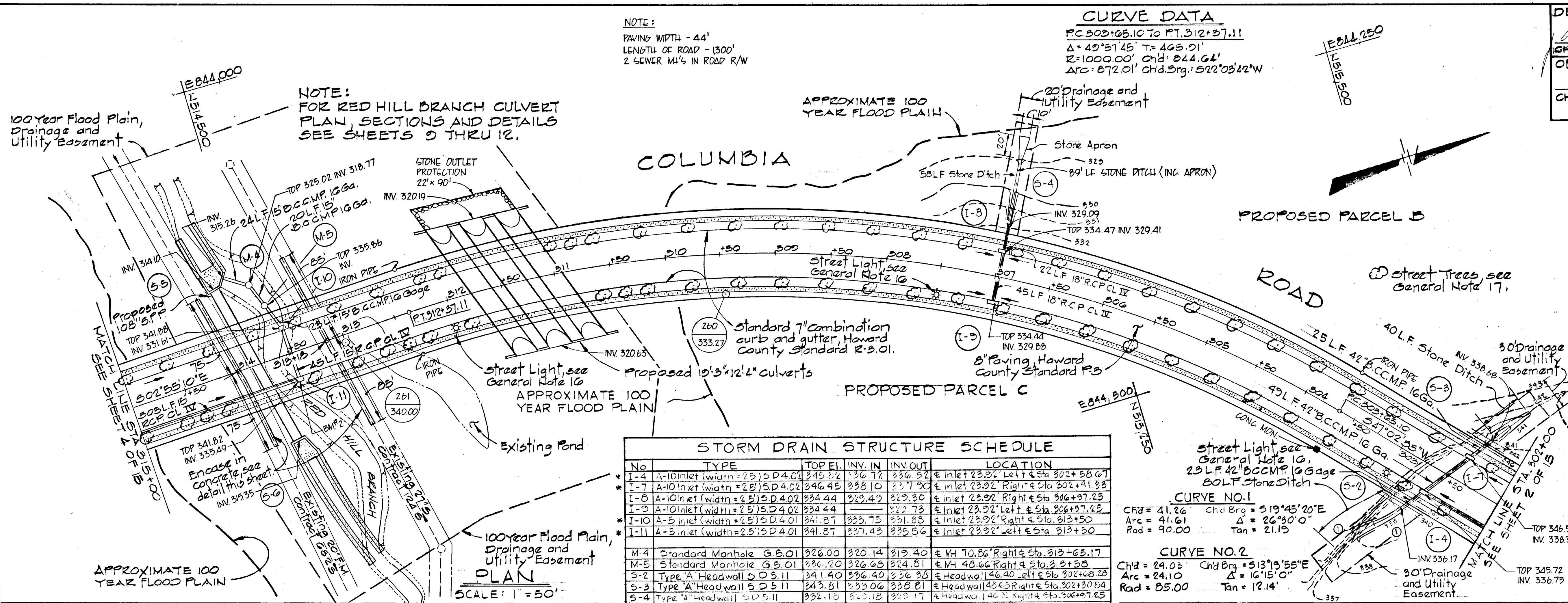
Kenneth A. McCord
 KENNETH A. MCCORD
 REGISTERED ENGINEER
 NO. 1974



CURVE DATA
 PC 302+05.10 TO PT. 312+97.11
 $\Delta = 49^{\circ}57'45''$ $T = 465.91'$
 $R = 1000.00'$ Chd: 844.64'
 Arc: 872.01' Chd. Brg: $S22^{\circ}03'42''W$

NOTE:
 PAVING WIDTH - 44'
 LENGTH OF ROAD - 1300'
 2 SEWER M.Y.'S IN ROAD R/W

NOTE:
 FOR RED HILL BRANCH CULVERT
 PLAN, SECTIONS AND DETAILS
 SEE SHEETS 9 THRU 12.



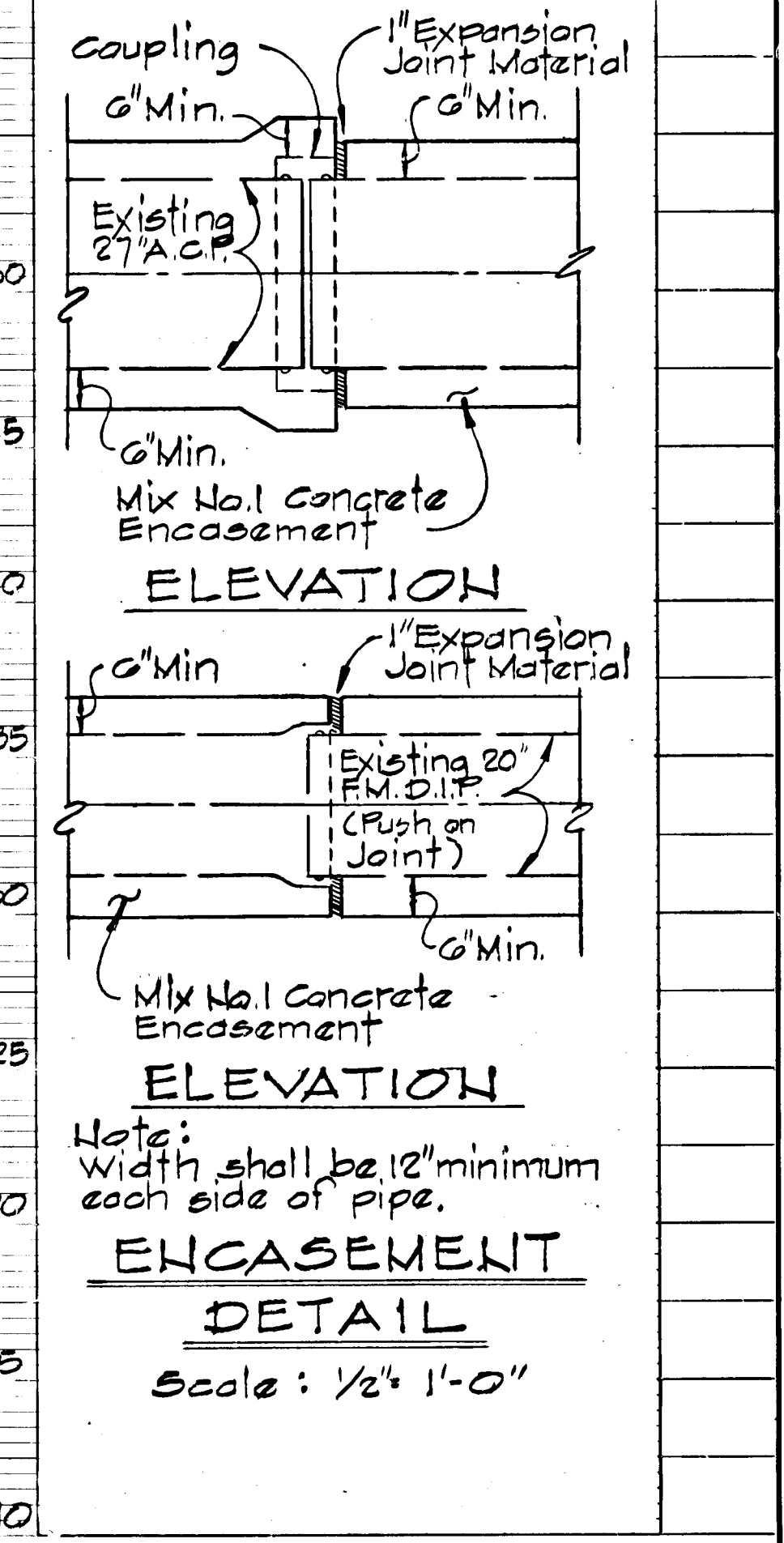
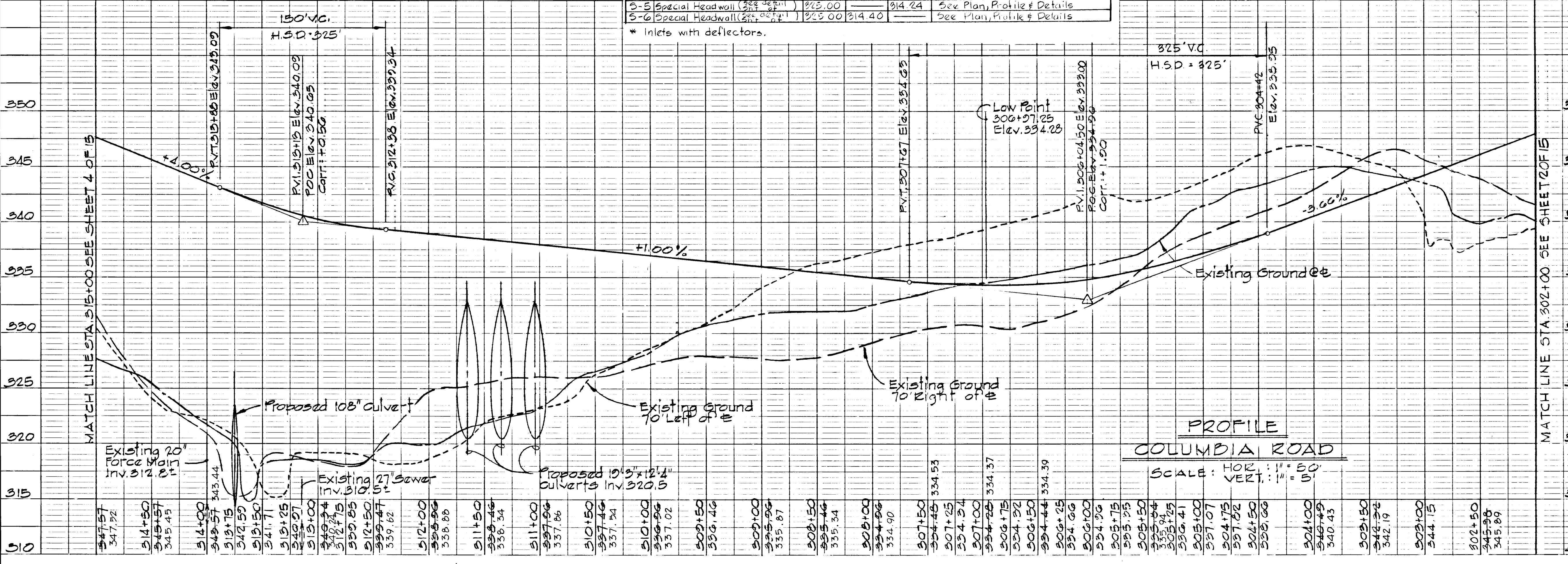
STORM DRAIN STRUCTURE SCHEDULE

No	TYPE	TOPEL	INV. IN	INV. OUT	LOCATION
I-4	A-10 Inlet (width=25) 5D 4.02	345.82	336.72	336.52	Inlet 23.92' Left of Sta 302+58.67
I-7	A-10 Inlet (width=25) 5D 4.02	346.45	338.10	337.90	Inlet 23.92' Right of Sta 302+41.33
I-8	A-10 Inlet (width=25) 5D 4.02	334.44	329.49	329.30	Inlet 23.92' Right of Sta 306+97.45
I-9	A-10 Inlet (width=25) 5D 4.02	334.44	329.49	329.78	Inlet 23.92' Left of Sta 306+97.45
I-10	A-5 Inlet (width=25) 5D 4.01	341.87	333.73	331.83	Inlet 23.92' Right of Sta 313+50
I-11	A-5 Inlet (width=25) 5D 4.01	341.87	337.43	335.56	Inlet 23.92' Left of Sta 313+50
M-4	Standard Manhole G.S.O1	326.00	320.14	319.40	MH 70.86' Right of Sta 313+65.17
M-5	Standard Manhole G.S.O1	326.20	326.63	324.81	MH 48.66' Right of Sta 312+58
S-2	Type 'A' Headwall 5 D 5.11	341.40	336.40	336.38	Headwall 146.40' Left of Sta 312+48.25
S-3	Type 'A' Headwall 5 D 5.11	343.81	339.06	336.81	Headwall 146.63' Right of Sta 312+30.84
S-4	Type 'A' Headwall 5 D 5.11	332.15	325.18	323.17	Headwall 146.28' Right of Sta 312+07.25
S-5	Special Headwall (25' x 25')	325.00		314.24	See Plan, Profile & Details
S-6	Special Headwall (25' x 25')	325.00	314.40		See Plan, Profile & Details

* Inlets with deflectors.

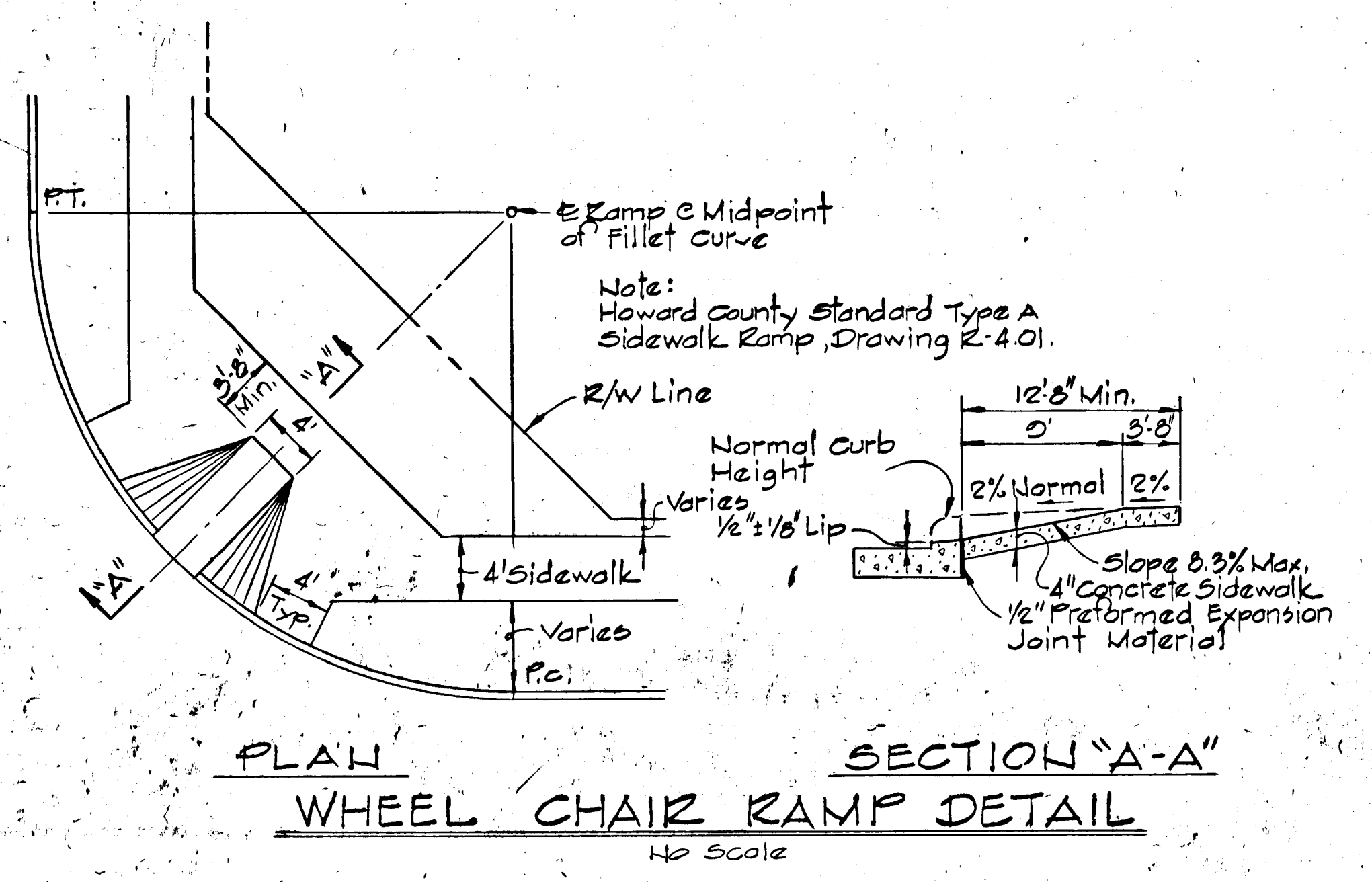
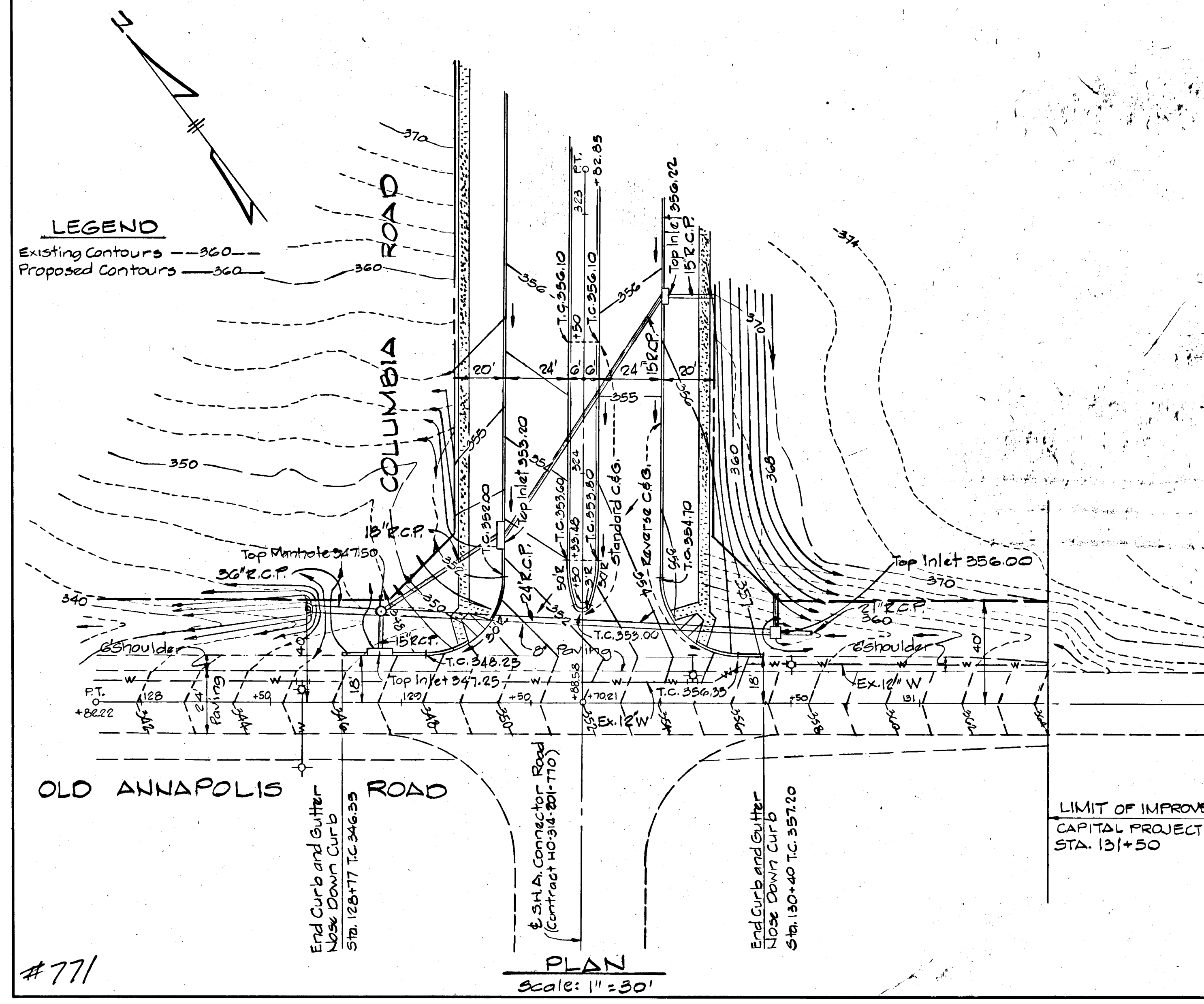
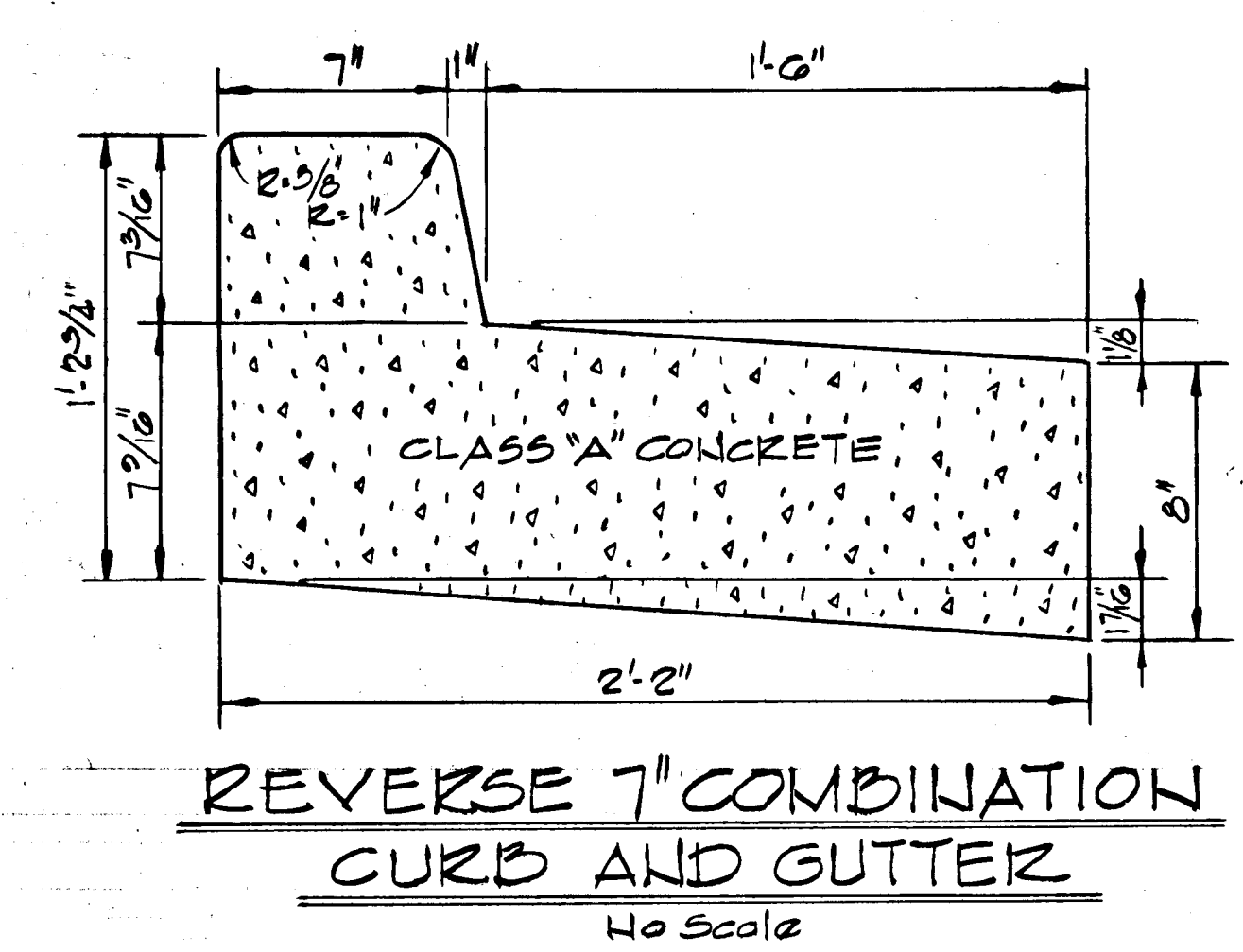
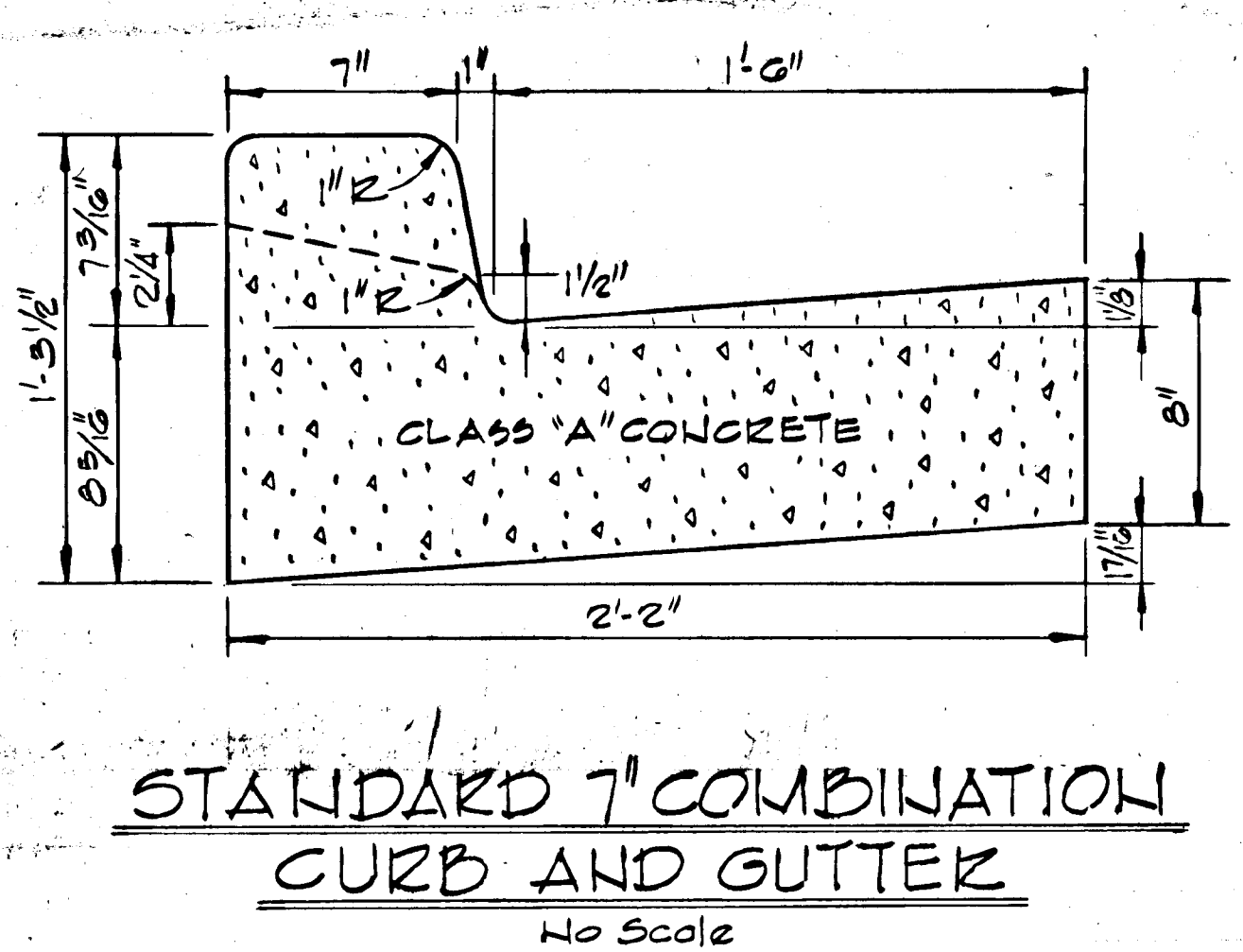
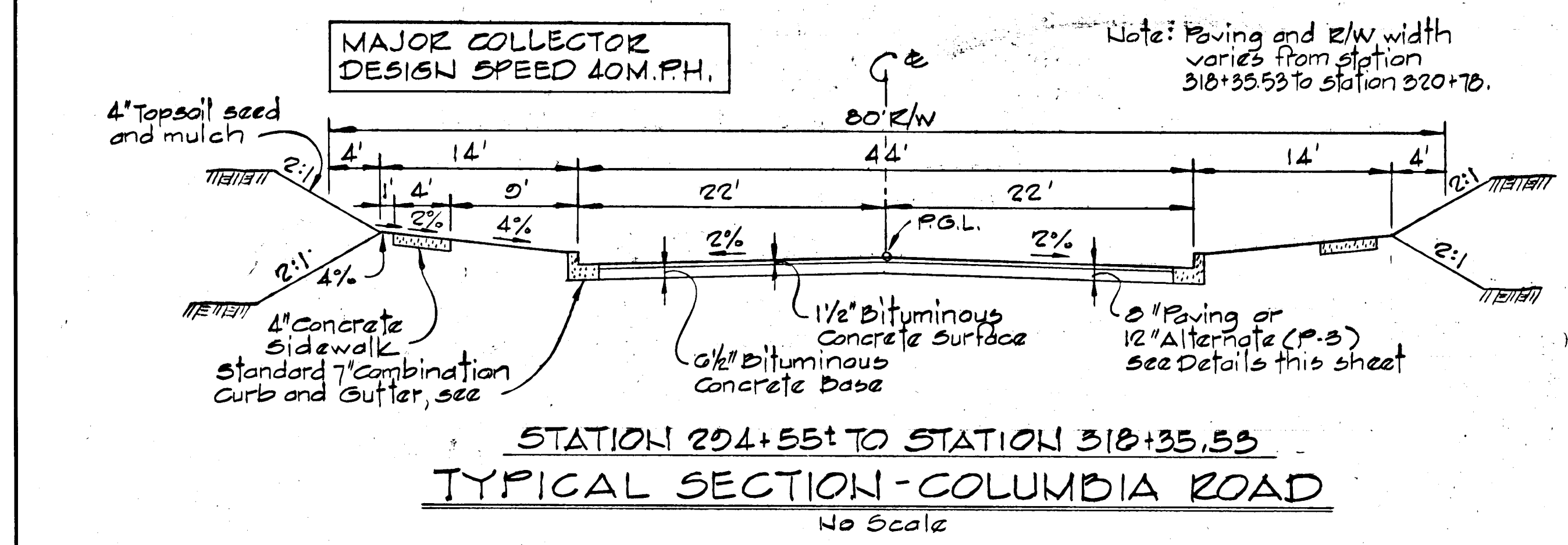
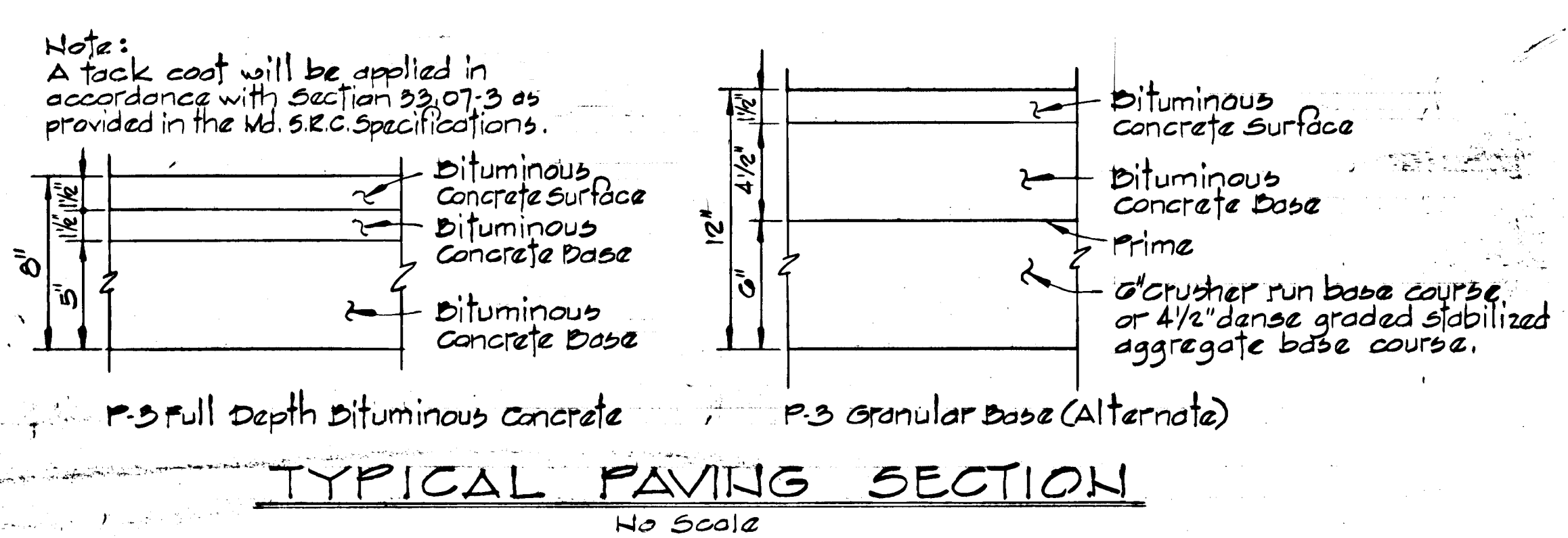
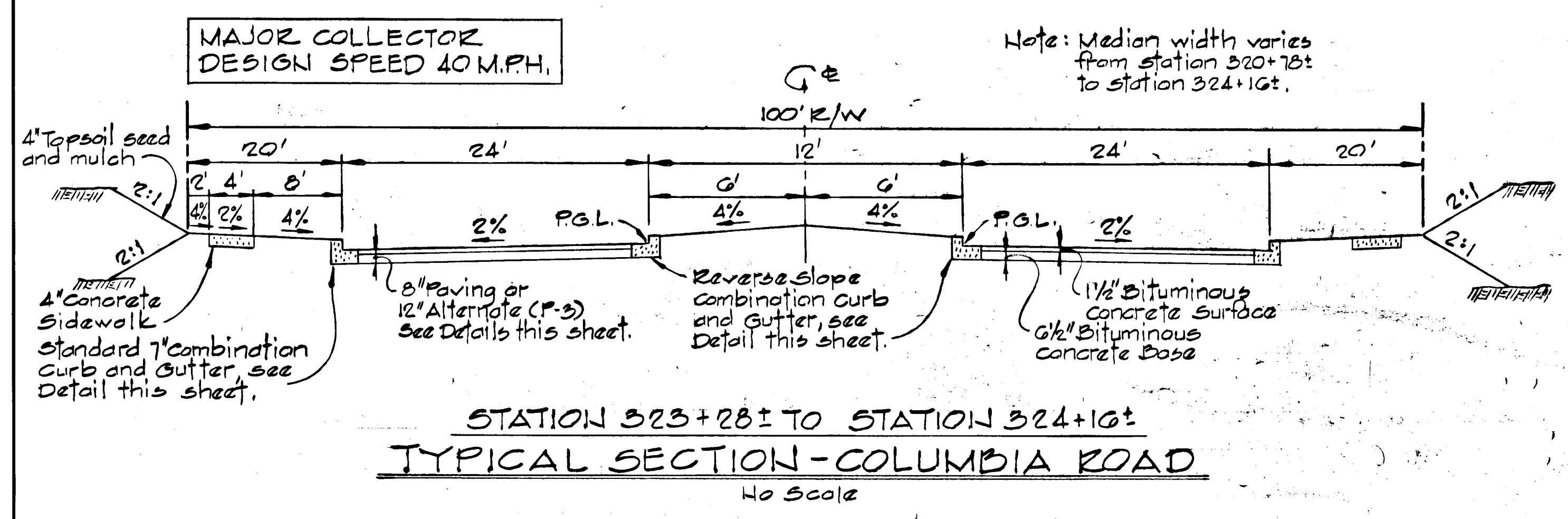
CURVE NO. 1
 Chd = 41.26 Chd Brg = $S19^{\circ}45'20''E$
 Arc = 41.61 $\Delta = 26^{\circ}30'0''$
 Rad = 90.00 Tan = 21.19

CURVE NO. 2
 Chd = 24.03 Chd Brg = $S13^{\circ}15'55''E$
 Arc = 24.10 $\Delta = 16^{\circ}15'0''$
 Rad = 85.00 Tan = 12.14



DATE: _____
 BY: _____
 CHECKED: _____
 NO. _____

DATE: _____
 BY: _____
 CHECKED: _____
 NO. _____



REV. DATE	REV. NO.	REVISION DESCRIPTION
8/15/84	1	As per P.W. & S.C. comments

DORSEY HALL
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION

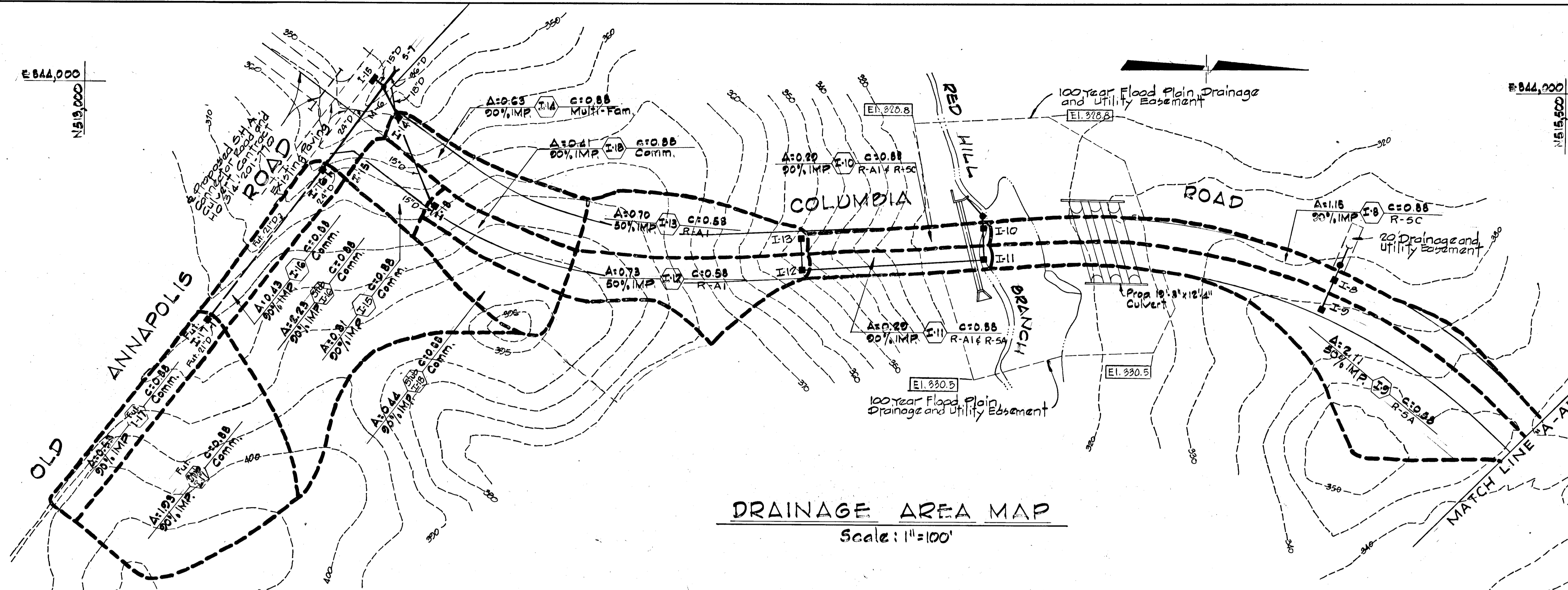
PROJECT AREA
 SECTION 2 AREA 1

PROJECT TITLE
 ROADWAY DETAILS

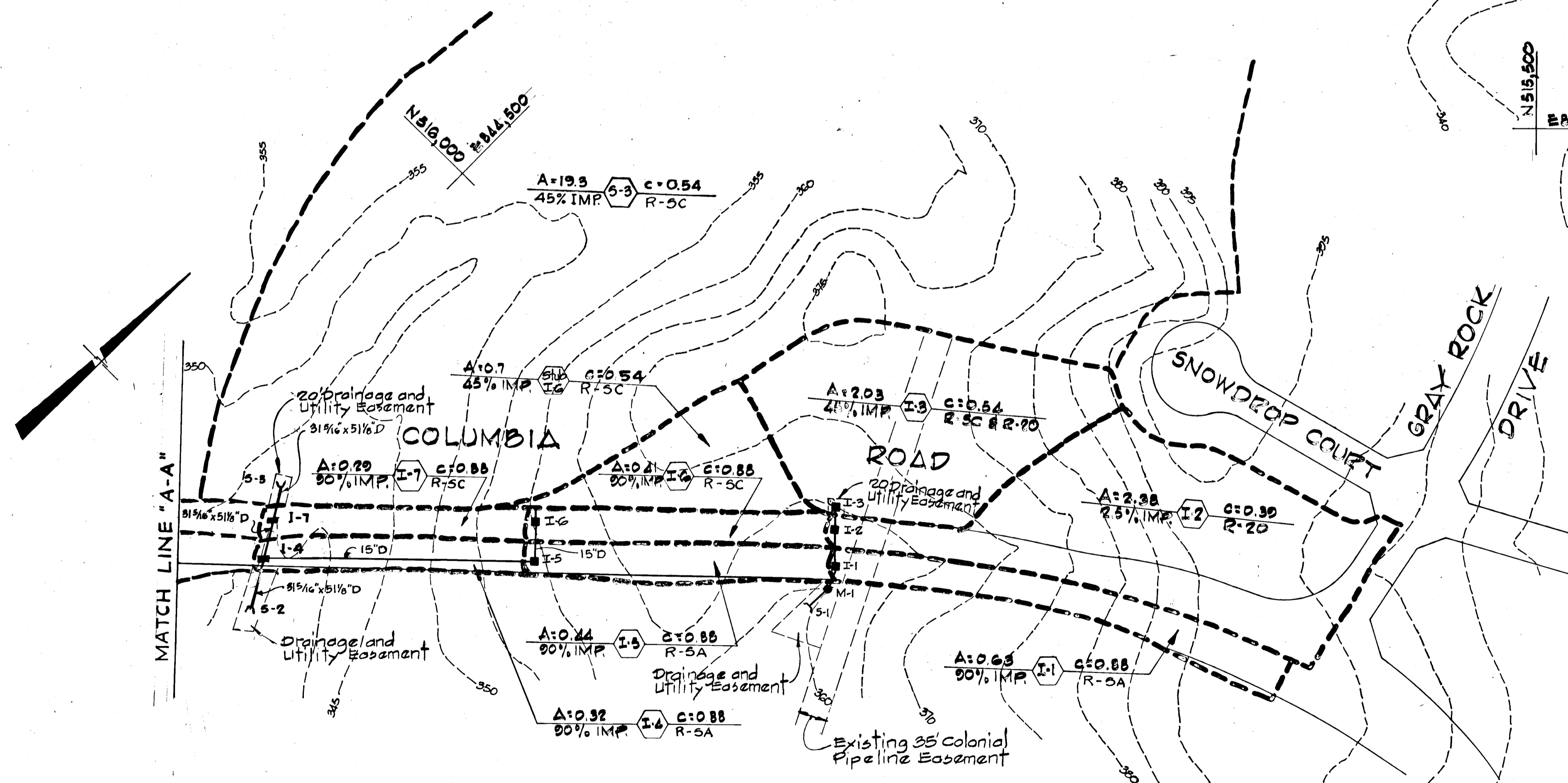
SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

Kenneth A. McCord
 REGISTERED ENGINEER
 NO. 1074



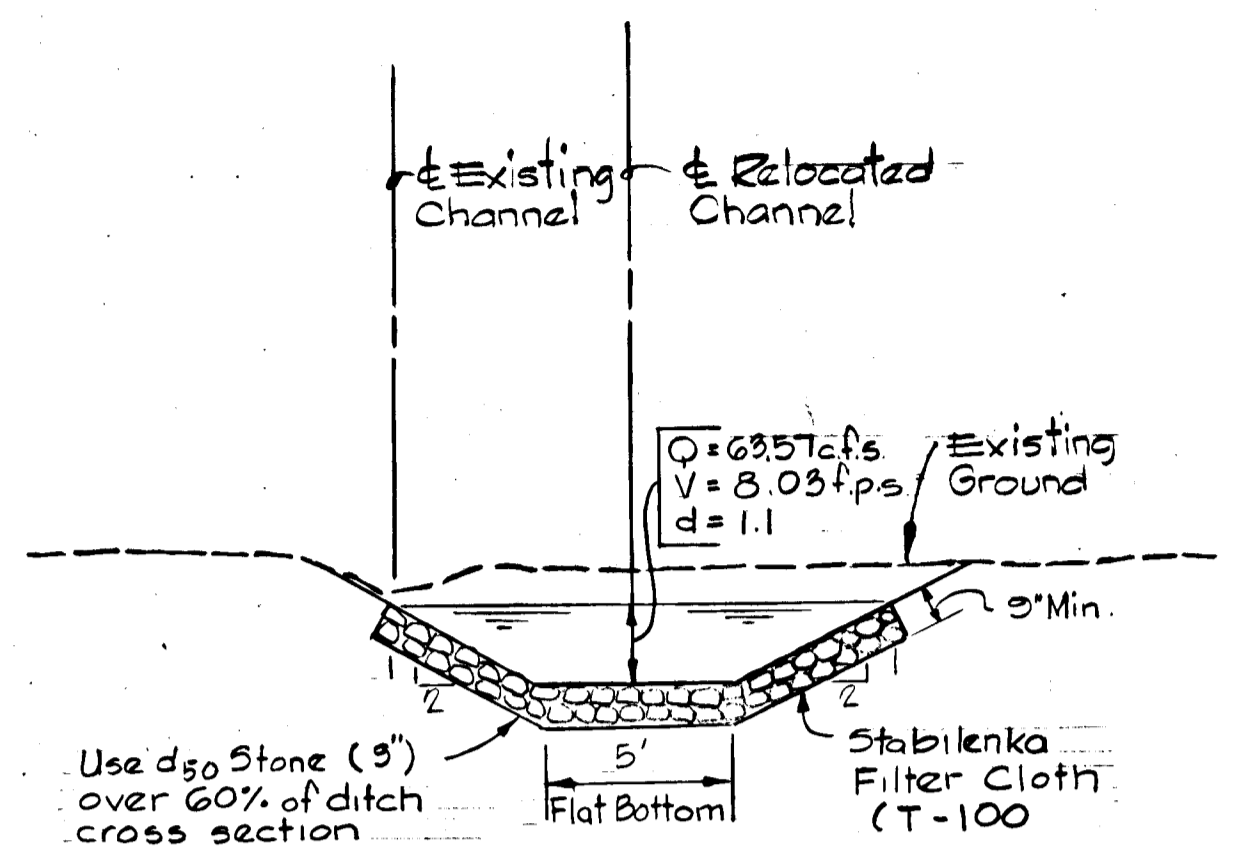
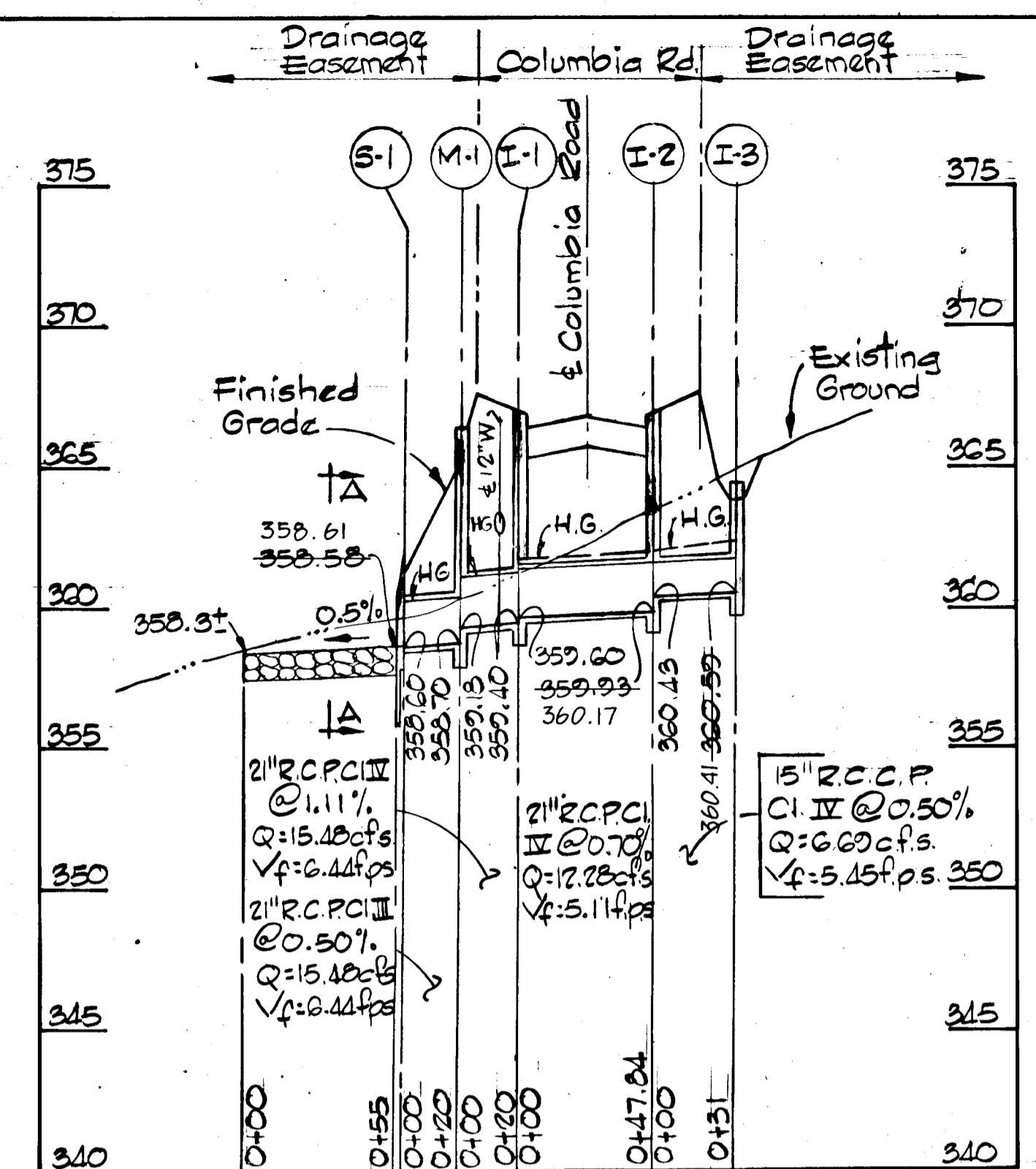
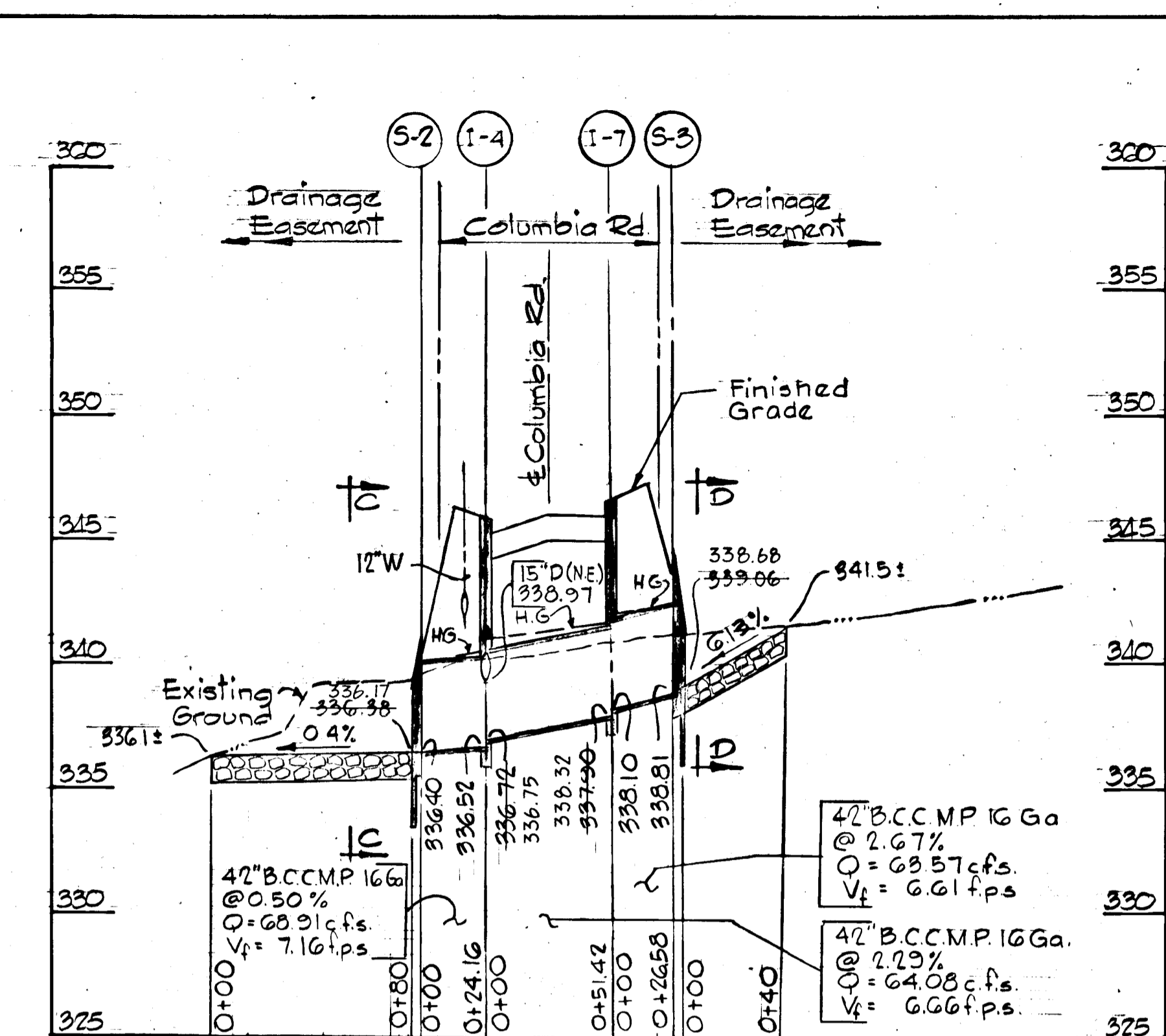
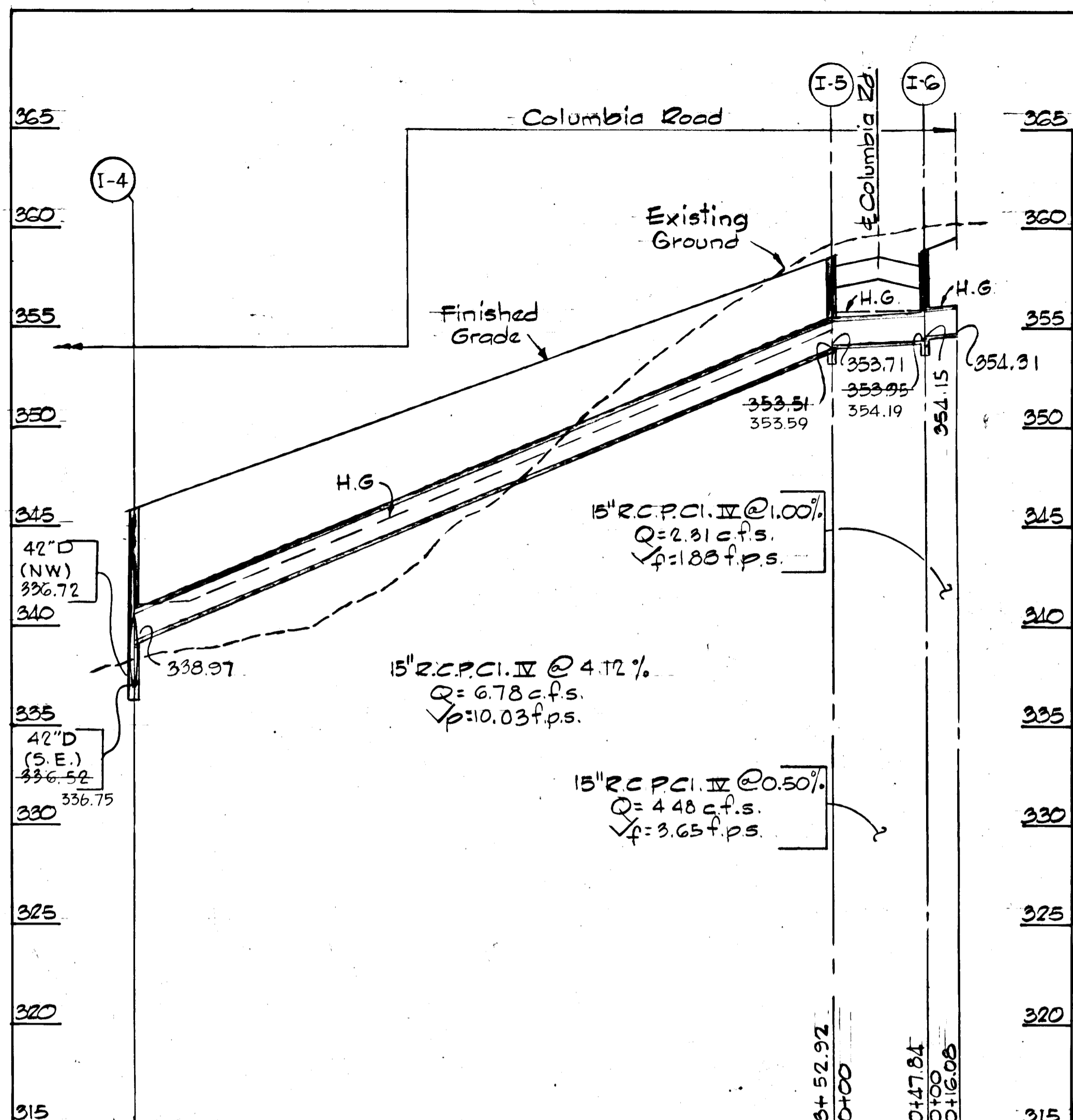
DRAINAGE AREA MAP
 Scale: 1"=100'



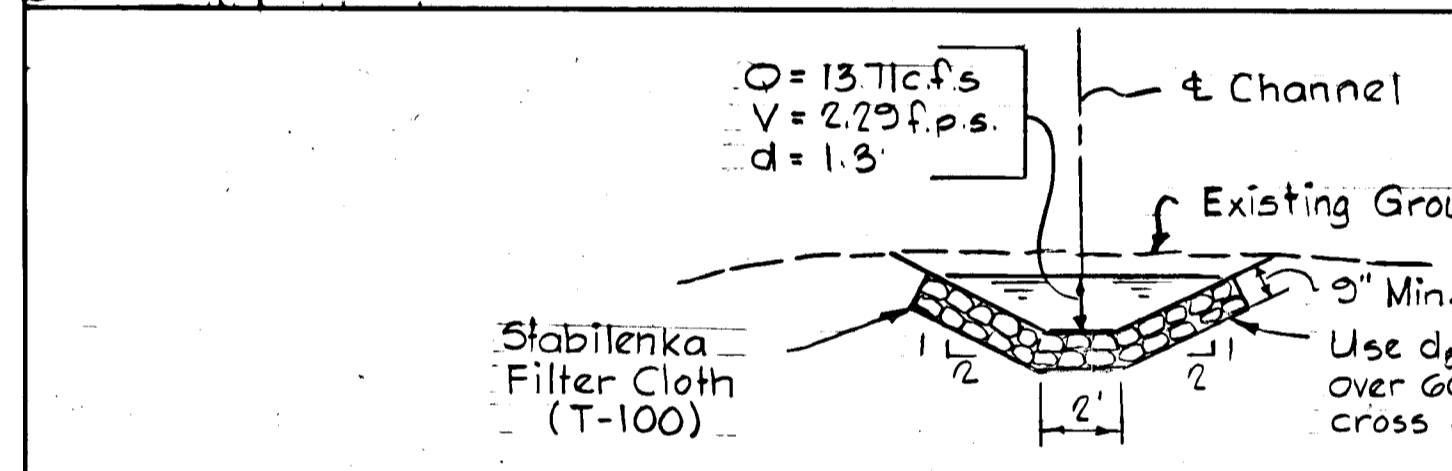
DRAINAGE AREA MAP
 Scale: 1"=100'

REV. DATE	REV. NO.	REVISION DESCRIPTION
2/13/84	1	As Per 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 1		
PROJECT TITLE DRAINAGE AREA MAP		
SCALE: AS SHOWN DATE:		
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
Kenneth A. McCord REGISTERED ENGINEER No. 1074		

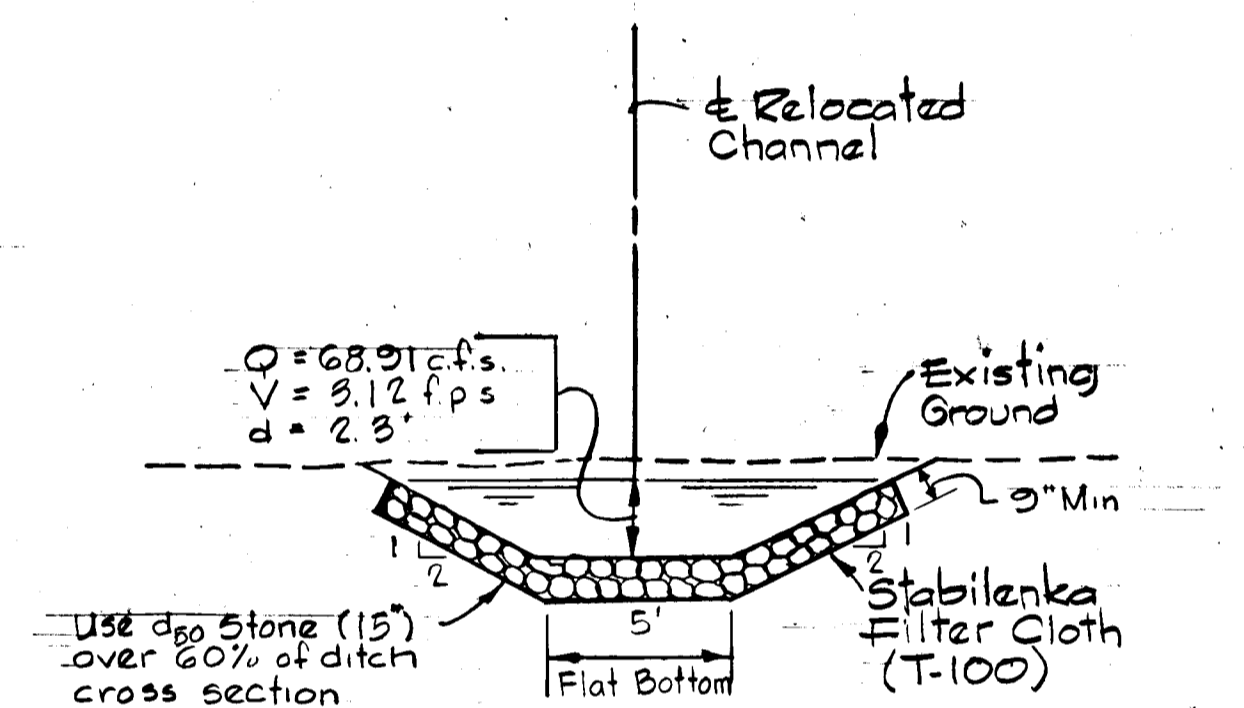
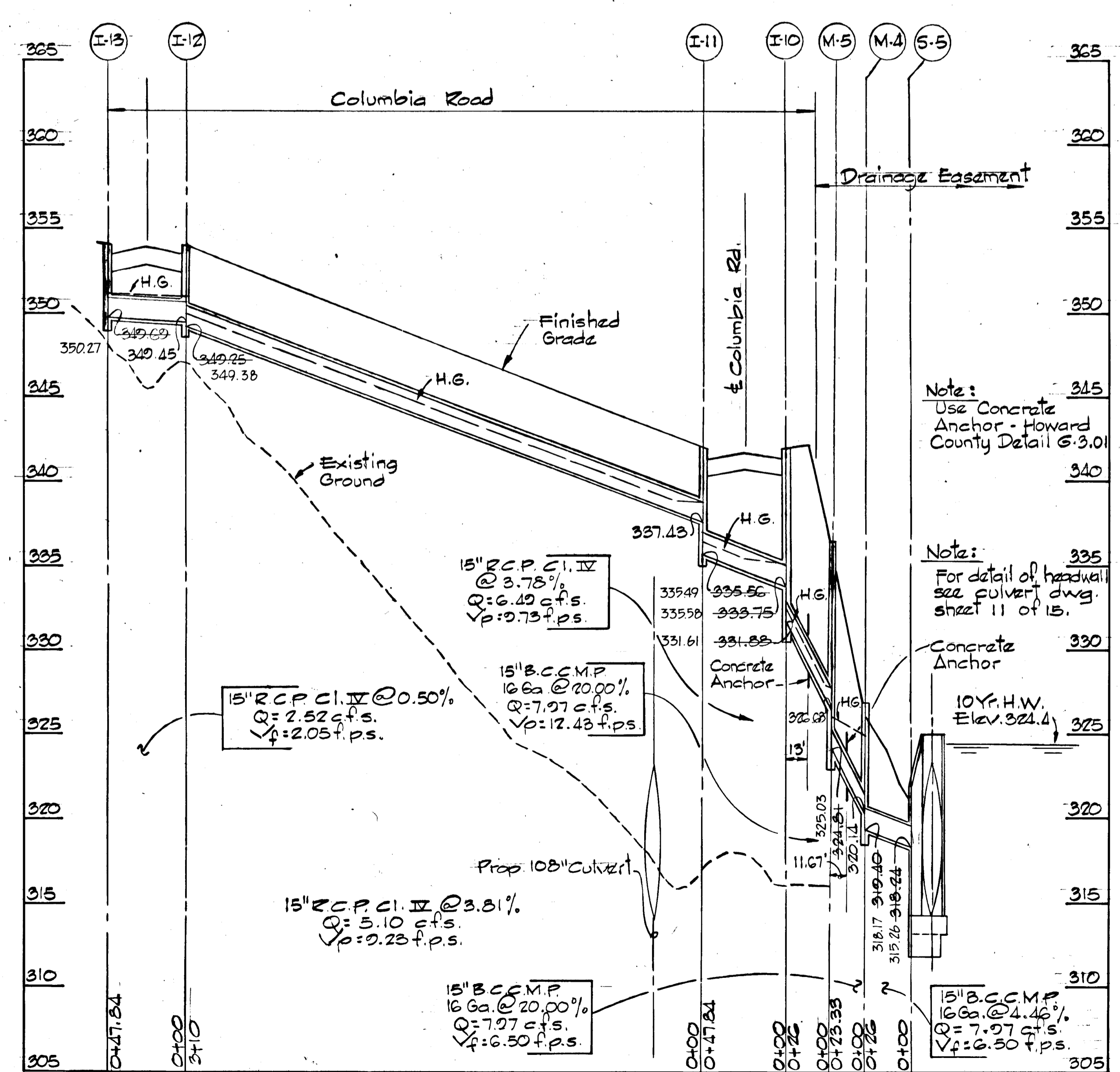
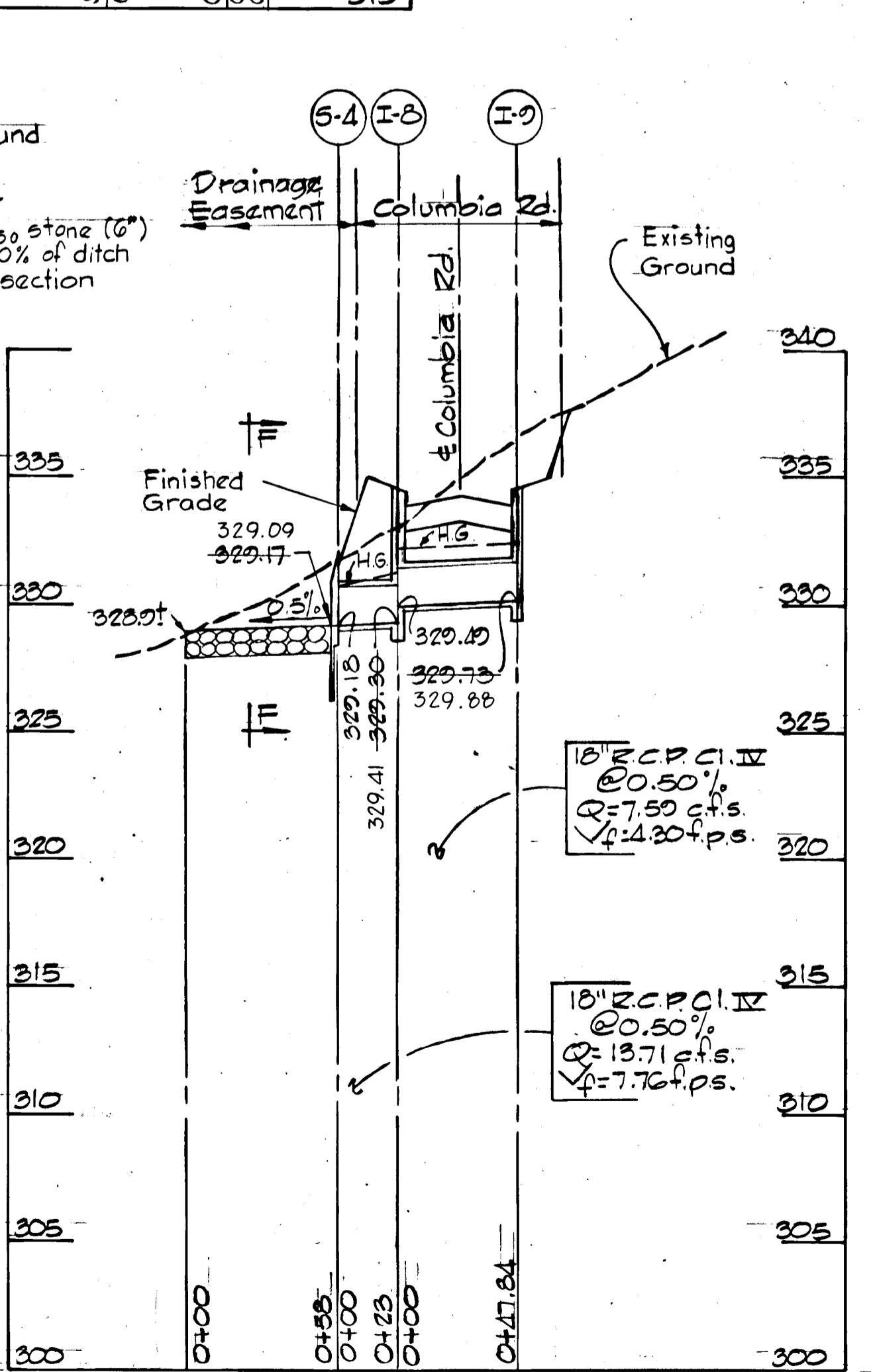
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SECTION D-D
No Scale



SECTION F-F
No Scale



SECTION C-C
No Scale

Note:
 The type of bedding used for storm drain pipe 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.

Note:
 Use Concrete Anchor - Howard County Detail G-3.01

Note:
 For detail of headwall see pulver. dwg. sheet 11 of 15.

"AS-BUILT" ELEVATIONS AS OF JUNE 3, 1986

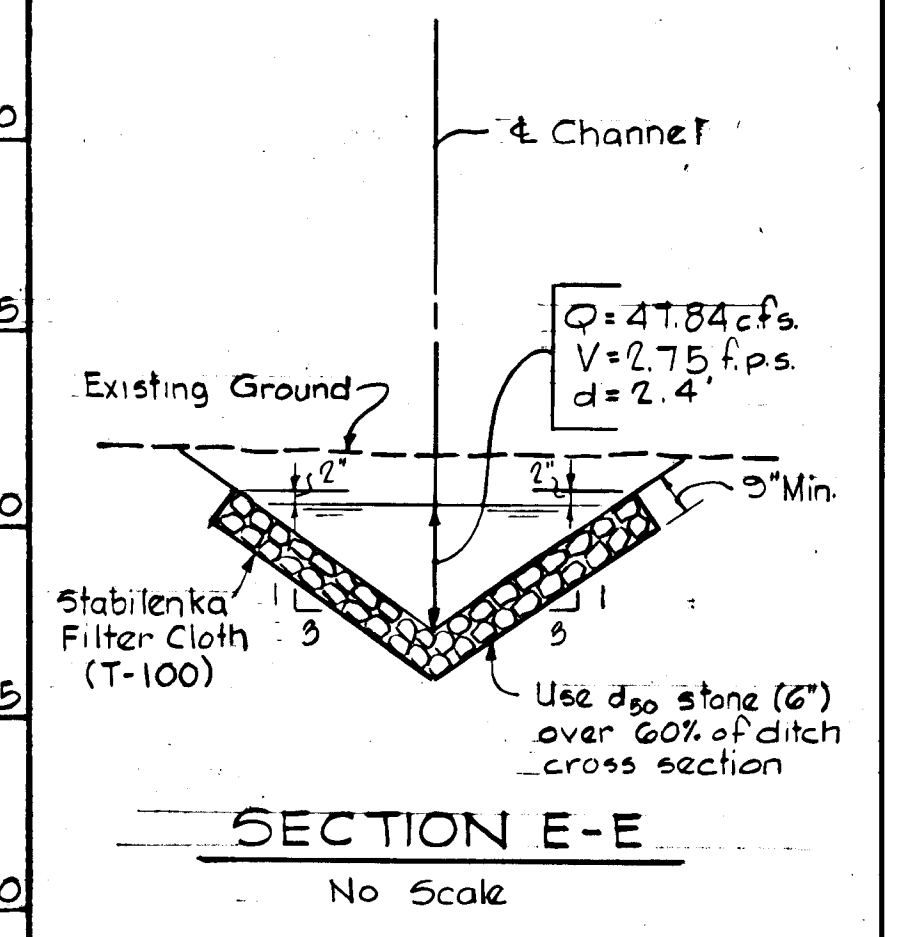
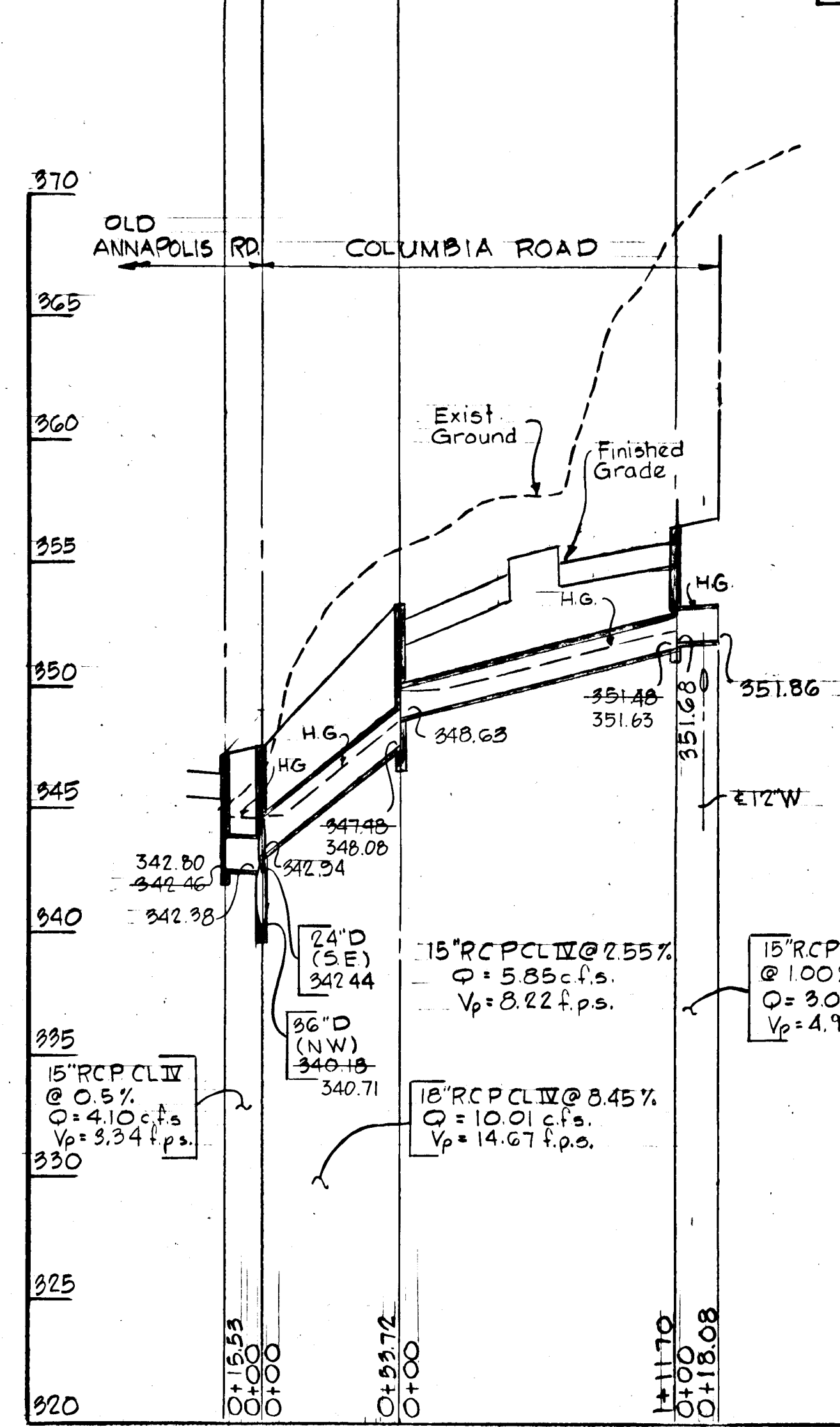
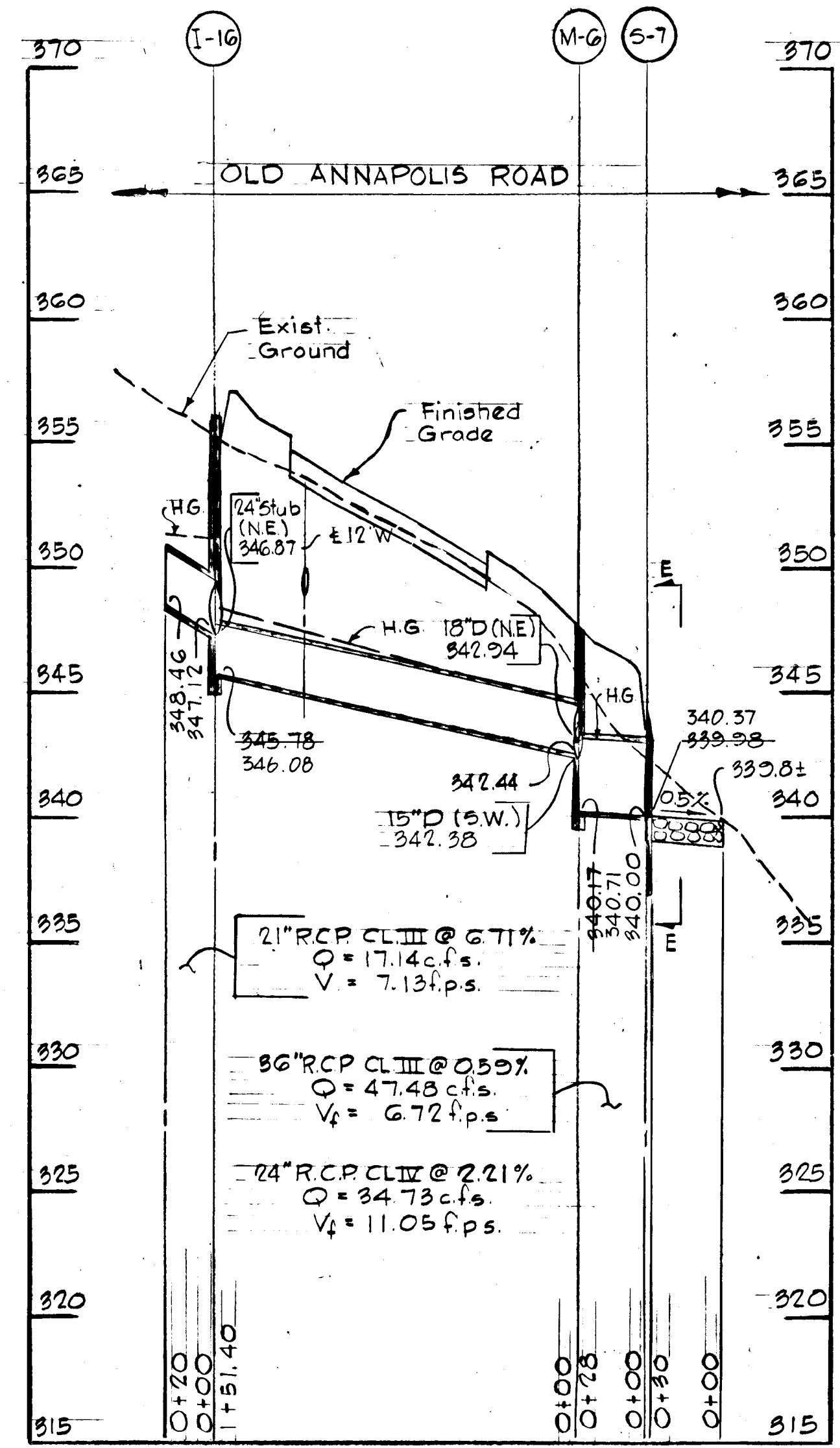
KENNETH A. McCORD P.E. #1974

REVISION	REVNO	REVISION DESCRIPTION
4/11/83	2	As Per H.D. Comments
6/19/84	1	As Per D.P.W. & S.C.S. Comments
<p>DORSEY HALL 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND</p> <p>OWNER AND DEVELOPER COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION</p> <p>PROJECT AREA SECTION 2 AREA 1</p> <p>PROJECT TITLE STORM DRAIN PROFILES</p> <p>SCALE: AS SHOWN DATE:</p> <p>WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218</p>		

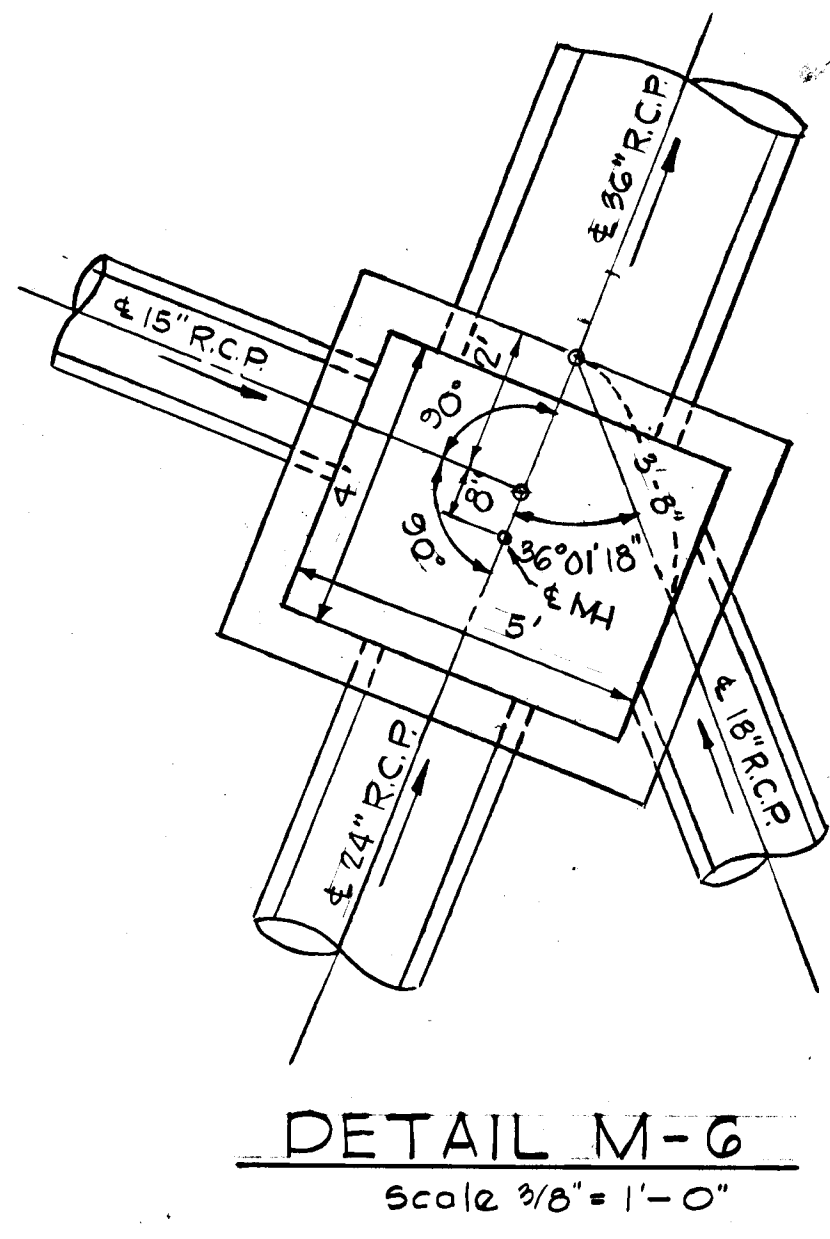
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F-85-16

7/10/84 SHEET 7 OF 15



Note:
 The type of bedding used for storm drain pipe 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.



As-BUILT ELEVATIONS As of JUNE 3, 1986

KENNETH A. MCCORD PE #1974

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DORSEY HALL
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION

PROJECT AREA
 SECTION 2 AREA 1

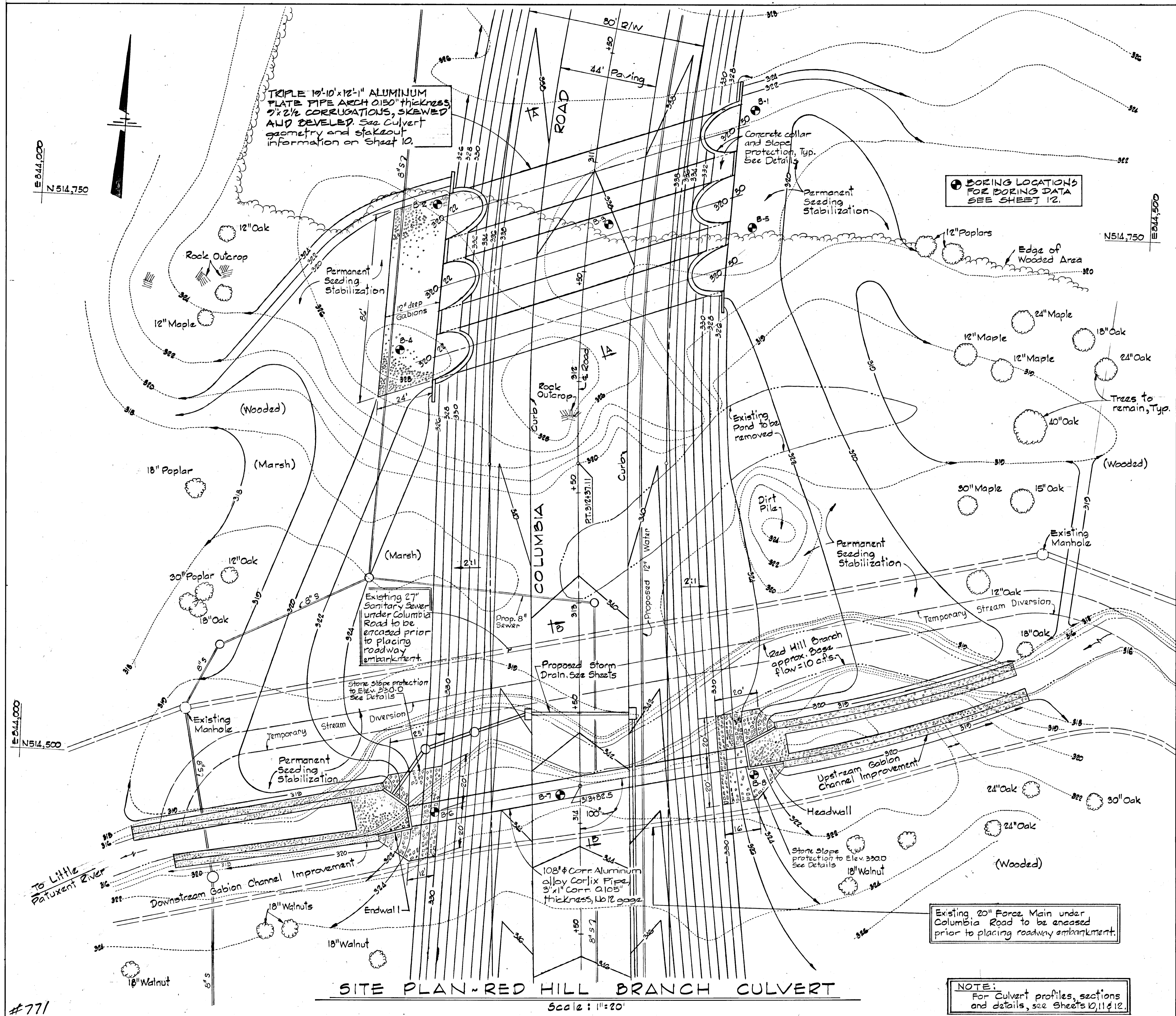
PROJECT TITLE
 STORM DRAIN PROFILES AND DETAILS

SCALE: AS SHOWN DATE: 1

WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS
 BALTIMORE, MARYLAND 21218

Kenneth A. McCord
 KENNETH A. MCCORD
 REGISTERED ENGINEER
 NO. 1

#771



TRIPLE 10'-10" x 12'-1" ALUMINUM PLATE PIPE ARCH 0.150" thickness 2" x 2 1/2" CORRUGATIONS, SKEWED AND BEVELED. See Culvert geometry and stakeout information on Sheet 10.

BORING LOCATIONS FOR BORING DATA SEE SHEET 12.

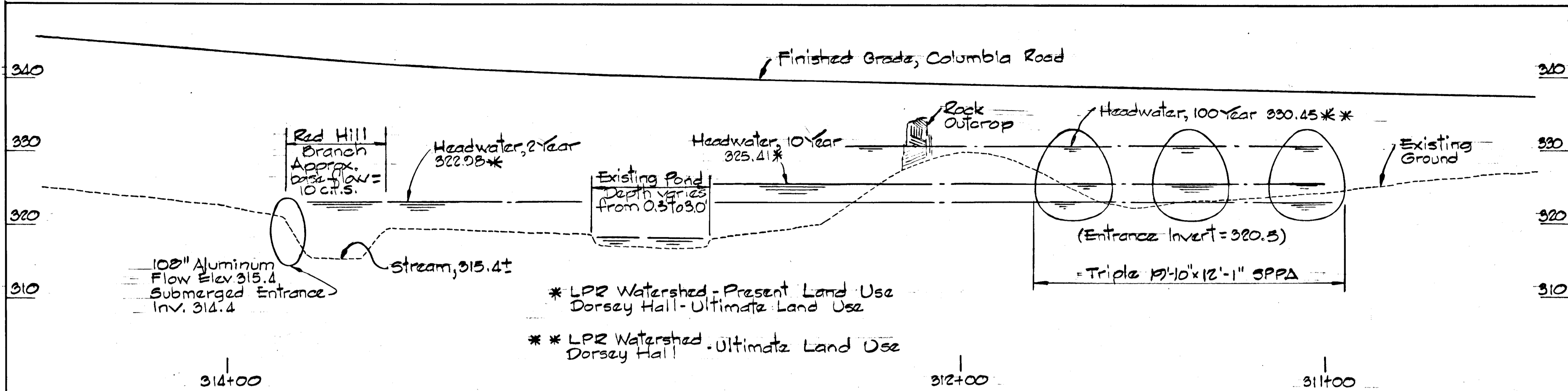
NOTE: FOR SEDIMENT CONTROL PRACTICES DURING CULVERT CONSTRUCTION SEE SHEETS 13, 14 AND 15.

0/10/84	1	As Per D.P.W. & S.C.S. Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION
DORSEY HALL 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION		
PROJECT AREA SECTION 2 AREA 1		
PROJECT TITLE RED HILL BRANCH CULVERT PLAN		
SCALE: AS SHOWN DATE:		
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
Kenneth A. McCord REGISTERED ENGINEER NO. 1074		

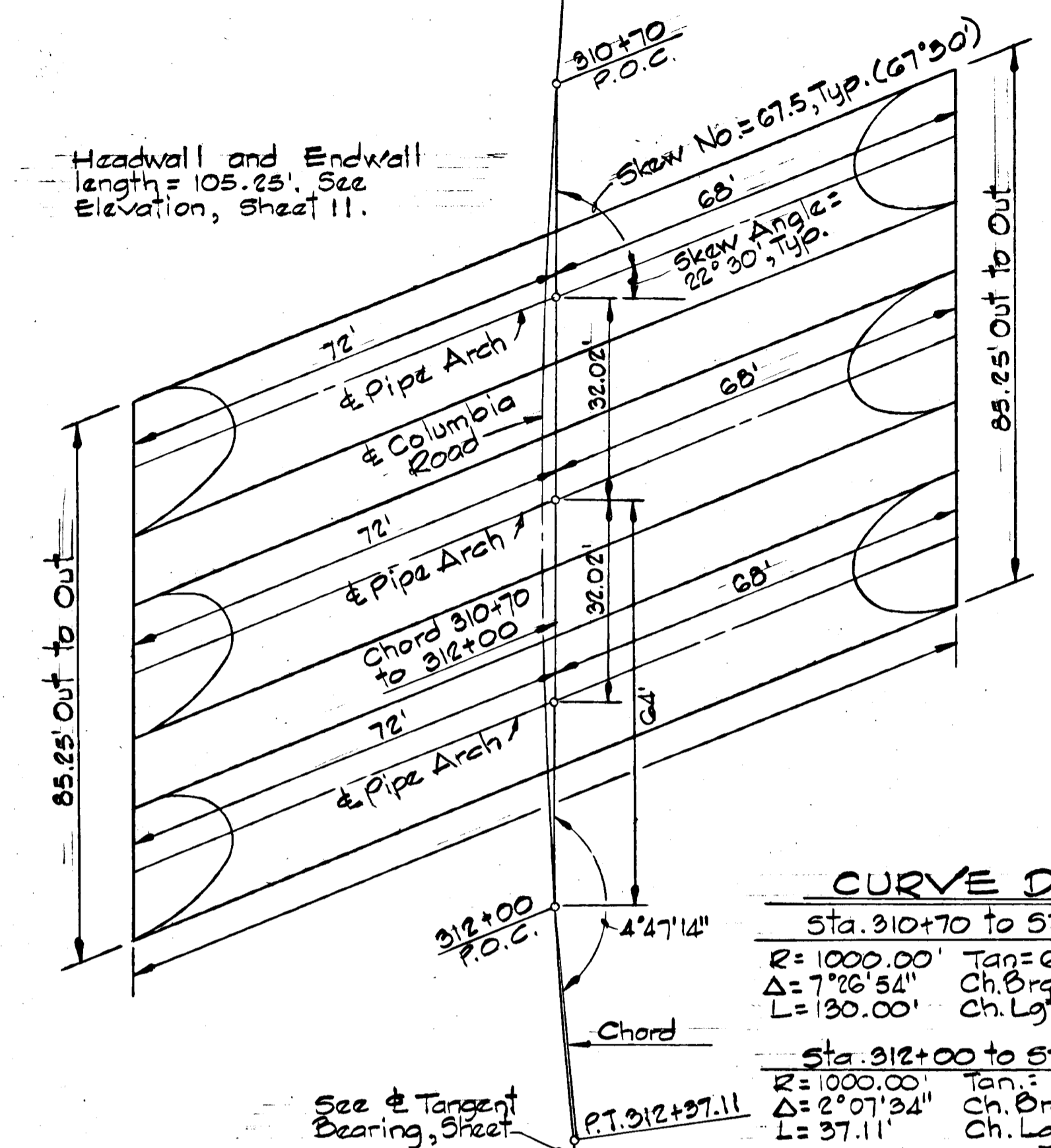
SITE PLAN - RED HILL BRANCH CULVERT

Scale: 1" = 20'

NOTE: For Culvert profiles, sections and details, see Sheets 10, 11 & 12.



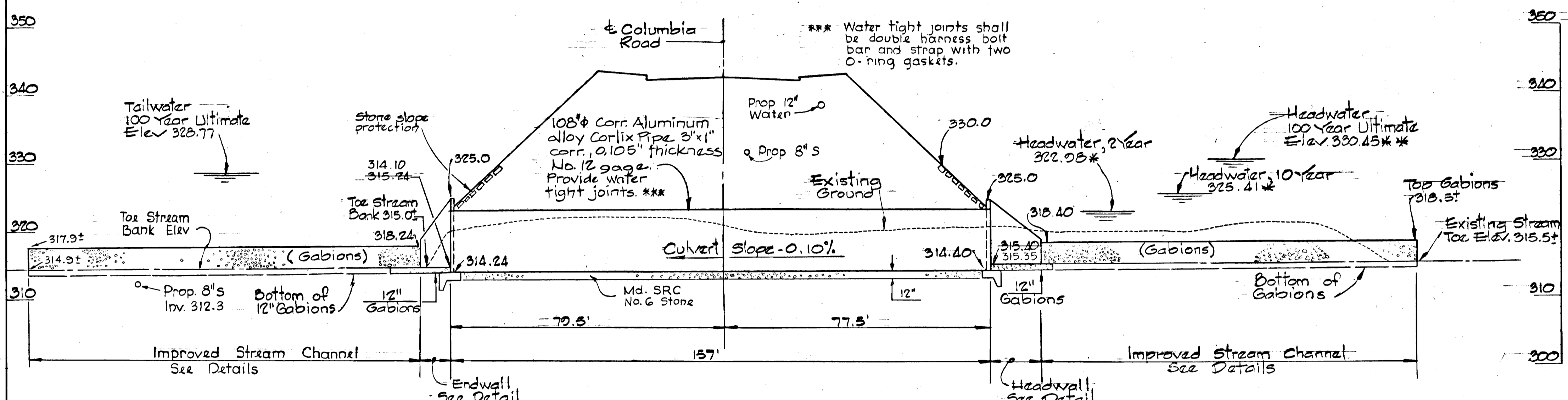
**CROSS SECTION
 RED HILL BRANCH CULVERT**
 Scale: Hor: 1"=20'
 Vert: 1"=10'



GEOMETRY and STAKEOUT-TRIPLE SPPA
 Scale: 1"=20'

CURVE DATA

Sta. 310+70 to Sta. 312+00	R=1000.00'	Tan.=65.00'	Ch. Org.=N2°55'51"E
	Δ=7°26'54"	Ch. Lgth.=129.01'	
Sta. 312+00 to Sta. 312+37.11	R=1000.00'	Tan.=18.56'	Ch. Org.=N1°51'23"W
	Δ=2°07'24"	Ch. Lgth.=37.11'	



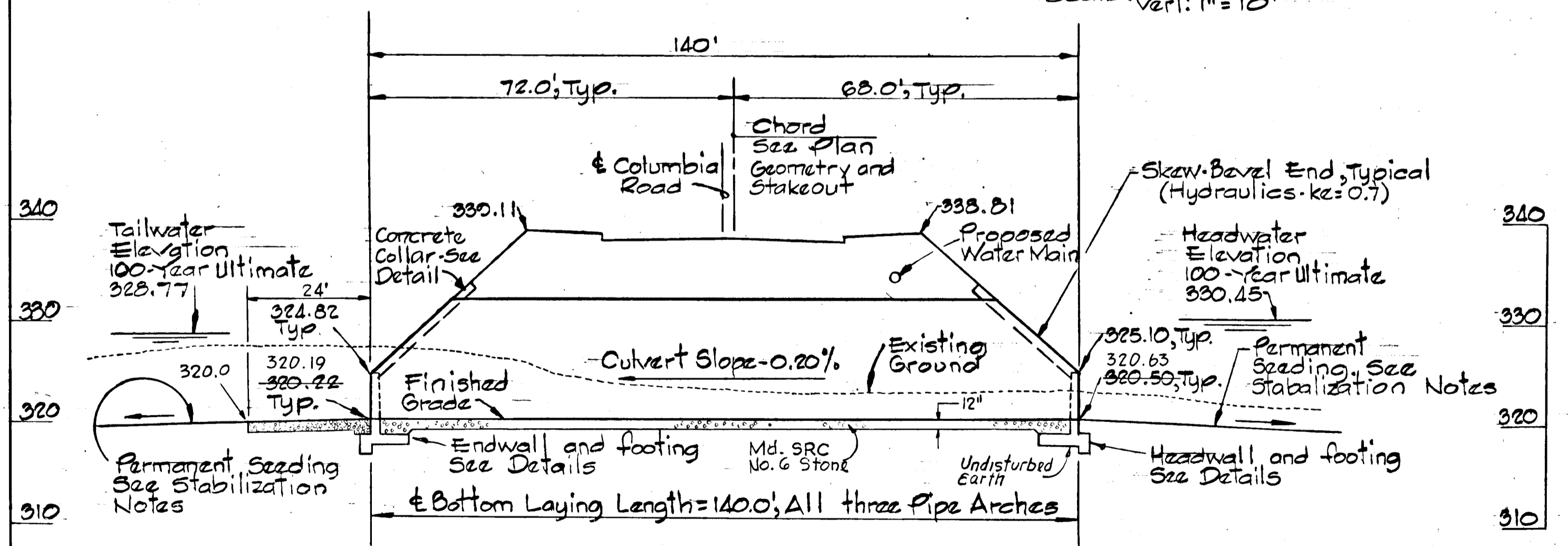
**PROFILE
 STREAM and CULVERT-108" ALUMINIUM PIPE**
 Scale: Hor: 1"=20'
 Vert: 1"=10'

**CULVERT CONSTRUCTION - SUBGRADE
 TRIPLE SPPA**

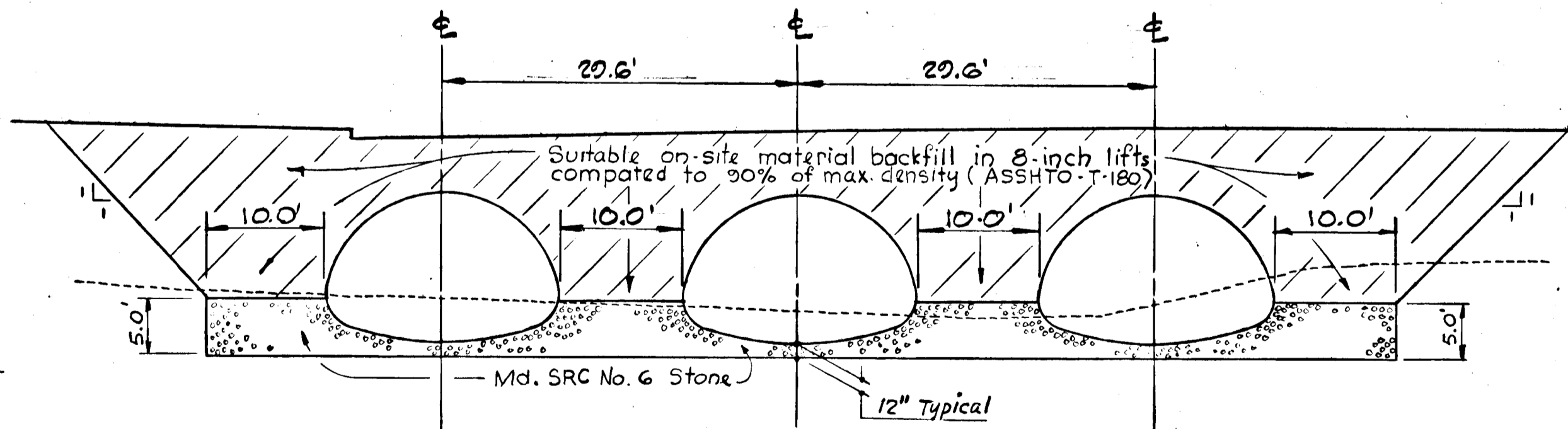
- Excavate to 12" below SPPA bottom elevation to limits shown. Trenching may be required in some places to lower ground water.
- When groundwater is controlled, run vibratory roller on excavated subgrade to densify. Soft areas will require undercutting.
- Backfill with Md. SRC No. 6 stone. Mold stone to underside of triple SPPA and compact with vibratory roller. Stone to maximum height adjacent to corner plates shall be compacted with vibratory roller. Place Terra Tex SD (Non woven) Filter Fabric or equal prior to placing stone.

AS-BUILT ELEVATIONS AS OF JUNE 3, 1986

KENNETH A. MCCORD P.E. # 1974



**PROFILE
 MIDDLE PIPE ARCH CULVERT-TRIPLE 19'-10" X 12'-1" SPPA**
 Scale: Hor: 1"=20'
 Vert: 1"=10'



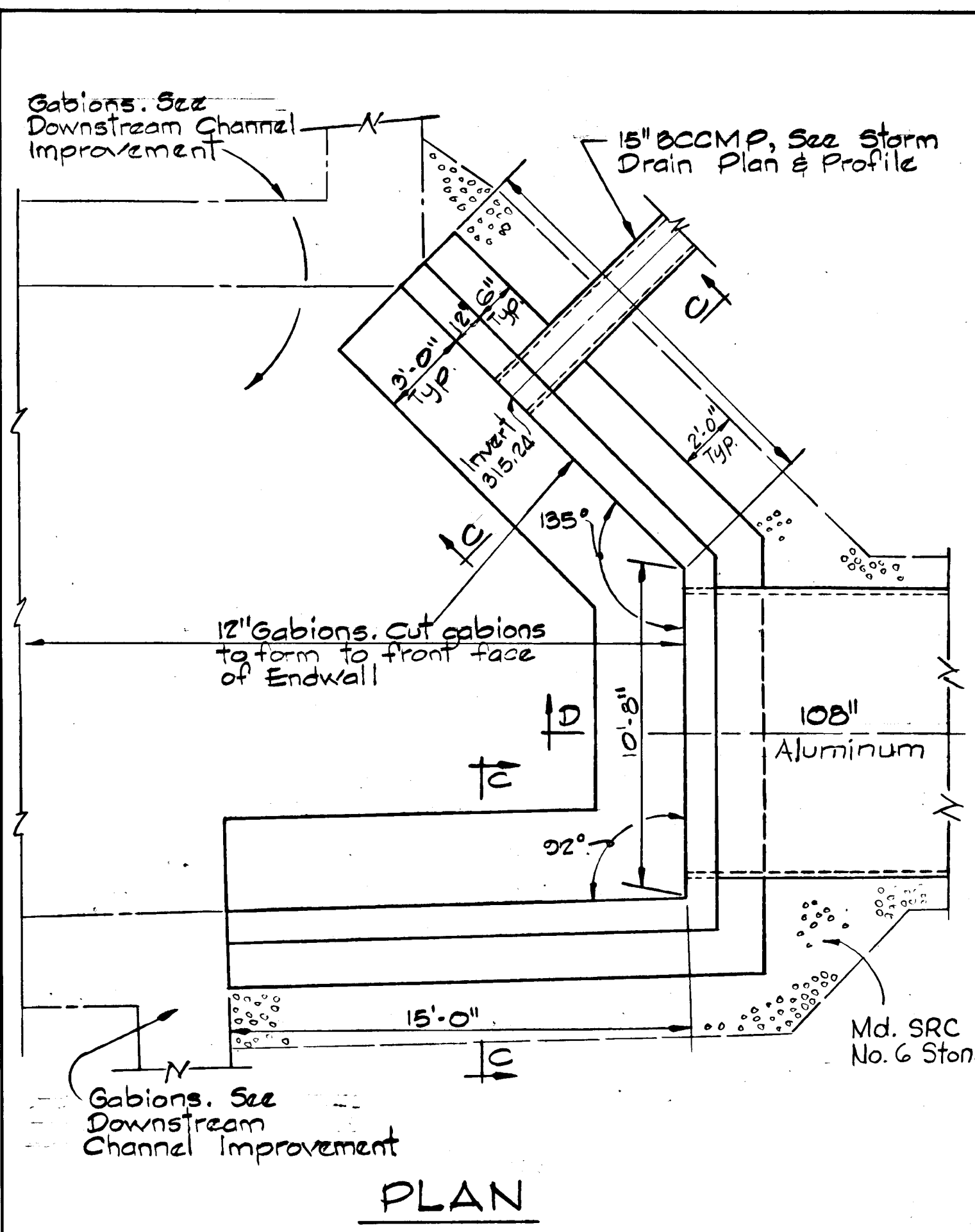
SECTION "A-A" (See Site Plan, Sheet 9)
 Scale: 1"=10'

**CULVERT CONSTRUCTION - SUBGRADE
 108" ALUMINIUM PIPE**

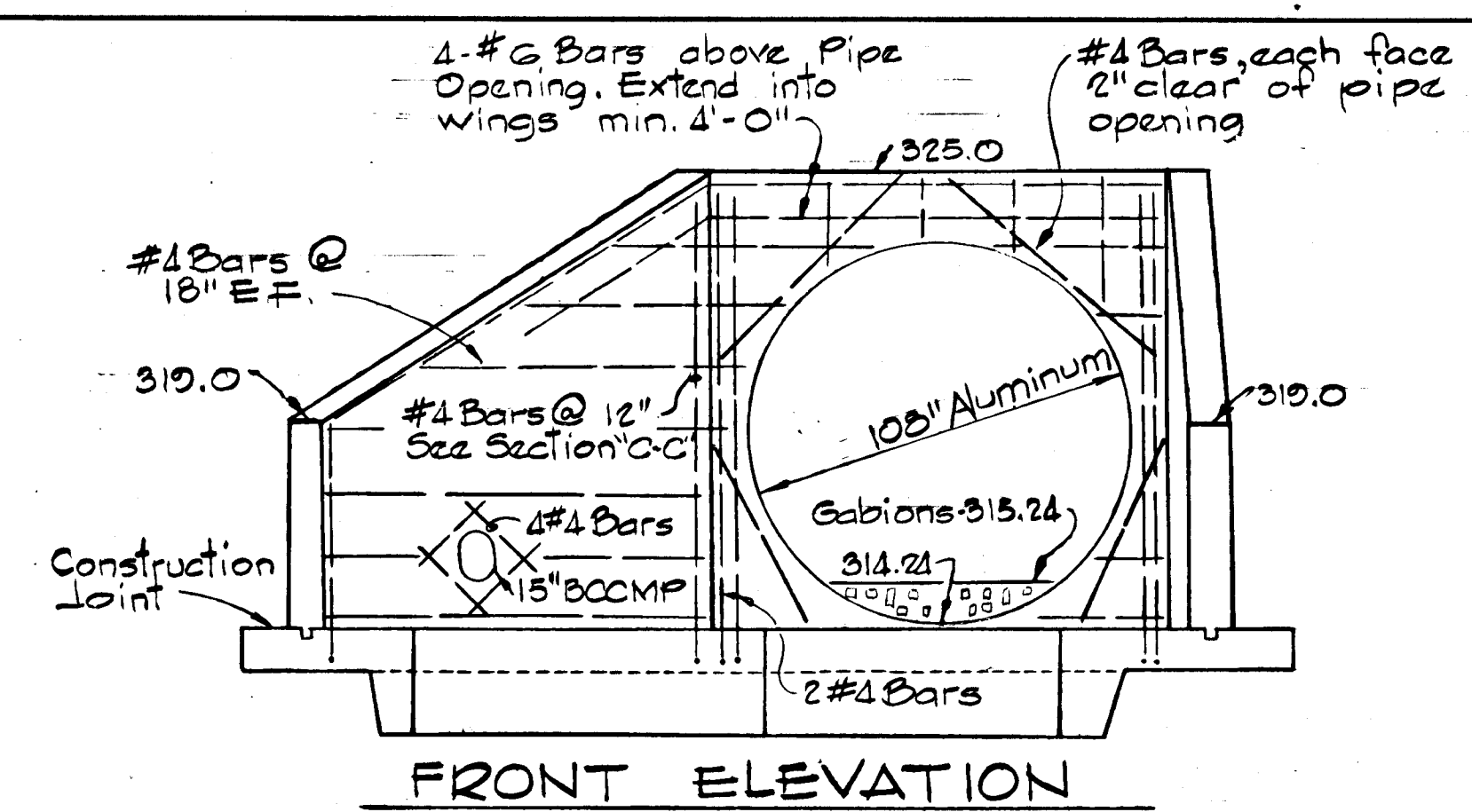
- Divert stream
- excavate to 12" below pipe
- Intercept ground water with trench on north side of culvert. Pump water to lower elevation.
- After water elevation is lowered, run vibratory roller on excavated bottom to densify. Soft areas will require undercutting.
- Backfill with Md. SRC No. 6 stone to 12" thickness. Compact stone with vibratory roller prior to placing 108" pipe. Place Terra Tex SD (Non Woven) Filter Fabric or equal prior to placing stone.

0/3/84	1	As Per D.W. & S.O.S. Comments	REVISION DESCRIPTION
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OWNER AND DEVELOPER COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION			
PROJECT AREA SECTION 2 AREA 1			
PROJECT TITLE RED HILL BRANCH CULVERT SECTIONS AND DETAILS			
SCALE: AS SHOWN		DATE:	
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218			
Kenneth A. McCord KENNETH A. MCCORD REGISTERED ENGINEER NO. 1974			

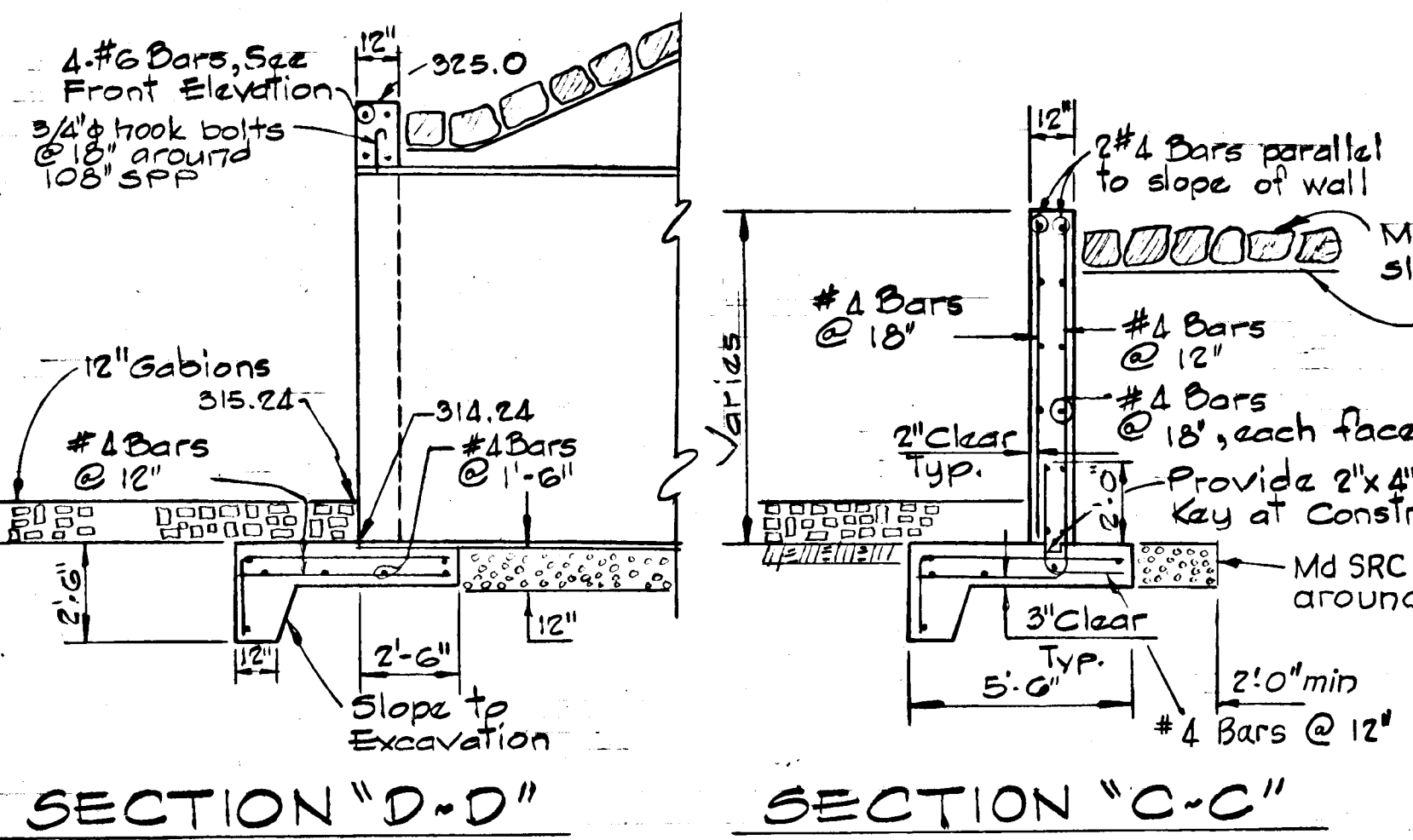
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PLAN



FRONT ELEVATION

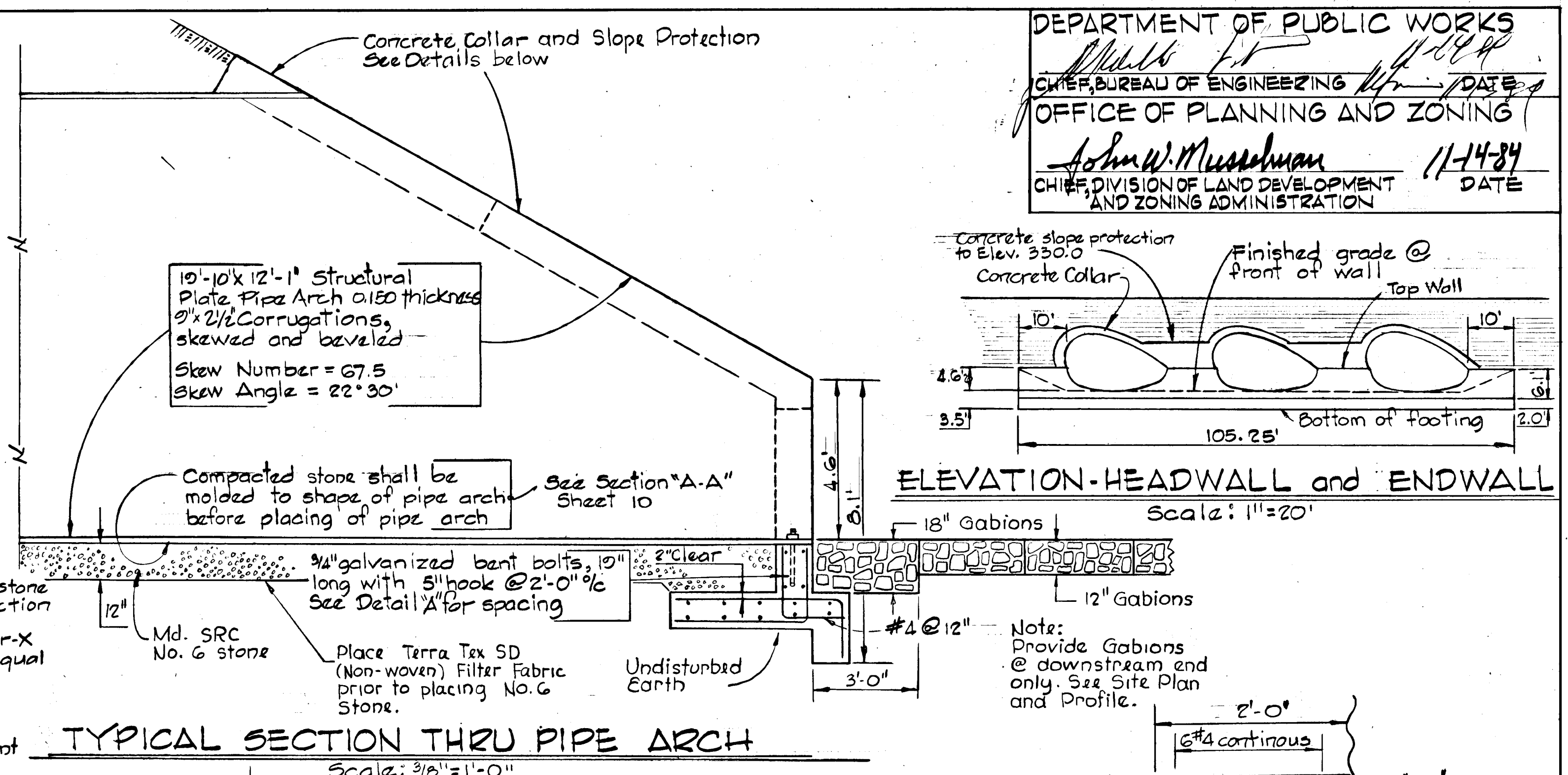


SECTION "D-D"

SECTION "C-C"

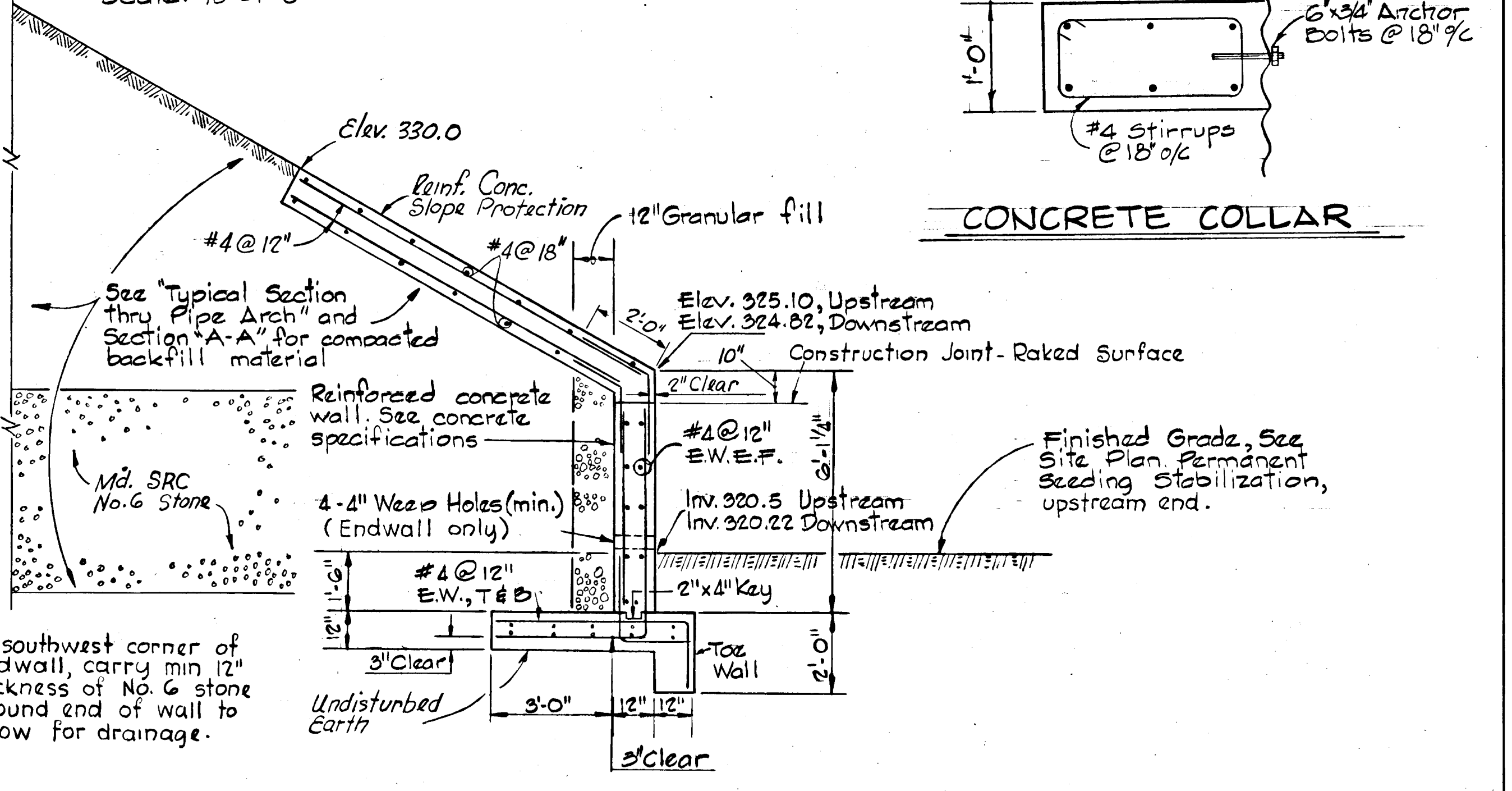
5-5 ENDWALL DETAIL - 108" ALUMINUM
 Scale: 1/4" = 1'-0"

SPECIFICATIONS
 All corrugated metal pipe shall meet AASHTO Specification M-210-82
 108" Aluminum Pipe shall meet AASHTO M-196
 Concrete:
 f'c = 4000 psi air entrained @ 28 days
 Fy = 60,000 psi
 Concrete in accordance with ACI 301



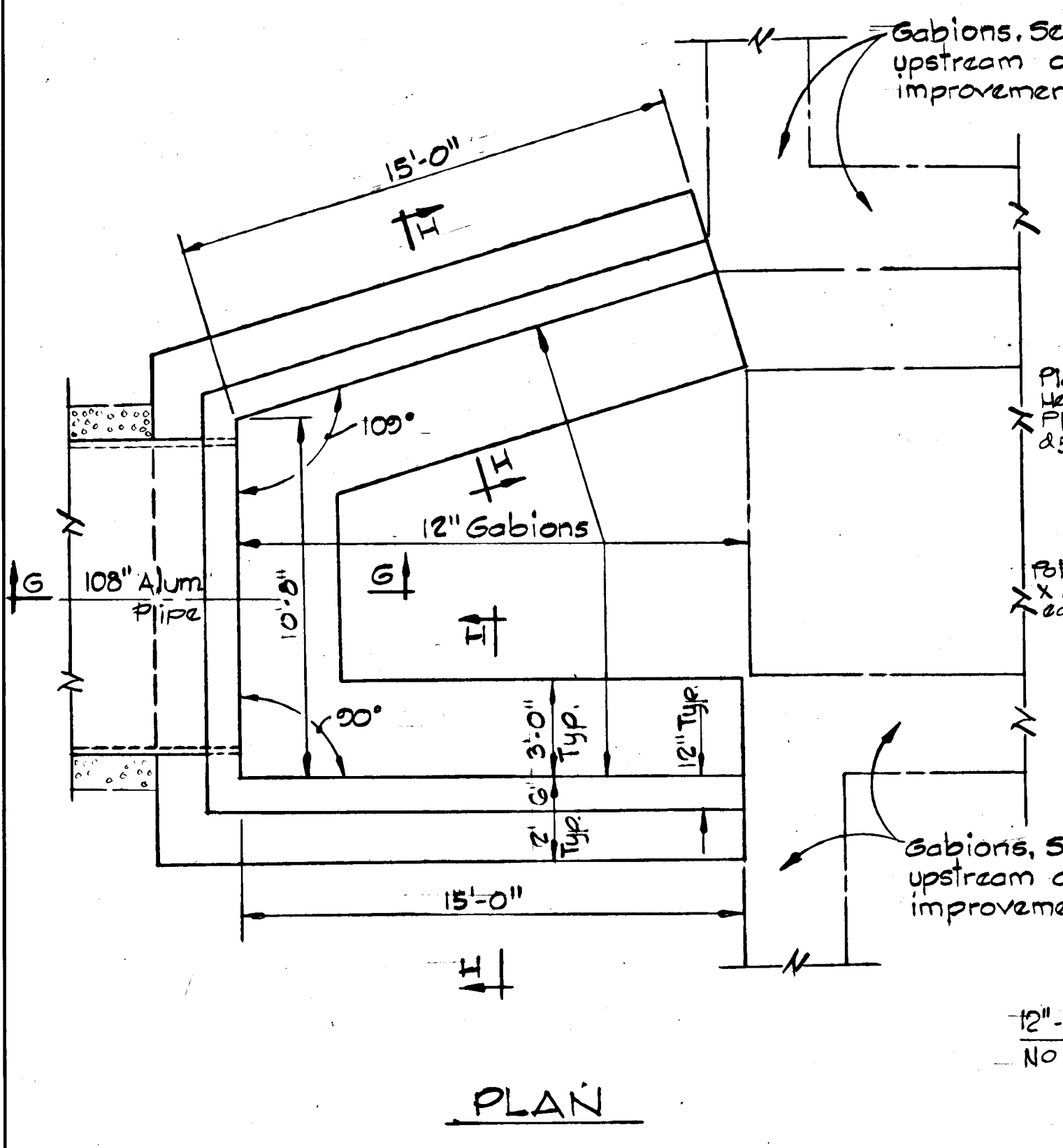
TYPICAL SECTION THRU PIPE ARCH

ELEVATION-HEADWALL and ENDWALL

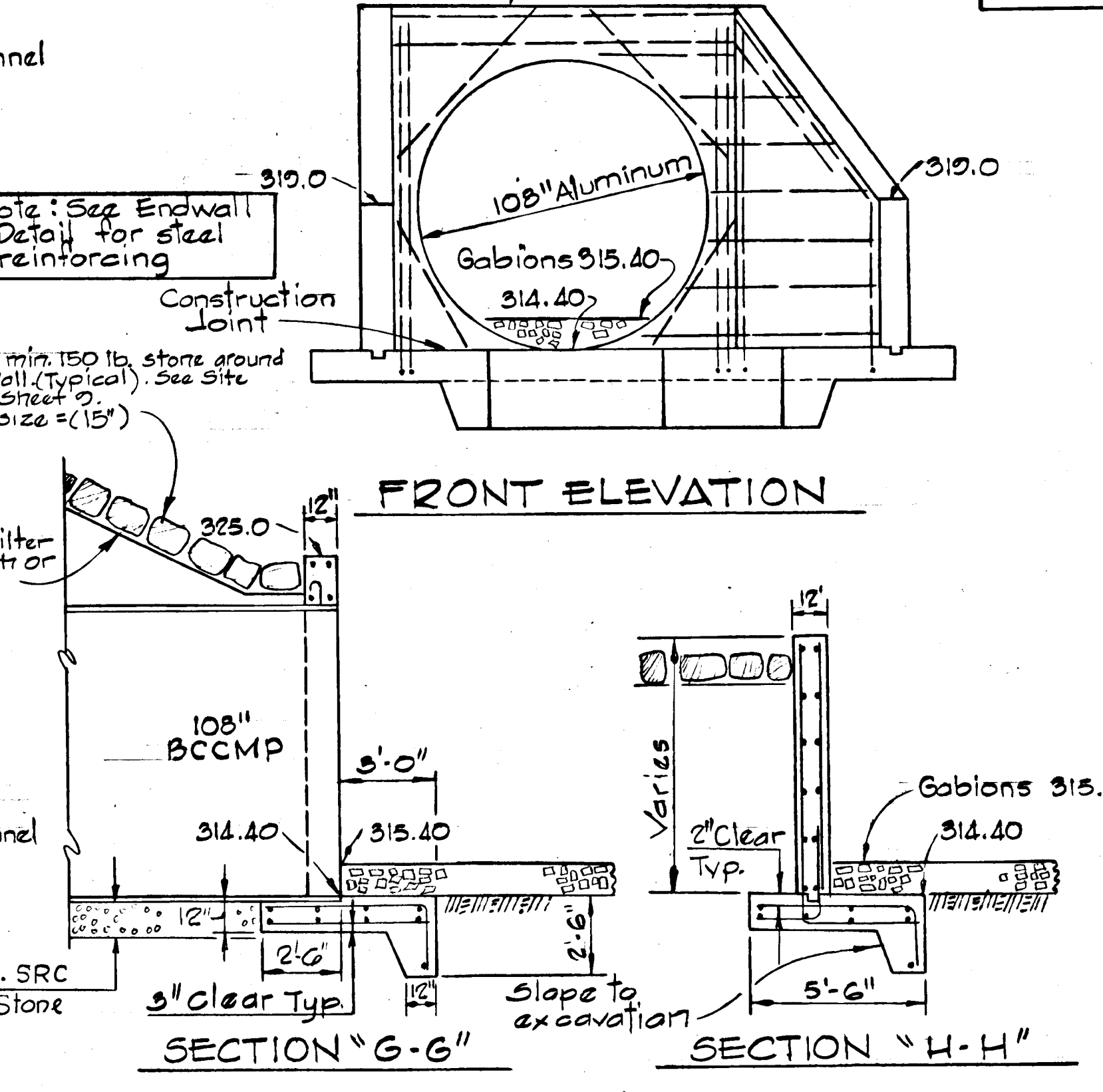


TYPICAL SECTION-HEADWALL and ENDWALL

CONCRETE COLLAR



PLAN

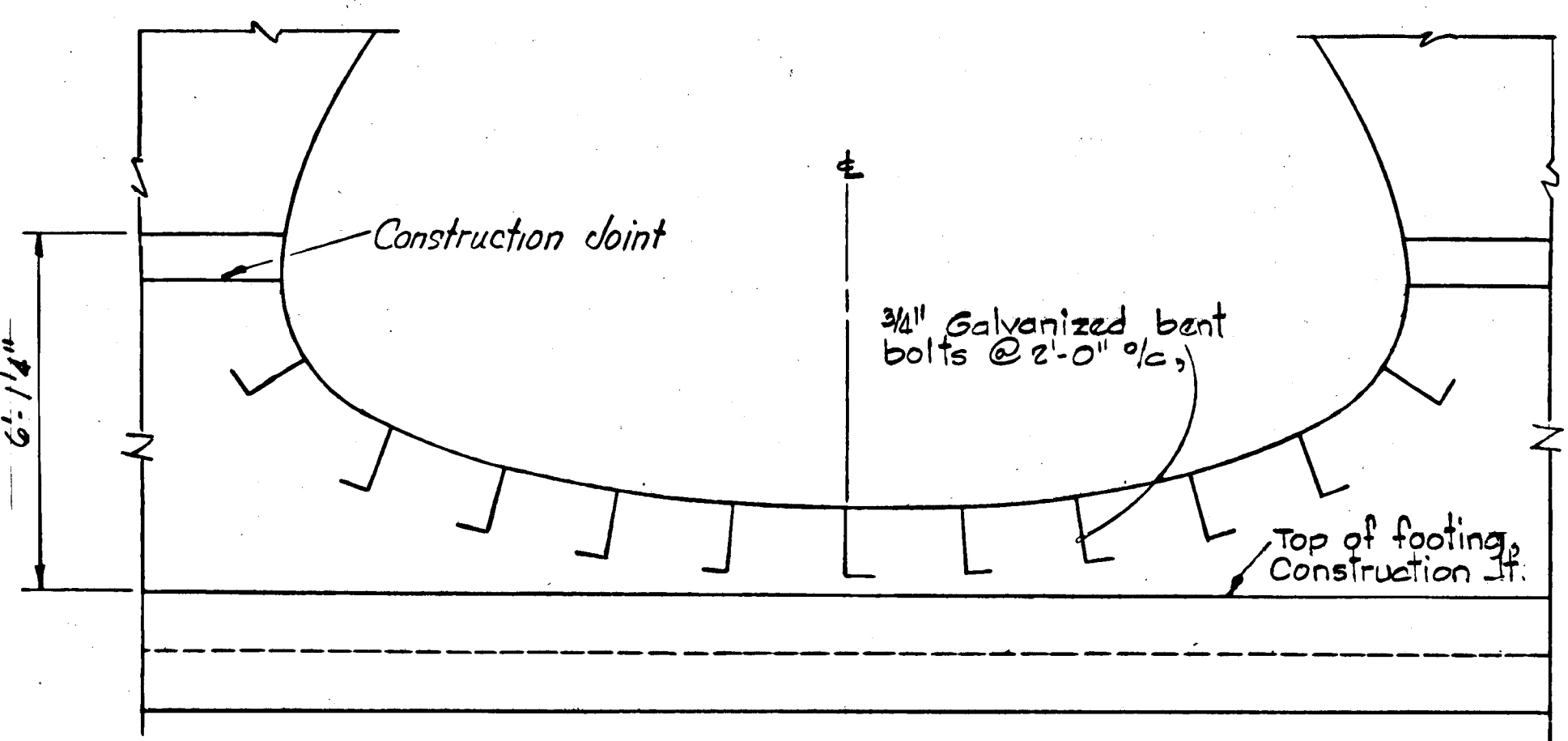


FRONT ELEVATION

SECTION "G-G"

SECTION "H-H"

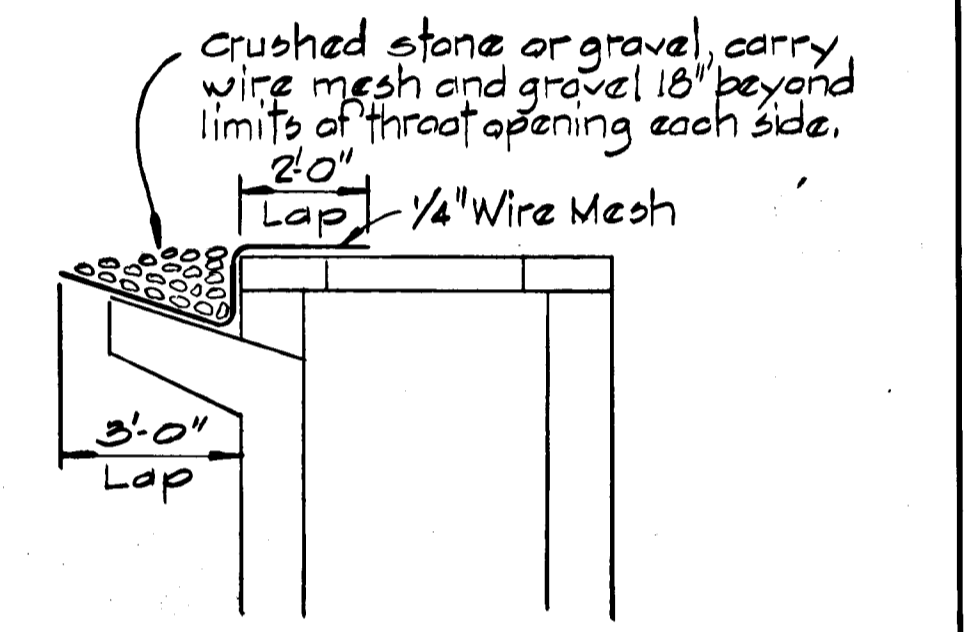
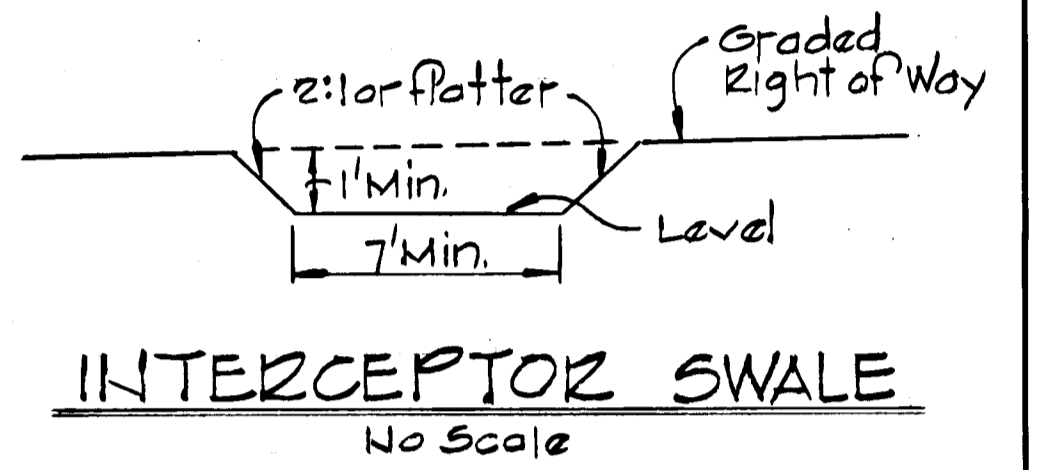
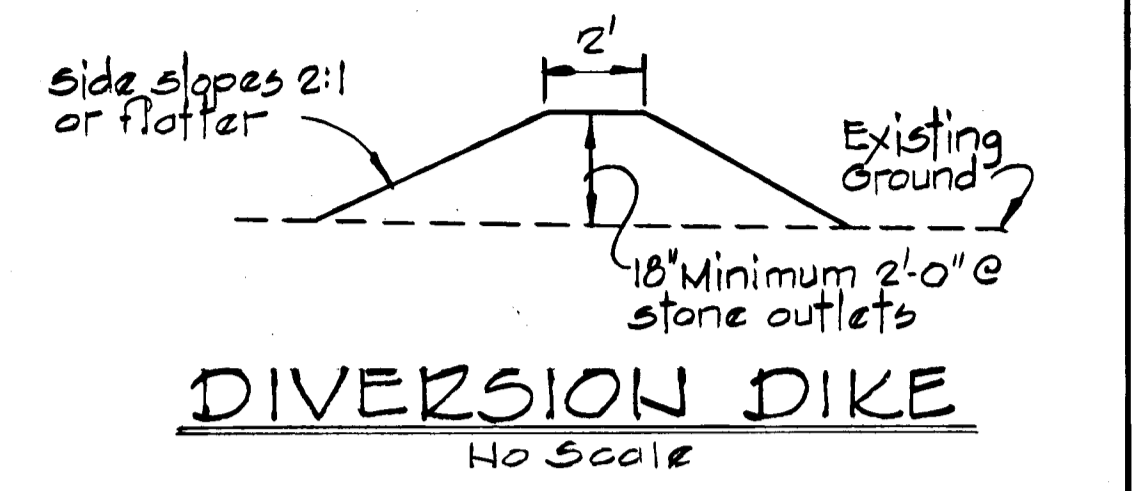
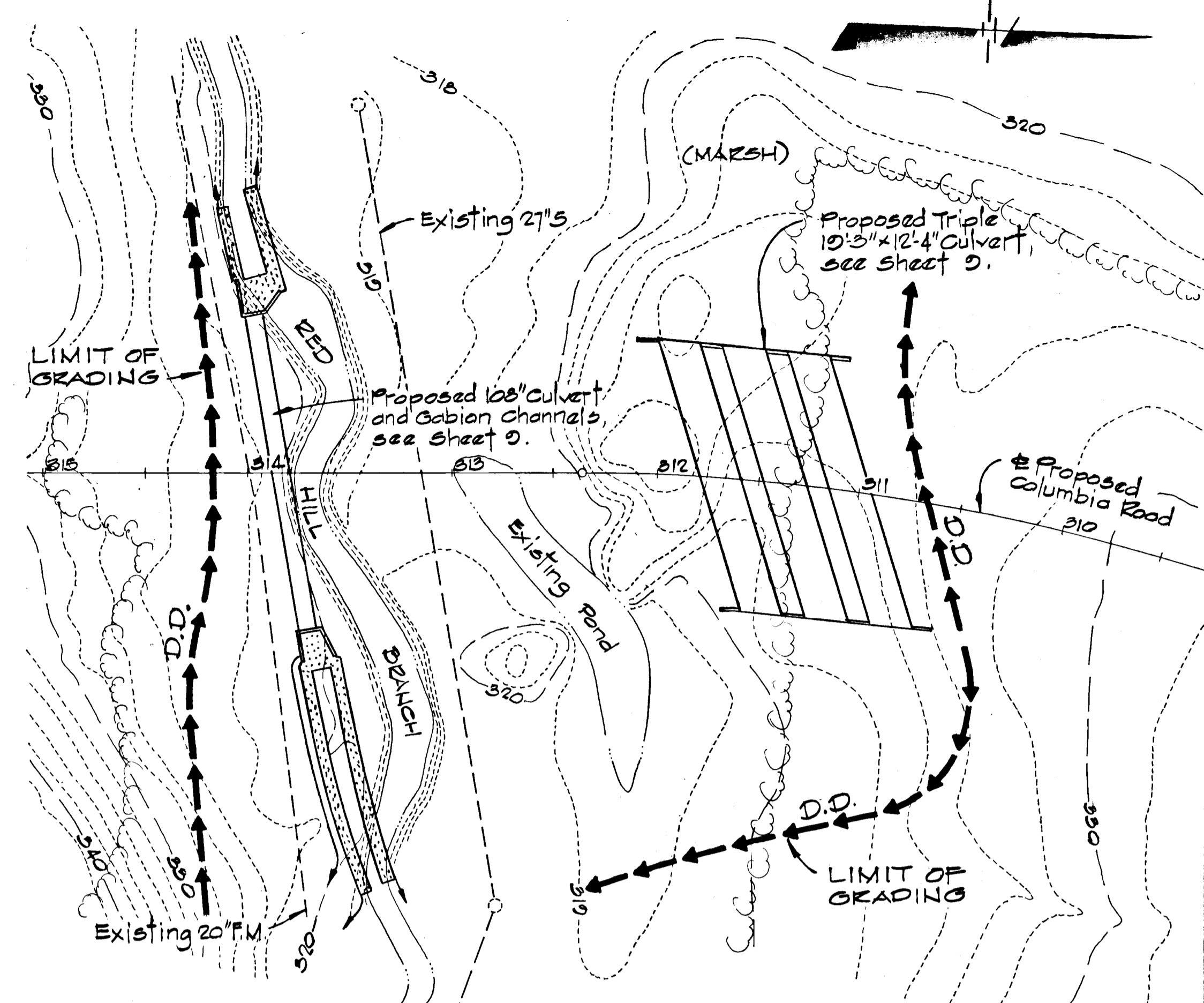
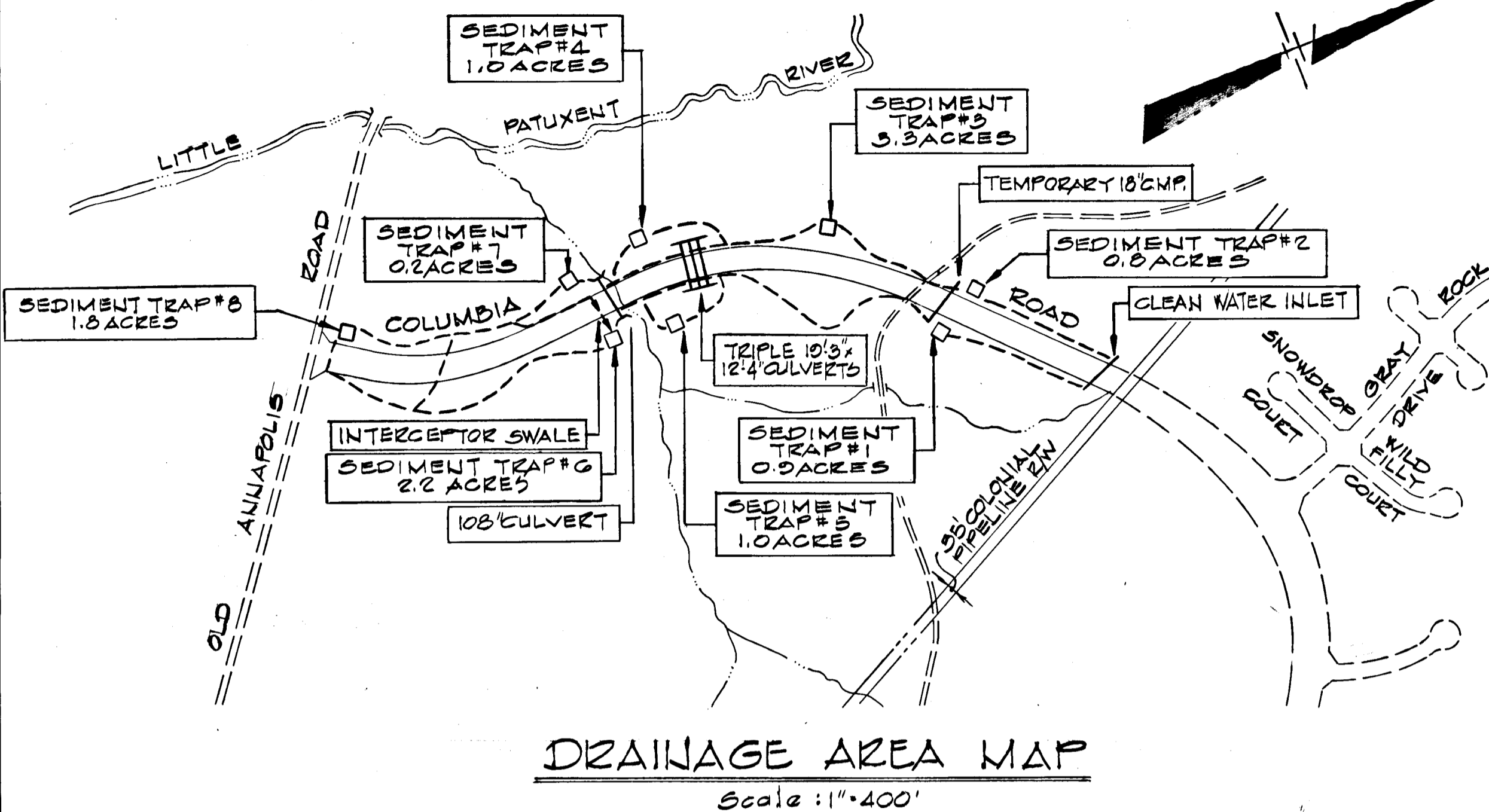
5-6 HEADWALL DETAIL - 108" ALUMINUM
 Scale: 1/4" = 1'-0"



DETAIL "A"

DATE	BY NO.	REVISION DESCRIPTION
9/19/84	1	As per DRW. & S.C.S. comments
DORSEY HALL 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION		
PROJECT AREA SECTION 2 AREA 1		
PROJECT TITLE RED HILL BRANCH CULVERT SECTIONS AND DETAILS		
SCALE: AS SHOWN		DATE:
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
Kenneth A. McCord REGISTERED ENGINEER NO. 1074		

#771



SEQUENCE OF CONSTRUCTION

1. Obtain Grading Permit.
2. Construct stabilized construction entrances on Columbia Road at road subgrade elevation. Clear and grub areas for sediment control facilities only.
3. Construct diversion dikes (for culvert construction) and stabilize with temporary seeding, see Plan 'Sediment Control for Culvert Construction' this sheet.
4. Construct culvert pipes and gabion channels. Use existing pond as temporary sediment trap.
5. Construct sediment traps, diversion dikes, silt fence, clean water inlet at station 295+65, temporary 18' CMP at station 302+20 and 24' R.C.P. and structures I-15, I-16, M-6, S-7 and stubs out of M-6 and I-16 of Old Annapolis Road.
7. Stabilize diversion dikes with temporary seeding, see specifications.
8. Strip and rough grade limits of construction. Remove existing pond, stabilize existing wet area (marsh) and complete roadway embankment in culvert areas.
9. Install interceptor swales.
10. Construct all utilities.
11. Fine grade roads, construct curb and gutter, sidewalks and seed disturbed areas with permanent seeding, see specifications.
12. Pave roads.
13. Remove all sediment control facilities after grass is established in the contributing drainage areas, stabilize 'Sediment Trap Removal Area' see Permanent Seeding Notes. "By Permission of the D.P.W. Sediment Control Inspector."

SEDIMENT CONTROL NOTES

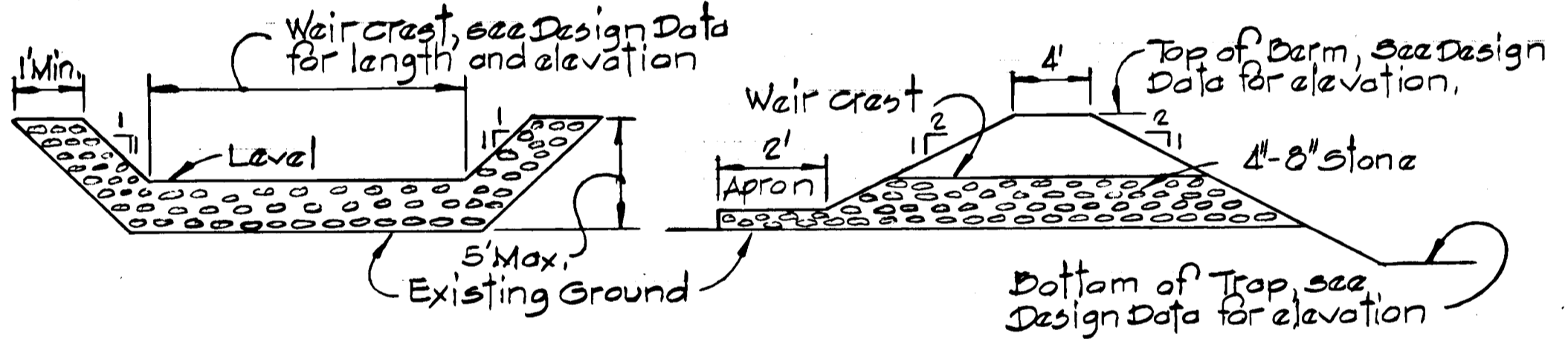
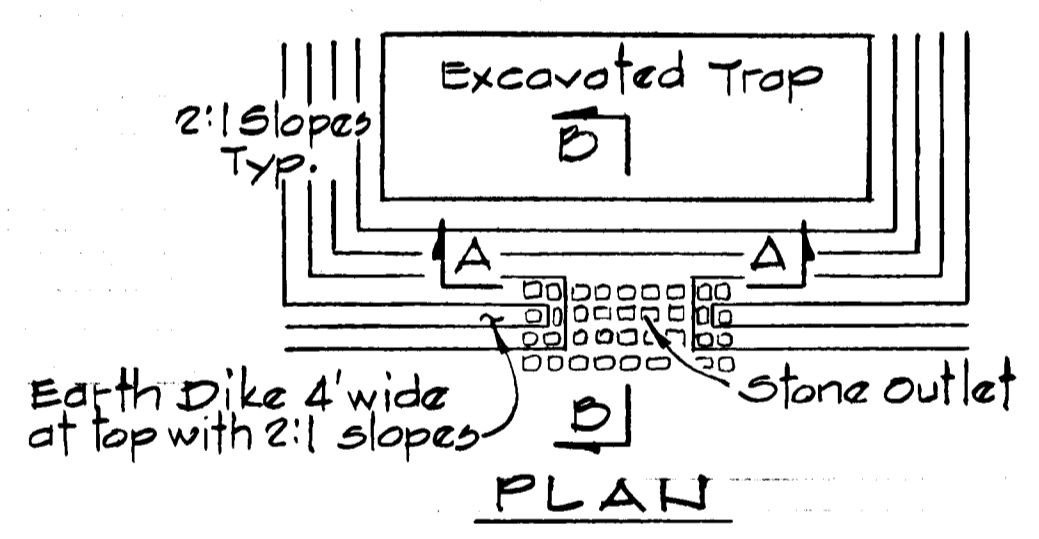
1. See "Sequence of Construction" this sheet.
2. The sediment control measures shall be constructed as shown on these drawings.
3. All temporary sediment control devices shall be seeded as specified in Notes 4 and 5. All other surfaces to be permanently seeded. See specifications this sheet.
4. The temporary sediment control devices shall be hydroseeded as follows:
 - a. Ground Limestone - (50 lbs/1000 sq ft)
 - b. Fertilizer - 10-10-10 (25 lbs/1000 sq ft)
 - c. Seed - Italian Ryegrass (40 lbs./acre)
5. Mulch with straw at the rate of 50 lbs/1000 sq ft or one ton/acre. Anchor with asphalt at the rate of 480 gallons/acre.
6. Prior to starting any work the contractor shall notify Howard County Sediment Control Division at least 24 hours in advance.

PERMANENT SEEDING NOTES

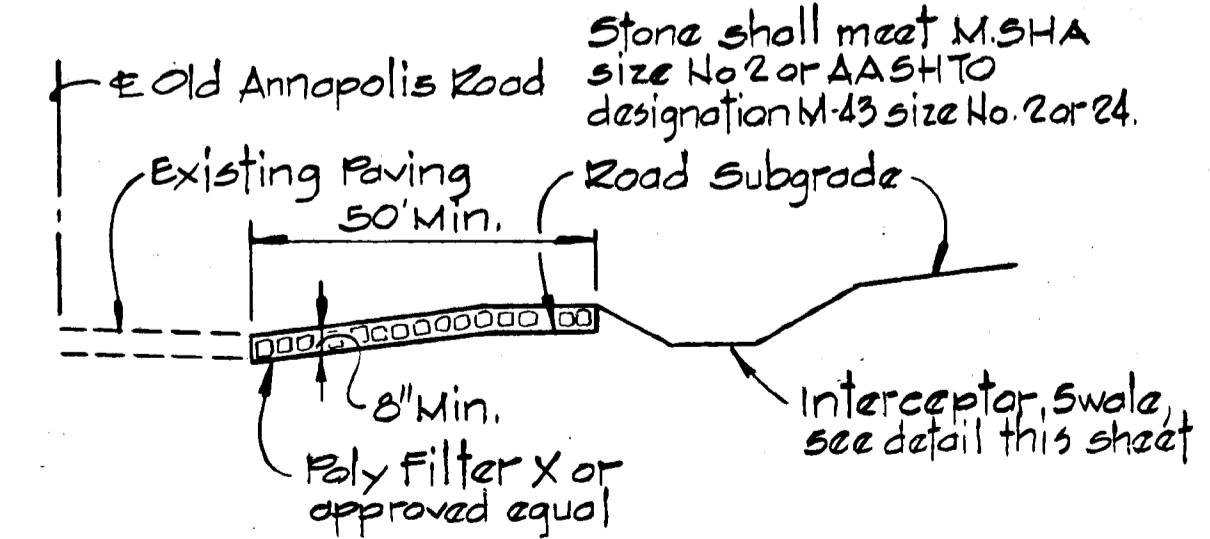
LIME - 2 tons/acre agricultural around limestone.
 FERTILIZER - 1000 lbs/acre (10-10-10)
 SEEDING - 100 lbs/acre of the following:
 20% Kentucky Blue Grass, 20% Marion Blue Grass, 55% Creeping Red Fescue, 5% Red Top.
 Mulch Required: Mulch area with straw, at the rate of 75 lbs/1000 sq ft or 1.5 tons/acre. Anchor with asphalt at the rate of 480 gallons/acre. Stabilization of slopes steeper than 3:1 shall be planted with crownvetch at the rate 20 lbs/acre or 0.46 lbs/1000 sq ft and Kentucky 31 Tall Fescue at the rate of 40 lbs/acre or 1 lb/1000 sq ft.

SPECIAL SEDIMENT CONTROL NOTES

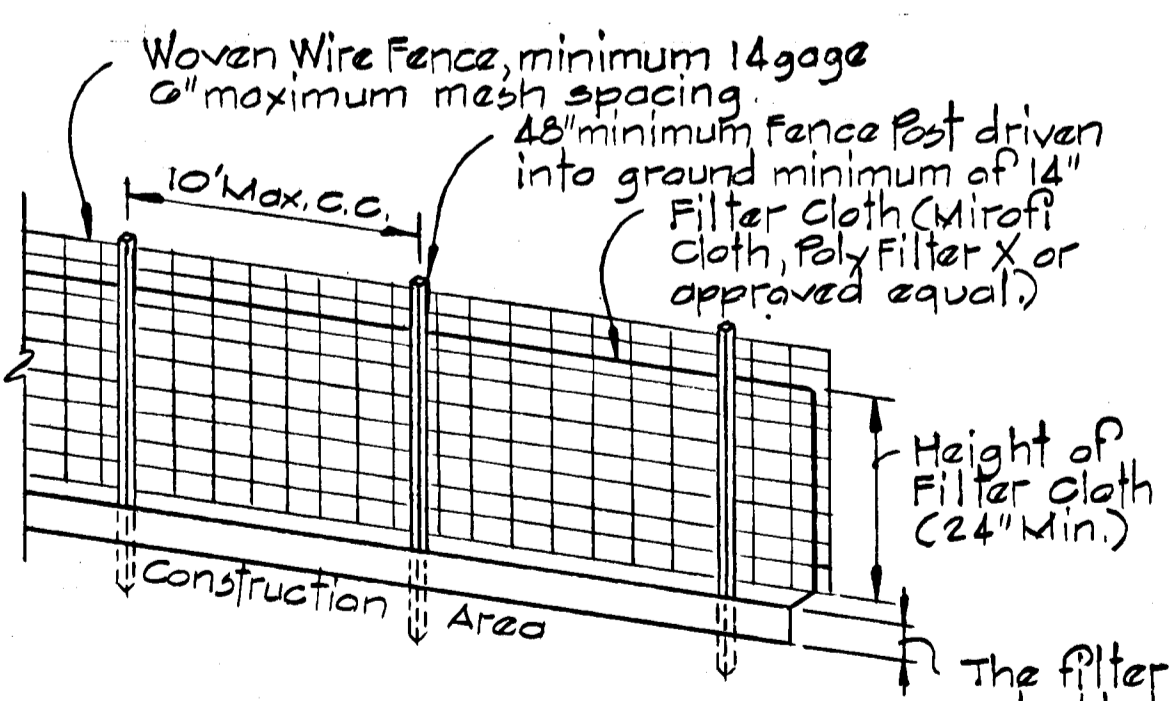
1. All perimeter controls and slopes 3:1 or steeper must be stabilized within 7 days of initial disturbance with temporary seed and mulch per standards and specifications. All other graded areas on the project site must receive permanent or temporary stabilization within 14 days.
2. All sediment traps and basins must be fenced and warning signs posted around their perimeter in accordance with volume 1, Chapter 12 of the Howard County Design Manual, Storm Drainage.



SECTION "A-A" SECTION "B-B"
STONE OUTLET SEDIMENT TRAP
 No Scale



SECTION - STABILIZED CONSTRUCTION ENTRANCE
 No Scale



- NOTES:**
1. Woven wire fence to be fastened securely to fence post by use of wire ties or staples.
 2. Filter cloth to be fastened securely to woven wire fence by use of wire ties spaced every 24" at top and mid section.

SILT FENCE DETAIL
 No Scale

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 6-25-84
 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 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 6-25-84
 WALTER E. WOODFORD DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

James M. Belmont 10/27/85
 DATE

U.S. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: [Signature] 10/27/85
 HOWARD S.C.D. DATE

9/13/84	1	As Per D.P.W. & S.C.S. Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION
DORSEY HALL 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER COLUMBIA INDUSTRIAL DEVELOPMENT CORPORATION		
PROJECT AREA	SECTION 2 AREA 1	
PROJECT TITLE	SEDIMENT CONTROL PLAN AND DETAILS	
SCALE: AS SHOWN	DATE:	
WHITMAN, REQUAZOT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21215		
KENNETH A. MCCORD REGISTERED ENGINEER NO. 1074		STATE OF MARYLAND ENGINEER & LAND SURVEYOR 1914

SEDIMENT TRAP #3
DESIGN DATA

DRAINAGE AREA 3.3 ACRES
VOLUME REQUIRED 3.3 x 67 = 221.1 CY
VOLUME AVAILABLE 222 CY
TOP DEKM ELEVATION 330.0
DESIGN CAPACITY ELEVATION 329.0
BOTTOM OF TRAP ELEVATION 325.5
SIZE OF TRAP AT CONTOUR 325.5: 18'x50'
STONE OUTLET WIDTH 14'

SEDIMENT TRAP #2
DESIGN DATA

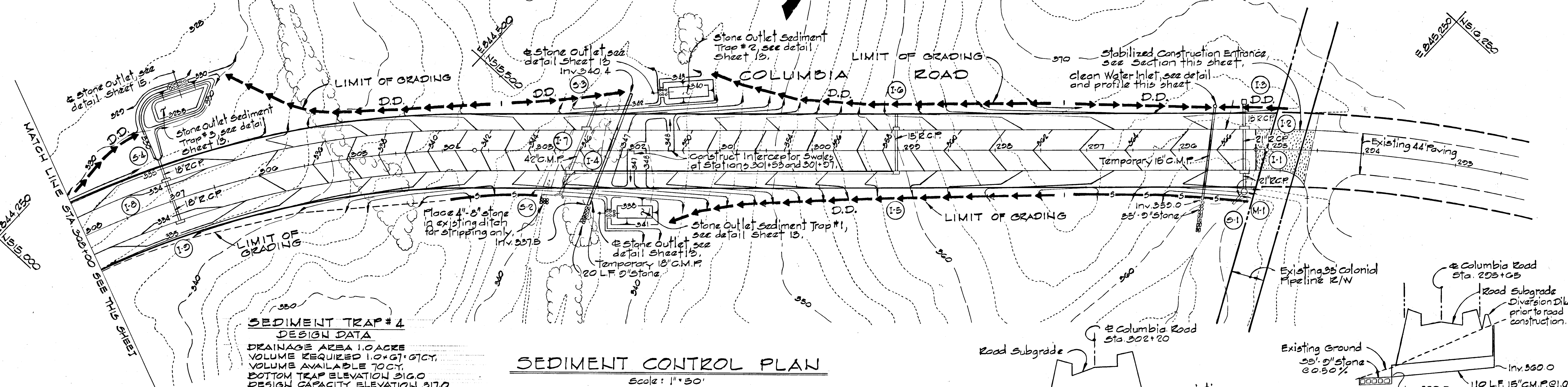
DRAINAGE AREA 0.8 ACRES
VOLUME REQUIRED 0.8 x 67 = 54 CY
VOLUME AVAILABLE 55 CY
TOP DEKM ELEVATION 343.0
DESIGN CAPACITY ELEVATION 342.0
BOTTOM OF TRAP ELEVATION 340.0
SIZE OF TRAP AT CONTOUR 340.0: 12'x43'
STONE OUTLET WIDTH 5'

SEDIMENT TRAP #1
DESIGN DATA

DRAINAGE AREA 0.9 ACRES
VOLUME REQUIRED 0.9 x 67 = 60.3 CY
VOLUME AVAILABLE 62 CY
TOP DEKM ELEVATION 341.0
DESIGN CAPACITY ELEVATION 340.0
BOTTOM OF TRAP ELEVATION 339.0
SIZE OF TRAP AT CONTOUR 339.0: 15'x40'
STONE OUTLET WIDTH 5'

Note:
Place stone filters at inlets I-1, I-2, I-4, I-5, I-6, I-7, I-10 and I-11, see "Typical Inlet Stone Filter" detail on sheet 13. Place straw bales around Inlet I-3.

DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING
OFFICE OF PLANNING AND ZONING
John W. Musselman
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
DATE 11-14-84



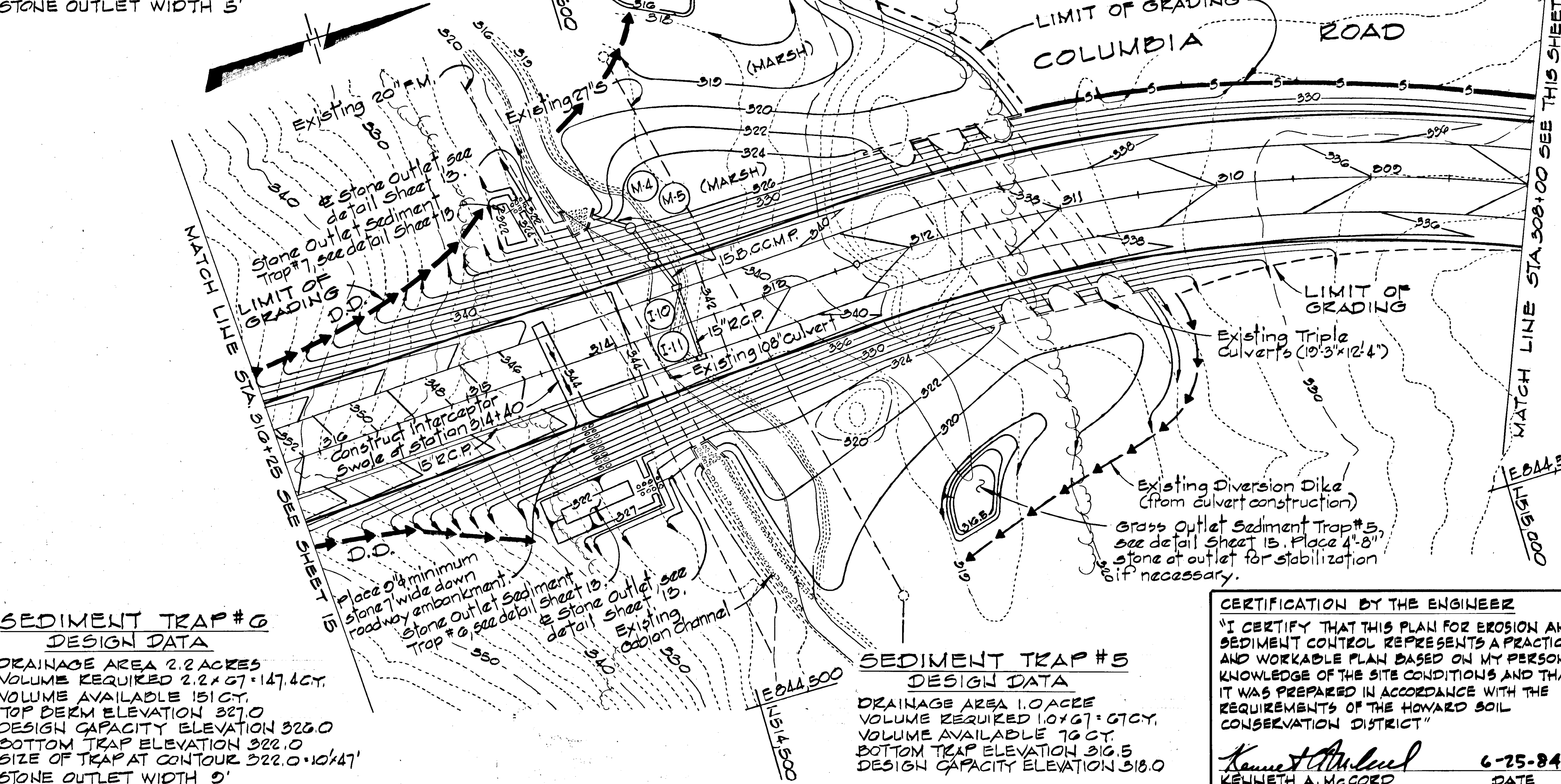
SEDIMENT TRAP #7
DESIGN DATA

DRAINAGE AREA 0.2 ACRES
VOLUME REQUIRED 0.2 x 67 = 13.4 CY
VOLUME AVAILABLE 14 CY
TOP DEKM ELEVATION 324.0
DESIGN CAPACITY ELEVATION 323.0
BOTTOM OF TRAP ELEVATION 322.0
SIZE OF TRAP AT CONTOUR 322.0: 10'x27'
STONE OUTLET WIDTH 5'

SEDIMENT TRAP #4
DESIGN DATA

DRAINAGE AREA 1.0 ACRES
VOLUME REQUIRED 1.0 x 67 = 67 CY
VOLUME AVAILABLE 70 CY
BOTTOM OF TRAP ELEVATION 316.0
DESIGN CAPACITY ELEVATION 317.0

SEDIMENT CONTROL PLAN
Scale: 1" = 50'

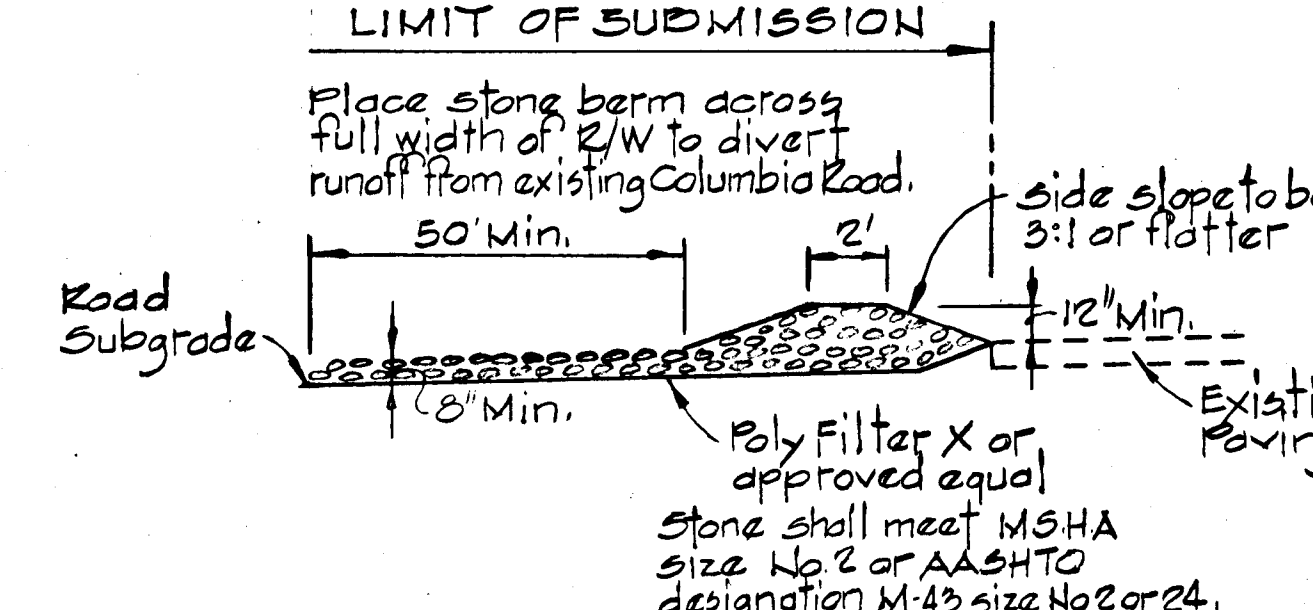
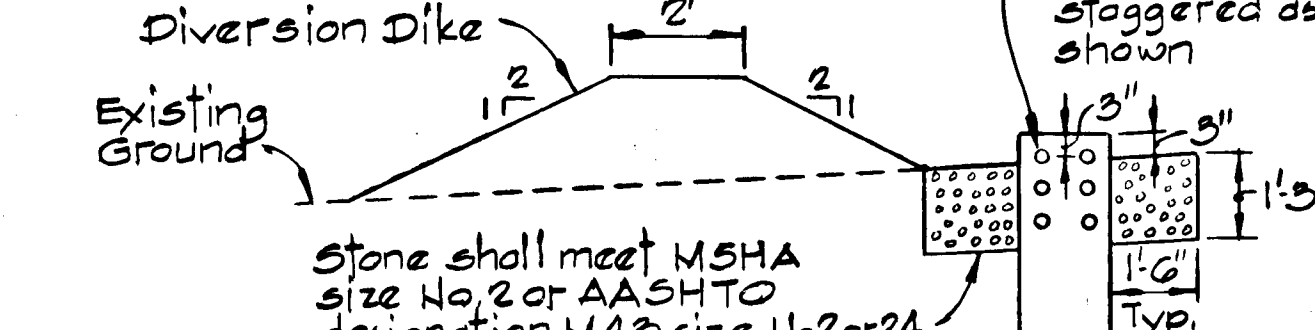
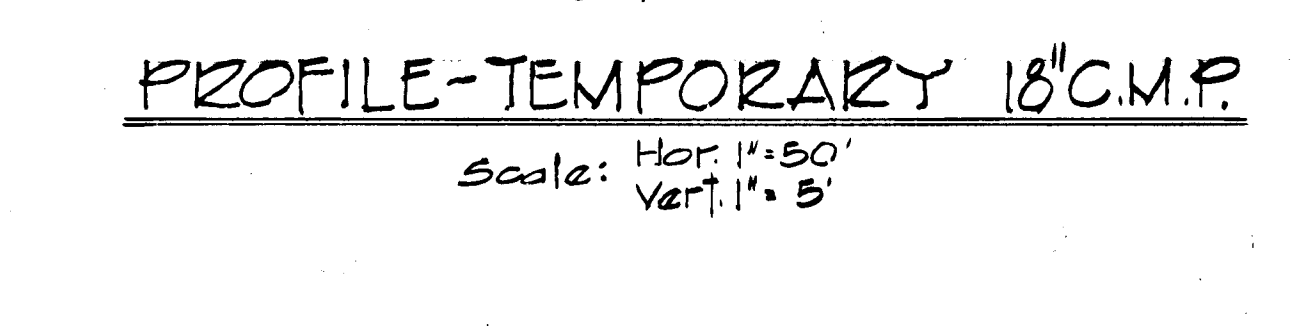
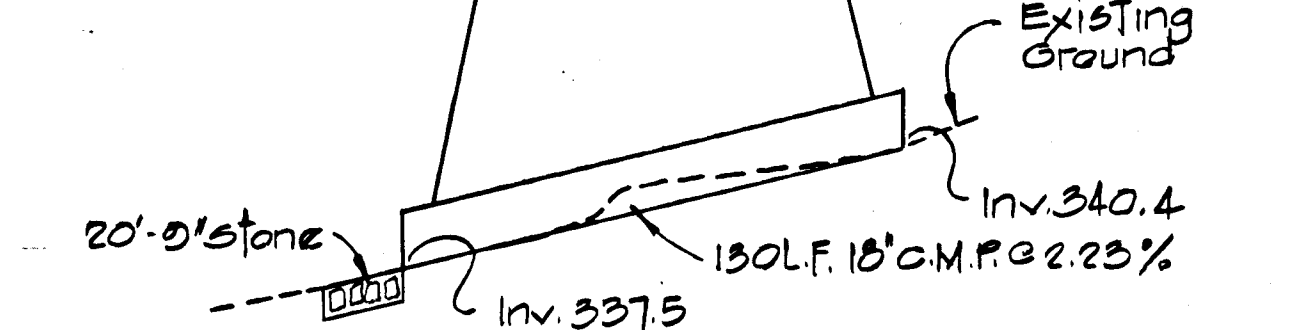


SEDIMENT TRAP #6
DESIGN DATA

DRAINAGE AREA 2.2 ACRES
VOLUME REQUIRED 2.2 x 67 = 147.4 CY
VOLUME AVAILABLE 151 CY
TOP DEKM ELEVATION 327.0
DESIGN CAPACITY ELEVATION 326.0
BOTTOM OF TRAP ELEVATION 322.0
SIZE OF TRAP AT CONTOUR 322.0: 10'x47'
STONE OUTLET WIDTH 9'

SEDIMENT TRAP #5
DESIGN DATA

DRAINAGE AREA 1.0 ACRES
VOLUME REQUIRED 1.0 x 67 = 67 CY
VOLUME AVAILABLE 70 CY
BOTTOM OF TRAP ELEVATION 316.5
DESIGN CAPACITY ELEVATION 318.0

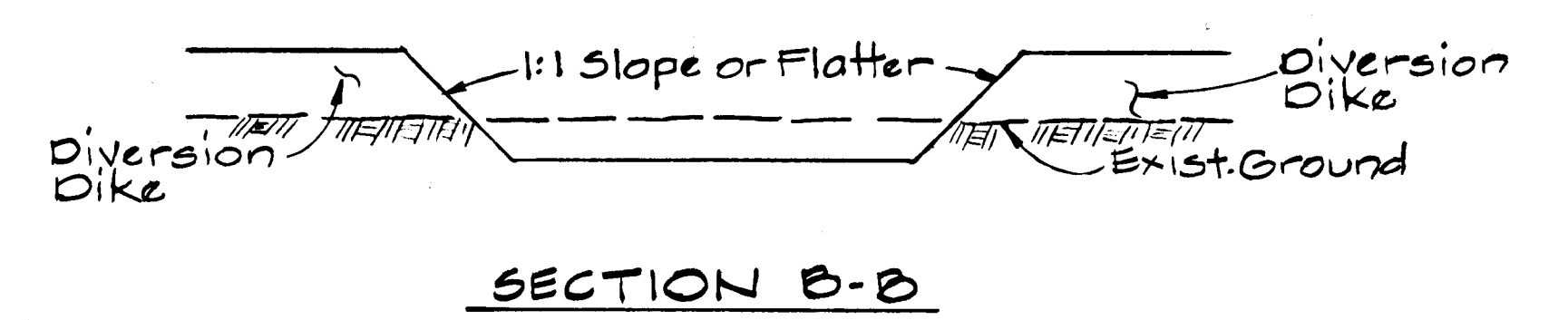
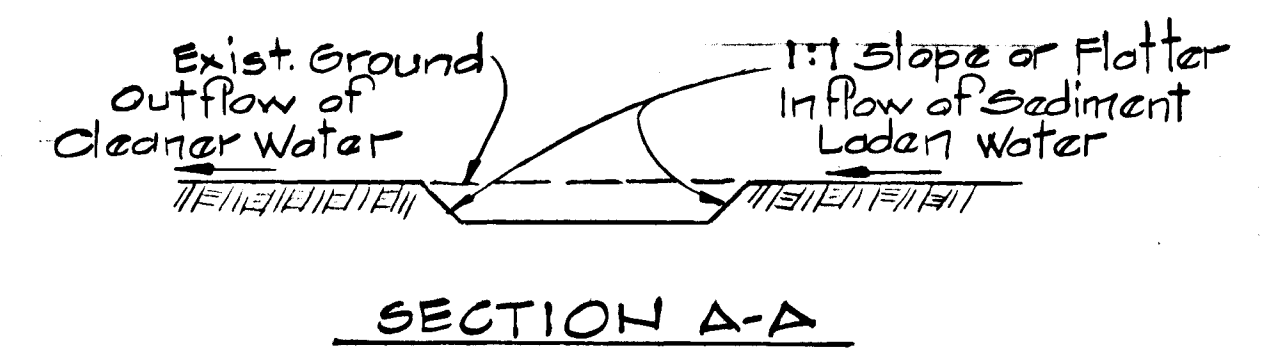
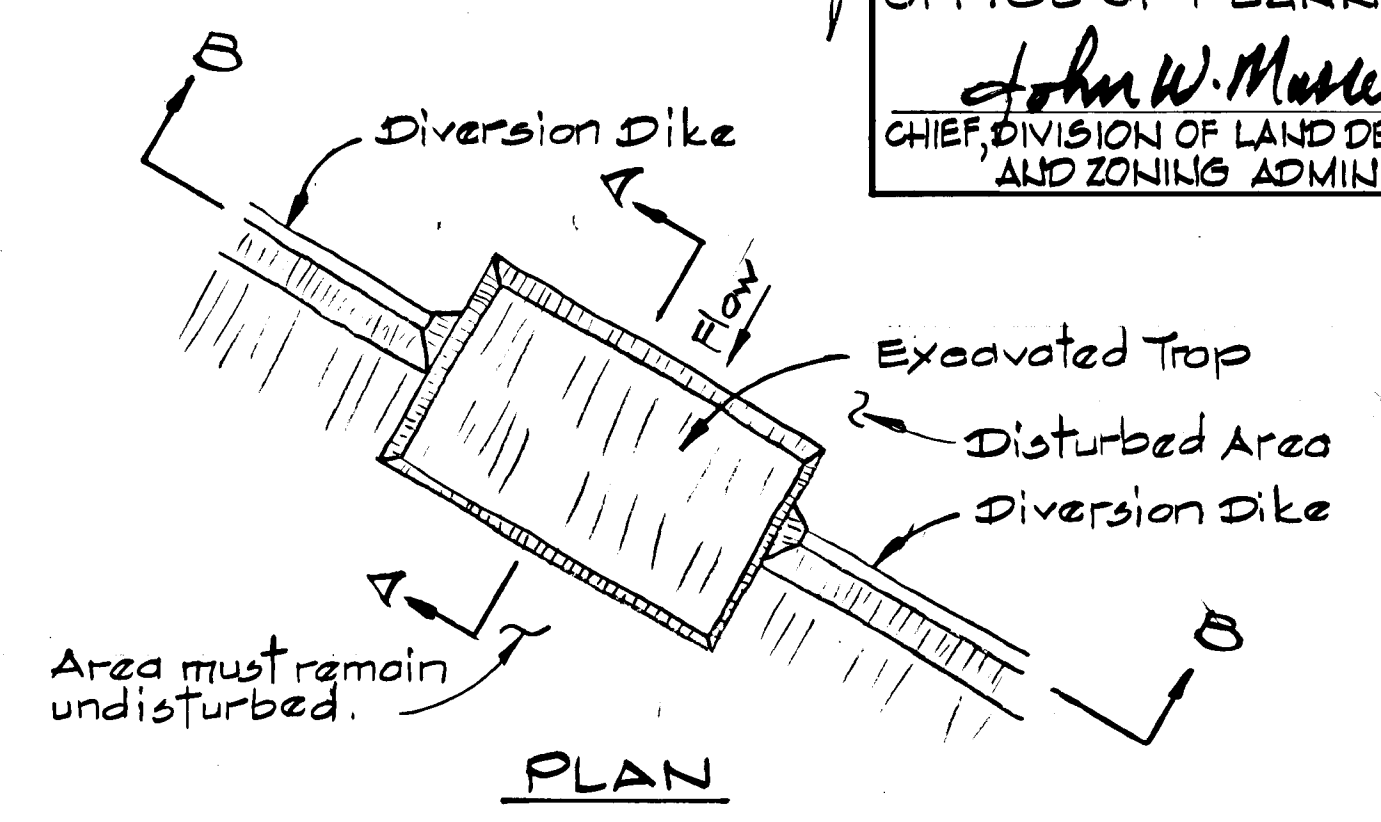
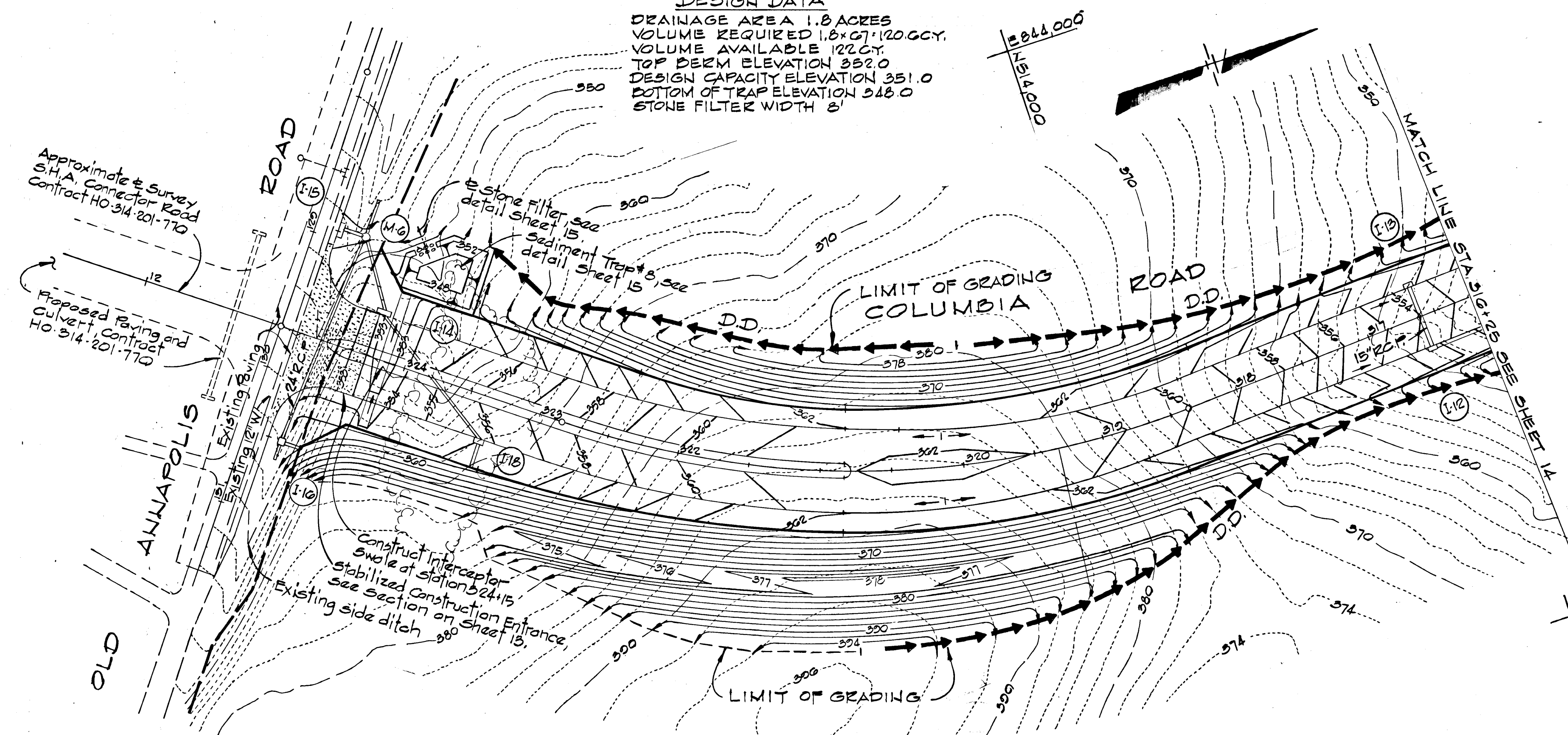


CERTIFICATION BY THE DEVELOPER
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL 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."

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"

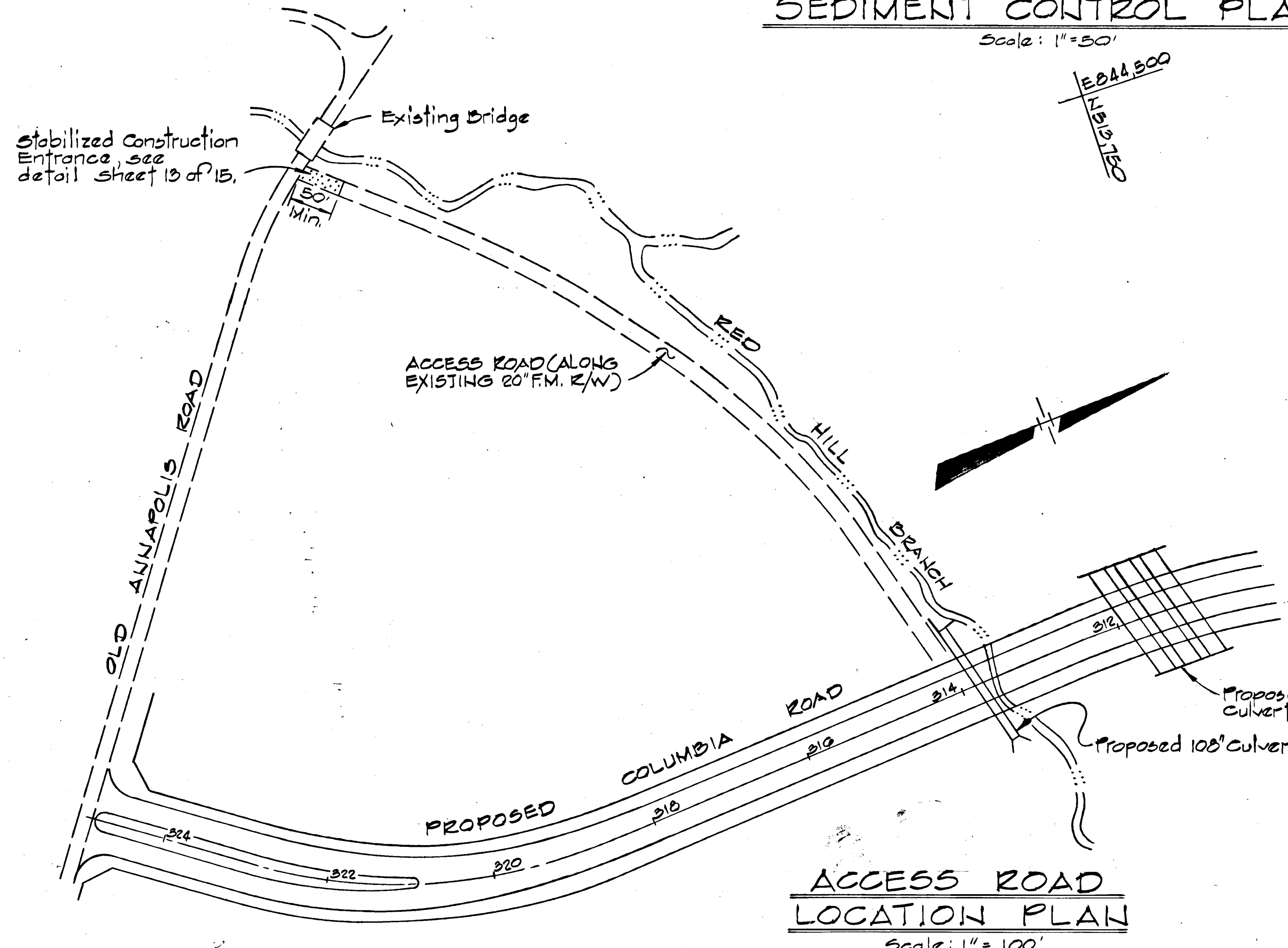
REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS	PROJECT AREA SECTION 2 AREA 1
APPROVED: <i>James M. Woodford</i> 11/23/85 DATE	PROJECT TITLE SEDIMENT CONTROL PLAN
U.S. SOIL CONSERVATION SERVICE	SCALE: AS SHOWN DATE:
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT	WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218
APPROVED: <i>John W. Musselman</i> 11/23/85 HOWARD S.C.D. DATE	REGISTERED ENGINEER NO. 1074

SEDIMENT TRAP #8
DESIGN DATA
 DRAINAGE AREA 1.8 ACRES
 VOLUME REQUIRED 1.8 x 67 = 120 G.C.Y.
 VOLUME AVAILABLE 122 G.C.Y.
 TOP BERM ELEVATION 352.0
 DESIGN CAPACITY ELEVATION 351.0
 BOTTOM OF TRAP ELEVATION 348.0
 STONE FILTER WIDTH 8'



SEDIMENT CONTROL PLAN
 Scale: 1" = 50'

GRASS OUTLET SEDIMENT TRAP
 No Scale



ACCESS ROAD LOCATION PLAN
 Scale: 1" = 100'

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
 6-25-84
 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
 6-25-84
 DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS
 James M. Helmer
 12/27/84
 DATE
 U.S. SOIL CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED
 HOWARD S.C.D. DATE

DATE	REV. NO.	REVISION DESCRIPTION
9/19/84	1	As per 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 1		
PROJECT TITLE		
SEDIMENT CONTROL PLAN		
SCALE: AS SHOWN		DATE:
WHITMAN, REQUAZDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
Kenneth A. McCord REGISTERED ENGINEER NO 1974		

#771