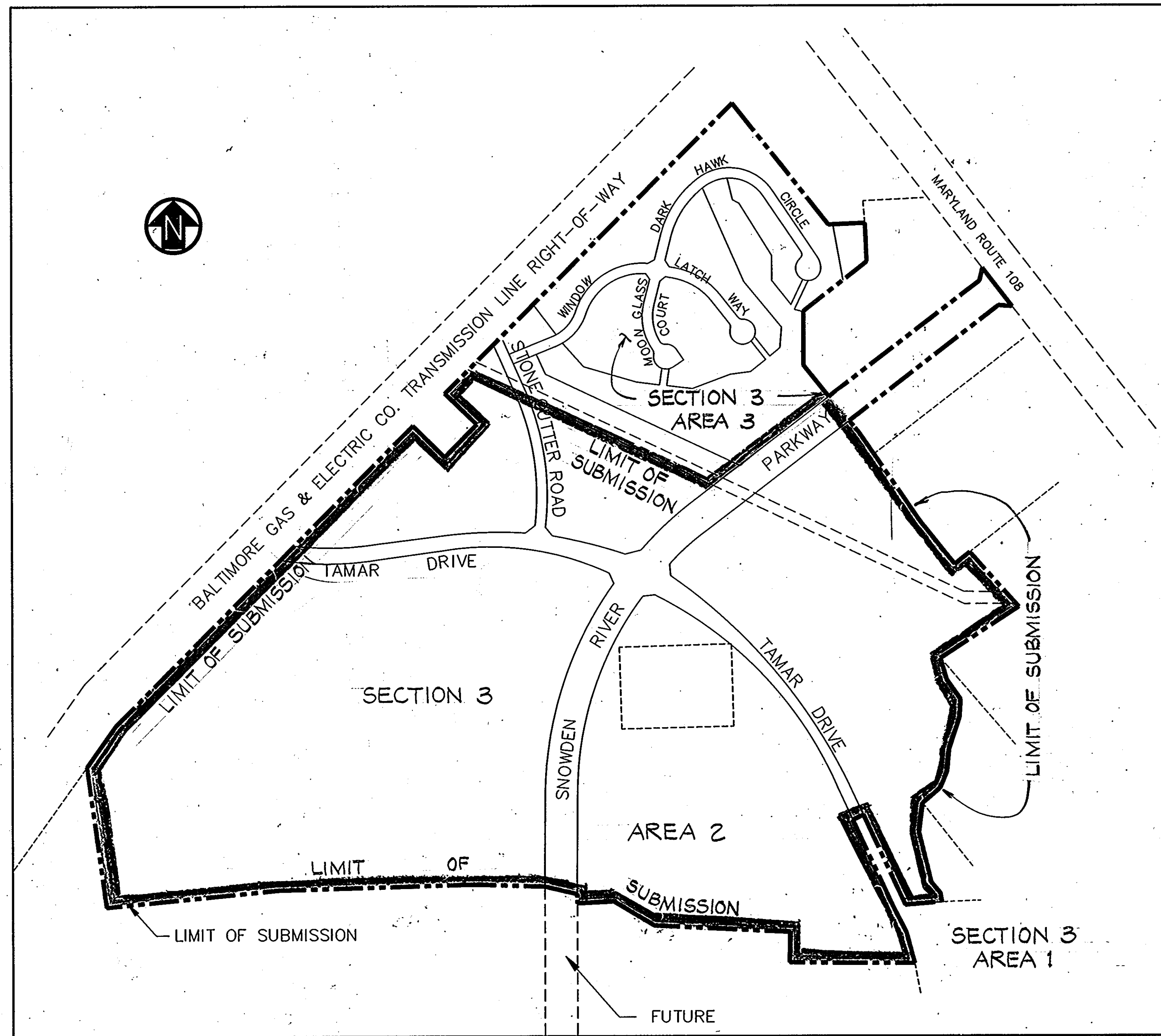


VICINITY MAP
SCALE: 1" = 2000'

VILLAGE of LONGREACH

SECTION 3 - AREA 2

ROAD CONSTRUCTION PLANS



SITE PLAN
SCALE: 1" = 400'

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ROAD PLANS AND PROFILES - TAMAR DRIVE STA. 4+00 TO 13+00
3	TAMAR DRIVE STA. 13+00 TO 25+00
4	TAMAR DRIVE STA. 25+00 TO 36+50
5	STONECUTTER ROAD STA. 8+7.7 TO 14+93
6	SNOWDEN RIVER PARKWAY STA. 45+20 TO 59+50
7	TYPICAL ROADWAY SECTIONS
8	DRAINAGE AREA MAPS - SHEET 1
9	SHEET 2
10	STORM DRAIN PROFILES - SHEET 1
11	SHEET 2
12	SHEET 3
13	CULVERT PROFILES
14	CULVERT DETAILS
15	SEDIMENT AND EROSION CONTROL PLANS - TAMAR DRIVE STA. 4+00 TO 13+00 TAMAR DRIVE STA. 13+00 TO 25+00
16	TAMAR DRIVE STA. 25+00 TO 36+50 STONECUTTER ROAD STA. 8+7.7 TO 14+93
17	SNOWDEN RIVER PARKWAY STA. 45+20 TO 59+50
18	SNOWDEN RIVER PKWY. STA. 62+00 TO 74+00
19	SEDIMENT & EROSION CONTROL DETAILS & NOTES
19A	STA. 54+00± SNOWDEN RIVER PKWY. STORAGE FOR SWM
19B	STA. 72+00± SNOWDEN RIVER PKWY. STORAGE FOR SWM

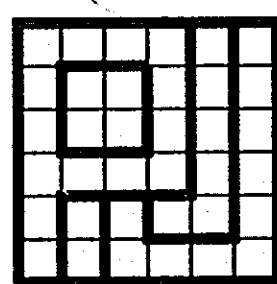
TREE PLANTING

THE LOCATIONS, TYPE AND NUMBER OF TREES SHOWN ON THESE PLANS ARE TENTATIVE AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMMODATE 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.

ESTIMATE OF QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
	STANDARD A-10 INLET WITH DEFLECTORS	EA.	3
	STANDARD 4' MANHOLE	EA.	1
	15" RCP CLASS IV	L.F.	48
	21" RCP CLASS IV	L.F.	412
	36" RCP CLASS IV	L.F.	573
	15" CMP 16 GAGE	L.F.	1286
	18" CMP 16 GAGE	L.F.	106
	21" CMP 16 GAGE	L.F.	386
	24" CMP 16 GAGE	L.F.	87
	27" CMP 16 GAGE	L.F.	195
	36" CMP 14 GAGE	L.F.	180
	54" CMP 14 GAGE	L.F.	112
	90" CMP 14 GAGE	L.F.	165
	STANDARD TYPE 'S' INLET	EA.	1
	STANDARD TYPE 'K' INLET	EA.	1
	STANDARD TYPE A-10 INLET WITHOUT DEFLECTORS	EA.	2
	STANDARD TYPE A-5 INLET WITH DEFLECTORS	EA.	14
	STANDARD TYPE A-5 INLET WITHOUT DEFLECTORS	EA.	2

GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- ALL UTILITY COMPANIES SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF CONSTRUCTION.
- ALL INLETS SHALL BE HOWARD COUNTY STANDARDS UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY RODE CODE.
- 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.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES WHERE DIRECTED BY THE ENGINEER A MINIMUM OF TWO WEEKS IN ADVANCE OF ANY CONSTRUCTION TEMPORARY COMPACTED 18" HIGH EARTH FILL DIVERSION DIKES SHALL BE CONSTRUCTED ABOVE THE LIPS OF THE FILL SLOPES ON THE RIGHT-OF-WAY CONCURRENTLY WITH THE INITIAL GRADING AND DIRECTED TO UNDISTURBED SOD AREAS AT THE END OF EACH DAY.
- CONTRACTOR TO NOTIFY THE HOWARD COUNTY DEPT. OF INSPECTIONS AND PERMITS AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE NO. 792-7272
- ALL DISTURBED SLOPE AREAS TO BE STABILIZED AS SOON AS GRADING IS COMPLETED.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3500 P.S.I.
- ALL SWALES AND SLOPES SHALL BE PERMANENTLY SEEDED. SEE THE SEED SPECIFICATIONS ON SHEET 19.
- TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1971 REVISED EDITION.
- POLY FILTER-X (FILTER CLOTH BLANKET) OR EQUAL SHALL BE PLACED UNDER ALL STONE RIP-RAP (FULL WIDTH AND LENGTH OF STONE).
- STONE SHALL BE MARYLAND S.H.A. CLASS I MEDIUM RIP-RAP. RIP-RAP SHALL BE UNPAVED UNLESS OTHERWISE NOTED.
- STUBS FOR 6" P.V.C. UNDERDRAIN PIPE TO BE INSTALLED AT CENTER OF EACH WALL OF A-10 INLETS.
- 100 YEAR-FLOODPLAIN INFORMATION BASED ON WATERSHED STUDY BY PURDUM & JESCHKE IN 1987.
- 250-WATT MERCURY VAPOR LAMP PENDANT MOUNTED FIXTURES ON 30-FOOT BRONZE ALUMINUM POLE.



PURDUM & JESCHKE
CONSULTING ENGINEERS AND
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 (301)837-0194

OWNER/DEVELOPER

THE HOWARD RESEARCH &
DEVELOPMENT LAND COMPANY
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044

OFFICE OF PLANNING & ZONING
CHIEF, DIVISION OF COMMUNITY PLANNING
AND LAND DEVELOPMENT DATE

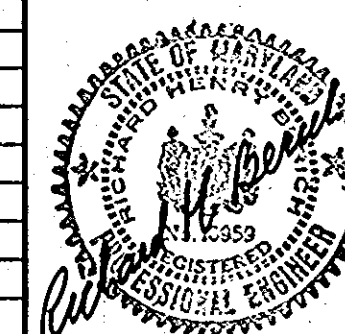
REVIEWED FOR HOWARD S.C.D.
AND MEETS TECHNICAL REQUIRE-
MENTS.

STEPHEN L. GIBSON
SIGNATURE DATE 9/27/88
SOIL CONSERVATION SERVICE

APPROVED: HOWARD COUNTY DEPARTMENT
OF PUBLIC WORKS

6/8/88
CHIEF, LAND DEVELOPMENT DIVISION DATE
6/6/88
CHIEF, BUREAU OF HIGHWAYS DATE
6-2-88
CHIEF, BUREAU OF ENGINEERING DATE

NO.	DATE	ESTIMATES OF QUANTITIES	DESCRIPTION
1	9/22/88		



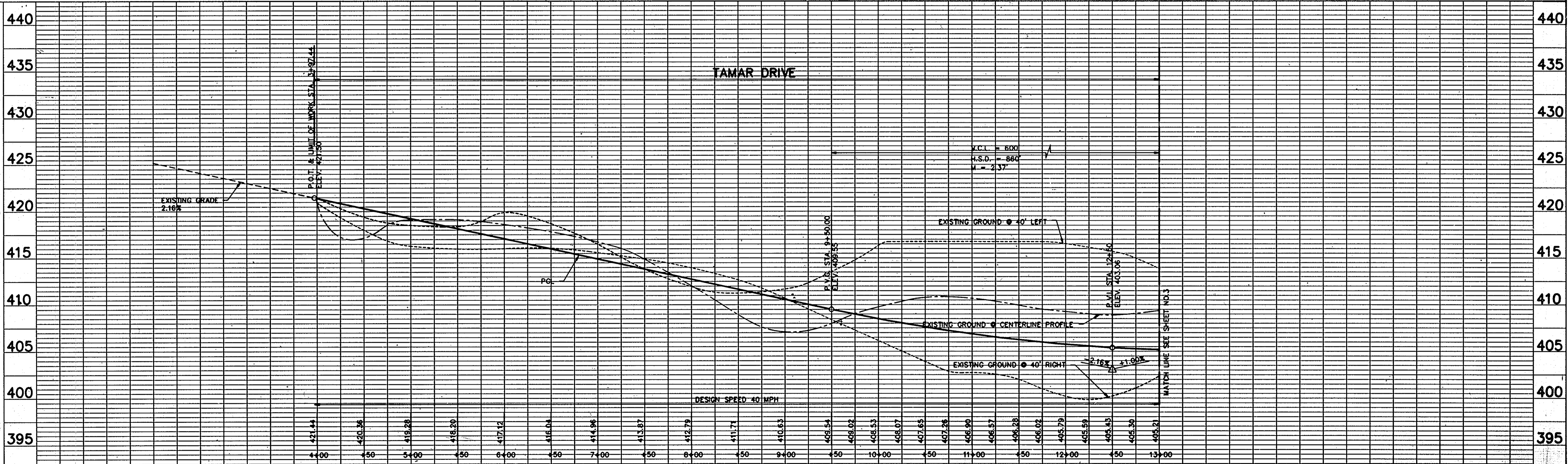
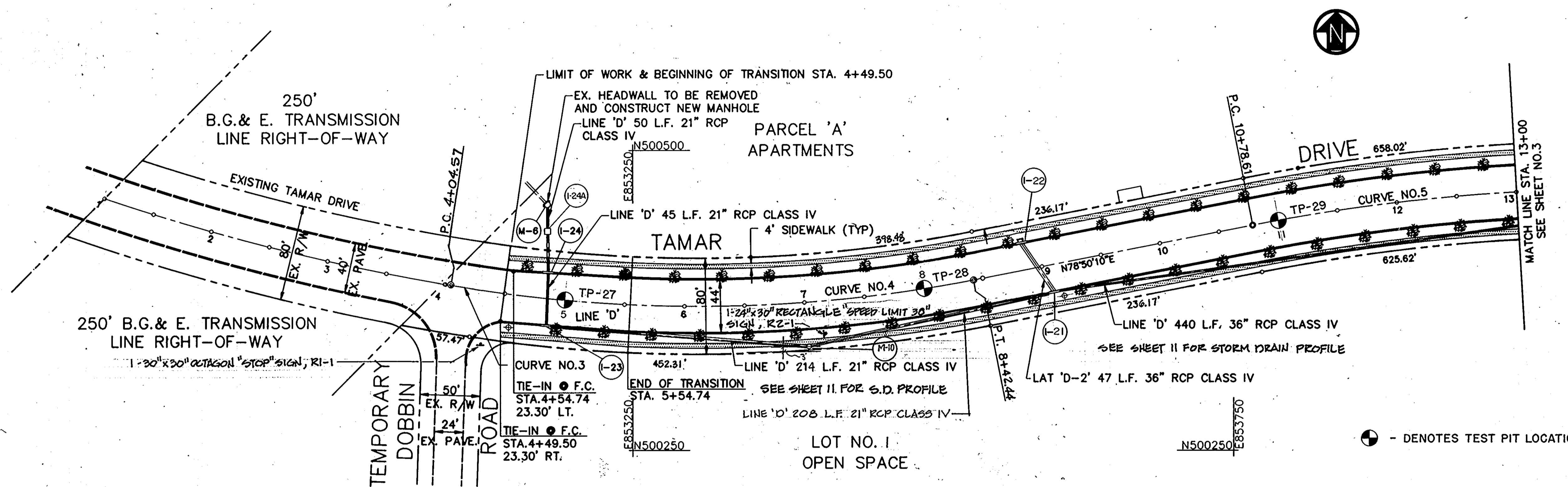
VILLAGE OF LONGREACH
SECTION 3 AREA 2 - ROAD CONSTRUCTION PLANS
TITLE SHEET
PARCELS: 27, 50, 229, 242, 254, 255 & 448
REFERENCE: S87-46
SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
DATE: 1/26/88 SCALE: NOTED

SHEET 1 OF 19
DES: GDT
DRAWN: LCC, MJJ
CHK: RHB

F-88-171

STORM DRAIN STRUCTURE SCHEDULE						
NO.	TYPE	TOP EL.	INV. IN	INV. IN	INV. OUT	STATION
I-21	STD. TYPE 'A' INLET	410.52	402.62	401.37	401.37	9+06
I-22	STD. TYPE 'A' INLET	410.53	402.63	401.38	401.38	9+07
I-23	STD. TYPE 'A' INLET	410.54	402.64	401.39	401.39	9+08
I-24	STD. TYPE 'A' INLET	410.55	402.65	401.40	401.40	9+09
M-1	STD. MANHOLE	410.56	402.66	401.41	401.41	9+10
M-10	STD. MANHOLE	410.57	402.67	401.42	401.42	9+11
I-24A	STD. TYPE 'A' INLET	410.58	402.68	401.43	401.43	9+12

CURVE NO.	Δ	RADIUS	LENGTH	TANGENT	CHORD LENGTH	CHORD BEARING
4	20°11'40"	1212.20	437.87	221.25	495.44	N69°11'00"E
5	44°51'14"	1600.00	1252.56	660.35	1220.82	S78°54'13"E



100

PURDUM & JESCHKE
 CONSULTING ENGINEERS AND LAND SURVEYORS
 1029 North Calvert Street
 Baltimore, Maryland 21202 (301)837-0194

OWNER/DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD. 21044

OFFICE OF PLANNING & ZONING
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
 APPROVED: *[Signature]* 6/16/88
 CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, LAND DEVELOPMENT DIVISION
 CHIEF, BUREAU OF HIGHWAYS
 CHIEF, BUREAU OF ENGINEERING

APPROVED: VILLAGE OF LONGREACH
 CHIEF, BUREAU OF ENGINEERING



VILLAGE OF LONGREACH SECT. 3 AREA 2
 ROADWAY PLAN & PROFILE
TAMAR DRIVE
 STA. 4+00 TO STA. 13+00
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
 DATE: 1/26/88

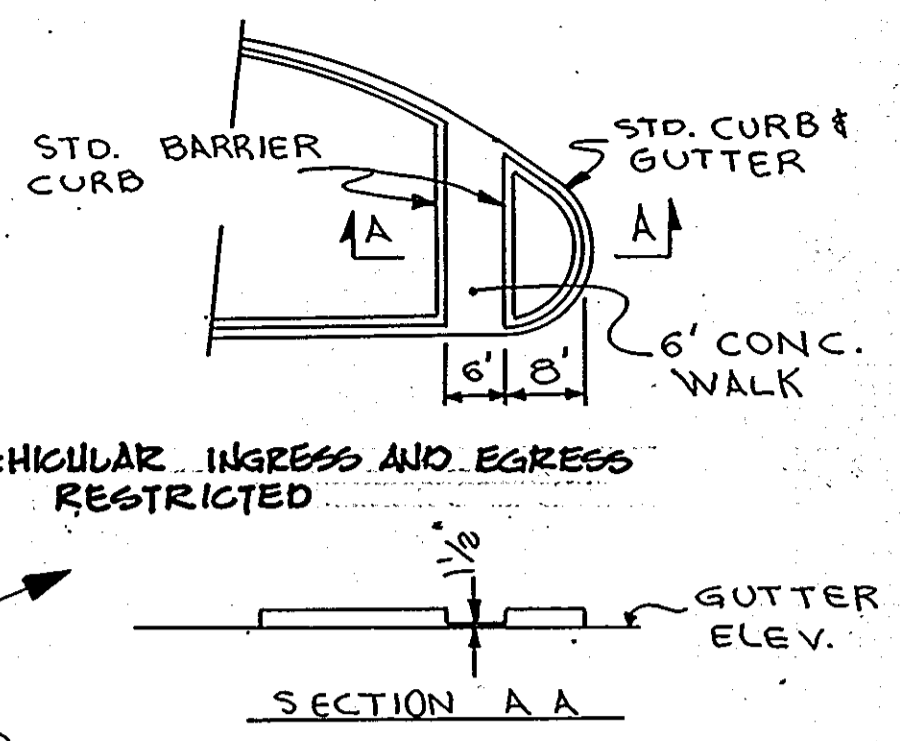
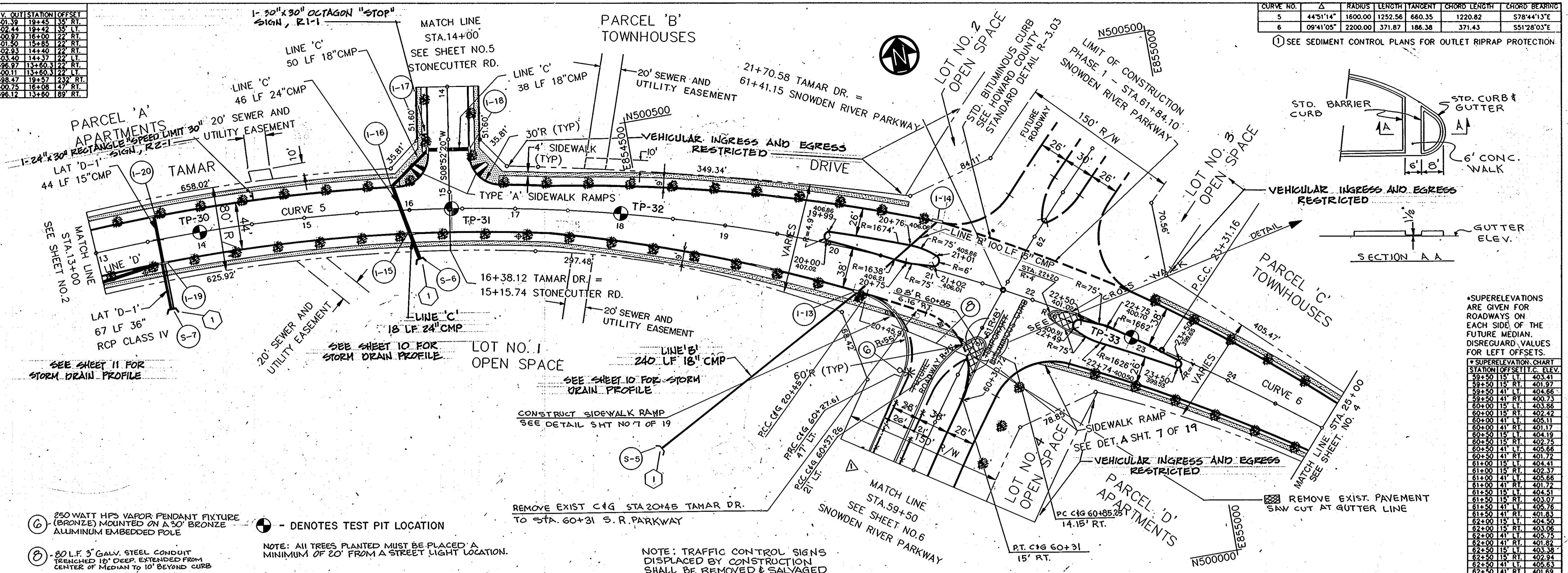
SHEET 2 OF 13
 DES: GDT
 DRAWN: LCC, MJJ
 CHK: RHB
 SCALE: HORIZ: 1" = 50'
 VERT: 1" = 5'

F-88-171

NO.	TYPE	TOP EL.	INV. IN	INV. IN	INV. IN	INV. IN	OFFSET
I-13	STD. A-5 INLET W/OUT	407.16	401.45		401.39	19+45	35' RT.
I-14	STD. A-5 INLET W/OUT	407.16	401.45		402.44	19+42	35' LT.
I-15	STD. A-5 INLET W/OUT	406.56	401.02		400.97	16+00	22' RT.
I-16	STD. A-5 INLET W/OUT	406.41	402.23	401.50	401.50	15+85	22' RT.
I-17	STD. A-5 INLET W/OUT	407.52	402.98		402.93	14+40	22' RT.
I-18	STD. A-5 INLET W/OUT	407.52	402.98		403.40	14+37	22' LT.
I-19	STD. A-5 INLET DEPRESSED	405.11	396.97	399.35	396.97	13+60.3	22' RT.
I-20	STD. A-10 INLET DEPRESSED	405.11	400.14		400.11	13+60.3	22' LT.
S-5	METAL END SECTION	399.72			398.47	19+57	23' RT.
S-6	METAL END SECTION	402.00			400.75	16+08	47' RT.
S-7	STD. TYPE 'A' HEADWALL	400.62			396.12	13+60	18' RT.

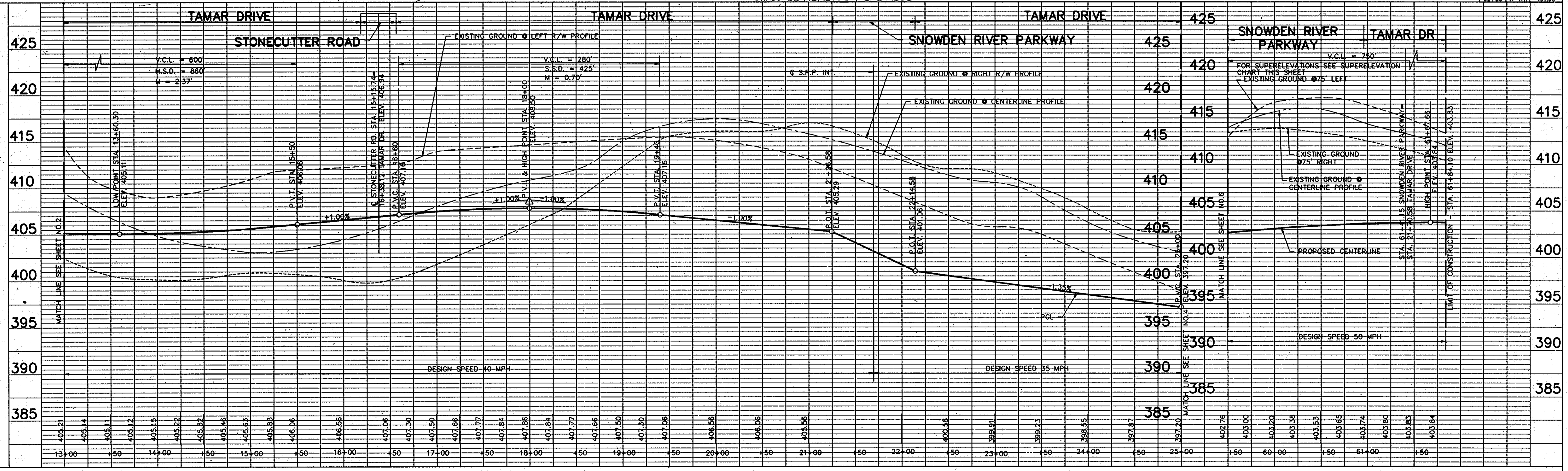
CURVE NO.	Δ	RADIUS	LENGTH	TANGENT	CHORD LENGTH	CHORD BEARING
5	44°51'14"	1600.00	1252.56	660.35	1220.82	S78°44'13"E
6	09°41'05"	2200.00	371.87	186.38	371.43	S51°28'03"E

① SEE SEDIMENT CONTROL PLANS FOR OUTLET RIPRAP PROTECTION.



*SUPERELEVATIONS ARE GIVEN FOR ROADWAYS ON EACH SIDE OF THE FUTURE MEDIAN. DISREGARD VALUES FOR LEFT OFFSETS.

STATION	OFFSET	ELEV.
58+50	15' LT.	403.41
59+50	15' RT.	401.97
59+50	41' LT.	404.66
59+50	41' RT.	400.73
60+00	15' LT.	403.86
60+00	15' RT.	402.42
60+00	41' LT.	405.11
60+00	41' RT.	401.17
60+50	15' LT.	404.19
60+50	15' RT.	402.75
60+50	41' LT.	405.66
60+50	41' RT.	401.72
61+00	15' LT.	404.41
61+00	15' RT.	402.97
61+00	41' LT.	405.88
61+00	41' RT.	401.72
61+50	15' LT.	404.51
61+50	15' RT.	403.07
61+50	41' LT.	405.76
61+50	41' RT.	401.83
62+00	15' LT.	404.50
62+00	15' RT.	403.56
62+00	41' LT.	405.88
62+00	41' RT.	401.82
62+50	15' LT.	403.38
62+50	15' RT.	402.94
62+50	41' LT.	405.63
62+50	41' RT.	401.69



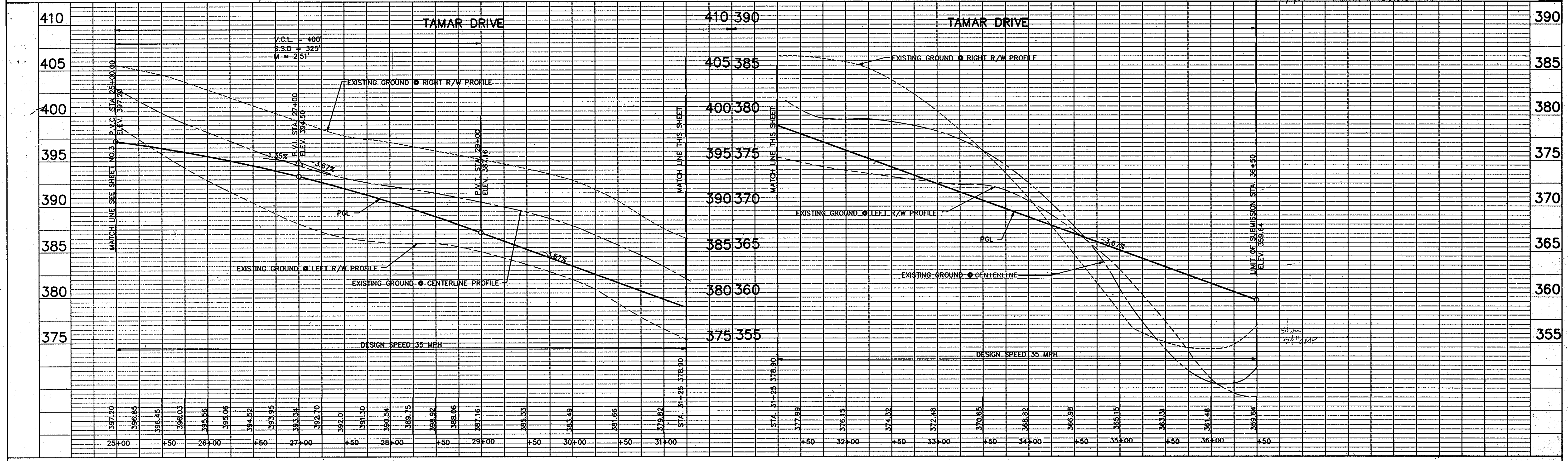
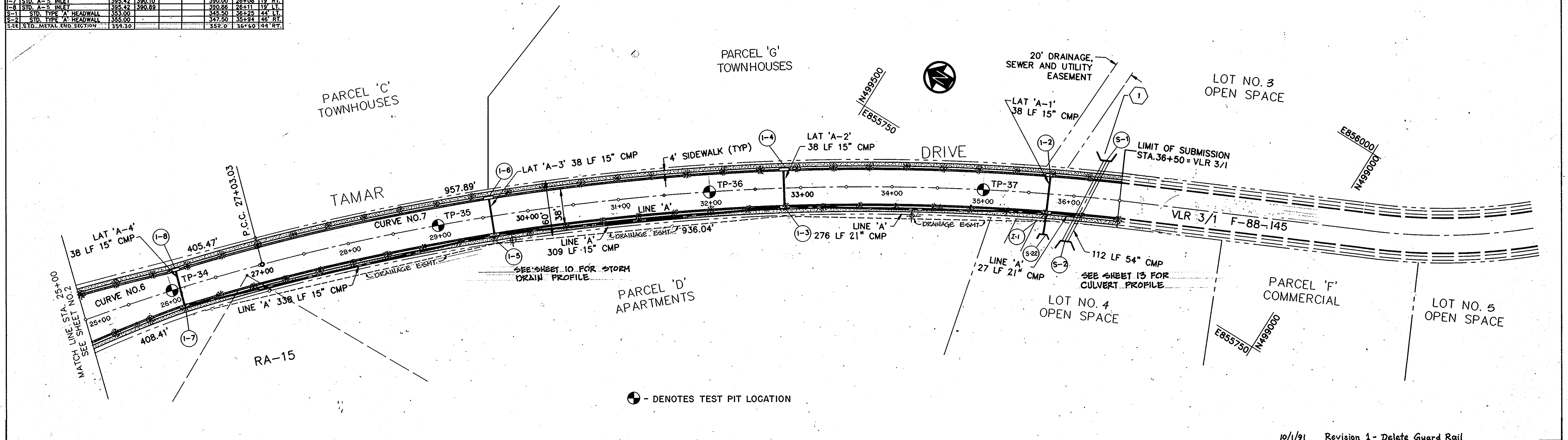
1001

<p>PURDUM & JESCHKE CONSULTING ENGINEERS AND LAND SURVEYORS 1029 North Calvert Street Baltimore, Maryland 21202 (301)837-0194</p>	<p>OWNER/DEVELOPER THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY. THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MD. 21044</p>	<p>APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CHIEF, LAND DEVELOPMENT DIVISION DATE 6/8/88 CHIEF, BUREAU OF HIGHWAYS DATE 6/8/88 CHIEF, BUREAU OF ENGINEERING DATE 6-9-88</p>	<p>REVISION G-30-94 ADDED SOUTHBOUND LANE TO S.R.P.</p>		<p>VILLAGE OF LONGREACH-SECT. 3 AREA 2 ROADWAY PLAN & PROFILE TAMAR DRIVE STA. 13+00 TO STA. 25+00 SIXTH ELECTION DISTRICT HOWARD COUNTY, MD. DATE: 1/26/88</p>	<p>SHEET 3 OF 19 DES: GDT DRAWN: LCC, JMJ CHK: RHB</p>

F-88497

NO.	TYPE	TOP EL.	INV. IN.	INV. IN.	INV. IN.	STATION	OFFSET
1-1	STD. A-5 INLET	362.58	357.35	357.00	358.70	35+70	19' RT.
1-2	STD. A-5 INLET	365.98			358.11	35+72	19' LT.
1-3	STD. A-5 INLET	373.21	367.75	367.80	367.10	32+77	19' RT.
1-4	STD. A-5 INLET	373.21	368.59		368.56	32+77	19' LT.
1-5	STD. A-5 INLET	384.96	380.00	379.75	379.25	29+60	19' RT.
1-6	STD. A-5 INLET	384.96	380.54		380.51	29+60	19' LT.
1-7	STD. A-5 INLET	395.42	390.10		390.00	26+08	19' RT.
1-8	STD. A-5 INLET	395.42	390.89		390.86	26+11	19' LT.
S-1	STD. TYPE 'A' HEADWALL	353.00			345.50	36+50	44' LT.
S-2	STD. TYPE 'A' HEADWALL	355.00			347.50	35+94	46' RT.
S-3	STD. METAL END SECTION	354.30			352.0	36+60	44' RT.

CURVE NO.	Δ	RADIUS	LENGTH	TANGENT	CHORD LENGTH	CHORD BEARING
6	09°41'05"	2200.00	371.87	188.38	371.43	S51°28'03"E
7	20°31'55"	2600.35	946.97	478.79	941.74	S36°11'33"E



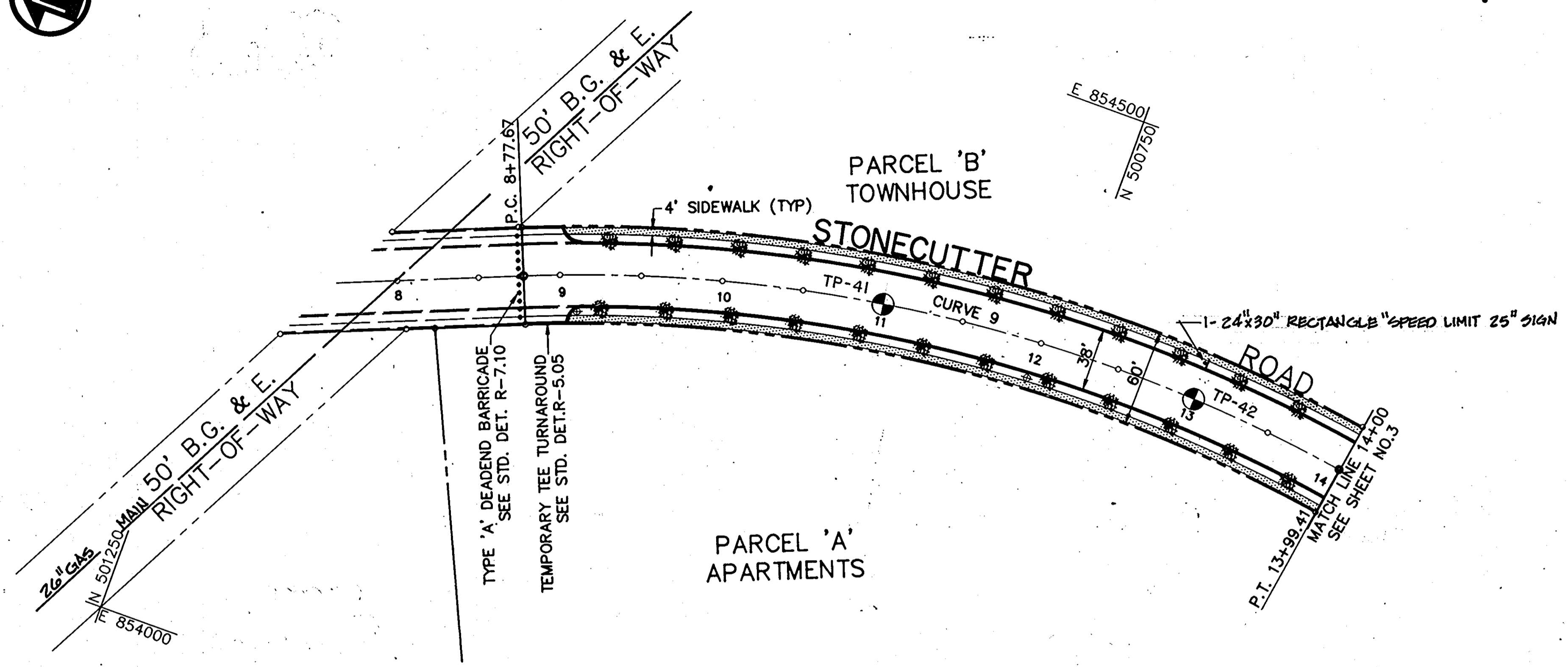
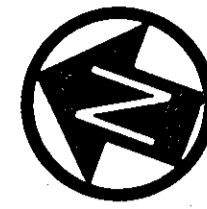
10/1/91 Revision 1 - Delete Guard Rail

100

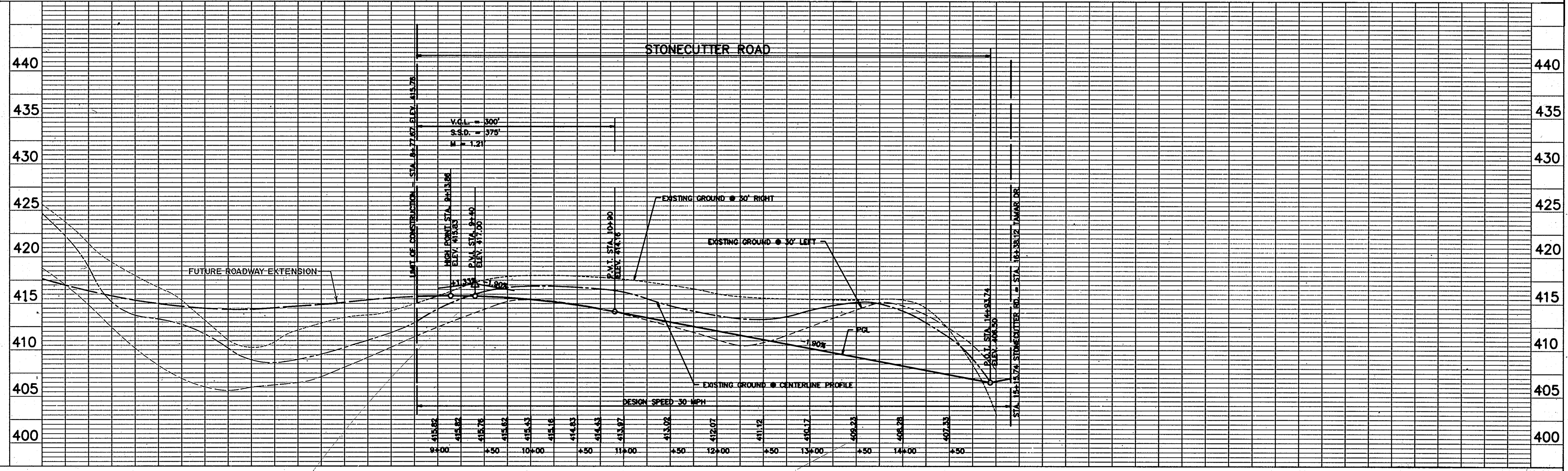
PURDUM & JESCHKE CONSULTING ENGINEERS AND LAND SURVEYORS 1029 North Calvert Street Baltimore, Maryland 21202 (301)837-0194	OWNER/DEVELOPER THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MD. 21044	APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>[Signature]</i> 6/16/88 CHIEF, LAND DEVELOPMENT DIVISION, DATE		VILLAGE OF LONGREACH-SECT. 3 AREA 2 ROADWAY PLAN & PROFILE TAMAR DRIVE STA. 25+00 TO STA. 36+50 SIXTH ELECTION DISTRICT HOWARD COUNTY, MD. DATE: 1/26/88	SHEET 4 OF 19 DES: GDT DRAWN: LCC, JMJ CHK: RHB
		OFFICE OF PLANNING & ZONING <i>[Signature]</i> 6/16/88 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT, DATE			APPROVED: CHIEF, BUREAU OF HIGHWAYS <i>[Signature]</i> 6/16/88 CHIEF, BUREAU OF ENGINEERING, DATE

F-88-171

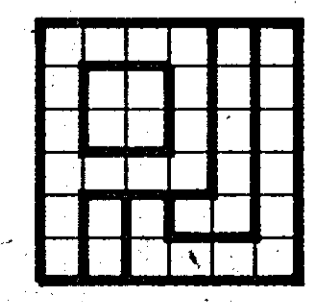
CURVE NO.	Δ	RADIUS	LENGTH	TANGENT	CHORD LENGTH	CHORD BEARING
9	31°06'15"	961.09	521.74	287.47	515.36	S08°40'47"E



⊙ - DENOTES TEST PIT LOCATION



100



PURDUM & JESCHKE
CONSULTING ENGINEERS AND
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 (301)837-0194

OWNER/DEVELOPER
THE HOWARD RESEARCH &
DEVELOPMENT LAND COMPANY
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044

OFFICE OF PLANNING & ZONING
DATE: 6/16/88
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

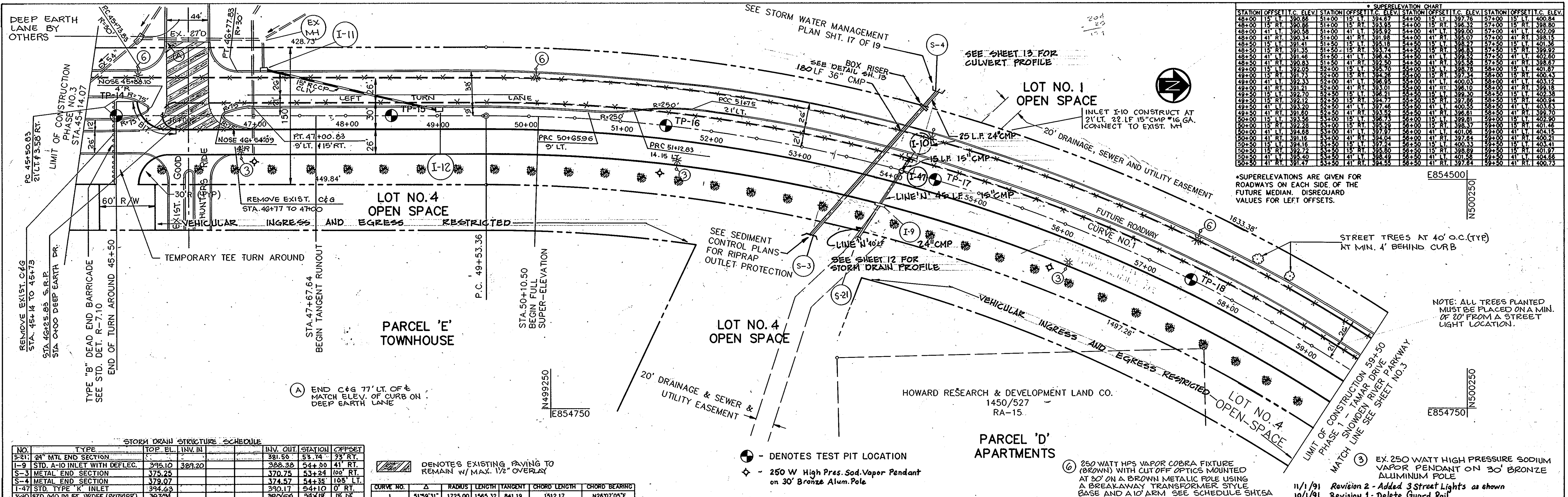
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 6/18/88
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 6/18/88
CHIEF, BUREAU OF HIGHWAYS
DATE: 6-18-88
CHIEF, BUREAU OF ENGINEERING



VILLAGE OF LONGREACH-SECT. 3 AREA 2
ROADWAY PLAN & PROFILE
STONECUTTER ROAD
STA. 8+77.67 TO STA. 14+93
SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
DATE: 1/20/88

SHEET 5 OF 19
DES: GDT
DRAWN: LCC, JMJ
CHK: RHB
SCALE: HORIZ: 1" = 50'
VERT: 1" = 5'

F-88-171



SUPERELEVATION CHART

STATION	OFFSET	T.C. ELEV.	STATION	OFFSET	T.C. ELEV.	STATION	OFFSET	T.C. ELEV.
46+00	15' LT	390.84	51+00	15' LT	394.53	54+00	15' LT	397.75
46+00	15' RT	390.84	51+00	15' RT	394.53	54+00	15' RT	397.75
46+00	41' LT	390.58	51+00	41' LT	394.27	54+00	41' LT	397.49
46+00	41' RT	390.58	51+00	41' RT	394.27	54+00	41' RT	397.49
46+00	15' LT	390.32	51+00	15' LT	394.01	54+00	15' LT	397.23
46+00	15' RT	390.32	51+00	15' RT	394.01	54+00	15' RT	397.23
46+00	41' LT	389.84	51+00	41' LT	393.53	54+00	41' LT	396.75
46+00	41' RT	389.84	51+00	41' RT	393.53	54+00	41' RT	396.75
46+00	15' LT	389.58	51+00	15' LT	389.27	54+00	15' LT	389.49
46+00	15' RT	389.58	51+00	15' RT	389.27	54+00	15' RT	389.49
46+00	41' LT	389.10	51+00	41' LT	388.79	54+00	41' LT	389.31
46+00	41' RT	389.10	51+00	41' RT	388.79	54+00	41' RT	389.31
46+00	15' LT	388.84	51+00	15' LT	388.53	54+00	15' LT	388.75
46+00	15' RT	388.84	51+00	15' RT	388.53	54+00	15' RT	388.75
46+00	41' LT	388.36	51+00	41' LT	388.05	54+00	41' LT	388.27
46+00	41' RT	388.36	51+00	41' RT	388.05	54+00	41' RT	388.27
46+00	15' LT	388.10	51+00	15' LT	387.79	54+00	15' LT	388.01
46+00	15' RT	388.10	51+00	15' RT	387.79	54+00	15' RT	388.01
46+00	41' LT	387.62	51+00	41' LT	387.31	54+00	41' LT	387.53
46+00	41' RT	387.62	51+00	41' RT	387.31	54+00	41' RT	387.53
46+00	15' LT	387.36	51+00	15' LT	387.05	54+00	15' LT	387.27
46+00	15' RT	387.36	51+00	15' RT	387.05	54+00	15' RT	387.27
46+00	41' LT	386.88	51+00	41' LT	386.57	54+00	41' LT	386.79
46+00	41' RT	386.88	51+00	41' RT	386.57	54+00	41' RT	386.79
46+00	15' LT	386.62	51+00	15' LT	386.31	54+00	15' LT	386.53
46+00	15' RT	386.62	51+00	15' RT	386.31	54+00	15' RT	386.53
46+00	41' LT	386.14	51+00	41' LT	385.83	54+00	41' LT	386.05
46+00	41' RT	386.14	51+00	41' RT	385.83	54+00	41' RT	386.05
46+00	15' LT	385.88	51+00	15' LT	385.57	54+00	15' LT	385.79
46+00	15' RT	385.88	51+00	15' RT	385.57	54+00	15' RT	385.79
46+00	41' LT	385.40	51+00	41' LT	385.09	54+00	41' LT	385.31
46+00	41' RT	385.40	51+00	41' RT	385.09	54+00	41' RT	385.31
46+00	15' LT	385.14	51+00	15' LT	384.83	54+00	15' LT	385.05
46+00	15' RT	385.14	51+00	15' RT	384.83	54+00	15' RT	385.05
46+00	41' LT	384.66	51+00	41' LT	384.35	54+00	41' LT	384.57
46+00	41' RT	384.66	51+00	41' RT	384.35	54+00	41' RT	384.57
46+00	15' LT	384.40	51+00	15' LT	384.09	54+00	15' LT	384.31
46+00	15' RT	384.40	51+00	15' RT	384.09	54+00	15' RT	384.31
46+00	41' LT	384.02	51+00	41' LT	383.71	54+00	41' LT	383.93
46+00	41' RT	384.02	51+00	41' RT	383.71	54+00	41' RT	383.93
46+00	15' LT	383.76	51+00	15' LT	383.45	54+00	15' LT	383.67
46+00	15' RT	383.76	51+00	15' RT	383.45	54+00	15' RT	383.67
46+00	41' LT	383.28	51+00	41' LT	382.97	54+00	41' LT	383.19
46+00	41' RT	383.28	51+00	41' RT	382.97	54+00	41' RT	383.19
46+00	15' LT	383.02	51+00	15' LT	382.71	54+00	15' LT	382.93
46+00	15' RT	383.02	51+00	15' RT	382.71	54+00	15' RT	382.93
46+00	41' LT	382.54	51+00	41' LT	382.23	54+00	41' LT	382.45
46+00	41' RT	382.54	51+00	41' RT	382.23	54+00	41' RT	382.45
46+00	15' LT	382.28	51+00	15' LT	381.97	54+00	15' LT	382.19
46+00	15' RT	382.28	51+00	15' RT	381.97	54+00	15' RT	382.19
46+00	41' LT	381.80	51+00	41' LT	381.49	54+00	41' LT	381.71
46+00	41' RT	381.80	51+00	41' RT	381.49	54+00	41' RT	381.71
46+00	15' LT	381.54	51+00	15' LT	381.23	54+00	15' LT	381.45
46+00	15' RT	381.54	51+00	15' RT	381.23	54+00	15' RT	381.45
46+00	41' LT	381.06	51+00	41' LT	380.75	54+00	41' LT	380.97
46+00	41' RT	381.06	51+00	41' RT	380.75	54+00	41' RT	380.97
46+00	15' LT	380.80	51+00	15' LT	380.49	54+00	15' LT	380.71
46+00	15' RT	380.80	51+00	15' RT	380.49	54+00	15' RT	380.71
46+00	41' LT	380.32	51+00	41' LT	380.01	54+00	41' LT	380.23
46+00	41' RT	380.32	51+00	41' RT	380.01	54+00	41' RT	380.23

*SUPERELEVATIONS ARE GIVEN FOR ROADWAYS ON EACH SIDE OF THE FUTURE MEDIAN. DISREGARD VALUES FOR LEFT OFFSETS.

STORM DRAIN STRUCTURE SCHEDULE

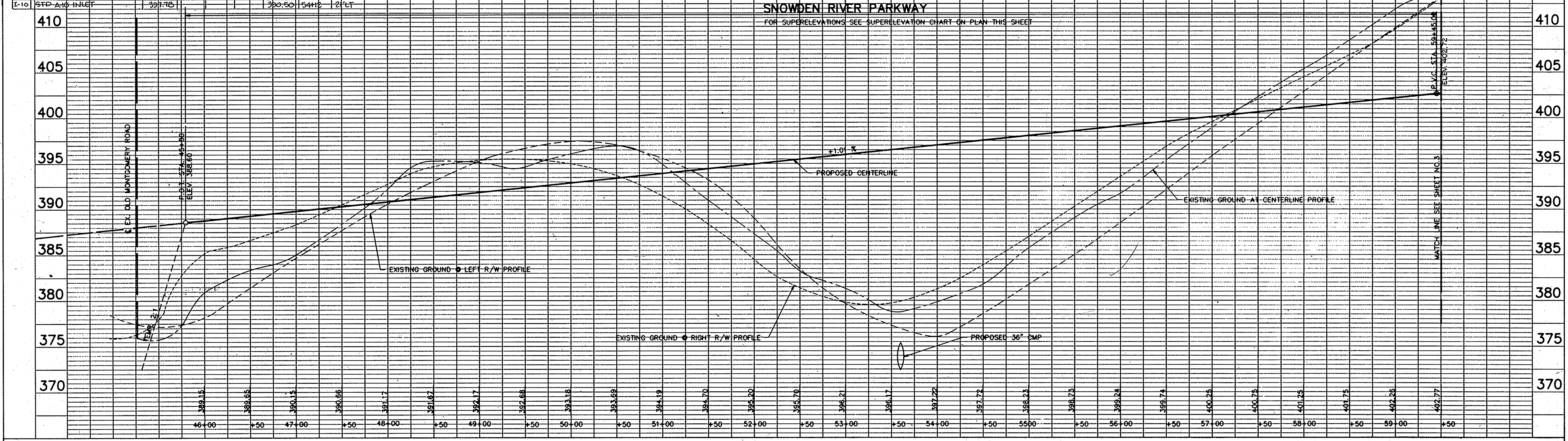
NO.	TYPE	TOP EL.	INV. IN	STATION	OFFSET
S-21	24" METAL END SECTION	396.10	399.20	381.50	53.74 RT
I-9	STD. A-10 INLET WITH DEFLEC.	375.25		388.38	54+00 41' RT
S-3	METAL END SECTION	375.25		370.75	53+24 100' RT
S-4	METAL END SECTION	379.07		374.57	54+35 105' LT
I-47	STD. TYPE 'K' INLET	394.63		390.17	54+10 0' RT
X-30	STD. 240 DL. 6" WOSE (EXT. WIRE)	392.94		392.58	54 X 2 18' RT
I-11	STD. A-5 INLET	389.72	386.10	386.00	47+07 47' LT
I-12	STD. A-5 INLET	392.15		388.40	49+00 0' LT
I-10	STD. A-10 INLET	391.70		380.50	54+12 21' LT

CURVE DATA

CURVE NO.	Δ	RADIUS	LENGTH	TANGENT	CHORD LENGTH	CHORD BEARING
1	51°39'31"	1725.00	1565.32	841.19	1512.17	N26°07'05"E

⊙ - DENOTES TEST PIT LOCATION
 ⬠ - 250 W High Pres. Sod. Vapor Pendant on 30' Bronze Alum. Pole

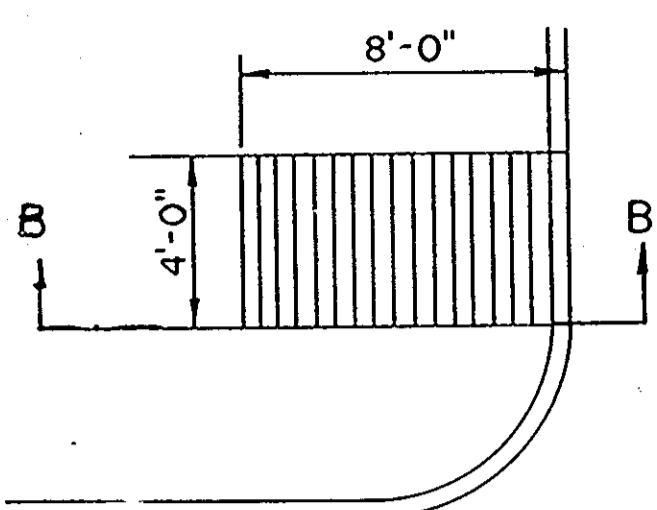
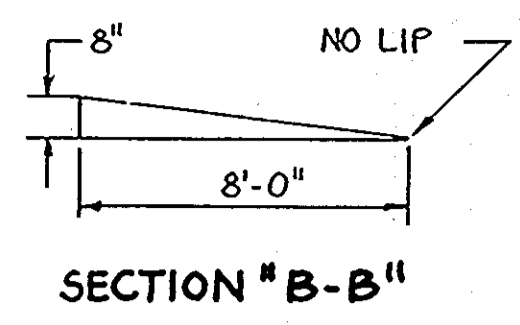
⊙ 250 WATT HPS VAPOR COBRA FIXTURE (BROWN) WITH CUT OFF OPTICS MOUNTED AT 30' ON A BROWN METALIC POLE USING A BREAKAWAY TRANSFORMER STYLE BASE AND A 10' ARM SEE SCHEDULE SHT. 5A
 11/1/91 Revision 2 - Added 3 Street Lights as shown
 10/1/91 Revision 1 - Delete Guard Rail



<p>PURDUM & JESCHKE CONSULTING ENGINEERS AND LAND SURVEYORS 1029 North Colvert Street Baltimore, Maryland 21202 (301)837-0194</p>	<p>OWNER/DEVELOPER THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MD. 21044</p>	<p>OFFICE OF PLANNING & ZONING DATE: 6/16/88</p>	<p>APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS DATE: 6/16/88</p>	<p>REVISION G-30-94 ADDED SOUTHBOUND LANE TO S.R.P.</p>		<p>VILLAGE OF LONGREACH-SECT. 3 AREA 2 ROADWAY PLAN & PROFILE SNOWDEN RIVER PARKWAY STA. 45+20 TO STA. 59+50</p>	<p>SHEET 6 OF 19 DES: GDT DRAWN: LCC, JMJ CHK: RHB</p>

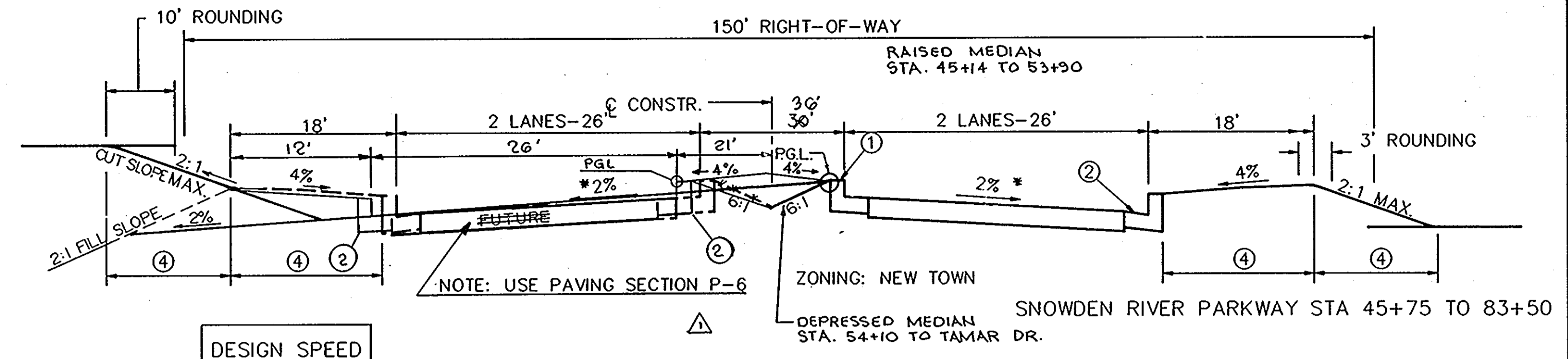
F-88-171

* 2% NORMAL X-SLOPE SEE S.E. CHART FOR X-SLOPES IN SE. SECTION

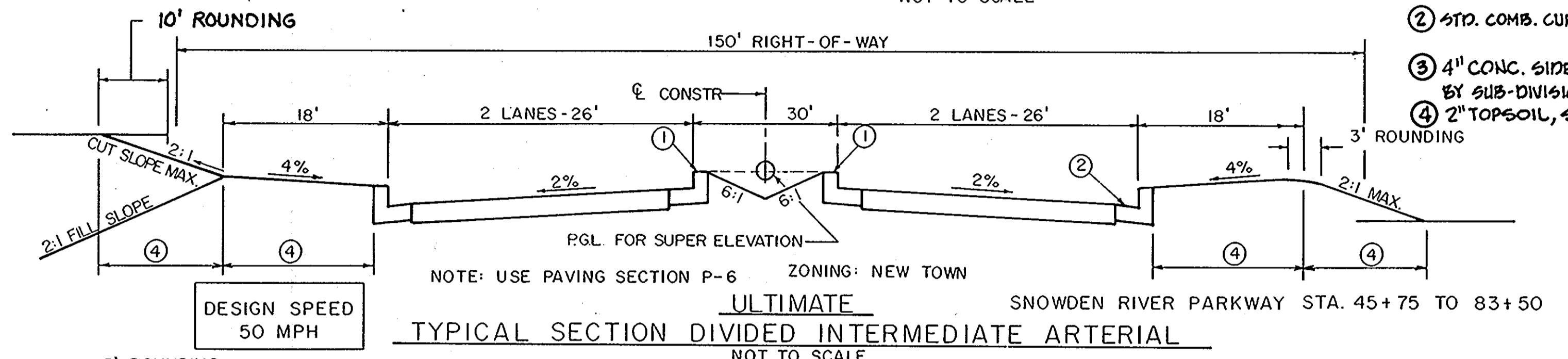


HANDICAP RAMP-DETAIL "A"
NOT TO SCALE

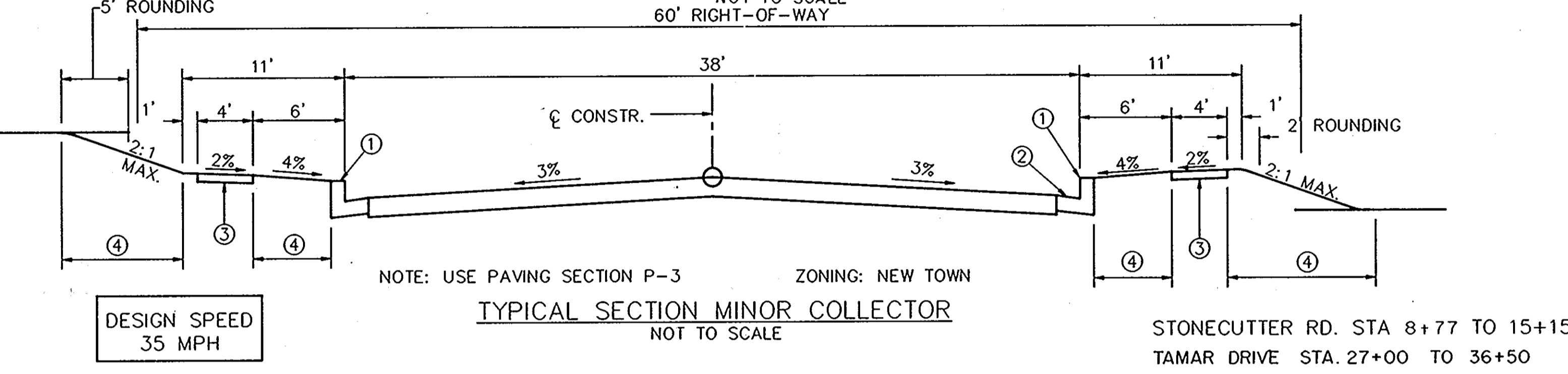
- LEGEND**
- ① PROFILE GRADE LINE (PGL)
 - ② STD. COMB. CURB & GUTTER
 - ③ 4" CONC. SIDEWALK AS REQ. BY SUB-DIVISION REGULATIONS
 - ④ 2" TOPSOIL, SEED & MULCH



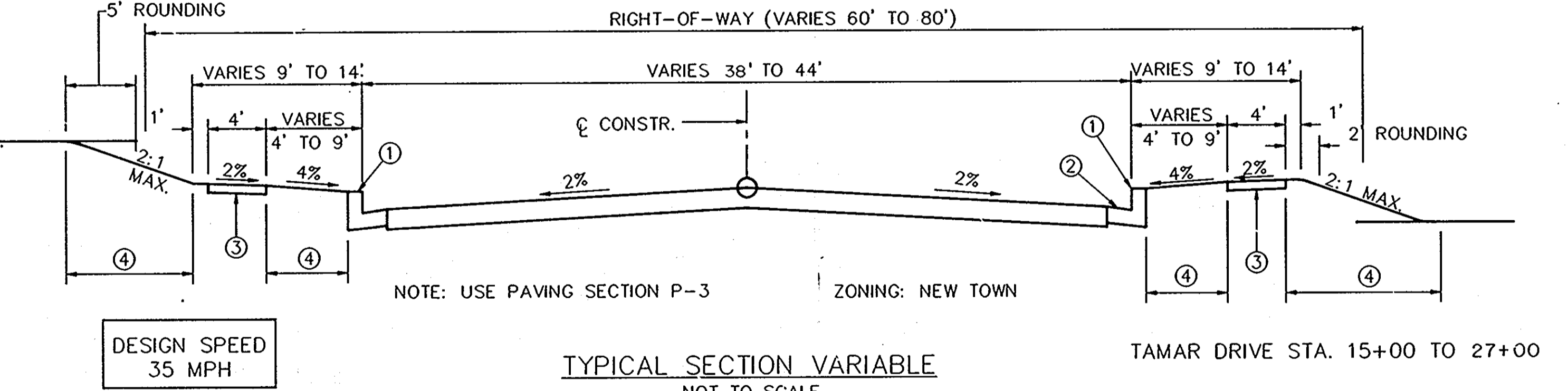
TYPICAL SECTION DIVIDED INTERMEDIATE ARTERIAL
NOT TO SCALE
SNOWDEN RIVER PARKWAY



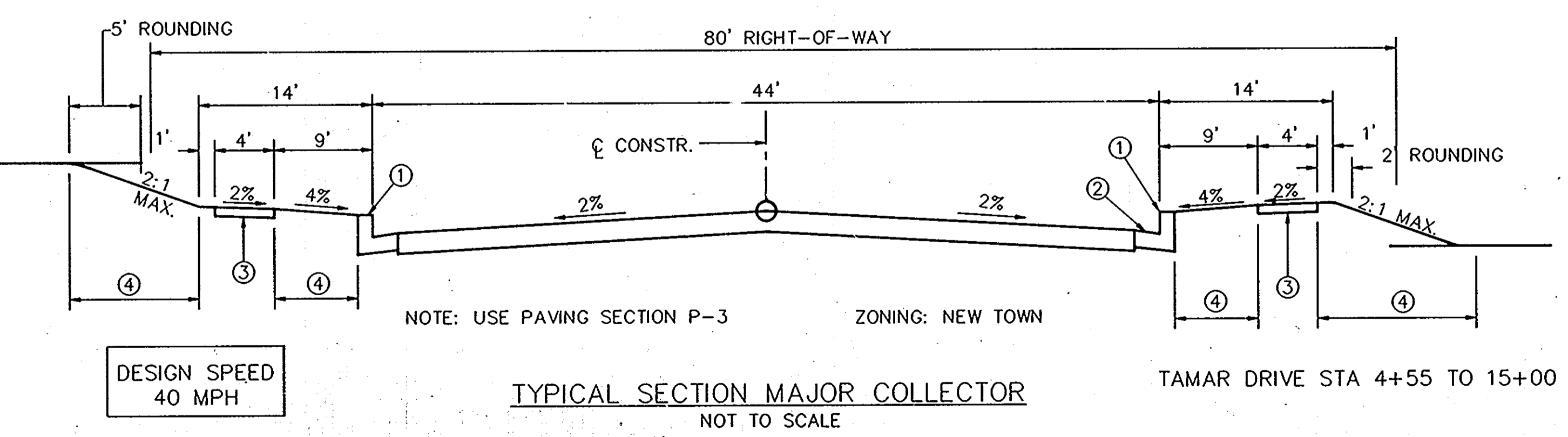
TYPICAL SECTION DIVIDED INTERMEDIATE ARTERIAL
NOT TO SCALE
ULTIMATE
SNOWDEN RIVER PARKWAY STA. 45+75 TO 83+50



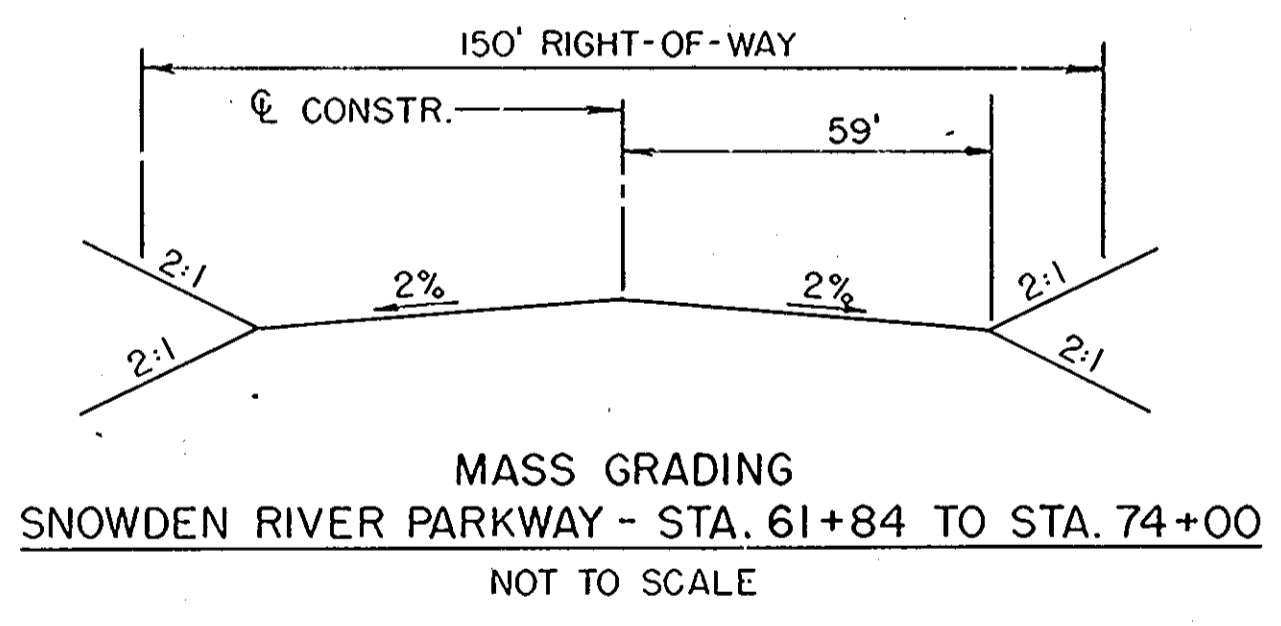
TYPICAL SECTION MINOR COLLECTOR
NOT TO SCALE
STONECUTTER RD. STA. 8+77 TO 15+15
TAMAR DRIVE STA. 27+00 TO 36+50



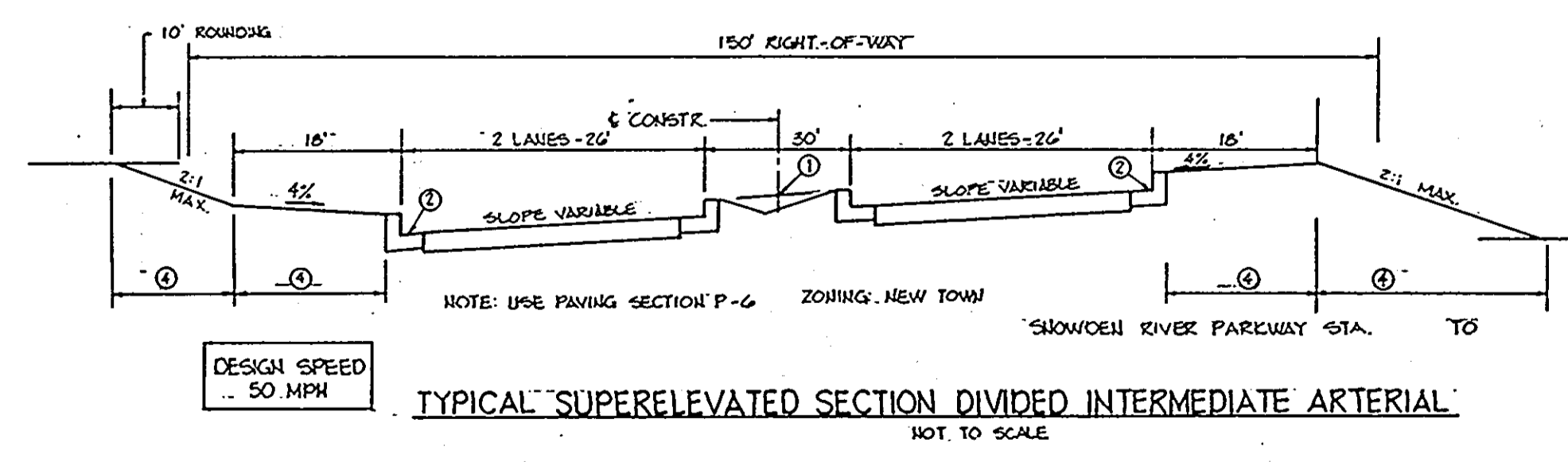
TYPICAL SECTION VARIABLE
NOT TO SCALE
TAMAR DRIVE STA. 15+00 TO 27+00



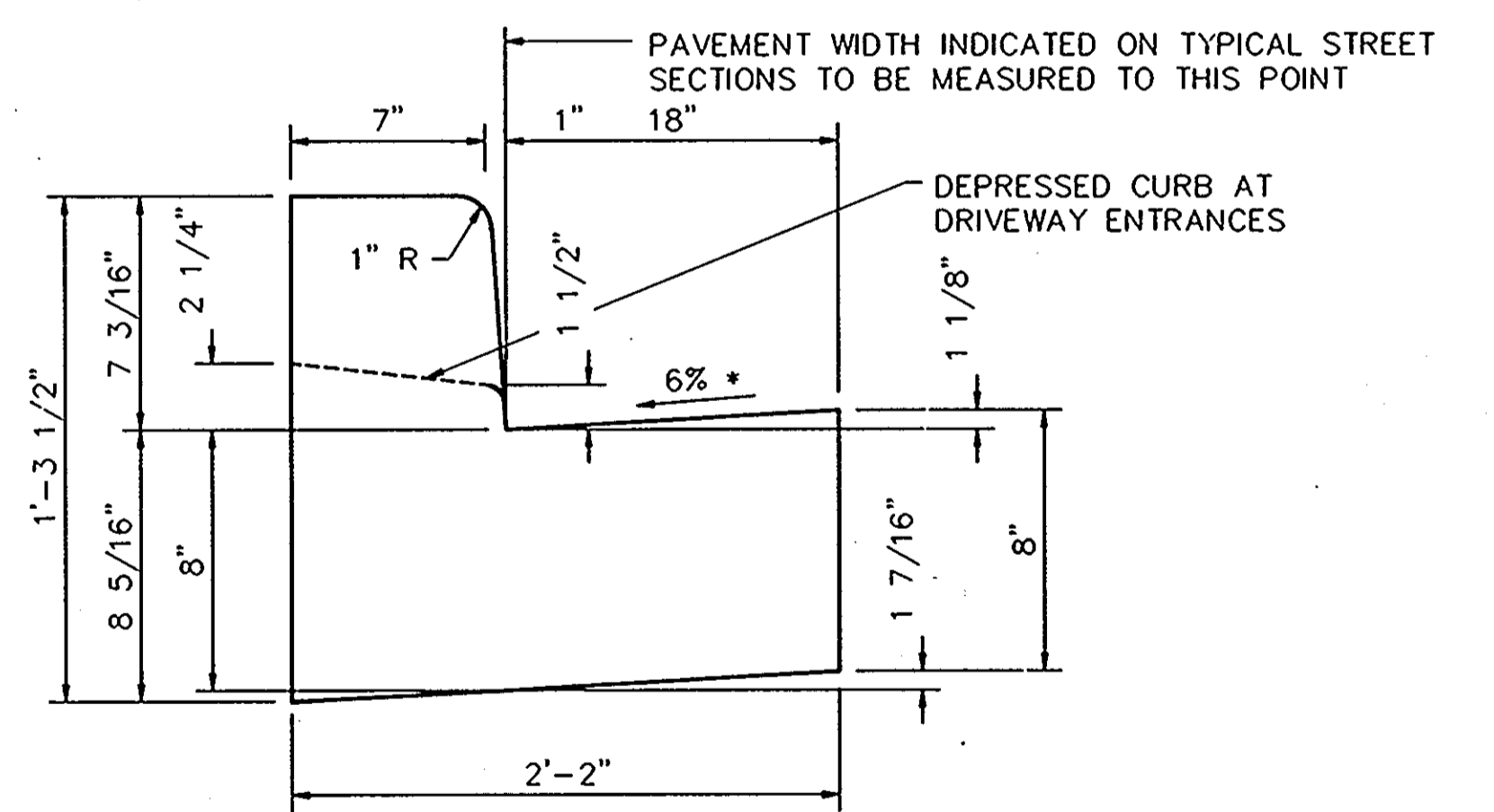
TYPICAL SECTION MAJOR COLLECTOR
NOT TO SCALE
TAMAR DRIVE STA. 4+55 TO 15+00



MASS GRADING
SNOWDEN RIVER PARKWAY - STA. 61+84 TO STA. 74+00
NOT TO SCALE



TYPICAL SUPERELEVATED SECTION DIVIDED INTERMEDIATE ARTERIAL
NOT TO SCALE



* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.

STANDARD 7" COMBINATION CURB AND GUTTER
NOT TO SCALE

SECTION NUMBER	FULL DEPTH BIT. CONC. ALTERNATE	GRANULAR BASE ALTERNATE
P-2	<ul style="list-style-type: none"> 1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE 	<ul style="list-style-type: none"> 1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE PRIME 8" CRUSHER RUN BASE COURSE (2 COURSES) OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE
P-3	<ul style="list-style-type: none"> 1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 5" BIT. CONC. BASE 	<ul style="list-style-type: none"> 1 1/2" BIT. CONC. SURFACE 4 1/2" BIT. CONC. BASE PRIME 6" CRUSHER RUN BASE COURSE OR 4 1/2" DENSE GRADED STABILIZED AGGREGATE BASE COURSE
P-6	<ul style="list-style-type: none"> 1 1/2" BIT. CONC. SURFACE (2 COURSES) 2" BIT. CONC. BASE 4" BIT. CONC. BASE 5" BIT. CONC. BASE 	<ul style="list-style-type: none"> 1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE PRIME 5" BIT. CONC. BASE 8" CRUSHER RUN BASE COURSE OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE

100

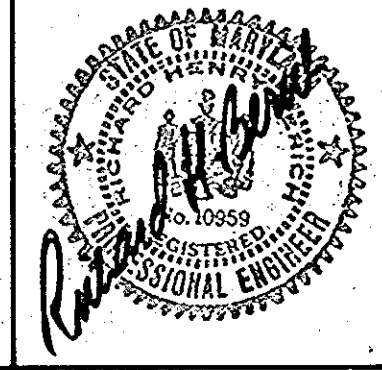
PURDUM & JESCHKE
CONSULTING ENGINEERS AND LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 (301)837-0194

OWNER/DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044

OFFICE OF PLANNING & ZONING
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
DATE: 6/16/88

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF, LAND DEVELOPMENT DIVISION, DATE: 6/16/88
CHIEF, BUREAU OF HIGHWAYS, DATE: 6/16/88
CHIEF, BUREAU OF ENGINEERING, DATE: 6/16/88

REVISION 6-20-94 ADDED LANE TO TYP. SECTION - SNOWDEN RIVER PARKWAY



VILLAGE OF LONGREACH-SECT. 3 AREA 2
TYPICAL SECTIONS & DETAILS
SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
DATE: 1/26/88 SCALE: NOTED

SHEET 7 OF 19
DES:
DRAWN:
CHK:

F-88-171

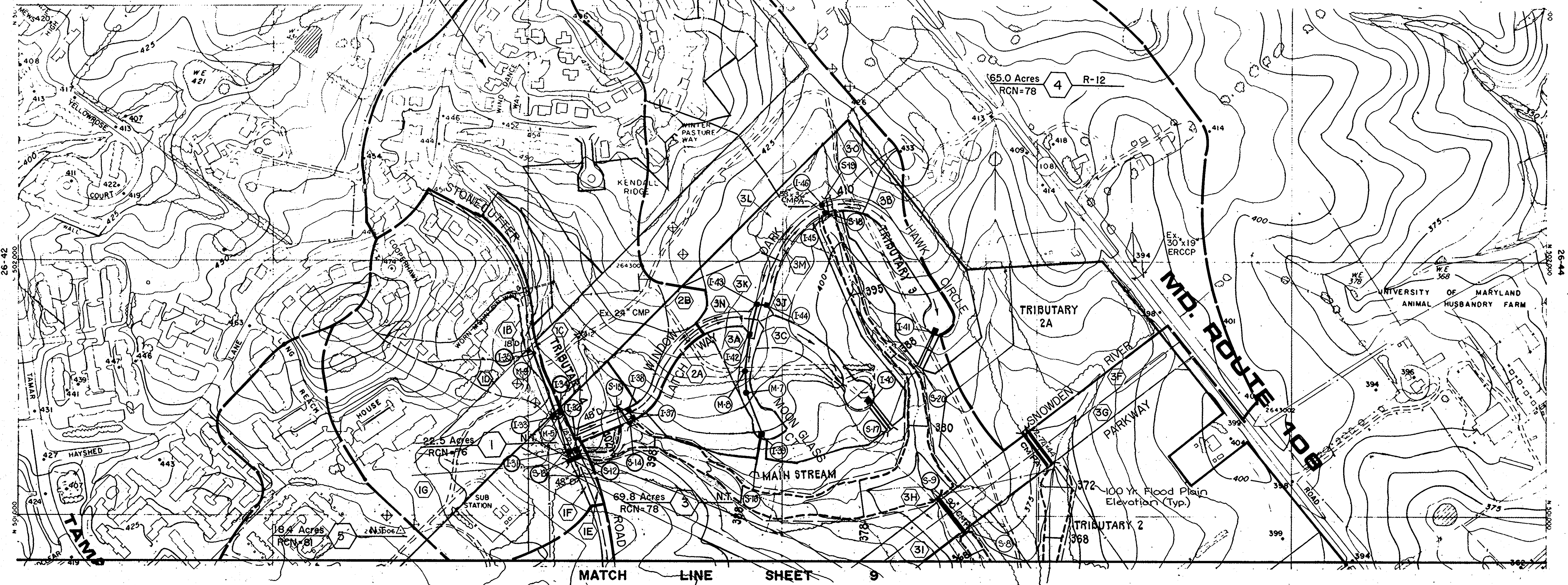
D.A.	AREA (Ac.)	COEFF.	TIME CONC. (Min.)
1B	1.68	0.35	12.8
1C	0.28	0.58	5.0
1D	1.24	0.35	12.5
1E	0.18	0.58	5.0
1F	0.18	0.58	5.0
2A	0.40	0.58	5.0
2B	1.38	0.37	12.0
3A	1.29	0.44	11.6
3B	1.47	0.44	11.8
3C	1.12	0.52	11.3
3D	2.30	0.29	15.2
3E	1.38	0.38	13.6
3F	1.38	0.38	15.2
3G	1.38	0.38	15.7
3H	1.12	0.38	15.2
3I	1.12	0.38	15.2
3J	0.41	0.58	5.0
3K	1.65	0.48	11.2
3L	4.18	0.32	16.0
3M	0.23	0.58	5.0
3N	0.17	0.58	5.0
3O	0.57	0.29	5.0

NOTE: ALL PIPE SIZES ARE 15" UNLESS NOTED OTHERWISE.

NOTE: ALL INLET ARE TYPE A-5 WITH DEFLECTORS, UNLESS OTHERWISE NOTED. INLETS TYPES ARE NOTED ON ROAD CONSTRUCTION PLANS.

31.0 Acres
RCN-76

2 N.T.

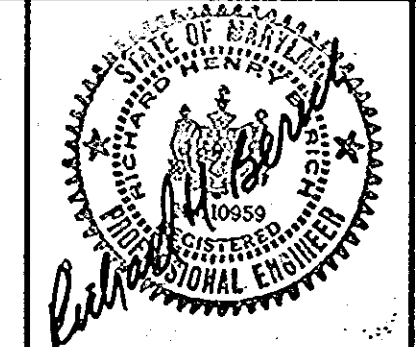


PURDUM & JESCHKE
CONSULTING ENGINEERS AND
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 (301)837-0194

OWNER/DEVELOPER
THE HOWARD RESEARCH &
DEVELOPMENT LAND COMPANY
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044

OFFICE OF PLANNING & ZONING
DATE: 6/16/88
A/CHIEF, DIVISION OF COMMUNITY
PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT
OF PUBLIC WORKS
DATE: 6/16/88
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 6/16/88
CHIEF, BUREAU OF HIGHWAYS
DATE: 6-9-88
CHIEF, BUREAU OF ENGINEERING



**VILLAGE OF LONGREACH - SECTION 3
AREA-2
DRAINAGE AREA MAP**
TAX MAP 36 & 37
SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
DATE: 1/26/88 SCALE: 1" = 200'

SHEET 8 OF 19
DES:
DRAWN:
CHK:

100

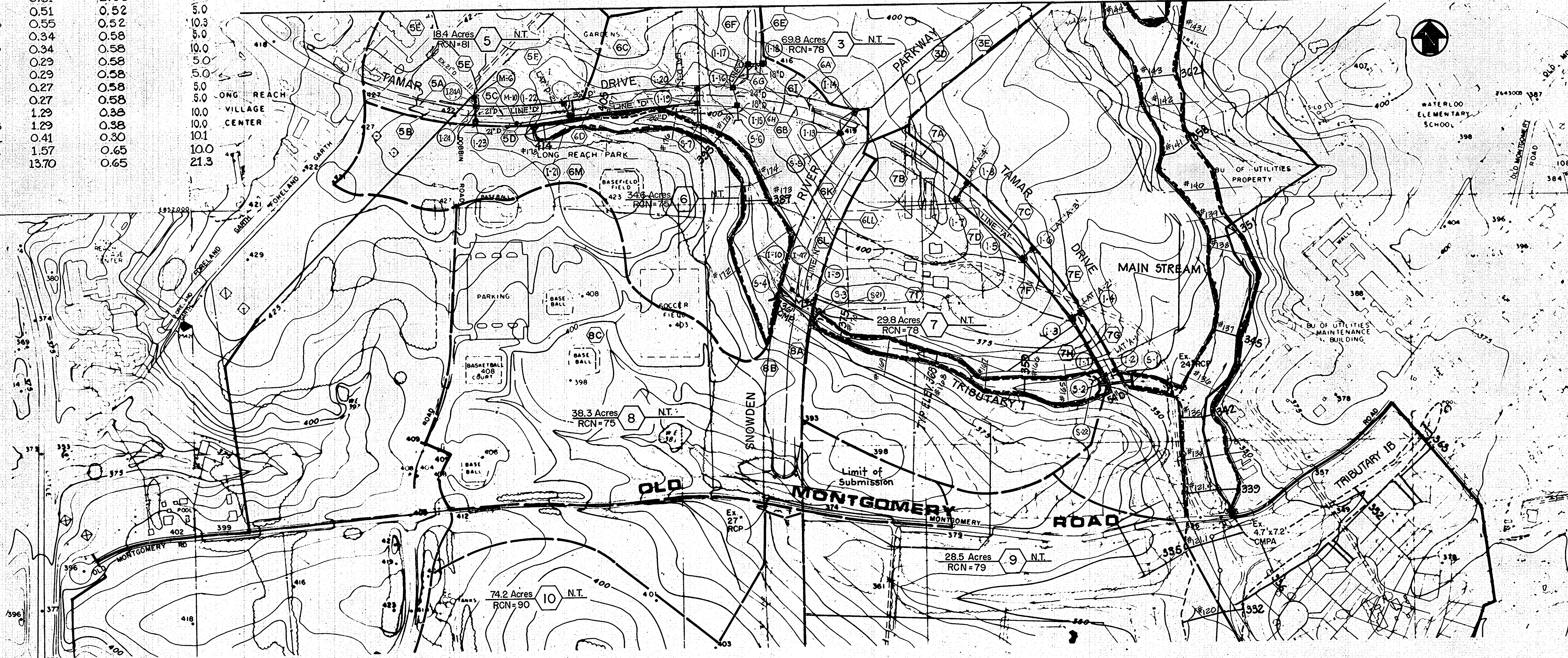
F-88-171

D.A.	AREA (Ac.)	COEFF.	TIME CONC. (Min.)
5A	1.88	0.58	10.0
5B	0.43	0.58	5.0
5C	0.41	0.58	5.0
5D	0.41	0.58	5.0
6A	0.23	0.58	5.0
6B	0.23	0.58	5.0
6C	5.51	0.29	12.9
6D	0.64	0.58	5.0
6E	0.28	0.58	5.0
6F	1.45	0.30	12.5
6G	1.74	0.23	10.0
6H	0.17	0.58	5.0
6I	0.83	0.35	13.6
6J	0.16	0.58	5.0
6K	0.81	0.58	10.0
6L	0.61	0.58	8.5
7A	0.51	0.52	5.0
7B	0.55	0.52	10.3
7C	0.34	0.58	5.0
7D	0.34	0.58	10.0
7E	0.29	0.58	5.0
7F	0.29	0.58	5.0
7G	0.27	0.58	5.0
7H	0.27	0.58	5.0
8A	1.29	0.38	10.0
8B	1.29	0.38	10.0
6LL	0.41	0.30	10.1
5E	1.57	0.65	10.0
5F	13.70	0.65	21.3

NOTE: ALL PIPE SIZES ARE 15" UNLESS NOTED OTHERWISE.

NOTE: ALL INLETS ARE TYPE A-5 WITH DEFLECTORS, UNLESS NOTED OTHERWISE. INLET TYPES ARE NOTED ON ROAD CONSTRUCTION PLANS.

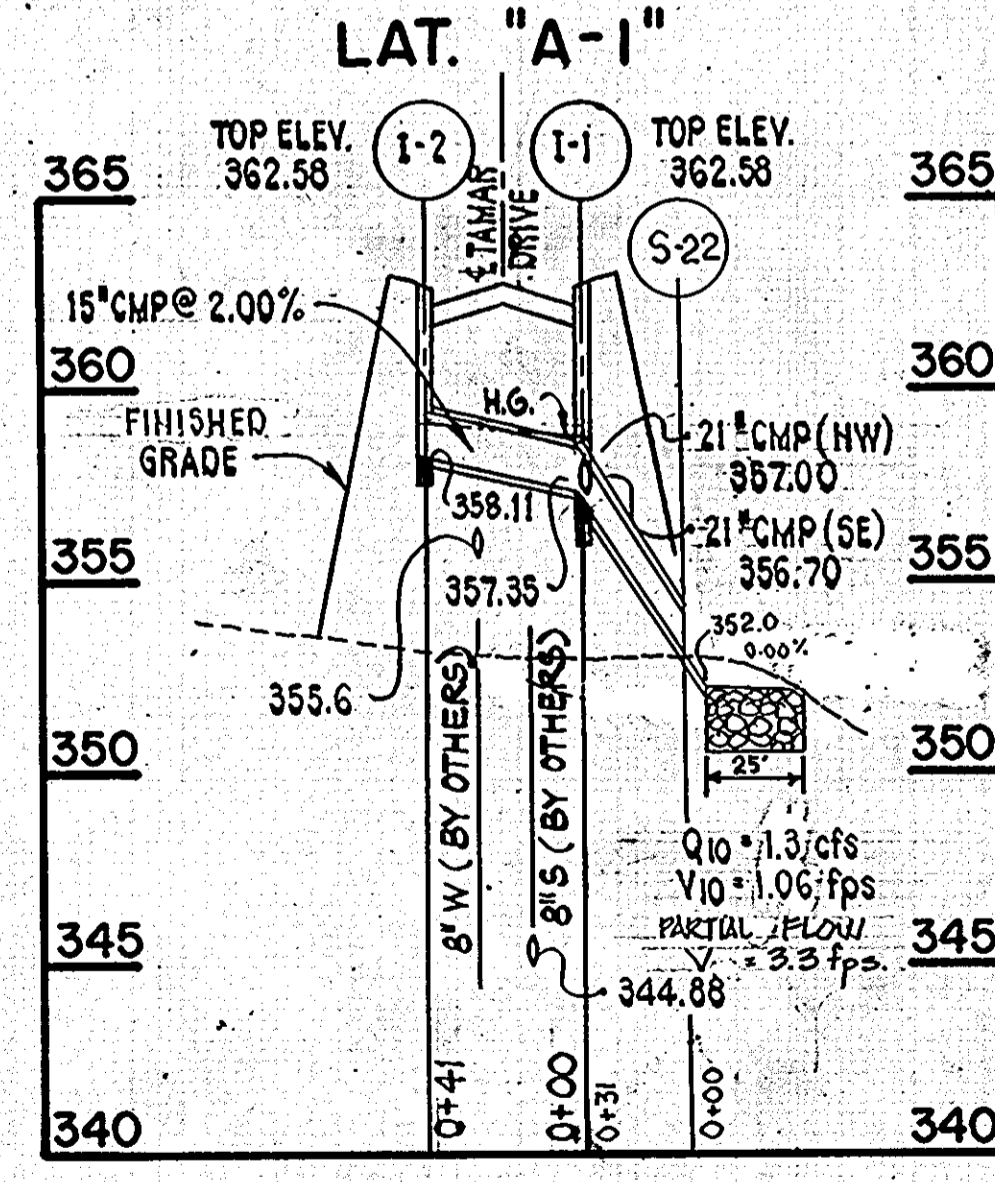
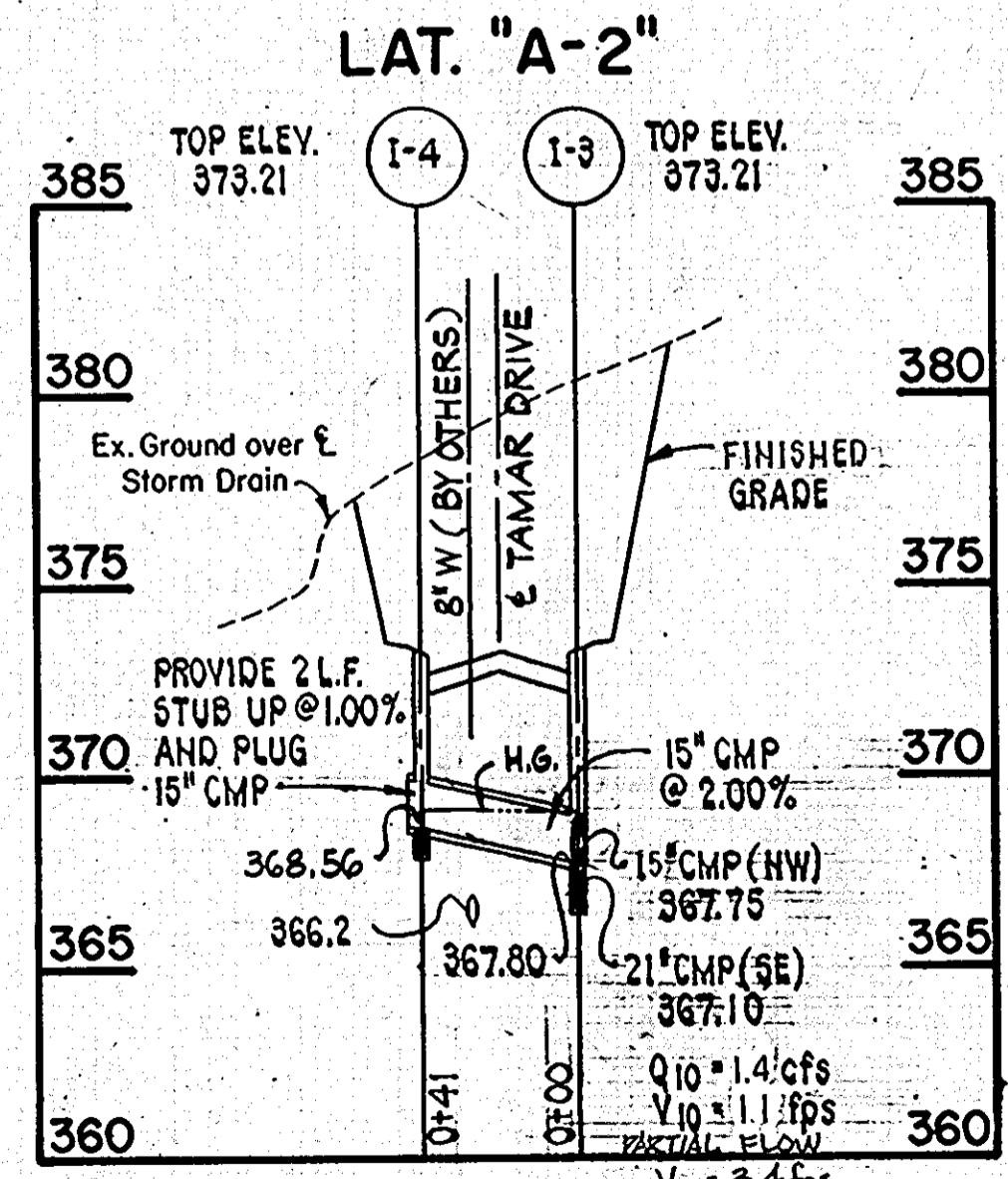
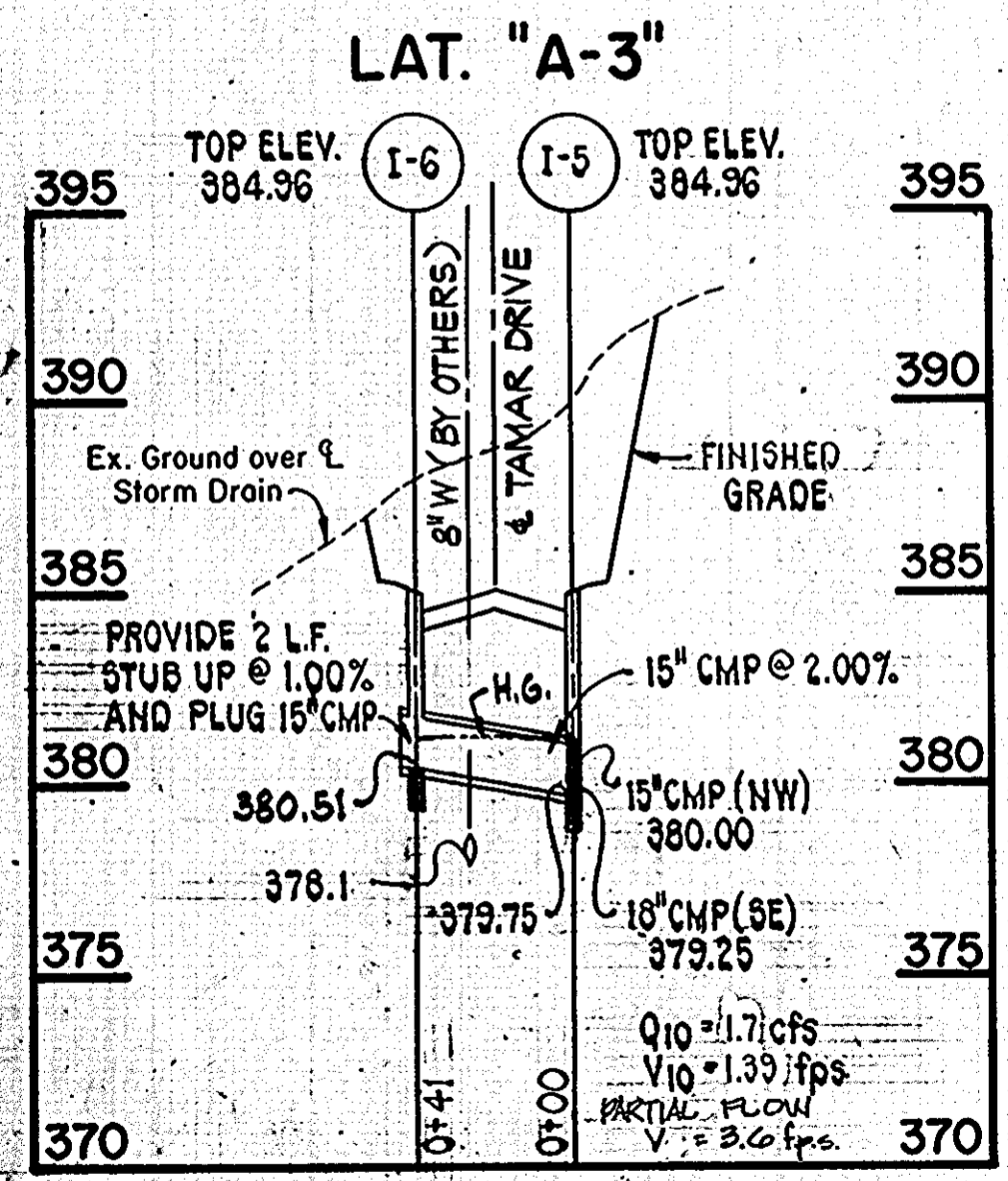
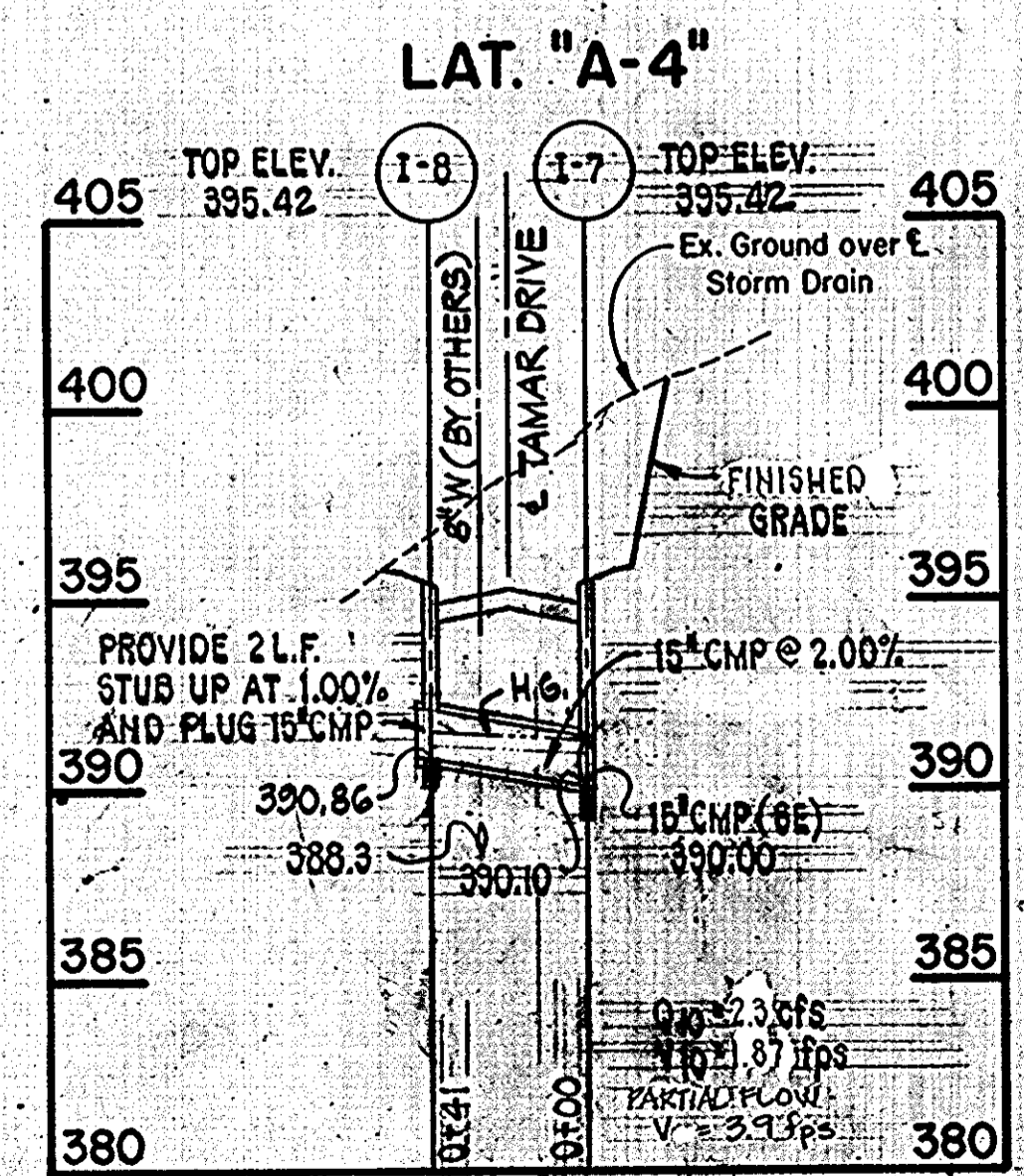
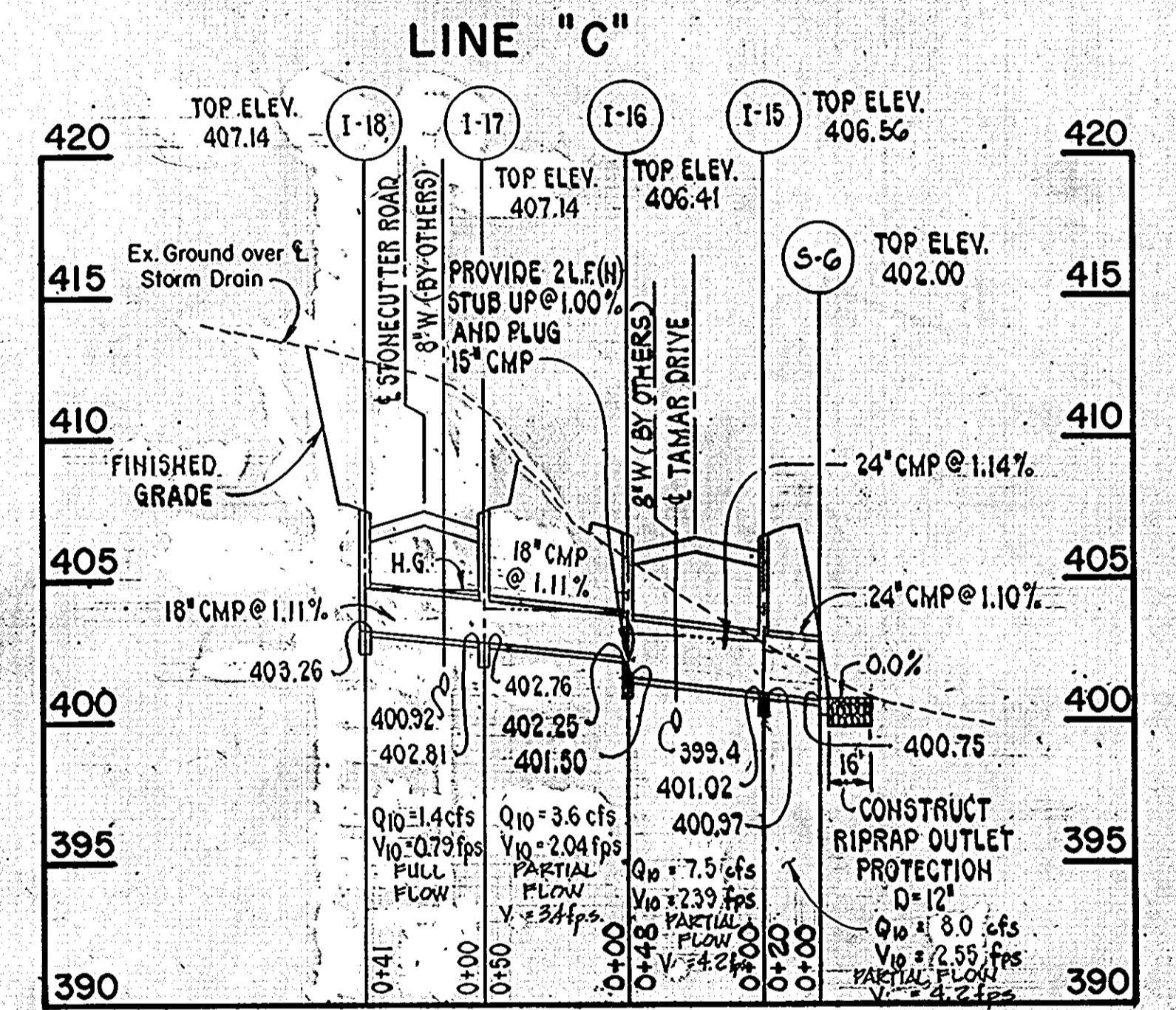
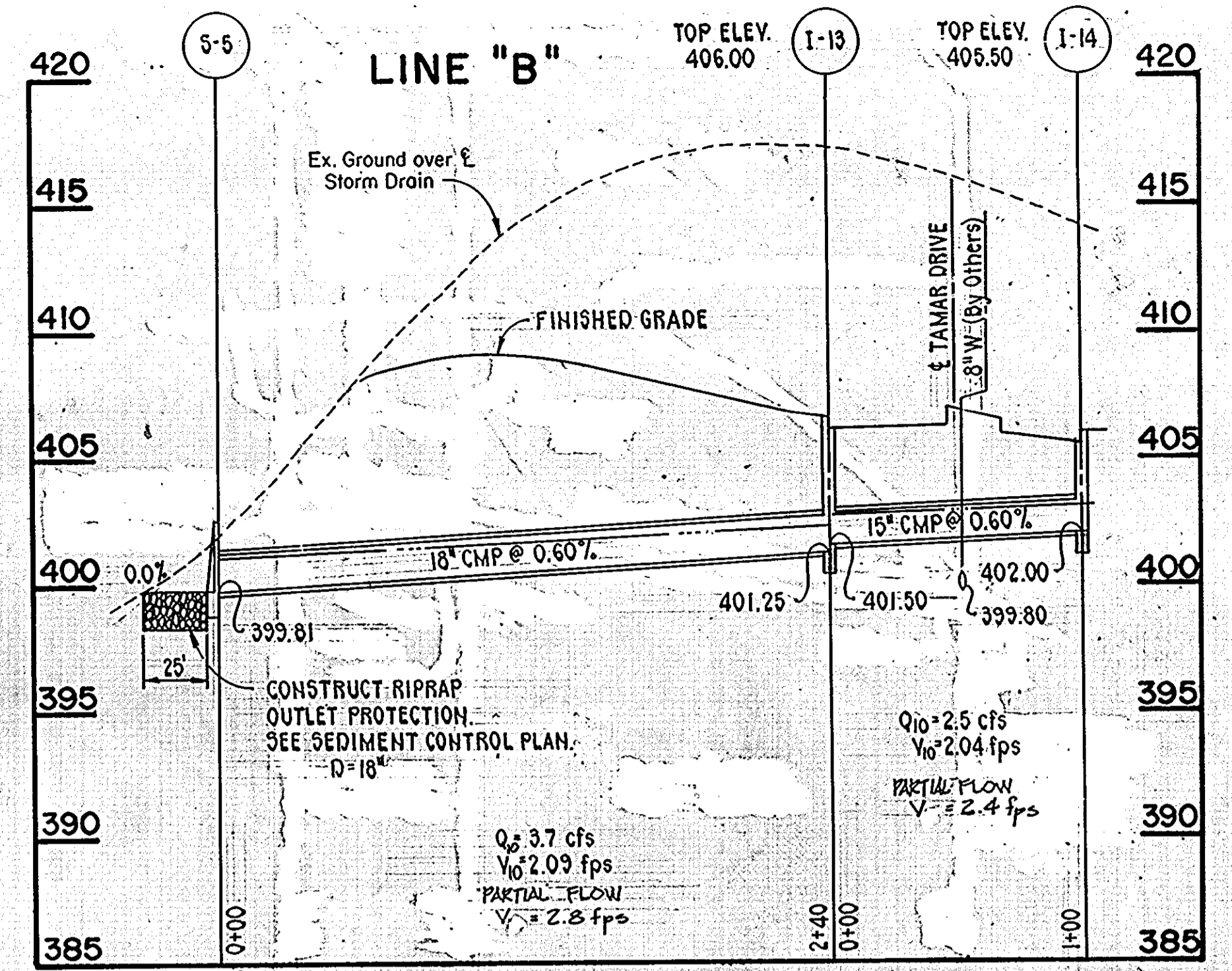
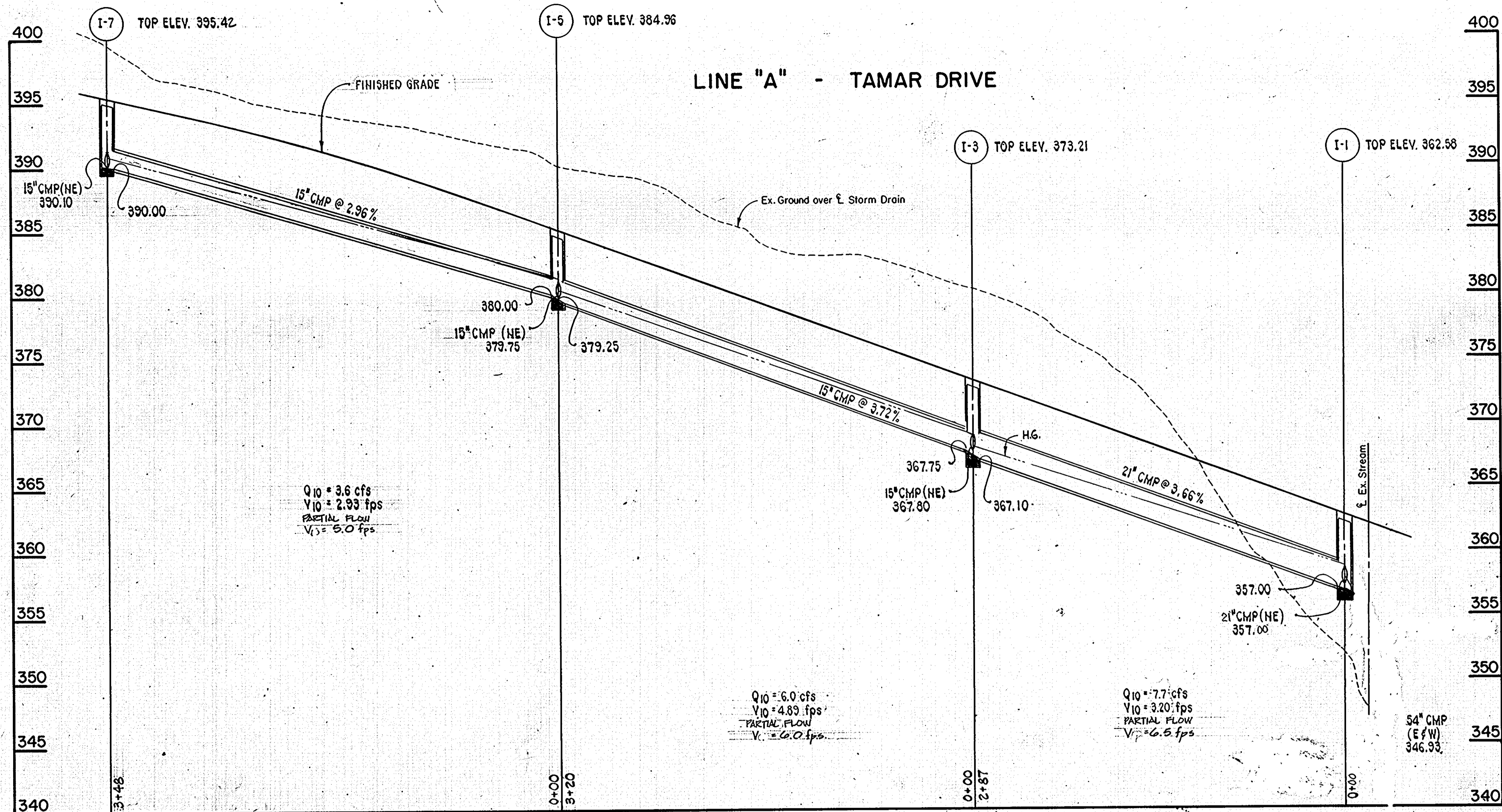
MATCH LINE SHEET 8



100

<p>PURDUM & JESCHKE CONSULTING ENGINEERS AND LAND SURVEYORS 1029 North Calvert Street Baltimore, Maryland 21202 (301)837-0194</p>	<p>OWNER/DEVELOPER: THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MD 21044</p>	<p>OFFICE OF PLANNING & ZONING <i>[Signature]</i> 6/16/88 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT</p>	<p>APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>[Signature]</i> 6/16/88 CHIEF, LAND DEVELOPMENT DIVISION <i>[Signature]</i> 6/16/88 CHIEF, BUREAU OF HIGHWAYS <i>[Signature]</i> 6/16/88 CHIEF, BUREAU OF ENGINEERING</p>	<p>VILLAGE OF LONGREACH SECTION 3, AREA 2 DRAINAGE AREA MAP TAX MAP 36 & 37 PARCELS 27, 229, 492, 498 SIXTH ELECTION DISTRICT HOWARD COUNTY, MD. DATE: 1/26/88 SCALE: 1" = 200'</p>	<p>SHEET 9 OF 19</p>
					<p>DES: _____ DRAWN: _____ CHK: _____</p>

F-88-171



PURDUM & JESCHKE
CONSULTING ENGINEERS AND
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland, 21202
(301)837-0194

OWNER/DEVELOPER
THE HOWARD RESEARCH &
DEVELOPMENT LAND COMPANY
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044

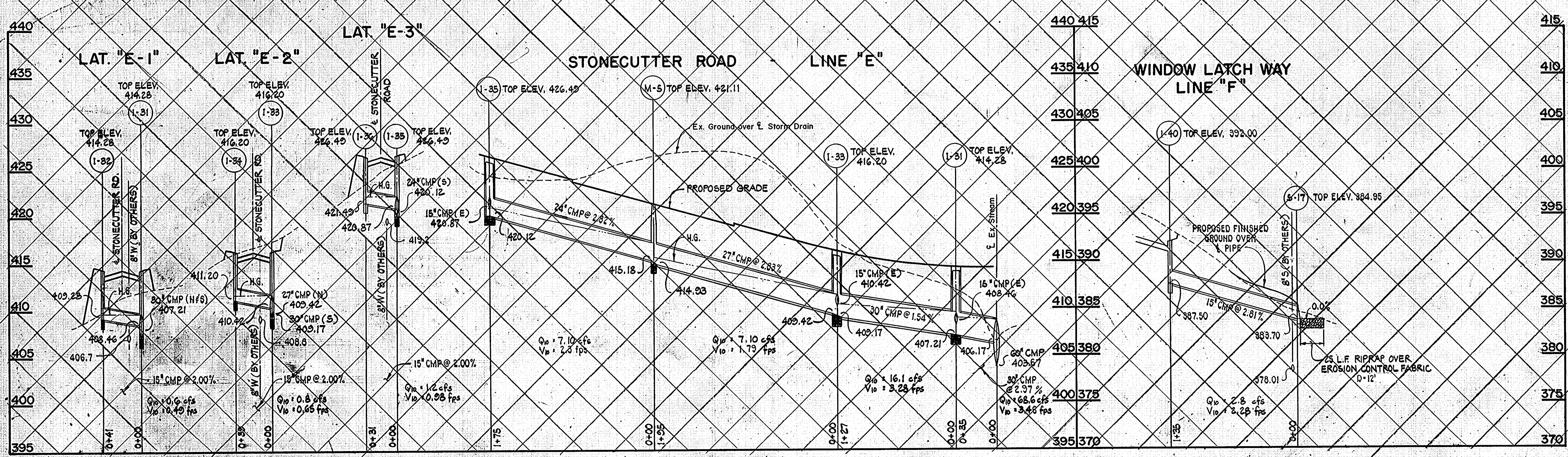
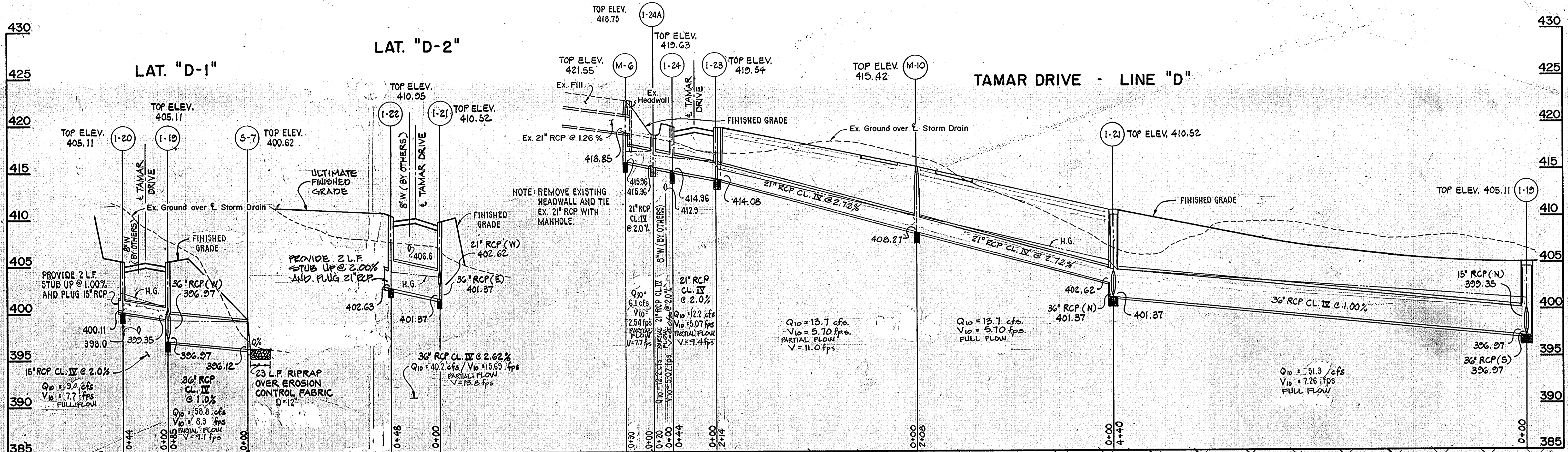
OFFICE OF PLANNING & ZONING
DIVISION OF COMMUNITY PLANNING
AND LAND DEVELOPMENT
DATE: 6/16/88

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 6/18/88
DATE: 6/18/88
DATE: 6/18/88



VILLAGE OF LONGREACH-SECT. 3 AREA 2
STORM DRAIN PROFILES
SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
DATE: 1/26/88

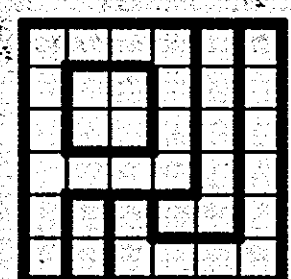
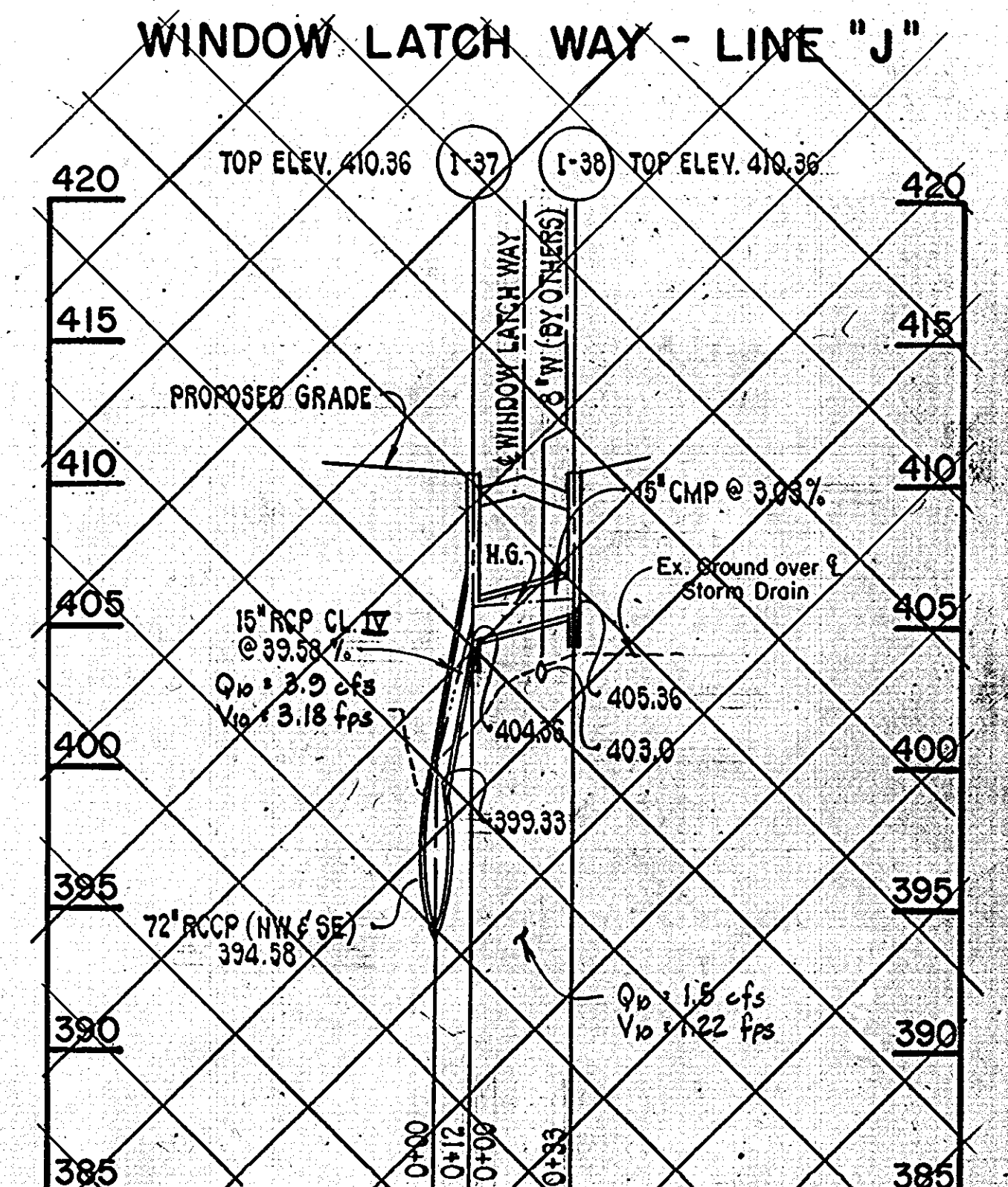
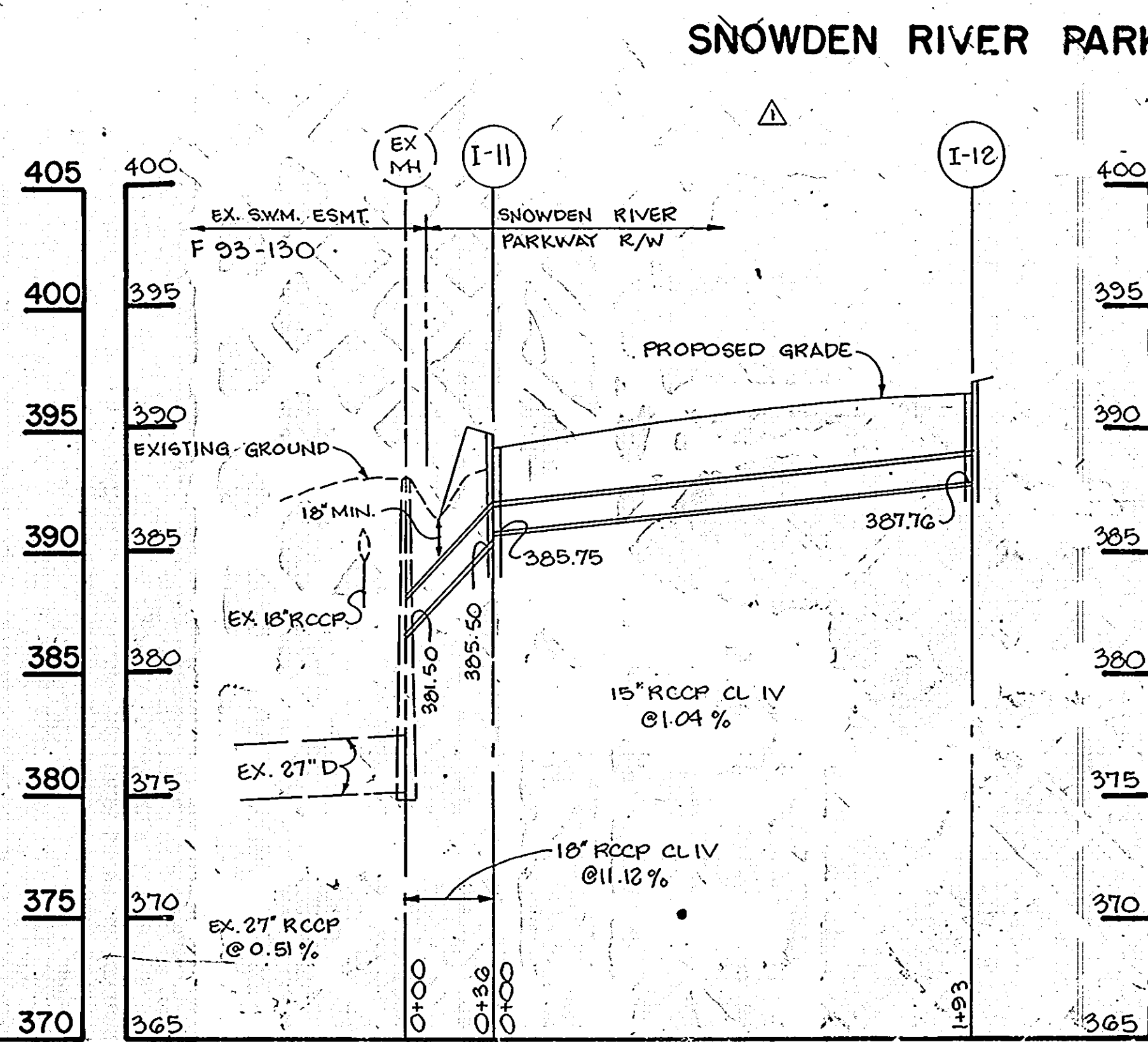
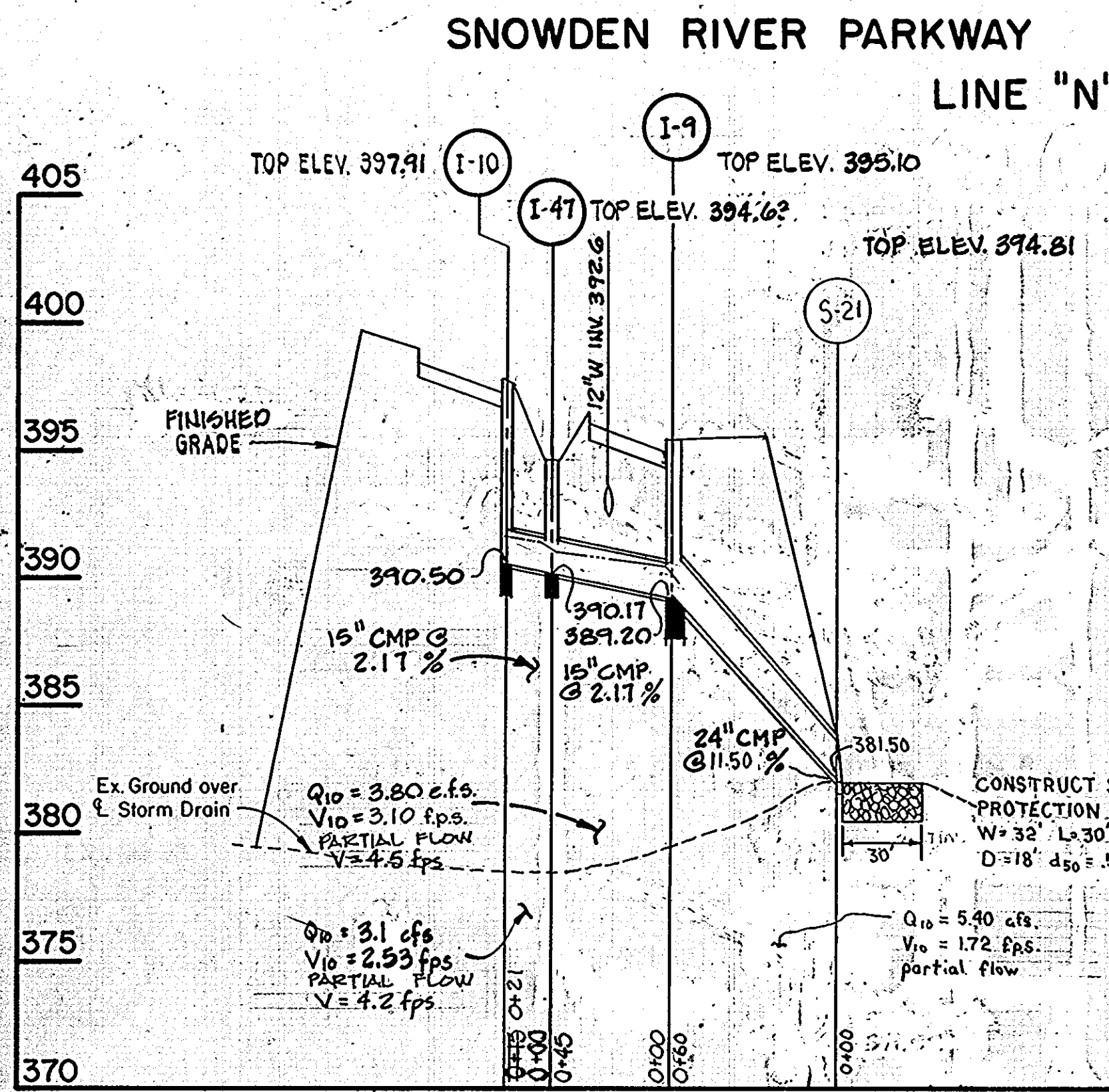
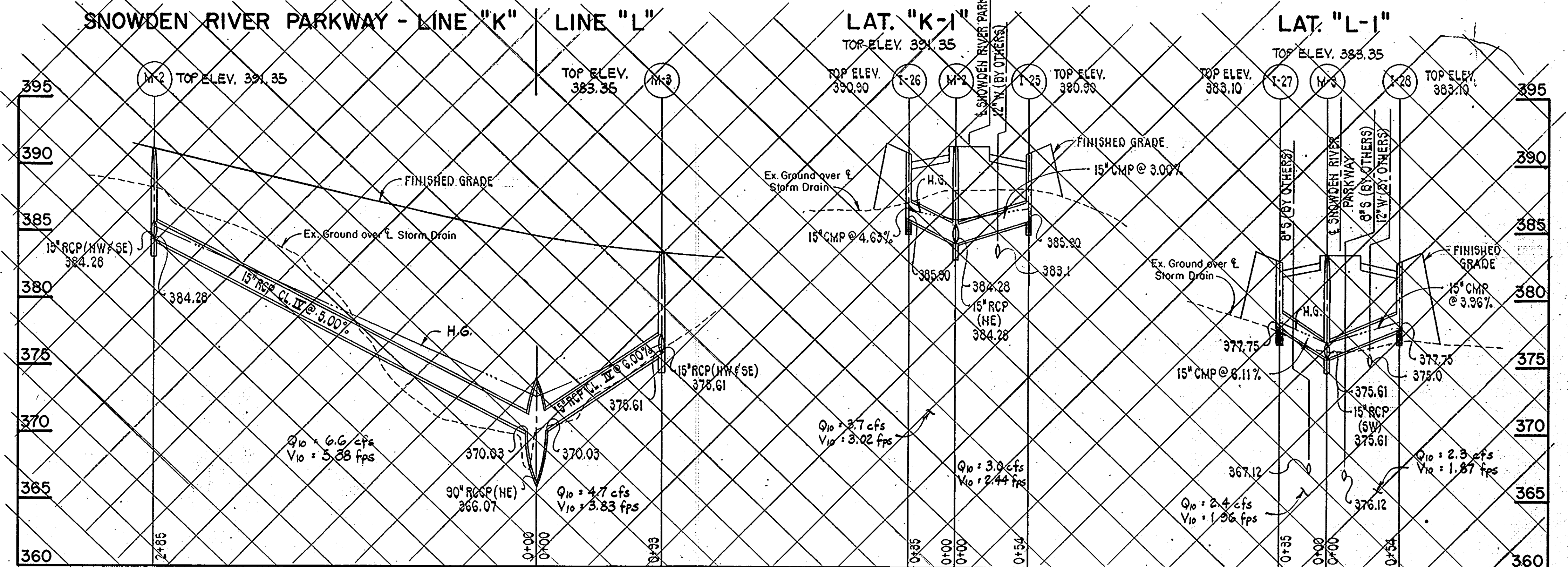
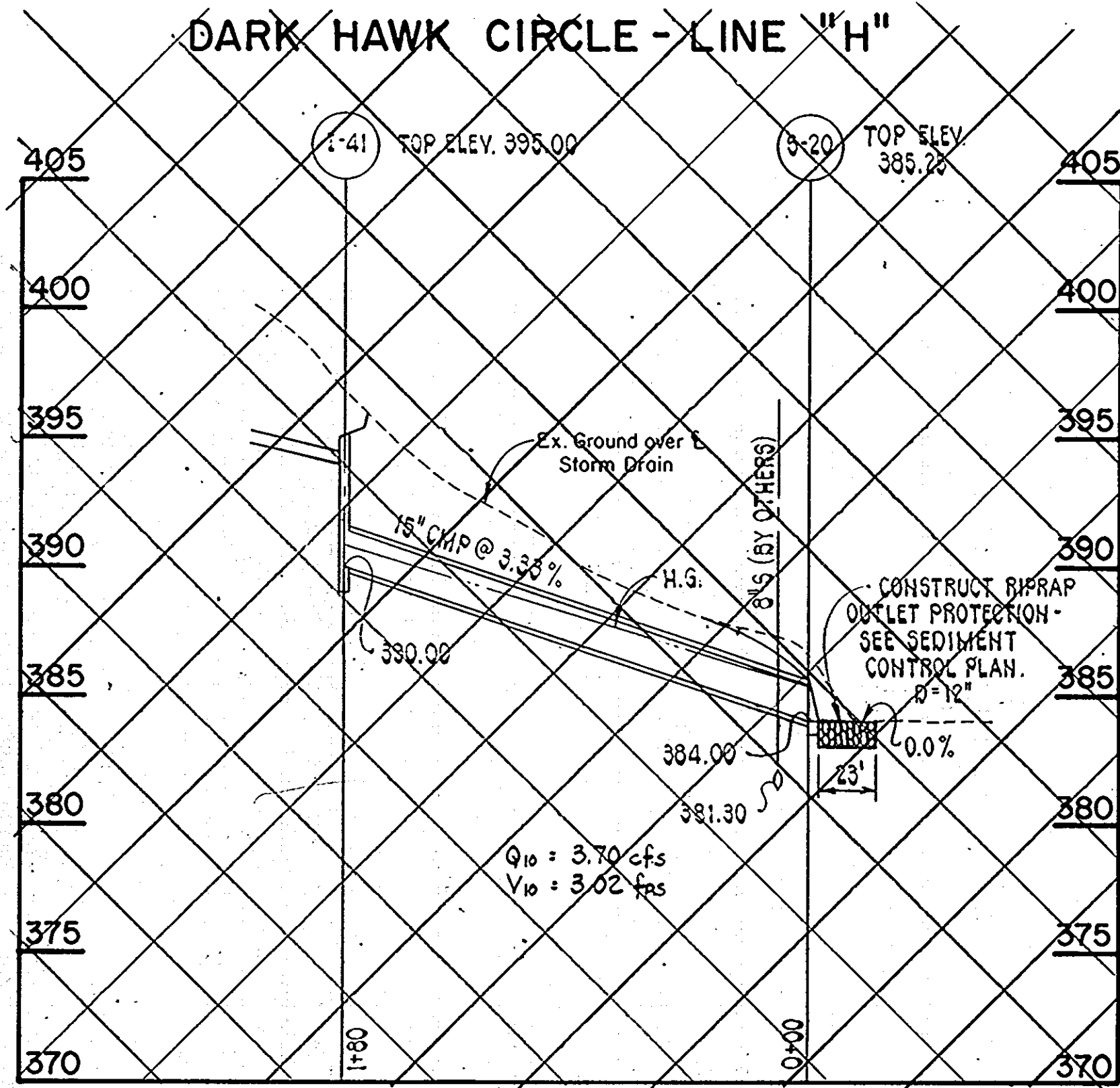
SHEET 10 OF 19
DES: GDT
DRAWN: RC
CHK: RHB
SCALE: HORIZ: 1" = 50'
VERT: 1" = 5'



100

<p>PURDUM & JESCHKE CONSULTING ENGINEERS AND LAND SURVEYORS 1029 North Calvert Street, Baltimore, Maryland 21202 (301)837-0194</p>	<p>OWNER/DEVELOPER THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MD. 21044</p>	<p>APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS</p> <p><i>Paul D. Pappas</i> 6/8/88 CHIEF, LAND DEVELOPMENT DIVISION DATE</p>	<p>VILLAGE OF LONGREACH - SECT. 3, AREA 2 STORM DRAIN PROFILES</p> <p>SIXTH-ELECTION DISTRICT HOWARD COUNTY, MD. DATE: 1/26/88</p>	<p>SHEET 11 OF 19</p> <p>DES: GDT DRAWN: RC CHK: RHB</p>
		<p>OFFICE OF PLANNING & ZONING</p> <p><i>James R. Smith</i> 6/16/88 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE</p>		<p><i>Charles W. McDaniel</i> 6/16/88 CHIEF, BUREAU OF HIGHWAYS DATE</p> <p><i>James R. Smith</i> 6-9-88 CHIEF, BUREAU OF ENGINEERING DATE</p>

F-88-171



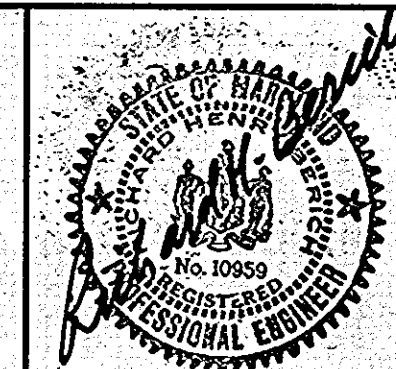
PURDUM & JESCHKE
CONSULTING ENGINEERS AND
LAND SURVEYORS
1029 North Colvert Street
Baltimore, Maryland 21202 (301)837-0194

OWNER/DEVELOPER
THE HOWARD RESEARCH &
DEVELOPMENT LAND COMPANY
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044

OFFICE OF PLANNING & ZONING
CHIEF, DIVISION OF COMMUNITY PLANNING
AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT
OF PUBLIC WORKS
6/8/88
CHIEF, LAND DEVELOPMENT DIVISION
CHIEF, BUREAU OF HIGHWAYS
CHIEF, BUREAU OF ENGINEERING

REVISION 7-1-84 ADDED PROFILE OF S.D. AT I-11
AND I-12

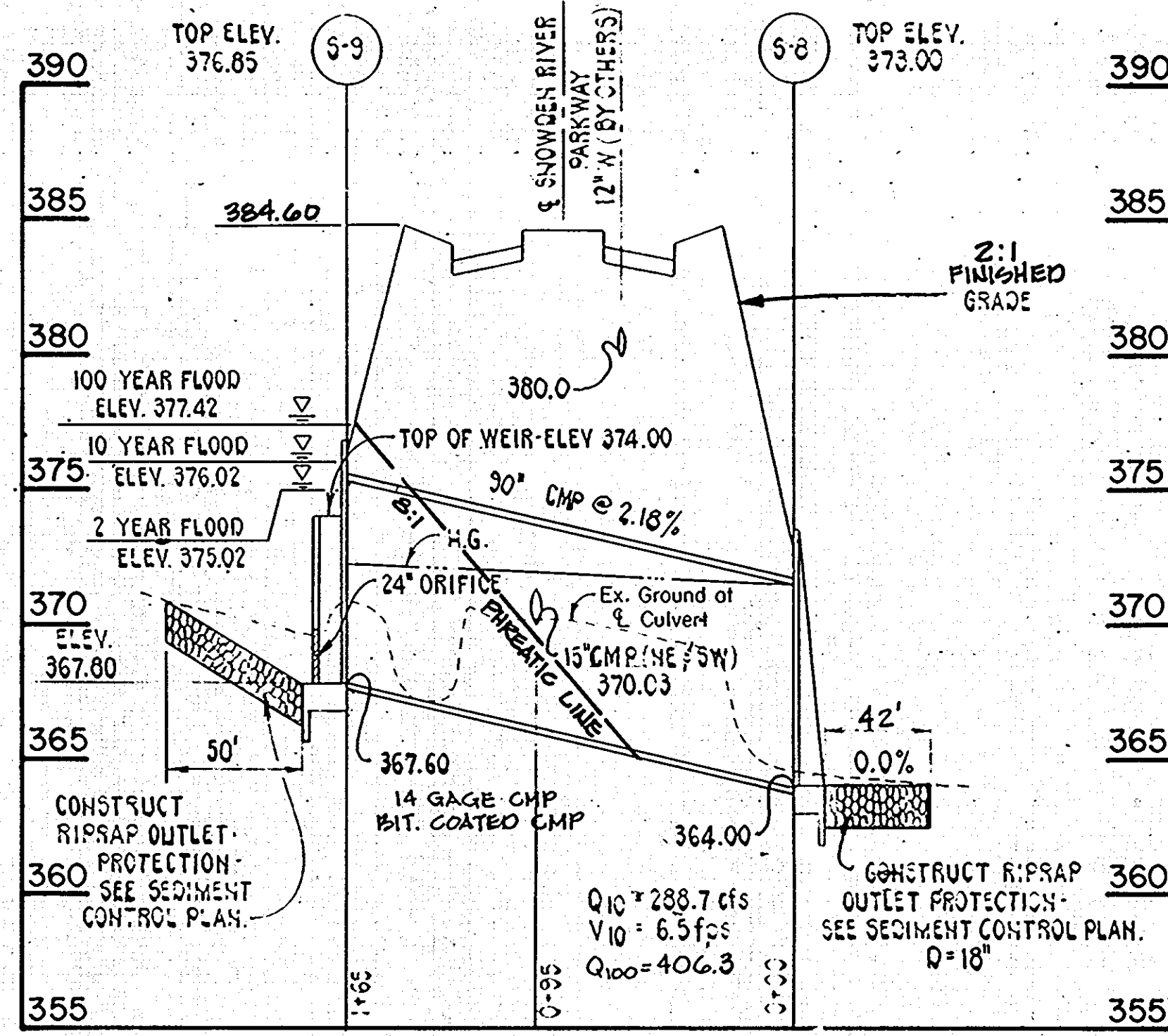


VILLAGE OF LONGREACH-SECT 3, AREA 2
STORM DRAIN PROFILES
SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
DATE: 1/26/88

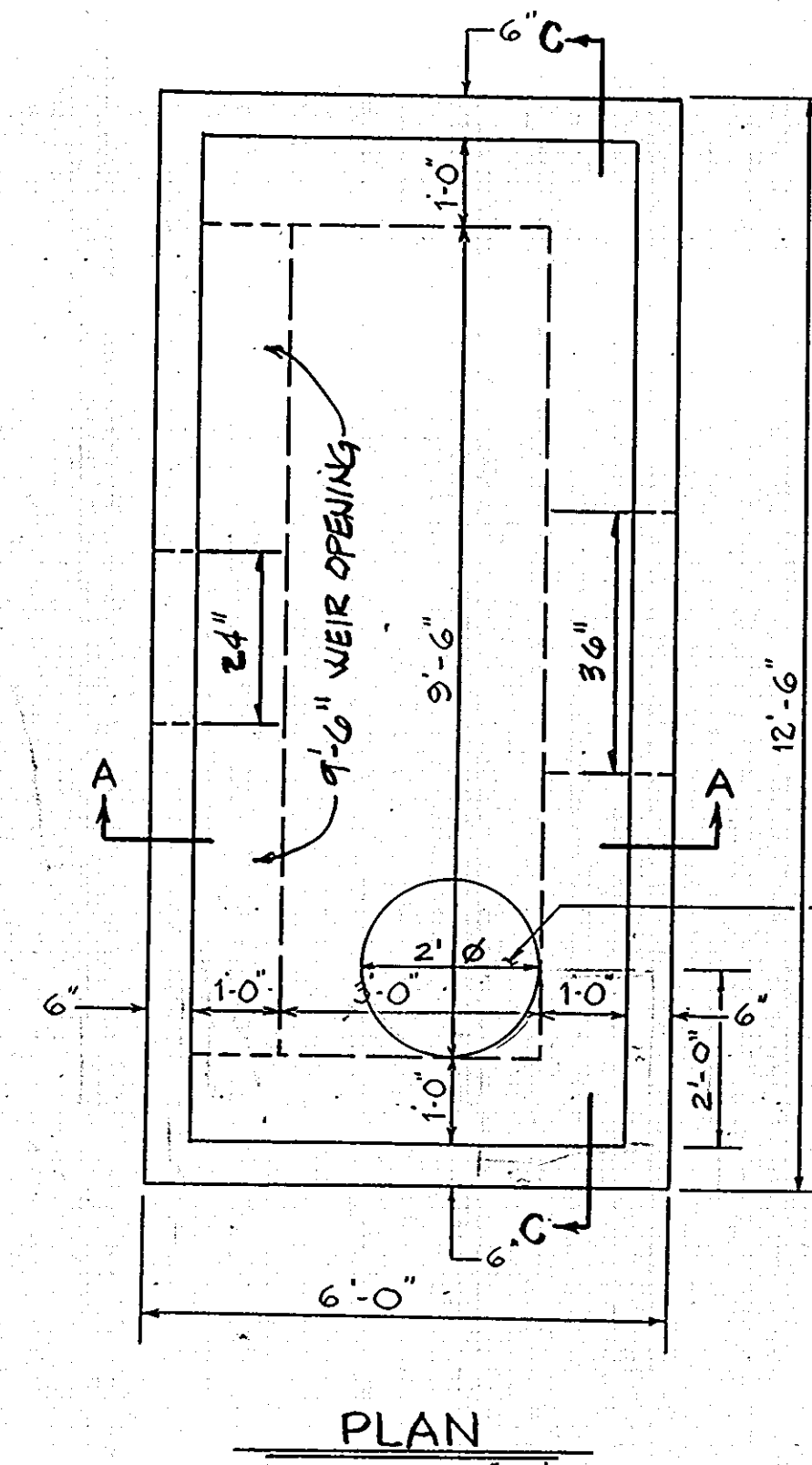
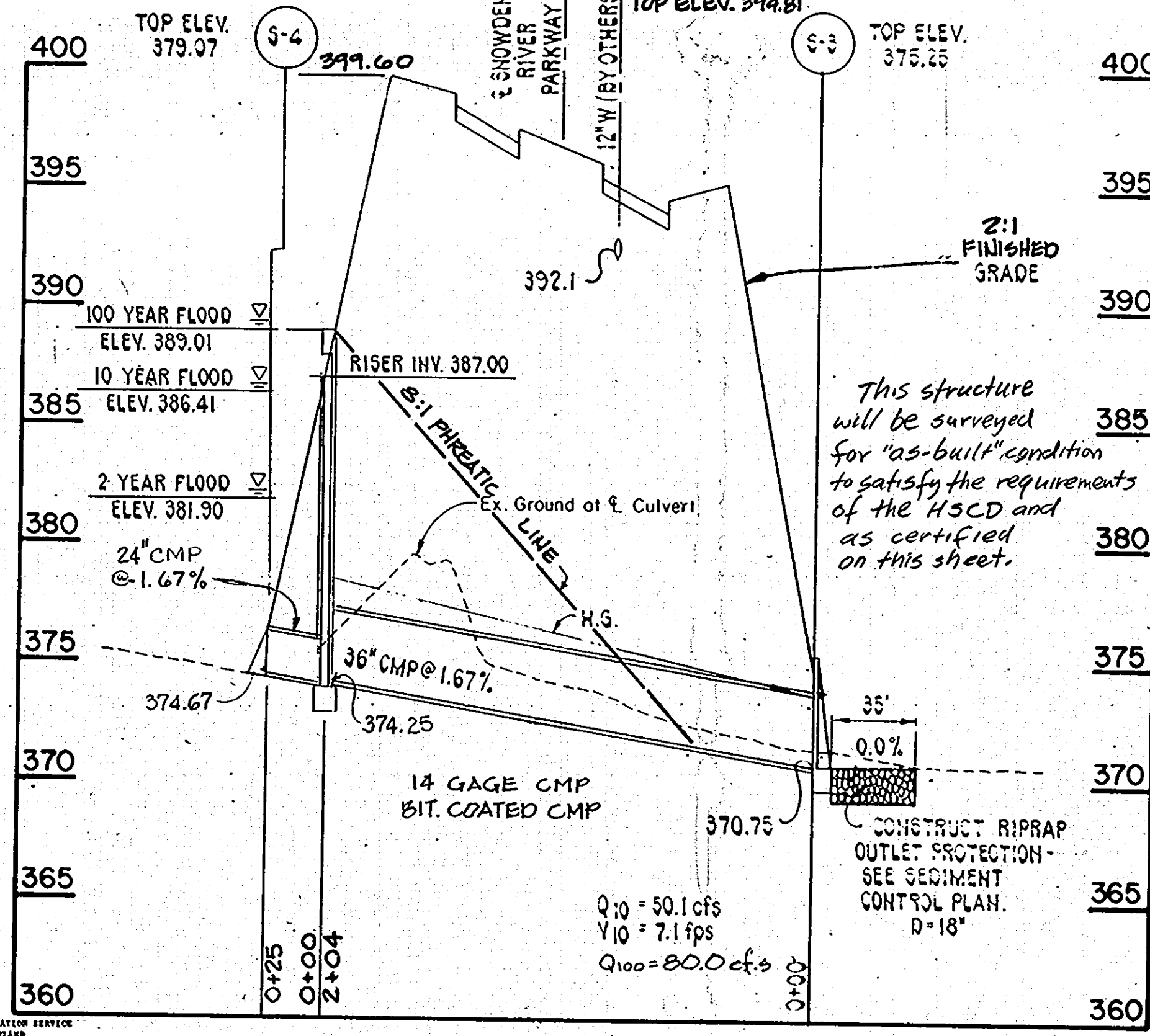
SHEET 12 OF 19
DES: GDT
DRAWN: RC
CHK: RHB
SCALE: HORIZ: 1" = 50'
VERT: 1" = 5'

F-88-171

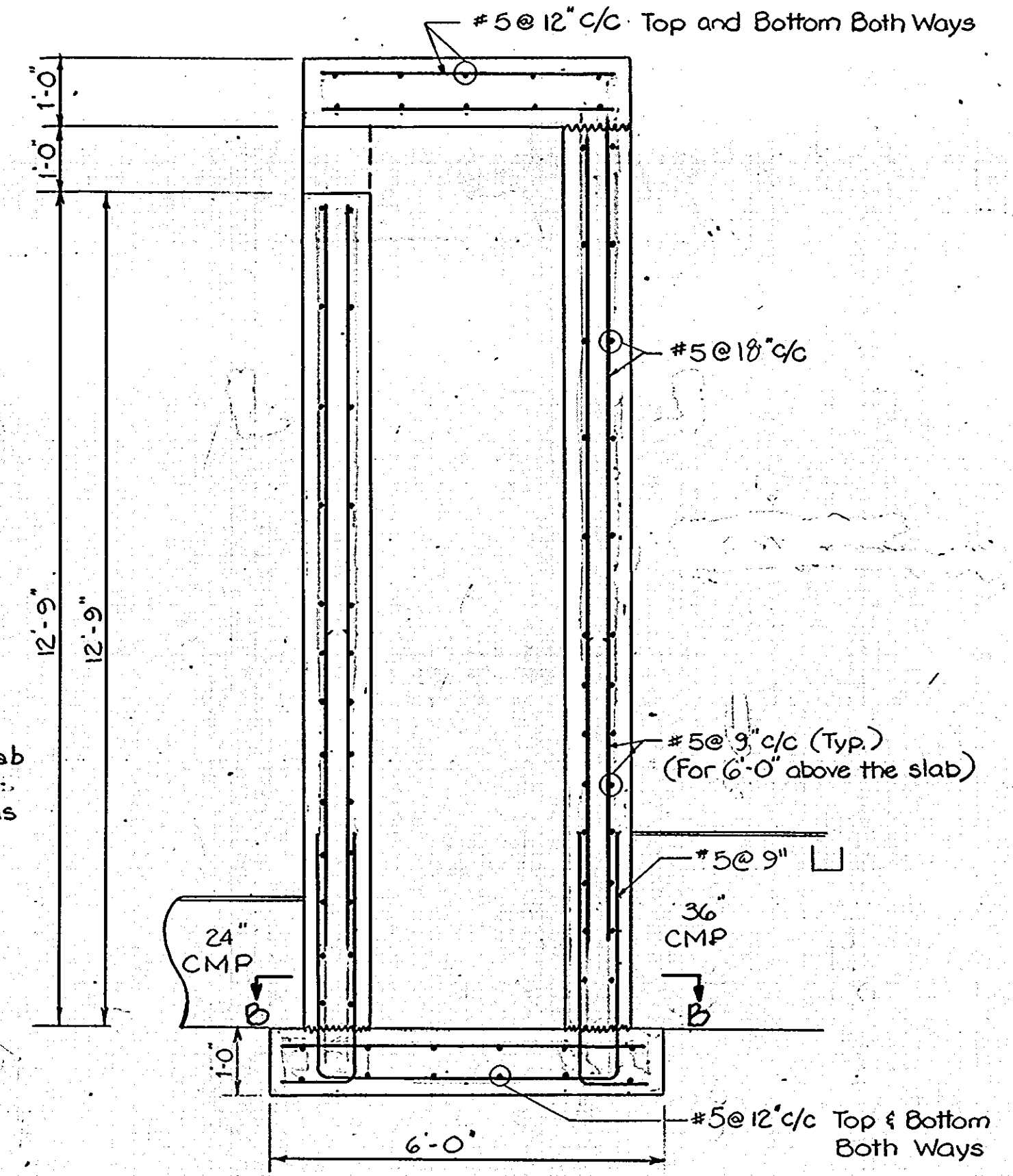
SNOWDEN RIVER PARKWAY - STA. 72+50



SNOWDEN RIVER PARKWAY - STA. 53+65



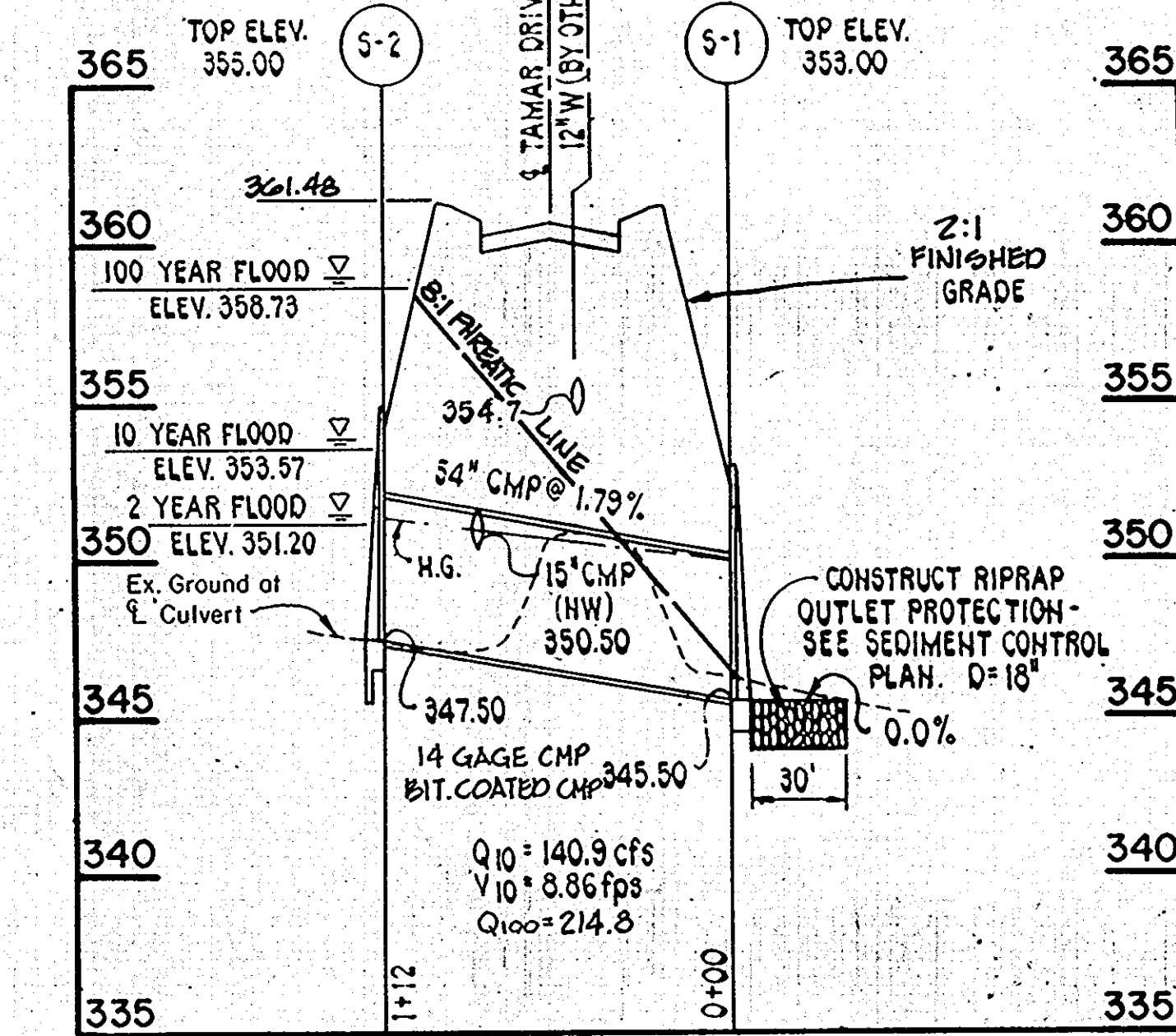
BOX RISER STRUCTURE
STA. 53+65 SNOWDEN RIVER PKWY.
SCALE: 1/2" = 1'-0"



SECTION A-A
Scale: 1/2" = 1'

TAMAR DRIVE

This structure will be surveyed for "as-built" condition to satisfy the requirements of the HSCD and as certified on this sheet.



SOIL CONSERVATION SERVICE
STORM DRAIN
CONSTRUCTION SPECIFICATIONS
FORM NO. 7-82

These specifications are appropriate to projects within the scope of the standard for practice 310.

1. SITE PREPARATION

Areas designated for borrow areas, subsoils, and structural work shall be cleared, grubbed and staked to topsoil. All trees, vegetation, roots and other obstructions shall be removed. Channel banks and slope breaks shall be staked to an accurate location. The site shall be covered by the pond or concrete will be cleared of all trees, brush, logs, stumps, rocks and other objectionable material unless otherwise specified on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. All cleared and grubbed material shall be disposed of outside and below the limits of the dam and concrete as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

2. MATERIALS

The fill material shall be taken from approved designated borrow area or stockpile. It shall be free of roots, stumps, rocks, debris, organic remains, debris or other objectionable material. The subsoil shall be compacted to an elevation which provides for satisfactory settlement to the design elevation. The fill height will be along the length of the embankment shall be measured above the design elevation (including finished) as shown on the plans.

3. CONSTRUCTION

The movement of the hoisting and spreading equipment over the fill shall be controlled so that the surface of each lift shall be traversed by multiple passes using tread tires of the equipment and compacted by a minimum of four complete passes of a vibratory roller, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

4. FINISHING

When a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and to be certified by the District Engineer.

5. STRUCTURAL MATERIALS

Reinforcing steel shall be of the type and quality conforming to that specified for the design fill material. The steel shall be placed in horizontal layers and to extend from the bottom to the top of the structure. The steel shall be completely encased in concrete. The steel shall be completely encased in concrete. The steel shall be completely encased in concrete. The steel shall be completely encased in concrete.

6. JOINTS

All joints shall be staggered in cross section.

7. CONSTRUCTION DETAILS

Reinforcing steel - (Structural steel) - This pipe and its appurtenances shall be advanced and fully tensioned and shall conform to the requirements of ASTM Specification A-307 with weight coupling bands. Any tensioning cables, anchors or other appurtenances shall be replaced with cold applied bituminous coating compound.

2. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, sandy or other suitable and other objectionable material shall be removed, channel banks and slope breaks shall be staked to an accurate location. The site shall be covered by the pond or concrete will be cleared of all trees, brush, logs, stumps, rocks and other objectionable material unless otherwise specified on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. All cleared and grubbed material shall be disposed of outside and below the limits of the dam and concrete as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

3. Backfilling shall conform to structural backfill as shown above.

4. Other details - (Structural steel, valves, etc.) shall be as shown on the drawings.

5. CONCRETE

a. Cement - Portland cement shall conform to the latest ASTM Specification C-150.

b. Water - The water used in concrete shall be clean, free from oil, acids, alkalis, salts, organic matter or other objectionable substances.

c. Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a No. 20 sieve and a maximum size of one and one-half (1 1/2) inches, except that sand may be used in concrete for pipe and vaults with that which will not produce honeycombs or other defects in the structure.

d. Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a No. 10 sieve and a maximum size of one and one-half (1 1/2) inches, except that coarse aggregate may be used in concrete for pipe and vaults with that which will not produce honeycombs or other defects in the structure.

e. Reinforcing Steel - The reinforcing steel shall be deformed bars of low-carbon steel conforming to the latest ASTM Specification A-615.

f. Design Mix - The concrete shall be placed in the following proportions, measured by weight: The water-cement ratio shall be 5.33 to 1 (W/C ratio) and the water per 94 pounds of cement. The proportion of materials for the concrete shall be determined by the District Engineer or his representative. The concrete shall be placed in the structure in layers not exceeding 12 inches in thickness. The concrete shall be placed in the structure in layers not exceeding 12 inches in thickness. The concrete shall be placed in the structure in layers not exceeding 12 inches in thickness.

g. Mixing - The concrete ingredients shall be mixed in batch plants with the water in homogeneous and of uniform consistency. The mixing of each batch shall conform to the following: The concrete shall be mixed in a batch plant or other suitable mixing equipment. The concrete shall be mixed in a batch plant or other suitable mixing equipment. The concrete shall be mixed in a batch plant or other suitable mixing equipment.

h. Placing - The concrete shall be placed in the structure in layers not exceeding 12 inches in thickness. The concrete shall be placed in the structure in layers not exceeding 12 inches in thickness. The concrete shall be placed in the structure in layers not exceeding 12 inches in thickness.

i. Formwork - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, temperature, and wind loads or other forces that may be applied. The forms shall be constructed and braced so that they can be removed without damage to or injury to the concrete.

j. Curing - The forms shall be removed 24 hours after the placement of the concrete. All forms and other devices used shall be removed from the surface of the concrete.

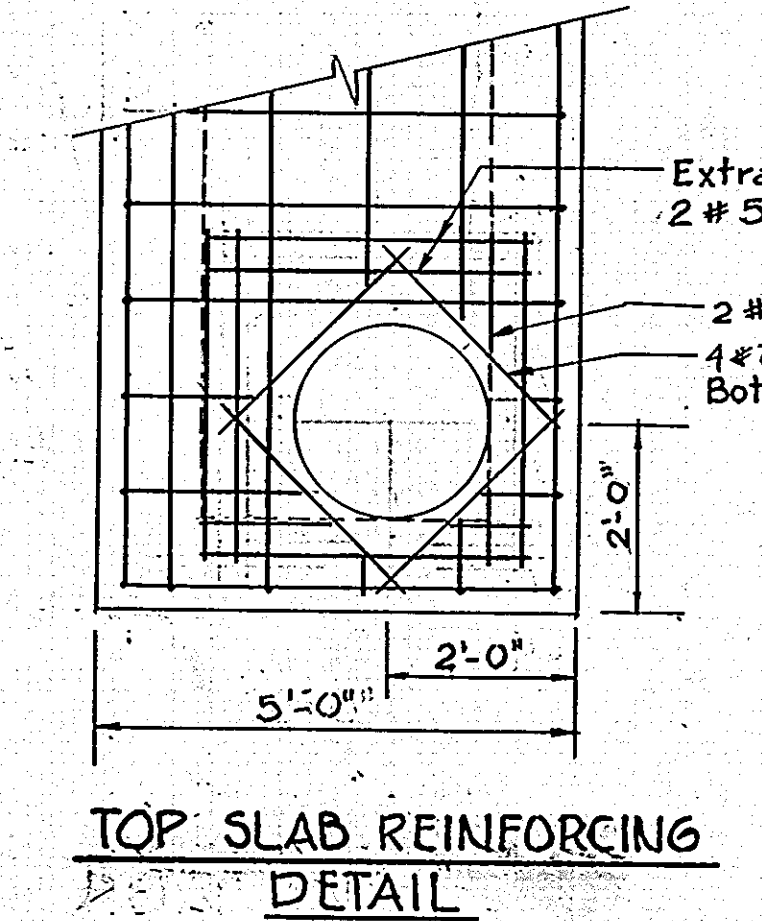
k. Reinforcing Steel - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coating. The steel shall be accurately placed and securely tied and blocked into position so that an movement of the steel will occur during placement of concrete.

l. Consolidation - Concrete shall be consolidated with latest type mechanical vibrator. Vibration shall be employed by passing and hand tamping or other approved means and shall be done in such a manner as to avoid segregation of the concrete and to ensure complete consolidation of the concrete.

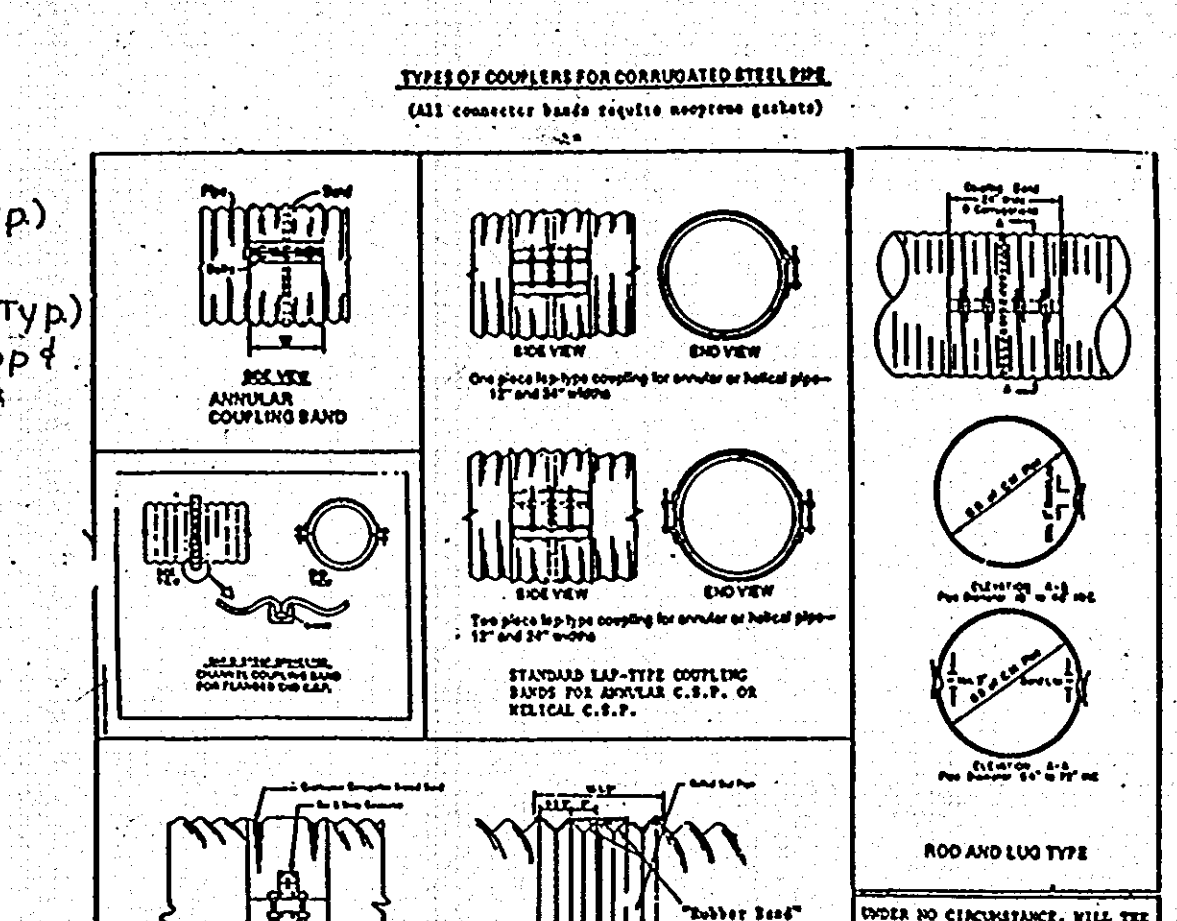
m. Finishing - Defective concrete, honeycombed areas, voids left by the removal of the rods, edges on all concrete surfaces, shall be repaired immediately after the removal of the forms. Voids shall be filled and completely filled with dry packing mortar.

n. Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least three (3) days. All concrete shall be kept continuously moist for at least 14 days after being placed. Protection may be provided by spraying or applying an approved curing compound. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.

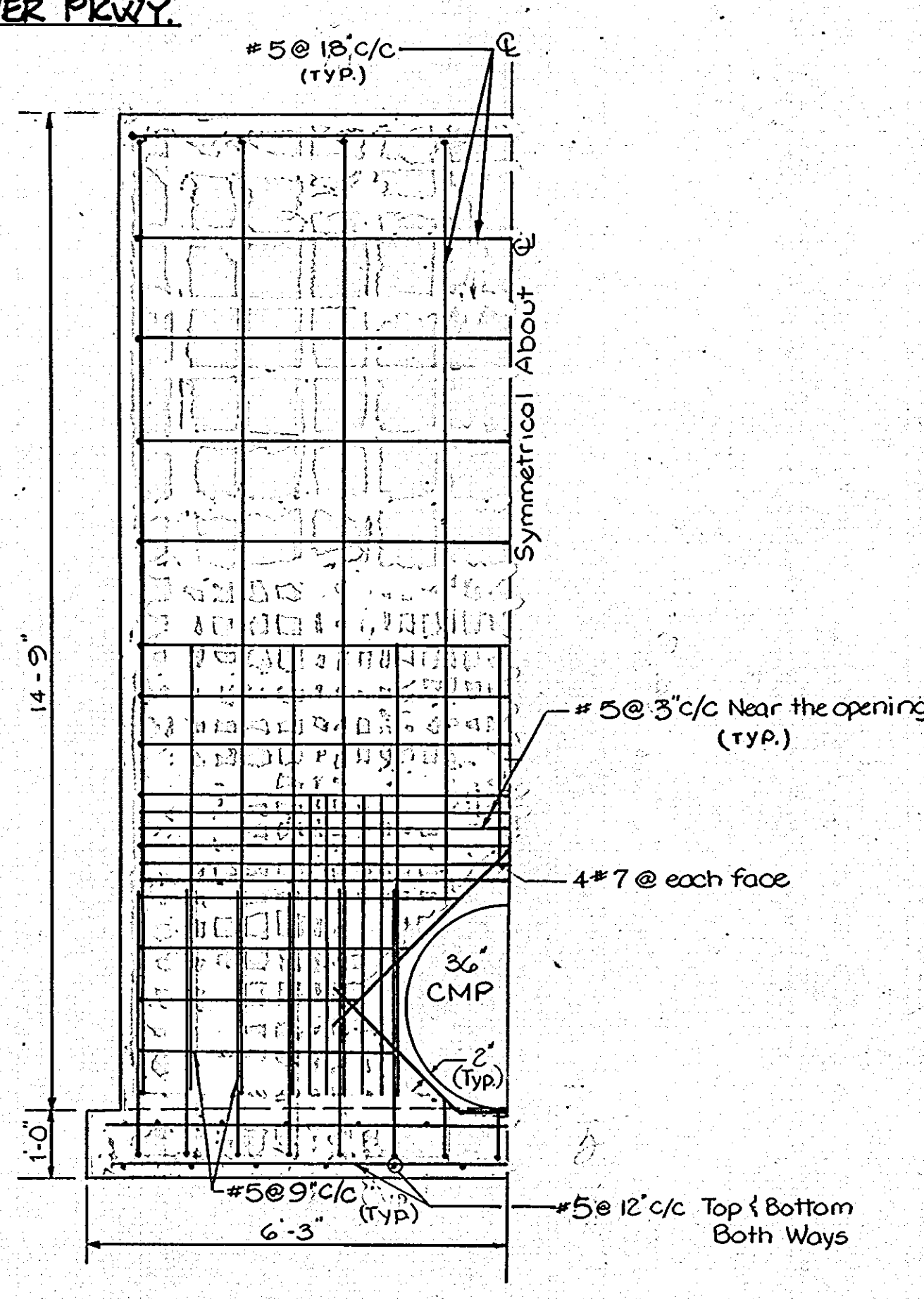
o. Placing Temperature - Concrete may not be placed at temperatures below 32° F with the temperature falling, or 80° with the temperature rising.



TOP SLAB REINFORCING DETAIL



DETAILS OF COUPLERS FOR CORROSION RESISTANT STEEL PIPE



SECTION C-C
Scale: 1/2" = 1'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
6/18/88
CHIEF, LAND DEVELOPMENT DIVISION
DATE
6/16/88
CHIEF, BUREAU OF HIGHWAYS
DATE
6-9-88
CHIEF, BUREAU OF ENGINEERING

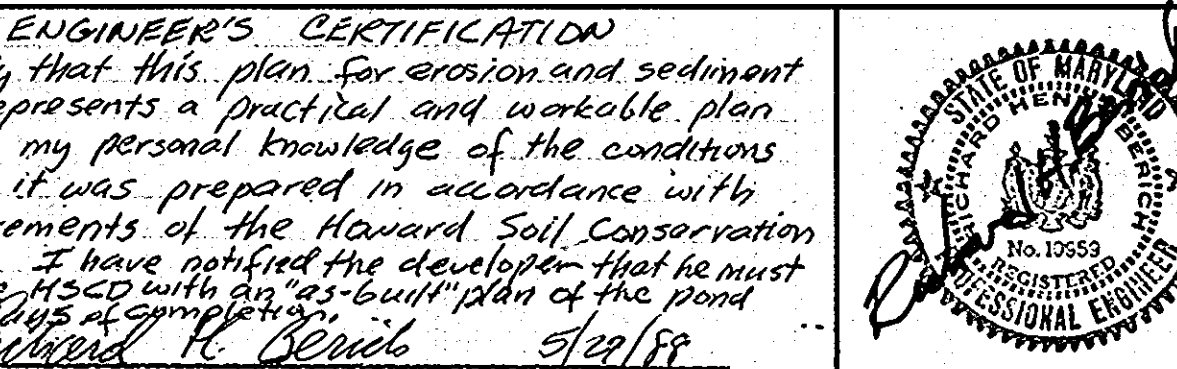
I will provide the Howard Soil Conservation District (HSCD) with an "as-built" plan of the pond within 30 days of completion.

DEVELOPER'S CERTIFICATION
I certify that all development and construction will be done according to this plan and any responsible personnel involved in the construction project will have a certificate of a license at the Department of Natural Resource approved training program for the control of any sediment erosion before beginning the project. I also authorize provided on-site inspection by the Howard Soil Conservation District.

ENGINEER'S CERTIFICATION
I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the HSCD with an "as-built" plan of the pond within 30 days of completion.

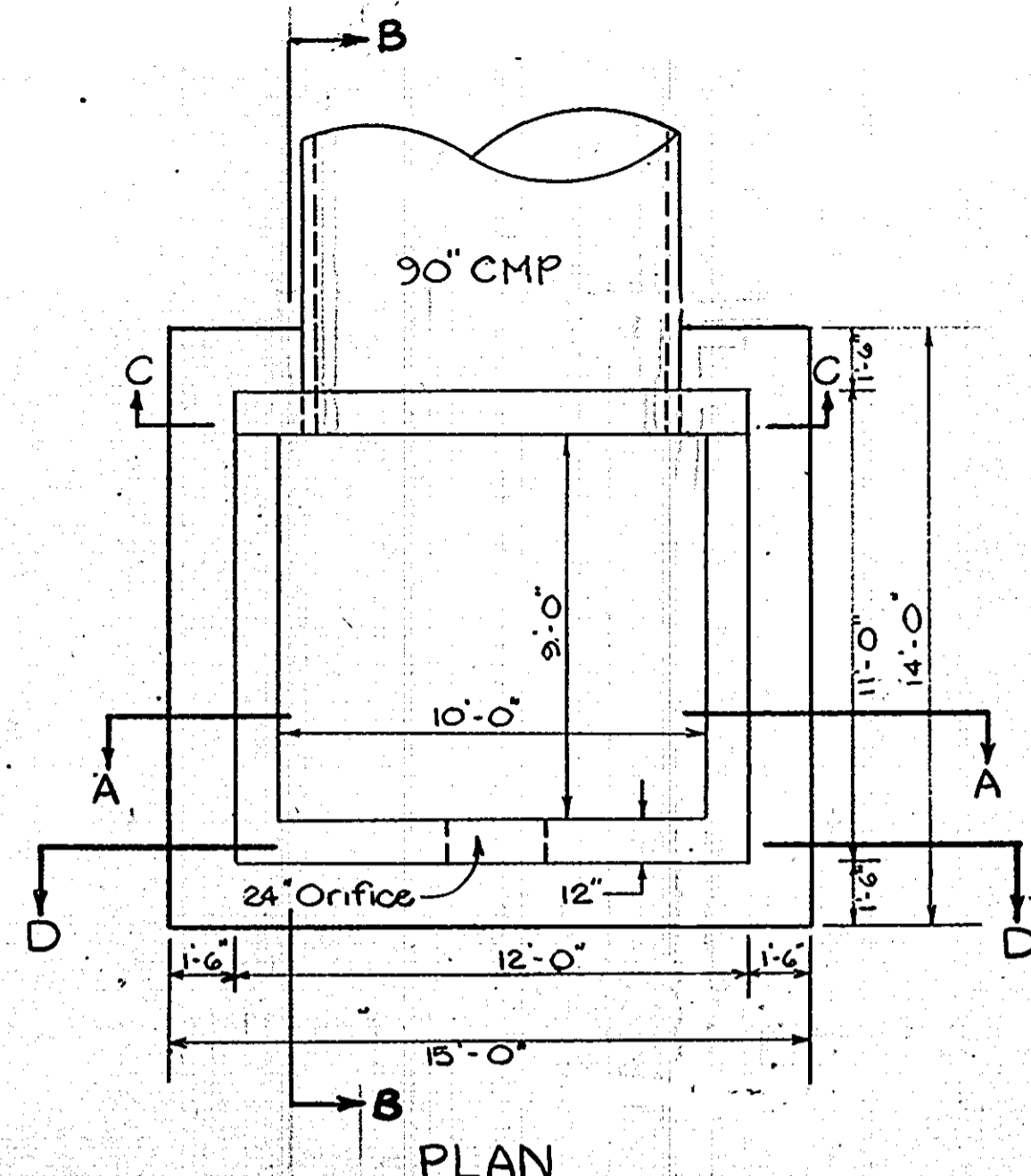
VILLAGE OF LONGREACH-SECT. 3, AREA 2
STORM DRAIN PROFILES
SHEET 13 OF 19
DES: GDT
DRAWN: RC
CHK: RHB
SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
DATE: 1/26/88
SCALE/HORIZ: 1" = 50'
VERT: 1" = 5'

PURDUM & JESCHKE CONSULTING ENGINEERS AND LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 (301)837-0194
OWNER/DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044
OFFICE OF PLANNING & ZONING
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

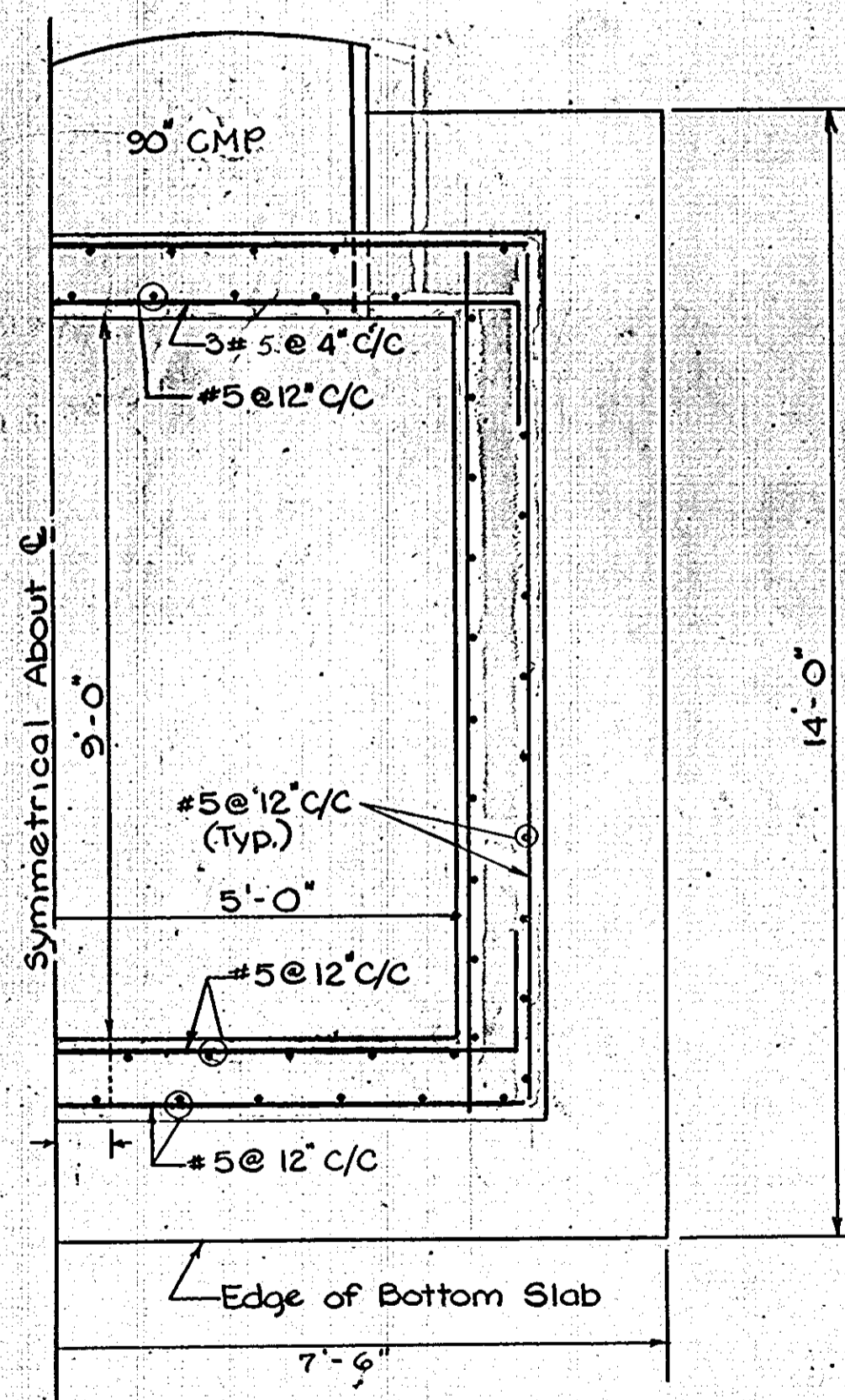


DATE: 6/16/88
DATE: 6/9/88
DATE: 6/22/88

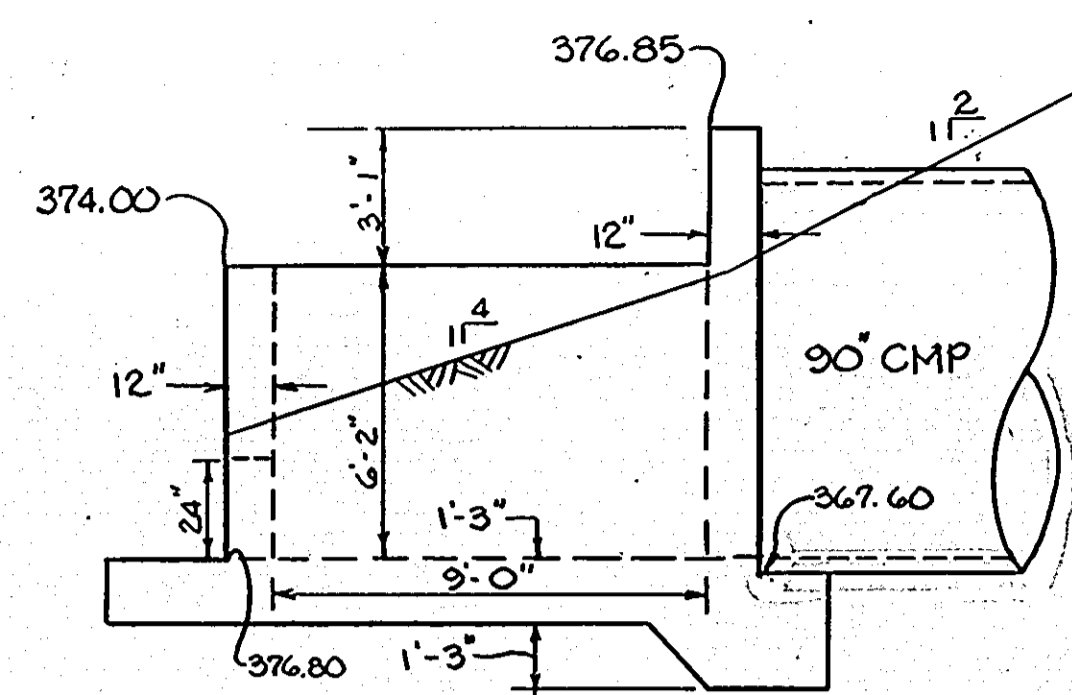
F-88-171



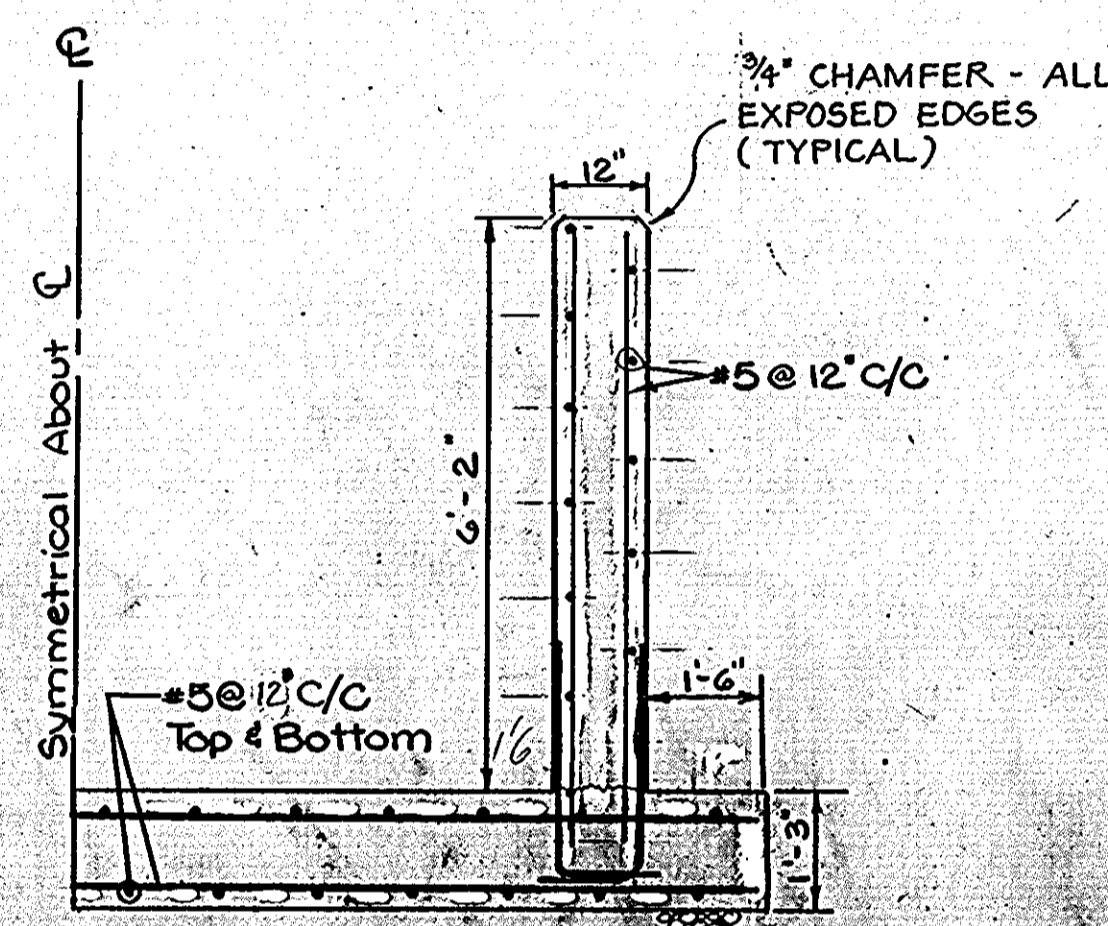
STRUCTURE @ 72+50 SNOWDEN RIVER PARKWAY
Scale: 1/4" = 1'



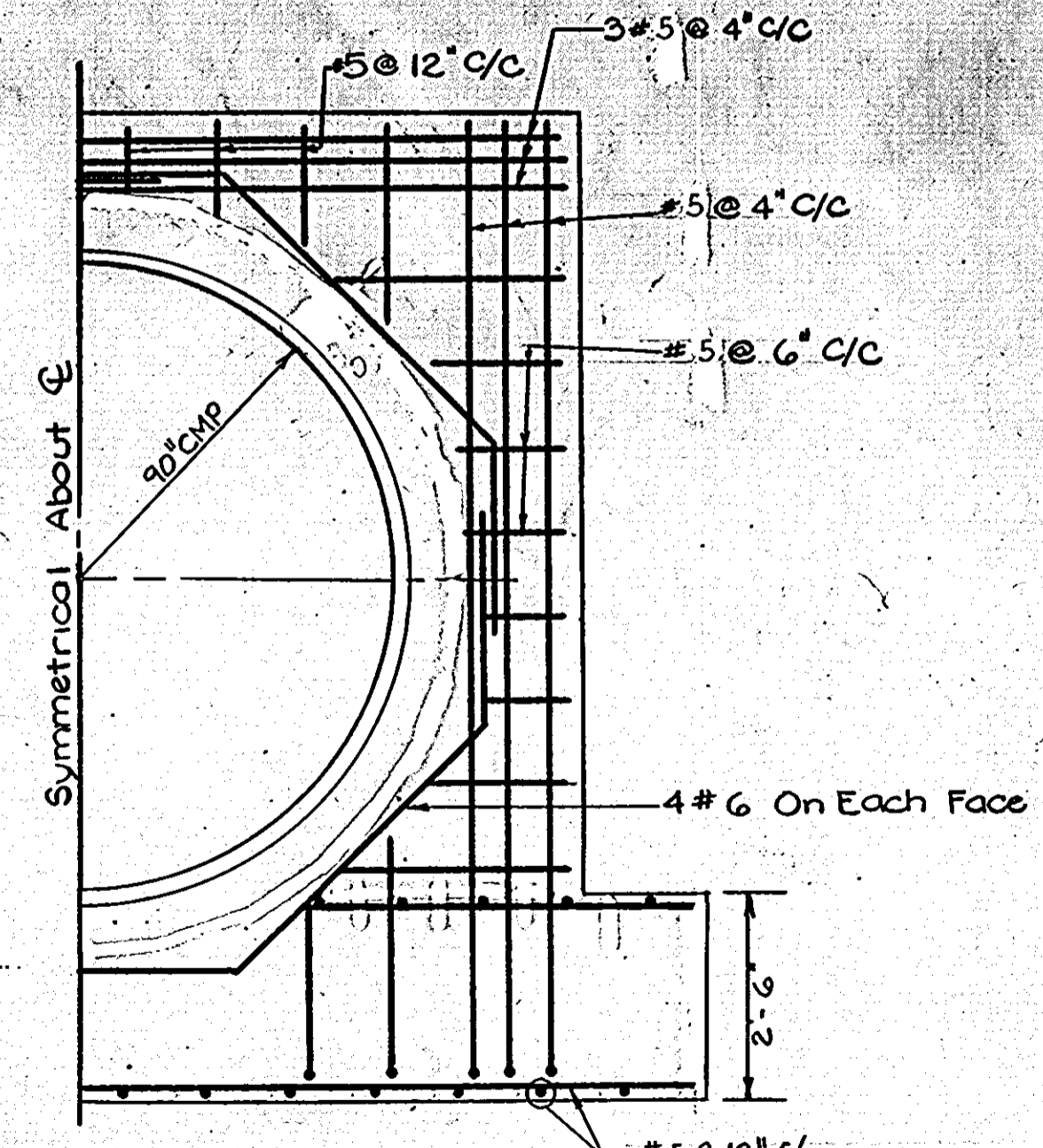
STRUCTURE @ 72+50 SNOWDEN RIVER PARKWAY
Scale: 1/2" = 1'



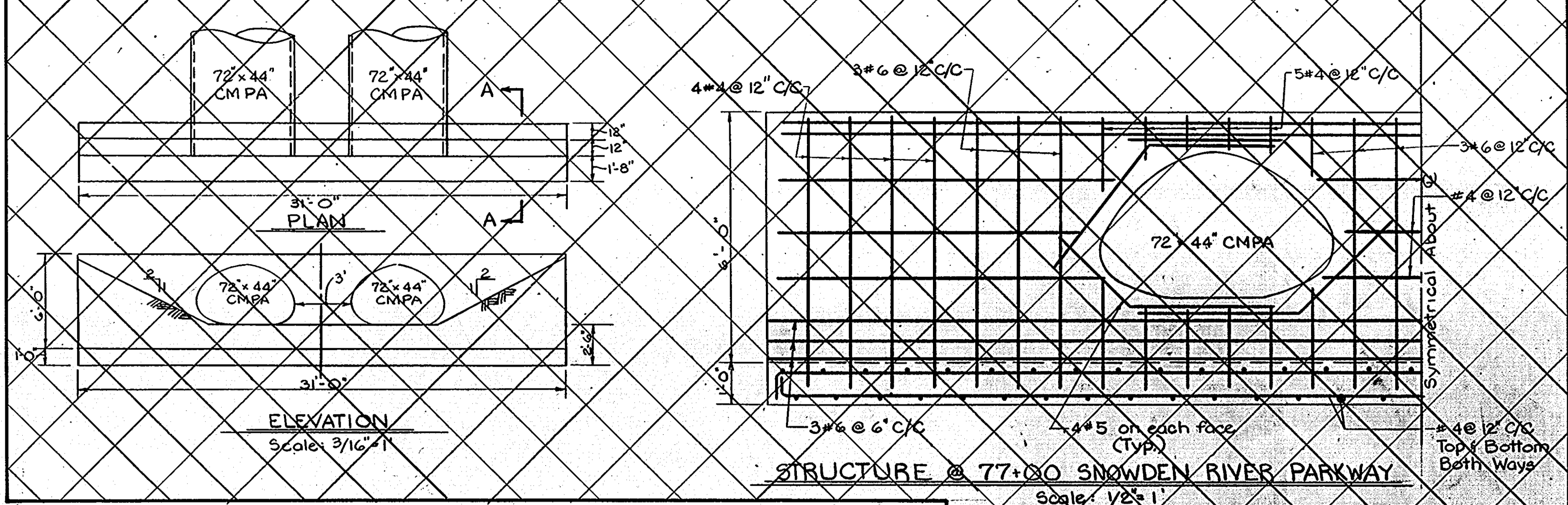
ELEVATION
Scale: 1/4" = 1'



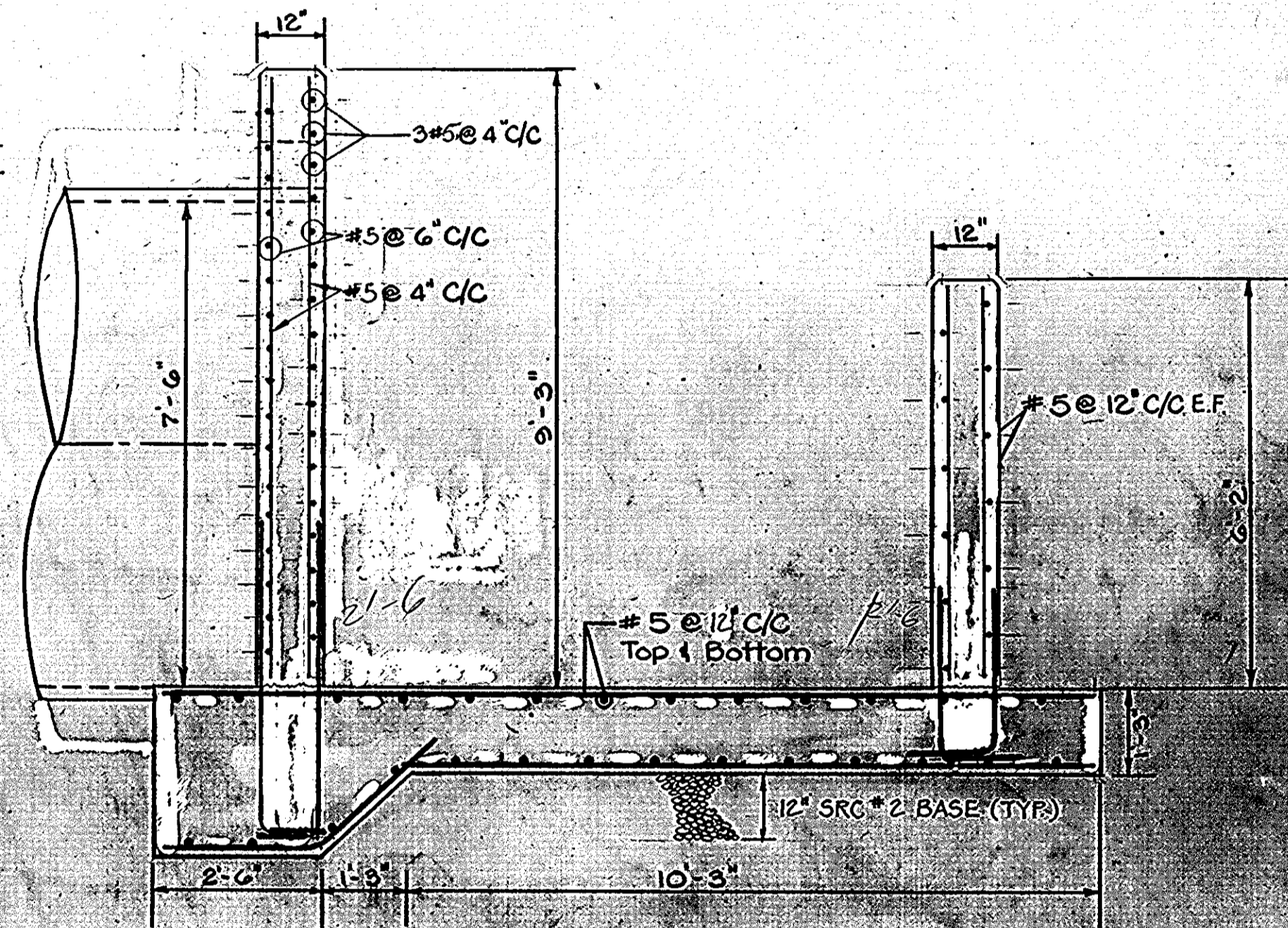
SECTION A-A
Scale: 1/2" = 1'



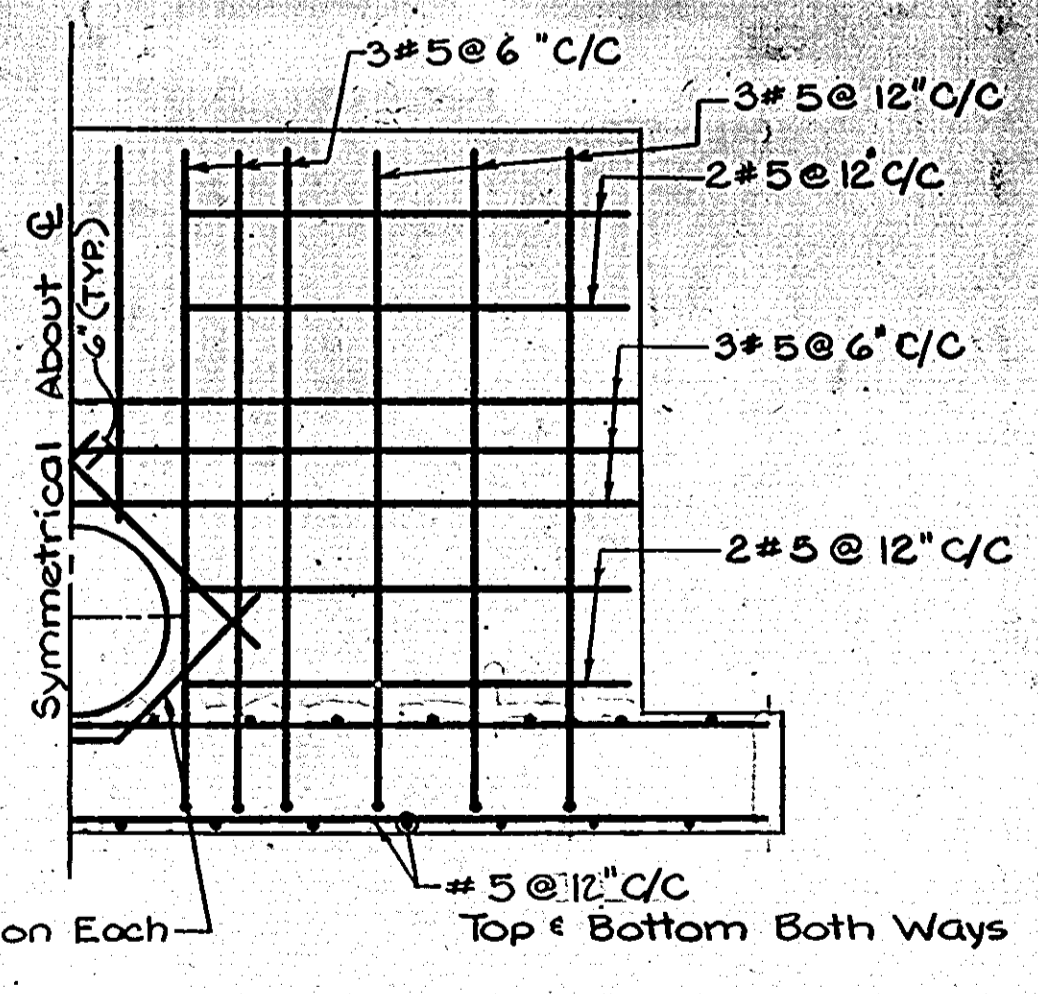
SECTION C-C
Scale: 1/2" = 1'



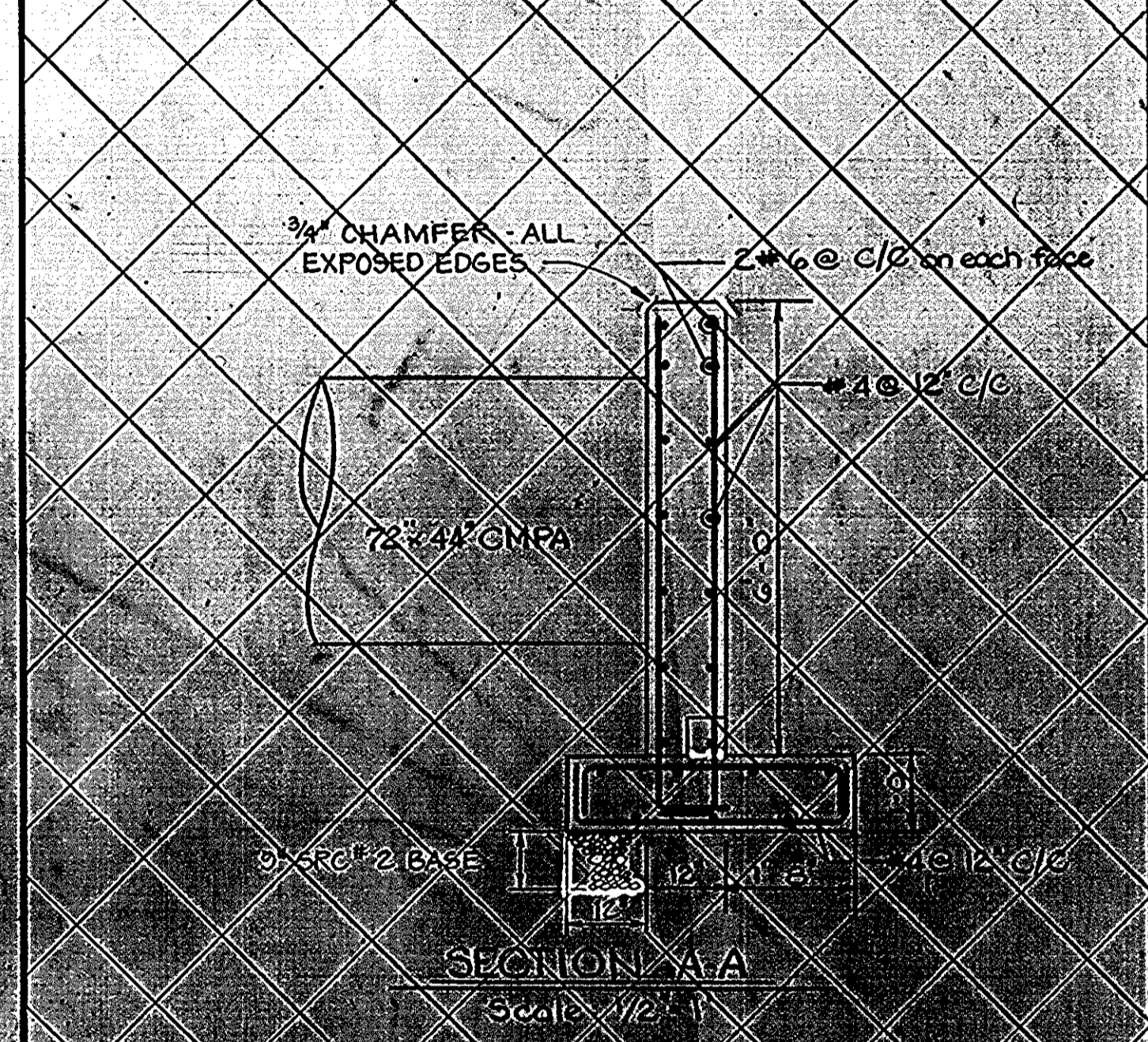
STRUCTURE @ 77+00 SNOWDEN RIVER PARKWAY
Scale: 1/2" = 1'



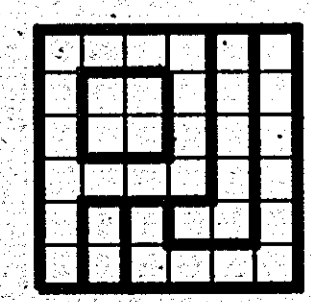
SECTION B-B
Scale: 1/2" = 1'



SECTION D-D
Scale: 1/2" = 1'



SECTION A-A
Scale: 1/2" = 1'

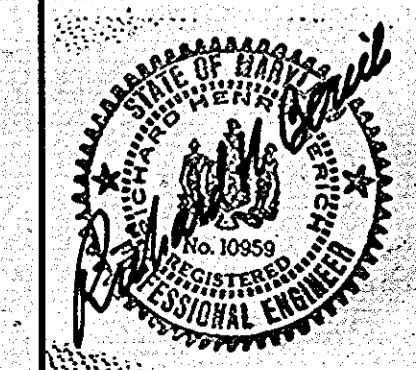


PURDUM & JESCHKE
CONSULTING ENGINEERS AND
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 (301) 837-0194

OWNER/DEVELOPER
THE HOWARD RESEARCH &
DEVELOPMENT LAND COMPANY
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044

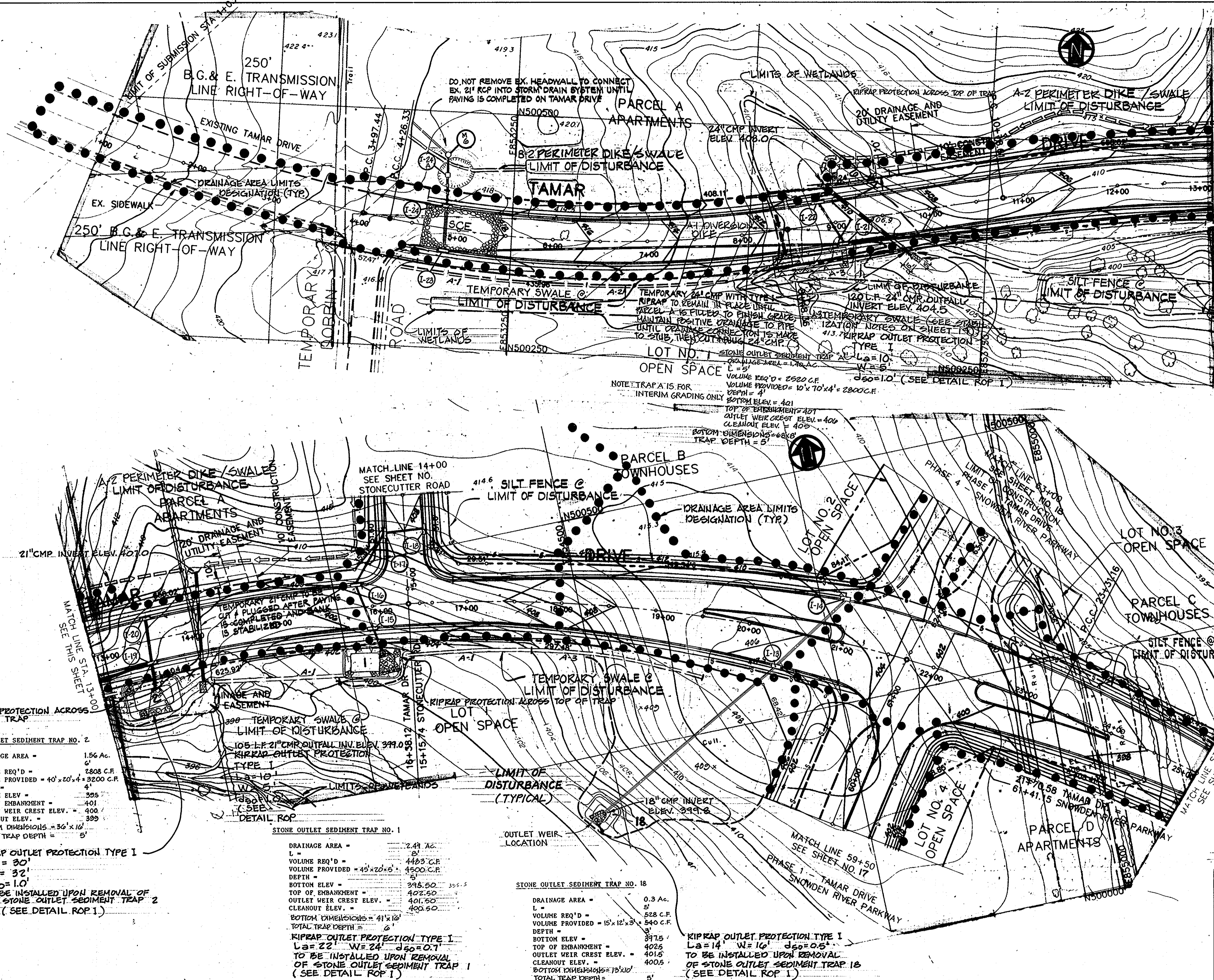
OFFICE OF PLANNING & ZONING
DATE: 6/16/88
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 6/8/88
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 6-9-88
CHIEF, BUREAU OF ENGINEERING



VILLAGE OF LONGREACH-SECT 3, AREA 2
STORM DRAIN DETAILS
SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
DATE: 1/26/88

SHEET 14 OF 19
DES: GDT
DRAWN: RC
CHK: RHB
SCALE: HORIZ: 1" = 50'
VERT: 1" = 5'



STONE OUTLET SEDIMENT TRAP NO. 6
 DRAINAGE AREA = 0.5 AC. (FOR INTERM. GRADING)
 L = 5'
 VOLUME REQ'D = 900 C.F.
 VOLUME PROVIDED = 32' x 10' x 3' = 960 C.F.
 DEPTH = 3'
 BOTTOM ELEV. = 408.5
 TOP OF ENHANCEMENT = 410.5
 OUTLET WEIR CREST ELEV. = 409.5
 CLEANOUT ELEV. = 408.5
 BOTTOM DIMENSIONS = 28' x 8'
 TRAP DEPTH = 4'

STONE OUTLET SEDIMENT TRAP NO. 2
 DRAINAGE AREA = 1.56 AC.
 L = 6'
 VOLUME REQ'D = 2808 C.F.
 VOLUME PROVIDED = 40' x 20' x 4' = 3200 C.F.
 DEPTH = 4'
 BOTTOM ELEV. = 325
 TOP OF ENHANCEMENT = 401
 OUTLET WEIR CREST ELEV. = 400
 CLEANOUT ELEV. = 399
 BOTTOM DIMENSIONS = 36' x 16'
 TOTAL TRAP DEPTH = 5'

RIPPRAP OUTLET PROTECTION TYPE I
 La = 30'
 W = 32'
 d50 = 1.0'
 TO BE INSTALLED UPON REMOVAL OF STONE OUTLET SEDIMENT TRAP 2 (SEE DETAIL ROP 1)

STONE OUTLET SEDIMENT TRAP NO. 1
 DRAINAGE AREA = 2.41 AC.
 L = 6'
 VOLUME REQ'D = 4483 C.F.
 VOLUME PROVIDED = 45' x 20' x 6' = 4500 C.F.
 DEPTH = 6'
 BOTTOM ELEV. = 395.5
 TOP OF ENHANCEMENT = 402.50
 OUTLET WEIR CREST ELEV. = 401.50
 CLEANOUT ELEV. = 400.50
 BOTTOM DIMENSIONS = 41' x 16'
 TOTAL TRAP DEPTH = 6'

RIPPRAP OUTLET PROTECTION TYPE I
 La = 22' WE 24' d50 = 0.7'
 TO BE INSTALLED UPON REMOVAL OF STONE OUTLET SEDIMENT TRAP 1 (SEE DETAIL ROP 1)

STONE OUTLET SEDIMENT TRAP NO. 18
 DRAINAGE AREA = 0.3 AC.
 L = 5'
 VOLUME REQ'D = 528 C.F.
 VOLUME PROVIDED = 15' x 12' x 3' = 540 C.F.
 DEPTH = 3'
 BOTTOM ELEV. = 397.5
 TOP OF ENHANCEMENT = 402.5
 OUTLET WEIR CREST ELEV. = 401.5
 CLEANOUT ELEV. = 400.5
 BOTTOM DIMENSIONS = 13' x 10'
 TOTAL TRAP DEPTH = 5'

RIPPRAP OUTLET PROTECTION TYPE I
 La = 14' W = 10' d50 = 0.5'
 TO BE INSTALLED UPON REMOVAL OF STONE OUTLET SEDIMENT TRAP 18 (SEE DETAIL ROP 1)

OWNER/DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD. 21044

ALL TRAPS HAVE 2:1 SIDE SLOPES

Reviewed for Howard Soil Conservation District and meets technical requirements.
James M. Helms 5/27/88
 U.S. Soil Conservation Service Date

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
Steven J. Fisher 5/27/88
 Howard Soil Conservation District Date

PURDUM & JESCHKE
 CONSULTING ENGINEERS AND LAND SURVEYORS
 1029 North Calvert Street
 Baltimore, Maryland 21202 (301)837-0194

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
James M. Helms 6/18/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
James M. Helms 6/18/88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: BUREAU OF ENGINEERING
James M. Helms 6/18/88
 CHIEF, BUREAU OF ENGINEERING DATE

DEVELOPER'S CERTIFICATION
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
James M. Helms 1-26-88
 DATE

ENGINEER'S CERTIFICATION
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Richard H. Davis 1/26/88
 DATE

VILLAGE OF LONGREACH-SECT. 3, AREA 2 SEDIMENT & EROSION CONTROL PLAN

SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
 DATE: 1/26/88

SHEET 15 OF 19
 DES: GDT
 DRAWN: RC
 CHK: RHB
 SCALE: 1" = 50'

F-88-171

STONE OUTLET SEDIMENT TRAP NO. 3

DRAINAGE AREA = 4.5 AC.
 L = 18'
 VOLUME REQ'D = 8100 C.F.
 VOLUME PROVIDED = 81' x 25' x 4' = 8100 C.F.
 DEPTH = 4'
 BOTTOM ELEV. = 395'
 TOP OF EMBANKMENT = 351'
 OUTLET WEIR CREST ELEV. = 390'
 CLEANOUT ELEV. = 389'
 BOTTOM DIMENSIONS = 17' x 21'

TEMPORARY SWALE
 (AT LIMIT OF DISTURBANCE)
 FOR CLEARING AND GRADING

CONSTRUCT RIRAP OUTLET
 PROTECTION TYPE 1

LOT NO. 3
 OPEN SPACE
 (SEE DETAIL ROP. II)

INSTALL TEMPORARY 21" CMP TO
 SEDIMENT TRAP TO BE CUT AND
 PLUGGED AFTER PAVING IS
 COMPLETED

LIMIT OF DISTURBANCE
 (TYPICAL)

LOT NO. 4
 OPEN SPACE

PARCEL F
 COMMERCIAL

LOT NO. 5
 OPEN SPACE

STONE OUTLET SEDIMENT TRAP NO. 5

DRAINAGE AREA = 0.3 AC.
 L = 12'
 VOLUME REQ'D = 540 C.F.
 VOLUME PROVIDED = 10' x 15' x 4' = 600 C.F.
 DEPTH = 4'
 BOTTOM ELEV. = 348'
 TOP OF EMBANKMENT = 354'
 OUTLET WEIR CREST ELEV. = 353'
 CLEANOUT ELEV. = 352'
 BOTTOM DIMENSIONS = 6' x 11'

MATCH LINE STA. 25+00
 SEE SHEET NO. 15

TEMPORARY SWALE
 (AT LIMIT OF DISTURBANCE)

TAMAR

PARCEL D
 APARTMENTS

DRAINAGE AREA BOUNDARY (TYP.)

N 501250
 E 854500

DRAINAGE AREA BOUNDARY (TYP.)

OPEN SPACE

STONECUTTER

PARCEL B
 TOWNHOUSE

SILT FENCE
 (AT LIMIT OF DISTURBANCE)

ROAD

A-1 PERIMETER DIKE/SWALE
 (AT LIMIT OF DISTURBANCE)

PARCEL A
 APARTMENTS

ALL TRAPS HAVE 2:1 SIDE SLOPES

OWNER/DEVELOPER
 THE HOWARD RESEARCH &
 DEVELOPMENT LAND COMPANY
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD. 21044

Reviewed for Howard Soil Conservation District and meets technical requirements.
[Signature] 5/27/88
 U.S. Soil Conservation Service Date
 This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
[Signature] 5/27/88
 Howard Soil Conservation District Date

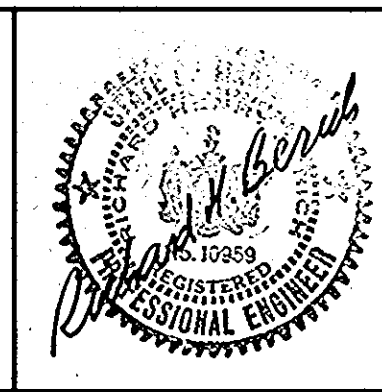
PURDUM & JESCHKE
 CONSULTING ENGINEERS AND
 LAND SURVEYORS
 1029 North Calvert Street
 Baltimore, Maryland 21202 (301) 837-0194

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 6/8/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE
[Signature] 6/8/88
 CHIEF, BUREAU OF HIGHWAYS DATE
[Signature] 6-2-88
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
[Signature] 6/16/88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

DEVELOPER'S CERTIFICATION
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 1-26-88
 DATE

ENGINEER'S CERTIFICATION
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 1/26/88
 DATE



**VILLAGE OF LONGREACH-SECT. 3, AREA 2
 SEDIMENT & EROSION CONTROL PLAN**
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
 DATE: 1/26/88

SHEET 16 OF 19
 DES: GDT
 DRAWN: RC
 CHK: RHB
 SCALE: 1" = 50'

F-88-171

STONE OUTLET SEDIMENT TRAP NO. 23

DRAINAGE AREA = 1.8 Ac.
 L = 5'
 VOLUME REQ'D = 3240 C.F.
 VOLUME PROVIDED = 65'x15'x4' = 3900 C.F.
 DEPTH = 4'
 BOTTOM ELEV. = 372
 TOP OF EMBANKMENT = 378
 OUTLET WEIR CREST ELEV. = 377
 CLEANOUT ELEV. = 376
 BOTTOM DIMENSIONS = 61'x12'
 TRAP DEPTH = 6'

STONE OUTLET SEDIMENT TRAP NO. 24

DRAINAGE AREA = 0.9 Ac.
 L = 5'
 VOLUME REQ'D = 1620 C.F.
 VOLUME PROVIDED = 25'x15'x4' = 1800 C.F.
 DEPTH = 4'
 BOTTOM ELEV. = 375
 TOP OF EMBANKMENT = 381
 OUTLET WEIR CREST ELEV. = 380
 CLEANOUT ELEV. = 379
 BOTTOM DIMENSIONS = 21'x15'
 TRAP DEPTH = 5'

STONE OUTLET SEDIMENT TRAP NO. 19

DRAINAGE AREA = 0.6 Ac.
 L = 5'
 VOLUME REQ'D = 1080 C.F.
 VOLUME PROVIDED = 20'x15'x4' = 1200 C.F.
 DEPTH = 4'
 BOTTOM ELEV. = 375
 TOP OF EMBANKMENT = 381
 OUTLET WEIR CREST ELEV. = 380
 CLEANOUT ELEV. = 379
 BOTTOM DIMENSIONS = 16'x11'
 TRAP DEPTH = 6'

STONE OUTLET SEDIMENT TRAP NO. 20

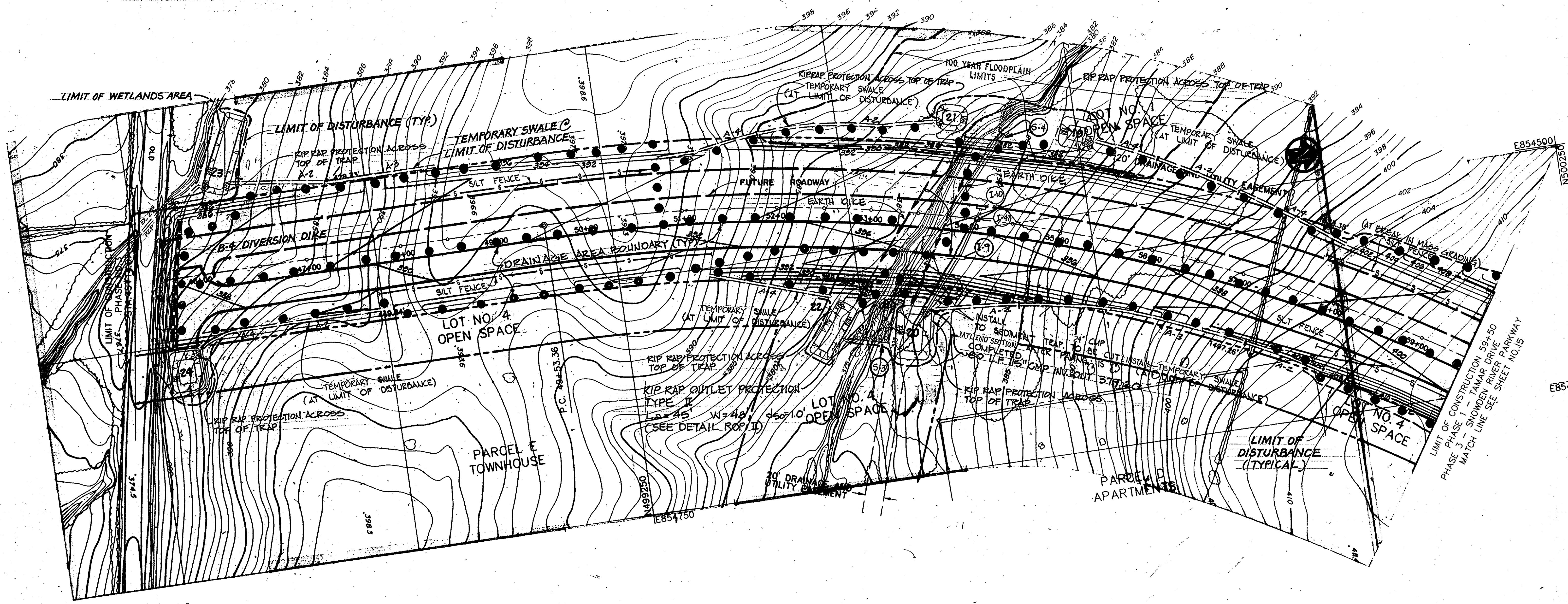
DRAINAGE AREA = 1.7 Ac.
 L = 7'
 VOLUME REQ'D = 3060 C.F.
 VOLUME PROVIDED = 40'x20'x4' = 3200 C.F.
 DEPTH = 4'
 BOTTOM ELEV. = 372
 TOP OF EMBANKMENT = 378
 OUTLET WEIR CREST ELEV. = 377
 CLEANOUT ELEV. = 376
 BOTTOM DIMENSIONS = 36'x12'
 TRAP DEPTH = 6'

STONE OUTLET SEDIMENT TRAP NO. 21

DRAINAGE AREA = 0.4 Ac.
 L = 5'
 VOLUME REQ'D = 720 C.F.
 VOLUME PROVIDED = 20'x15'x3' = 900 C.F.
 DEPTH = 3'
 BOTTOM ELEV. = 376
 TOP OF EMBANKMENT = 381
 OUTLET WEIR CREST ELEV. = 380
 CLEANOUT ELEV. = 379
 BOTTOM DIMENSIONS = 17'x12'
 TRAP DEPTH = 5'

STONE OUTLET SEDIMENT TRAP NO. 22

DRAINAGE AREA = 0.75 Ac.
 L = 5'
 VOLUME REQ'D = 1350 C.F.
 VOLUME PROVIDED = 50'x10'x3' = 1500 C.F.
 DEPTH = 3'
 BOTTOM ELEV. = 371
 TOP OF EMBANKMENT = 376
 OUTLET WEIR CREST ELEV. = 375
 CLEANOUT ELEV. = 374
 BOTTOM DIMENSIONS = 48'x8'
 TRAP DEPTH = 5'

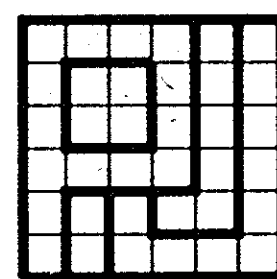


OWNER/DEVELOPER

THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 THE ROUSE BUILDING
 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD. 21044

ALL TRAPS HAVE 2:1 SIDE SLOPES.

Reviewed for Howard Soil Conservation District and meets technical requirements.
 [Signature] 5/27/88
 U.S. Soil Conservation Service Date
 This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
 [Signature] 5/27/88
 Howard Soil Conservation District Date



PURDUM & JESCHKE
 CONSULTING ENGINEERS AND LAND SURVEYORS
 1029 North Calvert Street
 Baltimore, Maryland 21202 (301)837-0194

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 6/8/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE
 [Signature] 6/9/88
 CHIEF, BUREAU OF HIGHWAYS DATE
 [Signature] 6/9/88
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 [Signature] 6/8/88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

DEVELOPER'S CERTIFICATION
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 1-26-88 DATE

ENGINEER'S CERTIFICATION
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 1/20/88 DATE



VILLAGE OF LONGREACH-SECT. 3, AREA 2
 SEDIMENT & EROSION CONTROL PLAN
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
 DATE: 1/20/88

SHEET 17 OF 19
 DES: GDT
 DRAWN: RC
 CHK: RHB
 SCALE: 1" = 50'

STRUCTURE NO.	STRUCTURE TYPE	STATION	OFFSET	NOTES
25	STD. TYPE 'A' TRAP	72+40	2' RIGHT	
26	SPECIAL STRUCTURE	72+55	65' LEFT	SEE DETAILS - SHEET 15 OF 19

STONE OUTLET SEDIMENT TRAP NO. 25

DRAINAGE AREA = 2.0 Ac.
 L = 8'
 VOLUME REQ'D = 3600 C.F.
 VOLUME PROVIDED = 32' x 32' x 4' = 4100 C.F.
 DEPTH = 5'
 BOTTOM ELEV = 366
 TOP OF EMBANKMENT = 373
 OUTLET WEIR CREST ELEV. = 372
 CLEANOUT ELEV. = 371
 BOTTOM DIMENSIONS = 27' x 27'
 TRAP DEPTH = 6'

STONE OUTLET SEDIMENT TRAP NO. 26

DRAINAGE AREA = 0.3 Ac.
 L = 5'
 VOLUME REQ'D = 540 C.F.
 VOLUME PROVIDED = 20' x 10' x 3' = 600 C.F.
 DEPTH = 3'
 BOTTOM ELEV = 369.30
 TOP OF EMBANKMENT = 374
 OUTLET WEIR CREST ELEV. = 373
 CLEANOUT ELEV. = 372
 BOTTOM DIMENSIONS = 17' x 7'
 TRAP DEPTH = 4'

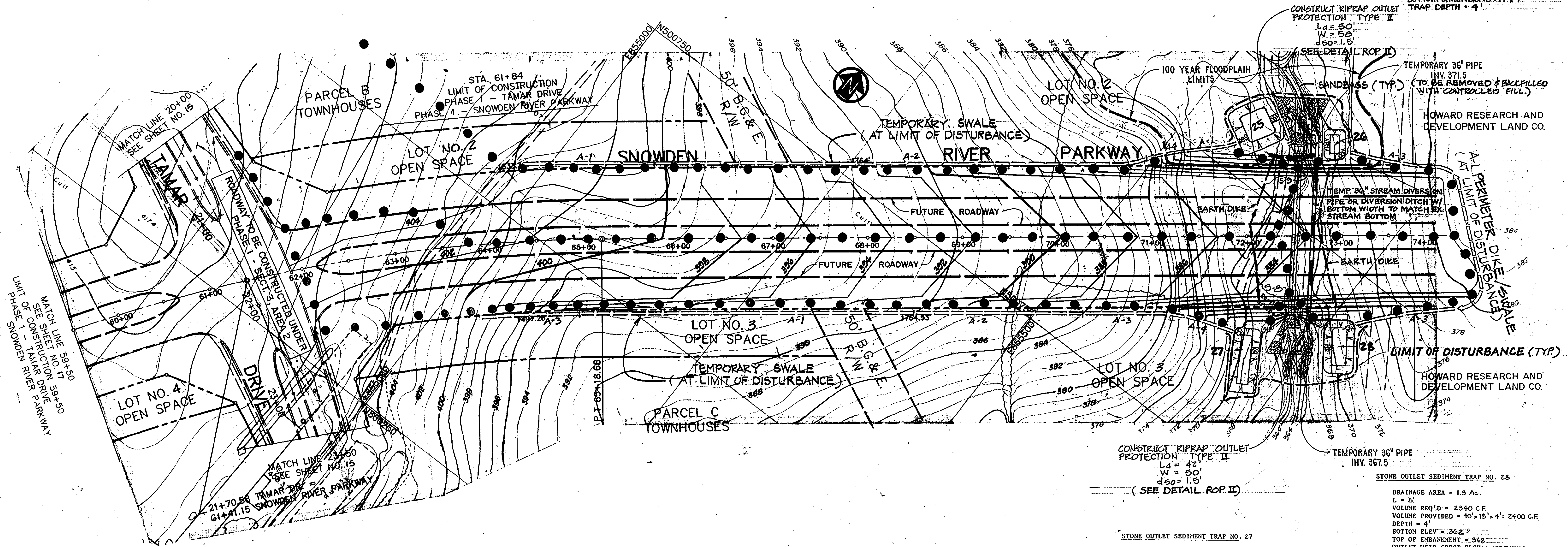
STONE OUTLET SEDIMENT TRAP NO. 27

DRAINAGE AREA = 1.8 Ac.
 L = 5'
 VOLUME REQ'D = 3240 C.F.
 VOLUME PROVIDED = 57' x 12' x 6' = 3400 C.F.
 DEPTH = 5'
 BOTTOM ELEV = 361
 TOP OF EMBANKMENT = 368
 OUTLET WEIR CREST ELEV. = 367
 CLEANOUT ELEV. = 366
 BOTTOM DIMENSIONS = 53' x 8'
 TRAP DEPTH = 6'

STONE OUTLET SEDIMENT TRAP NO. 28

DRAINAGE AREA = 1.3 Ac.
 L = 5'
 VOLUME REQ'D = 2340 C.F.
 VOLUME PROVIDED = 40' x 15' x 4' = 2400 C.F.
 DEPTH = 4'
 BOTTOM ELEV = 362.2
 TOP OF EMBANKMENT = 368
 OUTLET WEIR CREST ELEV. = 367
 CLEANOUT ELEV. = 366
 BOTTOM DIMENSIONS = 30' x 11'
 TRAP DEPTH = 5'

ALL TRAPS HAVE 2:1 SIDE SLOPES



OWNER/DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD. 21044

Reviewed for Howard Soil Conservation District and meets technical requirements.
[Signature] 5/21/88
 U.S. Soil Conservation Service Date
 This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
[Signature] 5/27/88
 Howard Soil Conservation District Date

PURDUM & JESCHKE
 CONSULTING ENGINEERS AND LAND SURVEYORS
 1029 North Calvert Street
 Baltimore, Maryland 21202 (301)837-0194

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 6/18/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 6/26/88
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
[Signature] 6/16/88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

DEVELOPER'S CERTIFICATION
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 1-26-88
 DATE

ENGINEER'S CERTIFICATION
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 1/26/88
 DATE

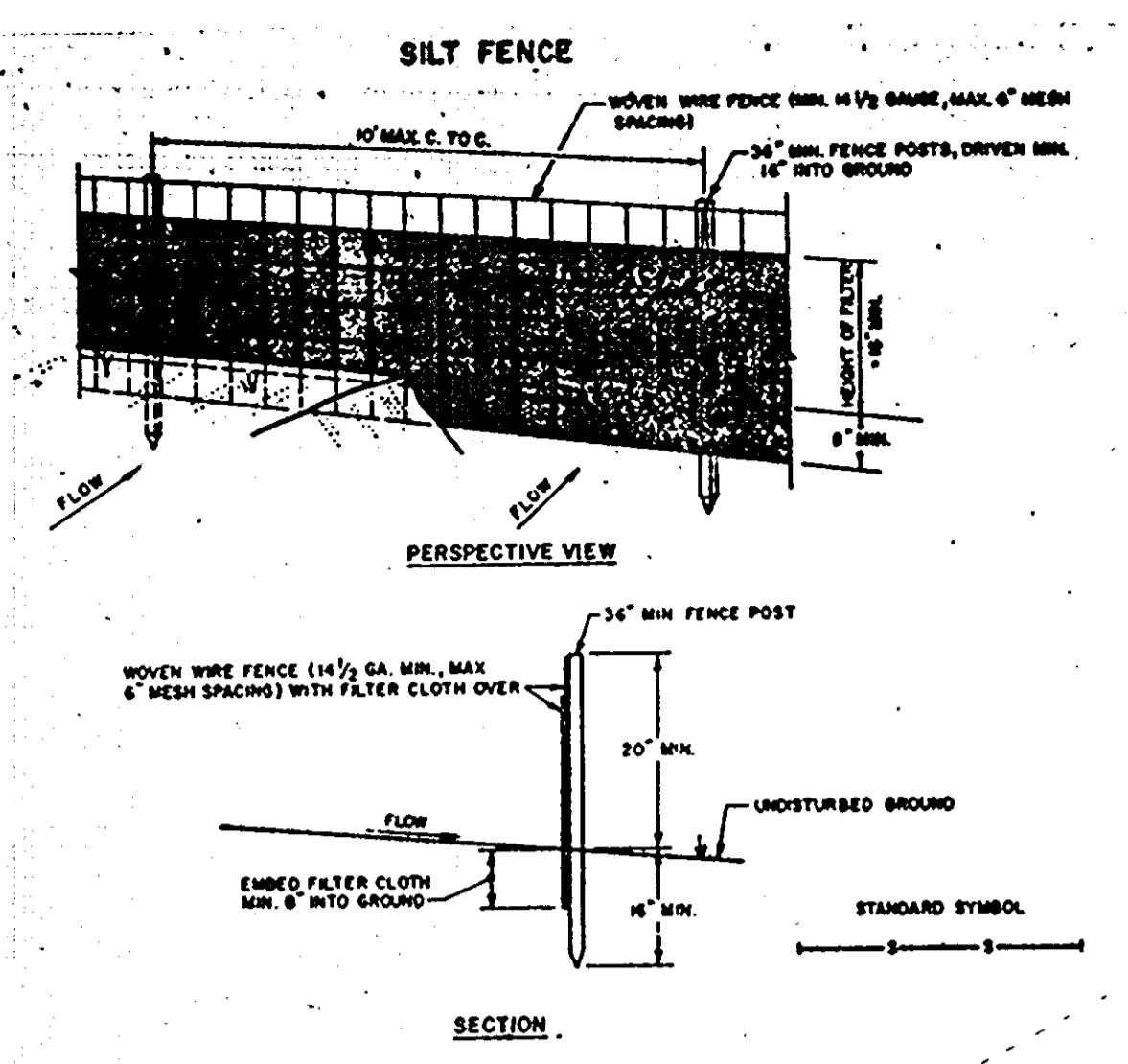


VILLAGE OF LONGREACH-SECT. 3, AREA 2 SEDIMENT & EROSION CONTROL PLAN
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
 DATE: 1/26/88

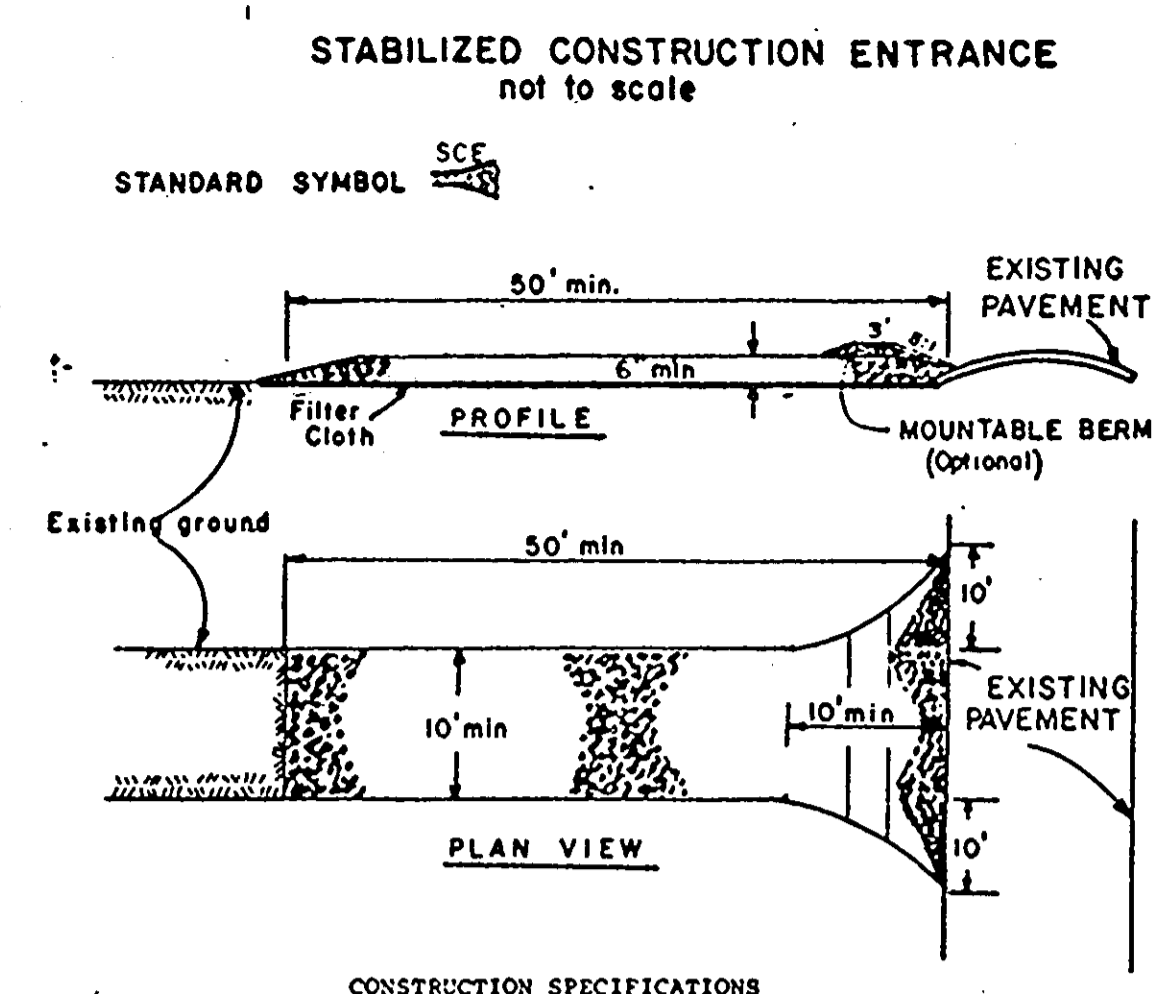
SHEET 18 OF 19
 DES: GDT
 DRAWN: RC
 CHK: RHB
 SCALE: 1" = 50'

100

F-88-171



- 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 ALGAE DEVELOP IN THE SILT FENCE.
- POSTS: STEEL EITHER I OR U TYPE OR 2" HARDWOOD
 FENCE: WOVEN WIRE, 1 1/2 GA. 6" MAX. TESH OPENING
 FILTER CLOTH: FILTER X, MIRAFLO, STABILINA TIRAN OR APPROVED EQUAL
 PREFABRICATED UNIT: GEOPAB, DAVITROFENCE, OR APPROVED EQUAL



- 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 cleanup of any measures used to trap sediment. All sediment applied, 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.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded 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 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 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 reseeding.

TEMPORARY SEEDING NOTES

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

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

Soil Amendments: Apply 60 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

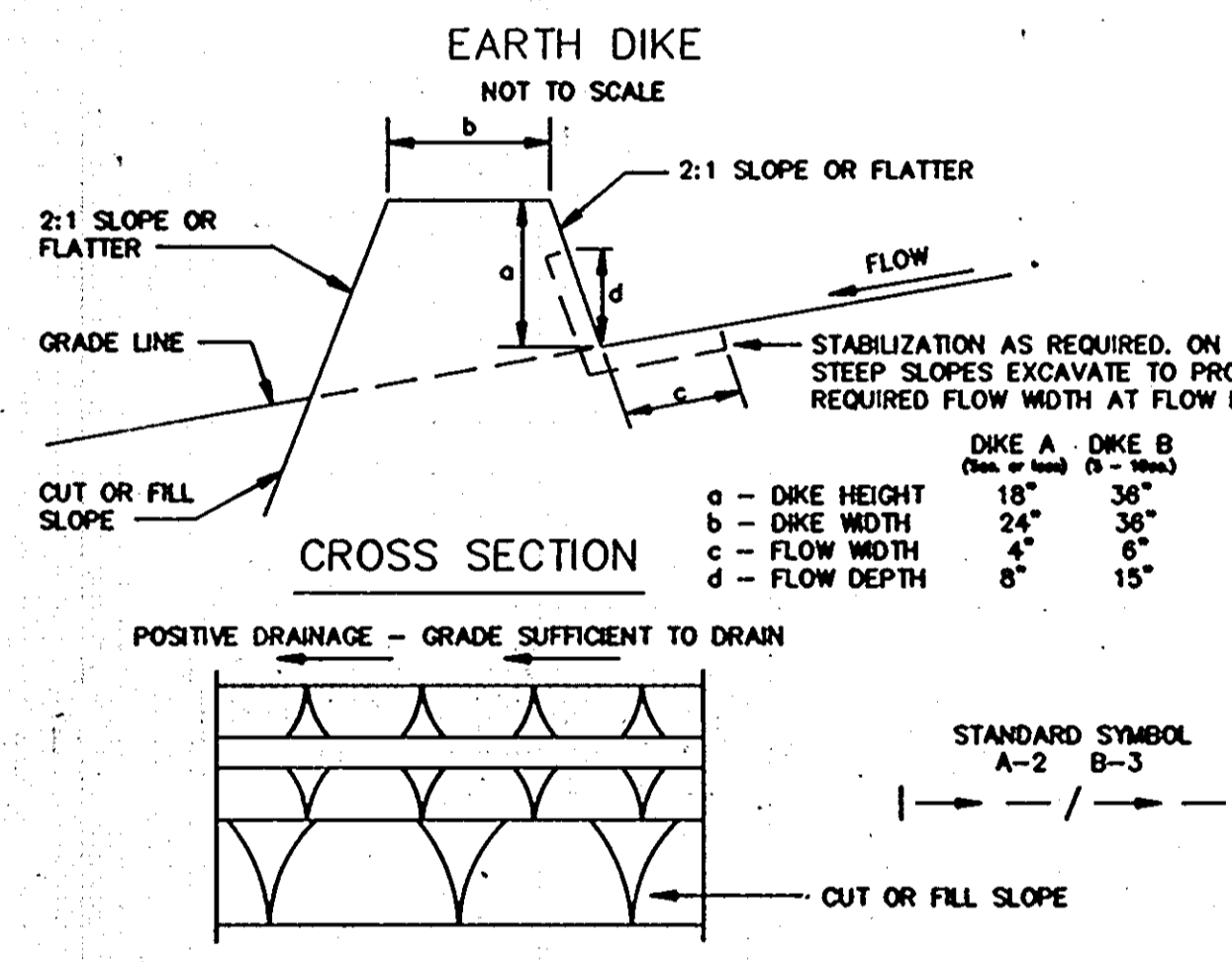
Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 28 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect 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 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

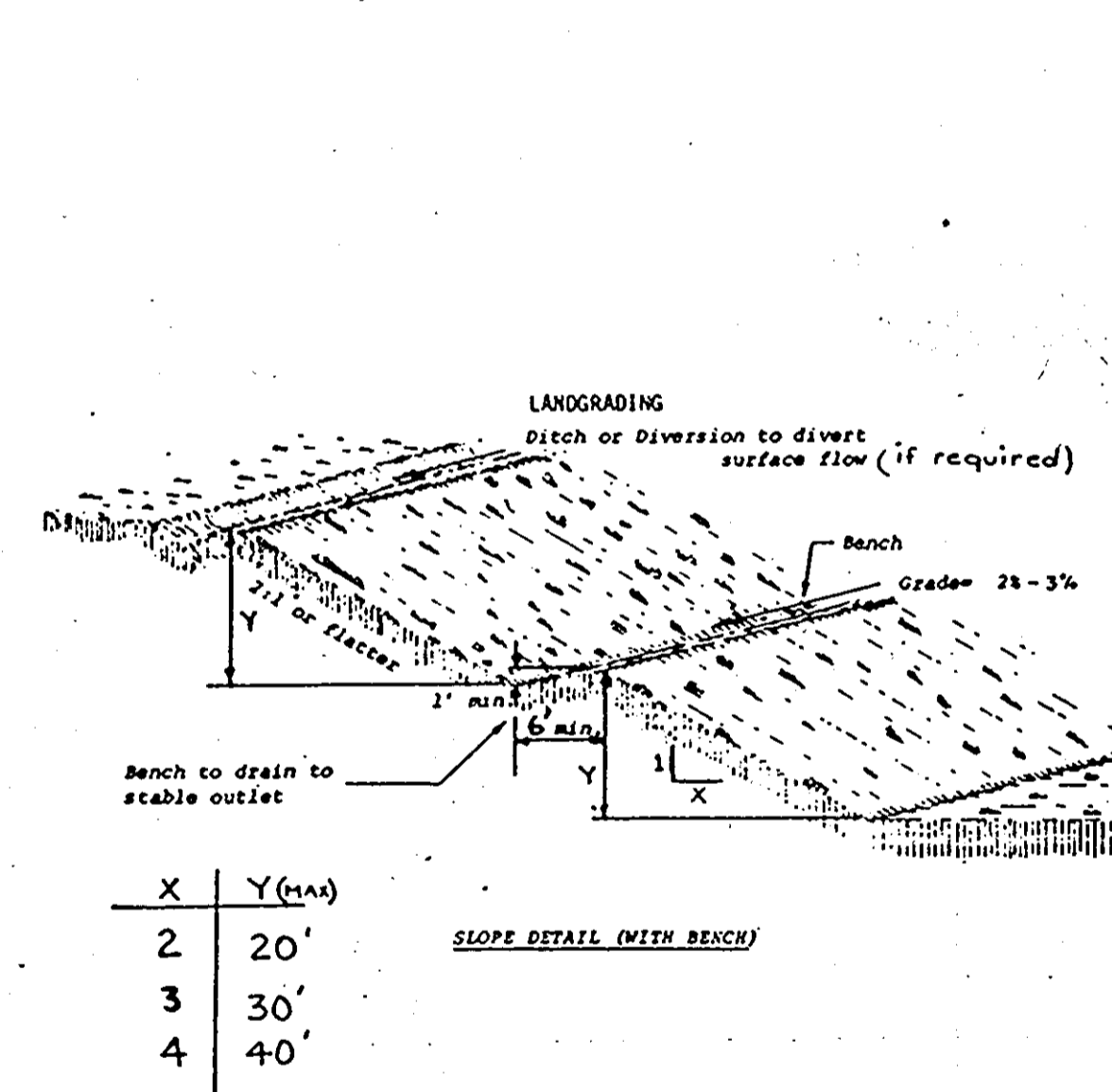
Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

- 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, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
 - 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
 - 6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
 - 7) Site Analysis:

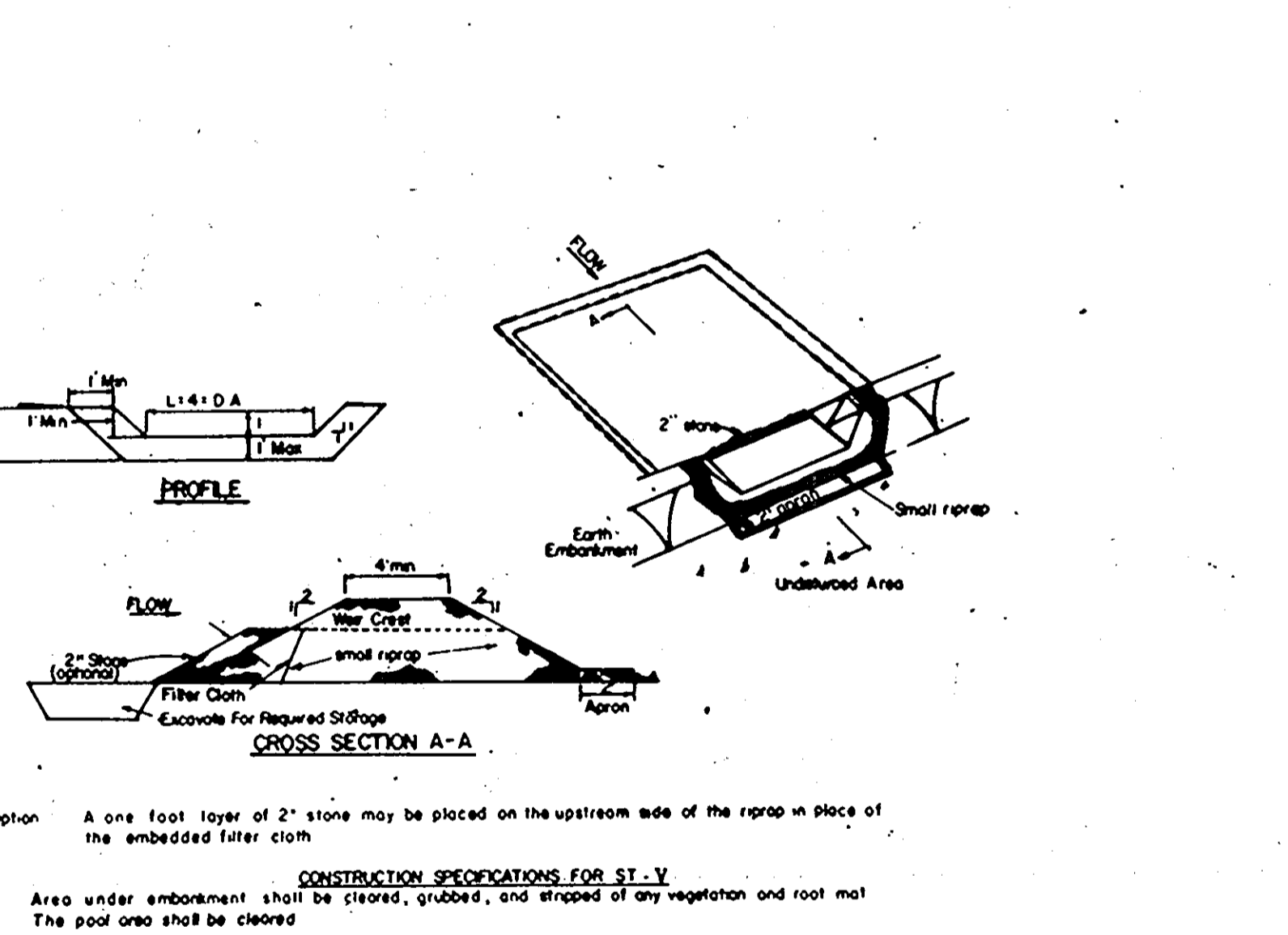
Total Area of Site	230.21 Acres
Area Disturbed	24.0 Acres
Area to be roofed or paved	10.88 Acres
Area to be vegetatively stabilized	13.12 Acres
Total Cu. yds	66600 Cu. yds
Offsite waste/borrow area location	NA
 - 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
 - 9) Additional sediment controls must be provided, if deemed necessary by the Howard County DPM 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.



- CONSTRUCTION SPECIFICATION**
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 SPECIFICATION FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.
- | TYPE OF TREATMENT | CHANNEL GRADE | FLOW CHANNEL STABILIZATION | |
|-------------------|---------------|----------------------------------|--|
| | | 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; SOO; 2" STONE |
| 3 | 5.1 - 8.0% | SEED WITH JUTE, OR SOO; 2" STONE | LINED RIPRAP 4 - 8" |
| 4 | 8.1 - 20% | LINED RIPRAP 4 - 8" | ENGINEERING DESIGN |
- A. STONE TO BE 2 INCH STONE, OR RECYCLE CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
 B. RIPRAP TO BE 4 - 8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
 C. APPROVED EQUIVALENT CAN BE SUBSTITUTED FOR ANY OF THE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.



- CONSTRUCTION SPECIFICATIONS**
1. All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved sediment control plan until they are permanently stabilized.
 2. All sediment control practices and measures shall be constructed, applied and maintained in accordance with the approved sediment control plan and the "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas".
 3. Topsoil required for the establishment of vegetation shall be stockpiled in amount necessary to complete finished grading of all exposed areas.
 4. Areas to be filled shall be cleared, grubbed and stripped of topsoil to remove trees, vegetation, roots or other objectionable material.
 5. Areas which are to be topsoiled shall be scarified to a minimum depth of three inches prior to placement of topsoil.
 6. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc., shall be compacted in accordance with local requirements or codes.
 7. All fill to be placed and compacted in layers not to exceed 8 inches in thickness.
 8. Except for approved landfills, fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other objectionable materials that would interfere with or prevent construction of satisfactory fills.
 9. Frozen materials or soft, sticky or highly compressible materials shall not be incorporated into fills.
 10. Fill shall not be placed on a frozen foundation.
 11. All benches shall be kept free of sediment during all phases of development.
 12. Seeps or springs encountered during construction shall be handled in accordance with the Standard and Specifications for Subsurface Drain or other approved method.
 13. All graded areas shall be permanently stabilized immediately following finished grading.
 14. Stockpiles, borrow areas and spoil areas shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications.



- CONSTRUCTION SPECIFICATIONS FOR ST-V**
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 oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by tamping 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" appropriate placed on the up-grade side on the small riprap or embedded filter cloth in the riprap.
 5. 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.
 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 that erosion and water pollution is minimized.
 8. The structure shall be removed and the area stabilized when the drainage pipe has been properly stabilized.

SEQUENCE OF CONSTRUCTION

1. Obtain grading permit.
2. Notify the Howard County Bureau of Licenses, Inspection and Permits at least 48 hours before any work begins.
3. Clear and grub for sediment and erosion control measures or devices only.
4. Place stone construction entrance as shown on plan.
5. Install silt fence and temporary CHP's as shown on plans & construct sediment traps, earth diversion dikes and perimeter swales as shown on plans, stabilize with temporary seeding.
6. Notify Howard County Department of Permits and Licenses, Sediment Control Division, upon completion of said installation.
7. Begin earthwork operations beginning with topsoil removal and stockpiling.
8. Start major grading, maintain positive drainage to sediment control structures.
9. Stabilize rough graded areas.
10. Place temporary stream diversion pipe with sandbags at both upstream and downstream limits of pipe.
11. Construct all concrete end support walls.
12. Install CHPA's and RCP's.
13. As roadway fill is placed, install silt fence or perimeter swales along entire length of the toe of slope of the embankment of both upstream and downstream faces.
14. Install rip-rap channel protection at the downstream end of CHPA's and RCP's.
15. Redirect flow through CHPA's and RCP's.
16. Grade roads to subgrade and construct storm drain system.
17. Install temporary CHP storm discharge pipes to stone outlet basins.
18. Plug storm drain discharge pipe to culverts.
19. Construct curb and gutter and install base course.
20. Remove plug from storm drain discharge pipe to culverts, after paving is complete.
21. Cut and plug temporary basin discharge pipes.
22. Sediment shall be removed from the sediment traps when the cleanup elevation has been reached.
23. The contractor shall inspect and provide necessary maintenance on the sediment and erosion control structures shown hereon. After each rainfall and on a daily basis.
24. The sediment traps shall be dewatered by pumping. The sediment from the traps shall be placed up grade from the sediment traps in such a manner as not to interfere with construction operations or cause erosion downgrade from the sediment trap.
25. Remove sediment from roadways and dress stone construction entrance as required.
26. Remove inlet protection devices and flush storm drain system to remove any trapped sediment. Install rip-rap aprons.
27. Remove stone construction entrance and silt fence. Clean base course. Apply tack coat to base course and lay surface course.
28. All disturbed areas due to removal of sediment control measures shall be graded and stabilized with permanent seeding mixture.

Reviewed for Howard Soil Conservation District and meets technical requirements.

James M. Phelps 5/27/88
 Howard Soil Conservation District Date

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Stephen C. Phelps 5/27/88
 Howard Soil Conservation District Date

1001

PURDUM & JESCHKE
 CONSULTING ENGINEERS AND
 LAND SURVEYORS
 1029 North Calvert Street
 Baltimore, Maryland 21202 (301)837-0194

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Paul J. ... 6/6/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
James M. Phelps 5/27/88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF ENGINEERING
William B. ... 6-8-88
 CHIEF, BUREAU OF ENGINEERING DATE

DEVELOPER'S CERTIFICATION

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT.

James M. Phelps 1-26-88
 DATE

ENGINEER'S CERTIFICATION

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Richard H. ... 1/26/88
 DATE

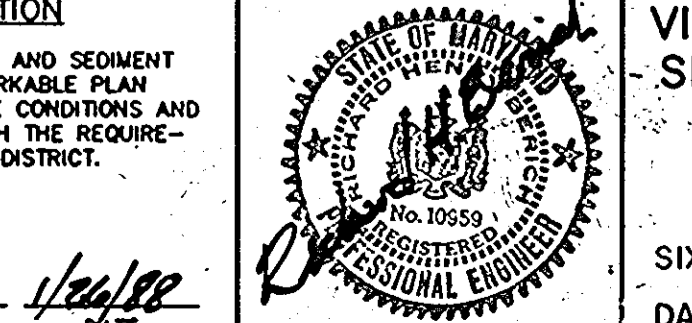
VILLAGE OF LONGREACH - SECT. 3, AREA 2
 SEDIMENT & EROSION CONTROL DETAILS

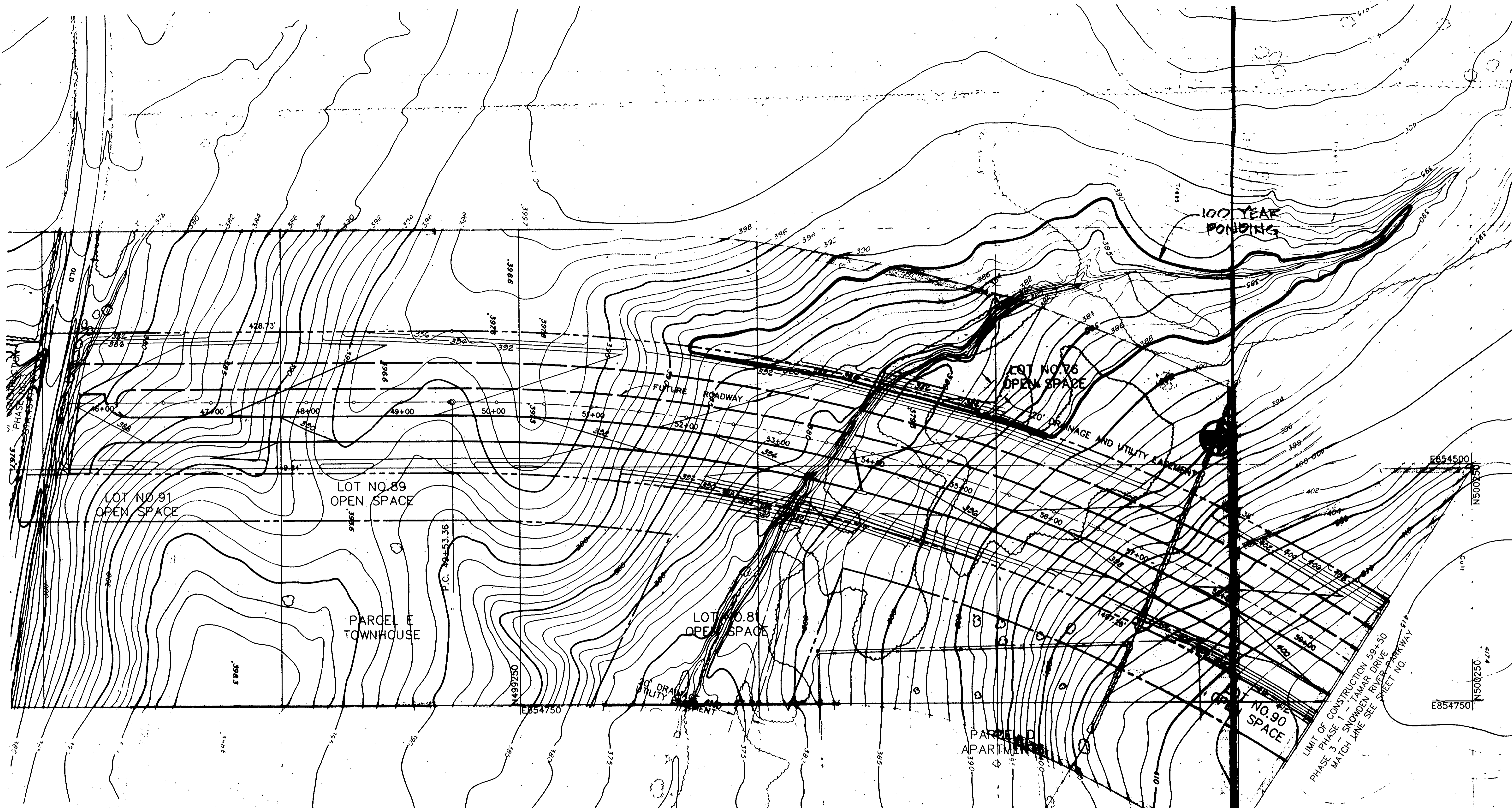
SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
 DATE: 1/26/88

SHEET 19 OF 19

DES: GOT
 DRAWN: REC
 CHK: RHB

SCALE: 1" = 50'





By the Developer:
 "I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."
Gregory R. Shaw 1-26-88
 Date

By the Engineer:
 "I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
Richard H. Berich 1/26/88
 Richard H. Berich, Reg. No. 10959
 Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
Constance A. Johns 5/27/88
 U.S. Soil Conservation Service Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
Stephen L. Shuler 5/27/88
 Howard Soil Conservation District Date

PURDUM & JESCHKE
 CONSULTING ENGINEERS AND
 LAND SURVEYORS
 1029 North Colvert Street
 Baltimore, Maryland 21202 (301)837-0194

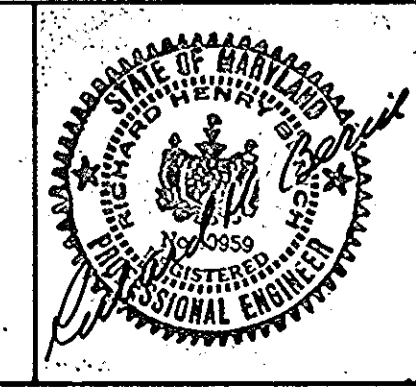
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William W. Wickland 6/18/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE
William W. Wickland 6/18/88
 CHIEF, BUREAU OF HIGHWAYS DATE
William W. Wickland 6/18/88
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Howard County 6/18/88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William W. Wickland 6/18/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE
William W. Wickland 6/18/88
 CHIEF, BUREAU OF HIGHWAYS DATE
William W. Wickland 6/18/88
 CHIEF, BUREAU OF ENGINEERING DATE

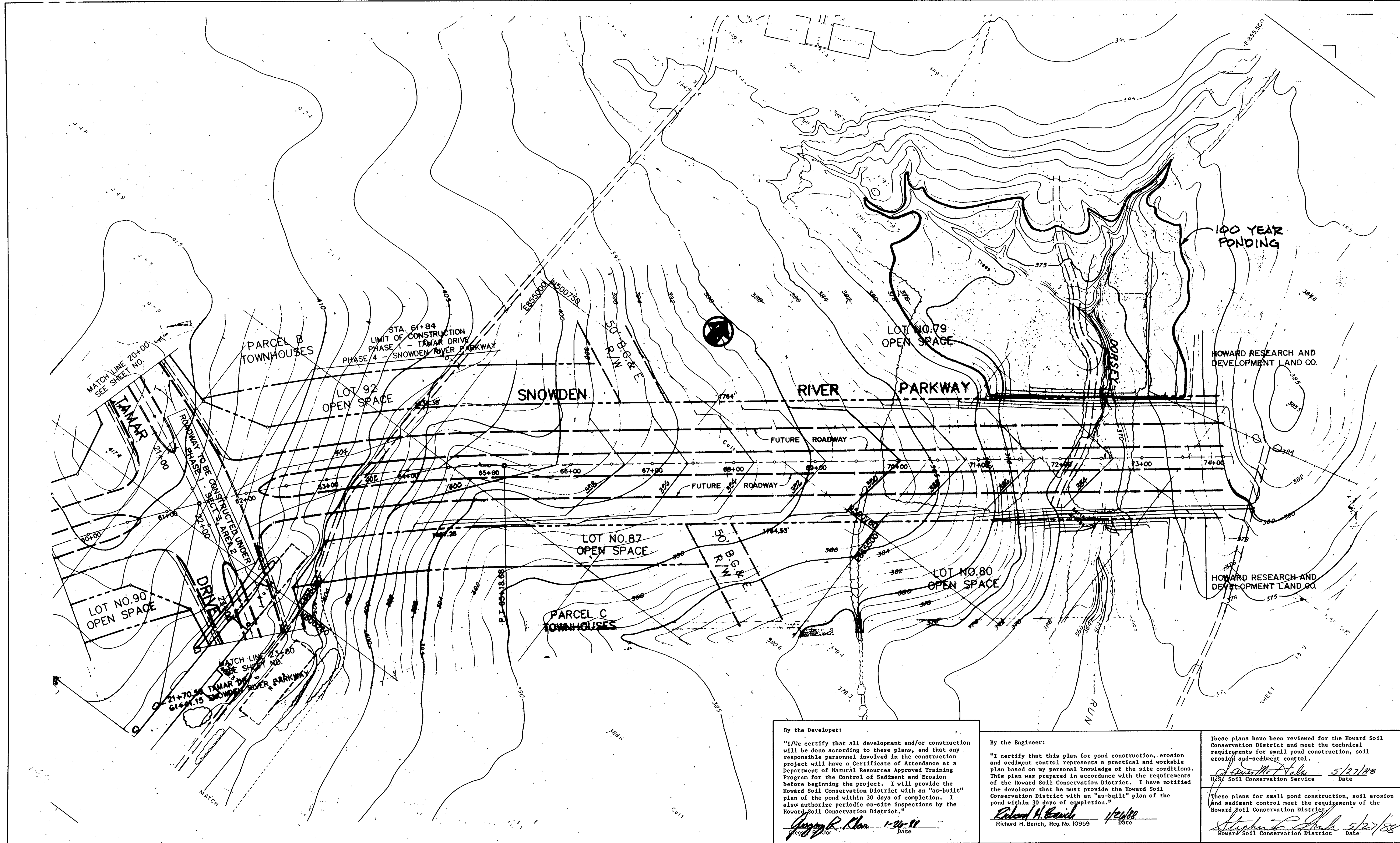
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William W. Wickland 6/18/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE
William W. Wickland 6/18/88
 CHIEF, BUREAU OF HIGHWAYS DATE
William W. Wickland 6/18/88
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William W. Wickland 6/18/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE
William W. Wickland 6/18/88
 CHIEF, BUREAU OF HIGHWAYS DATE
William W. Wickland 6/18/88
 CHIEF, BUREAU OF ENGINEERING DATE



VILLAGE OF LONGREACH - SECT. 3, AREA 2
 54+00 ± SNOWDEN RIVER PARKWAY
 STORAGE FOR
 STORMWATER MANAGEMENT
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
 DATE: 1/26/88

SHEET 19A OF 19
 DES: GDT
 DRAWN: REC
 CHK: RHB
 SCALE: 1" = 50'



By the Developer:
 "I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."
Gregory P. Khan 1-26-88
 Date

By the Engineer:
 "I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
Richard H. Berich 1/26/88
 Richard H. Berich, Reg. No. 10959 Date

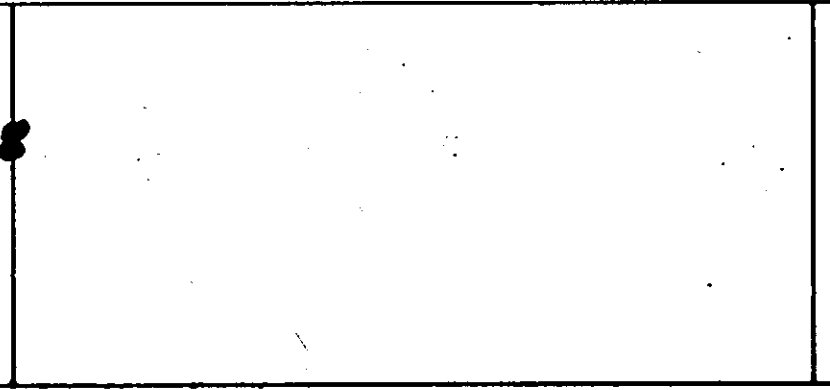
These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
J. Owen McVey 5/27/88
 U.S. Soil Conservation Service Date
 These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
Stephen L. Glush 5/27/88
 Howard Soil Conservation District Date

PURDUM & JESCHKE
 CONSULTING ENGINEERS AND
 LAND SURVEYORS
 1029 North Calvert Street
 Baltimore, Maryland 21202 (301)837-0194

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Paul H. Jagan 6/8/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE
Devinville G. Williams 6/8/88
 CHIEF, BUREAU OF HIGHWAYS DATE
W. Adam R. Ryan 6-9-88
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Sumner Smith 6/8/88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Sumner Smith 6/8/88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



VILLAGE OF LONGREACH - SECT. 3, AREA 2
 72+00 ± SNOWDEN RIVER PARKWAY
 STORAGE FOR
 STORMWATER MANAGEMENT
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MD.
 DATE: 1/26/88

SHEET 19B OF 19
 DES: GOT
 DRAWN: REC
 CHK: RHB
 SCALE: 1" = 50'

100

133-171