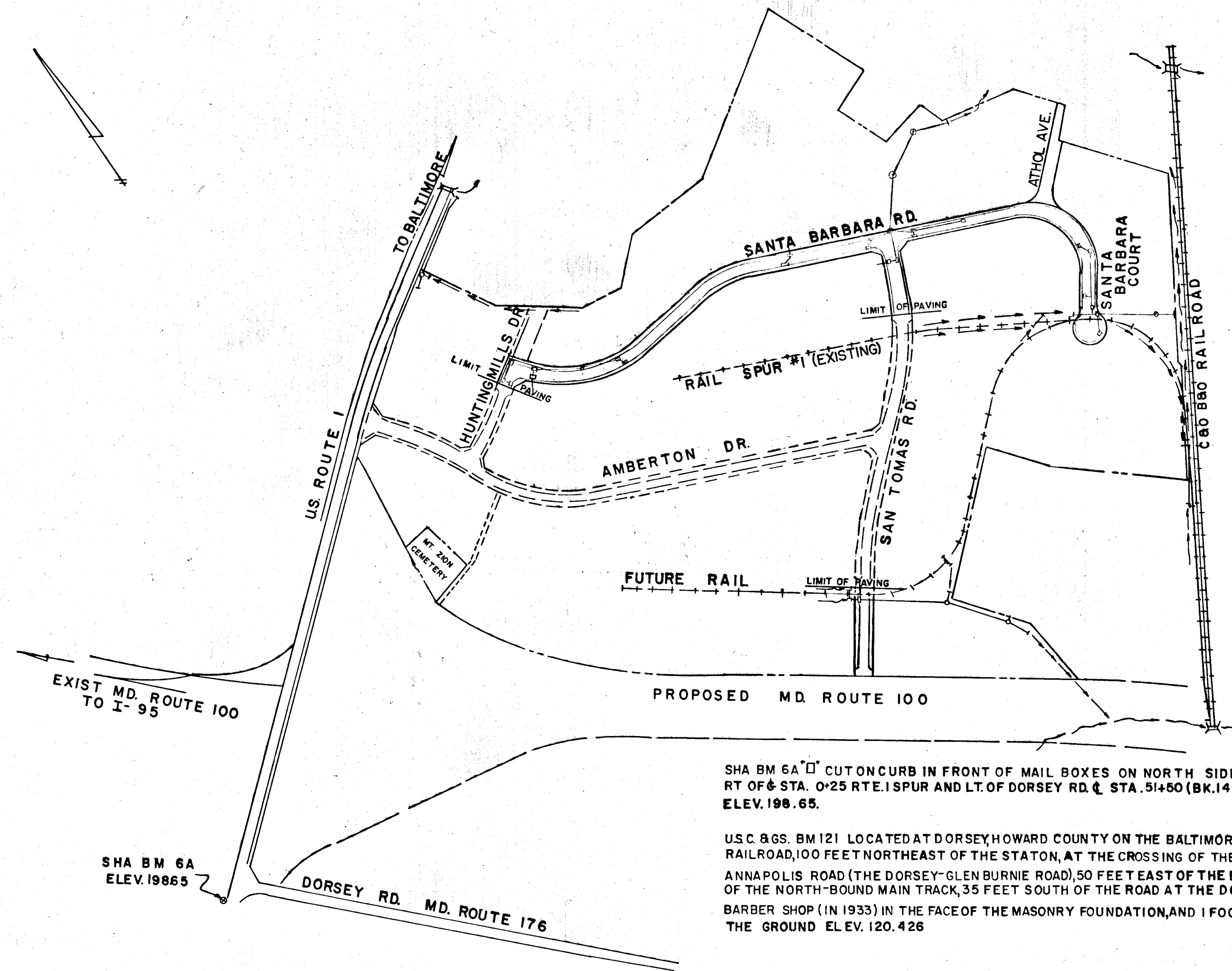
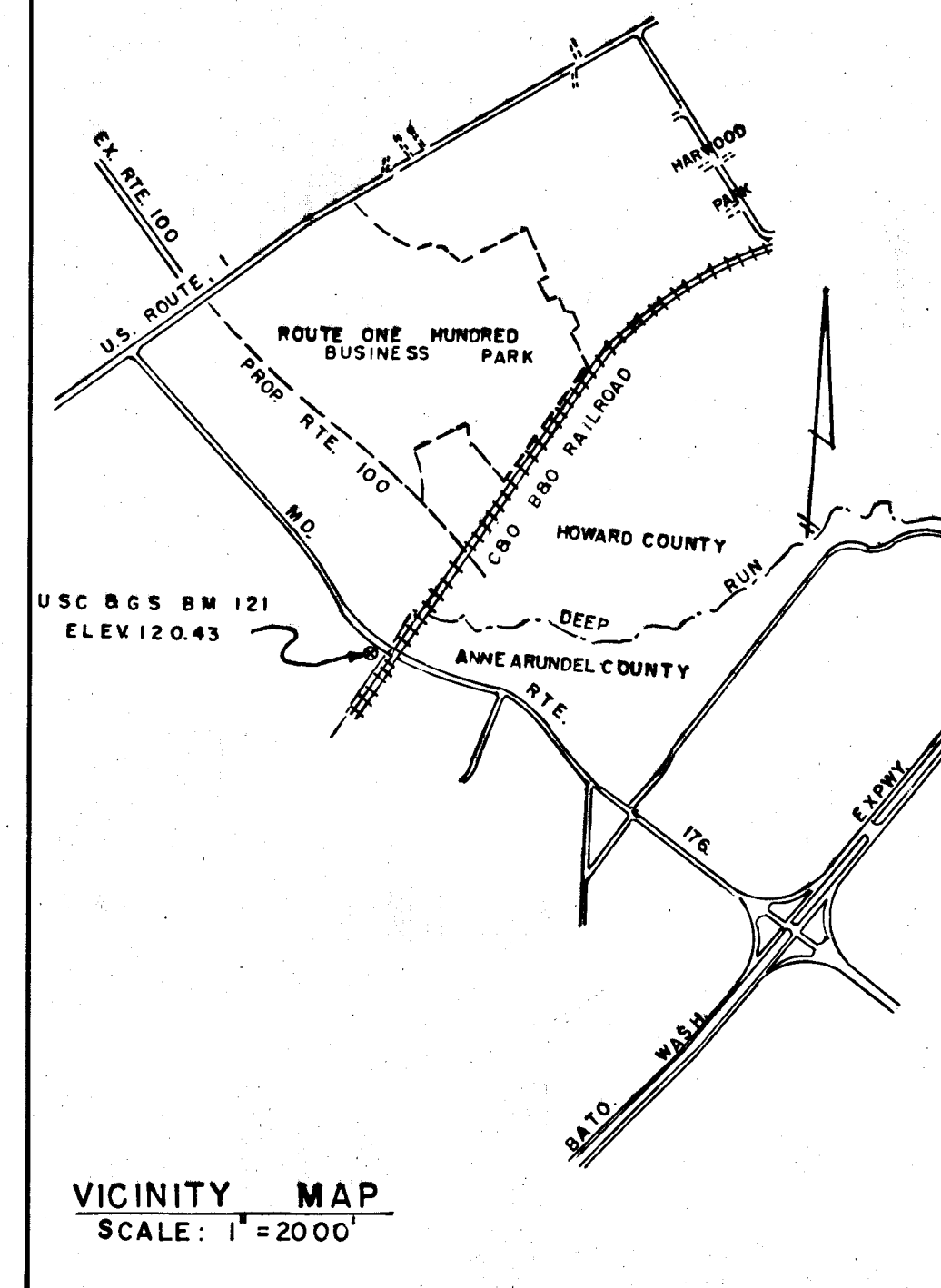


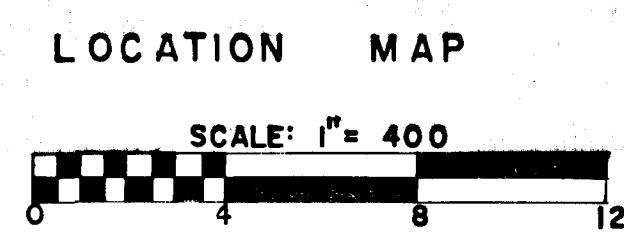
GENERAL NOTES

1. Horizontal Control - This Project Is Oriented To Conform To The Maryland Grid System
2. Vertical Control - U.S.C. & G.S. BM 121 Elev. 120.426 And S.H.A. BM 6-A Elev. 198.65 As Noted On The Location Plan
3. Specifications - Specifications For This Project Are The Road Construction Code Of Howard County, All Revisions Thereof And Additions Thereto And The Special Provisions
4. Storm Drains Shall Be All One Option, No Combinations Of Drains Other Than Those Shown On The Contract Documents Shall Be Allowed
5. Invert Elevations - All Storm Drain Elev. Shown Are Invert Elev. All Pipes, Ditches And Flumes Will Be Constructed On A Uniform Grade Between Invert Elev. Noted On The Plans And Are Subject To Field Modification By The Engineer.
6. The Bid Line For The Storm Drain Shall Be Top Of Subgrade Of The Road, All Roads Will Be Notched To Subgrade By Others, Where The Storm Drain Is Not Within The Road Right Of Way The Bid Line Shall Be Existing Ground Unless Otherwise Noted On The Plans
7. Selected Backfill - Selected Backfill Maybe Placed Under Drainage Pipes If Directed By The Engineer. An Allowance For Selected Backfill Has Been Made In The Proposal Quantities
8. Underground Utilities - The Location Of Underground Utilities Shown On The Plan Are For Information Only. The Contractor Will Be Responsible To Locate These Utilities And Will Notify All Utility Companies Prior To Construction
9. Design Speed 35 M.P.H., Posted 25 M.P.H.



SHA BM 6A CUT ON CURB IN FRONT OF MAIL BOXES ON NORTH SIDE OF U.S. ROUTE 1 RT OF STA. 0+25 RTE. 1 SPUR AND LT. OF DORSEY RD. STA. 5+450 (BK. 14427 P. 6.4) ELEV. 198.65.

U.S.C. & G.S. BM 121 LOCATED AT DORSEY, HOWARD COUNTY ON THE BALTIMORE & OHIO RAILROAD, 100 FEET NORTHEAST OF THE STATION, AT THE CROSSING OF THE OLD ANNAPOLIS ROAD (THE DORSEY-GLEN BURNIE ROAD), 50 FEET EAST OF THE EAST RAIL OF THE NORTH-BOUND MAIN TRACK, 35 FEET SOUTH OF THE ROAD AT THE DORSEY BARBER SHOP (IN 1933) IN THE FACE OF THE MASONRY FOUNDATION, AND 1 FOOT ABOVE THE GROUND ELEV. 120.426



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	Cover Sheet
2	Typical Sections And Details
3	Drainage Area Plan
4	Plan And Profile - Santa Barbara Road
5	Plan And Profile - Santa Barbara Court
6	Plan And Profile - Santa Barbara Road
7	Plan And Profile - San Tomas Road
8	Storm Drain Profiles
9	Storm Drain Profiles

ROUTE ONE HUNDRED BUSINESS PARK ROADS & DRAINS PHASE II

Reviewed for Howard S.C.D.
Name
and meets Technical Requirements
James H. B. B. B. Date 5-1-73
Signature
Soil Conservation Service
This Development Plan is approved
for Soil Erosion and Sediment Control
by the Howard Soil Conservation
District.
Approved Ronald B. B. B. Date 5/1/73
Howard S.C.D.

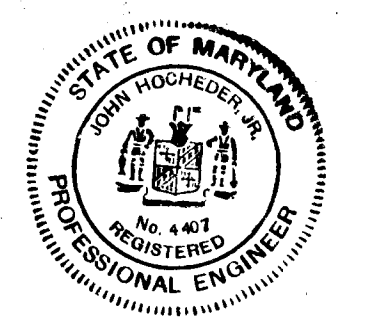
APPROVED
DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
HOWARD COUNTY, MARYLAND
DATE 4/1/73

NOTE:
Soil Erosion Control Plan "Kaiser Aetna Industrial Park SE-1"
Approved Feb. 22, 1972 is the basic erosion control plan in effect.

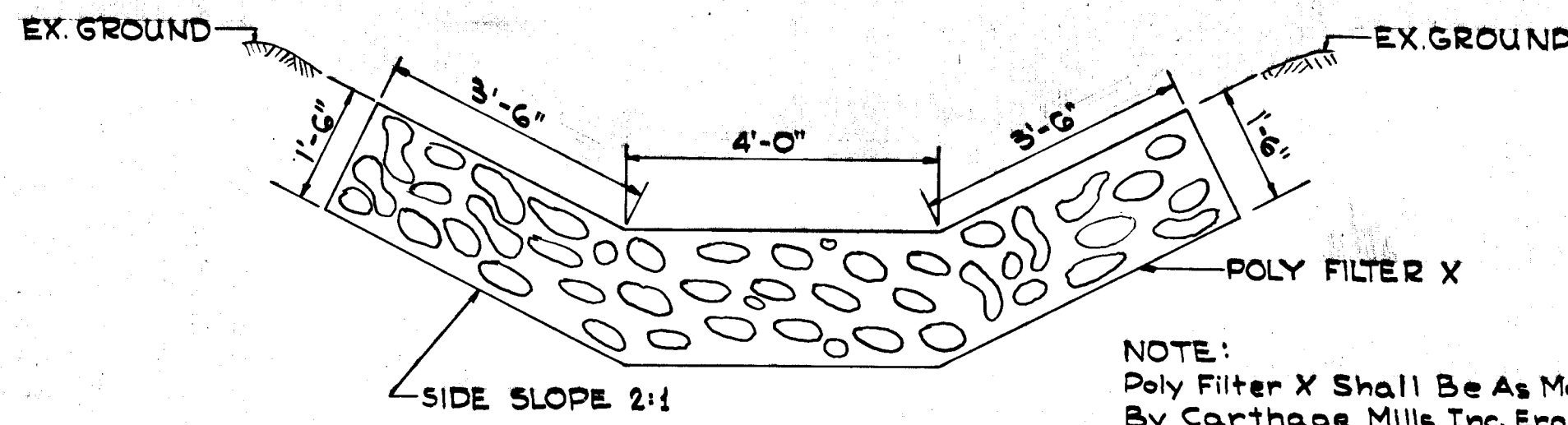
Developers Certification:
"I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."
Deviation from this plan will not be made unless authorized by the Howard Soil Conservation.

Engineers Certification:
"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."

DESIGNED T.C.	SEAL	G.W. STEPHENS JR. & ASSOC. INC. ENGINEER <u>[Signature]</u> DATE <u>4/13/73</u> LIC NO. <u>4407</u>	GEORGE W. STEPHENS JR. & ASSOC. INC ENGINEERS 303 ALLEGHENY AVE. TOWSON MD. 21204	OWNER & DEVELOPER KAISER AETNA 2 HOPKINS PLAZA BALTIMORE MD. 21201	OFFICE OF PLANNING & ZONING CHIEF, DIV. OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING <u>[Signature]</u> DATE <u>5/1/73</u>	DEPARTMENT OF PUBIC WORKS CHIEF, BUREAU OF HIGHWAYS <u>[Signature]</u> DATE <u>5/7/73</u>	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING ROUTE ONE HUNDRED BUSINESS PARK ROADS & STORM DRAINS PHASE II DATE MARCH 21, 1973 HOWARD COUNTY, MD. ELECTION DISTRICT NO. 1	DATE	REVISIONS	BY	SHEET NO 1 OF 9
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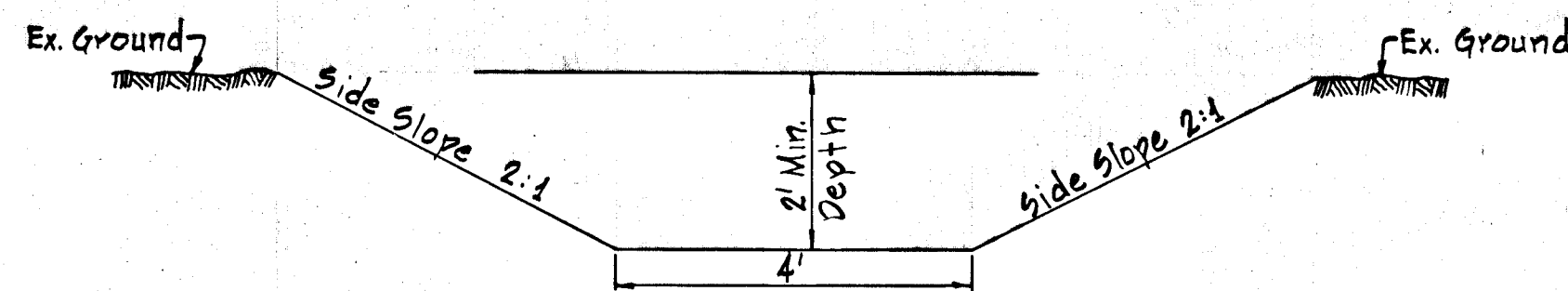


Rip Rap To Consist Of Dense Rocks Of Random Shapes And Sizes Resistant To The Action Of Air And Water Suitable For Bank Protection. All Rocks Shall Weigh A Minimum Of 150 Pounds.

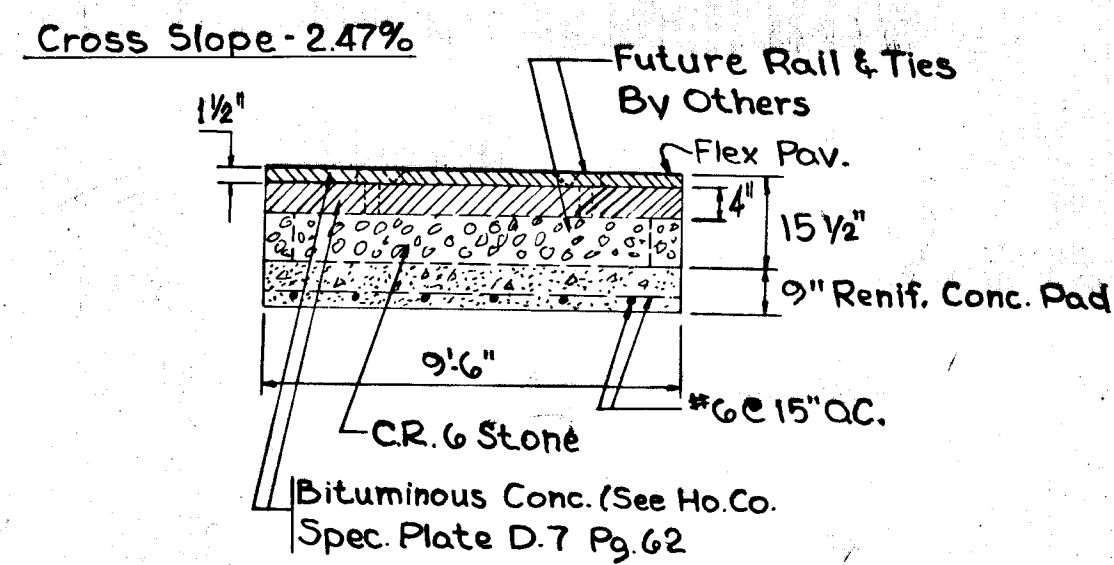


NOTE:
Poly Filter X Shall Be As Manufactured By Carthage Mills Inc. Erosion Control Division 124 W. 66th Street, Cincinnati, Ohio Or Approved Equal

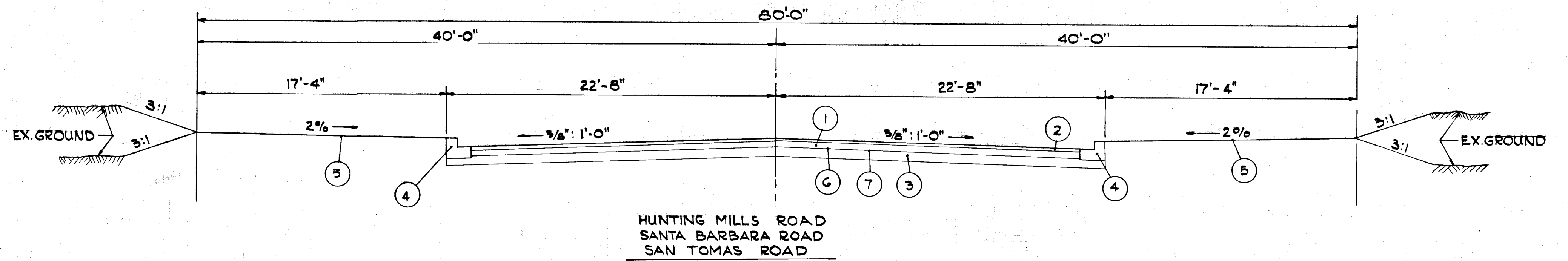
UNGRADED RIP RAP SIDE DITCH
STORM DRAIN OUTFALLS
No Scale



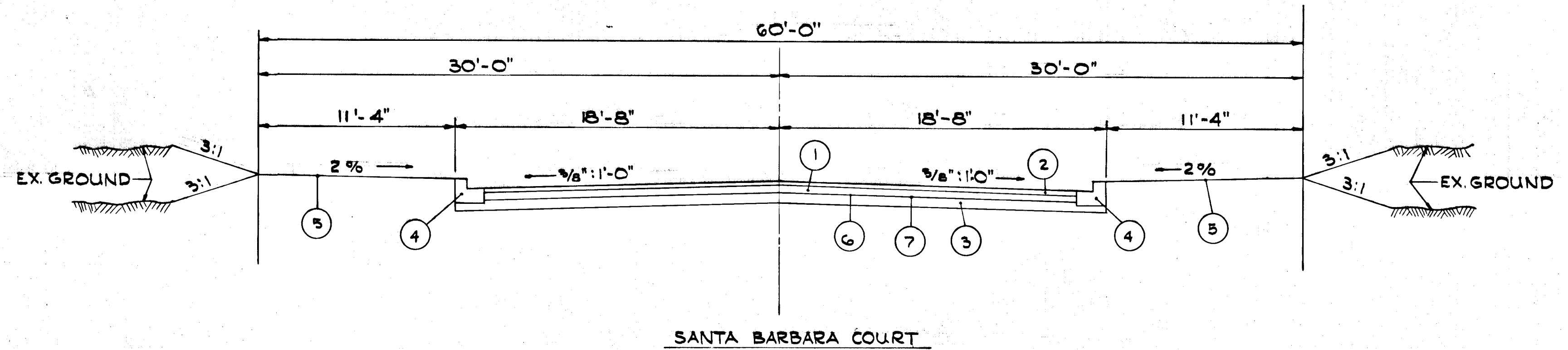
TYPICAL 4' SIDE DITCH
No Scale



TYPICAL R-R GRADE CROSSING
No Scale

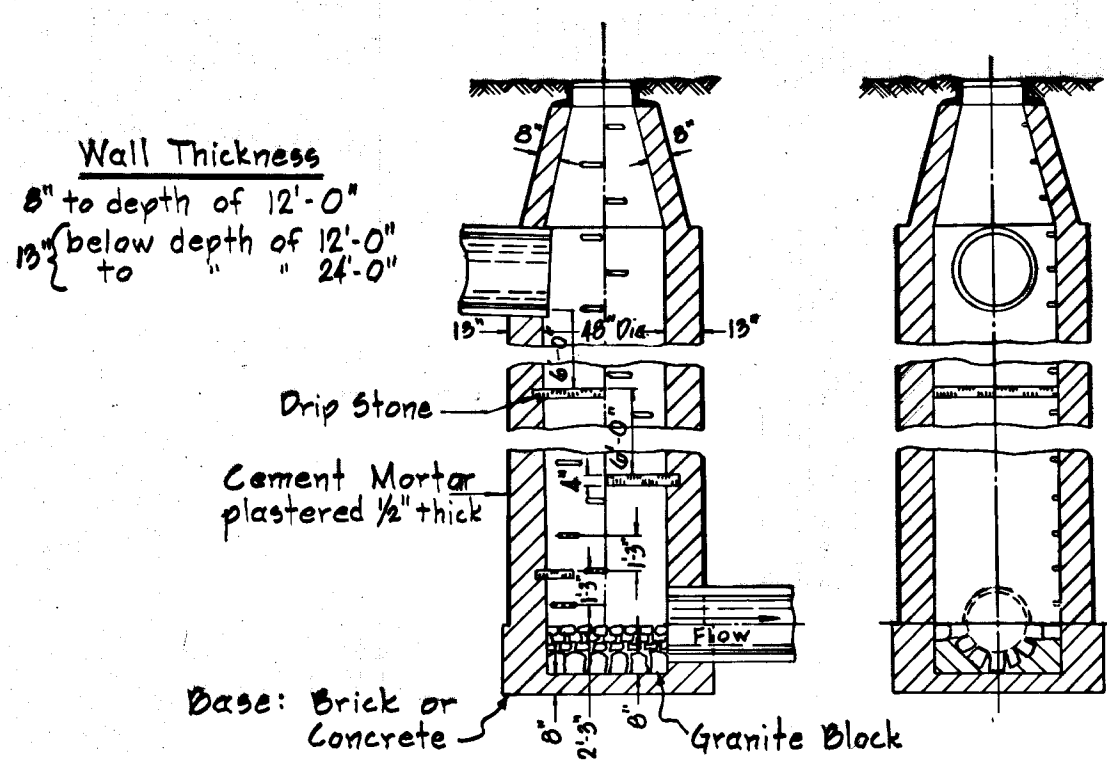


HUNTING MILLS ROAD
SANTA BARBARA ROAD
SAN TOMAS ROAD



SANTA BARBARA COURT

TYPICAL SECTIONS
SCALE: 1" = 5'-0"



STANDARD DROP MANHOLE
No Scale
(From Standard No. Md.-383.11)

Base Thickness
8" Wall - 12" Base
15" Wall - 16" Base

Note: Location of Drip Stone may be Adjusted to Meet the Requirements of Each case, but normally shall be 6" apart. Granite drip stones are preferable but if not available some other approved type may be used.

- ① 4" Bituminous Concrete Binder Base
- ② 1 1/2" Bituminous Concrete Surface
- ③ 9" Crusher Run (Type II Sub Base) (2 Courses)
- ④ Std. 7" Combination Curb & Gutter
- ⑤ 4" Topsoil, Seed & Mulch
- ⑥ Prime Coat
- ⑦ Tack Coat

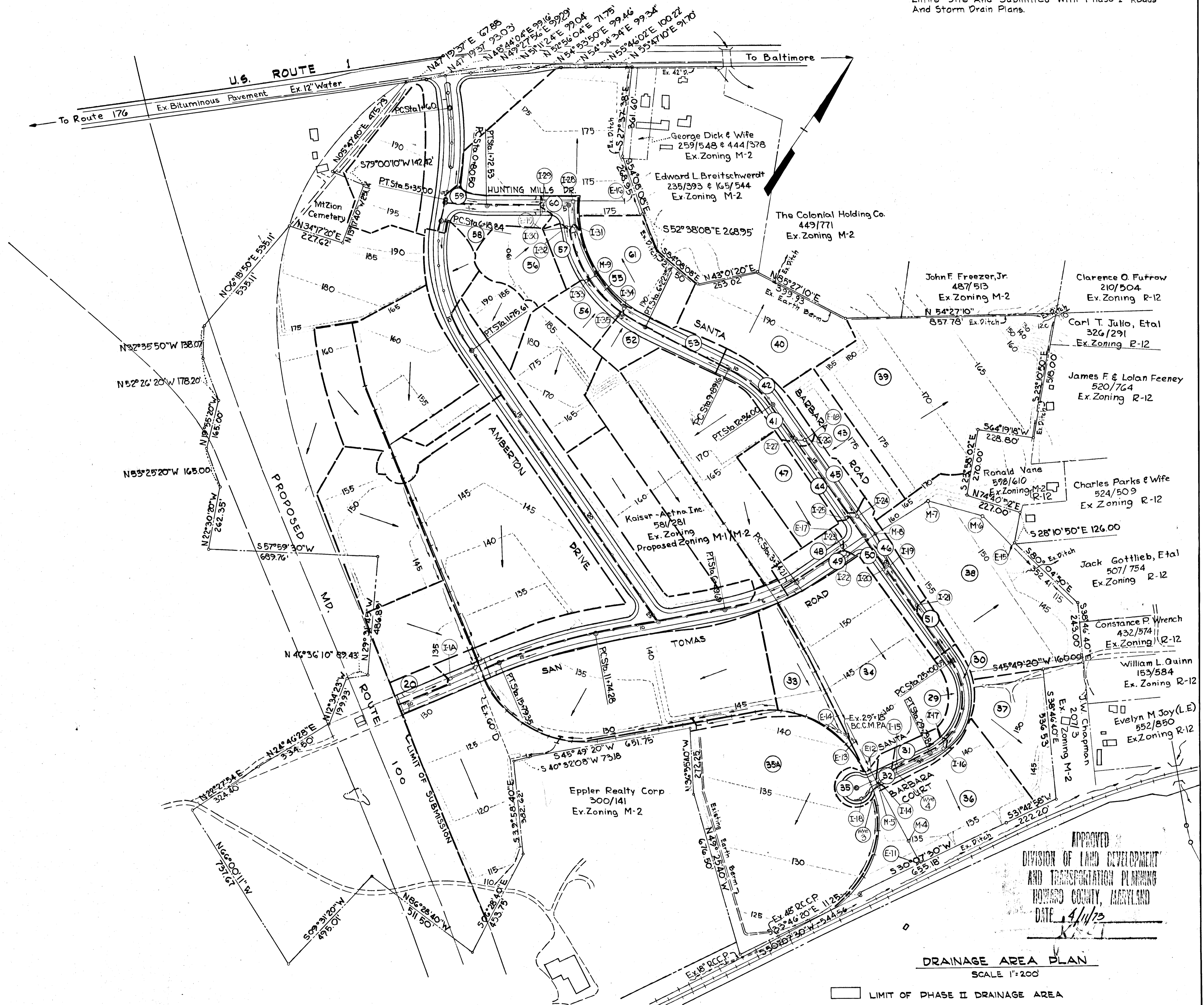
APPROVED
DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
HOWARD COUNTY, MARYLAND
DATE: 5/17/73

DESIGNED T.C.	SEAL 	G.W. STEPHENS JR. ASSOC. INC. ENGINEER <i>John Hochstadt</i> DATE 4/12/73 LIC. NO. 4407	GEORGE W. STEPHENS JR. ASSOC. INC. CONSULTING ENGINEERS 303 ALLEGHENY AVE. TOWSON MD. 21204	OWNER & DEVELOPER KAISER AETNA 2 HOPKINS PLAZA BALTIMORE, MARYLAND	OFFICE OF PLANNING & ZONING CHIEF, DIV. OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE	DEPARTMENT OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS <i>J. N. McKeand</i> DATE 5/17/73	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING ROUTE ONE HUNDRED BUSINESS PARK ROADS AND STORM DRAINS PHASE II TYPICAL SECTIONS & DETAILS DATE: MARCH 21, 1973 HOWARD COUNTY MARYLAND ELECTION DISTRICT NO. 1	DATE	REVISIONS	BY	SHEET NO 2 OF 2
DRAWN D.F.											DRAWING NO.
CHECKED A.G.											CONTRACT NO.
											FILE

**KAISER AETNA
DRAINAGE AREAS
PHASE II**

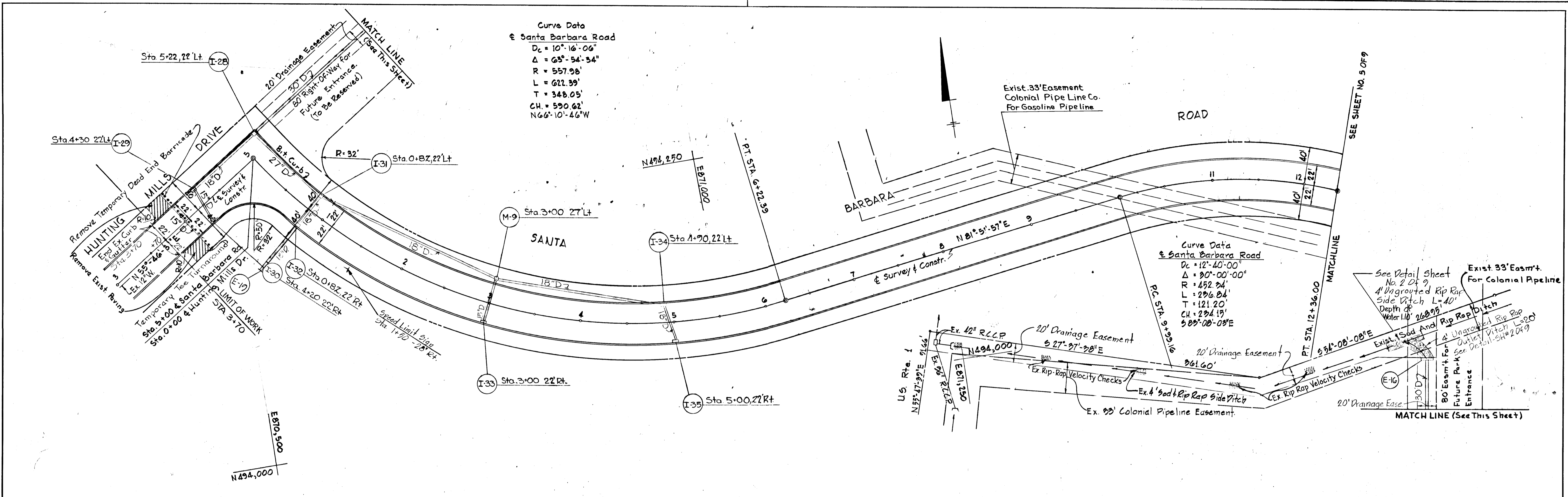
AREA NO.	C.	AREA IN ACRES	AREA NO.	C.	AREA IN ACRES
29	0.87	0.50	46	0.84	0.62
30	0.85	0.60	47	0.80	2.02
31	0.84	0.37	48	0.84	0.32
32	0.85	0.50	49	0.89	0.23
33	0.80	1.75	50	0.86	1.12
34	0.80	7.15	51	0.84	0.17
35	0.85	0.50	52	0.83	1.10
36	0.80	5.05	53	0.87	0.55
37	0.80	2.75	54	0.82	0.92
38	0.80	8.70	55	0.87	0.41
39	0.80	11.50	56	0.80	17.9
40	0.80	4.50	57	0.83	0.55
41	0.88	0.40	58	0.84	1.10
42	0.85	0.61	59	0.90	0.40
43	0.80	2.77	60	0.90	0.34
44	0.88	0.48	61	0.80	2.90
45	0.85	0.51	35A	0.80	12.30
			20	0.84	0.45

Note:
The Erosion Control Plan Was Approved For The
Entire Site And Submitted With Phase I Roads
And Storm Drain Plans.

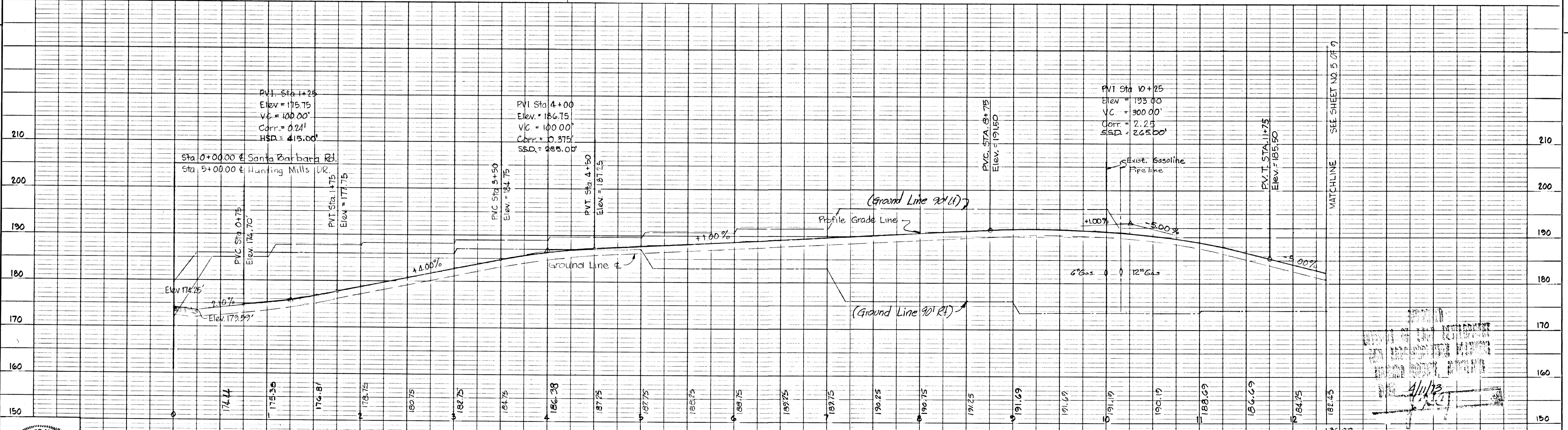


DRAINAGE AREA PLAN
SCALE 1"=200'

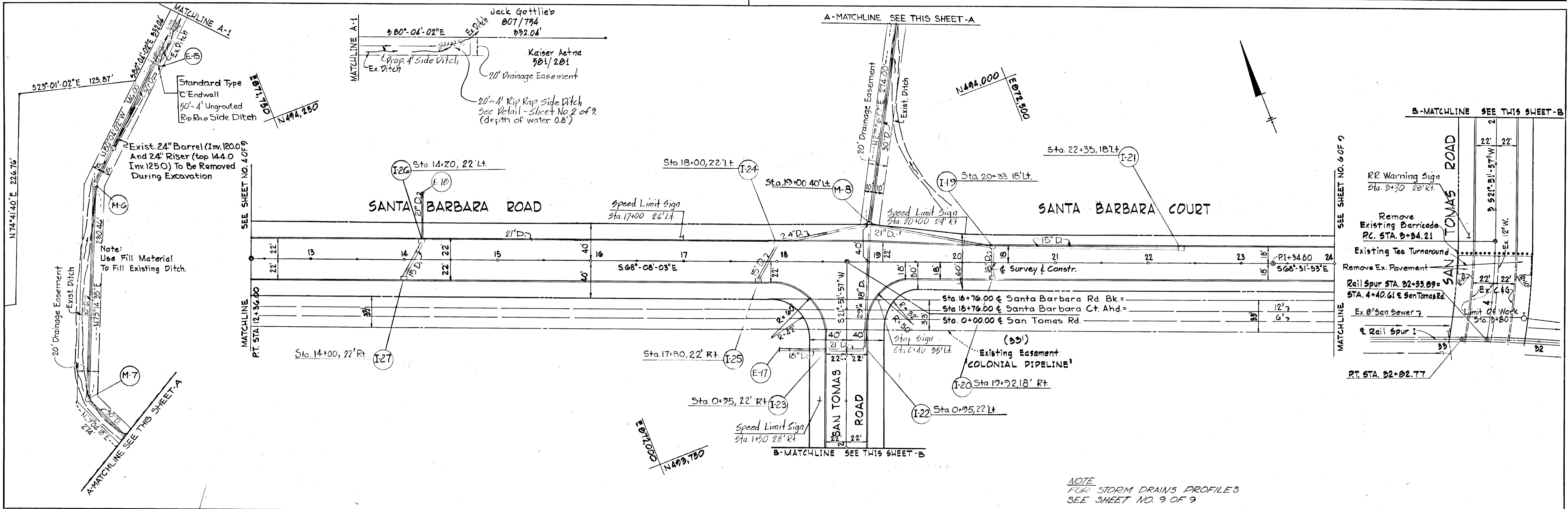
DESIGNED T.C.	SEAL 	G.W. STEPHENS JR. & ASSOC. INC. ENGINEER DATE 4/13/73 LIC. NO. 4407	GEORGE W. STEPHENS JR. ASSOC. INC. CONSULTING ENGINEERS 303 ALLEGHENY AVE. TOWSON MD. 21204	OWNER & DEVELOPER KAISER AETNA 2 HOPKINS PLAZA BALTIMORE, MARYLAND	OFFICE OF PLANNING & ZONING CHIEF, DIV. OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE	DEPARTMENT OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS <i>J. M. McKeand</i> DATE 5/7/73	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING ROUTE ONE HUNDRED BUSINESS PARK ROADS & STORM DRAINS PHASE II DATE: MARCH 21, 1973 HOWARD COUNTY MARYLAND ELECTION DISTRICT NO. 1	DATE	REVISIONS	BY	SHEET NO 3 OF 7 DRAWING NO. CONTRACT NO. FILE
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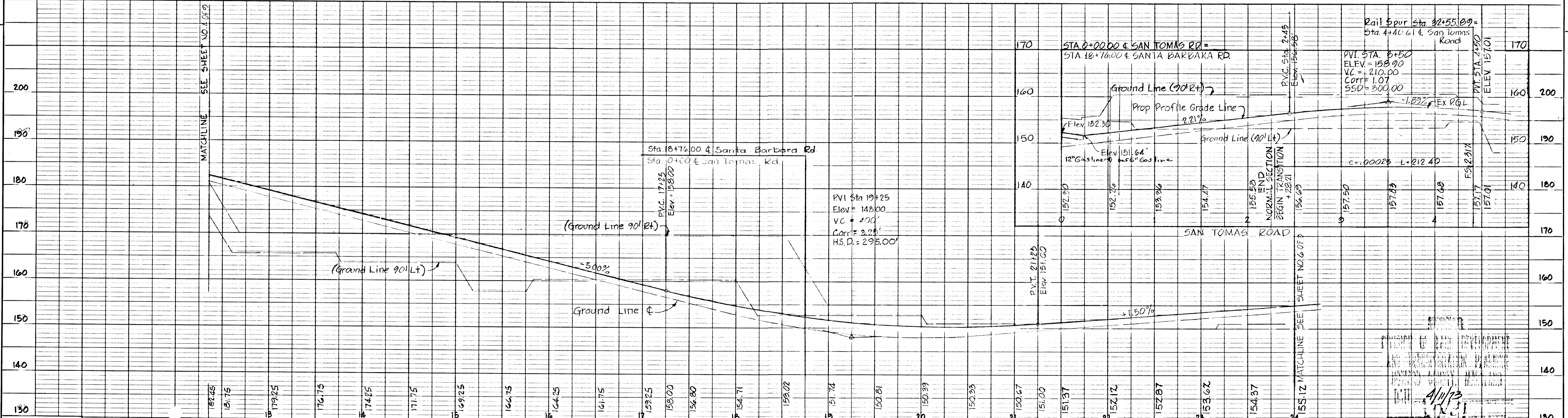
For Storm Drain Profiles - See Sheet 8 of 9



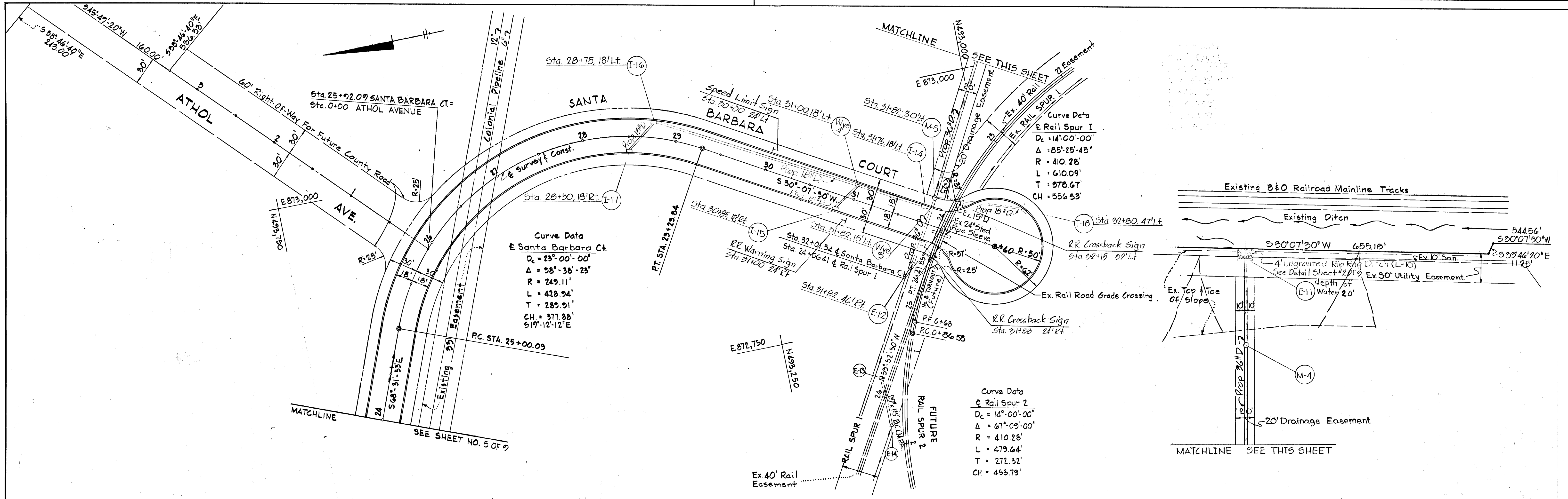
	DESIGNED AG. G.W. STEPHENS JR & ASSOC	GEORGE W. STEPHENS JR & ASSOC, INC. CONSULTING ENGINEERS 303 ALLEGHENY AVE TOWSON, MD. 21204	OFFICE OF PLANNING & ZONING	DEPARTMENT OF PUBLIC WORKS	OWNER & DEVELOPER	SCALE	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING ROUTE ONE HUNDRED BUSINESS PARK ROADS AND STORM DRAINS PHASE II EL. DISTRICT NO. 1	CONTRACT NO.		
	DRAWN A.S.		ENGINEER <i>George W. Stephens Jr.</i>	CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING	CHIEF, BUREAU OF HIGHWAYS	KAISER - AETNA		PLAN: 1" = 50'	SHEET 4 OF 9	
	CHECKED AG.		DATE 1/13/73 LIC. NO. 4467	Date:	<i>G. W. Stephens Jr.</i>	2 Hopkins Plaza		Baltimore, Maryland	PROFILE: HOR. 1" = 50' VERT. 1" = 10'	DWG. NO.
									Date: March 21, 1973	FILE:



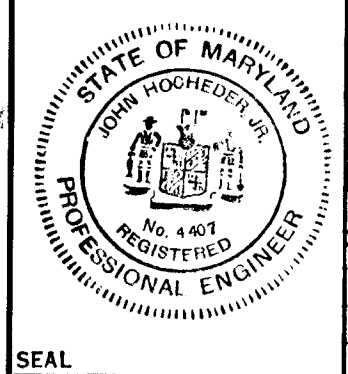
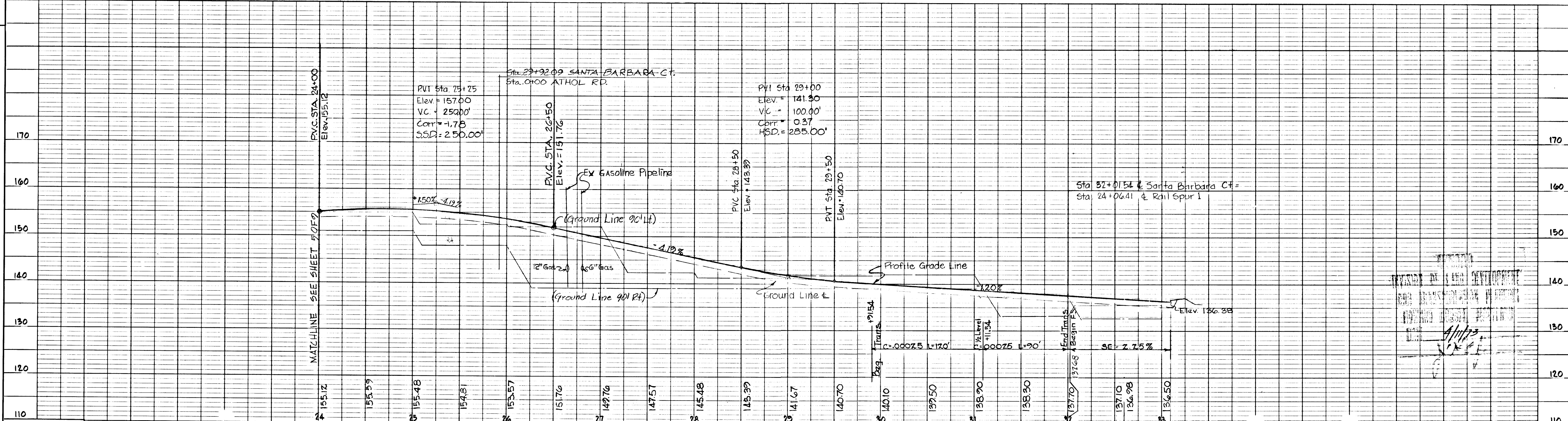
NOTE
FOR STORM DRAINS PROFILES
SEE SHEET NO. 9 OF 9



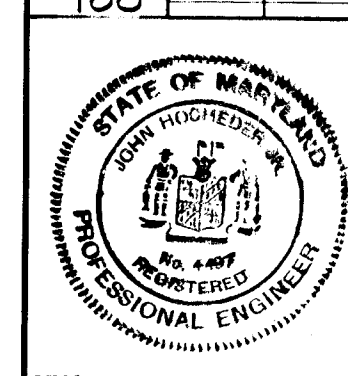
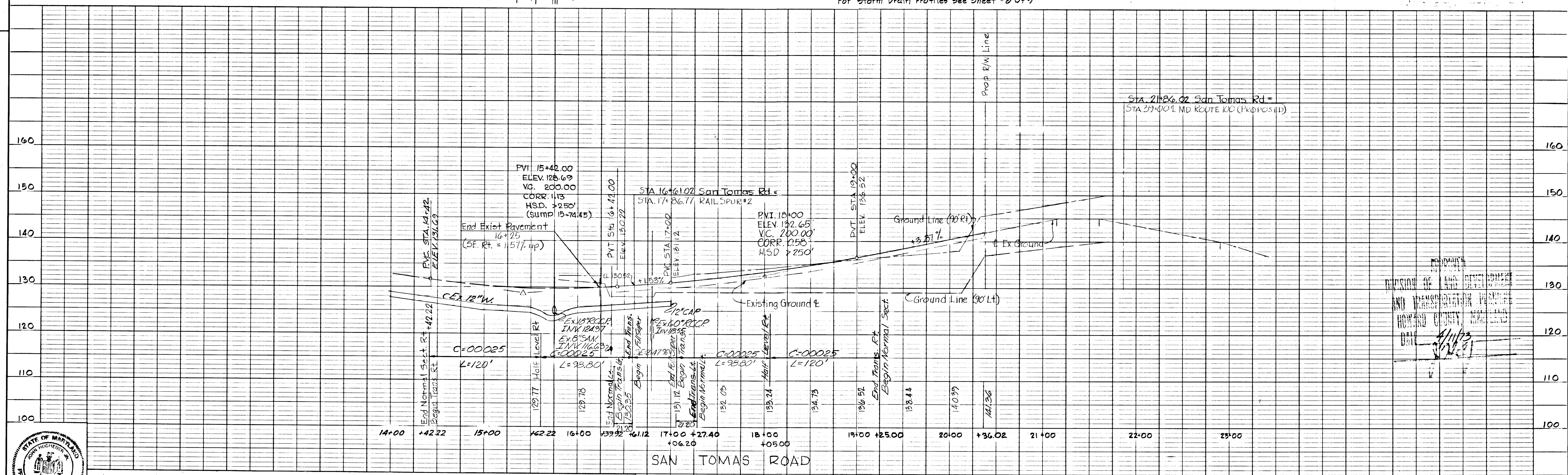
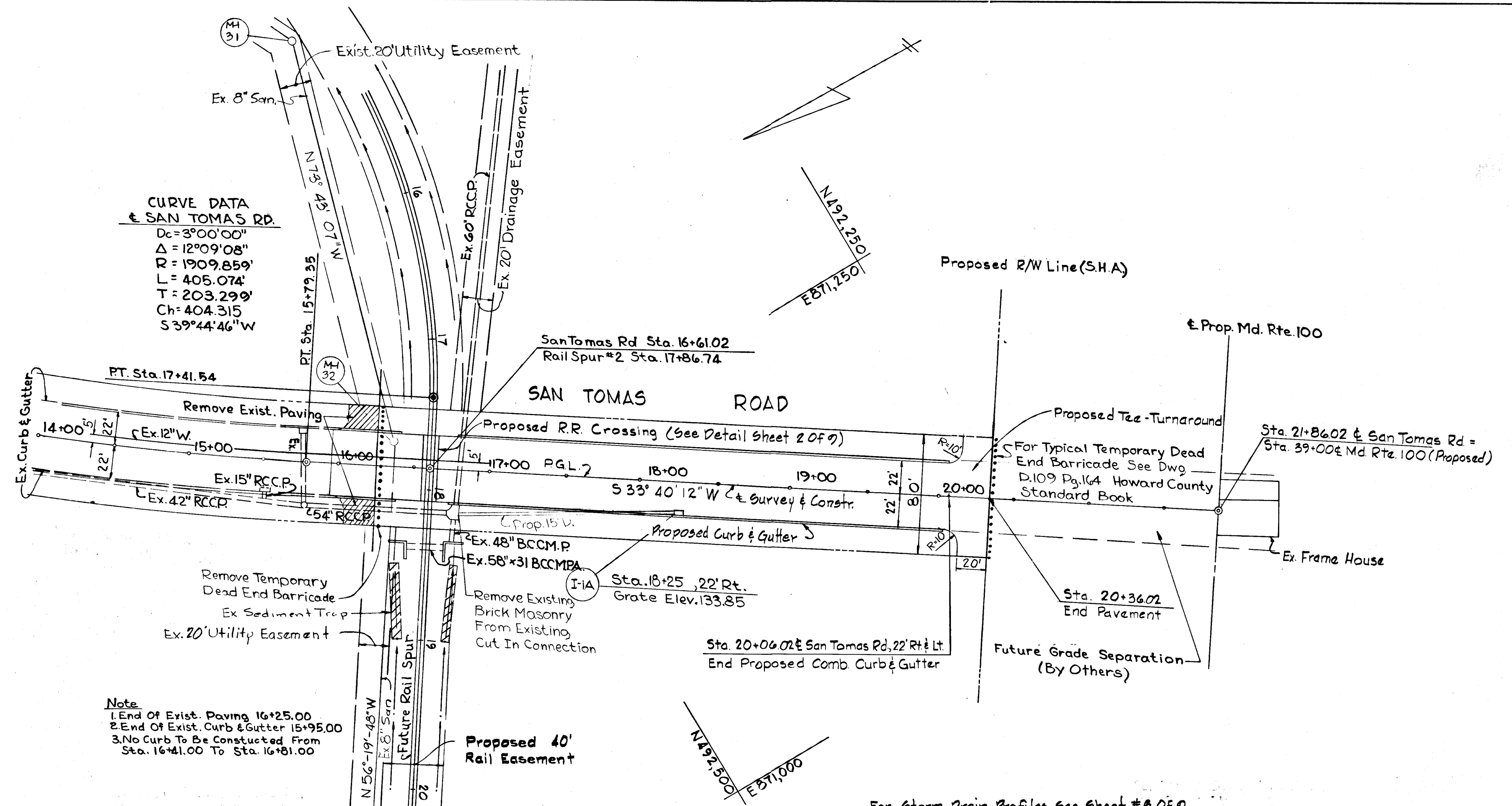
	DESIGNED: AG	GW STEPHENS JR. #4550C	OFFICE OF PLANNING & ZONING CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING Date: 5/7/73	DEPARTMENT OF PUBLIC WORKS CHIEF BUREAU OF HIGHWAYS J. H. [Name] DATE: 5/7/73	OWNER & DEVELOPER KAISER - AETNA 2 Hopkins Plaza Baltimore, Maryland	SCALE PLAN: 1"=50' PROFILE: HOR. 1"=50' VERT. 1"=10' DATE: MARCH 21, 1973	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING ROUTE ONE HUNDRED BUSINESS PARK ROADS AND STORM DRAINS PHASE II EL. DISTRICT NO. 1	CONTRACT NO.				
	DRAWN: DL	ENGINEER: [Signature]						DATE: 4/13/73 LIC. NO. 4407	303 ALLEGHENY AVE. TOWSON, MD 21204	SHEET 5 OF 9	DWG. NO.	FILE:
	CHECKED: AG											



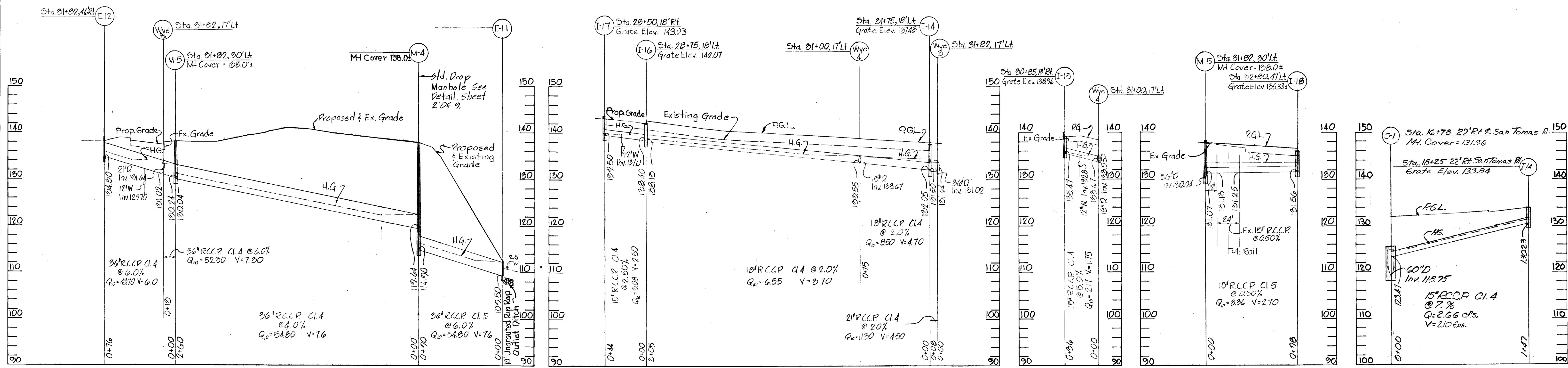
For Storm Drain Profiles See Sheet # 8 of 9



DESIGNED: AG	G.W. STEPHENS JR & ASSOC	GEORGE W. STEPHENS JR & ASSOC, INC.	OFFICE OF PLANNING & ZONING	DEPARTMENT OF PUBLIC WORKS	OWNER & DEVELOPER	SCALE	HOWARD COUNTY	DEPARTMENT OF PUBLIC WORKS	BUREAU OF ENGINEERING	SHEET 6 OF 9
DRAWN: DL	ENGINEER: G.W. Stephens Jr.	CONSULTING ENGINEERS	CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING	CHIEF, BUREAU OF HIGHWAYS	KAISER - AETNA	PLAN: 1" = 50'	ROUTE ONE HUNDRED BUSINESS PARK	ROADS AND STORM DRAINS	PHASE II	DWG. NO.
CHECKED: AG	DATE: 4/13/73 LIC. NO. 1117	303 ALLEGHENY AVE. TOWSON, MD 21204	Date:	5/17/73	Baltimore, Maryland	PROFILE: HOR. 1" = 50' VERT. 1" = 10'	DATE: MARCH 21, 1973	EL. DISTRICT NO. 1	FILE:	

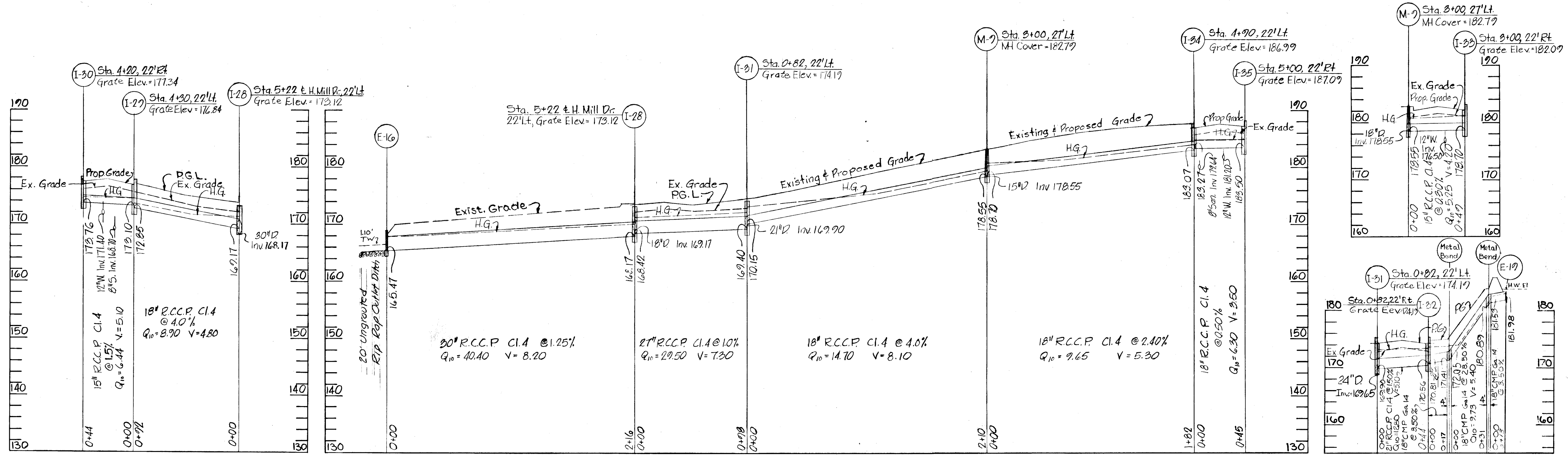


DESIGNED A.C.G. GW STEPHENS JR ASSOC INC	ENGINEER George W. Stephens Jr.	DATE 2/13/73 LIC. NO. 4407	OFFICE OF PLANNING & ZONING CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING Date: 5/1/73	DEPARTMENT OF PUBLIC WORKS CHIEF BUREAU OF HIGHWAYS DATE: 5/1/73	OWNER & DEVELOPER KAISER - AETNA 2 Hopkins Plaza Baltimore, Maryland	SCALE PLAN: 1"=50' PROFILE: HOR. 1"=50' VERT. 1"=10'	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING ROUTE ONE, HUNDRED BUSINESS PARK ROADS AND STORM DRAINS PHASE II	DATE: MARCH 21, 1973	EL. DISTRICT NO. 1	CONTRACT NO.	SHEET 7 OF 9 DWG. NO.	FILE:
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PROFILES
SCALE: HORIZ. 1" = 50'
VERT. 1" = 10'

APPROVED
DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
HOWARD COUNTY, MARYLAND
DATE 4/11/73
J.A.C.



PROFILES
SCALE: HORIZ. 1" = 50'
VERT. 1" = 10'

ENDWALL SCHEDULE

NO.	TYPE	SIZE	INV. OUT
E-11	Std. Type "C"	36"	129.50
E-12	Std. Type "E"	36"	134.80
E-16	Std. Type "C"	30"	105.47
E-19	End Support Wall	18"	121.98

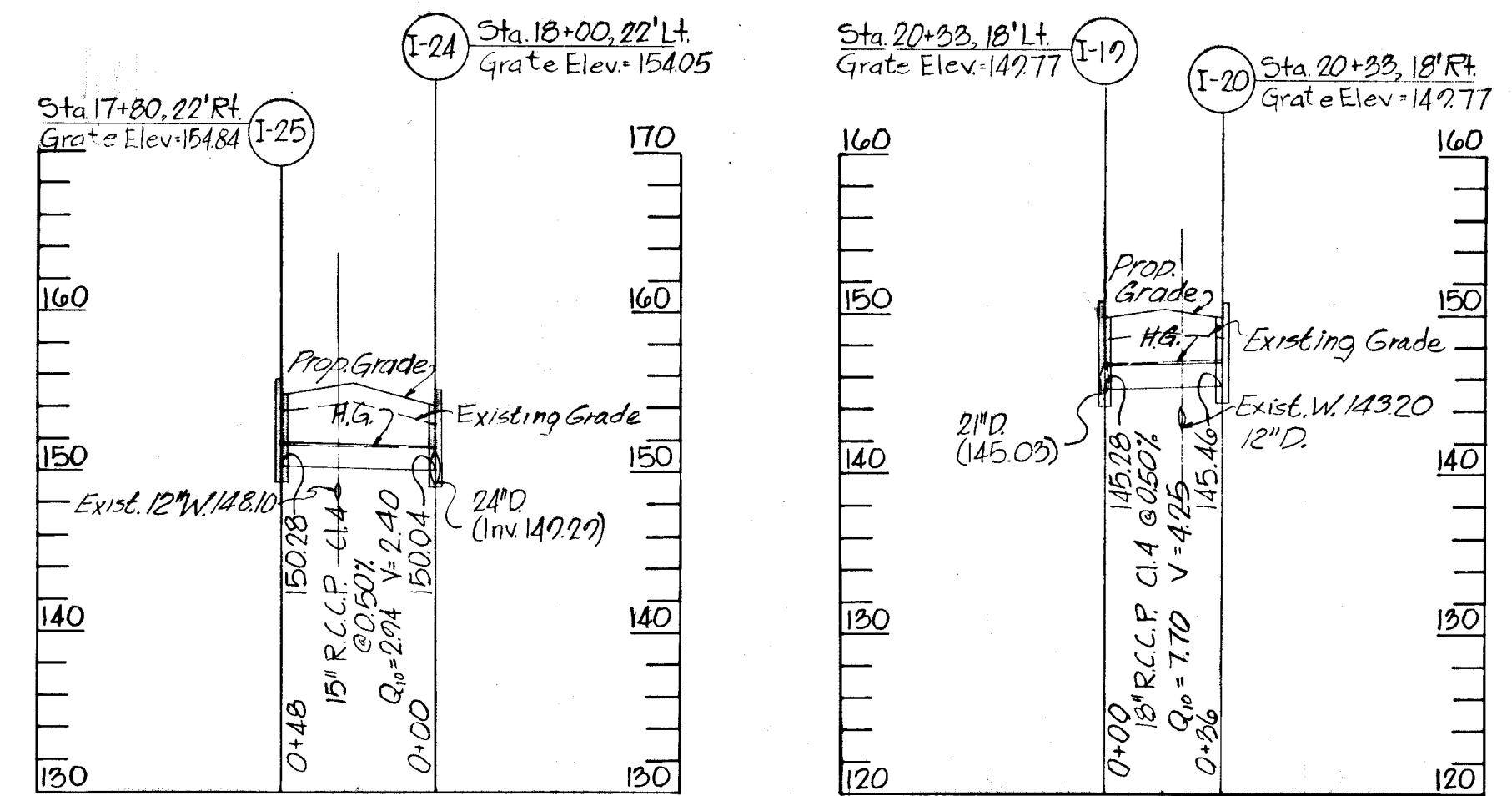
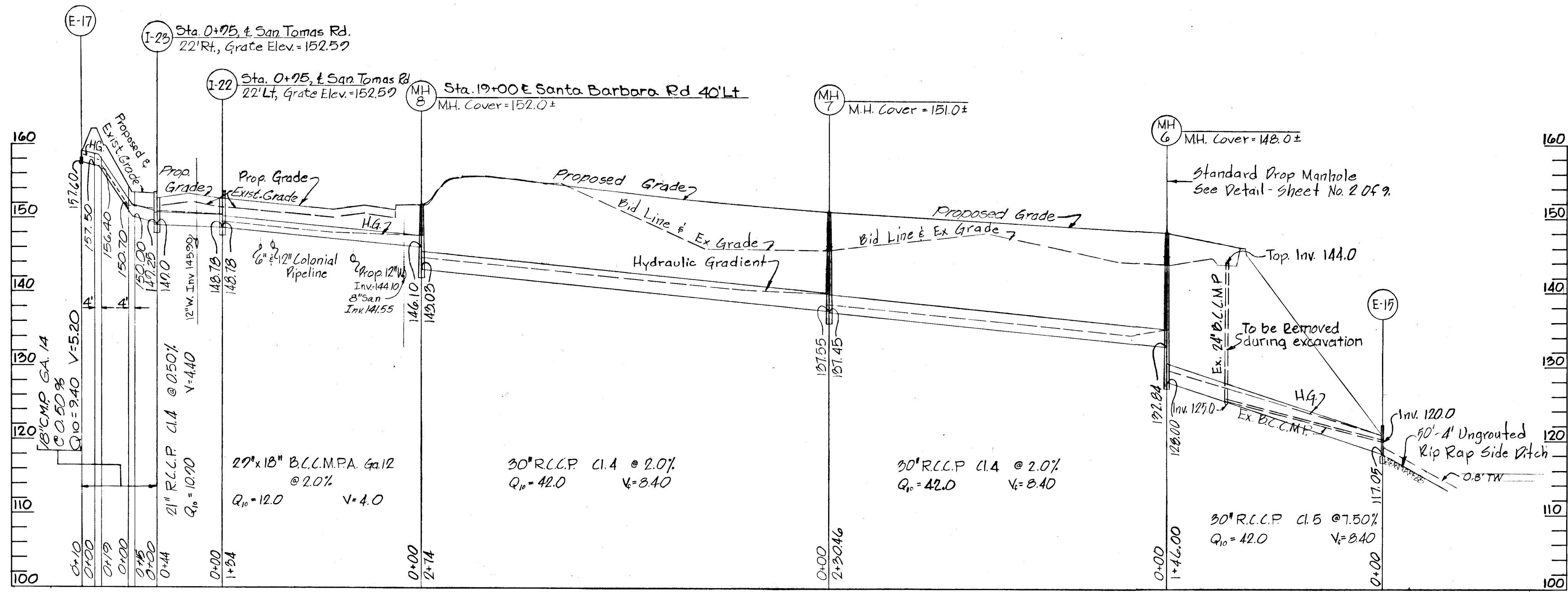
MANHOLE SCHEDULE

NO.	TYPE	SIZE	INV. OUT	TOP ELEV.
M-4	Std. Drop MH	48"	114.90	128.0±
M-5	B	48" x 48"	130.04	138.0±
M-7	B	48" x 48"	118.55	122.17

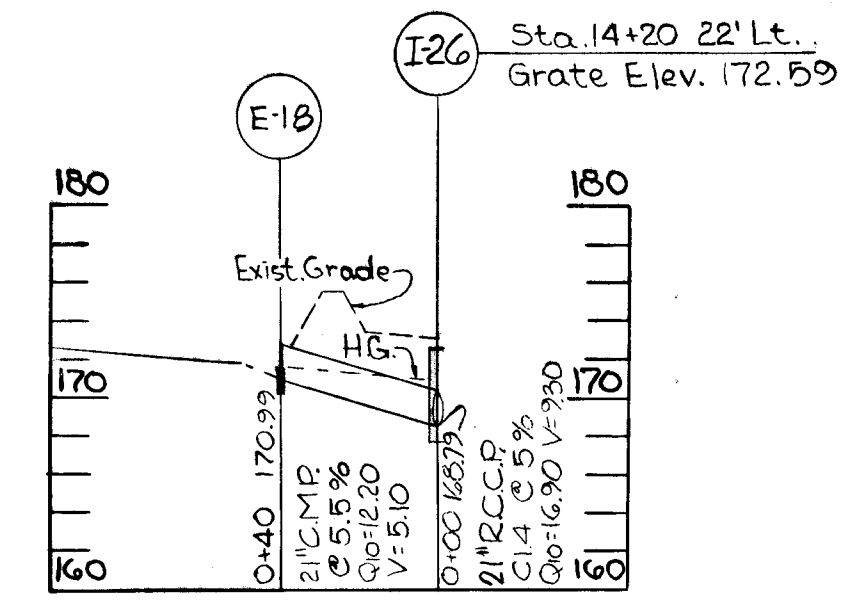
INLET SCHEDULE

NO.	TYPE	Q (cfs)	INV. OUT	TOP ELEV.
I-14	Ob. 18" Comb.	2.01	121.88	131.48
I-15	" "	2.17	122.47	132.76
I-16	" "	2.57	128.15	142.01
I-17	" "	2.08	129.50	142.03
I-18	" "	2.26	131.56	145.23±
I-20	" "	2.48	168.17	172.12
I-21	" "	2.52	172.85	176.84
I-22	" "	6.44	172.76	177.24
I-23	" "	2.52	167.40	174.17
I-24	" "	2.22	170.56	174.17
I-25	" "	2.75	178.70	182.07
I-28	" "	2.26	122.07	126.77
I-35	" "	2.26	123.50	127.07
I-1A	" "	2.66	130.23	133.24

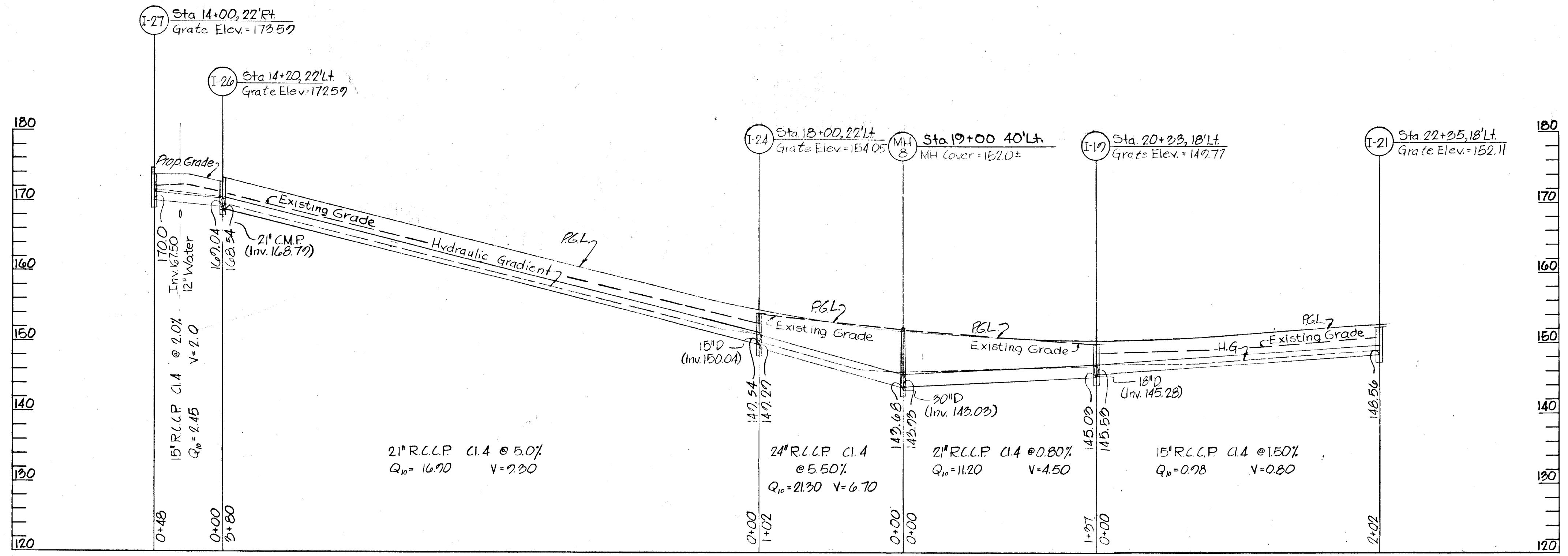
T.C. Designed	STATE OF MARYLAND PROFESSIONAL ENGINEER No. 4407 J. W. STEPHENS, JR.	ENGINEER	OWNER & DEVELOPER	HOWARD COUNTY		STORM DRAINS		REVISIONS		Sheet 2 of 2
		GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC. TOWSON, MD. 21284 4407 4/13/73 Prof. Eng. Reg. Date	KAISER AETNA 2 Hopkins Plaza Baltimore, Maryland	DEPARTMENT OF PUBLIC WORKS Chief Bureau of Highways D.M. McKeand 5/7/73 Approved Date	OFFICE OF PLANNING AND ZONING Chief, Div. of Land Development and Transportation Planning.	ROUTE ONE HUNDRED BUSINESS PARK STORM DRAIN PROFILES PHASE II		Date	Description	By
D.L. Drawn										Contract No.
A.G. Checked										



PROFILES
 SCALE: HOR. 1" = 50'
 VER. 1" = 10'



APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 4/13
[Signature]



ENDWALL SCHEDULE

NO	TYPE	SIZE	INV OUT
E-15	Std type 12"	30"	117.05
E-17	End Support Wall	18"	157.60
E-18	End Support Wall	21"	170.99

MANHOLE SCHEDULE

NO	TYPE	SIZE	INV OUT	TOP ELEV.	REMARKS
M-6	Std Drop MH	48"	128.00	148.0±	see sheet 019
M-7	A-1	48"	127.45	151.0±	
M-8	B	48"x48"	143.03	152.0±	

INLET SCHEDULE

NO	TYPE	Q (cfs)	INV OUT	TOP ELEV.
I-17	Dbl 15" Comb	413	145.03	147.77
I-20	"	170	145.46	147.77
I-21	15" Comb	0.28	142.56	152.11
I-22	Dbl 15" Comb	1.40	143.78	152.59
I-23	"	1.87	147.0	152.59
I-24	"	3.01	149.29	154.05
I-25	"	2.94	150.28	154.84
I-26	"	3.60	168.19	172.59
I-27	"	2.45	170.0	173.59

PROFILES
 SCALE: HOR. 1" = 50'
 VER. 1" = 10'

T.C. Designed		ENGINEER GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC. TOWSON, MD 21284	OWNER & DEVELOPER KAISER AETNA 2 Hopkins Plaza Baltimore, Maryland 21201	HOWARD COUNTY		STORM DRAINS		REVISIONS		Sheet 9 of 9
D.L. Drawn				DEPARTMENT OF PUBLIC WORKS Chief, Bureau of Highways	OFFICE OF PLANNING AND ZONING Chief, Div. of Land Development and Transportation Planning.	ROUTE ONE HUNDRED BUSINESS PARK STORM DRAIN PROFILES PHASE II		Date	Description	By
A.G. Checked				<i>[Signature]</i> 4/13/73 Prof. Engt. Reg. Date	<i>[Signature]</i> 4/13/73 Approved Date	<i>[Signature]</i> 4/13/73 Approved Date	Date: MARCH 21, 1973	HOWARD COUNTY, MARYLAND	Elect. Dist. No. 1	