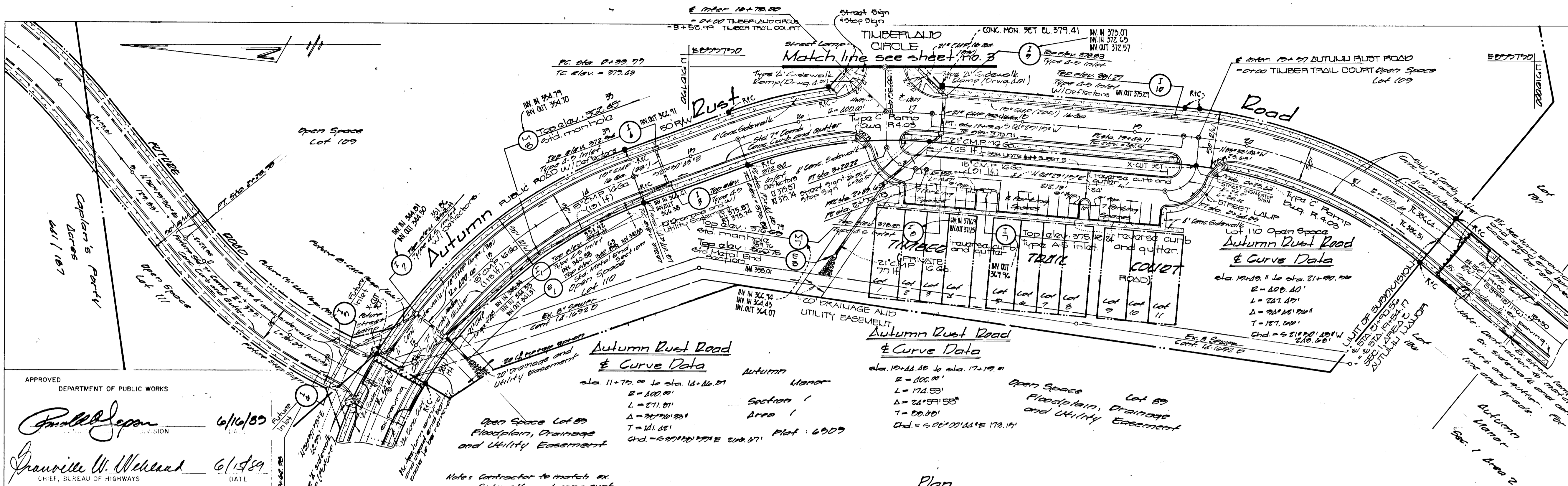


DATE
BY
SURVEYED
PLOTTED
CHECKED
NOTE BOOK NO.

DATE
BY
SURVEYED
PLOTTED
CHECKED
NOTE BOOK NO.



APPROVED DEPARTMENT OF PUBLIC WORKS
Paralle Japon 6/16/89
 DIVISION
Granville W. McLeod 6/15/89
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED DEPARTMENT OF PUBLIC WORKS
William E. Reilly 6-16-89
 CHIEF, BUREAU OF ENGINEERING
 APPROVED OFFICE OF PLANNING AND ZONING
Mark A. deCarry 6/16/89
 CHIEF, DIVISION OF COMMUNITY AND LAND DEVELOPMENT

LEGEND
 • R/C DENOTES REDUCED AND CAP SET

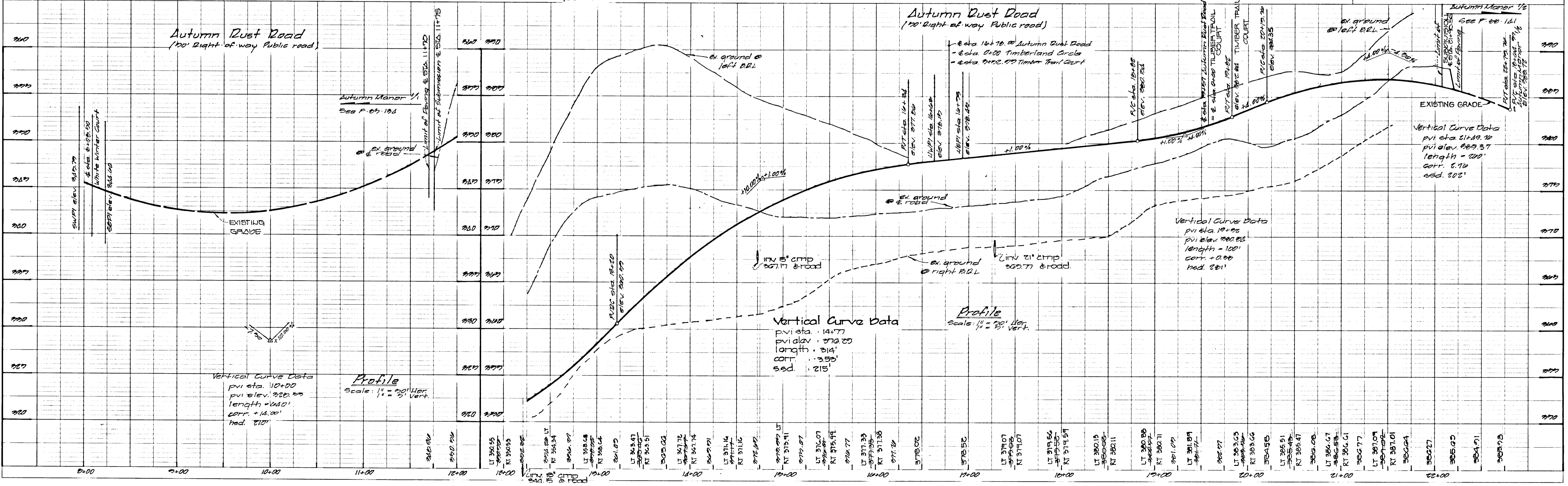
Townhomes of Timberland
 Lots 1-111
 second election district
 Howard County, Maryland

Autumn Rust Road Sta. 11+75.00 to Sta. 16+16.01	Timber Trail Court Sta. 0+76.18 to Sta. 0+94.05	Timberland Circle Sta. 2+09.65 to Sta. 3+20.02
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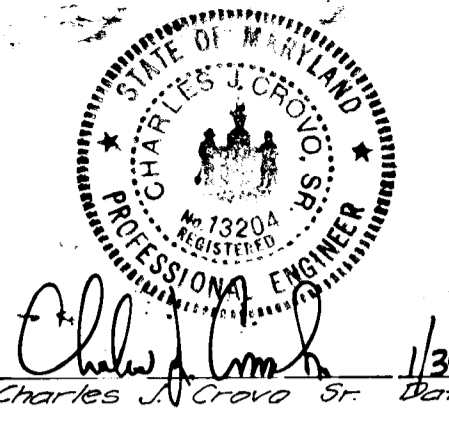
OWNER AND DEVELOPER
 Taylor Land Service Co.
 Land Design and Development
 8007 Adams St.
 Ellicott City, Maryland 21043

SCALE as shown DATE 12/10/88 DWG. NO. 2 OF 11
 DES. K. P. R. DRN. T. Salas CHK. G. Grov

FISHER, COLLINS AND CARTER, INC.
 CIVIL ENGINEERS AND LAND SURVEYORS
 8388 COURT AVE. ELICOTT CITY, MARYLAND 21043

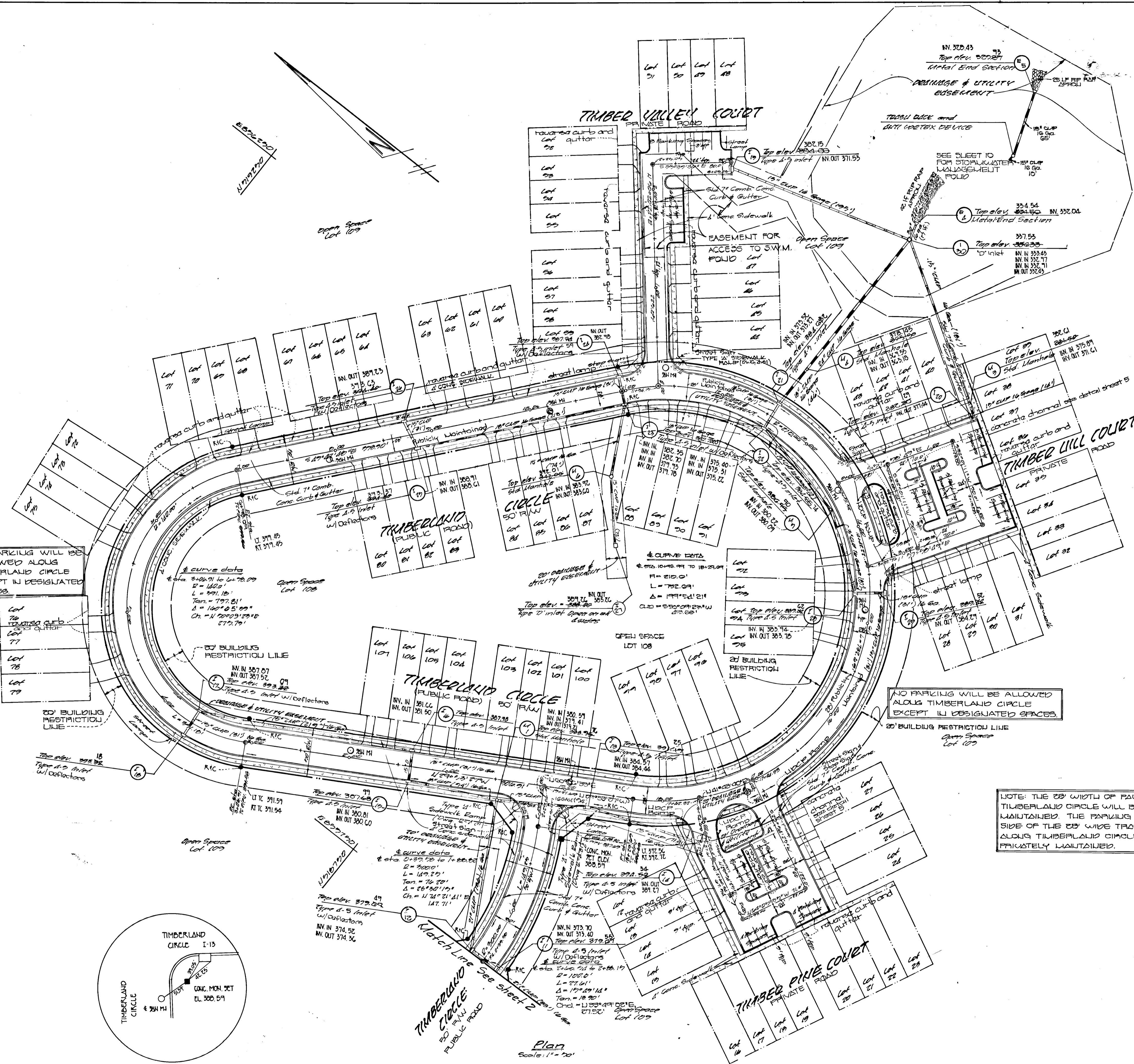


1450



Approved Department of Public Works
Charles A. Groves 6/16/89
 Chief, Land Definition Division
 Approved Department of Public Works
Frank W. Weiland 6/15/89
 Chief, Bureau of Highway
 Approved Department of Public Works
Frank W. Weiland 6-16-89
 Chief, Bureau of Engineering
 Approved Office of Planning & Zoning
Frank W. Weiland 6/15/89
 Chief, Division of Community Planning and Land Development
Townhomes of Timberland
 Lots 1-110
 second election district
 Howard county, Maryland
 Parcel map 23 blocks 13,14,19,20 parcels 69
 Timberland Circle & S.E. 0+00 to 0+25.00
 Timberland Circle & S.E. 0+00 to 0+25.00
 Timberland Circle & S.E. 0+00 to 3+07.24
 Timberland Circle & S.E. 0+00 to 3+07.24
 Owner and Developer
 Taylor Land Service Co.
 76 Land Design and Development
 8707 Main St.
 Ellicott City, Maryland 21043
 Scale: as shown Date: 12/1/88 Page no 3 of 11
 Des: L. Fraley Dwn: T. Sales Chk: C. Groves
 Fisher, Collins and Carter, Inc.
 Civil Engineers and Land Surveyors
 2300 Court Ave. Ellicott City, Maryland 21043

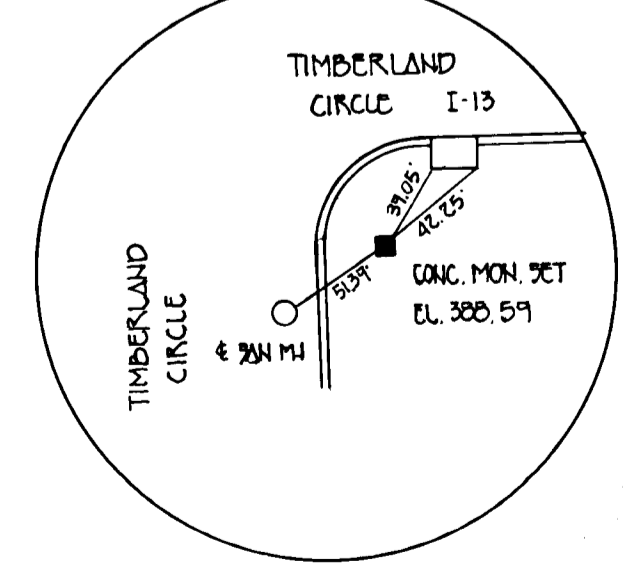
LEGEND
 ● R.C. : REBAR AND CAP SET
 ● S.M.I. : SANITARY MANHOLE



NO PARKING WILL BE ALLOWED ALONG TIMBERLAND CIRCLE EXCEPT IN DESIGNATED SPACES.

NO PARKING WILL BE ALLOWED ALONG TIMBERLAND CIRCLE EXCEPT IN DESIGNATED SPACES.

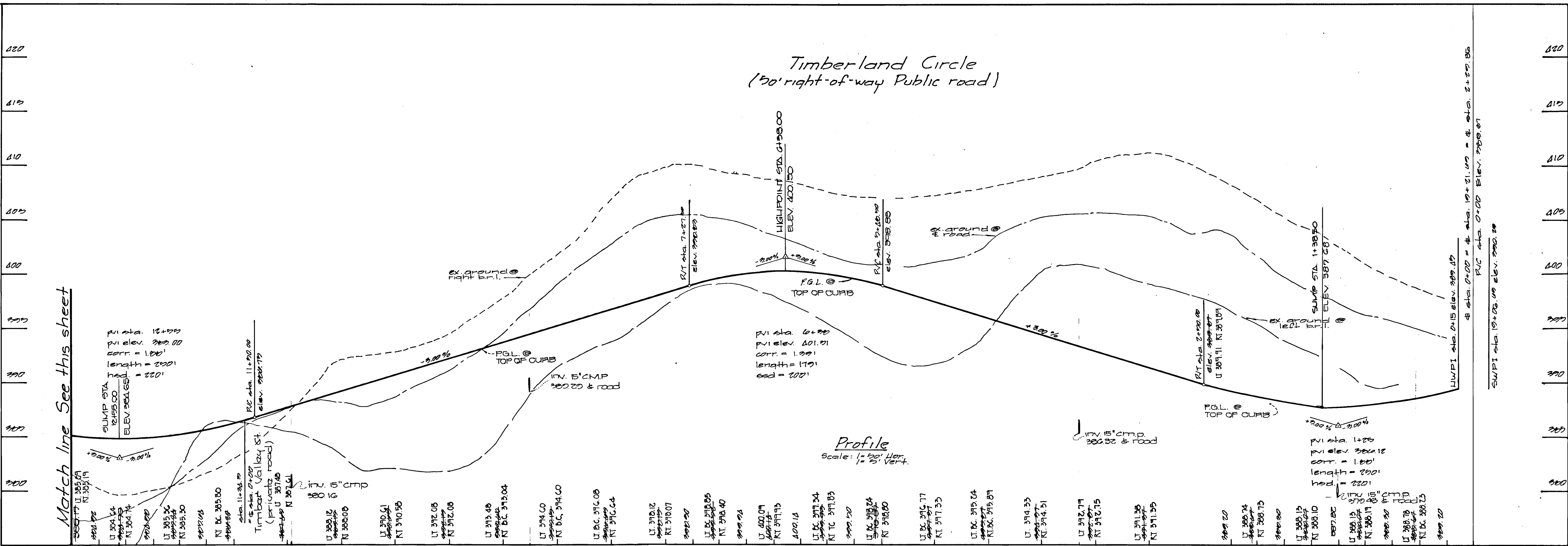
NOTE: THE 20' WIDTH OF PAVING ON TIMBERLAND CIRCLE WILL BE PUBLICLY MAINTAINED. THE PARKING SPACES OUTSIDE OF THE 20' WIDE TRAVELED WAY ALONG TIMBERLAND CIRCLE WILL BE PRIVATELY MAINTAINED.



Plan Scale: 1" = 20'

REVISION - Removed Parking Spaces & Replace with Driveways. Replaced Stormdrain I-20. By: J. Smith 3/12/91
 REVISION - Revised Parking Spaces & Driveways. and Moved Man. and I-27. By: J.S. 4/1/91

1450



Approved: Department of Public Works
Richard L. Seaman 6/16/89
 Chief, Land Development Division Date

Approved: Bureau of Highways
William W. McLeod 6/15/89
 Chief, Bureau of Highways Date

Approved: Department of Public Works
William E. R. O'Neil 6/16/89
 Chief, Bureau of Engineering Date

Approved: Office of Planning and Zoning
Harold J. Z. Campbell 6/22/89
 Chief, Division of Community Planning and Land Development Date

Charles J. ... 1/30/89
 Surveyor

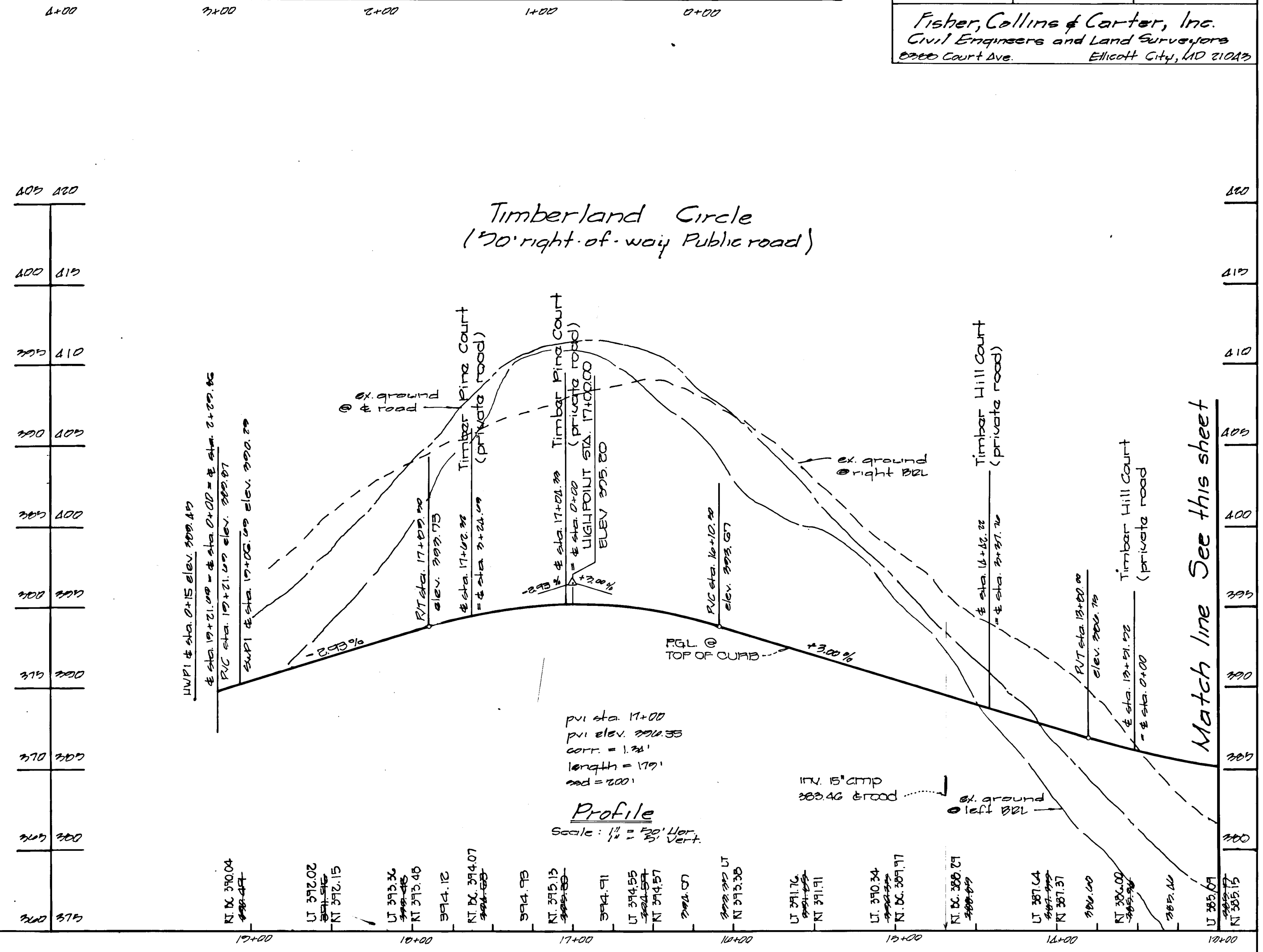
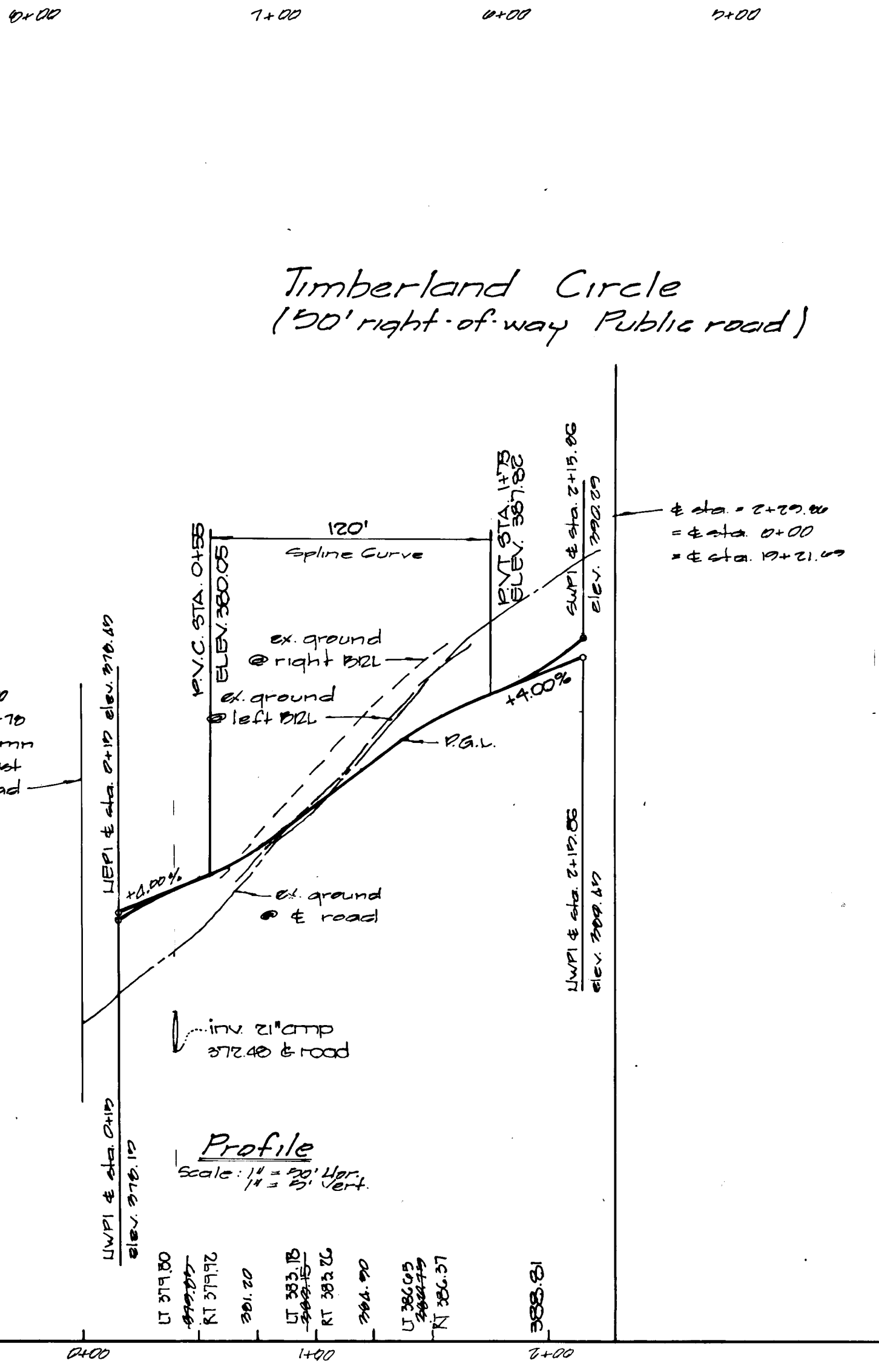
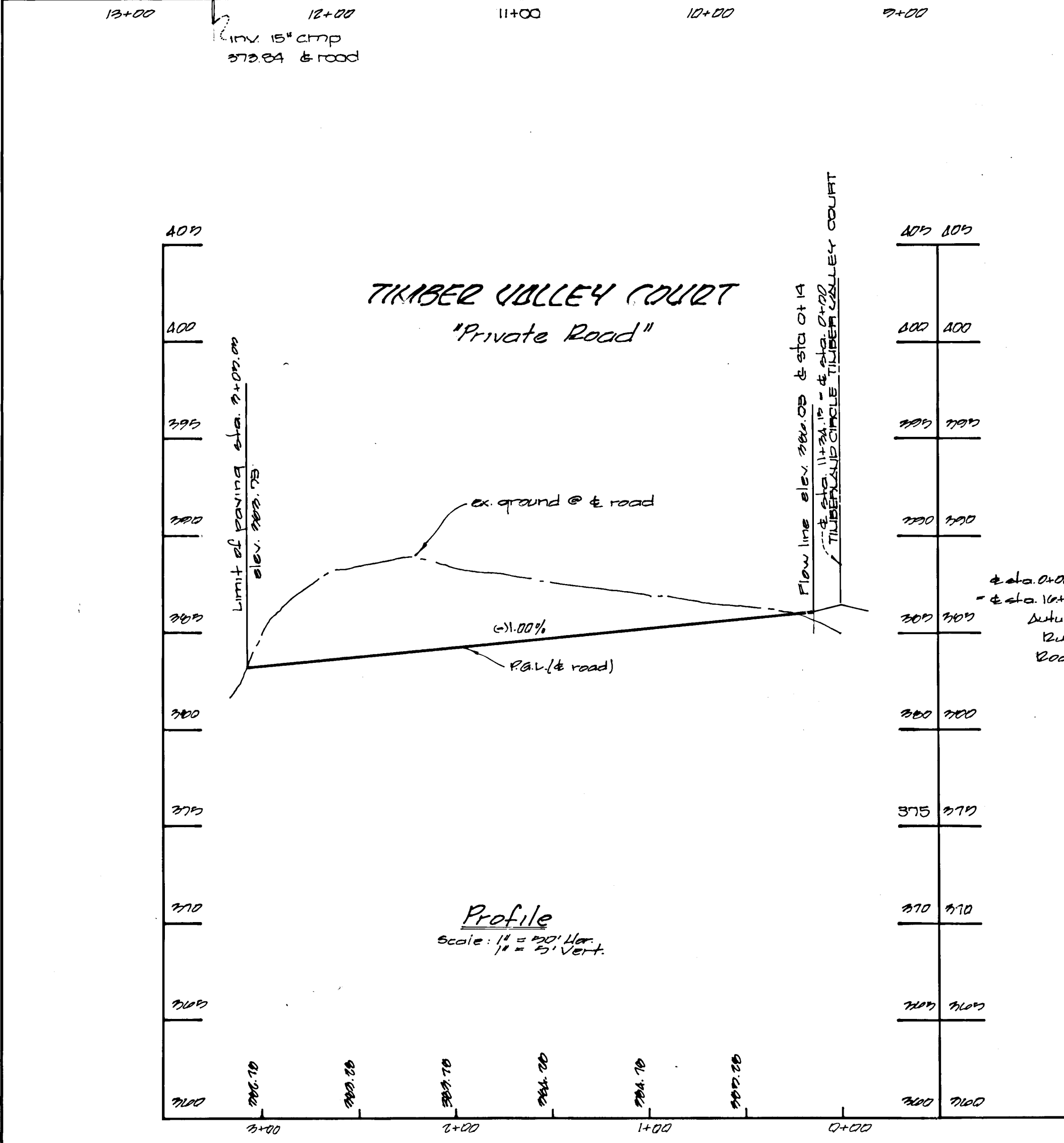
Townhomes of Timberland
 Lots 1-110
 second election district
 Howard County, Maryland
 Tax map 20 blocks 10, 14, 19, 20 parcel 60

ROAD PROFILES

Owner and Developer
 Taylor Land Service Co.
 Land Design and Development
 8801 Main St.
 Ellicott City, Maryland 21043

Scale: as shown Date: 12/16/88 Drawing: 1 of 11
 Res. K. Fralic, Dwn. T. Salas, Chk. G. Grovo

Fisher, Collins & Carter, Inc.
 Civil Engineers and Land Surveyors
 6300 Court Ave. Ellicott City, MD 21043



1450

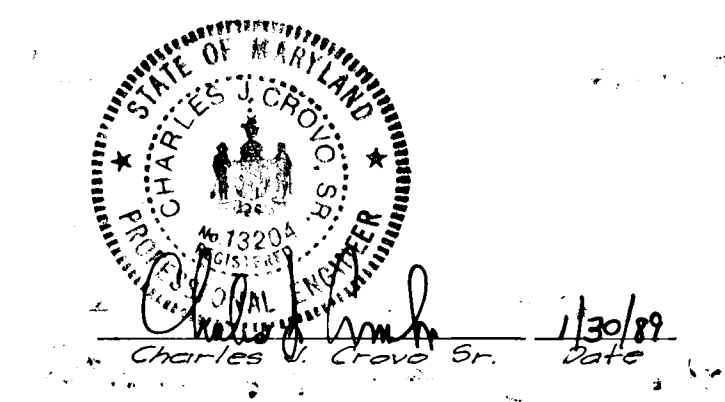
Revised by: U.S. Changed 54A 1130.00/17/90 and P&C a Top of Curb

Approved: Department of Public Works
 Chief, Land Development Division
 6/16/89 Date

Graville W. Wealand 6/15/89 Date
 Chief, Bureau of Highways

Approved: Department of Public Works
 Chief, Bureau of Engineering
 6/16/89 Date

Approved: Office of Planning and Zoning
 Chief, Division of Community Planning and Land Development
 6/21/89 Date



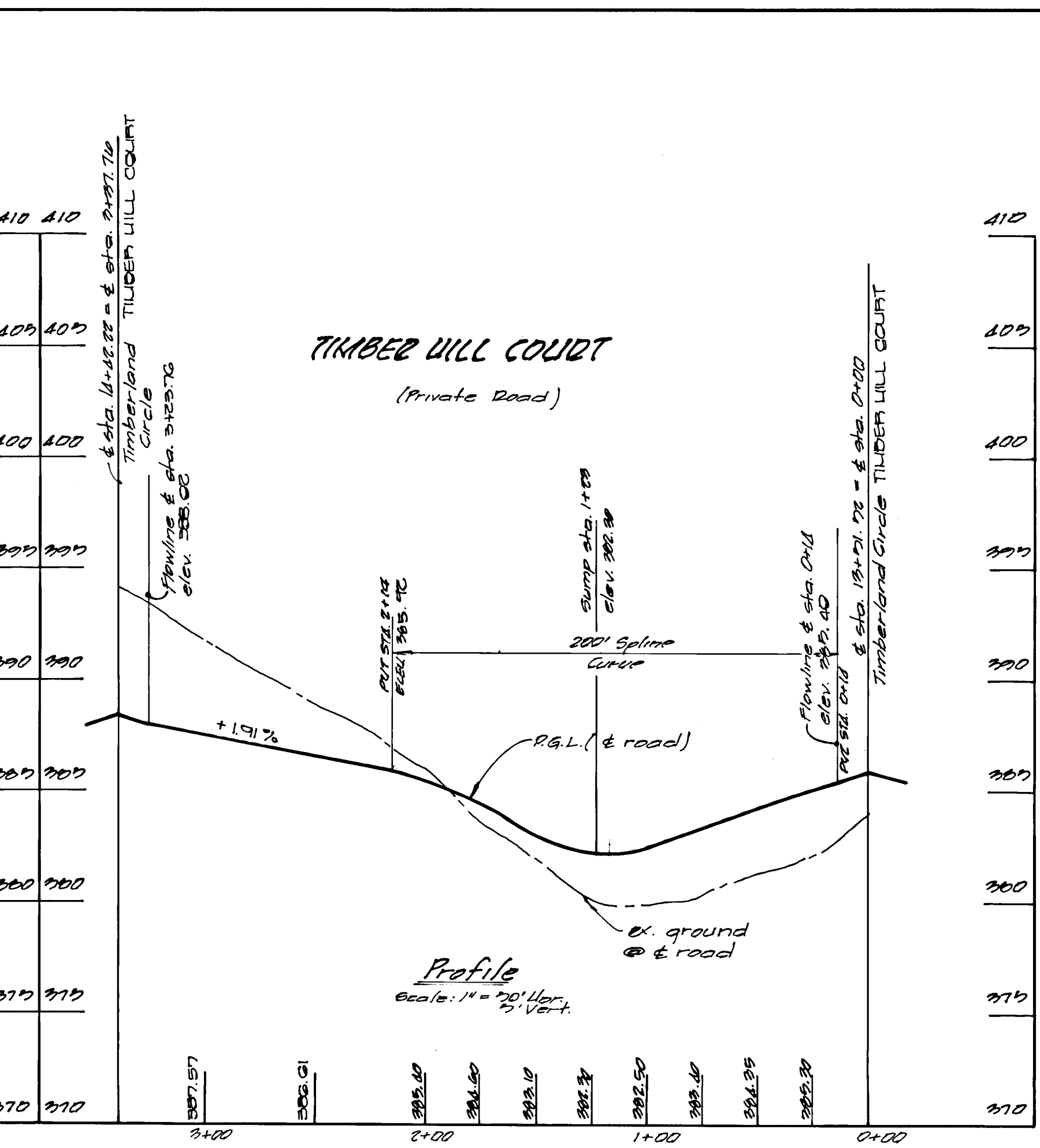
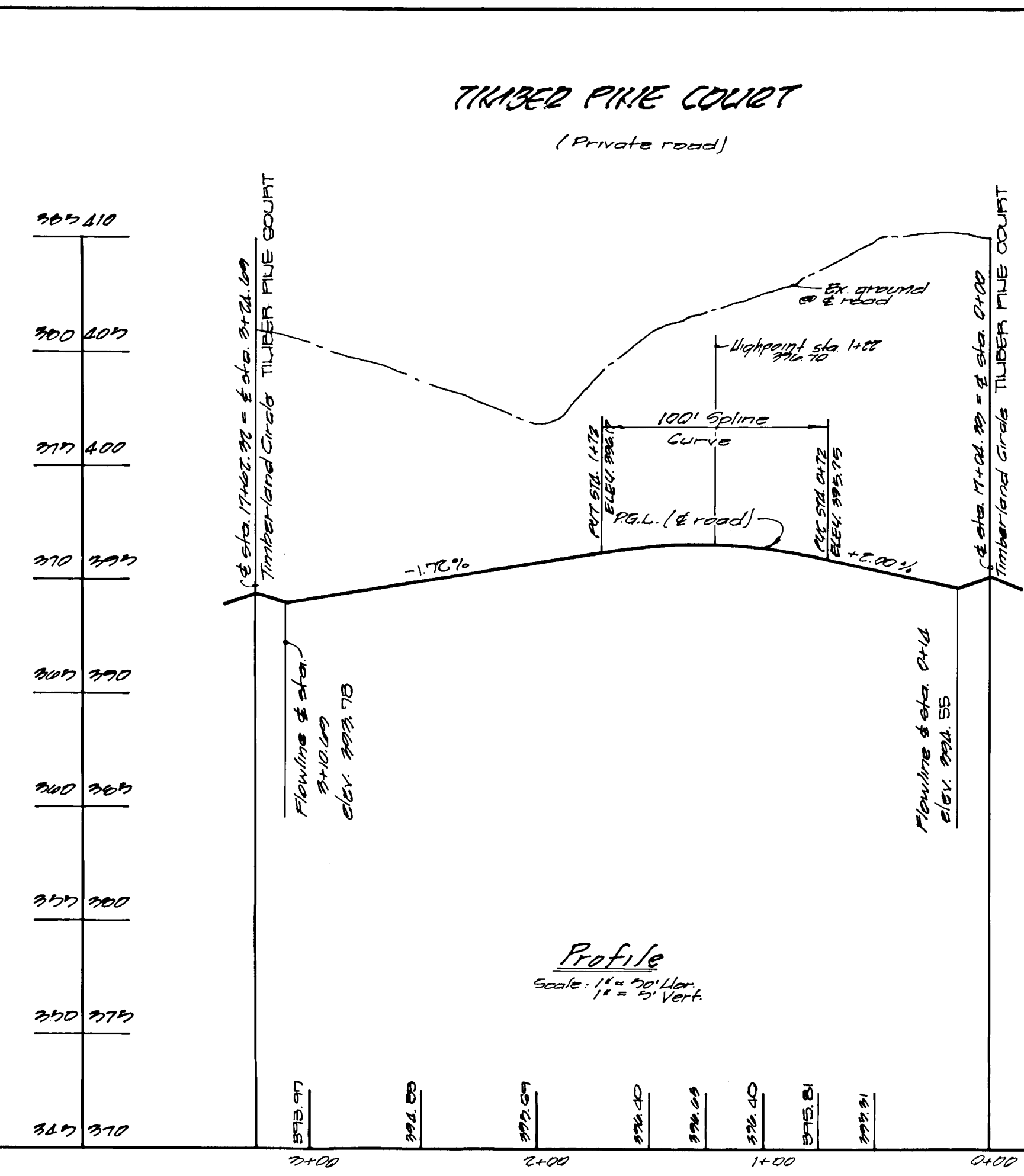
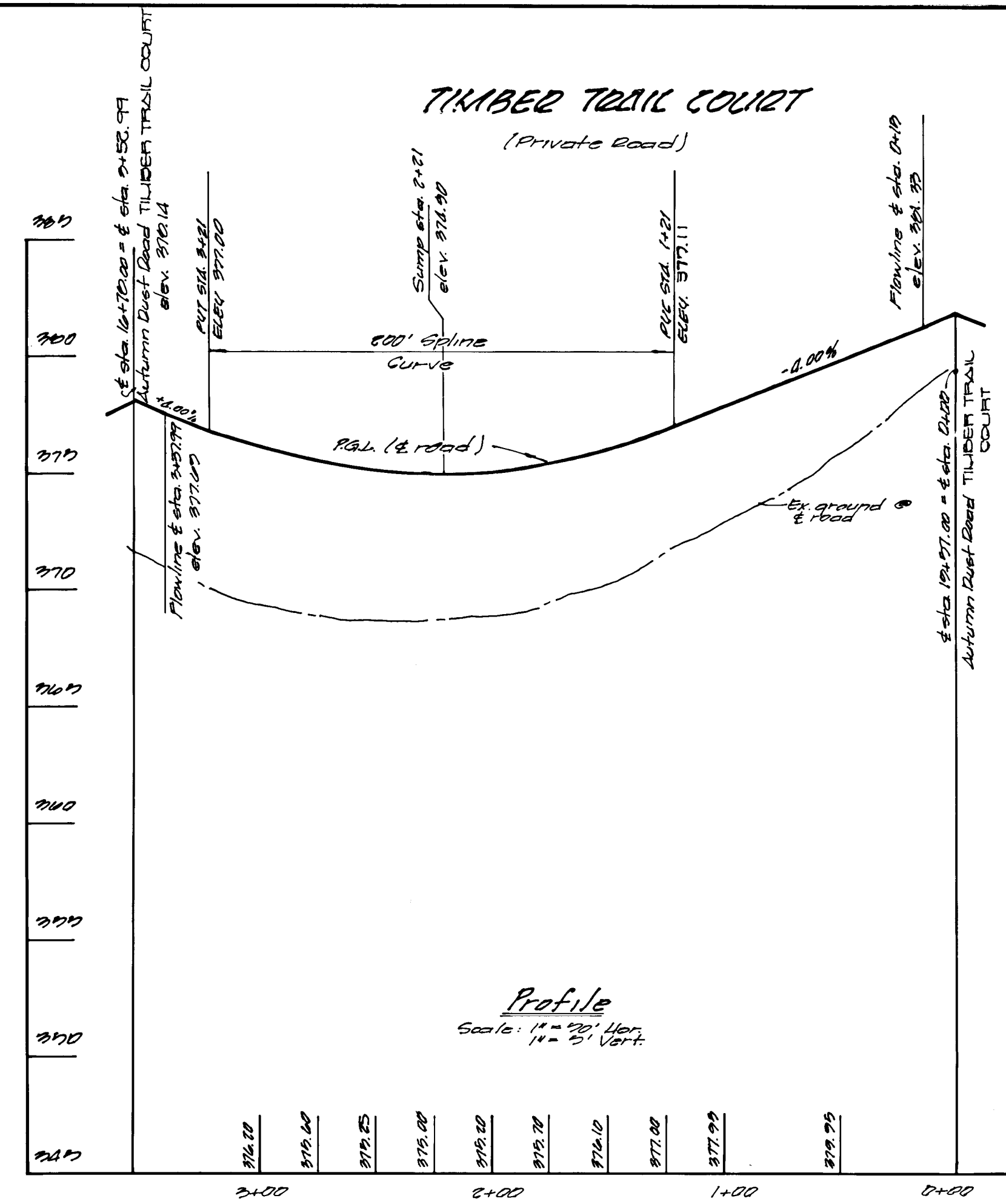
Townhomes of Timberland
 Lots 1-110
 second election district
 Howard County, Maryland
 tax map 27 block 13, 14, 15, 16 parcel 47

ROAD PROFILES

Owner and Developer
 Taylor Land Service Co.
 46 Land Design and Development
 8307 Adams St.
 Ellicott City, Maryland 21042

Scale: as shown Date: 11/20/86 Dwg no: S of 11
 Des: K. Pralle Dwn: T. Galas Ck: C. Cravo

Fisher, Collins & Carter, Inc.
 Civil Engineers and Land Surveyors
 8888 Court Ave. Ellicott City, MD 21043



Typical Roadway Section

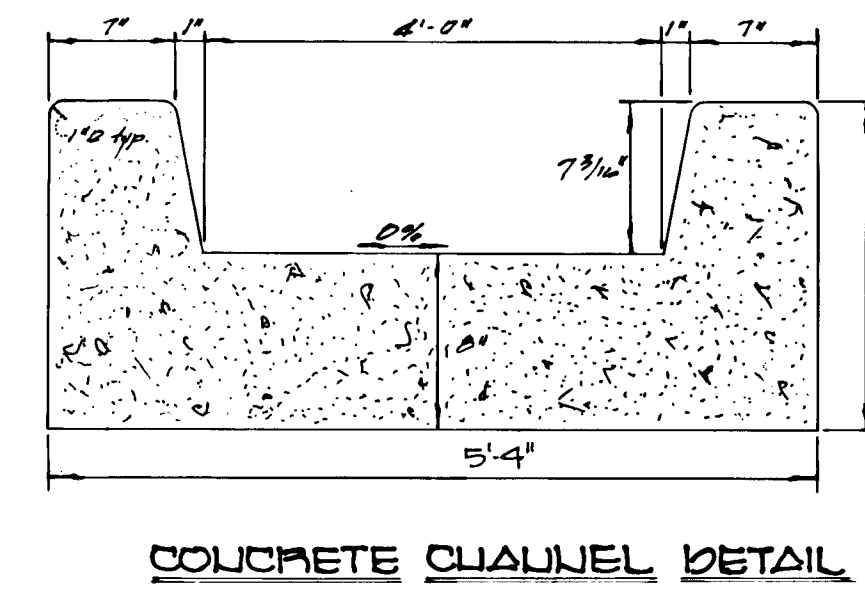
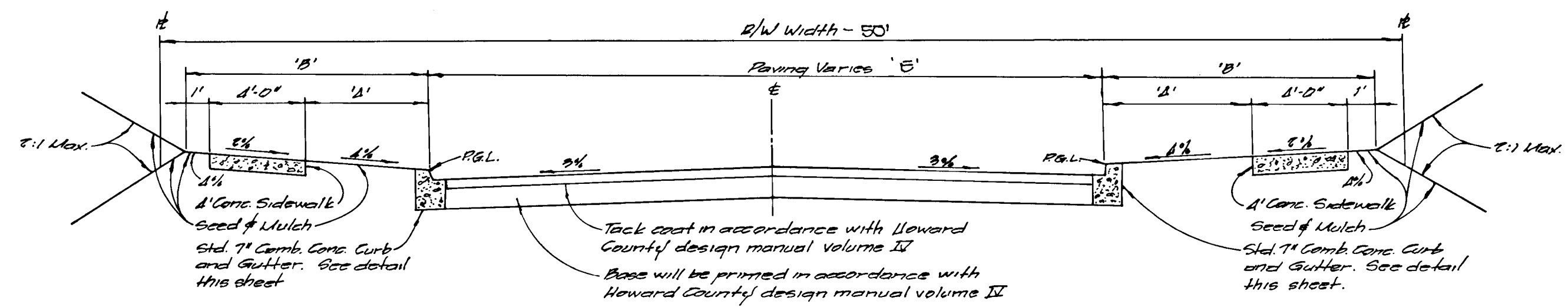
All materials and construction shall be in accordance with Howard County Design Manual Volume II standard specification and details for construction.

R/W Width - 50'

Paving Width - 5'

Back coat in accordance with Howard County design manual volume II

Base will be primed in accordance with Howard County design manual volume II

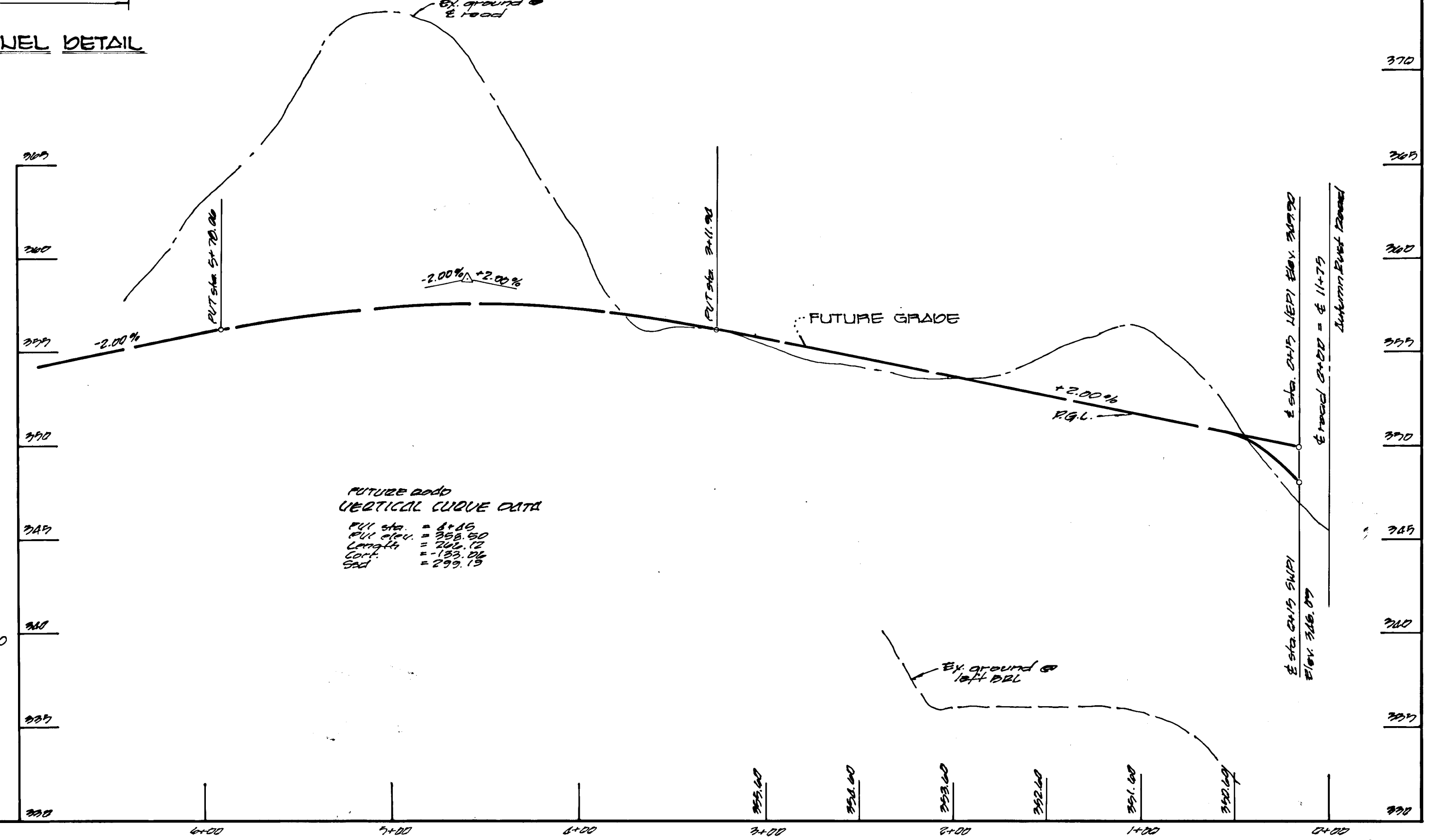


NOTE:
 *** THE CURB & GUTTER ALONG THE EAST SIDE OF TIMBER TRAIL COURT FROM E. STA. 2+70.00 TO E. STA. 2+72.18 SHALL BE REVERSE CURB & GUTTER. THE PAVING SHALL HAVE AN UPERSIDE SLOPE OF 3% FROM THE P.G.L. TO THE REVERSE CURB & GUTTER WITHIN THESE LIMITS. ***

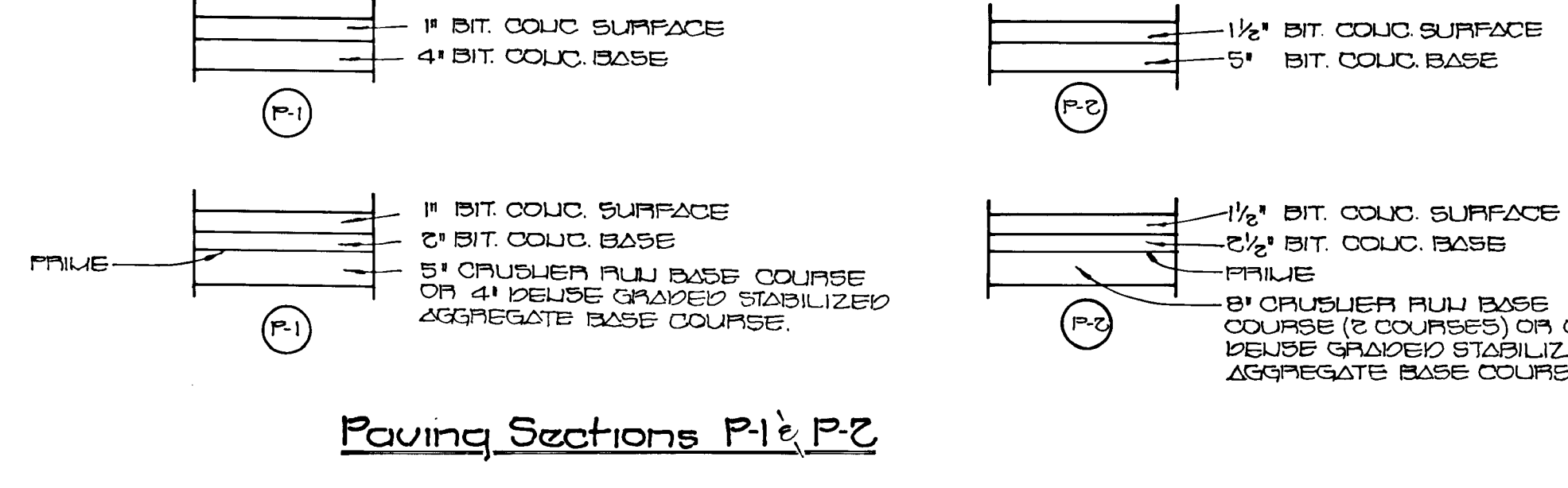
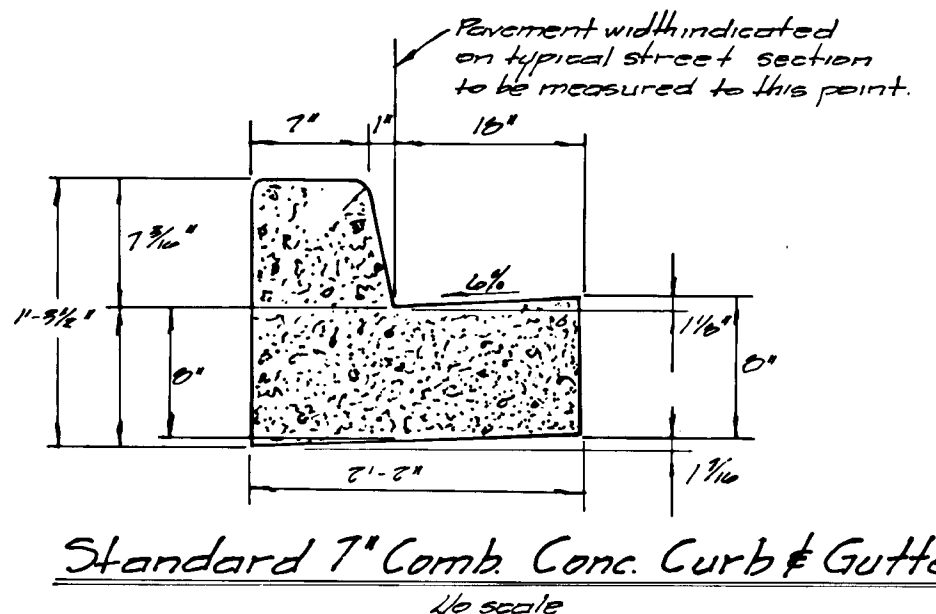
*** THE CURB & GUTTER ALONG THE EAST SIDE OF TIMBER TRAIL COURT FROM E. STA. 2+72.18 TO E. STA. 2+72.18 SHALL BE REVERSE CURB & GUTTER. THE PAVING SHALL HAVE AN UPERSIDE SLOPE OF 3% FROM THE P.G.L. TO THE REVERSE CURB & GUTTER WITHIN THESE LIMITS. ***

*** THE CURB & GUTTER ALONG THE EAST SIDE OF TIMBER TRAIL COURT FROM E. STA. 2+72.18 TO E. STA. 2+72.18 SHALL BE REVERSE CURB & GUTTER. THE PAVING SHALL HAVE AN UPERSIDE SLOPE OF 3% FROM THE P.G.L. TO THE REVERSE CURB & GUTTER WITHIN THESE LIMITS. ***

TYPICAL SECTION - PARKING ADJACENT TO PRIVATE AND PUBLIC ROADS

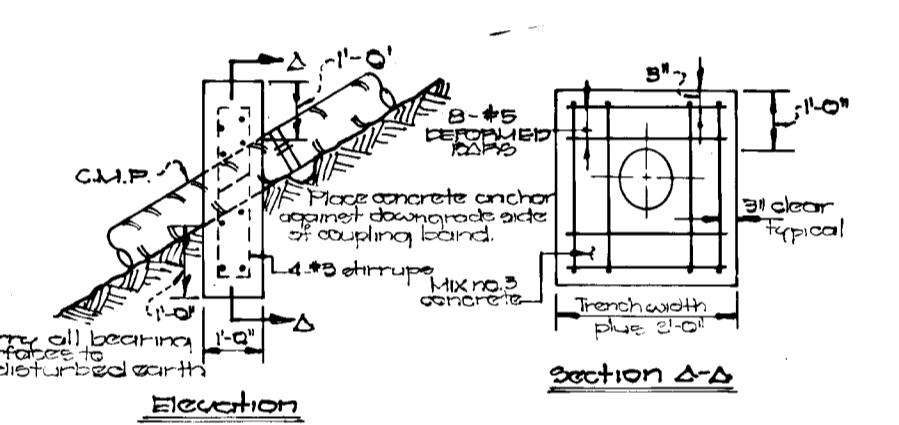
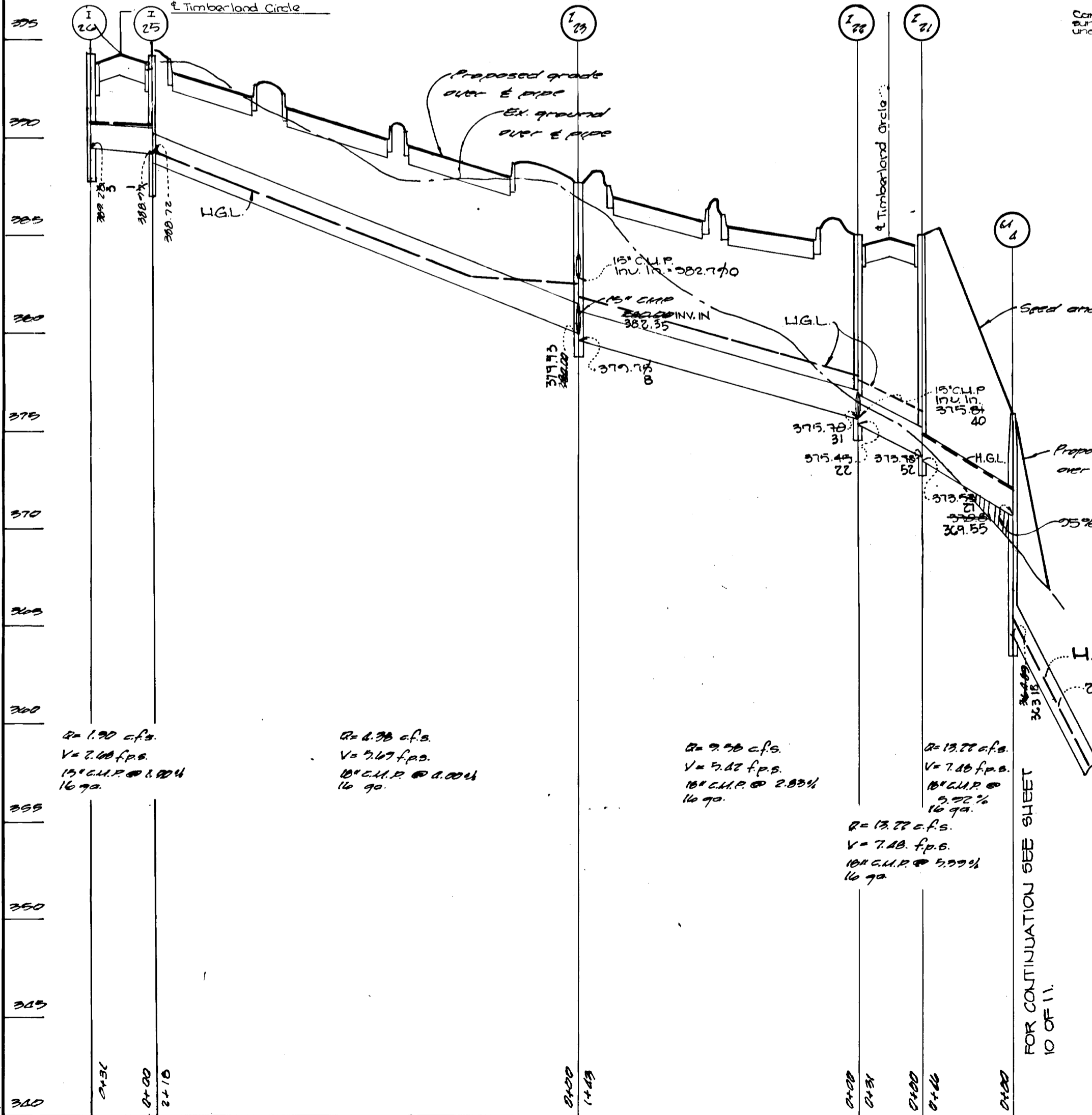
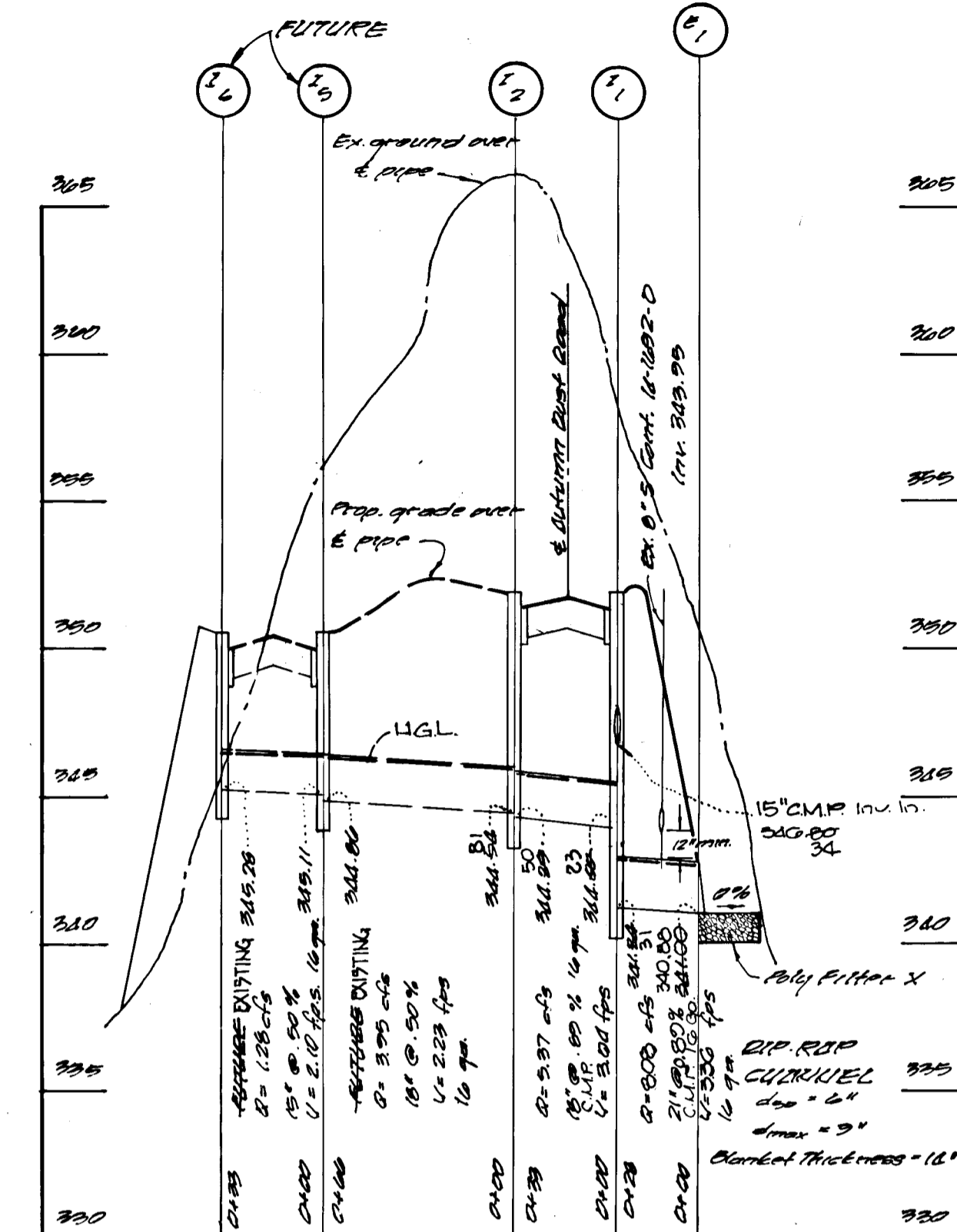
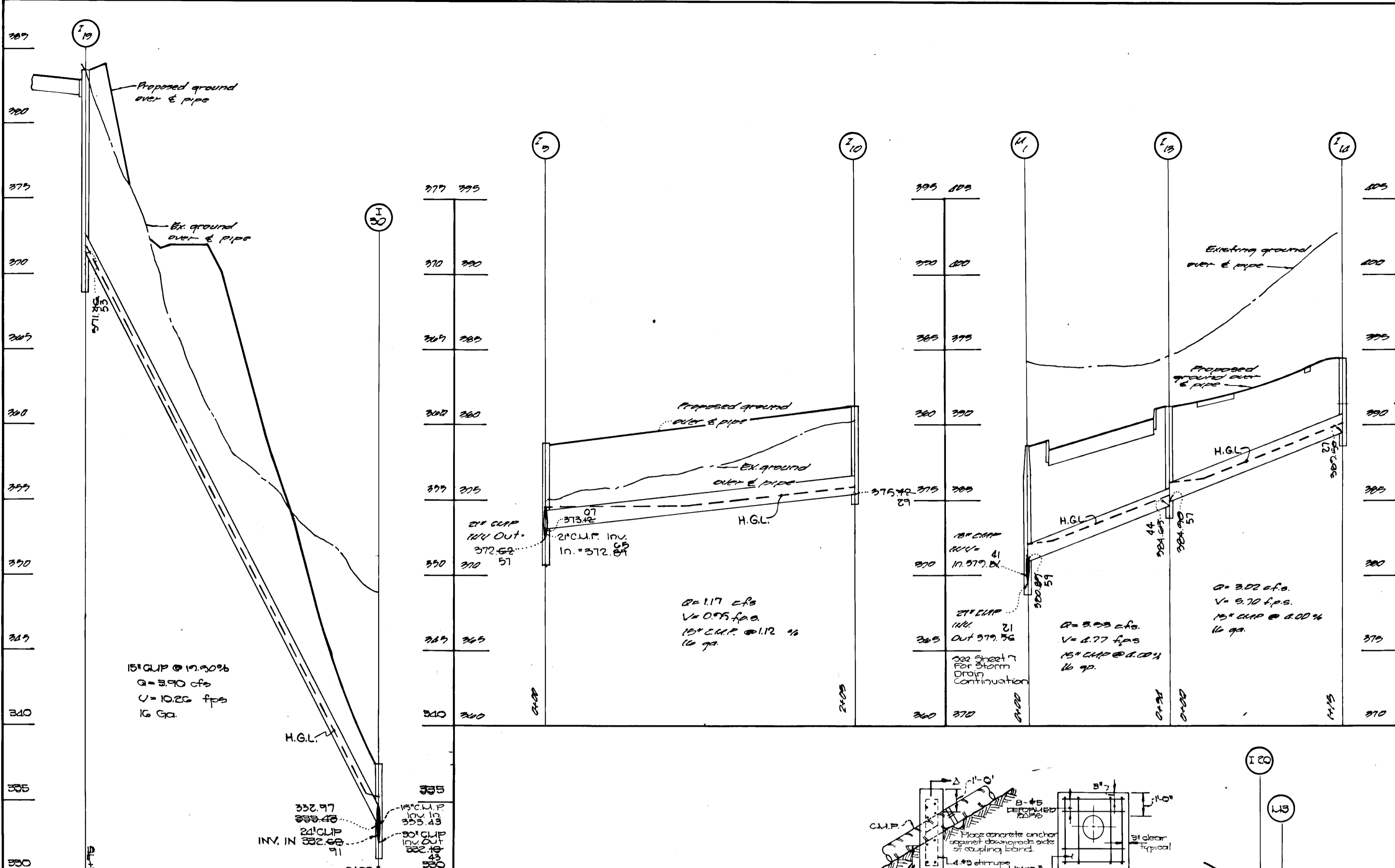


Paving Width	R/W	Classification	A'	B'	Design Speed	Zoning	E. sta. limits	Paving Section	C'	D'	E'
20'	50'	local	4'	9'	30 mph	D-ED	11+75 to 21+30.56	P-2	30'	14'	30'
20'	50'	local	4'	9'	30 mph	D-ED	0+00 to 2+29.86	P-2	30'	14'	30'
20'	50'	local	4'	9'	30 mph	D-ED	0+00 to 19+21.09	P-2	30'	14'	30'
20'	50'	private	4'	9'	30 mph	D-ED	0+00 to 3+19.54	P-1 & 2	30'	12'	24'
20'	50'	private	4'	9'	30 mph	D-ED	0+00 to 3+16.59	P-1 & 2	30'	12'	24'
20'	50'	private	4'	9'	30 mph	D-ED	0+00 to 3+27.36	P-1 & 2	30'	12'	24'
20'	50'	private	4'	9'	30 mph	D-ED	0+00 to 3+25.09	P-1 & 2	30'	12'	24'



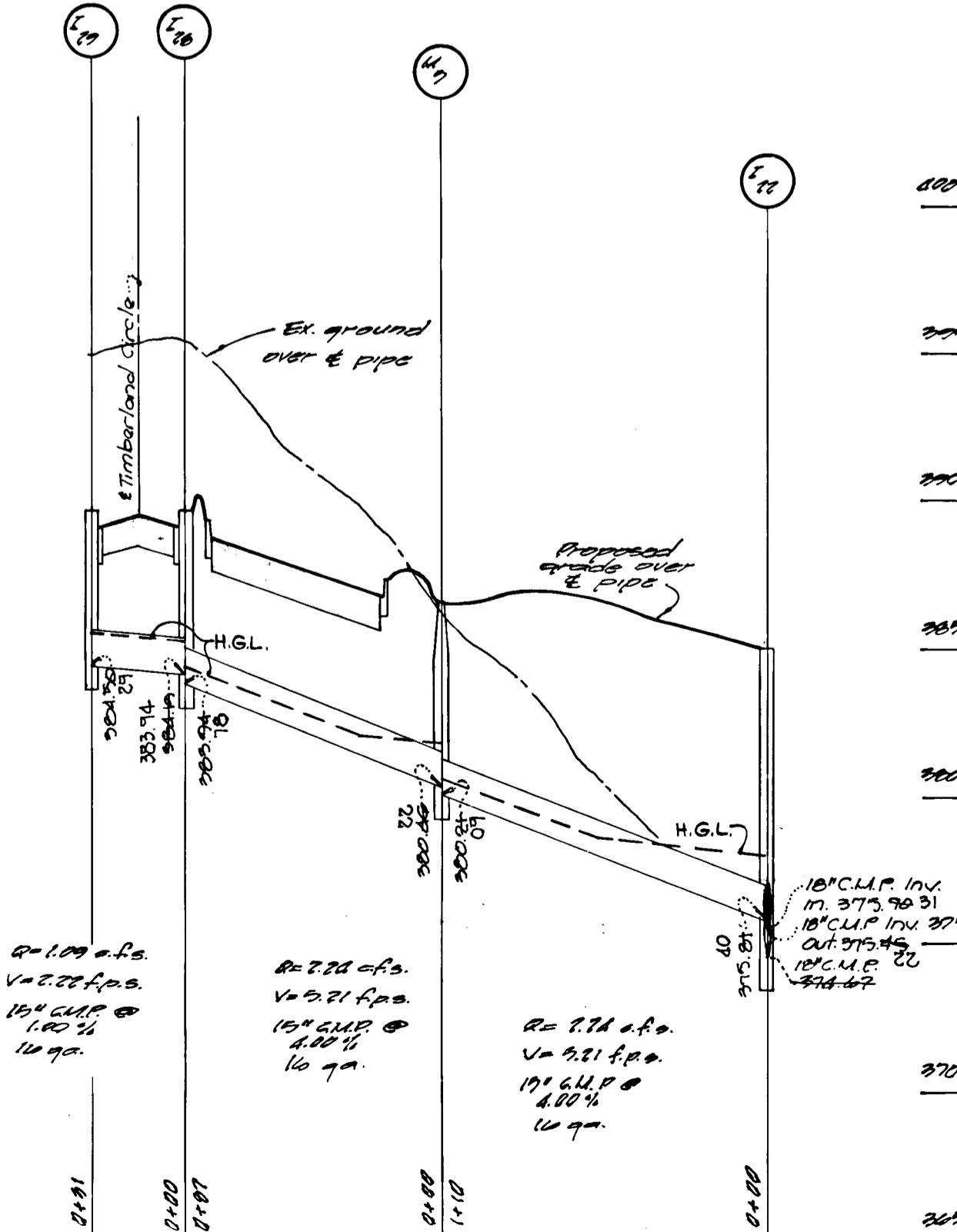
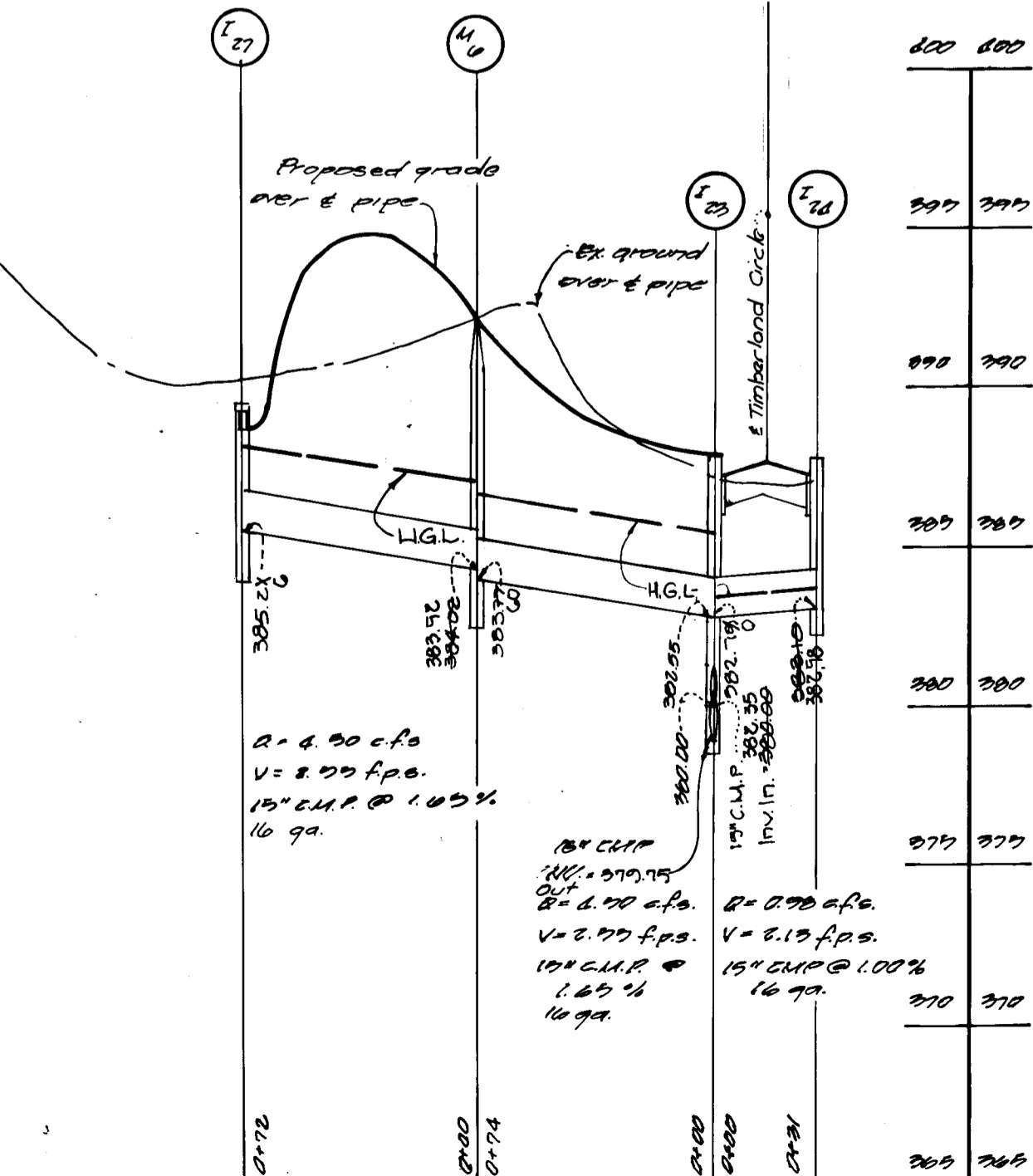
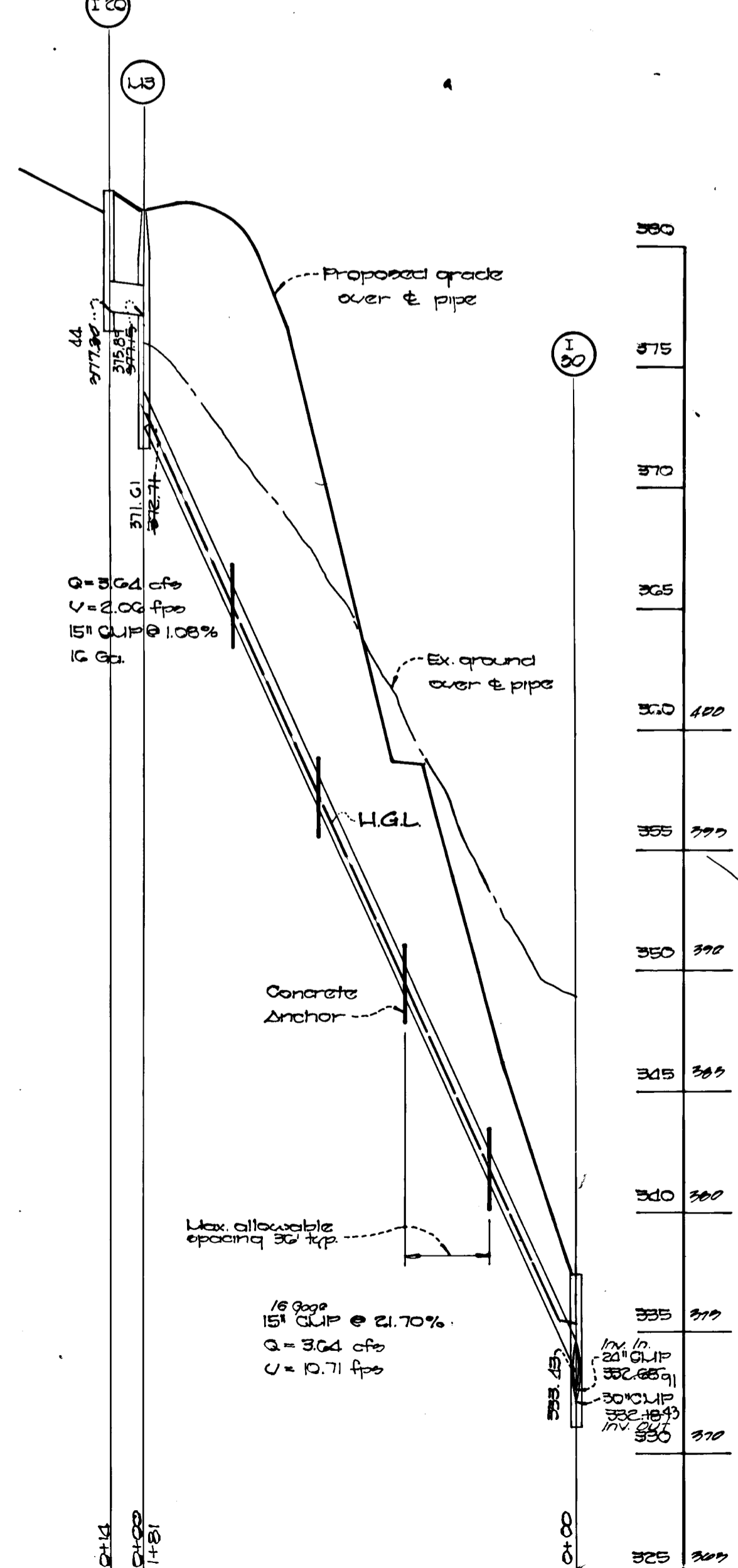
FUTURE ROAD VERTICAL CURVE DATA
 PVI = 384.50
 L = 120.00
 G1 = -2.00%
 G2 = 2.00%

1450



Concrete Anchor
Not to scale

385	370
380	365
375	360
370	355
365	350
360	345
355	340
350	335
345	330
340	325



Charles J. Cravo, Jr.
1/30/89
Date

Approved Department of Public Works

Paul M. Leman
6/16/89
Date
Chief, Land Development Division

Approved Bureau of Highways
G. W. W. W. W. W.
6/15/89
Date
Chief, Bureau of Highways

Approved Department of Public Works
G. W. W. W. W.
6/15/89
Date
Chief, Bureau of Engineering

Approved Office of Planning & Zoning
G. W. W. W. W.
6/15/89
Date
Chief, Division of Community Planning and Land Development

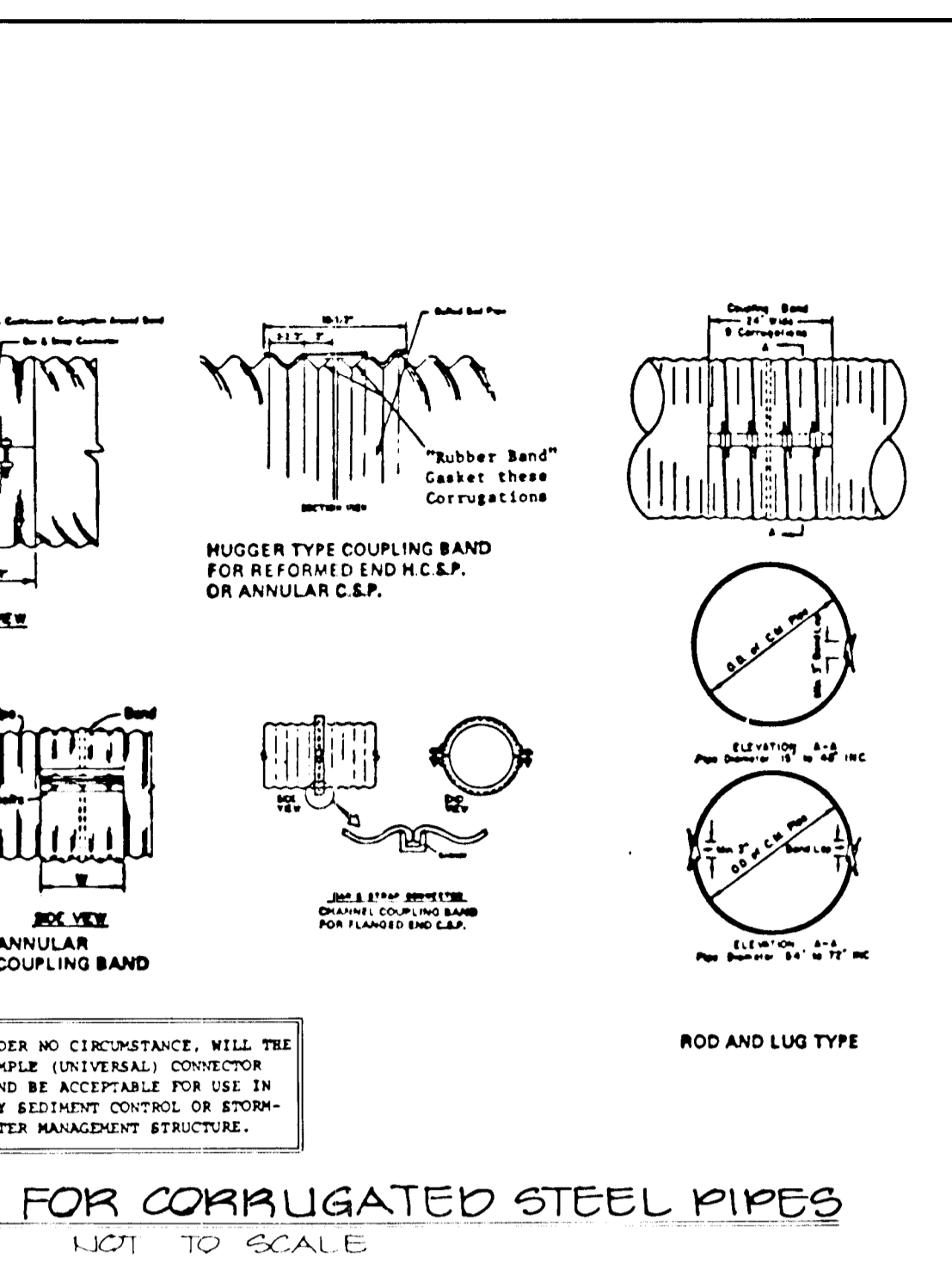
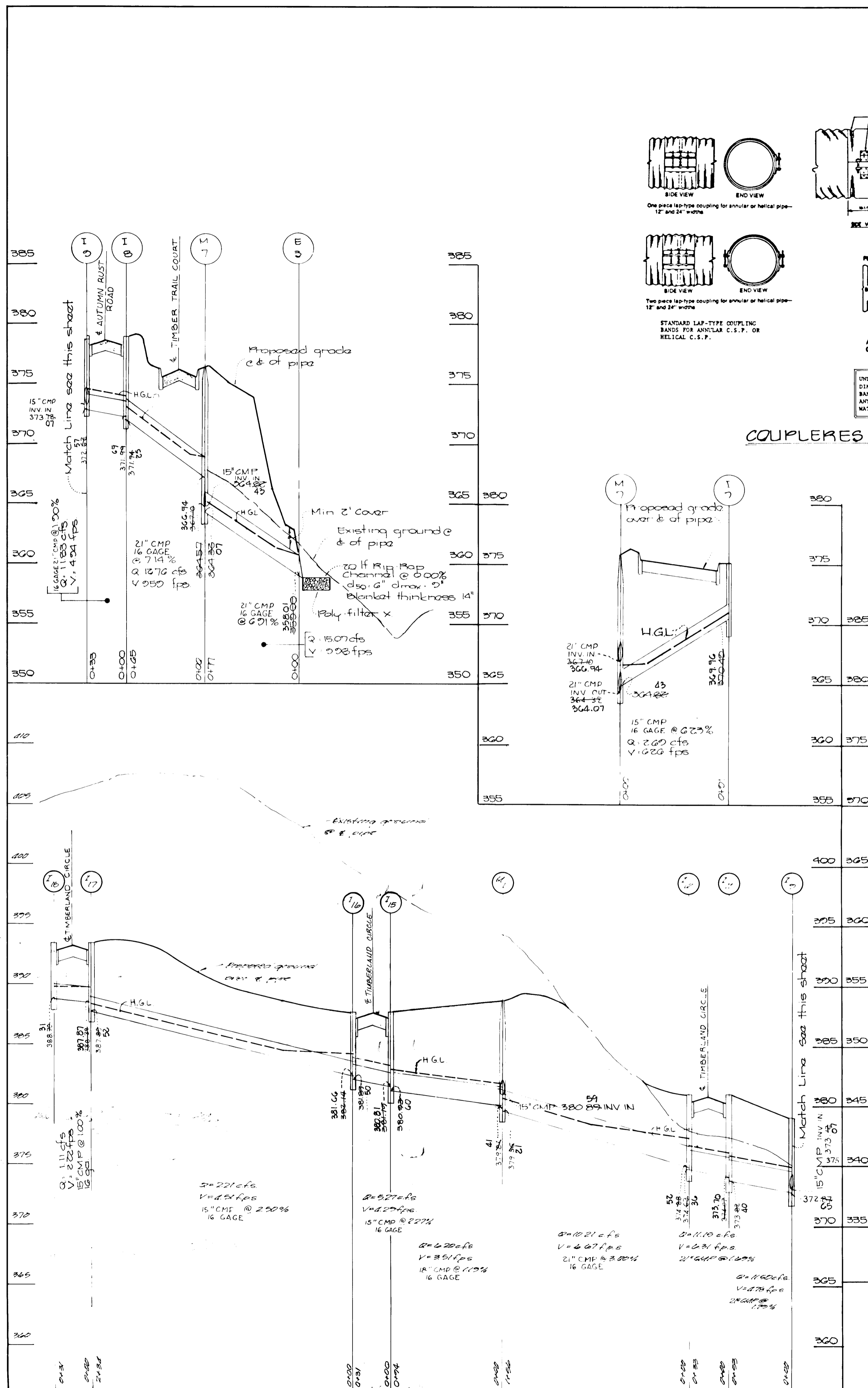
Approved
G. W. W. W. W.
6/15/89
Date
Chief, Division of Community Planning and Land Development

Townhomes of Timberland
Lots 1-110
second election district
Howard county, Maryland
tax map 23 blocks 18,14,19,20 parcel 67

STORM DRAIN PROFILES

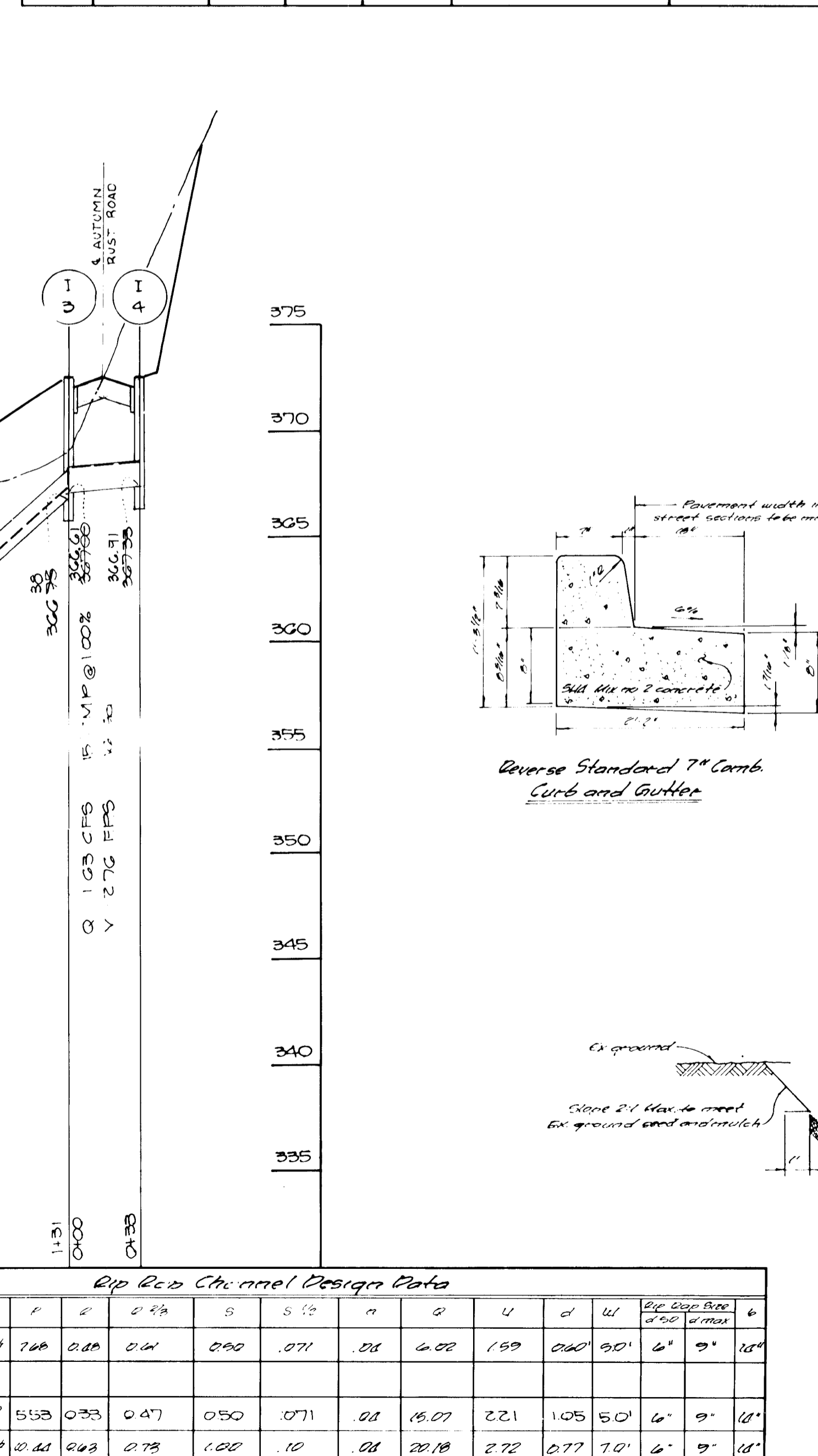
Owner and Developer
Taylor Land Service Co.
Land Design and Development
8307 Linn St.
Ellicott City, Maryland 21043
Scale: as shown Date: Jan. 25, 1989 Drawn by: G. J. J.
Rev. E. Fraze Drm. T. Sales Chk. C. Cravo
Fisher, Collins & Carter, Inc.
Civil Engineers and Land Surveyors
8000 Court Ave. Ellicott City, Maryland 21043

1450



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

STRUCT.	TYPE	TOP ELEVATION	INV. IN.	INV. OUT	LOCATION	REMARKS
1-1	A-5	346.80	346.80	341.74 51	ROAD 12+22 RT 15'	S.D. 4.01 & 4.83
1-2	W/DIFFLECTORS	351.80	351.80	344.29 50	ROAD 12+22 LT 15'	S.D. 4.01 & 4.83
1-3	A-5	372.58	372.58	366.75 58	ROAD 14+73 RT 15'	S.D. 4.01 & 4.83
1-4	A-5	372.54	372.54	366.71	ROAD 14+73 LT 15'	S.D. 4.01 & 4.83
1-5	W/DIFFLECTORS	375.24	375.24	368.91	ROAD 2+21 LT 12'	S.D. 4.01
1-6	FUTURE SYSTEM	375.24	375.24	368.91	ROAD 17+31 RT 15'	S.D. 4.01
1-7	A-5	378.83	378.83	373.47 07	ROAD 17+31 LT 15'	S.D. 4.01
1-8	A-5	381.22	381.22	375.48 23	ROAD 19+34 LT 15'	S.D. 4.01 & 4.83
1-10	W/DIFFLECTORS	379.75	379.75	373.69 40	ROAD 0+43 RT 15'	S.D. 4.01 & 4.83
1-11	W/DIFFLECTORS	379.75	379.75	374.74 52	ROAD 0+43 LT 15'	S.D. 4.01 & 4.83
1-12	A-5	381.74	381.74	384.65 44	ROAD 18+74 LT 14'	S.D. 4.01
1-13	A-5	384.57	384.57	389.58 27	ROAD 2+82 LT 12'	S.D. 4.01 & 4.83
1-14	W/DIFFLECTORS	381.22	381.22	380.00 00	ROAD 1+38 RT 14'	S.D. 4.01
1-15	A-5	382.00	382.00	381.00 50	ROAD 1+38 RT 14'	S.D. 4.01
1-16	A-5	382.00	382.00	381.00 50	ROAD 3+65 RT 14'	S.D. 4.01 & 4.83
1-17	A-5	382.00	382.00	381.00 50	ROAD 3+65 RT 14'	S.D. 4.01 & 4.83
1-18	W/DIFFLECTORS	381.22	381.22	380.00 00	ROAD 10+97 LT 14'	S.D. 4.01 & 4.83
1-19	A-5	381.22	381.22	380.00 00	ROAD 8+84 RT 14'	S.D. 4.01 & 4.83
1-20	A-5	381.22	381.22	380.00 00	ROAD 8+84 RT 14'	S.D. 4.01 & 4.83
1-21	A-5	381.22	381.22	380.00 00	ROAD 8+84 RT 14'	S.D. 4.01 & 4.83
1-22	A-5	381.22	381.22	380.00 00	ROAD 8+84 RT 14'	S.D. 4.01 & 4.83
1-23	A-5	381.22	381.22	380.00 00	ROAD 10+97 LT 14'	S.D. 4.01 & 4.83
1-24	A-5	381.22	381.22	380.00 00	ROAD 10+97 LT 14'	S.D. 4.01 & 4.83
1-25	W/DIFFLECTORS	381.22	381.22	380.00 00	ROAD 8+84 RT 14'	S.D. 4.01 & 4.83
1-26	W/DIFFLECTORS	381.22	381.22	380.00 00	ROAD 8+84 RT 14'	S.D. 4.01 & 4.83
1-27	W/DIFFLECTORS	381.22	381.22	380.00 00	ROAD 10+97 LT 14'	S.D. 4.01 & 4.83
1-28	A-5	381.22	381.22	380.00 00	ROAD 14+69 RT 14'	S.D. 4.01
1-29	A-5	381.22	381.22	380.00 00	ROAD 14+69 RT 14'	S.D. 4.01
1-30	"D" INLET	381.22	381.22	380.00 00	ROAD 14+69 RT 14'	OPENINGS ON ALL 4 SIDES
M-1	STD. MANHOLE	388.94	388.94	379.46 21	ROAD 0+46 LT 14'	S.D. 5.61
M-2	STD. MANHOLE	381.22	381.22	372.34 61	ROAD 533.84 EB 56, 488.70	S.D. 5.01
M-3	STD. MANHOLE	378.83	378.83	364.99 518	ROAD 13+73 RT 20'	S.D. 5.01
M-4	STD. MANHOLE	380.75	380.75	364.99 518	ROAD 10+75 RT 14'	S.D. 5.01
M-5	STD. MANHOLE	376.68	376.68	364.99 518	ROAD 3+01 LT 20'	S.D. 5.01
M-6	STD. MANHOLE	362.45	362.45	354.74 07	ROAD 13+37 RT 21'	S.D. 5.01
M-7	STD. MANHOLE	342.75	342.75	341.50	ROAD 12+17 RT 45'	S.D. 5.61
M-8	STD. MANHOLE	342.75	342.75	341.50	ROAD 16+10 RT 122'	S.D. 5.61
E-1	METAL END SECTION	334.58	334.58	332.04 04	ROAD 16+10 RT 122'	S.D. 5.61
E-2	METAL END SECTION	334.58	334.58	332.04 04	ROAD 16+10 RT 122'	S.D. 5.61
E-3	METAL END SECTION	334.58	334.58	332.04 04	ROAD 16+10 RT 122'	S.D. 5.61
E-4	METAL END SECTION	334.58	334.58	332.04 04	ROAD 16+10 RT 122'	S.D. 5.61
E-5	METAL END SECTION	334.58	334.58	332.04 04	ROAD 16+10 RT 122'	S.D. 5.61



APPROVED

Department of Public Works

Chief, Land Development Division

Chief, Bureau of Highways

Department of Public Works

Chief, Bureau of Engineering

Office of Planning & Zoning

Chief, Division of Community Planning

Townhomes of Timberland
Lots 1-110
second election district
Howard county, Maryland
tax map 29 blocks 18, 14, 19, 20 parcel 66

STORMDRAIN PROFILES AND DETAILS

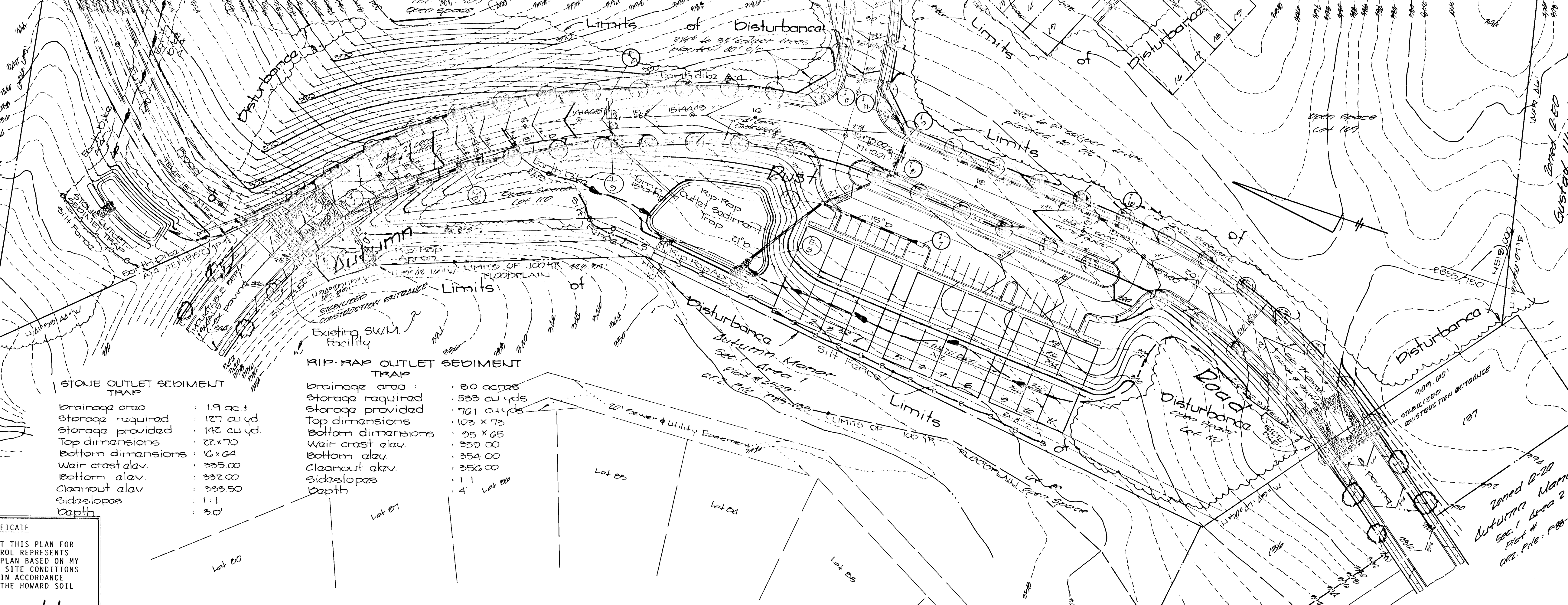
Owner and Developer
Taylor Land Service Co.
% Land Design and Development
8005 Blaine St.
Ellicott City, Maryland 21038

Scale as shown Date: Jan 26, 1998, Sheet 7 of 11
Asst. E. Prater, Dnn T. Salas, Chf.: C. Crowe

Prater, Collins & Carter, Inc.
Civil Engineers and Land Surveyors
8300 Court Ave. Ellicott City, Maryland 21038

REVISION: Revised Structure Schedule 1-20.
By: J. Smith March 12, 1991

ASBUILT 2-13-97 F80-151



STONE OUTLET SEDIMENT TRAP

Brainage area	1.9 ac.
Storage required	127 cu yd
Storage provided	142 cu yd
Top dimensions	22 x 70
Bottom dimensions	16 x 64
Wair crest elev.	335.00
Bottom elev.	332.00
Cleanout elev.	333.50
Sideloop	1:1
Depth	3.0'

RIP-RAP OUTLET SEDIMENT TRAP

Brainage area	80 acres
Storage required	583 cu yds
Storage provided	761 cu yds
Top dimensions	103 x 73
Bottom dimensions	25 x 65
Wair crest elev.	350.00
Bottom elev.	354.00
Cleanout elev.	356.00
Sideloop	1:1
Depth	4' Lot 00

- CONSTRUCTION SEQUENCE**
- OBTAIN GRADING PERMIT.
 - CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM AND SWALE.
 - CONSTRUCT RIP-RAP TRAPS, STONE OUTLET TRAPS AND STORMWATER MANAGEMENT FACILITY AS SHOWN ON PLAN. STABILIZE TRAPS AND PONDS USING TEMPORARY SEEDING.
 - FALL SILT FENCE AND EARTH DIKES AS SHOWN ON PLAN. STABILIZE USING TEMPORARY SEEDING. CLEAR AND GRUB TO LIMITS OF DISTURBANCE. GRADE ROADS TO SUBGRADE.
 - CONSTRUCT PERMANENT STORMDRAIN SYSTEM AS SHOWN ON PLAN.
 - CONTRACTOR TO BRICK-UP PERMANENT OUTLET TRAP NO. 1.
 - CONTRACTOR TO BRICK-UP PERMANENT STORM DRAIN AT 1-3 TOWARDS M-8 UNTIL STORM DRAIN AT 1-2 TOWARDS M-8 IS IN PLACE.
 - CONTRACTOR TO BRICK-UP PERMANENT STORM DRAIN AT 1-2 TOWARDS M-8 UNTIL PERMANENT SEEDING IS IN PLACE.
 - CONTRACTOR TO BRICK-UP PERMANENT STORM DRAIN AT 1-3 TOWARDS M-8 UNTIL PERMANENT SEEDING IS IN PLACE.
 - CONSTRUCT GRADE STABILIZATION STRUCTURE AS SHOWN ON PLAN.
 - 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.
 - SEDIMENT TRAPS AND PONDS SHALL BE DETERMINED BY PUMPING.
 - SEDIMENT SHALL BE REMOVED FROM THE TRAPS AND PONDS WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED. SEDIMENT MUST BE PLACED UP HILL FROM TRAPS AND PONDS.
 - REMOVE SEDIMENT FROM EXISTING ROADWAYS AND DRESS STONE CONSTRUCTION ENTRANCE ON A DAILY BASIS.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR PERIMETER SEDIMENT CONTROL STRUCTURES; DIKES, SWALES, DITCH PERIMETER SLOPES GREATER THAN 3:1 b) 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 - CONSTRUCT WATER AND SEWER UTILITIES.
 - CONSTRUCT CURB AND GUTTER AND BASE COURSE OF ROAD.
 - REMOVE STONE CONSTRUCTION ENTRANCE CLEAN BASE COURSE. APPLY TACK COAT TO BASE COURSE AND LAY SURFACE COURSE.
 - CONSTRUCT SIDEWALKS.
 - COMPLETE STABILIZATION OF ALL DISTURBED AREAS SHALL BE DONE PRIOR TO REMOVAL OF ALL SEDIMENT CONTROL STRUCTURES.
 - REMOVE SILT FENCE, STONE OUTLET TRAPS AND RIP-RAP OUTLET TRAPS.
 - ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.
 - NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AT COMPLETION OF PROJECT (301-992-2437).
- THE STORMWATER MANAGEMENT FUND WILL BE USED AS A SEDIMENT BOWL UNTIL SUCH TIME AS THE AREA DRAINING TO THE FUND IS STABILIZED. INSTALL BLOCKING DEVICE (SEE DETAIL THIS SHEET) CONTRACTOR SHALL REMOVE SEDIMENT FROM FUND WHEN THE CLEANOUT ELEVATION (331.00) HAS BEEN REACHED.**

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.

Signature: *Charles J. Cravo Sr.* Date: 1/30/89

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Signature: *John Taylor* Date: 1/30/89

APPROVED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND ITS TECHNICAL REQUIREMENTS.

Signature: *Robert Ziehm* Date: 6/9/89

HOWARD COUNTY SOIL CONSERVATION DISTRICT

APPROVED: OFFICE OF PLANNING AND ZONING

Signature: *Janice S. D'Amico* Date: 6/22/89

PLANNING AND LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PUBLIC WORKS

Signature: *Robert S. Brown* Date: 6/16/89

CHIEF, BUREAU OF ENGINEERING

APPROVED: DEPARTMENT OF PUBLIC WORKS

Signature: *Robert S. Brown* Date: 6/16/89

CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PUBLIC WORKS

Signature: *Robert S. Brown* Date: 6/16/89

CHIEF, LAND DEVELOPMENT DIVISION

PERMANENT SEEDING NOTES:

APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED, SOIL ANALYSES: IN 1/4" OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- 1) PREPARED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (82 LBS/1000 SQ.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING.
- 2) UNPREPARED - DISC OR DISC INTO UPPER THREE-INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ.FT.) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (82 LBS/1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ.FT.) BEFORE SEEDING. NARROW OR DISC INTO UPPER THREE-INCHES OF SOIL.

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, PER ACRE AND 2 LBS. PER ACRE (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 (4 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 SOO, OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNKNOTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 216 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 SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES:

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED, SOIL ANALYSES: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING. FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.7 LBS/1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 2 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 SOO.

SEEDING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNKNOTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 216 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.

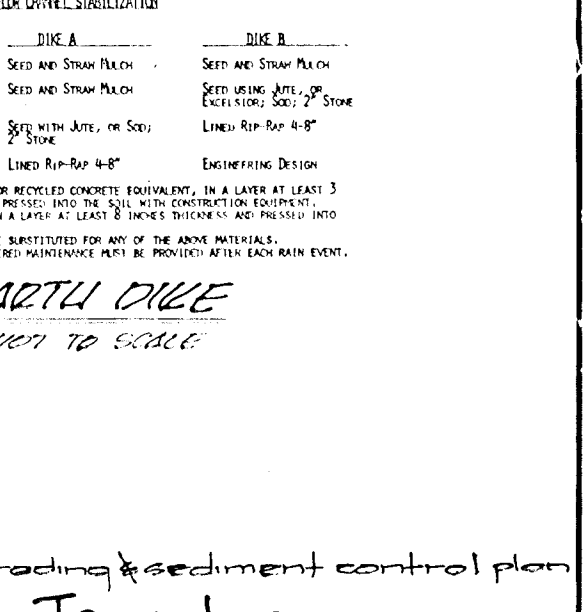
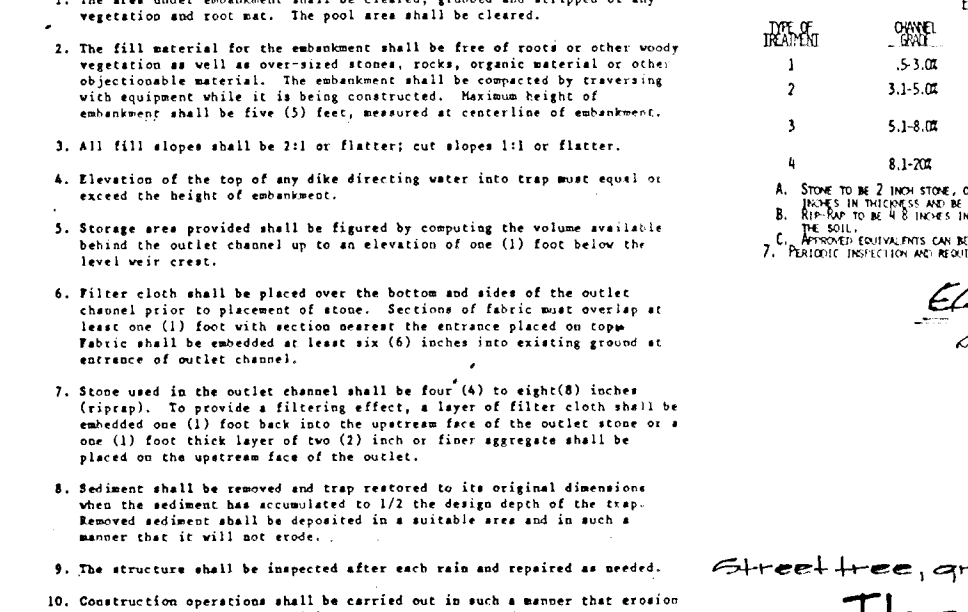
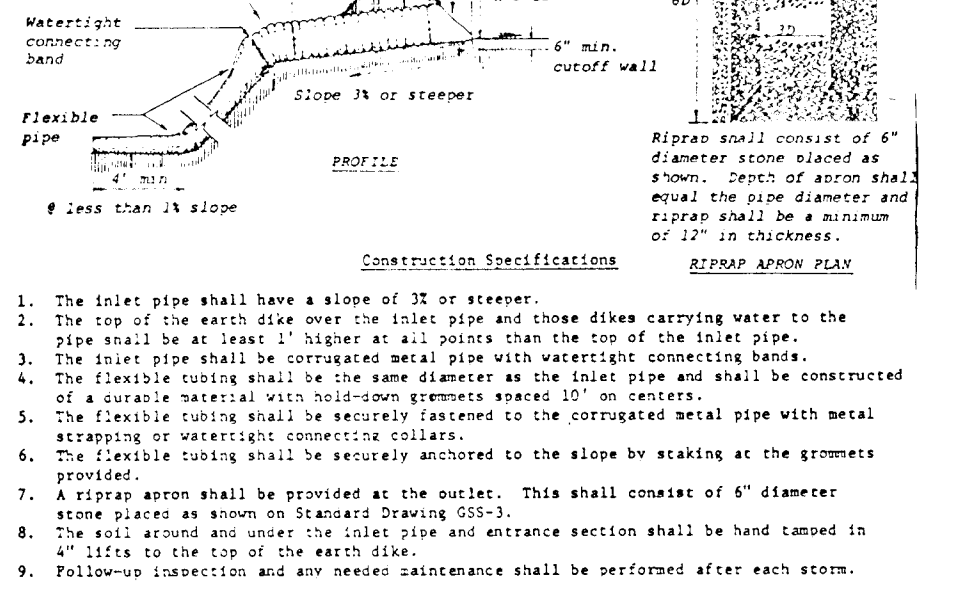
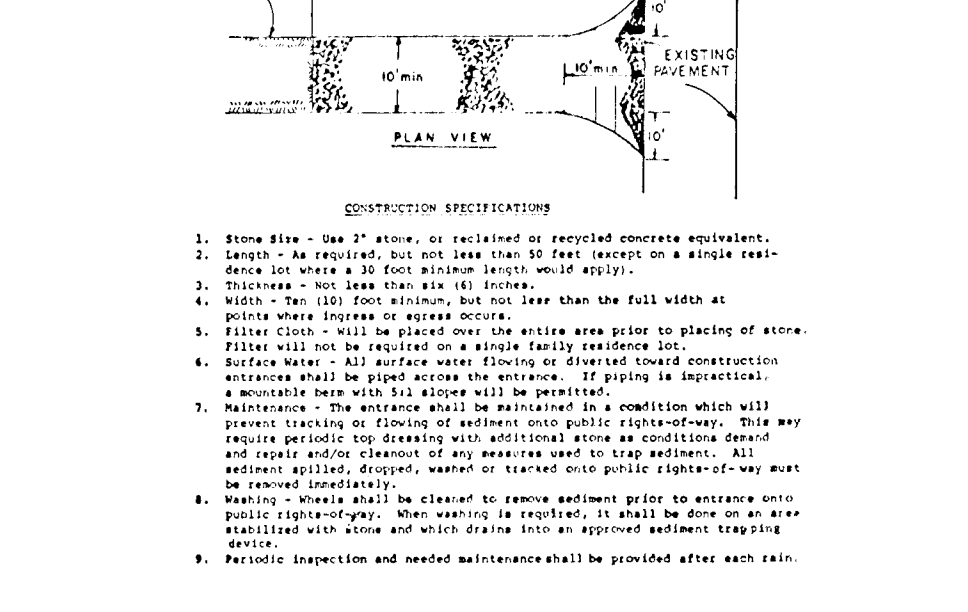
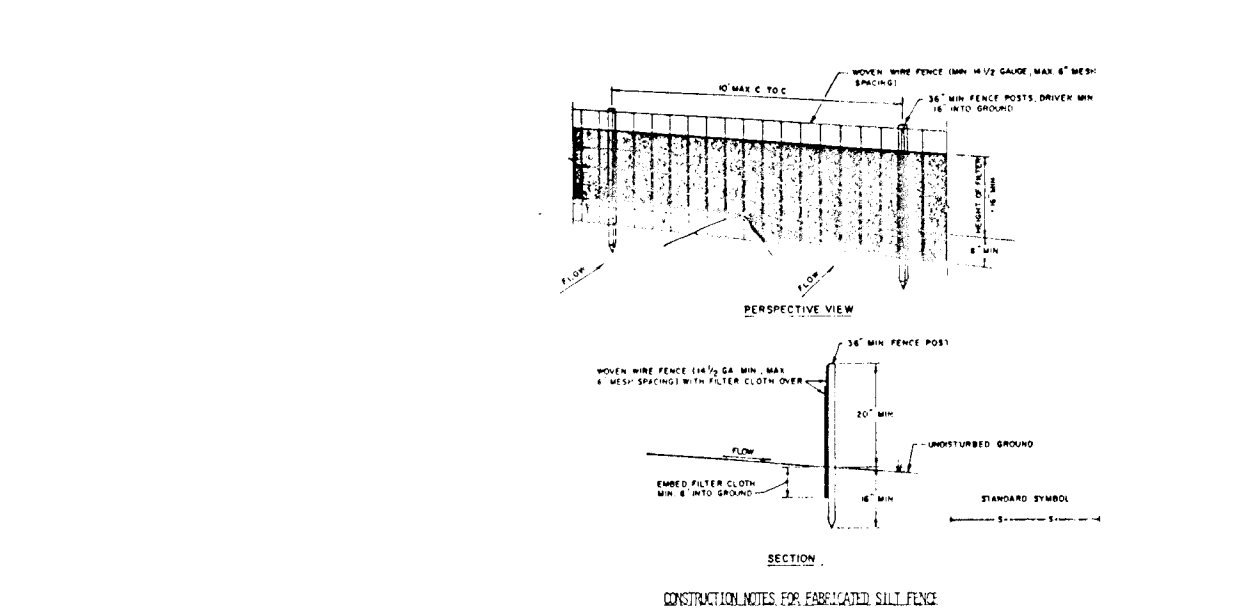
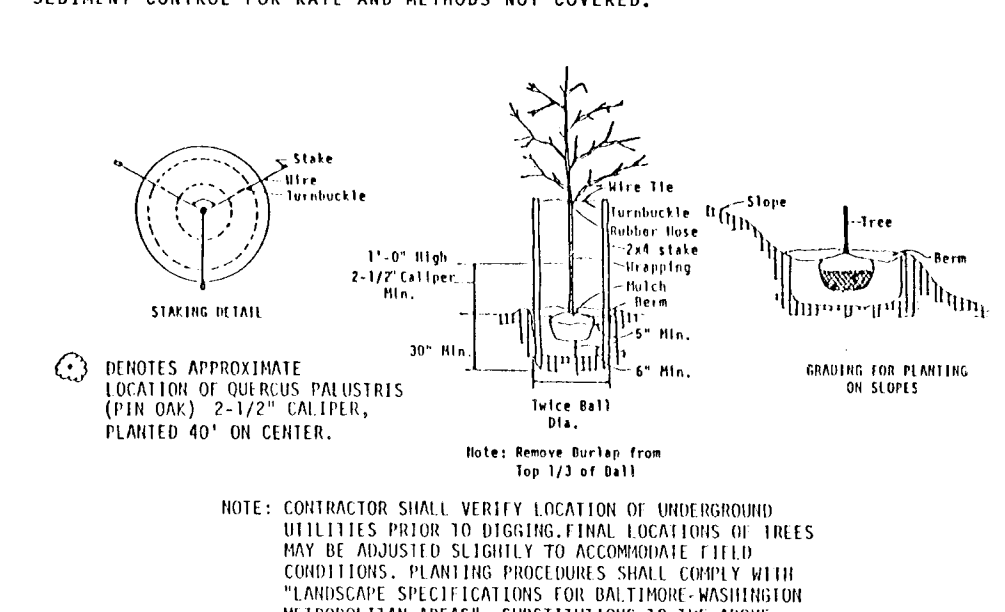
REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEDIMENT CONTROL NOTES:

- 1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (892-2437).
- 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. 52), SOO (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	583	ACRES
AREA DISTURBED	103	ACRES
AREA TO BE VEGETATIVELY STABILIZED	350	ACRES
TOTAL CUT	350	CU. YDS.
TOTAL FILL	350	CU. YDS.
- 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 SOIL CONSERVATION DISTRICT.

10) 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 CONTROL. 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.



Tree Planting Detail

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FIRM LOCATIONS IN AREAS MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL BE AS PER "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" - SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

Stabilized Construction Entrance

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FIRM LOCATIONS IN AREAS MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL BE AS PER "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" - SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

Silt Fence

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FIRM LOCATIONS IN AREAS MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL BE AS PER "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" - SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

Grade Stabilization Structure

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FIRM LOCATIONS IN AREAS MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL BE AS PER "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" - SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

Rip-rap Outlet Sediment Trap

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FIRM LOCATIONS IN AREAS MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL BE AS PER "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" - SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

Blocking Detail for Stormwater Management Pond

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FIRM LOCATIONS IN AREAS MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL BE AS PER "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" - SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

Fisher, Collins & Carter, Inc.

civil engineers and land surveyors

8000 court avenue

ellicott city, maryland 21043

telephone: (301) 821-2000

Silt Fence

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FIRM LOCATIONS IN AREAS MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL BE AS PER "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" - SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

Owner and Developer

Taylor Land Service Co. Inc.

46 Land Design and Development

8307 Main St. #2

ellicott city, maryland 21043

Grade Stabilization Structure

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FIRM LOCATIONS IN AREAS MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL BE AS PER "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" - SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

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APPROVED: OFFICE OF PLANNING AND ZONING
Marshall S. ...
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
 APPROVED: DEPARTMENT OF PUBLIC WORKS
William E. ...
 CHIEF, BUREAU OF ENGINEERING

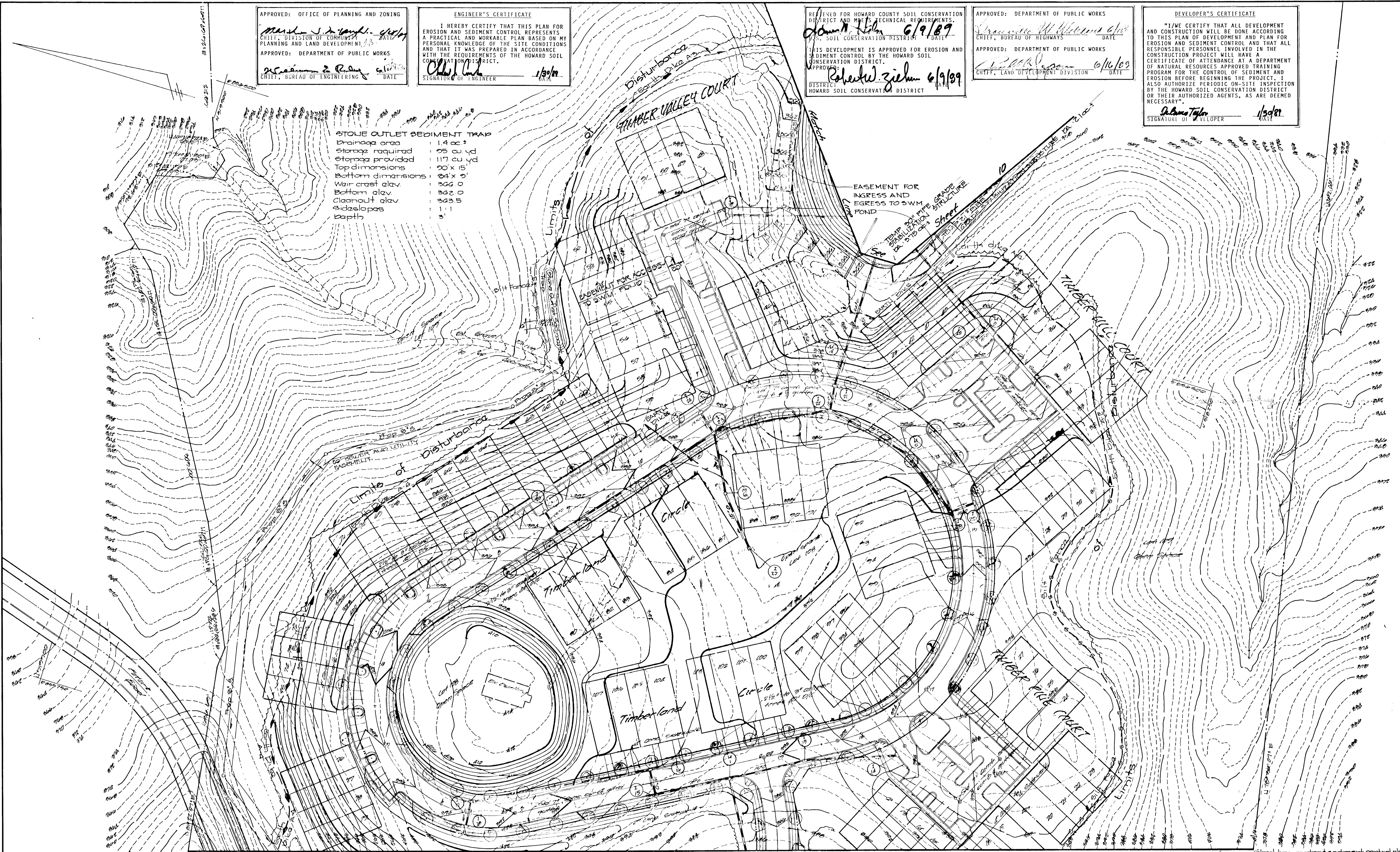
ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Charles ...
 SIGNATURE OF ENGINEER
 1/30/89

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND METS TECHNICAL REQUIREMENTS.
Robert Ziel...
 DATE 6/19/89
 DISTRICT: HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS
William E. ...
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: DEPARTMENT OF PUBLIC WORKS
William E. ...
 CHIEF, LAND DEVELOPMENT DIVISION
 DATE 6/16/89

DEVELOPER'S CERTIFICATE
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."
Charles Taylor
 SIGNATURE OF DEVELOPER
 1/30/89

STONE OUTLET SEDIMENT TRAP
 Drainage area: 1.4 ac ±
 Storage required: 25 cu yd
 Storage provided: 117 cu yd
 Top dimensions: 20' x 15'
 Bottom dimensions: 24' x 9'
 Wall crest elev.: 266.0
 Bottom elev.: 262.0
 Cleanout elev.: 263.5
 Sidewalk depth: 3'



Match Line See Sheet 8

Fisher, Collins & Carter, Inc.
 civil engineers and land surveyors
 8300 Court Avenue
 Ellicott City, Maryland 21043
 telephone: (301) 401-7055

Owner and Developer
 Taylor Land Service Co. Inc.
 c/o Land Design and Development
 8207 Main St. ext
 Ellicott City, Maryland 21043

Charles J. ...
 DATE 1/30/89

Sheet title, grading and sediment control plan
 The Townhomes of Timberland
 lots 1-110
 second election district
 Howard County, Maryland
 tax map: 23 p/10 parcel: 670
 scale: 1"=50' sheet 7 of 11
 date: January 25, 1989

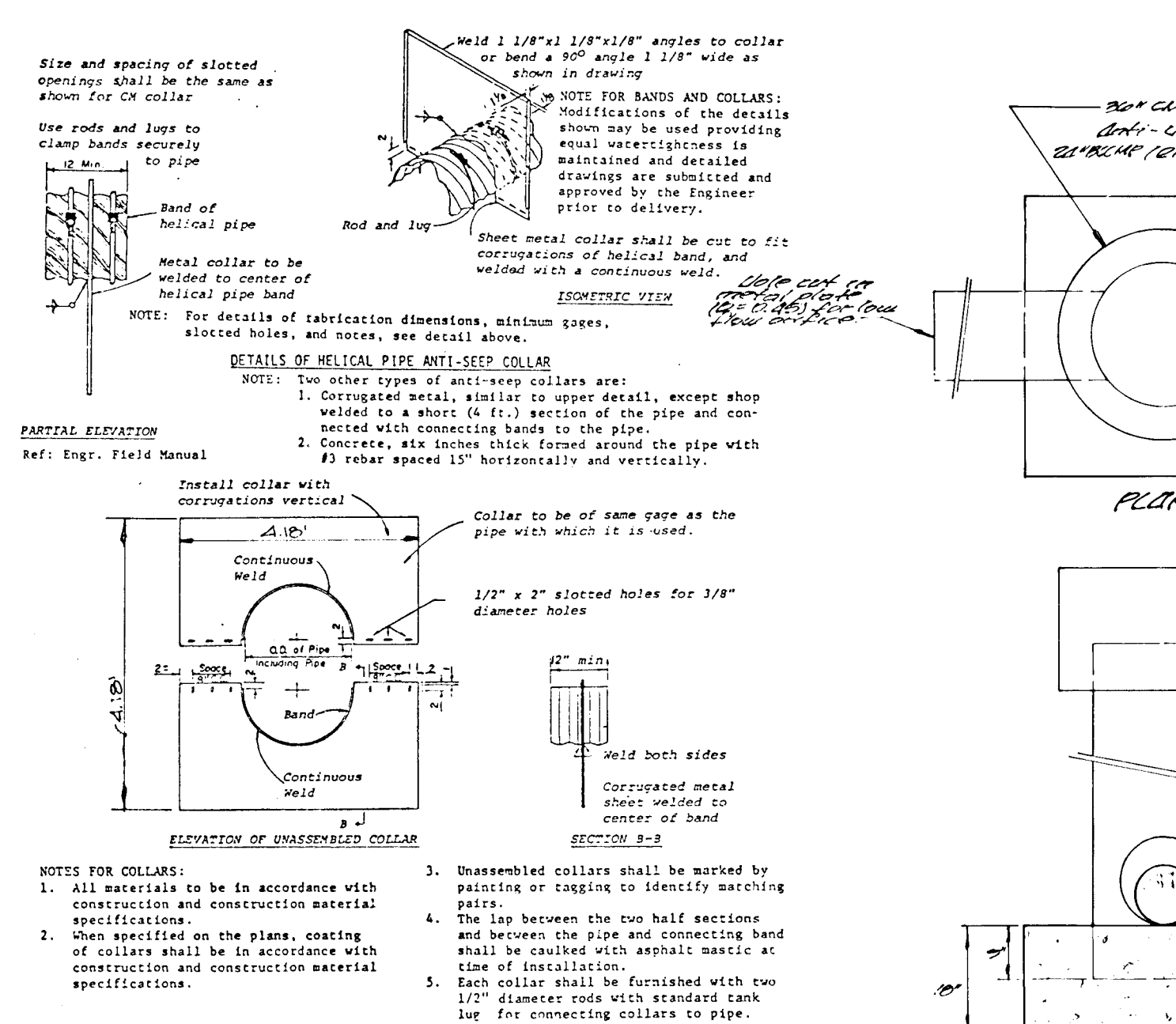
STORMWATER MANAGEMENT FACILITY SPECIFICATIONS

- I. **SITE PREPARATION**
Areas under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. To facilitate clean out and restoration, it is recommended that the permanent pool area be cleared of all brush and trees.
- II. **EARTH FILL**
Material
The fill material shall be taken from approved designated borrow area or areas. It shall be free from roots, stumps, wood, rubbish, over-size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least 10 percent above the design elevation (including freeboard) unless otherwise shown on the plans. All fill material shall be CL or ML as approved by Soils Engineer.
- Placement**
Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.
- Core Trench**
Where specified, a core trench shall be excavated along or parallel to the centerline of the embankment, as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation with the minimum width being 4-feet. The depth shall be at least 4-feet or as shown on the plans. The side slopes of the trench shall be 1:1 or flatter. The backfill material for the core trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability. Compact to 95% of AASHTO T-99 density. Materials shall be CL or ML as approved by Soils Engineer. *SEE NOTE ON THIS SHEET FOR SITE PREPARATION.*
- III. **STRUCTURAL BACKFILL**
Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed 4-inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than 4-feet to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a structure or pipe unless there is a compacted fill of 2-feet or greater over the structure or pipe.
- IV. **PIPE CONDUITS**
A. CORRUGATED METAL PIPE
1. **Materials - Metal Pipe** - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211, with watertight coupling bands.
2. **Connections** - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the control structure shall be mortared all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.
3. **Bedding** - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. **Laying pipe** - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.
5. **Backfilling** shall conform to structural backfill as shown above.
6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.
- V. **CONCRETE**
Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications for Materials, Highways, Bridges, and Incident Structures, Article 20.07 (Portland Cement Concrete Mixtures), Mix No. 3.
- VI. **STABILIZATION**
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by permanent seeding and applying straw mulch in accordance with "Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas" immediately after finish grading.

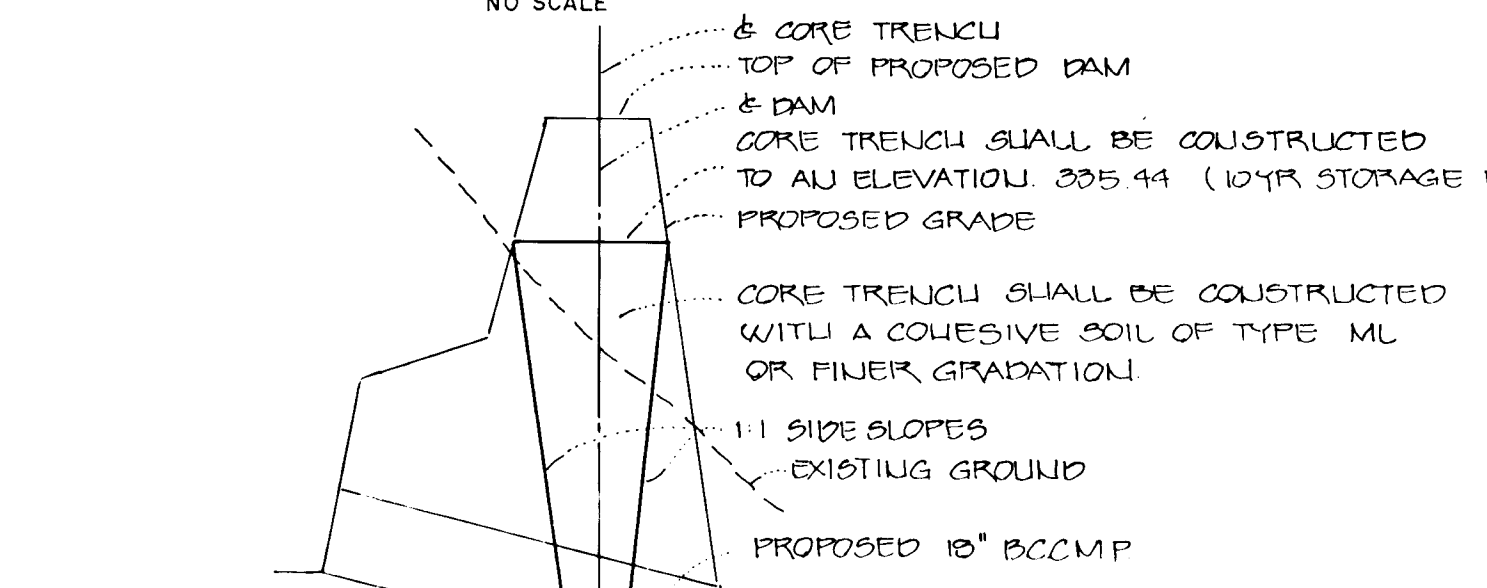
- OPERATION AND MAINTENANCE SPECIFICATIONS**
- I HEREBY CERTIFY THAT I WILL OPERATE AND MAINTAIN THE COMPLETED POND IN ACCORDANCE WITH THE FOLLOWING:
1. PERIODIC INSPECTIONS OF THE FACILITY WILL BE MADE TO IDENTIFY POTENTIAL PROBLEMS THAT MAY AFFECT ITS SAFETY. THESE INSPECTIONS WILL BE MADE AFTER PERIODS OF HEAVY RAINFALL AND AT LEAST TWICE ANNUALLY. INSPECTION REPORTS SHALL BE KEPT UNTIL THE NEXT SUBSEQUENT INSPECTION. INSPECTIONS ITEMS TO BE LOOKED AT INCLUDE:
 - a) SPILLWAY AND OUTLET WORKS;
 - b) RIP-RAP;
 - c) VEGETATIVE COVER;
 - d) CRACKS IN THE FILL;
 - e) SLOPE FAILURES; AND
 - f) SEEPAGE AND OTHER SIGNS OF DISTRESS.
 2. PROBLEMS IDENTIFIED DURING INSPECTIONS WILL BE PROMPTLY CORRECTED. MAJOR PROBLEMS WILL BE BROUGHT TO THE ATTENTION OF THE SOIL CONSERVATION DISTRICT AND THE DAM SAFETY DIVISION OF THE MARYLAND WATER RESOURCES ADMINISTRATION. AS A VERY MINIMUM, GRASSY VEGETATION WILL BE MAINTAINED IN A DENSE AND HEALTHY STATE, AND WOODY VEGETATION WILL NOT BE PERMITTED TO GROW ON THE EMBANKMENT.

- ALL EXPOSED AREAS OF THE EMBANKMENT AND POND SHALL BE STABILIZED BY:
- A. SPREADING 4" TOPSOIL (INCLUDING BOTTOM OF POND)
 - B. WORKING IN 1 TON OF GROUND LIMESTONE AND 1,000 POUNDS OF 10-10-10 FERTILIZER PER ACRE (INCLUDING BOTTOM OF POND)
 - C. SEED WITH 40 LBS/ACRE OF "KENTUCKY 31" TALL FESCUE, AND 15 LBS./ACRE OF CROWNVECH INOCULATED.
 - D. MULCH WITH 1 1/2 TONS STRAW PER ACRE.
 - E. TIE DOWN MULCH WITH EMULSIFIED ASPHALT @ 348 GALLONS/ACRE.

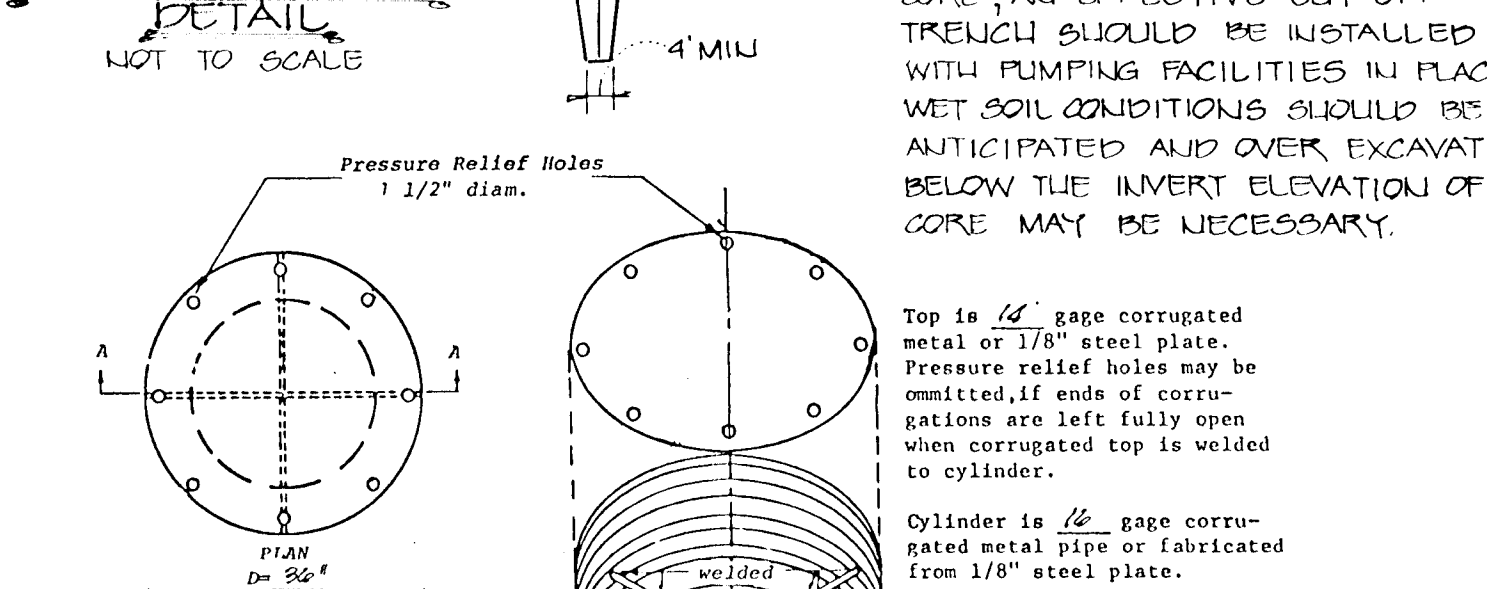
FISHER, COLLINS & CARTER, INC.
Civil Engineers and Land Surveyors
2200 Court Avenue
Ellicott City, Maryland 21033
Telephone (410) 41-2855



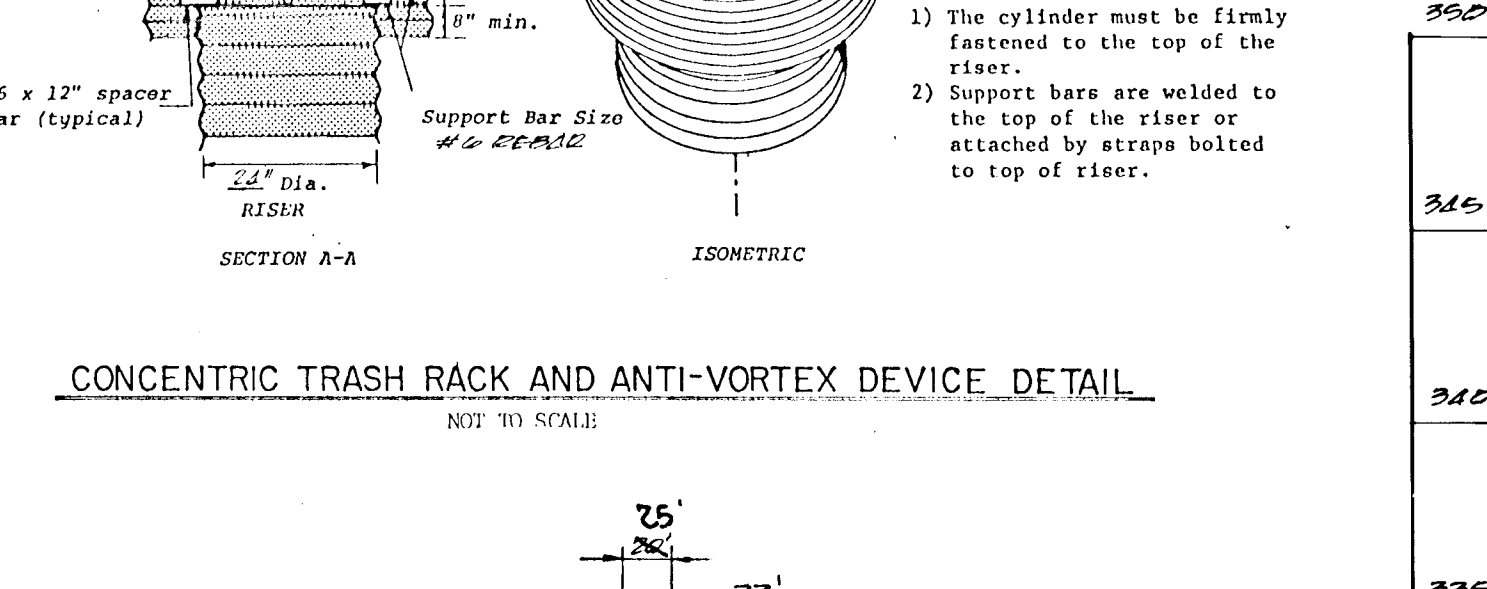
CORRUGATED METAL ANTI-SEEP COLLAR DETAILS



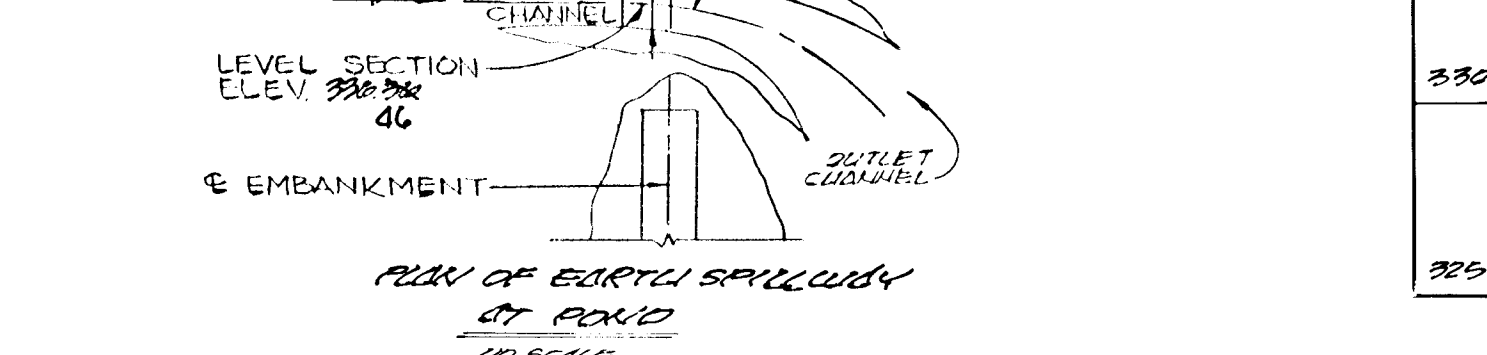
CORE TRENCH DETAIL



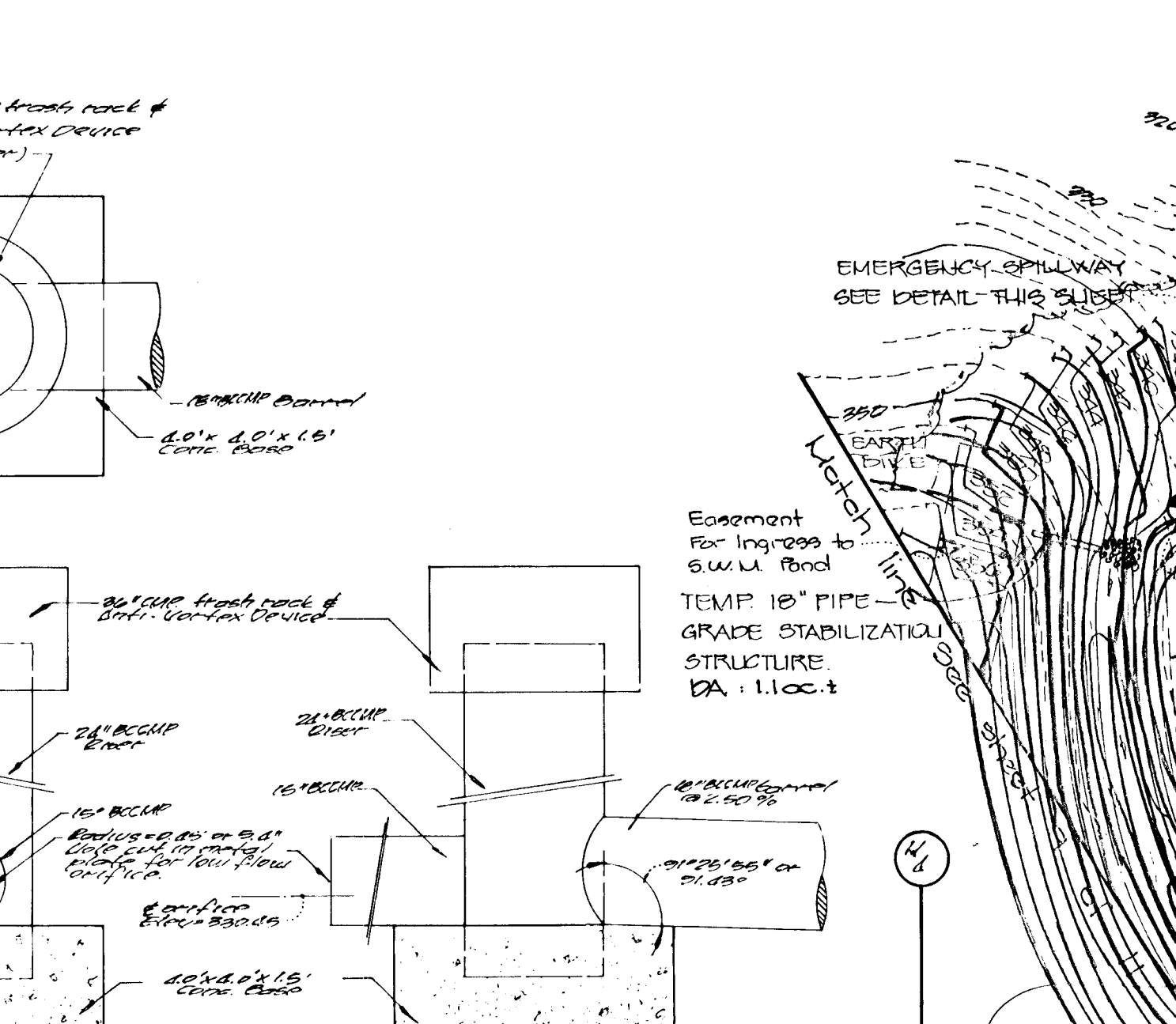
CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE DETAIL



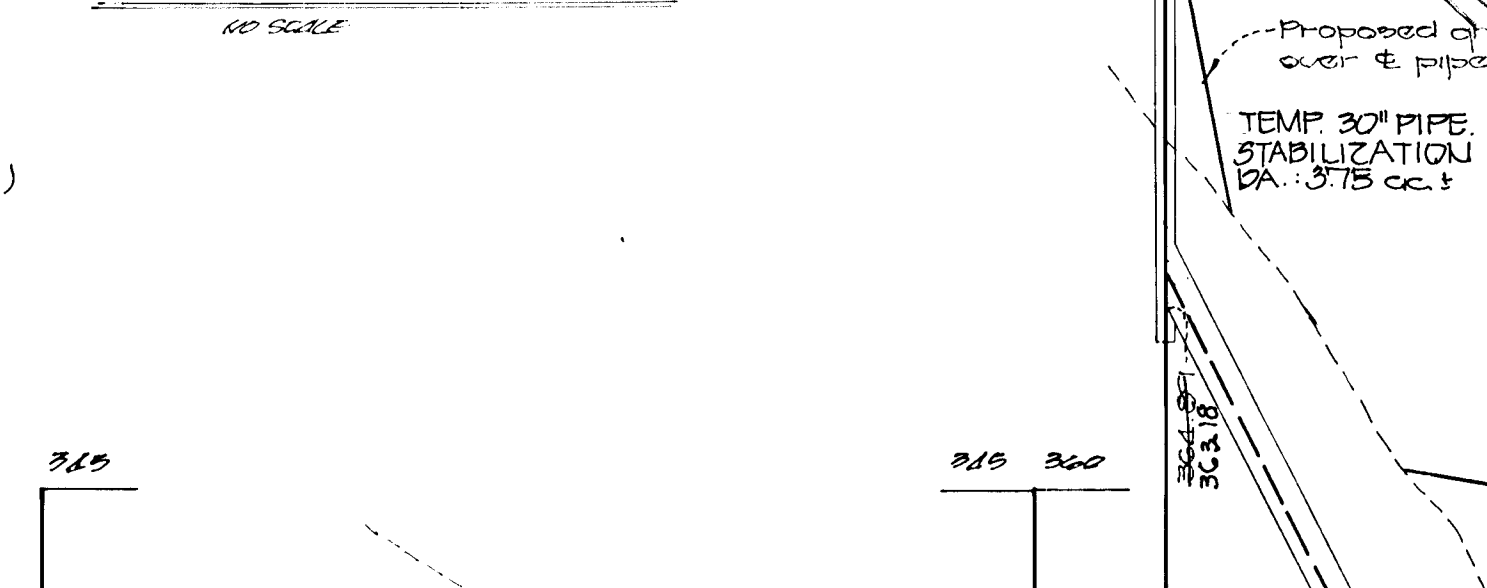
PLAN OF EARTH SPILLWAY AT POND



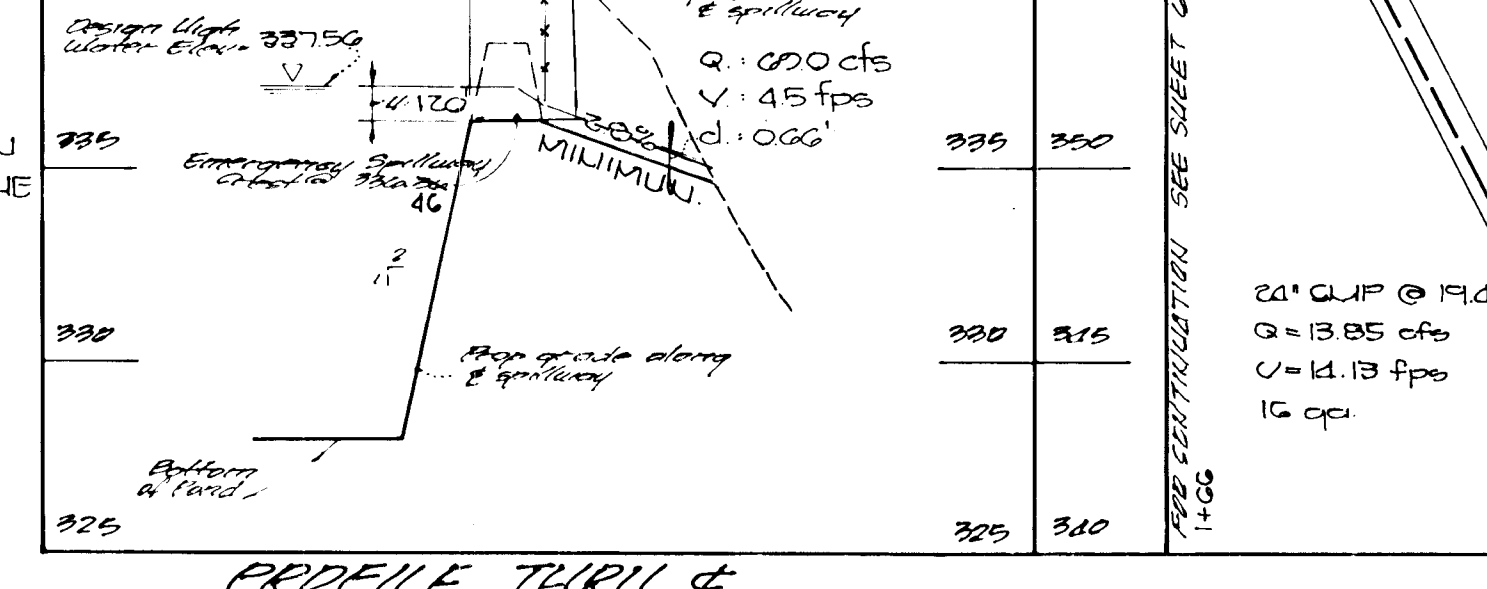
CROSS SECTION OF EARTH SPILLWAY AT CONTROL SECTION



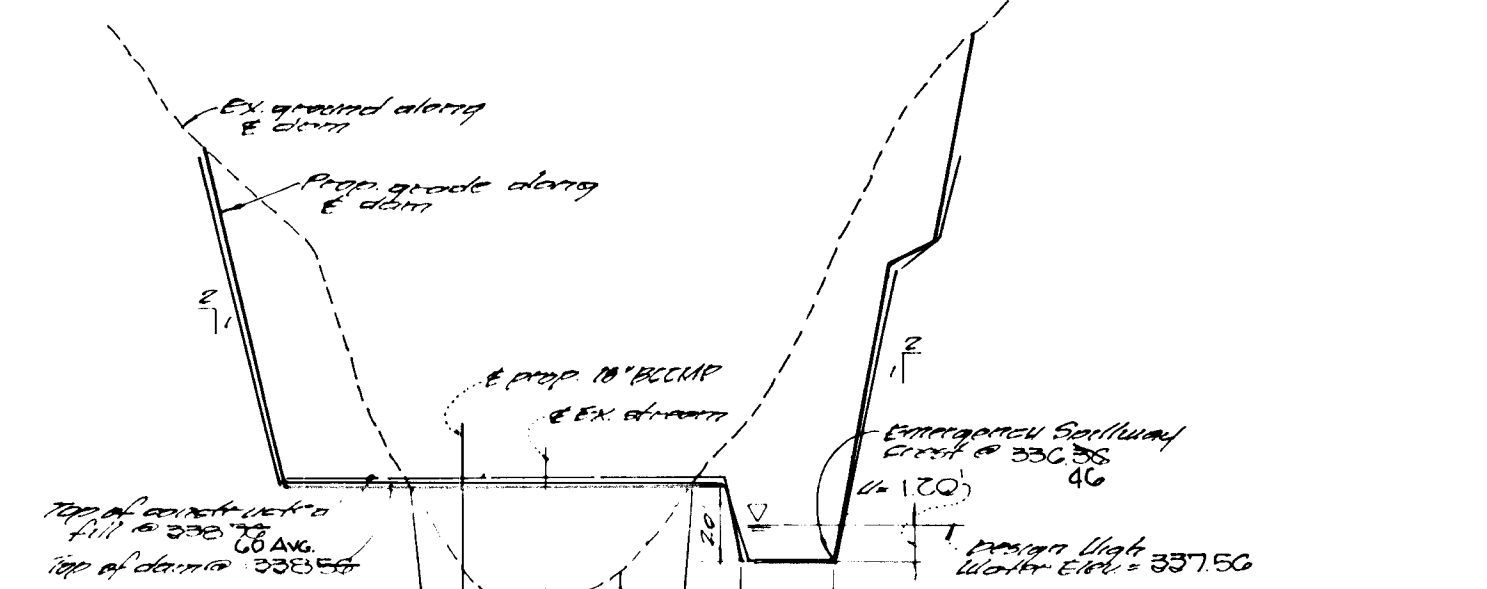
STRUCTURE DETAILS



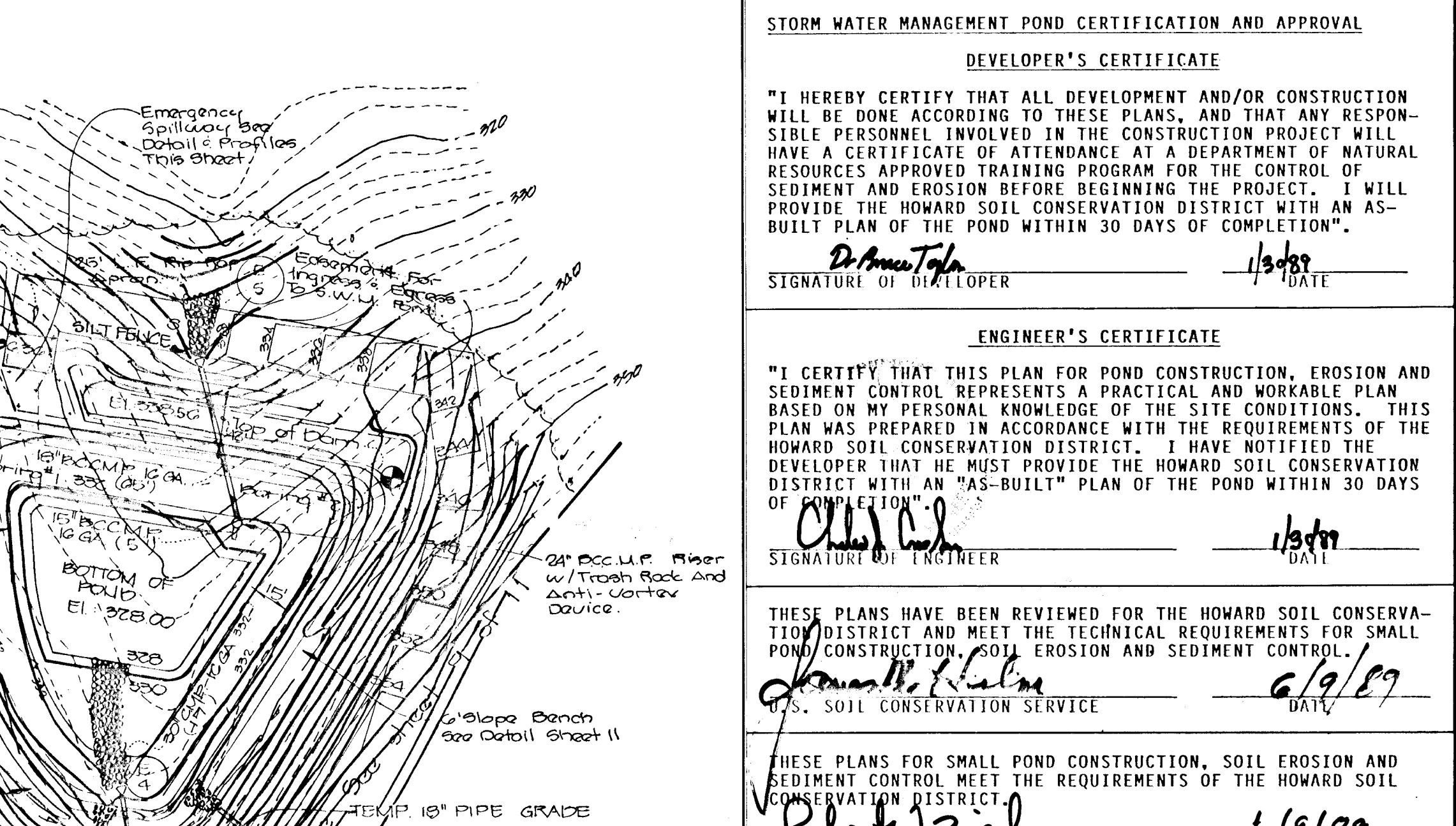
PROFILE THROUGH EMERGENCY SPILLWAY



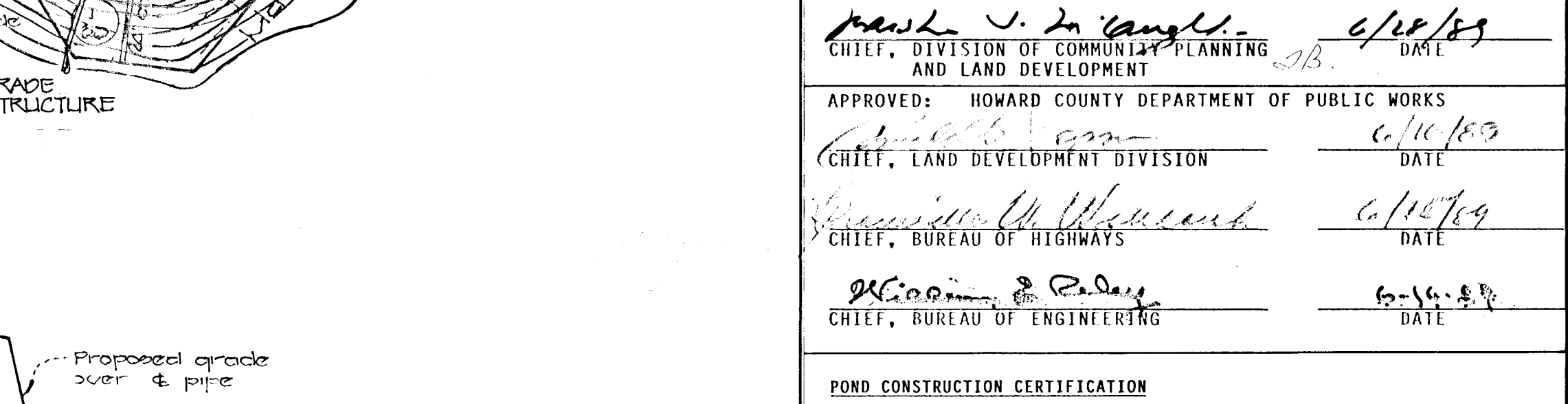
PROFILE ALONG DAM



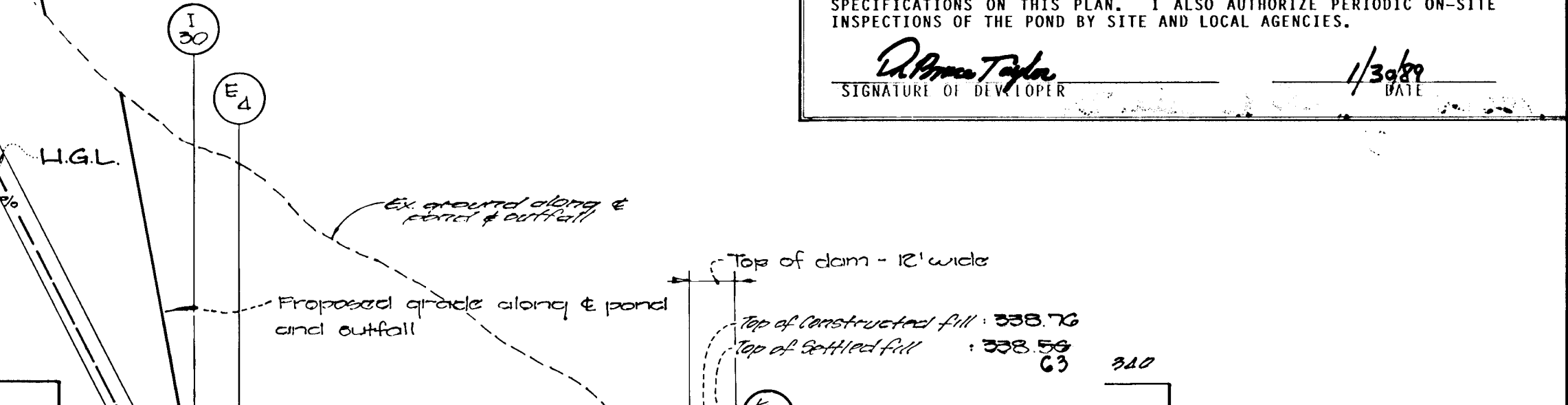
PROFILE THROUGH RISER AND BARREL



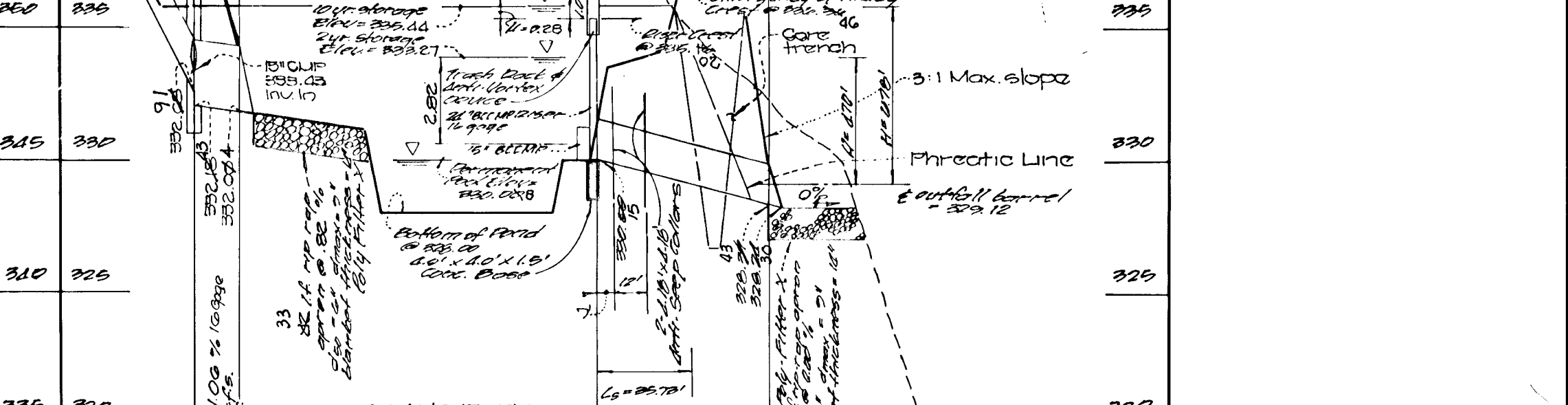
EMERGENCY SPILLWAY



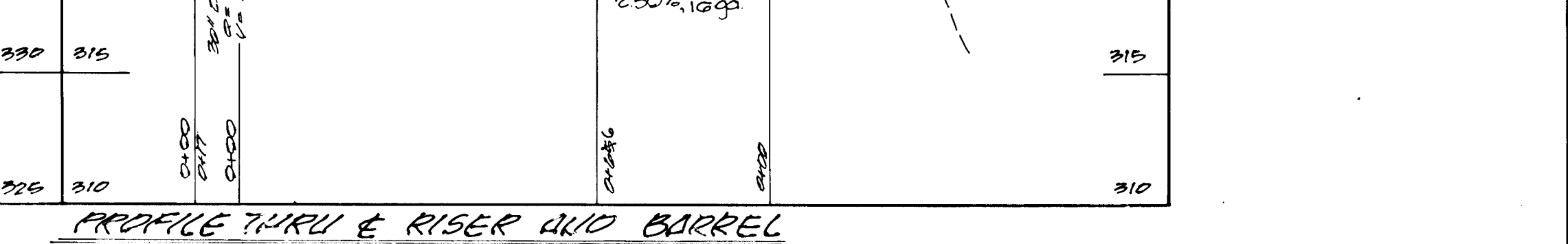
PROFILE THROUGH RISER AND BARREL



PROFILE THROUGH RISER AND BARREL



PROFILE THROUGH RISER AND BARREL



PROFILE THROUGH RISER AND BARREL

NOTES:
1. All pipe joints shall be watertight.
2. All pipe shall be continuous around the diameter of the pipe.
3. All walls shall be continuous around the diameter of the pipe.

OWNER AND DEVELOPER:
Taylor Land Service Co.
% Land Pros and Development
8807 Dean Street
Ellicott City, Maryland 21038

DATE: 1/30/89

STORM WATER MANAGEMENT POND CERTIFICATION AND APPROVAL

DEVELOPER'S CERTIFICATE

"I HEREBY 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."

SIGNATURE OF DEVELOPER: D. Amos Taha
DATE: 1/30/89

ENGINEER'S CERTIFICATE

"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."

SIGNATURE OF ENGINEER: Robert Ziehm
DATE: 1/30/89

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.

APPROVED: U.S. SOIL CONSERVATION SERVICE
DATE: 6/9/89

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
DATE: 6/9/89

APPROVED: OFFICE OF PLANNING AND ZONING
DATE: 6/28/89

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 6/16/89

APPROVED: BUREAU OF HIGHWAYS
DATE: 6/15/89

APPROVED: BUREAU OF ENGINEERING
DATE: 6-15-89

POND CONSTRUCTION CERTIFICATION

I CERTIFY THAT UPON COMPLETION OF CONSTRUCTION I WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE (OM) OF THE SMALL POND. OM WILL BE PERFORMED BY ME IN ACCORDANCE WITH THE SPECIFICATIONS ON THIS PLAN. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS OF THE POND BY SITE AND LOCAL AGENCIES.

SIGNATURE OF DEVELOPER: D. Amos Taha
DATE: 1/30/89

TOWNSHIPS OF THABEDLAND
DATE: 1-10
General Election District
Howard County, Maryland
Tax Map 25, Blocks 18, 19, 20, Parcel 25
Scale: as shown Sheet 10 of 11
Date: January 25, 1989

Zoned R-ED
 Captain's Forty Acres
 641/187
 APP. FILE 5-87-23

APPROVED: HOWARD COUNTY
 DEPARTMENT OF PUBLIC
 WORKS.

CHIEF LAND DEVELOPMENT DIVISION DATE

CHIEF BUREAU OF HIGHWAYS DATE

Charles C. Cook 1/30/89
 Chief, Bureau of Highways

Townhomes of Timberland
 Lots 1-110
 second election district
 Howard county, Maryland
 Tax map 20, blocks 8, 9, 10, to parcel 69

Drainage Area Map

Taylor Land Service Co.
 46 Canal Design and Development
 8807 Main Street
 Elkridge City, Maryland 21023

Scale: 1" = 100' Date: 12/20/88 (Sheet No. 11 of 11)
 Des. by: P. B. Cook Proj. by: T. G. Galloway Chk. by: C. C. Cook

Fisher, Collins and Carter, Inc.
 Civil Engineers and Land Surveyors
 8888 Court Ave. Elkridge City, MD 21023

Zoned R-2D
 Autumn Manor
 Section 1 Area 1
 Plat 6500
 APP. FILE 1-85-135

Zoned R-2D
 Autumn Manor
 Section 1 Area 1
 Plat 6500
 APP. FILE 1-85-135

SOIL EXPLORATION LOG				SOIL EXPLORATION LOG			
ELEV.	DESCRIPTION OF MATERIALS (Classification)	DEPTH SCALE	SAMPLE	ELEV.	DESCRIPTION OF MATERIALS (Classification)	DEPTH SCALE	SAMPLE
			Cond. Blows/ft. No. Type Rec.				Cond. Blows/ft. No. Type Rec.
342.5	0.5" to 1.0" Diameter Cobbles and topsoil (fill)	2.5		343.0	Orange/Brown micaceous Sandy Clayey SILT (M)	3.0	
338.5	Dark Brown micaceous coarse to fine SAND, some silt, little clay (SM-SC)	6.5		338.0	Dark Brown micaceous to Green/Brown coarse to fine SAND, some silt, little clay (SM-SC)	9.0	
	Light Black/White micaceous fine to medium SAND, some silt, some fragmented rock (M) (DECOMPOSED ROCK)	7.5		332.0	Dense Black/White micaceous SAND some silt, some fragmented rock (M) (DECOMPOSED ROCK)	14.0	
	Test pit terminated at 9.0'				Test pit terminated at 14.0'		
	Refusal at 9.0'						

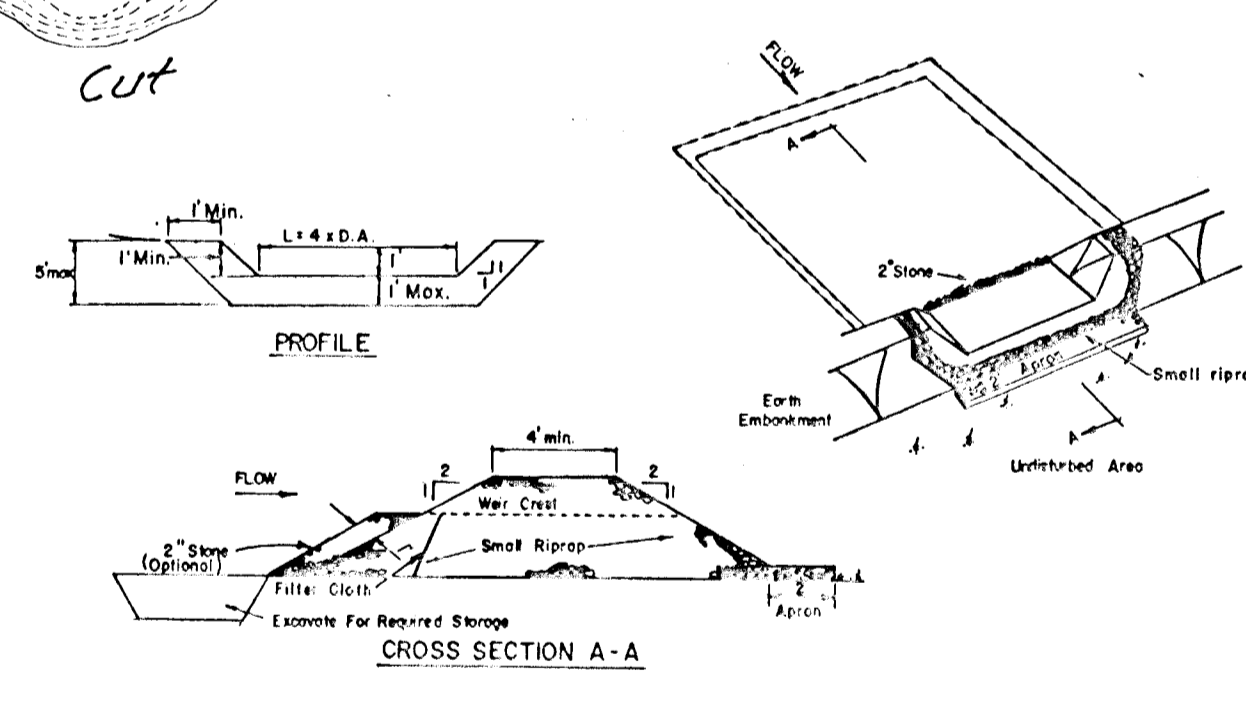
SAMPLER TYPE
 DS-Driven Soil Snoop
 PI-Pretest Shelby Tube
 CA-Continuous Flight Auger
 RC-Rock Core

GROUND WATER DEPTH
 At Completion (ft) Dry
 At 24 Hours (ft) 8.0'

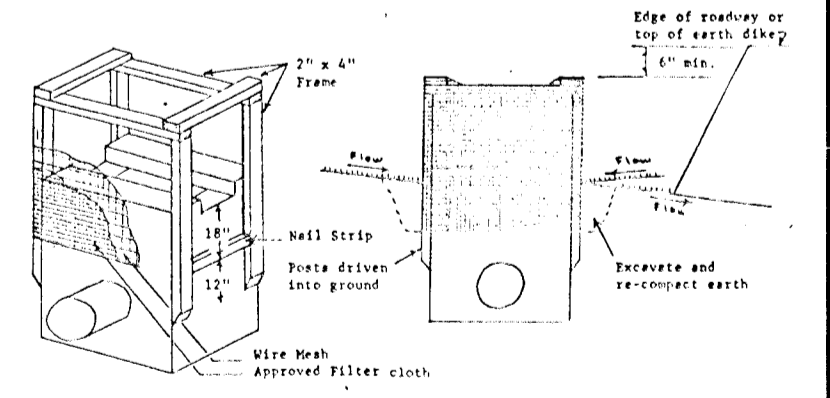
CONDITIONS
 D-Disturbed
 I-Intact
 U-Unsaturated
 L-Loose

SOIL TESTING PREPARED BY:
 INVESTIGATIVE TESTING AND ENGINEERING INC.
 3030 VERO ROAD, SUITE C
 BALTIMORE MD 21227
 ITE PROJECT NO 20-2012G
 DATE TESTED: MARCH 15, 1988

Plan
 Scale: 1" = 100'



- OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.
- 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 over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing 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" aggregate placed on the up-grade side on the small riprap on 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 area has been properly stabilized.



- A note, distribute on yard inlet protection.
1. Excavate completely around inlet to a depth of 18" below bottom of inlet.
 2. Drive 2 x 4 post 1' into ground at four corners of inlet. Place wall string between posts on ends of inlet. Assemble top portion of 2 x 4 frame using galvanized pipe. Top of frame (posts) must be 6" below edge of roadway adjacent to inlet.
 3. Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
 4. Stretch filter cloth tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet notch edge. Fasten securely to frame. Ends must meet at post, be overlapped and fastened, then fastened down.
 5. Backfill around inlet to compacted 4" layers until level of earth is even with notch elevation on ends and top elevation on sides.
 6. If the inlet is not in a low place, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 4" higher than the top of frame (posts).
 7. This structure must be inspected frequently and the filter fabric replaced when clogged.

