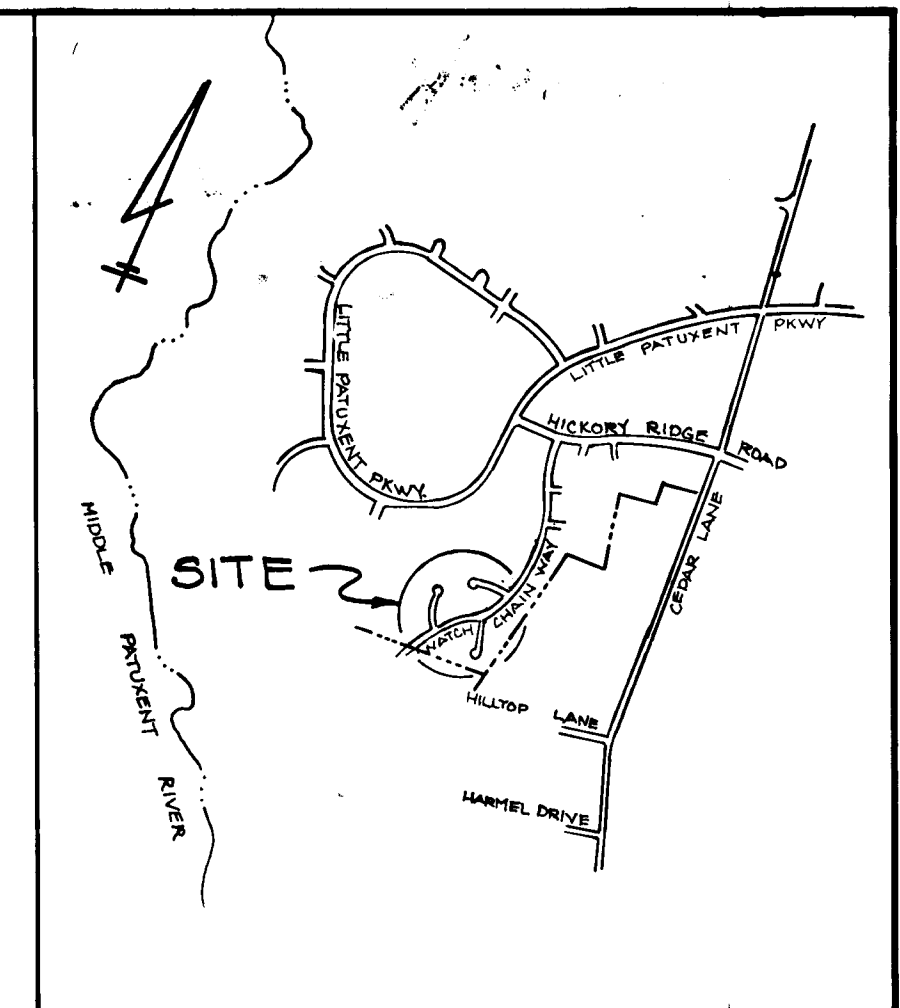


BENCH MARKS

- BM #1 BOX CUT IN TOP OF INLET SLAB 15' RIGHT OF & STATION 12+55 WATCH CHAIN WAY - ELEV. 403.61
- BM #2 BOX CUT IN TOP OF INLET SLAB 14' RIGHT OF & STATION 3+60 MIDDLEWATER COURT - ELEV. 403.11
- BM #3 BOX CUT IN TOP OF INLET SLAB 15' RIGHT OF & STATION 21+00 WATCH CHAIN WAY - ELEV. 422.61

BENCH MARKS

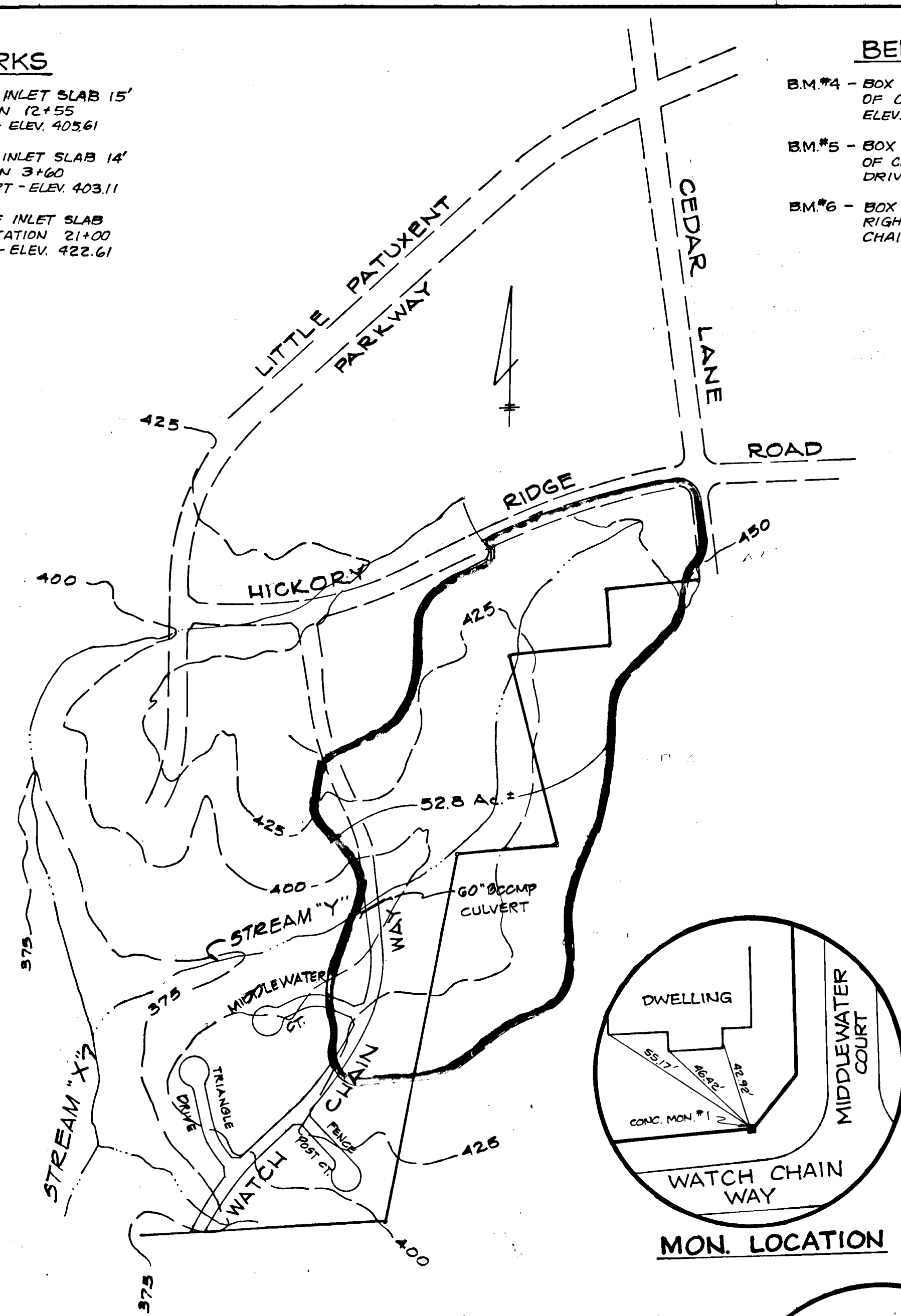
- BM #4 BOX CUT IN TOP OF INLET SLAB REAR OF CUL-DE-SAC BULB FENCE POST COURT - ELEV. 401.61
- BM #5 BOX CUT IN TOP OF INLET SLAB REAR OF CUL-DE-SAC BULB TRIANGLE DRIVE - ELEV. 409.80
- BM #6 BOX CUT IN TOP OF INLET SLAB 15' RIGHT OF & STATION 28+50 WATCH CHAIN WAY - ELEV. 378.10



VICINITY MAP
SCALE: 1"=2000'

INDEX OF DRAWINGS

NO	DESCRIPTION
1	TITLE SHEET & DRAINAGE AREA MAP
2	TYPICAL SECTIONS & DETAILS
3	PLAN & PROFILE - WATCH CHAIN WAY
4	PLAN & PROFILE - WATCH CHAIN WAY
5	PLAN & PROFILE - MIDDLEWATER CT. TRIANGLE DRIVE
6	PLAN & PROFILE - FENCE-POST COURT
7	STORM DRAIN PROFILES
8	SEDIMENT CONTROL PLAN
9	SEDIMENT CONTROL DETAILS

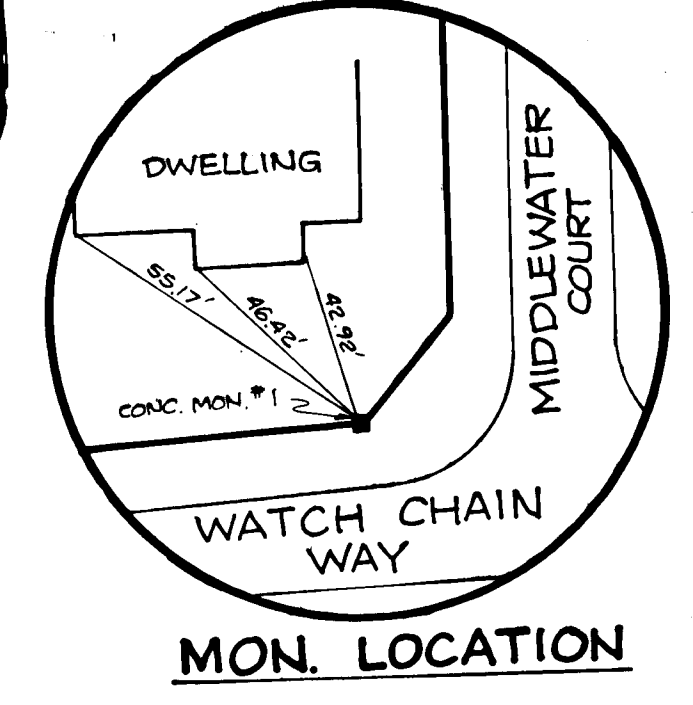


60' BCCMP CULVERT DRAINAGE AREA
SCALE: 1"=400'

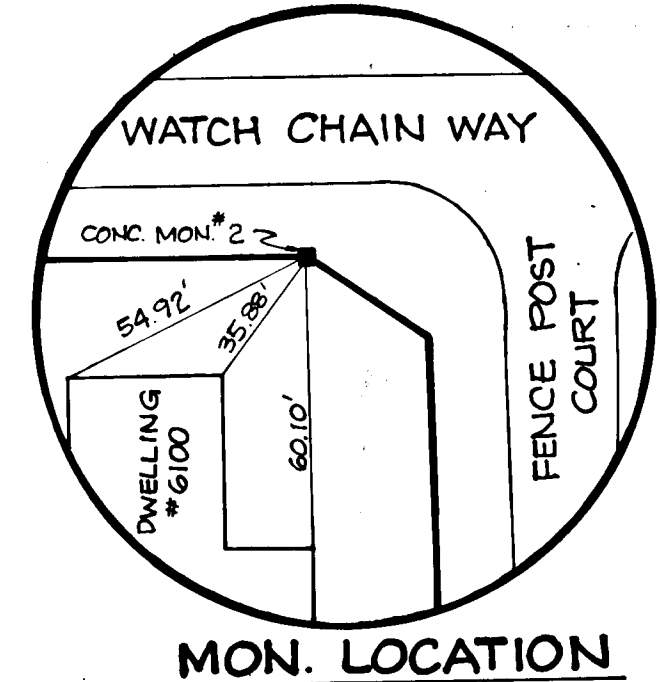
GENERAL NOTES

1. ALL STORM DRAIN & PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST DETAILS AND SPECIFICATIONS OF HOWARD COUNTY & MD. S.H.A.
2. TYPES OF STORM DRAIN STRUCTURES REFER TO THE STANDARD DETAILS OF HOWARD COUNTY AND MD. S.H.A.
3. TRENCH COMPACTION FOR STORM DRAINS WITHIN ROADS OR STREET RIGHT-OF-WAY LIMITS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY ROAD CODE.
4. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS, BY HAND, AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF CONSTRUCTION.
5. ALL UTILITY COMPANIES SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF CONSTRUCTION.
6. ALL TRAFFIC CONTROL SERVICES, PARKING AND SIGNING TO BE DONE IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", 1978 REVISED EDITION.
7. SAG AND CREST VERTICAL CURVES WERE DESIGNED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME III, ROAD & BRIDGES.
8. PROVIDE CONCRETE SIDEWALK RAMP IN CURBS, WHERE SHOWN IN PLAN (MAX. 12:1 SLOPE; SEE HOWARD COUNTY STD. DETAILS, R-4.01.)
9. MINIMUM COVER OF 12" SHALL BE PROVIDED OVER STORM DRAIN PIPES IN ALL AREAS NOT BEING FINAL GRADED BY THESE PLANS.
10. DESIGN SPEED: 30 M.P.H.
11. STREET LIGHTS SHALL BE 175 WATT MODERN MERCURY VAPOR LAMP POST TOP FIXTURES ON 12-FOOT BONDZ FIBERGLASS POLES.
12. ALL HORIZONTAL AND VERTICAL CONTROLS BASED ON MARYLAND STATE DATUM.
13. STORM WATER MANAGEMENT IS PROVIDED BY PLANS SUBMITTED UNDER F-83-120.
14. THE LOCATION, TYPE, & NUMBER OF TREES SHOWN ON THIS PLAN ARE TENTATIVE AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION & VARIETY OF TREES MAY VARY TO ACCOMMODATE FIELD CONDITIONS, & BUILDER'S LANDSCAPE PROGRAM. BOND RELEASE IS CONTINGENT UPON SECTION 16.191 OF THE HOWARD COUNTY JURISDICTION REGULATIONS AS APPROVED BY THE OFFICE OF PLANNING & ZONING.

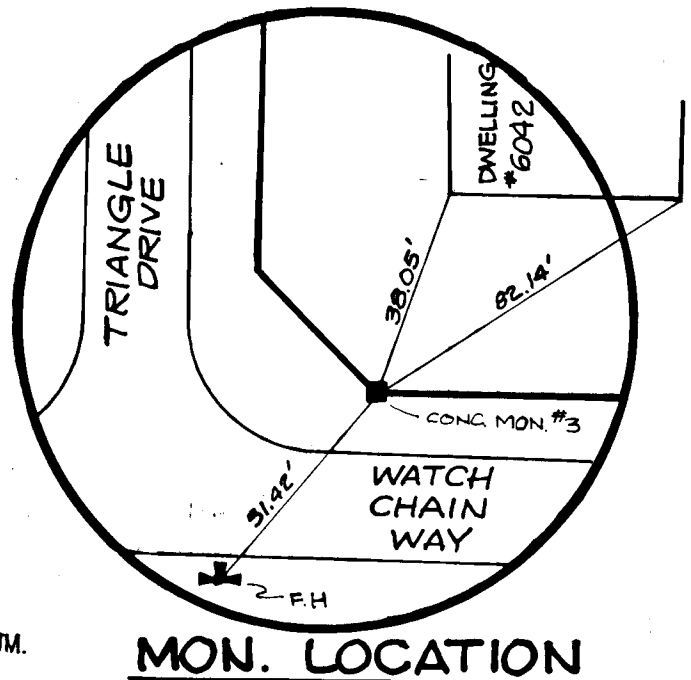
DRAINAGE AREA MAP
SCALE: 1"=100'



MON. LOCATION



MON. LOCATION



MON. LOCATION

AS-BUILT SURVEY CERTIFIED BY
KENNETH A. MCCORD P.E. No. 1974 ON 9-2-88

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 5/26/88
CHIEF, BUREAU OF ENGINEERING
APPROVED HOWARD CO. OFFICE OF PLANNING & ZONING
[Signature] 5-26-88
CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMIN.

KIDDE CONSULTANTS, INC.
ENGINEERS - PLANNERS - SURVEYORS
1020 CROMWELL BRIDGE ROAD
TOWSON, MARYLAND 21204

DESIGNED: L.L.Y.
DRAWN: R.D.
CHECKED: L.L.Y.
DATE: 5-19-88

TITLE SHEET
DRAINAGE AREA MAP

VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 12
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1"=100'
DRAWING: 1 OF 2
JOB NO:
FILE NO: F-86-128

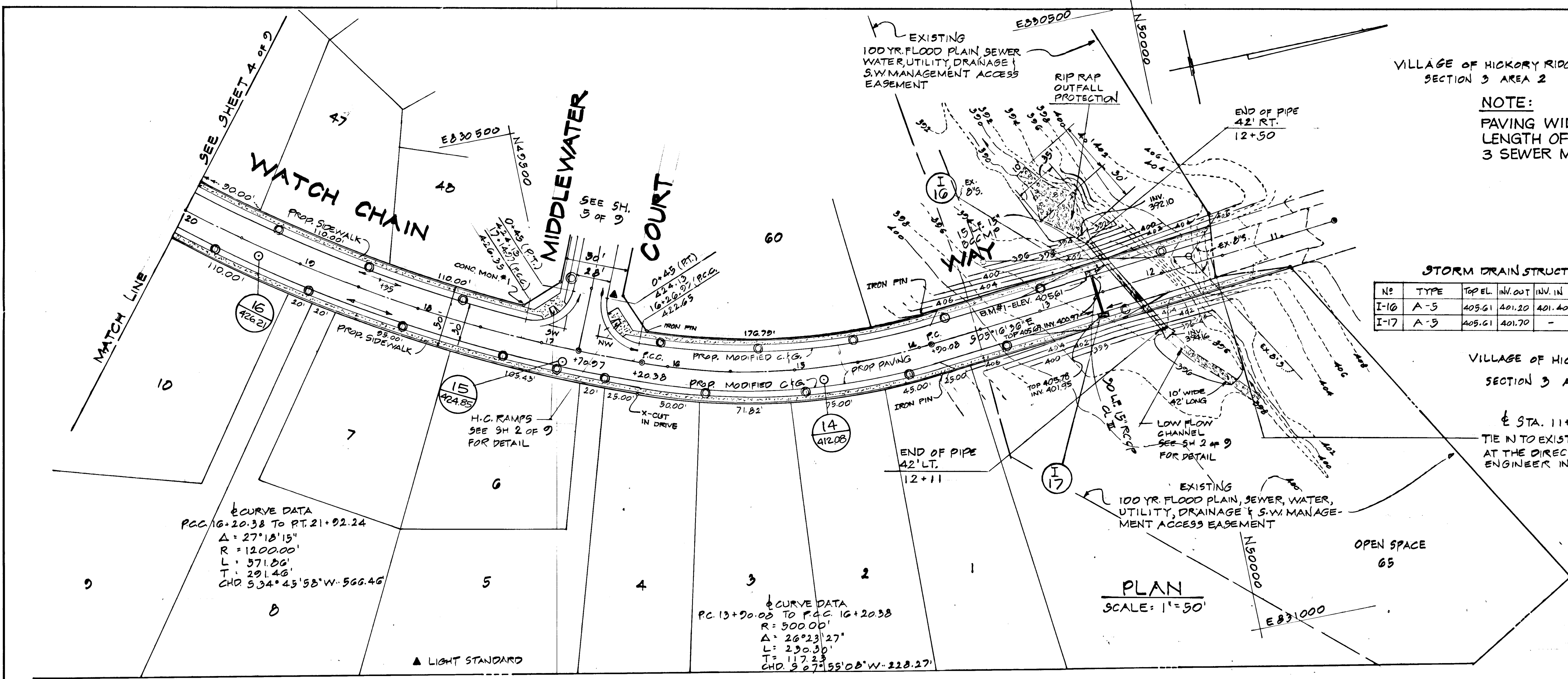
NO	BY	REVISION	DATE
1	K.C.I.	DELETED PIPES, ADDED 'C', CHG. AC.	7-25-88

FOR: HOWARD RESEARCH & DEVELOPMENT CORP.
THE ROUSE COMPANY BUILDING
COLUMBIA, MARYLAND 21204

AS-BUILT 9-2-88 F-86-128 30 86028

DATE	
BY	
NO.	
PLAN	
REVISIONS	
PROPOSED	
NOTE BOOK	
NO.	

DATE	
BY	
NO.	
PROFILE	
REVISIONS	
GRADE CHECKED	
NOTE BOOK	
NO.	



VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 2

NOTE:
PAVING WIDTH - 30'
LENGTH OF ROAD 843'
3 SEWER MHS IN ROAD R/W

STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP EL.	INV. OUT	INV. IN	LOCATION	REMARKS
I-16	A-5	405.61	401.20	401.40	15' RT. 12+55	50 4.01
I-17	A-5	405.61	401.70	-	15' LT. 12+55	30 4.01

VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 10

± STA. 11+55 ±
TIE N TO EXISTING PAVING & C&G.
AT THE DIRECTION OF THE
ENGINEER IN THE FIELD

PLAN
SCALE: 1" = 50'

FOR TYPICAL CROSS SECTIONS &
PAVING DETAILS SEE SH. 2 OF 9
FOR DRAIN PROFILES SEE
SH. 7 OF 9
FOR OUTFALL PROTECTION DETAIL
SEE SH. 2 OF 9

APPROVED: DEPARTMENT OF PUBLIC WORKS

John W. W... 5-21-86
CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
John W. W... 5-26-86
CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1020 CROMWELL BRIDGE ROAD
TOWSON, MARYLAND 21204

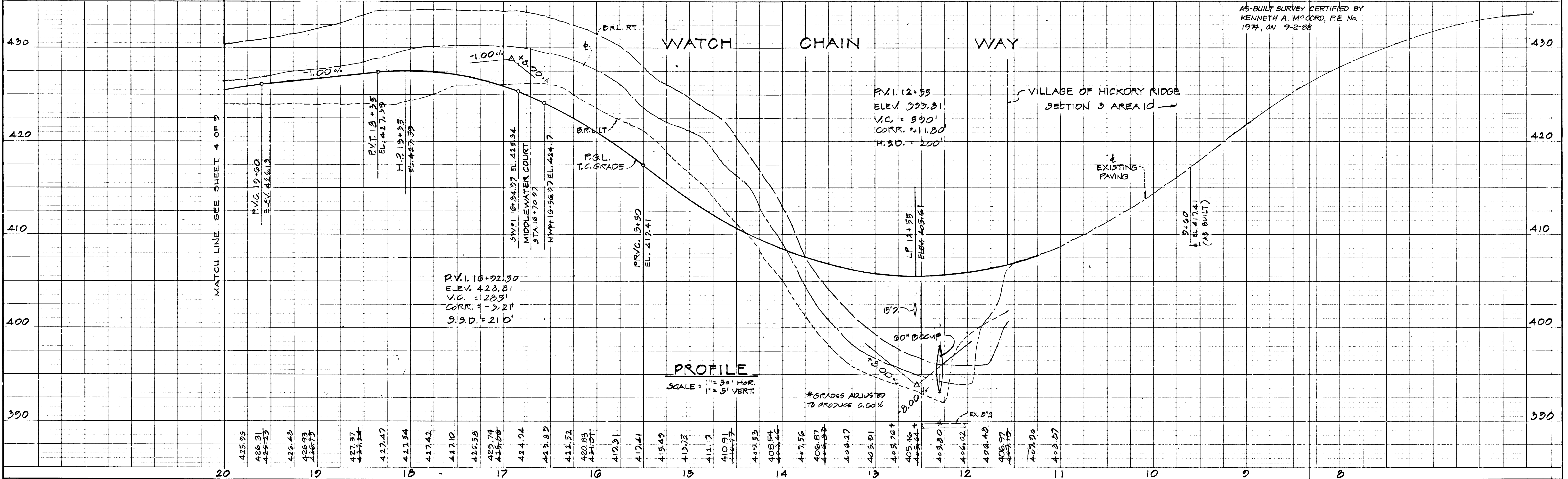
STATE OF MARYLAND
LICENSED PROFESSIONAL ENGINEER

RESUBMITTED L.L.Y.
DRAWN W.W.P.
CHECKED L.L.Y.
DATE 5-19-86

ROAD CONSTRUCTION PLANS
WATCH CHAIN WAY
COLUMBIA
VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 12
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS NOTED
DRAWING 3 OF 9
JOB NO.
FILE NO. F-86-128

FOR: THE HOWARD RESEARCH & DEVELOPMENT CORP.
THE ROUSE COMPANY BUILDING
COLUMBIA, MARYLAND 21044



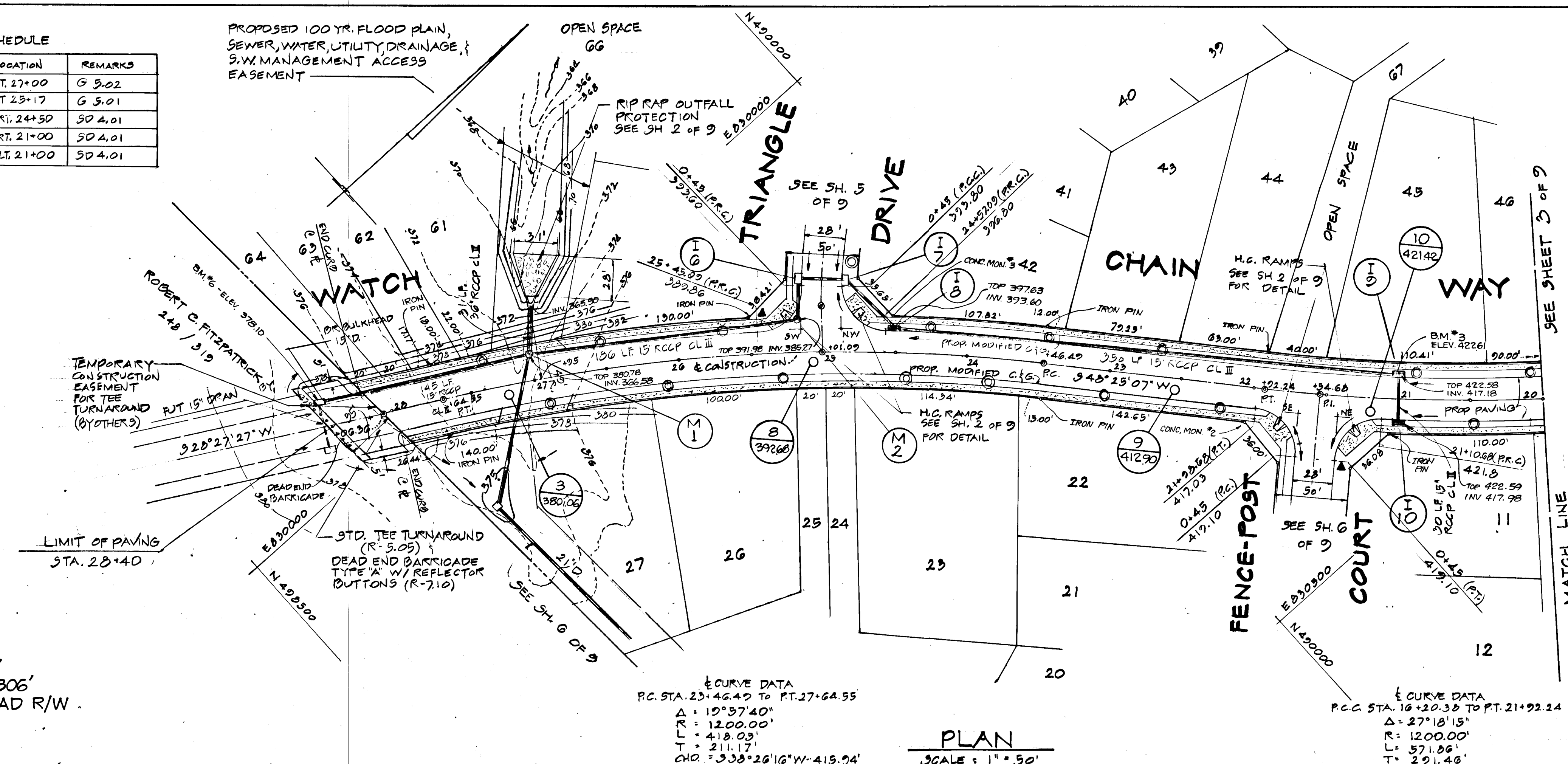
PROFILE
SCALE: 1" = 50' HOR.
1" = 5' VERT.

*GRADES ADJUSTED
TO PRODUCE 0.60%

AS-BUILT SURVEY CERTIFIED BY
KENNETH A. McCORD, P.E. No.
1977, ON 9-2-88

STORM DRAIN STRUCTURE SCHEDULE						
N ^o	TYPE	TOP EL.	IN ^o OUT	IN ^o IN	LOCATION	REMARKS
M-1	STD. MH	390.97	368.25	368.0	175 RT. 27+00	G 5.02
M-2	STD. MH	391.50	385.00	385.20	23 RT. 28+17	G 5.01
I-8	A-5	397.40	393.40	393.60	1575 RT. 24+50	SD 4.01
I-9	A-5	422.43	417.4	417.6	1575 RT. 21+00	SD 4.01
I-10	A-5	422.47	418.0	-	1575 RT. 21+00	SD 4.01

PROPOSED 100 YR. FLOOD PLAN,
SEWER, WATER, UTILITY, DRAINAGE,
& SW. MANAGEMENT ACCESS
EASEMENT



± CURVE DATA
P.C. STA. 23+46.42 TO PT. 27+64.55
Δ = 10° 57' 40"
R = 1200.00'
L = 418.03'
T = 211.17'
CHD = 533° 26' 16" W - 413.94'

± CURVE DATA
P.C.C. STA. 16+20.30 TO PT. 21+22.24
Δ = 27° 18' 15"
R = 1200.00'
L = 371.06'
T = 291.46'
CHD = 534° 45' 50" W - 566.46'

PLAN
SCALE = 1" = 50'

NOTE:
PAVING WIDTH - 30'
LENGTH OF ROAD - 806'
4 SEWER MHS IN ROAD R/W

FOR TYPICAL CROSS SECTIONS &
PAVING DETAILS SEE SH. 2 OF 9
FOR DRAIN PROFILES SEE
SH. 7 OF 9
FOR OUTFALL PROTECTION DETAIL
SEE SH. 2 OF 9

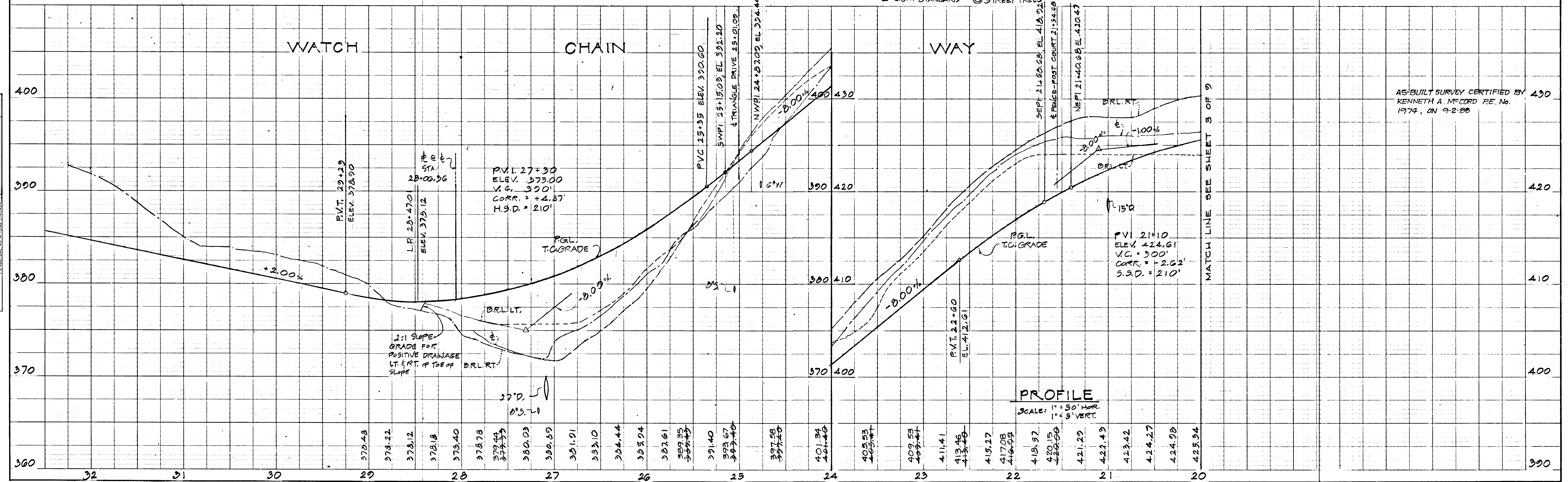
APPROVED: DEPARTMENT OF PUBLIC WORKS
 APPROVED: BUREAU OF ENGINEERING
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
KIDDE CONSULTANTS, INC.
 ENGINEERS · PLANNERS · SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 TOWSON, MARYLAND 21204

DESIGNED L.L.Y.
 DRAWN V.V.W.P.
 CHECKED L.L.Y.
 DATE 5-19-86

ROAD CONSTRUCTION PLANS
 WATCH CHAIN WAY
COLUMBIA
 VILLAGE OF HICKORY RIDGE
 SECTION 3
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

FOR THE HOWARD RESEARCH & DEVELOPMENT CORP.
 THE ROUSE COMPANY BUILDING
 COLUMBIA, MARYLAND 21044

SCALE AS NOTED
 DRAWING 4 OF 9
 JOB NO.
 FILE NO. F-86-12B



PROFILE
SCALE: 1" = 50' HOR
1" = 5' VERT.

AS-BUILT SURVEY CERTIFIED BY
KENNETH A. MCCORD P.E. No. 430
1974, ON 9-2-88

APPROVED: DEPARTMENT OF PUBLIC WORKS
 5-22-88
 CHIEF, BUREAU OF ENGINEERING
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 5-26-88
 CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION

KIDDE CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 TOWSON, MARYLAND 21204

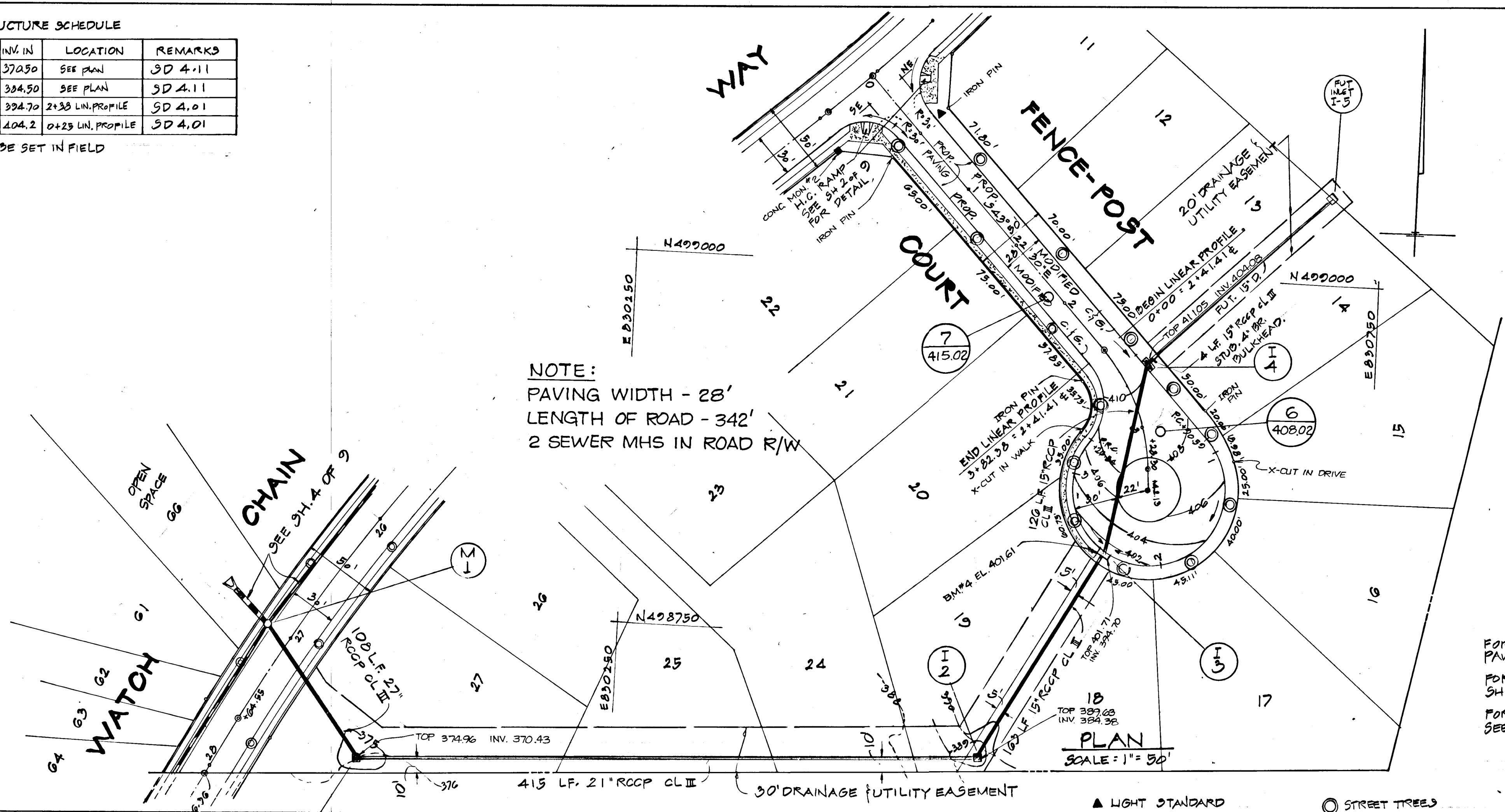
DESIGNED L.L.Y. ROAD CONSTRUCTION PLANS SCALE AS NOTED
 DRAWN W.H.B. FENCE-POST COURT DRAWING 6 OF 9
 CHECKED L.L.Y. COLUMBIA JOB NO.
 DATE 5-19-88 VILLAGE OF HICKORY RIDGE AREA 12 FILE NO. F-86-12B
 SECTION 3 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FOR: THE HOWARD RESEARCH & DEVELOPMENT CORP.
 THE ROUSE COMPANY BUILDING
 COLUMBIA, MARYLAND 21044

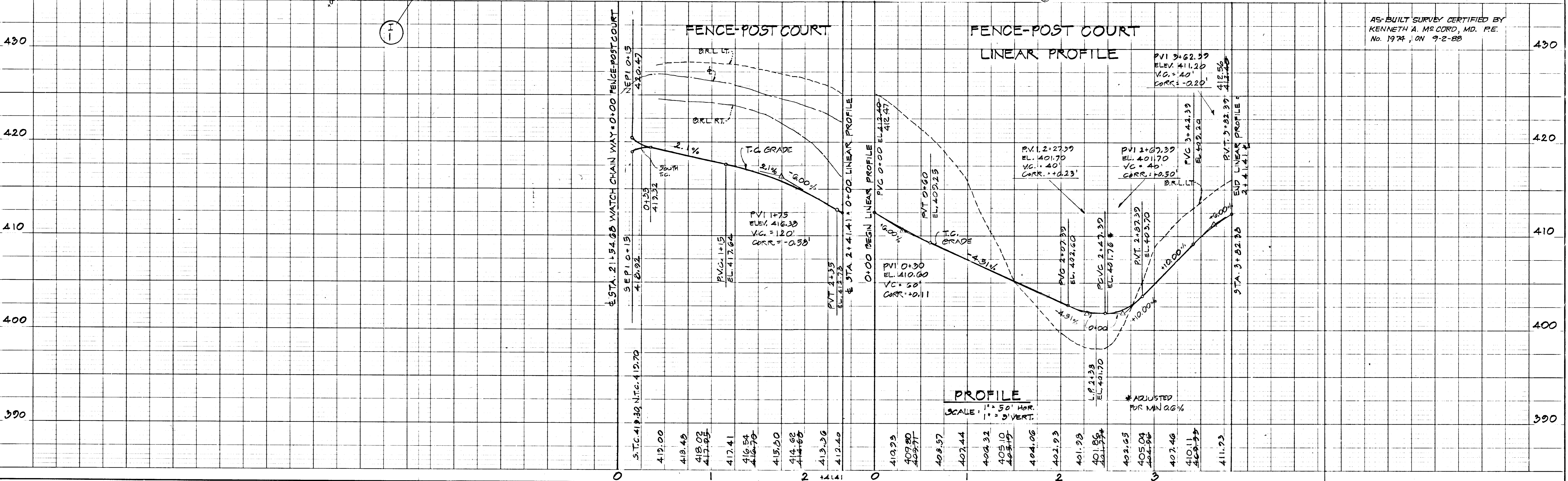
STORM DRAIN STRUCTURE SCHEDULE

NO	TYPE	TOP EL	INV. OUT	INV. IN	LOCATION	REMARKS
I-1	D INLET	*	370.00	370.50	SEE PLAN	SD 4-11
I-2	D INLET	*	384.00	384.50	SEE PLAN	SD 4-11
I-3	A-5	401.70	394.50	394.70	2+33 LN. PROFILE	SD 4-01
I-4	A-5 w/ DEF.	410.23	404.0	404.2	0+23 LN. PROFILE	SD 4-01

* FLOW LINE ELEVATION TO BE SET IN FIELD

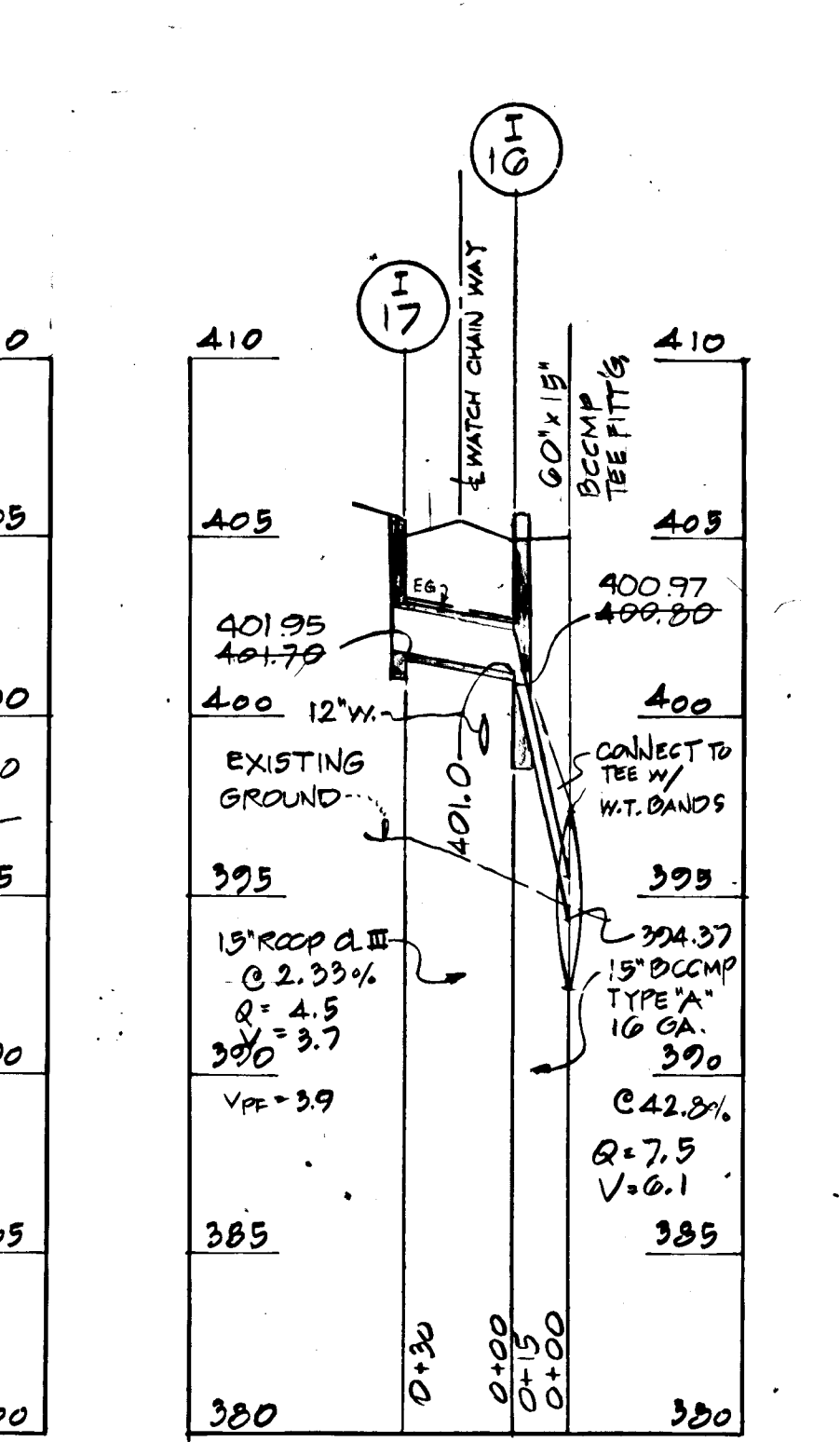
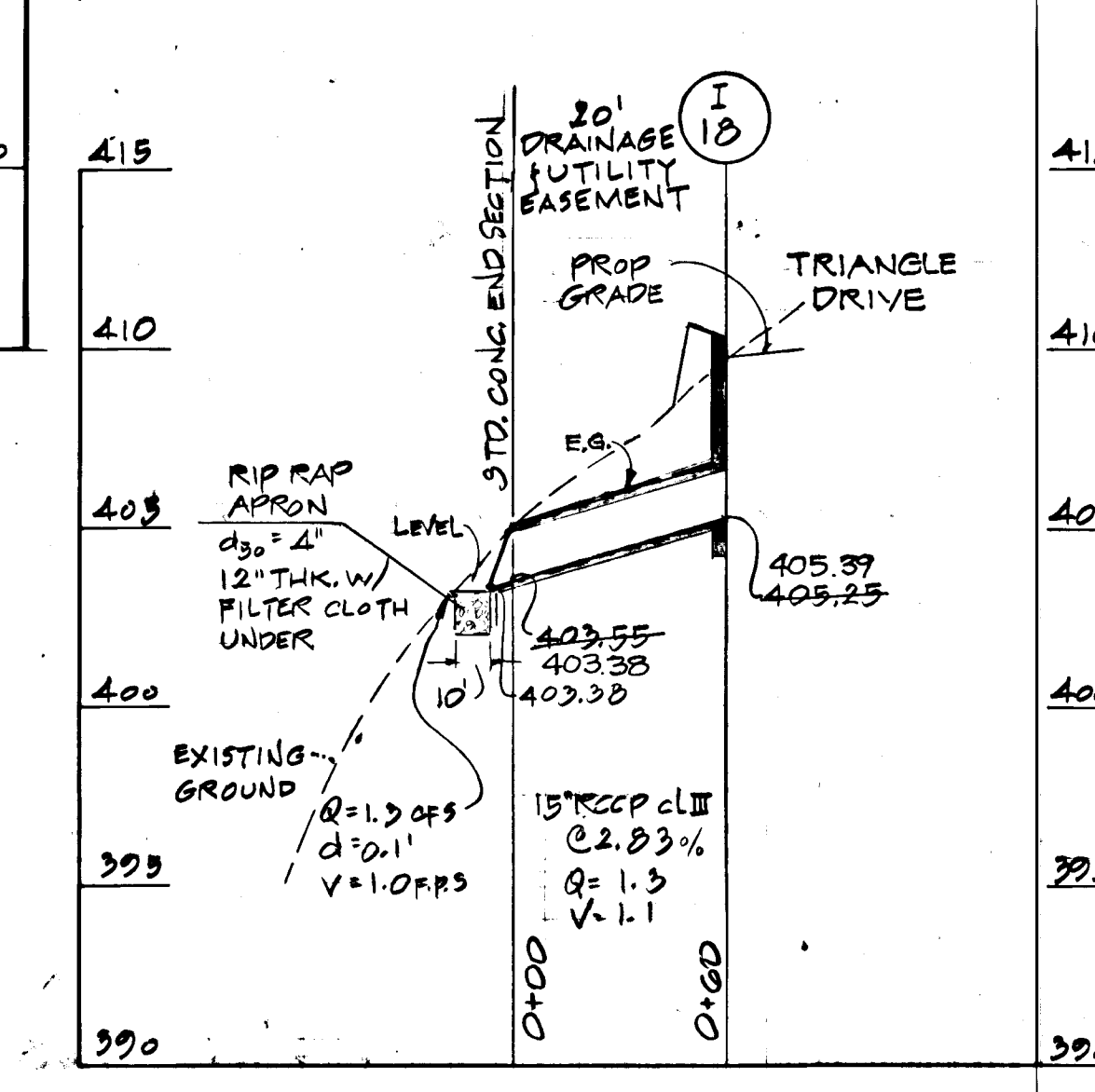
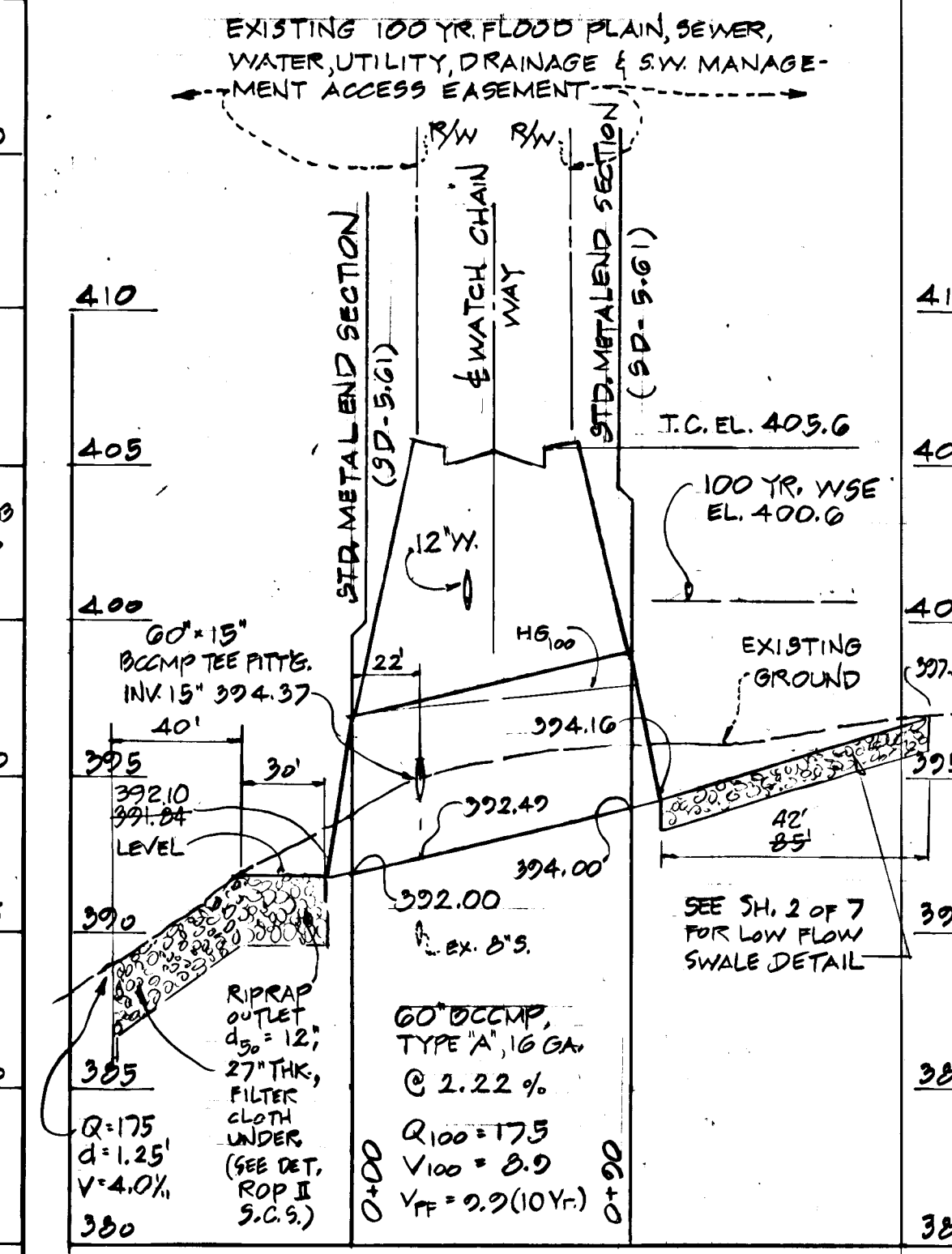
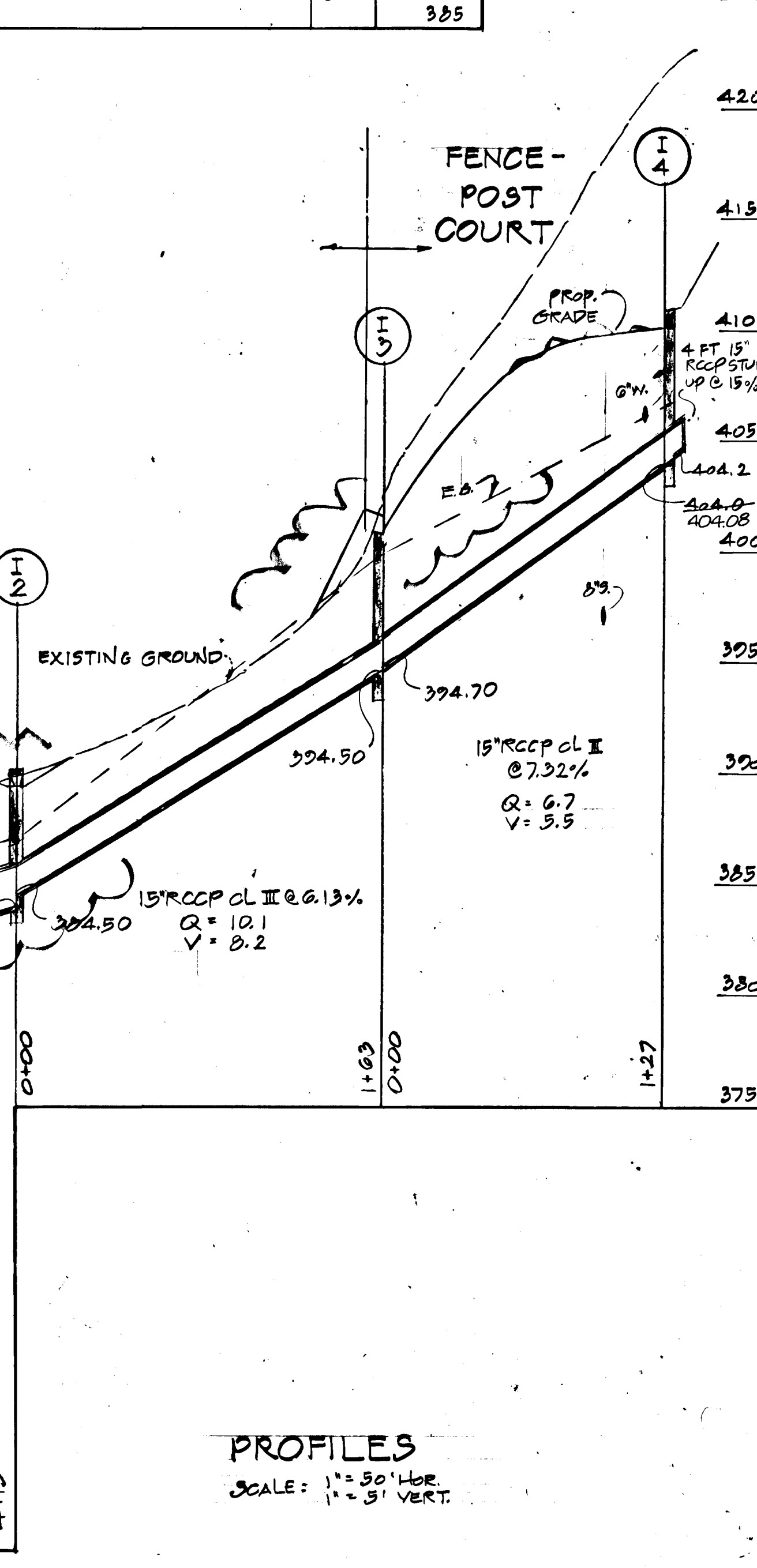
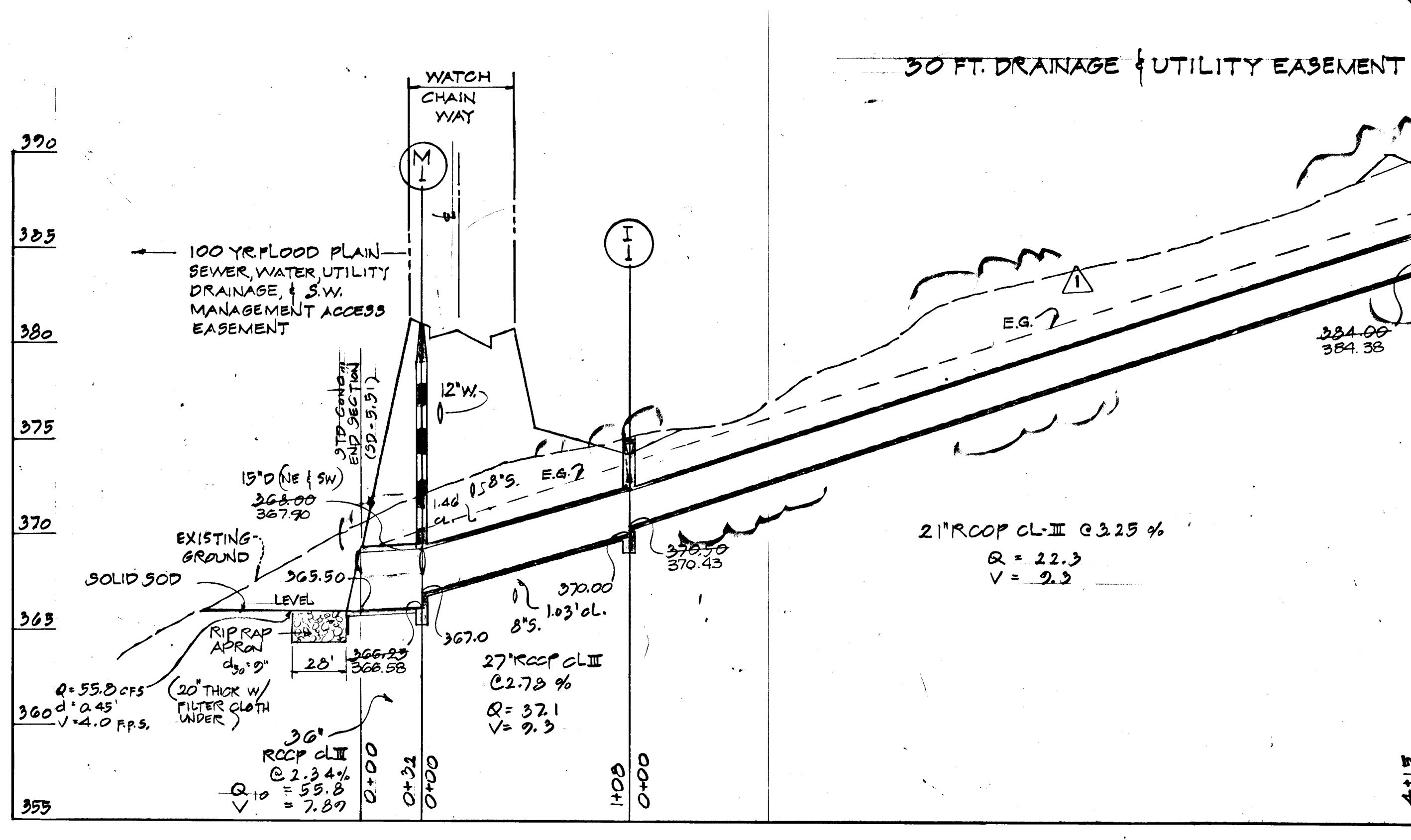
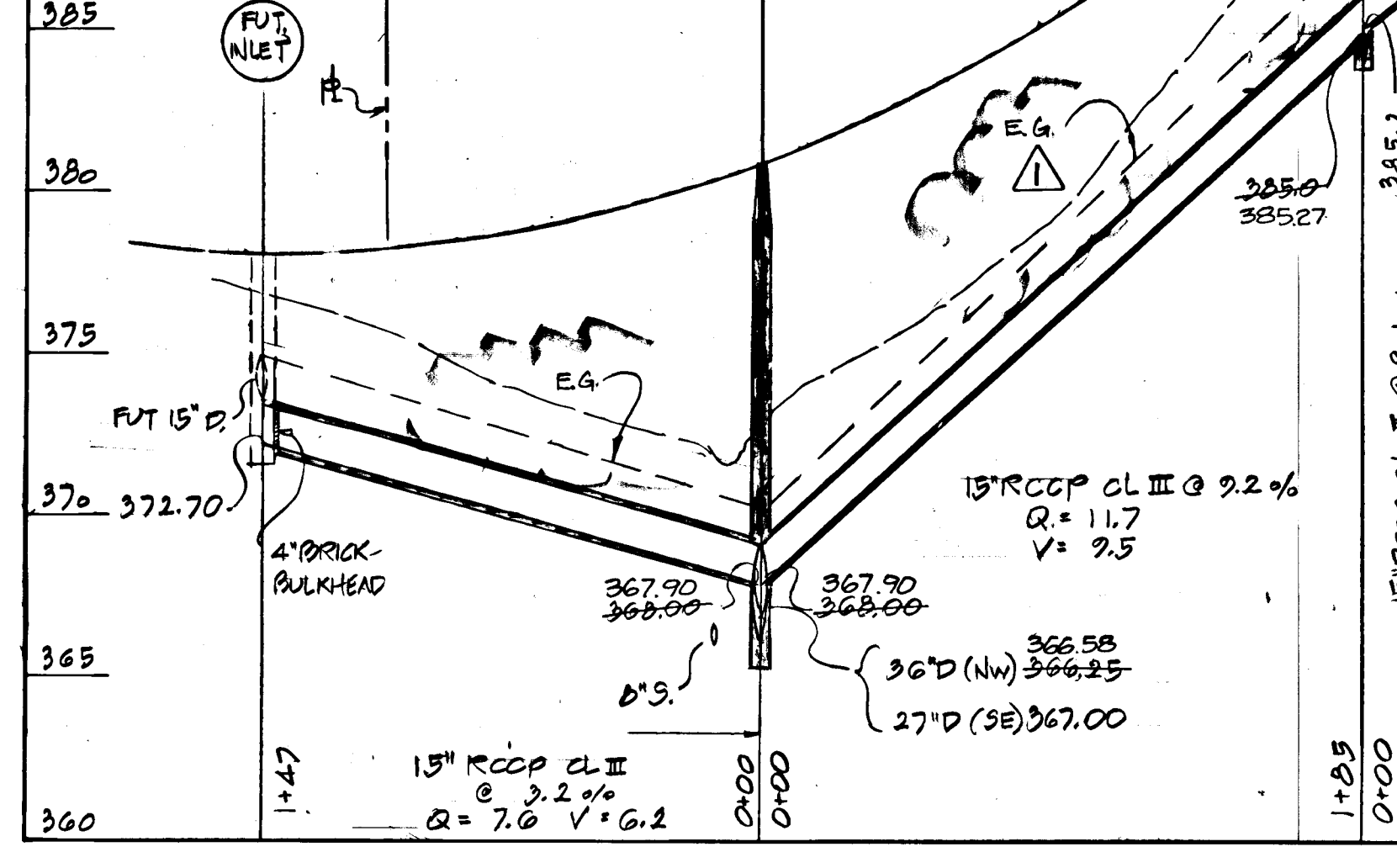
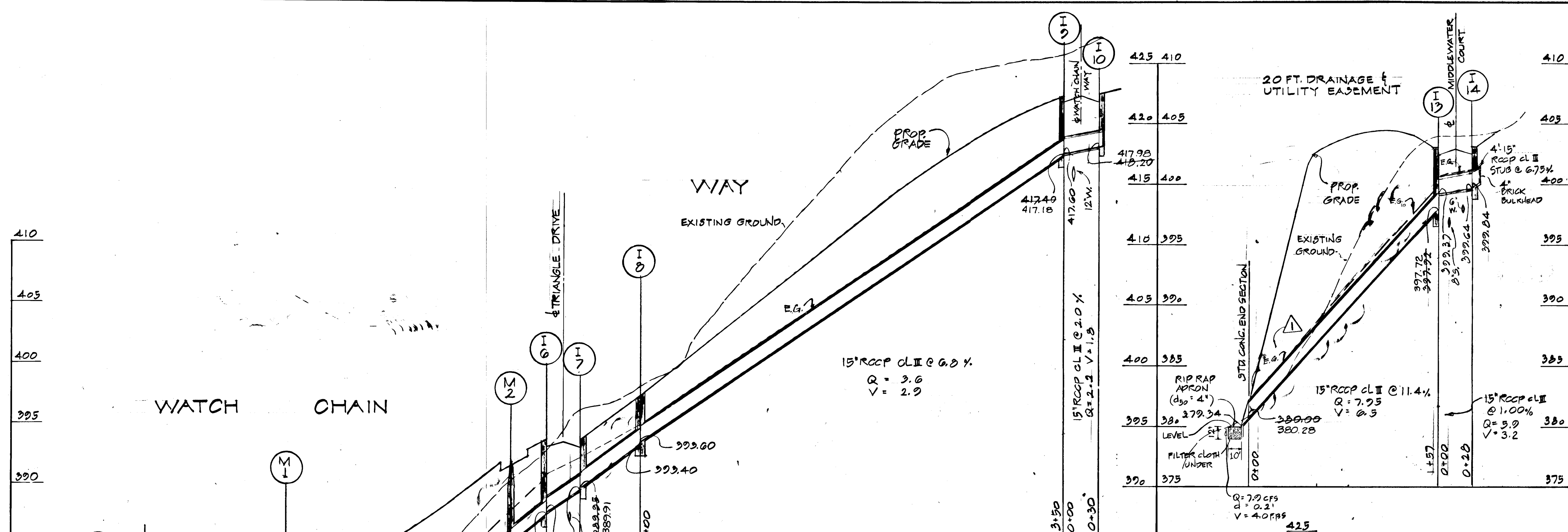


FOR TYPICAL CROSS SECTIONS & PAVING DETAILS SEE SH. 2 OF 9
 FOR DRAIN PROFILES SEE SH. 7 OF 9
 FOR OUTFALL PROTECTION DETAIL SEE SH. 2 OF 9



PLAN
 SURVEYED, PLOTTED, CHECKED, BY RT. OF WAY CHECKED, No.

PROFILE
 SURVEYED, PLOTTED, CHECKED, BY R.M.S. NOTED, STRUCTURE NOTATIONS CHECKED, No.



PROFILES
SCALE: 1" = 50' HOR.
1" = 5' VERT.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 25-26-86
 CHIEF, BUREAU OF ENGINEERING
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 John W. Mueselmann 5-26-86
 CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION

KIDDE CONSULTANTS, INC.
 ENGINEERS - PLANNERS - SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 TOWSON, MARYLAND 21204

DESIGNED L.L.Y.
 DRAWN W.D.
 CHECKED L.L.Y.
 DATE 9-19-86

STORM DRAIN PROFILES
 WATCH CHAIN WAY, FENCE-POST COURT, TRIANGLE DRIVE & MIDDLEWATER COURT

SCALE AS NOTED
 DRAWING 7 OF 9
 JOB NO.
 FILE NO. F-86-12B

COLUMBIA
 VILLAGE OF HICKORY RIDGE
 SECTION 3 AREA 12
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

FOR: THE HOWARD RESEARCH & DEVELOPMENT CORP.
 THE ROUSE COMPANY BUILDING
 COLUMBIA, MARYLAND 21044

NO.	BY	REVISION	DATE
1	K.C.I.	CHG. HQ. TO E.G. & CHG. E.G. LINES	7-25-86

AS-BUILT SURVEY CERTIFIED BY
 KENNETH A. M. CORD, MD P.E. No.
 1974, ON 9-2-88

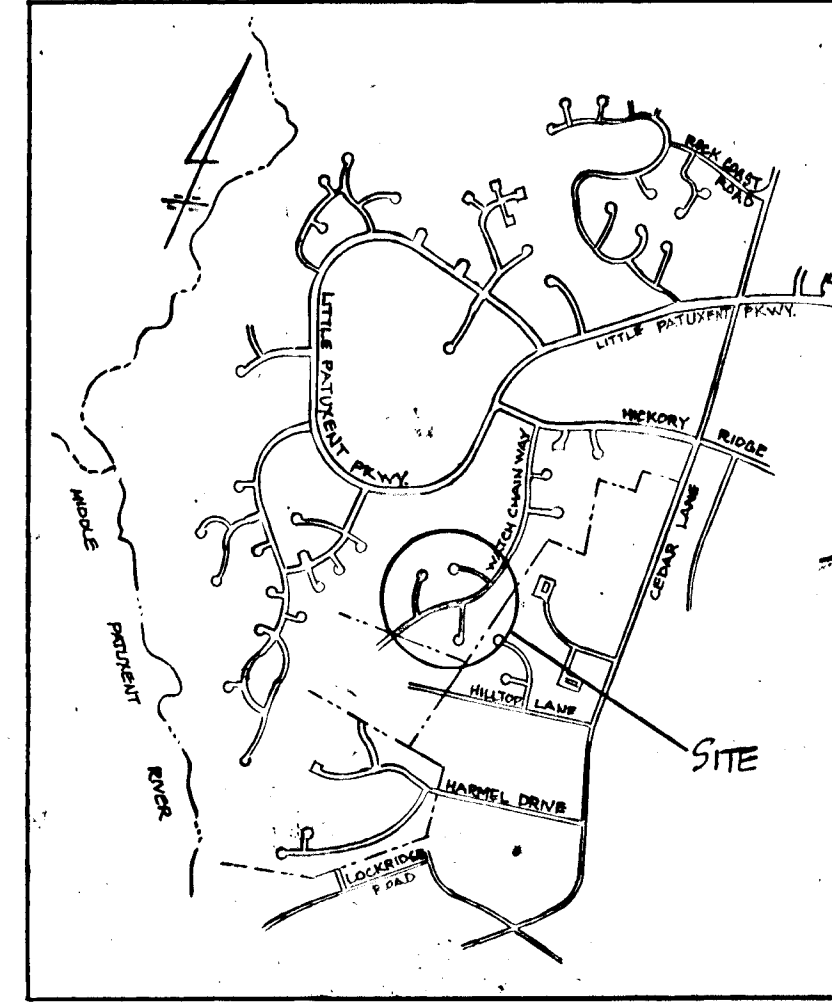
SILT TRAP DATA

TRAP NUMBER	TYPE OF TRAP	DRAINAGE AREA	STORAGE CAPACITY	STORAGE PROVISION	OUTLET LENGTH	STORAGE DEPTH	BOTTOM DIMENSIONS	BOTTOM ELEV.	TOP OF DAM	CLEAN-OUT ELEV.	WEIR CREST
1	1	3.0 AC	5400	7500	12'	4'	18x12'	394	400	396	399
2	2	0.95 AC	1720	1919	4'	2'	50x12'	390	394	391	399
3	3	4.97 AC	8921	9800	20'	4'	120x12'	376	382	378	381
4	4	3.50 AC	6300	7000	14'	4'	6x117'	394	400	396	399
5	5	0.93 AC	1674	1856	4'	2'	4x112'	392	396	393	395
6	6	4.9 AC	8864	9825	20'	4'	100x15'	366	372	368	371

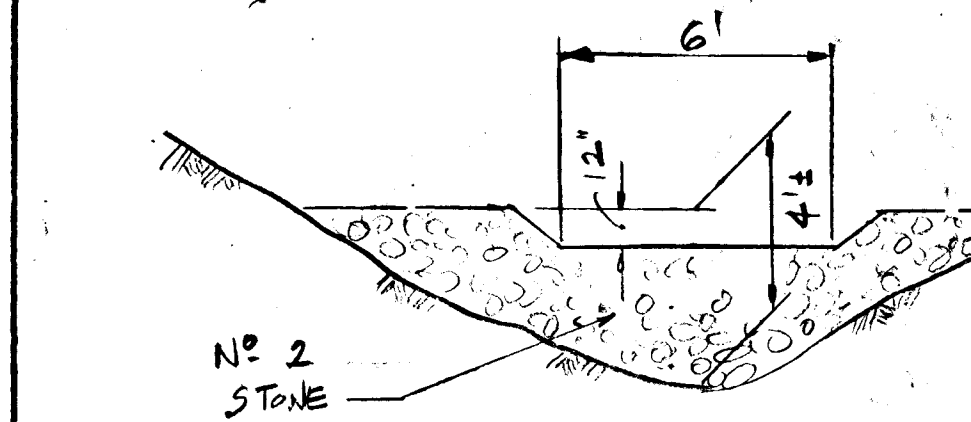
Office of Planning and Zoning
John W. Muehlen 5-27-86
 Chief, Division of Land Development, Planning and Zoning Administration

Department of Public Works
William E. Paul 5-27-86
 Chief, Bureau of Engineering

* NOTE:
 RE-BUILD DIKE ADJACENT TO TRAP NO. 2 AS FILL IS PLACED.

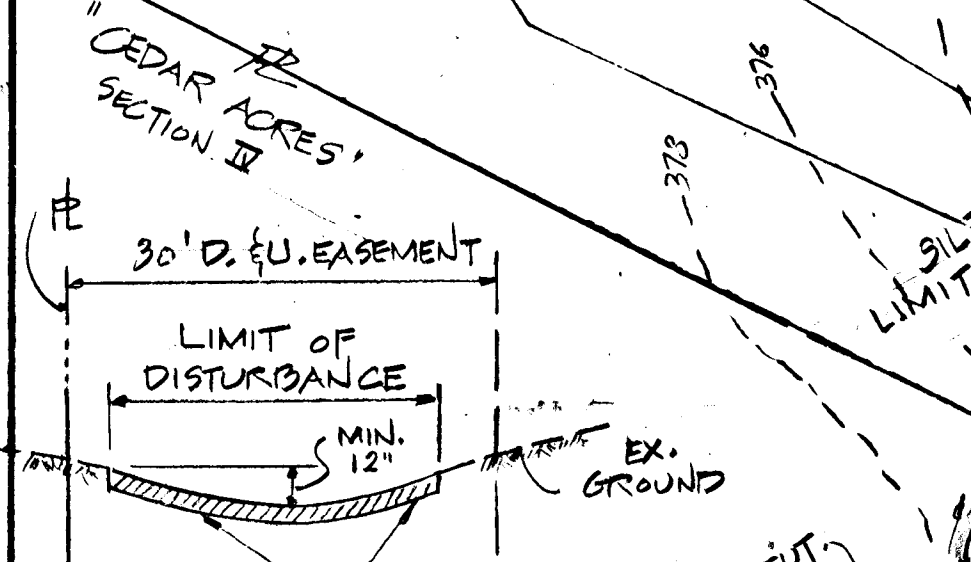


VICINITY MAP
 SCALE 1" = 2000'



TEMPORARY SILT PROTECTION FOR OUTFALL CHANNEL
 NOT TO SCALE

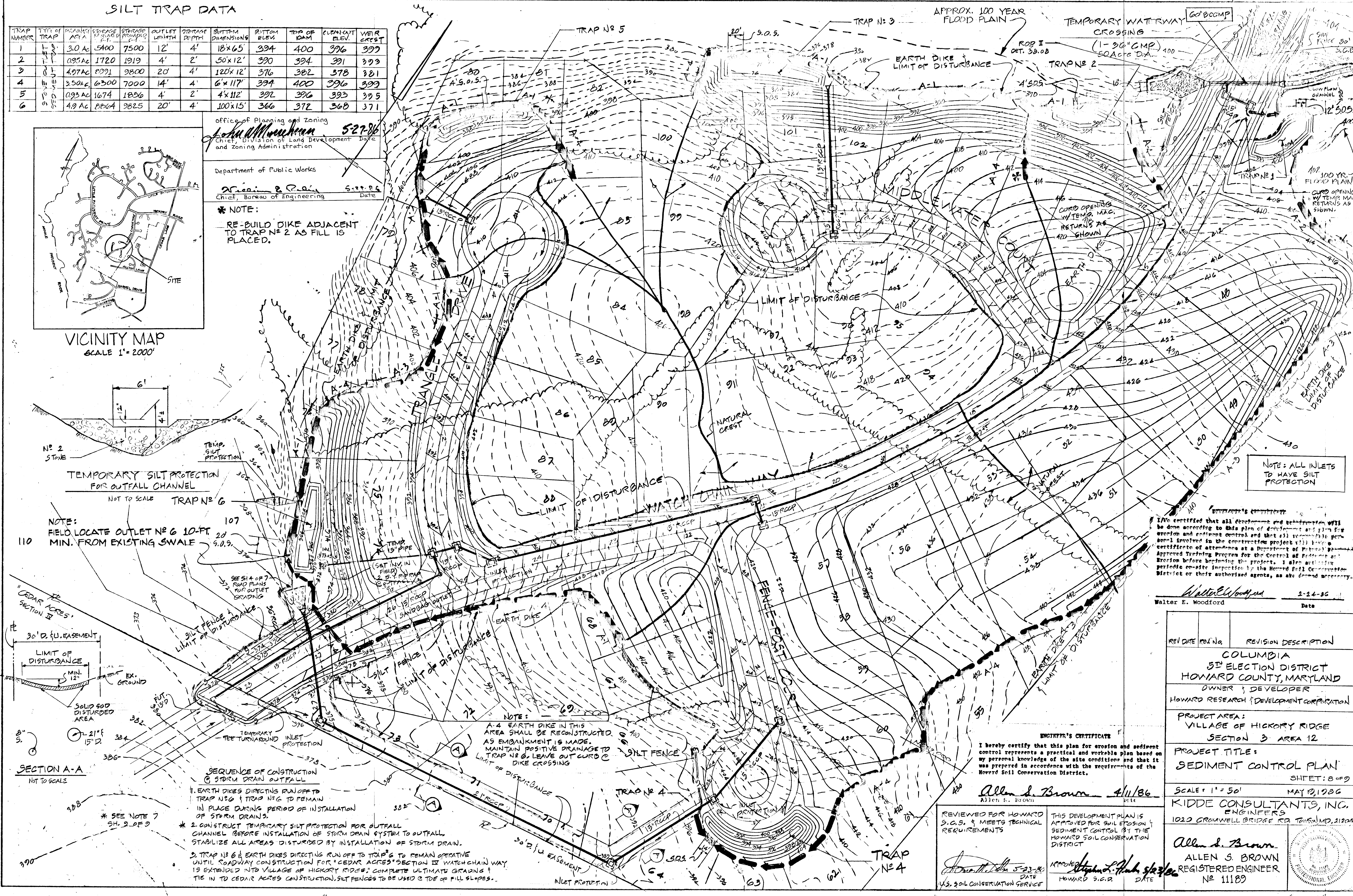
NOTE:
 FIELD LOCATE OUTLET NO. 6 10-FT. MIN. FROM EXISTING SWALE



SECTION A-A
 NOT TO SCALE

- SEQUENCE OF CONSTRUCTION @ STORM DRAIN OUTFALL
1. EARTH DIKES DIRECTING RUN OFF TO TRAP NO. 6 & TRAP NO. 6 TO REMAIN IN PLACE DURING PERIOD OF INSTALLATION OF STORM DRAIN.
 2. CONSTRUCT TEMPORARY SILT PROTECTION FOR OUTFALL CHANNEL BEFORE INSTALLATION OF STORM DRAIN SYSTEM TO OUTFALL. STABILIZE ALL AREAS DISTURBED BY INSTALLATION OF STORM DRAIN.
 3. TRAP NO. 6 & EARTH DIKES DIRECTING RUN OFF TO TRAP NO. 6 TO REMAIN OPERATIVE UNTIL ROADWAY CONSTRUCTION FOR CEDAR ACRES SECTION II WATCH CHAIN WAY IS EXTENDED INTO VILLAGE OF HICKORY RIDGE. COMPLETE ULTIMATE GRADING & TIE IN TO CEDAR ACRES CONSTRUCTION. SILT FENCES TO BE USED @ TOE OF FILL SLOPES.

NOTE:
 A-4 EARTH DIKE IN THIS AREA SHALL BE RECONSTRUCTED AS EMBANKMENT IS MADE. MAINTAIN POSITIVE DRAINAGE TO TRAP NO. 6. LEAVE OUT CURB @ DIKE CROSSING



ENGINEER'S CERTIFICATE
 I have certified that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of Public Works Approved Training Program for the Control of Erosion and Sedimentation before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as and deemed necessary.

Walter E. Woodford 2-24-86
 Date

ENGINEER'S CERTIFICATE
 I hereby 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.

Allen S. Brown 4/11/86
 Allen S. Brown

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

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

John W. Muehlen 5-23-86
 DATE
 U.S. SOIL CONSERVATION SERVICE

APPROVED
William E. Paul 5/23/86
 DATE
 HOWARD S.C.D.

REV. DATE	REV. NO.	REVISION DESCRIPTION
		COLUMBIA 5 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER & DEVELOPER HOWARD RESEARCH & DEVELOPMENT CORPORATION
		PROJECT AREA: VILLAGE OF HICKORY RIDGE SECTION 3 AREA 12
		PROJECT TITLE: SEDIMENT CONTROL PLAN
		SCALE: 1" = 50' MAY 12, 1986
		KIDDE CONSULTANTS, INC. ENGINEERS 1020 CRAWFELL BRIDGE RD. TOWSON, MD, 21284
		<i>Allen S. Brown</i> ALLEN S. BROWN REGISTERED ENGINEER NO. 11189

