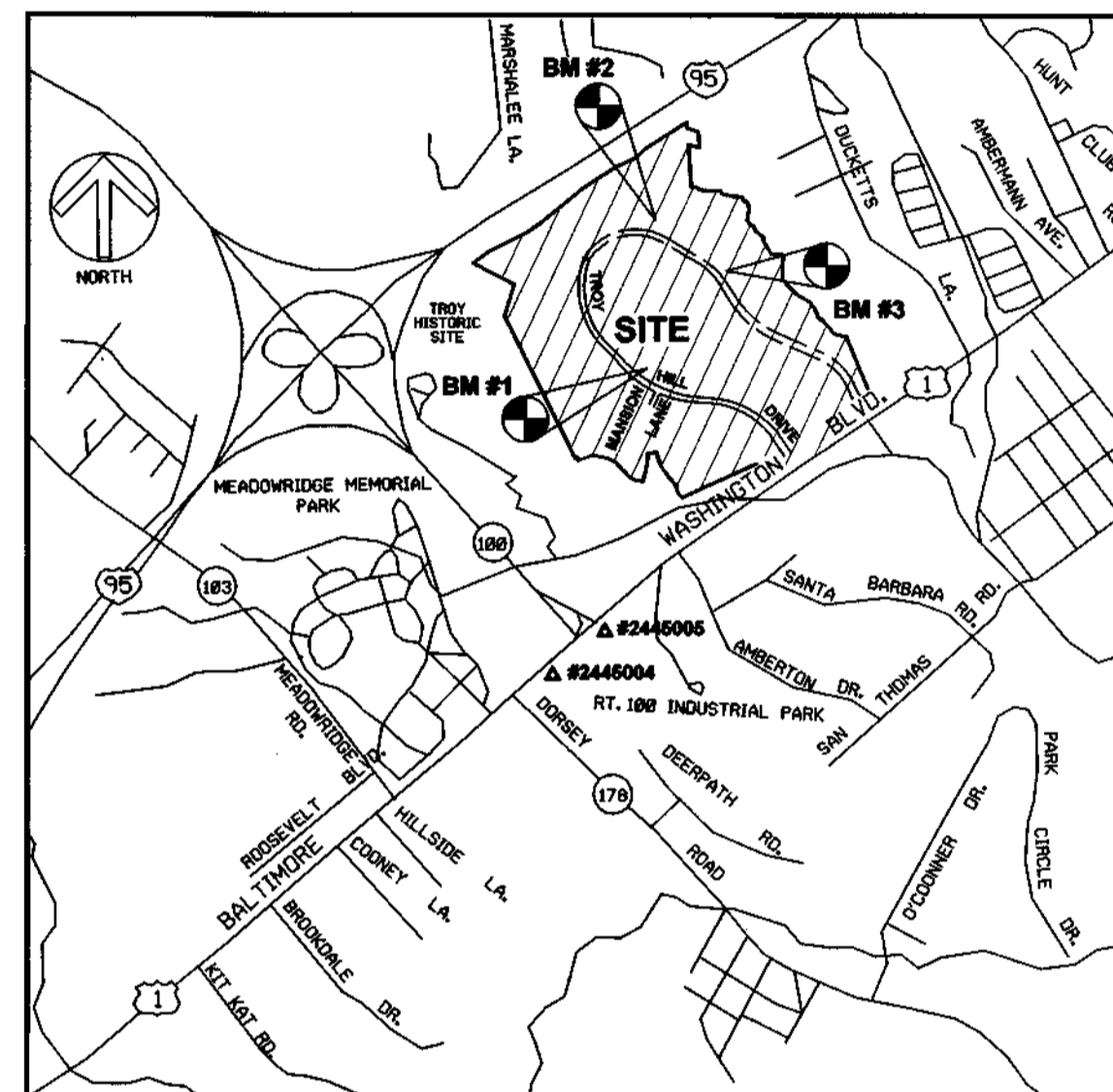


# TROY HILL CORPORATE CENTER

## PHASE II F-98-169

### SHEET INDEX

COVER SHEET	1
TYPICAL ROAD SECTIONS	2
MAINTENANCE OF TRAFFIC PLAN AND SUPERELEVATION CHART	3
LANDSCAPE DETAILS AND NOTES	4
ROAD PLAN AND PROFILES	5 - 7
DRAINAGE AREA MAP	8
STORM DRAIN PROFILES	9 - 11
STRUCTURE SCHEDULE	12
PAVEMENT STRIPING PLAN	13 - 14



VICINITY MAP  
SCALE: 1" = 2000'

(COORDINATES BASED ON N.A.D. 27, AS PROJECTED BY  
HOWARD COUNTY GEOMETRIC CONTROL STATIONS #2445004 AND #2445005.)

# 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND TAX MAP NO. 37

### GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, DETAILS AND SPECIFICATIONS FOR CONSTRUCTION.
  - ALL UTILITY COMPANIES SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF CONSTRUCTION.
  - ALL INLETS SHALL BE HOWARD COUNTY STANDARD UNLESS OTHERWISE SHOWN.
  - ALL STREET CURB RETURNS SHALL HAVE 30" RADI UNLESS OTHERWISE NOTED.
  - STORM DRAIN TRENCHES WITHIN RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD SPECIFICATIONS.
  - 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 SHOWN OR NEEDED AS APPROVED BY THE ENGINEER, A MINIMUM OF TWO WEEKS IN ADVANCE OF ANY CONSTRUCTION.
  - CONTRACTOR TO NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION AT LEAST 3 DAYS PRIOR TO STARTING WORK SHOWN ON THESE DRAWINGS. (TELEPHONE NO. (410) 313-1880)
  - DISTURBED SLOPE AREA TO BE STABILIZED AS SOON AS GRADING IS COMPLETED.
  - ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3600 P.S.I.
  - ALL SWALES AND SLOPES SHALL BE PERMANENTLY SEEDED. SEE THE SEED SPECIFICATIONS ON SHEET
  - TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1988 REVISED EDITION.
  - PLOY-FILTER-X OR EQUAL SHALL BE PLACED UNDER ALL STONE RIP-RAP (FULL WIDTH AND LENGTH OF STONE).
  - STONE FOR RIP-RAP SHALL BE AS SPECIFIED ON THESE DRAWINGS. ALL RIP-RAP SHALL BE NON-GROUTED UNLESS OTHERWISE NOTED.
  - STUBS FOR 6" PVC UNDERDRAIN PIPE TO BE INSTALLED AT CENTER OF EACH WALL OF EVERY INLET.
  - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  
STATE HIGHWAY ADMINISTRATION : 631-5533  
BALTIMORE GAS & ELECTRIC COMPANY / CONTRACTOR SERVICES 850-4620.  
BALTIMORE GAS & ELECTRIC COMPANY / UNDERGROUND DAMAGE CONTROL : 787-9068  
BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS : 313-4900.  
COLONIAL PIPELINE : 795-1390  
MISS UTILITY : 1-800-257-7777.
  - STREET TREES LOCATION, TYPE, AND NUMBER OF TREES SHOWN ON THIS PLAN ARE TENTATIVE AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF THE 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.
  - STREET LIGHTS WILL BE INSTALLED BY B.G.&E. AT LOCATIONS SPECIFIED IN PLANS. (A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.)
  - THE CONTRACTOR IS RESPONSIBLE TO PROVIDE FOR AND SUBMIT SHOP DRAWINGS THAT INDICATE ALL REQUIRED STIFFENING, BRACING AND SUPPORTS AT ALL FACTORY OR FABRICATED METAL PIPE CONNECTIONS AND APPURTENANCES.
  - THE CONTRACTOR IS COMPLETELY RESPONSIBLE TO INSURE THAT ALL CONDITIONS OF CORPS OF ENGINEER, MDE AND DNR WETLAND AND WATERWAY CONSTRUCTION PERMITS ARE STRICTLY ADHERED TO. A PRE-CONSTRUCTION MEETING IS TO BE ARRANGED BY THE CONTRACTOR BETWEEN ALL SUB-CONTRACTORS, THE OWNER, THE ENVIRONMENTAL CONSULTANT AND COUNTY OFFICIALS TO VERIFY COMPLIANCE. A FAILURE TO COMPLY WITH FEDERAL AND STATE PERMIT REGULATIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
  - CONTRACTOR TO VERIFY THAT ALL UNDERGROUND UTILITIES UNDERNEATH THE ROADBED AND WITHIN THE RIGHT-OF-WAY HAVE BEEN CONSTRUCTED. TO EACH LOT AND ADJOINING PROPERTY AND LOCATION MARKED IN THE FIELD PRIOR TO PLACEMENT OF STONE SUB-BASE AND PAVING. UTILITIES INCLUDE BUT ARE NOT LIMITED TO WATER, SANITARY SEWER, STORM DRAINS, LATERALS AND CONNECTIONS, TELEPHONE, ELECTRIC, GAS, AND CABLE TV, ETC. CUTTING OF CURB, GUTTER AND PAVEMENTS TO INSTALL SAID CONNECTIONS IS THE RESPONSIBILITY OF THE CONTRACTOR.
  - PROPOSED "S" COMBINATION INLETS SHALL MEET BICYCLE SAFETY AS PER HOWARD COUNTY DESIGN MANUAL VOLUME I, SECTION 4.1.1.E.1.C.
  - HANDICAP RAMPS MUST MEET A.D.A. REQUIREMENTS.
  - PROPOSED EXTENDED DETENTION STORMWATER MANAGEMENT PONDS ARE PRIVATELY OWNED AND MAINTAINED. POND #1 WILL BE CONSTRUCTED UNDER SDP-98-149 AND POND #3 WILL BE CONSTRUCTED UNDER SDP-98-143.
- TOPOGRAPHIC SURVEY  
THIS PLAT IS BASED ON A FIELD RUN SURVEY PERFORMED ON MARCH 2, 1988 BY CHARLES A. IRISH, JR. PROFESSIONAL LAND SURVEYOR (MARYLAND NO. 10706) OF VIKI INCORPORATED AND A FIELD RUN SURVEY PERFORMED ON JANUARY 8, 1990 BY ROBERT P. HENRY, PROFESSIONAL LAND SURVEYOR (MARYLAND NO. 10886) OF GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC.
- WAIVERS/APPROVALS/PERMITS  
1. WAIVER PETITION FILE #WP99-0770 TO PERMIT GRADING AND DEVELOPMENT ACTIVITIES WITHIN 100 YEAR FLOOD PLAIN, TO PERMIT GRADING FILLING AND REMOVAL OF VEGETATION COVER WITHIN WETLANDS AND 25' BUFFER SECTIONS 16.116(A)(1); 16.116(C)(8) APPROVED JULY 12, 1991.  
2. CERTAIN PORTIONS OF THE WETLANDS AND WETLAND BUFFERS SHOWN ON THESE PLANS MAY BE FILLED AND/OR IMPACTED IN ACCORDANCE WITH CORPS OF ENGINEERS NATIONAL PERMIT DEMAND-OP-RP96-0088-3, MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER QUALITY CERTIFICATE 91-WQC-0326 MARYLAND WATER RESOURCES ADMINISTRATION WATERWAYS CONSTRUCTION PERMIT 90-WC-0647 AND HOWARD COUNTY WAIVER PETITION FILE #WP 99-07. EXPIRATION DATE NOVEMBER 6, 1997.  
3. PRELIMINARY P-90-23 APPROVED AUGUST 9, 1991.  
4. WORK IN U.S. ROUTE #1 PERFORMED UNDER S.H.A. PERMIT NO. B-HO-5914-86 F91-24 WATERMAIN CROSSING IN U.S. ROUTE #1 PERFORMED UNDER CONTRACT NO. 44-5602-D.  
5. MASS GRADING AND STORM WATER MANAGEMENT TO BE COMPLETED UNDER SDP-98-113 AND SDP-98-143.  
6. WAIVER PETITION FILE #WP 99-07 TO PERMIT PROCESSING A MASS GRADING PLAN WITHOUT AN APPROVED SITE DEVELOPMENT PLAN.

#### BENCHMARK #1

IRON PIN @ TRAVERSE #1066  
N 496501.3597 E 869134.4576  
ELEV. = 175.92

#### BENCHMARK #2

IRON PIN @ TRAVERSE #1061  
N 498036.6945 E 868791.1502  
ELEV. = 242.49

#### BENCHMARK #3

IRON PIN @ TRAVERSE #1034  
N 497636.7437 E 869835.6586  
ELEV. = 214.85

#### OWNER / APPLICANT

TROY HILL BUSINESS PARK PARTNERSHIP  
C/O MANEKIN CORP.  
7165 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046  
(301) 290-1400  
ATTN: COLE SCHNORF

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Andrew M. Gonsky* 3-8-99  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Andy Hantler* 2/12/99  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*William J. ...* 2/9/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



GEORGE W. STEPHENS, JR.  
AND ASSOCIATES, INC.

Civil Engineers and Land Surveyors

658 Kenilworth Drive, Suite 100  
Towson Maryland 21204 (410) 825-8120  
203 East Broadway  
Bel Air, Maryland 21014 (410) 838-3800

SEAL



DESIGNED: RLM

DRAFTED: RLM

CHECKED: RLU

COVER SHEET

SCALE: AS SHOWN

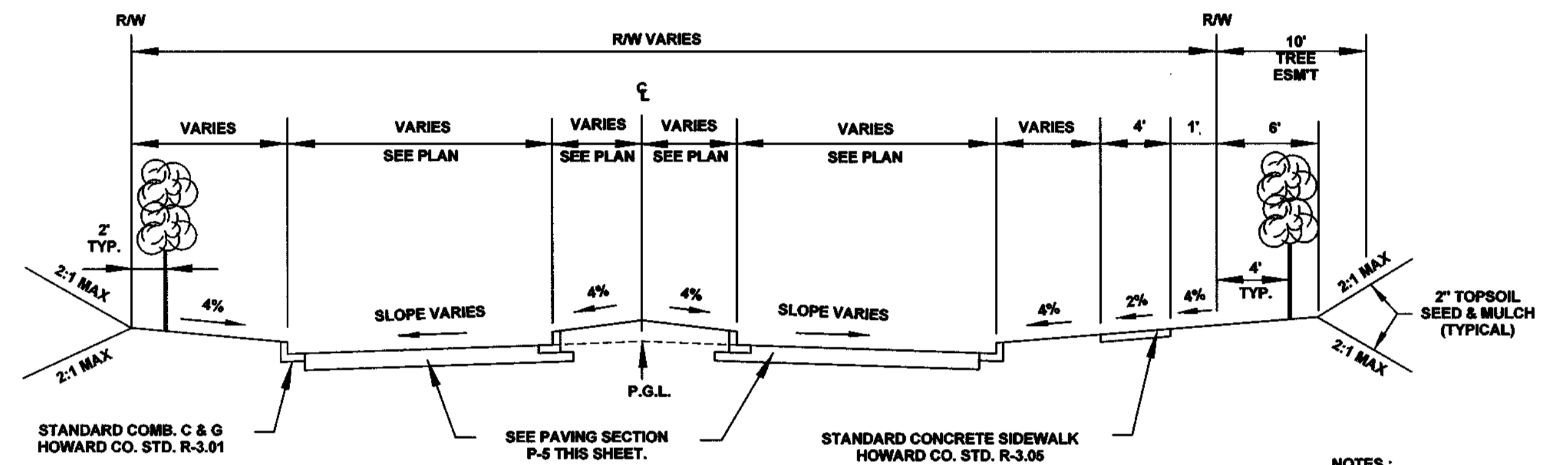
TROY HILL CORPORATE CENTER  
PHASE II

HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1

FEB. 10, 1999  
SHEET 1 OF 14

F98169

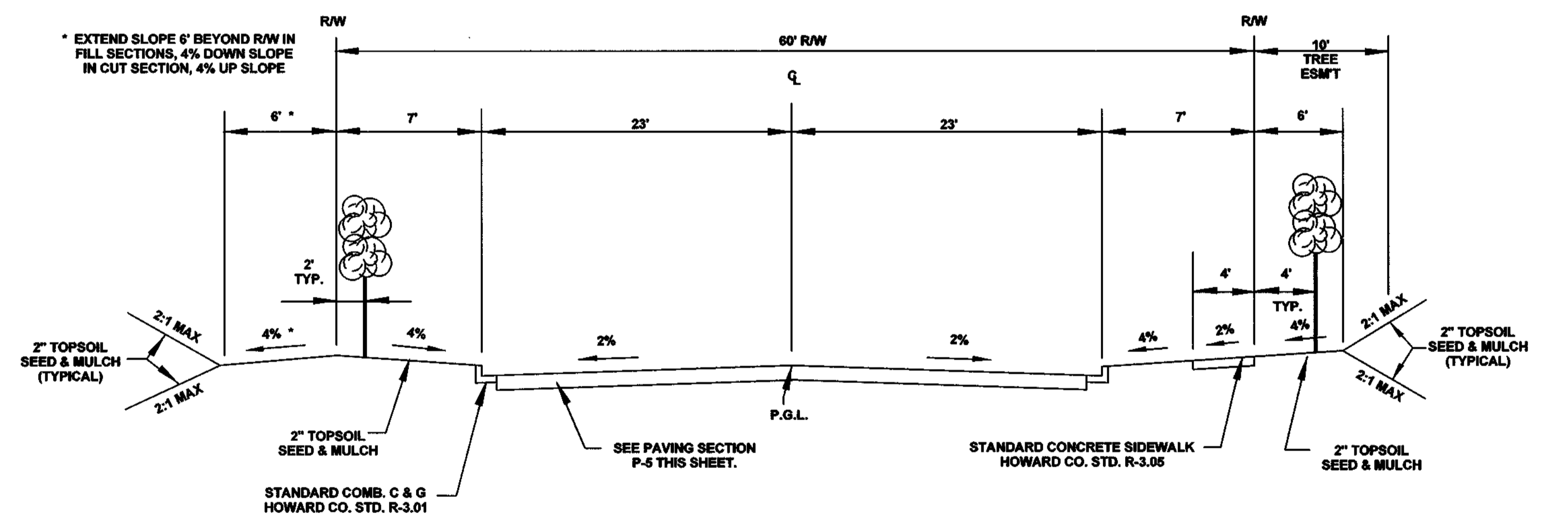
P/N 8130 - rdtitle.s01



**TROY HILL DRIVE TYPICAL SECTION #1**

(MAJOR COLLECTOR ROAD, DESIGN SPEED = 40 M.P.H.)  
 STA. 1+22.30 TO STA. 21+33.45  
 NO SCALE

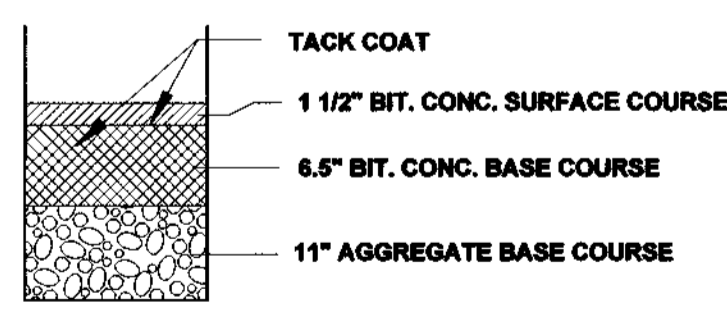
- NOTES:
1. NORMAL CROWN SECTION IS SUPER-ELEVATED ABOUT P.G.L. AT NORMAL CROWN SLOPE WHERE REQUIRED. SEE CURB ELEVATION CHART ON SHEET 3 OF 14.
  2. ROUNDING SHALL BE DONE AS PER COUNTY STANDARDS.
  3. GUTTER PAN AT THE MEDIAN EDGE OR THE HIGH SIDE OF SUPER-ELEVATED SECTIONS SHALL BE SLOPED AT 6% AND IN THE SAME DIRECTION AS THE PAVEMENT.



**TROY HILL DRIVE TYPICAL SECTION #2**

(MINOR COLLECTOR ROAD, DESIGN SPEED = 35 M.P.H.)  
 STA. 21+33.45 TO STA. 35+00.00  
 NO SCALE

- GENERAL NOTES:
1. BASE WILL BE PRIMED IN ACCORDANCE WITH SECTION 464.03.05 OF THE MSHA STANDARD SPECIFICATIONS FOR CONSTRUCTION.
  2. A TACK COAT WILL BE APPLIED IN ACCORDANCE WITH SECTION 401.03 OF THE MSHA STANDARD SPECIFICATIONS FOR CONSTRUCTION.
  3. SIDEWALK TO BE PROVIDED ON RIGHT SIDE OF ROADWAY ONLY.



**TYPICAL P-5 PAVING SECTION**

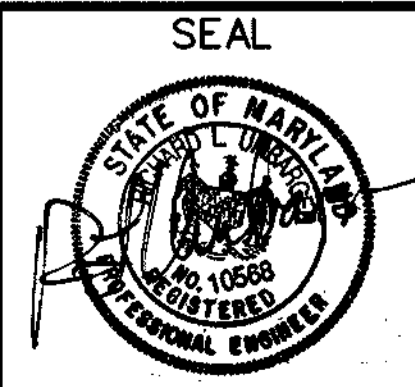
NO SCALE

OWNER / APPLICANT  
 TROY HILL BUSINESS PARK PARTNERSHIP  
 C/O MANEKIN CORP.  
 1185 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND 21046  
 (301) 290-1400  
 ATTN: COLE SCHNORF

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danella* 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cindy Hamstra* 2/12/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Mike Daneman* 2/9/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



**GEORGE W. STEPHENS, JR.  
 AND ASSOCIATES, INC.**  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800



DESIGNED: RLM  
 DRAFTED: RLM  
 CHECKED: RLU

**TROY HILL DRIVE  
 TYPICAL ROAD SECTIONS**

SCALE: AS SHOWN

**TROY HILL CORPORATE CENTER  
 PHASE II**

HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT #1

FEB. 10, 1999  
 SHEET 2 OF 14

# SUPERELEVATION CHART

STATION	T.C.L.T.	OFFSET FROM CL	CROSS SLOPE	T.C. LT. FACE OF MEDIAN	OFFSET TO FACE OF MEDIAN	PGL ELEV	OFFSET TO FACE OF MEDIAN	T.C. RT. FACE OF MEDIAN	CROSS SLOPE	OFFSET FROM CL	T.C. RT.
1+21.53				124.87		124.27	5.97	124.88	+0.0009	39.87	124.91
1+21.99	124.81	46.00	-0.0080	124.90	7.76	124.29					
1+27.24	125.01	46.00	-0.0009	125.05	8.00	124.45	8.00	125.05	+0.0005	39.49	125.09
1+50.00	125.97	46.00	+0.0052	125.77	8.00	125.13	8.00	125.73	-0.0052	37.97	125.52
1+75.00	126.96	46.00	+0.0105	126.56	8.00	125.88	8.00	126.40	-0.0105	36.30	126.05
2+00.00	127.96	46.00	+0.0158	127.36	8.00	126.63	8.00	127.15	-0.0158	34.64	126.68
2+09.53	128.33	46.00	+0.0178	127.65	8.00	126.91	8.00	127.39	-0.0200	34.00	126.83
2+25.00	128.90	46.00	+0.0200	128.14	8.00	127.38	8.00	127.86	-0.0200	34.00	127.30
2+50.00	129.65	46.00	+0.0200	128.89	8.00	128.13	8.00	128.61	-0.0200	34.00	128.05
2+56.67	129.85	46.00	+0.0200	129.09	8.00	128.33	8.00	128.81	-0.0200	34.00	128.25
2+75.00	130.40	46.00	+0.0200	129.64	8.00	128.88	8.00	129.36	-0.0200	34.00	128.80
3+00.00	131.15	46.00	+0.0200	130.39	8.00	129.63	8.00	130.11	-0.0200	34.00	129.55
3+25.00	131.90	46.00	+0.0200	131.14	8.00	130.38	8.00	130.86	-0.0200	34.00	130.30
3+50.00	132.66	46.00	+0.0200	131.90	8.00	131.14	8.00	131.62	-0.0200	34.00	131.05
3+75.00	133.36	46.72	+0.0172	132.71	8.00	131.97	8.00	132.47	-0.0172	34.00	131.98
4+00.00	134.07	44.44	+0.0132	133.59	8.00	132.88	8.00	133.41	-0.0132	34.00	133.02
4+25.00	134.85	42.91	+0.0092	134.53	8.00	133.86	8.00	134.43	-0.0092	34.00	134.14
4+31.81	135.09	42.95	+0.0081	134.81	8.00	134.14	8.00	134.71	-0.0081	34.00	134.45
4+50.00	135.74	41.80	+0.0052	135.56	8.18	134.92	8.18	135.62	-0.0052	34.00	135.33
4+75.00	136.71	39.69	+0.0012	136.67	8.43	135.06	8.43	136.67	-0.0012	34.00	136.58
5+00.00	137.76	37.03	-0.0028	137.90	8.68	135.28	8.68	137.91	+0.0028	34.00	137.98
5+25.00	138.93	34.00	-0.0068	139.15	8.92	135.67	8.92	139.23	+0.0068	34.00	139.40
5+32.56	139.29	34.00	-0.0081	139.54	9.00	135.98	9.00	139.66	+0.0081	34.00	139.86
5+50.00	140.16	34.00	-0.0109	140.48	9.00	139.94	9.00	140.64	+0.0109	34.00	140.91
5+75.00	141.48	34.00	-0.0148	141.90	9.00	141.39	9.00	142.12	+0.0148	34.00	142.49
6+00.00	142.88	34.00	-0.0189	143.39	9.00	142.92	9.00	143.69	+0.0189	34.00	144.16
6+25.00	144.38	34.00	-0.0200	144.92	9.00	144.46	9.00	145.24	+0.0200	34.00	145.74
6+50.00	145.85	34.00	-0.0200	146.39	9.00	145.93	9.00	146.71	+0.0200	34.00	147.21
6+75.00	147.26	34.00	-0.0200	147.80	9.00	147.34	9.05	148.12	+0.0200	34.00	148.62
7+00.00	148.62	34.00	-0.0200	149.16	9.13	148.70	9.22	149.48	+0.0200	34.00	149.98
7+25.00	149.92	34.00	-0.0200	150.45	9.30	150.00	9.41	150.79	+0.0200	34.00	151.28
7+50.00	151.16	34.00	-0.0200	151.69	9.50	151.24	9.56	152.03	+0.0200	34.00	152.52
7+75.00	152.33	34.00	-0.0200	152.80	9.69	152.41	9.68	153.20	+0.0200	34.00	153.69
8+00.00	153.45	34.00	-0.0200	153.97	9.84	153.53	9.83	154.33	+0.0200	34.00	154.81
8+25.00	154.61	34.00	-0.0200	155.03	10.00	154.59	9.96	155.39	+0.0200	34.00	155.87
8+50.00	155.51	34.00	-0.0200	156.03	10.00	155.59	10.00	156.39	+0.0200	34.00	156.87
8+75.00	156.45	34.00	-0.0200	156.97	10.00	156.53	10.00	157.33	+0.0200	34.00	157.91
9+00.00	157.33	34.00	-0.0200	157.85	10.00	157.41	10.00	158.21	+0.0200	34.00	158.89
9+25.00	158.15	34.00	-0.0200	158.67	10.00	158.23	10.00	159.03	+0.0200	34.00	159.51
9+50.00	158.92	34.00	-0.0200	159.44	10.00	159.00	10.00	159.80	+0.0200	34.00	160.28
9+75.00	159.62	34.00	-0.0200	160.14	10.00	159.70	10.00	160.50	+0.0200	34.00	161.02
10+00.00	160.26	34.00	-0.0200	160.78	10.00	160.34	10.00	161.14	+0.0200	34.00	161.82
10+25.00	160.84	34.00	-0.0200	161.36	10.00	160.92	10.00	161.72	+0.0200	34.00	162.20
10+50.00	161.37	34.00	-0.0200	161.89	10.00	161.46	10.00	162.25	+0.0200	34.00	162.73
10+75.00	161.86	34.00	-0.0200	162.38	10.00	161.94	10.00	162.74	+0.0200	34.00	163.22
11+00.00	162.36	34.00	-0.0200	162.88	10.00	162.44	10.00	163.24	+0.0200	34.00	163.72
11+25.00	162.85	34.00	-0.0200	163.37	10.00	162.93	10.00	163.73	+0.0200	34.00	164.21
11+50.00	163.34	34.00	-0.0200	163.86	10.00	163.42	10.00	164.22	+0.0200	34.00	164.70
11+75.00	163.84	34.00	-0.0200	164.36	10.00	163.92	10.00	164.72	+0.0200	34.00	165.20
12+00.00	164.33	34.00	-0.0200	164.85	10.00	164.41	10.00	165.21	+0.0200	34.00	165.69
12+25.00	164.91	34.00	-0.0176	165.37	10.00	164.91	10.00	165.69	+0.0176	34.00	166.11
12+50.00	165.53	34.00	-0.0136	165.90	10.00	165.40	10.00	166.13	+0.0136	34.00	166.46
12+75.00	166.15	34.00	-0.0096	166.43	10.00	165.89	10.00	166.59	+0.0096	34.00	166.82
12+84.10	166.38	34.00	-0.0081	166.63	10.00	166.07	10.00	166.76	+0.0081	34.00	166.96
13+00.00	166.79	34.00	-0.0066	166.98	10.00	166.39	10.00	167.05	+0.0066	34.00	167.18
13+25.00	167.41	34.00	-0.0016	167.50	10.00	166.88	10.00	167.49	+0.0016	34.00	167.53
13+50.00	168.06	34.00	+0.0024	168.01	10.00	167.38	10.00	168.00	-0.0024	34.00	167.88
13+75.00	168.69	34.00	+0.0064	168.54	10.00	167.87	10.00	168.45	-0.0064	34.00	168.24
13+85.88	168.97	34.00	+0.0081	168.78	10.00	168.09	10.00	168.65	-0.0081	34.00	168.40
14+00.00	169.31	34.00	+0.0104	169.06	10.00	168.36	10.00	168.90	-0.0104	34.00	168.60
14+25.00	169.95	34.00	+0.0144	169.46	10.00	168.86	10.00	169.35	-0.0144	34.00	168.96
14+50.00	170.63	34.00	+0.0184	170.19	10.00	169.40	10.00	169.85	-0.0184	34.00	169.37
14+75.00	171.30	34.00	+0.0200	170.82	10.00	170.02	10.00	170.46	-0.0200	34.00	169.94
15+00.00	172.00	34.00	+0.0200	171.52	10.00	170.72	10.00	171.16	-0.0200	34.00	170.64
15+25.00	172.80	34.00	+0.0200	172.32	10.00	171.52	10.00	171.96	-0.0200	34.00	171.44
15+50.00	173.68	34.00	+0.0200	173.20	10.00	172.40	10.00	172.84	-0.0200	34.00	172.32
15+75.00	174.64	34.00	+0.0200	174.16	10.00	173.36	10.00	173.80	-0.0200	34.00	173.20
16+00.00	175.65	34.00	+0.0200			174.37			-0.0200	34.00	174.29
16+04.56	175.87	34.00	+0.0200			174.69			-0.0200	34.00	174.51
16+25.00	176.65	34.00	+0.0200			175.37			-0.0200	34.00	175.29
16+50.00	177.66	34.00	+0.0200			176.38			-0.0200	34.00	176.30
16+75.00	178.67	34.00	+0.0200			177.39			-0.0200	34.00	177.31
17+00.00	179.67	34.00	+0.0200			178.39			-0.0200	34.00	178.31
17+12.95	180.19	34.00	+0.0200			178.91			-0.0200	34.00	178.83
17+25.00	180.68	34.00	+0.0200			179.40			-0.0200	34.00	179.32
17+50.00	181.67	33.50	+0.0200	181.19	9.50	180.40	9.50	180.85	-0.0200	33.50	180.33
17+75.00	182.68	32.87	+0.0200	182.20	8.87	181.41	8.87	181.87	-0.0200	32.87	181.35
18+00.00	183.67	32.30	+0.0200	183.19	8.30	182.42	8.30	182.89	-0.0200	32.30	182.37
18+25.00	184.65	31.70	+0.0200	184.17	7.70	183.42	7.70	183.91	-0.0200	31.70	183.39
18+50.00	185.65	31.07	+0.0200	185.17	7.07	184.43	7.07	184.93	-0.0200	31.07	184.41
18+75.00	186.65	30.47	+0.0200	186.17	6.47	185.44	6.47	185.95	-0.0200	30.47	185.43
19+00.00	187.54	29.79	+0.0168	187.14	5.79	186.44	5.79	186.96	-0.0200	29.79	186.44
19+25.00	188.42	29.24	+0.0128	188.11	5.24	187.45	5.24	187.99	-0.0200	29.24	187.47
19+33.80	188.73	29.01	+0.0114	188.46	5.01	187.80	5.01	188.34	-0.0200	29.01	187.82
19+50.00	189.31	28.46	+0.0088	189.10	4.46	188.46	4.46	189.01	-0.0200	28.46	188.49
19+75.00	190.20	27.76	-0.0032	190.08	3.76	189.47	3.76	190.03	-0.0200	27.76	189.51
20+00.00	191.05	27.05	-0.0048	191.07	3.05	190.47	3.05	191.05	-0.0200	27.05	190.53
20+25.00	192.00	26.24	-0.0032	192.13	2.24	191.48	2.24	192.08	-0.0200	26.24	191.56
20+34.98	192.36	26.00	-0.0048	192.54	2.00	191.88	2.00	192.48	-0.0200	26.00	191.96
20+49.78	192.89	25.00	-0.0072	193.12	2.00	192.48	2.00	193.08	-0.0200	25.00	192.56
20+75.00	193.81	24.99	-0.0112			193.49			-0.0200	24.99	193.69
21+00.00	194.68	24.19	-0.0152			194.45			-0.0200	23.93	194.57
21+25.00	195.48	23.17	-0.0192			195.32			-0.0200	23.17	195.46
21+30.00	195.62	23.00	-0.0200			195.48			-0.0200		

**Landscape Notes**

**I. GENERAL**

1. THESE PLANS SHALL BE USED FOR PLANTING INSTALLATION ONLY.
2. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
3. THE CONTRACTOR SHALL NOTE THAT IN THE CASE OF ANY DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
4. THE CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID.

**II. LANDSCAPING**

**A. STANDARDS:**

1. ALL PLANT MATERIAL, CONSTRUCTION METHODS AND MATERIAL PLACEMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF "AMERICAN STANDARD FOR NURSERY STOCK," AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., THE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS," AS PROPOSED BY THE LANDSCAPE CONTRACTORS ASSOCIATION, AND THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS" OF THE MARYLAND STATE DEPARTMENT OF TRANSPORTATION.
2. ALL TREES SHALL BE DELIVERED TO THE SITE BALLED AND BURLAPPED. ALL SHRUBS SHALL BE BALLED AND BURLAPPED OR IN CONTAINERS. ALL GRASSES & PERENNIALS SHALL BE IN CONTAINERS.

**B. MAINTENANCE:**

1. AFTER THE PLANTING HAS BEEN APPROVED BY THE LANDSCAPE ARCHITECT AND THE OWNER, THE MAINTENANCE OF WATERING AND WEEDING OF SUCH PLANTS AND PLANTED AREAS SHALL BE PROVIDED BY THE OWNER. SINCE THE PLANTS ARE TO BE GUARANTEED BY THE CONTRACTOR, THE CONTRACTOR SHALL PERIODICALLY CHECK THE MAINTENANCE CONDUCTED BY THE OWNER. IF THE CONTRACTOR IS NOT SATISFIED WITH THE MAINTENANCE OF THE PLANTS, A WRITTEN REPORT, IN TRIPLICATE, STATING APPROPRIATE CHANGES SHALL BE GIVEN IMMEDIATELY TO THE LANDSCAPE ARCHITECT; TWO COPIES WILL BE FORWARDED TO THE OWNER. BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING.
2. MAINTAIN TREES UNTIL FINAL ACCEPTANCE, BUT IN NO CASE, LESS THAN 60 DAYS AFTER FINAL ACCEPTANCE OF PLANTING. MAINTAIN ALL PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS, TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KEEP ALL PLANTS FREE OF INSECTS AND DISEASE.

**C. WATERING**

1. IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATERING SHALL NOT BE DONE DURING THE HEAT OF THE DAY. CONTRACTOR SHALL PROVIDE A SEPARATE LUMP SUM PRICE IN THE OVERALL LANDSCAPE BID FOR WATERING TO ALL NEW PLANTINGS DURING ONE GROWING SEASON.

**D. EXCAVATION:**

1. DEPTH AND WIDTH OF EXCAVATION FOR PLANTING OF ALL PLANTS SHALL BE TO TWICE THE DEPTH AND WIDTH OF ROOT BALL OR CONTAINER OF PLANT TO BE INSTALLED, EXCEPT AS NOTED ON DETAILS.

**E. TOPSOIL, PLANTING MIX, FERTILIZER, MULCH AND SOIL AMENDMENTS:**

1. ALL TOPSOIL SHALL BE WELL GRADED LOAM OF GOOD UNIFORM QUALITY AND SHALL BE A NATURAL FRAGILE SOIL, FREE OF OBJECTS LARGER THAN ONE INCH IN ANY DIMENSION, AND FREE OF TOXIC SUBSTANCES, WEEDS AND ANY MATERIAL OF SUBSTANCES THAT MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL CONTAIN AT LEAST 5% ORGANIC MATTER. IF SUFFICIENT TOPSOIL IS NOT AVAILABLE ON THE SITE TO MEET THE DEPTH AS SPECIFIED HEREIN, THE CONTRACTOR SHALL FURNISH ADDITIONAL TOPSOIL. PRIOR TO TOPSOIL DELIVERY, THE CONTRACTOR SHALL OBTAIN THE LANDSCAPE ARCHITECT'S APPROVAL OF THE SOURCE FROM WHICH TOPSOIL IS TO BE FURNISHED.

2. FOR PLANTING MIX, MIX THOROUGHLY 2/3 APPROVED TOPSOIL (SEE "TOPSOIL") AND 1/3 APPROVED ORGANIC MATTER.
3. FERTILIZER TABLETS OR SPIKES TO BE PLACED AT EACH TREE AND SHRUB AT A RATE OF 1 PER 2" OF TRUNK CALIPER OR GALLON OF ROOTBALL. TABLETS OR SPIKES SHALL NOT BE IN CONTACT WITH THE ROOTBALL.
4. MULCH MATERIAL SHALL BE OF UNIFORM SIZE, FINE SHREDDED TANBARK HARDWOOD MULCH OR APPROVED EQUAL. MULCH SHALL BE A REDDISH DARK BROWN COLOR AND SHALL BE LAID TO A UNIFORM MINIMUM DEPTH OF 2 INCHES. MULCH AREAS AROUND TREES AT THE RATE OF 1" OF DIAMETER PER OF TRUNK CALIPER.
5. HYDROGEL ABSORBENT MATERIAL SHALL BE ADDED TO THE PLANTING HOLE FOR EACH TREE AND SHRUB AT THE RATE OF 4 OUNCES PER 2-1/2" CALIPER OR GALLON OF ROOTBALL. HYDROGEL MATERIAL SHALL BE VITERRA "GELSCAPE," "TERRASORB," OR APPROVED EQUAL.

**F. SUBSTITUTIONS:**

1. IF A PLANT IS FOUND NOT TO BE SUITABLE OR AVAILABLE, THE LANDSCAPE CONTRACTOR IS TO NOTIFY THE LANDSCAPE ARCHITECT BEFORE BIDDING. THE OWNER OR LANDSCAPE ARCHITECT WILL THEN SELECT A REASONABLE ALTERNATE OR INFORM ALL LANDSCAPE CONTRACTORS OF THE AVAILABILITY OF THE ORIGINAL PLANT.

**G. PRUNING, CLEANUP, PROTECTION OF EXISTING MATERIALS AND RESTORATION**

1. THE CONTRACTOR SHALL PRUNE PLANT MATERIAL WITHIN TWO (2) DAYS OF INSTALLATION IN ACCORDANCE WITH THE DETAILS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
2. DURING COURSE OF PLANTING, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED, LAWN AREAS KEPT CLEAR, AND ALL REASONABLE PRECAUTIONS TAKEN TO AVOID DAMAGE TO ANY EXISTING LAWNS, PAVING, ETC. NOT SCHEDULED FOR REMOVAL. WHEN PLANTING IN AN AREA HAS BEEN COMPLETED, THE AREA SHALL BE CLEANED UP THOROUGHLY. DEBRIS, RUBBISH, SUBSOIL AND WASTE MATERIALS SHALL BE CLEANED UP AND REMOVED FROM THE PROPERTY. EXISTING GRASS AREAS WHICH HAVE BEEN INJURED BY THE WORK SHALL BE REGRADED AND SOODED TO MATCH THE EXISTING LAWN; THE ENTIRE AREA SHALL BE NEAT AND CLEAN TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
3. CONTRACTOR SHALL, AT ALL TIMES, PROTECT ALL PLANTS AND LAWNS FROM DAMAGE. THE MOVING OF HEAVY EQUIPMENT OR MATERIAL OVER THE LAWN AREAS SHALL BE DONE ON PLANKS OR PONTOONS.
4. THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION ALL PAVEMENTS, SOODED OR PLANTED AREAS, STRUCTURES OR SUBSTRUCTURES, NOT SCHEDULED FOR REMOVAL, WHICH ARE DISTURBED BY THE CONTRACTOR DURING PLANTING OPERATIONS. SUCH RESTORATION SHALL BE IN A MANNER SATISFACTORY TO THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

**H. FINAL INSPECTION AND GUARANTEE:**

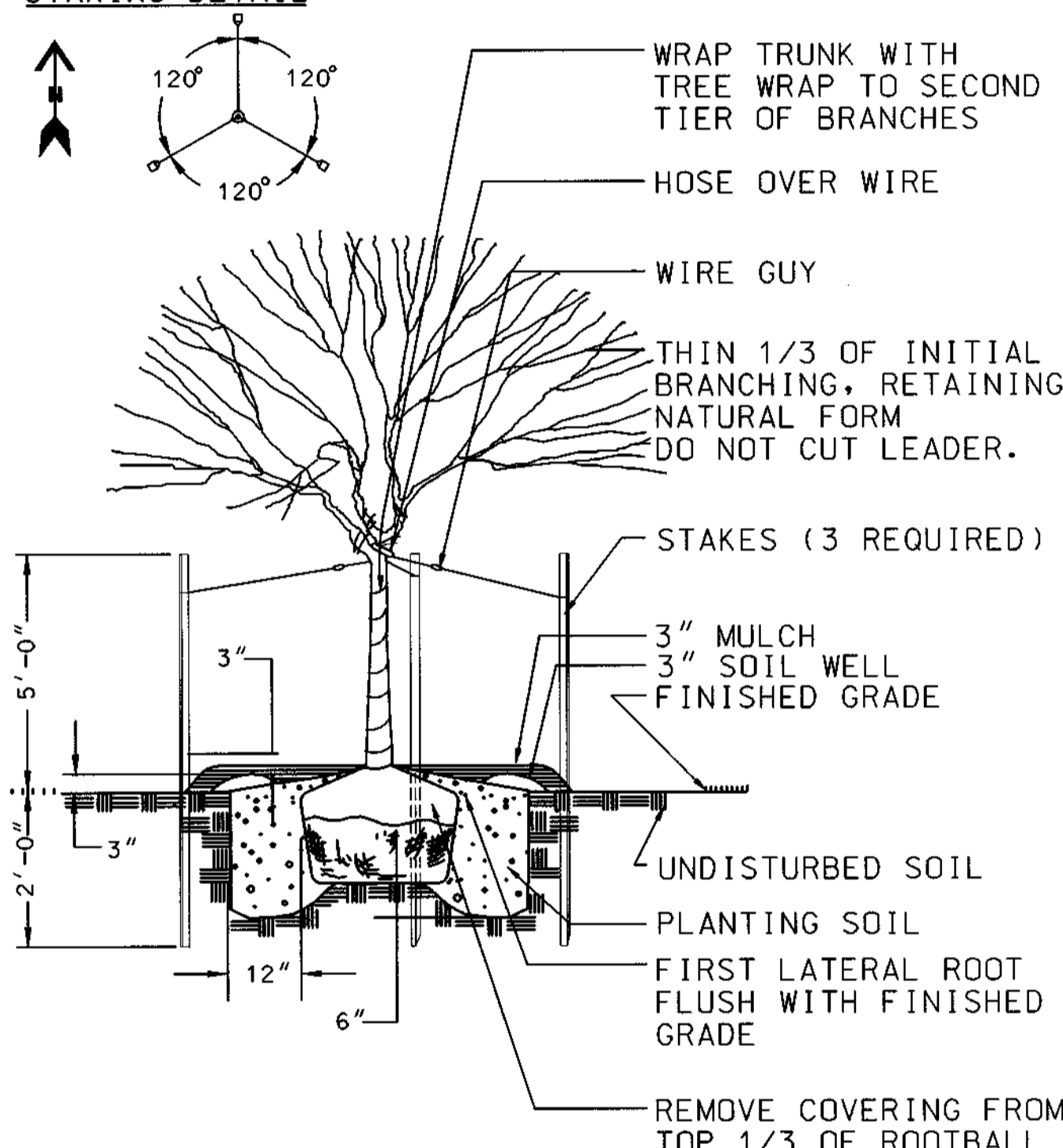
1. AFTER PLANTING IS COMPLETED (INCLUDING MULCHING AND CLEAN-UP) THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING TO REQUEST FINAL INSPECTION OF THE TOTAL PLANTING. THE LANDSCAPE ARCHITECT SHALL MAKE A FINAL INSPECTION VISIT AS SOON AS POSSIBLE. LANDSCAPE ARCHITECT SHALL NOTIFY THE LANDSCAPE CONTRACTOR, IN WRITING, WHEN ALL WORK IS SATISFACTORILY COMPLETE. IF WORK IS NOT SATISFACTORILY COMPLETE, THE LANDSCAPE ARCHITECT WILL NOTIFY THE LANDSCAPE CONTRACTOR, IN WRITING, AS TO THE DEFICIENCIES IN THE WORK AND THE NECESSARY CORRECTIVE MEASURES. THE LANDSCAPE CONTRACTOR WILL BE GIVEN A REASONABLE AMOUNT OF TIME TO CORRECT THE DEFICIENCIES, AND ANOTHER FINAL INSPECTION WILL BE SCHEDULED BY THE LANDSCAPE ARCHITECT.
2. ALL PLANT MATERIAL AND LAWN AREAS SHALL BE GUARANTEED TO BE IN A VIGOROUS GROWING CONDITION ONE YEAR FROM THE DATE OF FINAL INSPECTION AND ACCEPTANCE. AT THE TERMINATION OF THIS PERIOD, THE CONTRACTOR SHALL HAVE COMPLETED THE PRECEDING MAINTENANCE SCHEDULE. ANY PLANTS INFECTED WITH DISEASE OR INSECTS WILL BE REMOVED OR TREATED. ALL DEAD OR UNACCEPTABLE PLANTS WILL BE REPLACED BY THE SAME PLANTS AND SIZES DESIGNATED ON THE PLANT LIST. THESE PLANTS SHALL BE PLANTED, MULCHED AND GUY AS SPECIFIED HEREIN AND WITHOUT EXTRA COMPENSATION TO THE CONTRACTOR. AT THE COMPLETION OF ALL SUCH WORK AND WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT, THE CONTRACT WILL BE CONSIDERED COMPLETE.

PLANT LIST					
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
AR	62	Acer rubrum 'Red Sunset'	Red Sunset Maple	2 1/2" Cal.	B & B
GT	16	Gleditsia triacanthos 'Shade Master'	Shade Master Honey Locust	2 1/2" Cal.	B & B
PC	20	Pyrus calleryana 'Aristocrat'	Aristocrat Pear	2 1/2" Cal.	B & B
QP	27	Quercus phellos	Willow Oak	2 1/2" Cal.	B & B
ZS	29	Zelkova serrata 'Village Green'	Village Green Zelkova	2 1/2" Cal.	B & B

NOTE : TREE SPACING :  
A MINIMUM SPACING OF 20'-0" SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

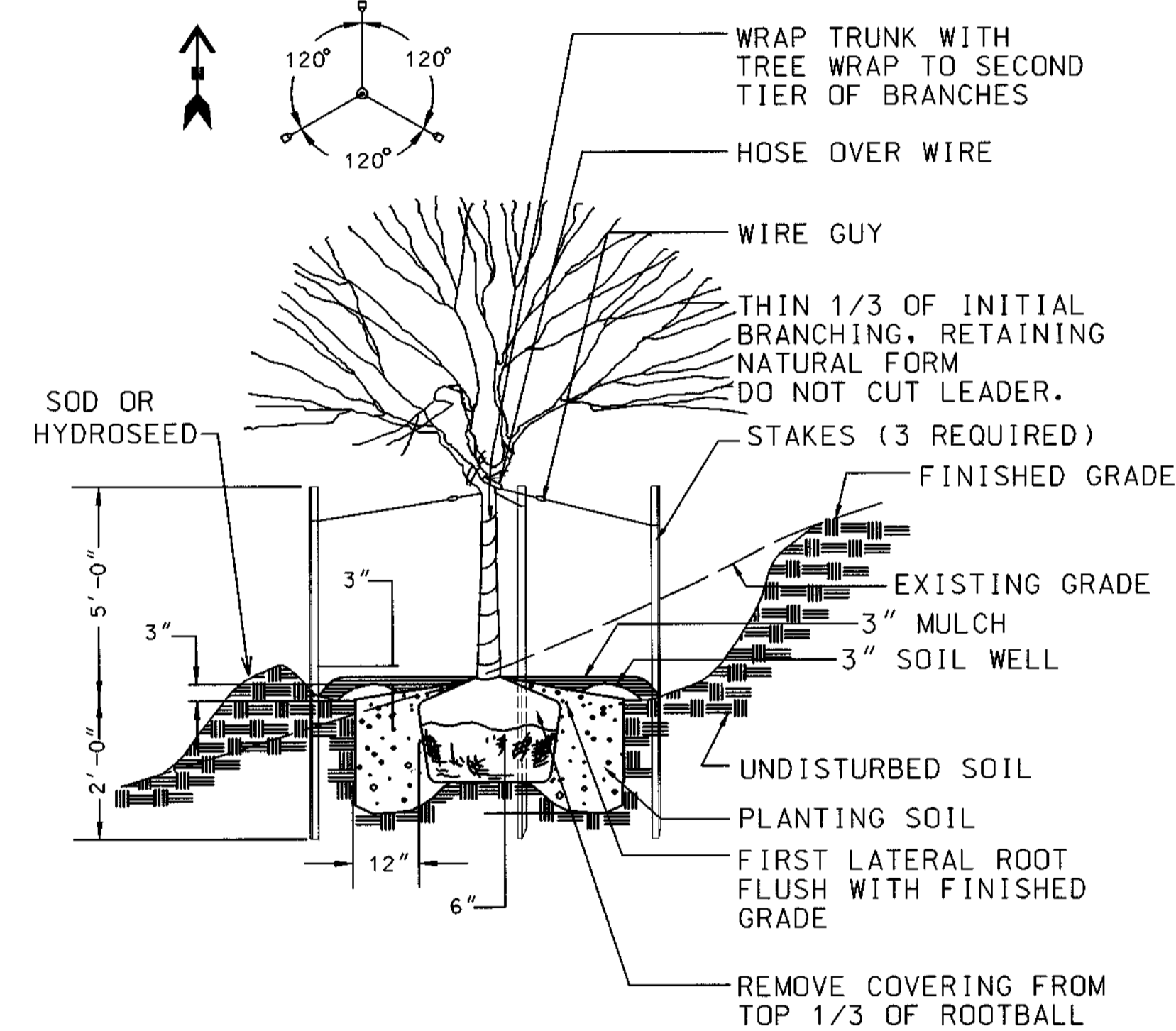
NOTE : 1. ALL PLANT MATERIAL SHALL CONFORM TO HOWARD COUNTY AND " USA STANDARD FOR NURSERY STOCK ", LATEST EDITION  
2. TREES TO BE A MINIMUM OF 4 FEET BEHIND CURB.

**STAKING DETAIL**



**Tree Planting Detail**  
NOT TO SCALE

**STAKING DETAIL**



**Slope Planting Detail**  
NOT TO SCALE

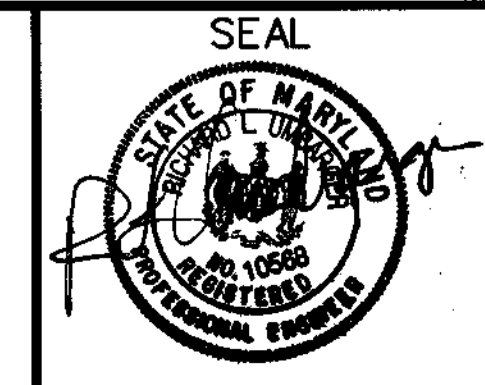
APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danaher* 3-8-99 DATE  
CHIEF, BUREAU OF HIGHWAYS

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Candy Hamilton* 3/12/99 DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT

*William D. ...* 3/5/99 DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION



**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
Civil Engineers and Land Surveyors  
658 Kenilworth Drive, Suite 100  
Towson Maryland 21204 (410) 825-8120  
203 East Broadway  
Bel Air, Maryland 21014 (410) 838-3800



DESIGNED : RGG  
DRAFTED : RLM  
CHECKED : RLU

**LANDSCAPE DETAILS AND NOTES**

SCALE : AS SHOWN

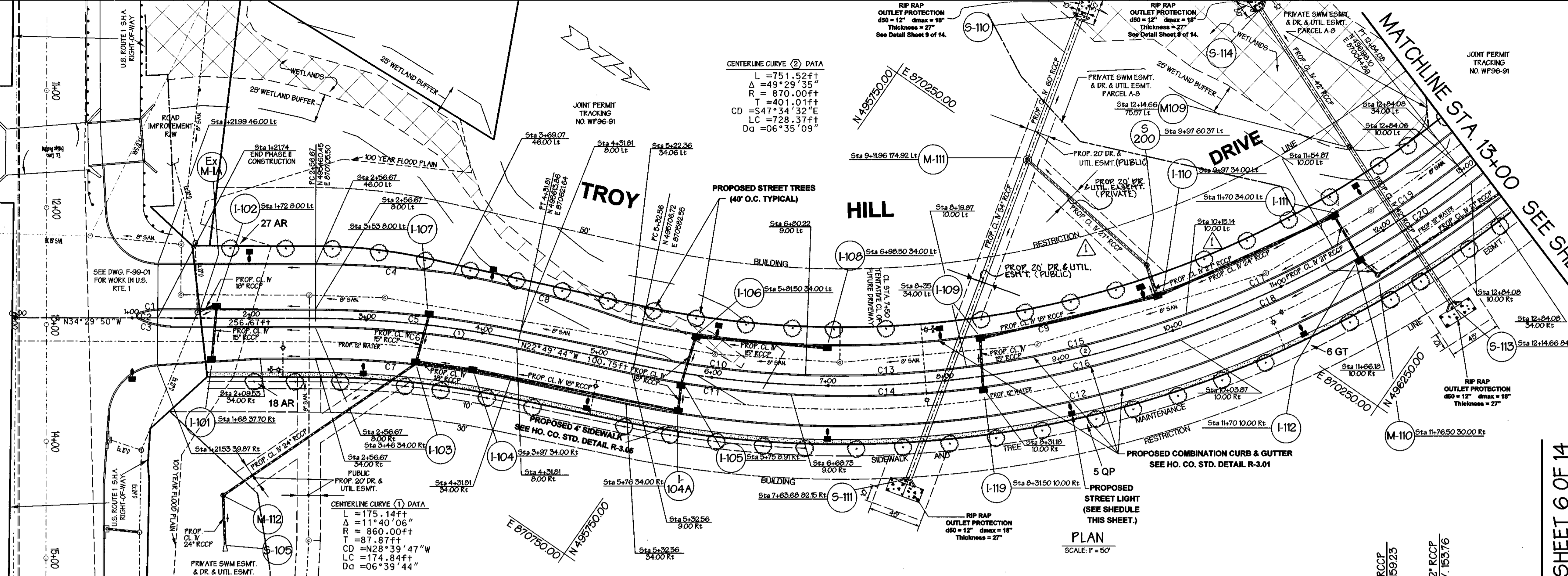
**TROY HILL CORPORATE CENTER**  
PHASE II

HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1

FEB. 10, 1999  
SHEET 4 OF 14

**OWNER / APPLICANT**  
TROY HILL BUSINESS PARK PARTNERSHIP  
C/O MANEKIN CORP.  
7165 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046  
(301) 290-1400  
ATTN : COLE SCHNORF

**BALTIMORE WASHINGTON BOULEVARD  
(U.S. ROUTE 1)**



LIGHTING SCHEDULE					
DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE / POLE TYPE	COMMENTS
5 of 14	TROY HILL DR.	1+00	46 RT	250 watt HPS vapor pendant fixture (gray) with cutoff optics mounted on 30' height on a galvanized steel pole with an aluminum trellisway transformer base using a 15' arm.	angle as shown on plan
		2+00	51 LT	150 watt HPS vapor pendant fixture (cutoff) mounted on 30' height on a galvanized steel pole using a 17' arm.	
		3+00	39 RT		
		4+00	50 LT		
		5+00	39 RT		
		6+00	39 LT		
		7+00	39 RT		
		8+00	39 RT		
		9+00	39 RT		
		10+00	39 LT		
		11+00	39 RT		
		12+00	39 LT		
		13+00	39 RT		

NOTE: COUNTY REQUIREMENTS FOR ENTRANCES SHALL BE MET AT THE SDP SUBMISSION FOR EACH LOT.

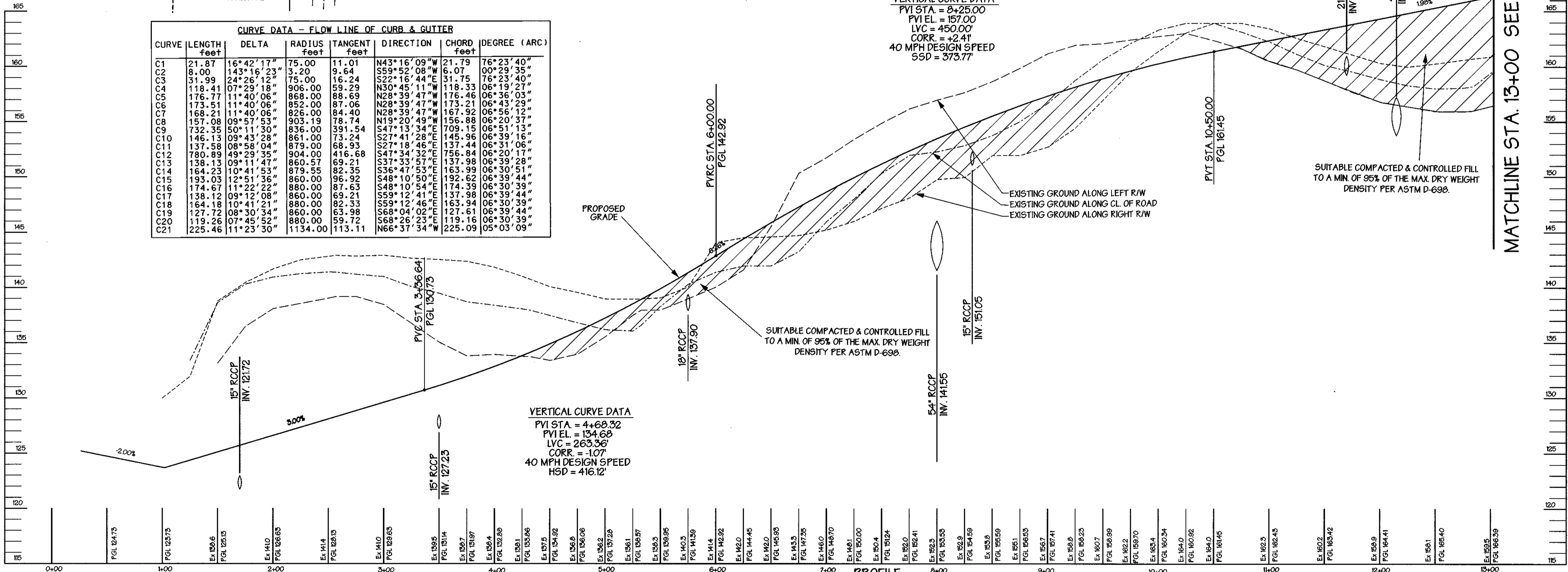
NOTE: ALL STORM DRAINS OUTSIDE THE PUBLIC RIGHT-OF-WAY ARE PRIVATE AND ARE WITHIN PRIVATE EASEMENTS.

**CENTERLINE CURVE (T) DATA**  
 L = 175.14 ft  
 Δ = 11° 40' 06"  
 R = 960.00 ft  
 T = 87.87 ft  
 CD = N28° 39' 47" W  
 LC = 174.84 ft  
 Dc = 06° 39' 44"

**CENTERLINE CURVE (2) DATA**  
 L = 751.52 ft  
 Δ = 49° 29' 35"  
 R = 870.00 ft  
 T = 401.01 ft  
 CD = S47° 34' 32" E  
 LC = 728.37 ft  
 Dc = 06° 35' 09"

**VERTICAL CURVE DATA**  
 PVI STA = 8+25.00  
 PVI EL = 157.00  
 LVC = 450.00  
 CORR = +2.41'  
 40 MPH DESIGN SPEED  
 SSD = 373.77'

CURVE DATA - FLOW LINE OF CURB & GUTTER							
CURVE	LENGTH feet	DELTA	RADIUS feet	TANGENT feet	DIRECTION	CHORD feet	DEGREE (ARC)
C1	21.87	16° 42' 17"	75.00	11.01	N43° 16' 09" W	21.79	76° 23' 40"
C2	8.00	143° 16' 23"	3.20	9.64	S59° 52' 08" W	6.07	00° 29' 35"
C3	31.99	24° 26' 12"	75.00	16.24	S22° 16' 44" E	31.75	76° 23' 40"
C4	118.41	07° 29' 18"	906.00	53.29	N30° 45' 11" W	118.33	06° 13' 27"
C5	176.77	11° 40' 06"	859.00	89.69	N28° 39' 47" W	176.46	06° 36' 03"
C6	173.51	11° 40' 06"	87.06	87.06	N28° 39' 47" W	173.21	06° 43' 29"
C7	168.21	11° 40' 06"	826.00	84.40	N28° 39' 47" W	167.92	06° 56' 12"
C8	157.08	09° 57' 53"	903.19	78.74	N19° 20' 49" W	156.88	06° 20' 37"
C9	732.35	50° 11' 30"	836.00	391.54	S47° 13' 34" E	709.15	06° 51' 13"
C10	146.13	09° 43' 28"	861.00	73.24	S27° 41' 24" E	145.96	06° 39' 16"
C11	137.58	08° 56' 04"	868.93	68.93	S27° 18' 46" E	137.44	06° 31' 06"
C12	780.89	49° 29' 35"	904.00	416.68	S47° 34' 32" E	756.84	06° 20' 17"
C13	138.13	09° 11' 47"	860.57	69.21	S37° 33' 57" E	137.98	06° 39' 28"
C14	164.23	10° 41' 53"	879.55	82.35	S36° 47' 53" E	163.99	06° 30' 51"
C15	193.03	12° 51' 36"	860.00	96.92	S48° 10' 50" E	192.62	06° 39' 44"
C16	174.67	11° 22' 22"	880.00	87.63	S48° 10' 50" E	174.39	06° 30' 39"
C17	138.12	09° 12' 08"	860.00	69.21	S59° 12' 41" E	137.98	06° 39' 44"
C18	164.18	10° 41' 21"	880.00	82.33	S59° 12' 46" E	163.94	06° 30' 39"
C19	127.72	08° 30' 34"	860.00	63.98	S68° 04' 02" E	127.61	06° 39' 44"
C20	119.26	07° 45' 52"	880.00	59.72	S68° 26' 23" E	119.09	06° 39' 44"
C21	225.46	11° 23' 30"	1134.00	113.11	N66° 37' 34" E	225.09	05° 03' 09"



**VERTICAL CURVE DATA**  
 PVI STA = 4+68.32  
 PVI EL = 134.68  
 LVC = 263.36  
 CORR = -1.07'  
 40 MPH DESIGN SPEED  
 HSD = 416.12'

12/30/99 BY G.W.S.  
 REVISED STORM DRAIN SIZES BETWEEN M-111 TO 200, 5 200 TO 1-110 TO MATCH PROFILES

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Andrew M. Danek 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Cindy Hammit 3/12/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 APPROVED: [Signature] 2/4/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



**GEORGE W. STEPHENS, JR.  
AND ASSOCIATES, INC.**  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800

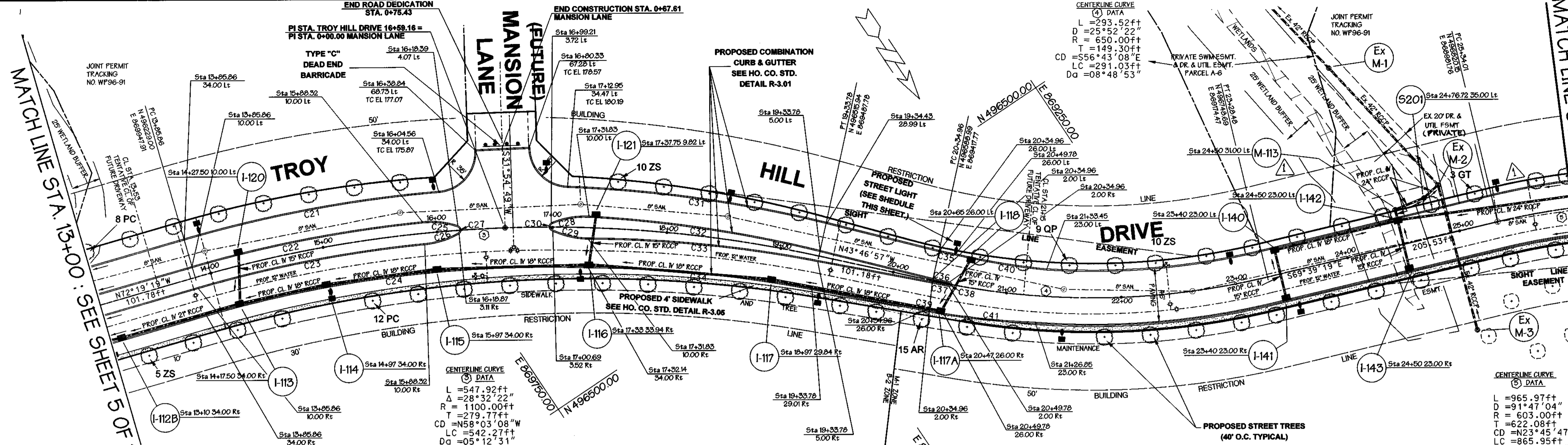


DESIGNED: CWC  
 DRAFTED: RLM  
 CHECKED: RLU

**TROY HILL DRIVE  
ROAD PLAN AND PROFILES  
STA. 0+00 TO STA. 13+00**  
 SCALE: 1" = 50'

**TROY HILL CORPORATE CENTER  
PHASE II**  
 HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT #1  
 FEB. 11, 1999  
 SHEET 5 OF 14

DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE / POLE TYPE	COMMENTS
6 of 14	TROY HILL DR.	14+00	36" LT.	150 watt HPS vapor fixture (height) mounted at 30' height on a galvanized steel pole using a 6" arm.	
		15+00	36" RT		
		16+00	36" LT.		
		16+95	52" LT		single arm as shown
		17+25	36" RT		
		18+50	36" LT		
		19+40	34" RT		
		20+50	30" LT		both sidewalk
		21+50	30" RT		
		23+50	30" RT		
		25+40	28" LT		

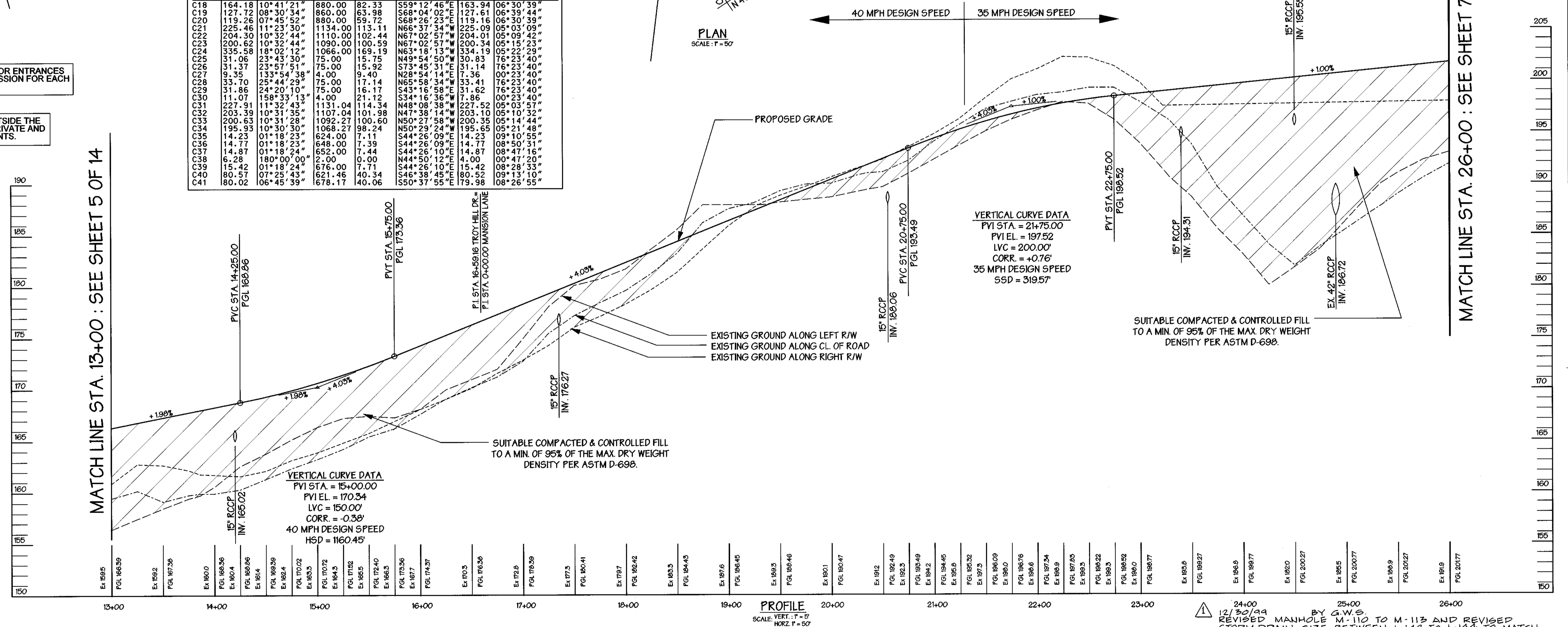


**CURVE DATA - FLOW LINE OF CURB & GUTTER**

CURVE	LENGTH (Feet)	DELTA	RADIUS (Feet)	TANGENT (Feet)	DIRECTION	CHORD (Feet)	DEGREE (ARC)
C18	164.78	10°41'21"	880.00	82.33	S59°12'46"E	163.34	06°30'39"
C19	127.72	08°30'34"	860.00	63.98	S68°04'02"E	127.61	06°39'44"
C20	119.26	07°45'52"	880.00	59.72	S68°26'23"E	119.16	06°30'39"
C21	225.46	11°23'30"	1134.00	113.11	N66°37'34"W	225.09	05°03'09"
C22	204.30	10°32'44"	1110.00	102.44	N67°02'57"W	204.01	05°09'42"
C23	200.62	10°32'44"	1090.00	100.59	N67°02'57"W	200.34	05°15'23"
C24	338.58	18°02'12"	1066.00	169.19	N63°18'13"W	334.19	05°22'49"
C25	31.06	23°43'30"	75.00	15.75	N49°54'50"W	30.83	76°23'40"
C26	31.37	23°57'51"	75.00	15.92	S73°45'31"E	31.14	76°23'40"
C27	9.35	133°54'38"	4.00	9.40	N28°54'14"E	7.36	00°23'40"
C28	93.70	25°44'29"	75.00	17.14	N65°58'34"W	33.41	76°23'40"
C29	11.07	24°20'10"	75.00	16.17	S43°16'38"E	31.62	76°23'40"
C30	11.07	158°33'13"	4.00	21.12	S34°16'36"W	7.86	00°23'40"
C31	227.91	11°32'43"	1131.04	114.34	N48°08'38"W	227.52	05°03'57"
C32	203.39	10°31'35"	1107.04	101.98	N47°38'14"W	203.10	05°10'32"
C33	200.63	10°31'28"	1092.21	100.60	N50°27'58"W	200.35	05°14'44"
C34	195.93	10°30'30"	1068.27	98.24	N50°27'58"W	195.65	05°21'48"
C35	14.23	01°18'23"	624.00	7.11	S44°26'09"E	14.23	09°10'55"
C36	14.77	01°18'23"	648.00	7.39	S44°26'09"E	14.77	08°50'31"
C37	14.87	01°18'24"	652.00	7.44	S44°26'10"E	14.87	08°47'16"
C38	6.28	180°00'00"	2.00	0.00	N44°50'12"E	4.00	00°47'20"
C39	5.42	01°18'24"	676.00	1.71	S44°26'10"E	15.42	08°28'33"
C40	80.57	07°25'43"	621.46	40.34	S46°38'45"E	80.52	09°13'10"
C41	80.02	06°45'39"	678.17	40.06	S50°37'55"E	79.98	08°26'55"

NOTE: COUNTY REQUIREMENTS FOR ENTRANCES SHALL BE MET AT THE SDP SUBMISSION FOR EACH LOT.

NOTE: ALL STORM DRAINS OUTSIDE THE PUBLIC RIGHT-OF-WAY ARE PRIVATE AND ARE WITHIN PRIVATE EASEMENTS.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danke* 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Chris Hamilton* 3/12/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
*Chris Hamilton* 3/12/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

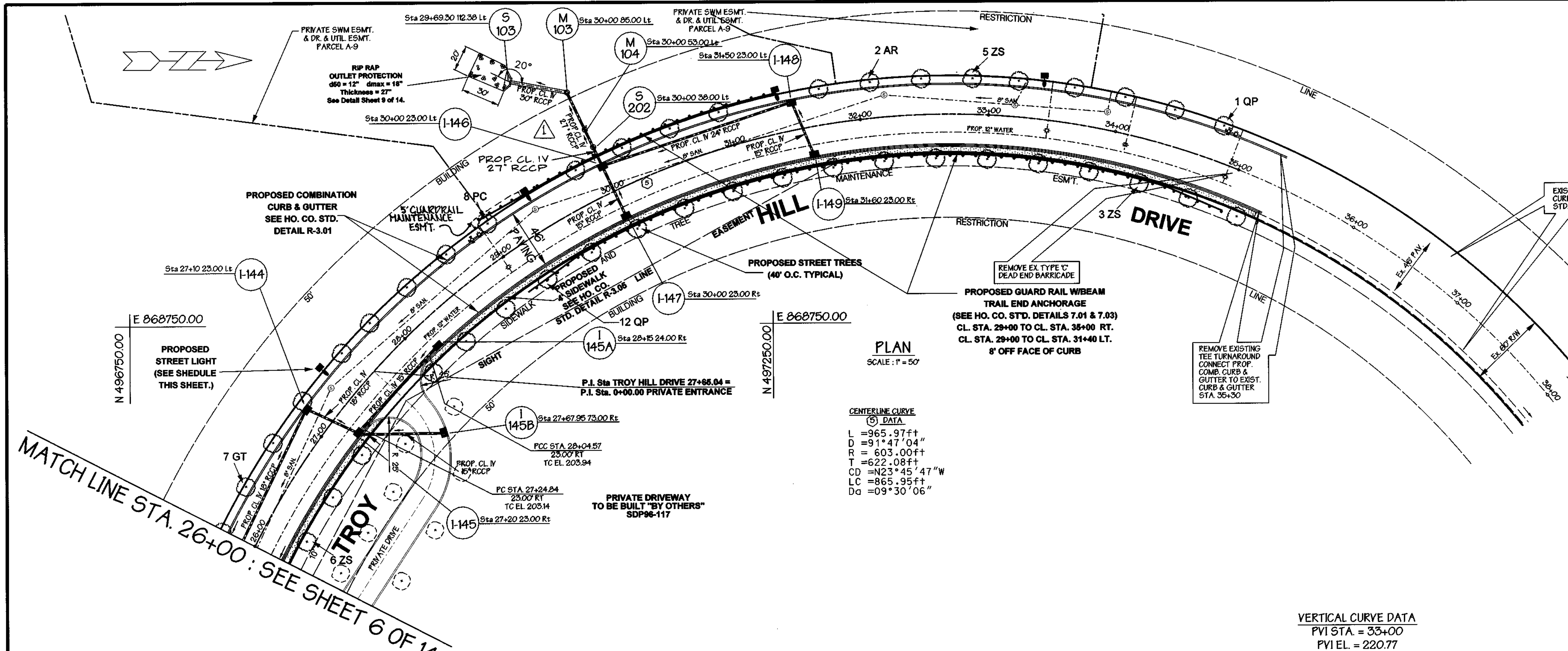
**GWS**  
 GEORGE W. STEPHENS, JR.  
 AND ASSOCIATES, INC.  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800

DESIGNED: CWC  
 DRAFTED: RLM  
 CHECKED: RLU

**TROY HILL DRIVE**  
**ROAD PLAN AND PROFILE**  
**STA. 13+00 TO STA. 26+00**  
 SCALE: 1" = 50'

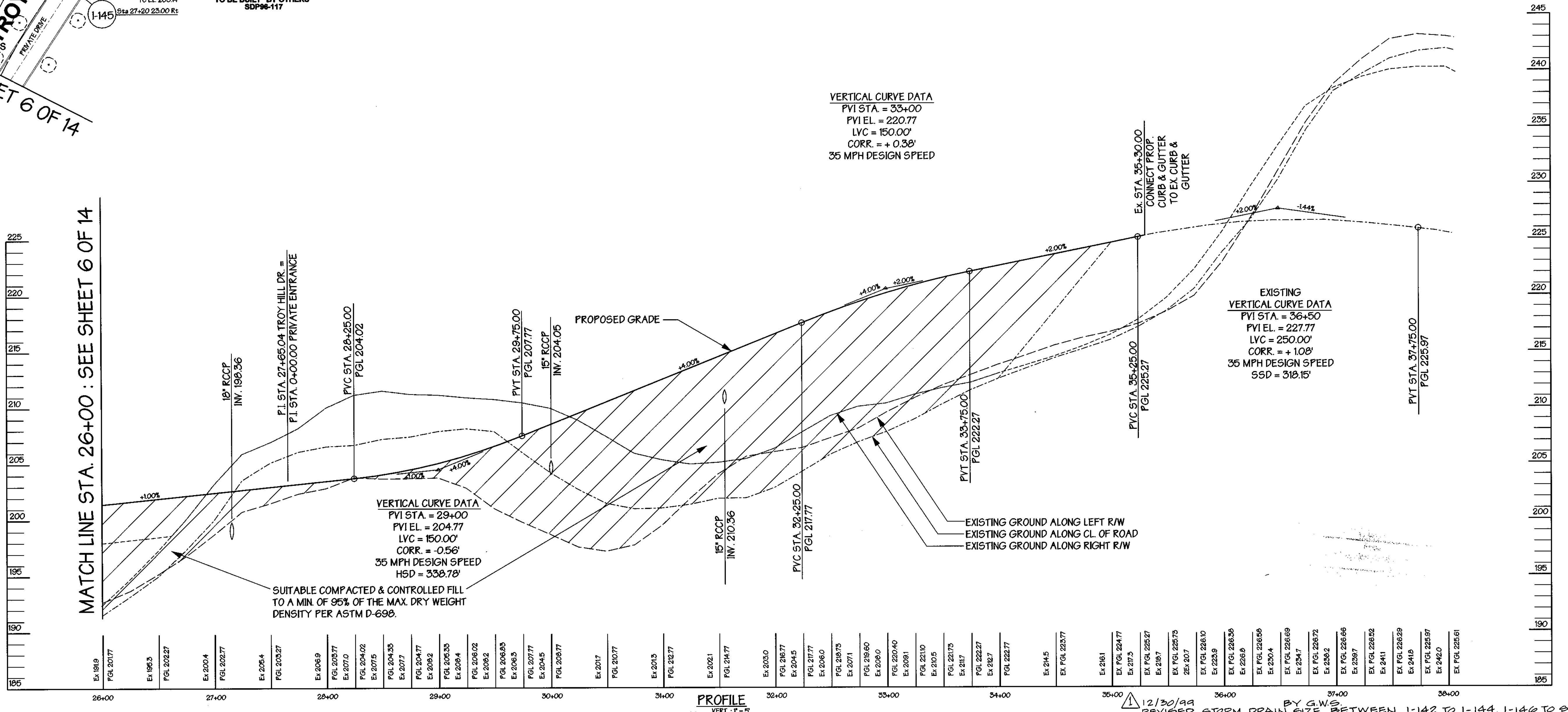
**TROY HILL CORPORATE CENTER**  
 PHASE II  
 HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT #1  
 FEB. 11, 1999  
 SHEET 6 OF 14  
 F98169  
 P/W 8130 - rdsht.s06

LIGHTING SCHEDULE					
DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE / POLE TYPE	COMMENTS
7 of 14	TROY HILL DR.	27+40	28' LT	150 watt HPS vapor pendant fixture (outoff) mounted at 30' height on a galvanized steel pole using a 6' arm.	
"	"	29+40	28' LT.		
"	"	31+40	28' LT		
"	"	33+40	28' LT.		



NOTE: COUNTY REQUIREMENTS FOR ENTRANCES SHALL BE MET AT THE SDP SUBMISSION FOR EACH LOT.

NOTE: ALL STORM DRAINS OUTSIDE THE PUBLIC RIGHT-OF-WAY ARE PRIVATE AND ARE WITHIN PRIVATE EASEMENTS.

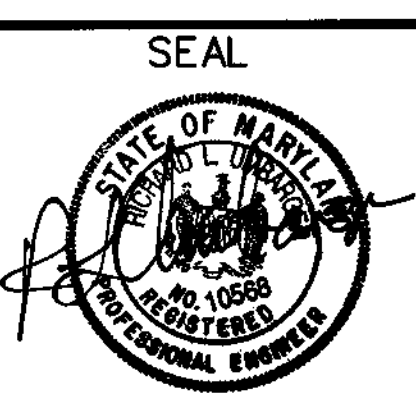


APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cinda Hamilton* 3/13/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*John Williams* 3/19/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21104 (410) 838-3800

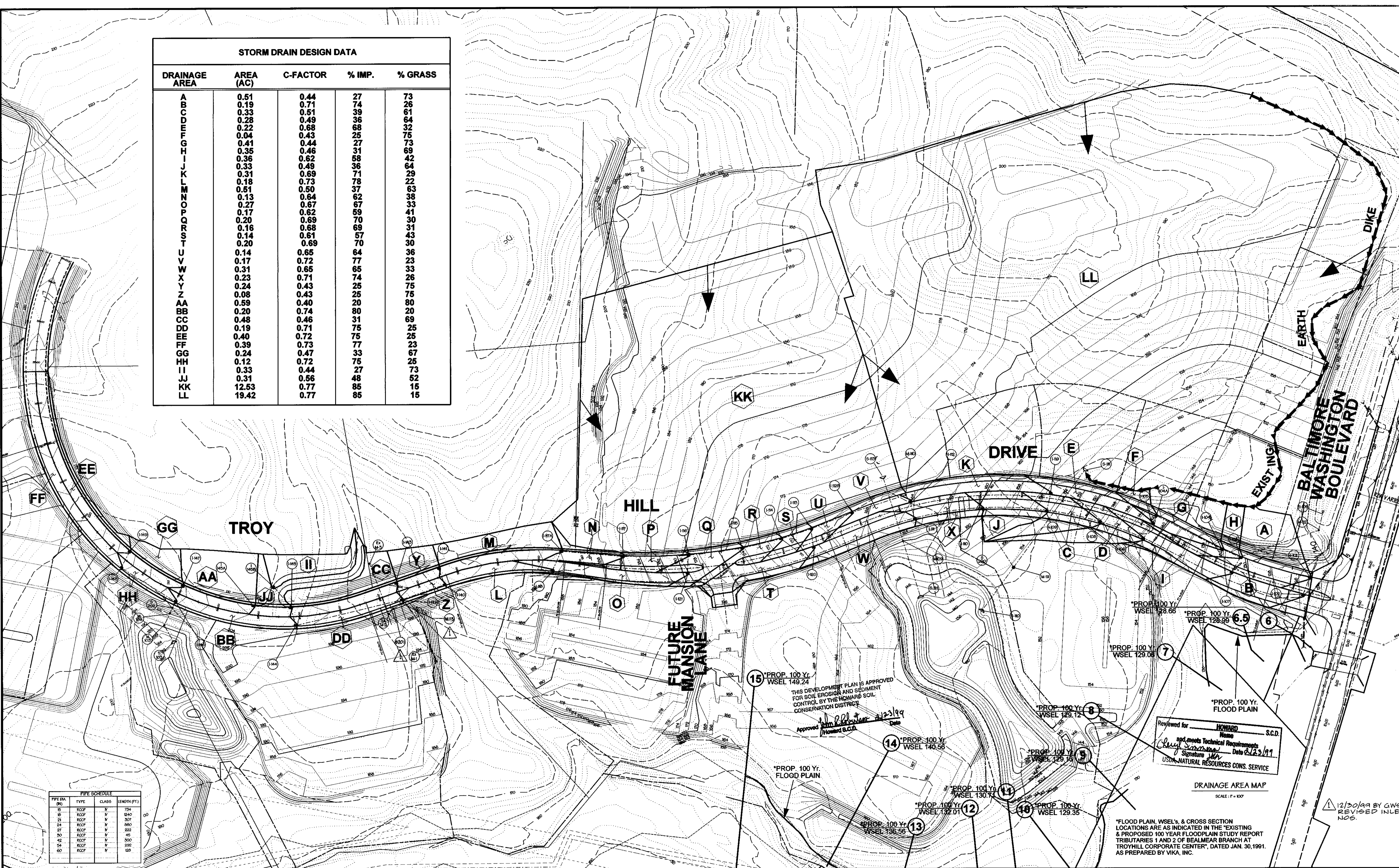


DESIGNED : CWC  
 DRAFTED : RLM  
 CHECKED : RLU

**TROY HILL DRIVE ROAD PLAN AND PROFILE**  
 STA. 26+00 TO STA. 35+00  
 SCALE: 1" = 50'

**TROY HILL CORPORATE CENTER**  
 PHASE II  
 HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT \*1  
 FEB. 11, 1999  
 SHEET 7 OF 14

STORM DRAIN DESIGN DATA				
DRAINAGE AREA	AREA (AC)	C-FACTOR	% IMP.	% GRASS
A	0.51	0.44	27	73
B	0.19	0.71	74	26
C	0.33	0.51	39	61
D	0.28	0.49	36	64
E	0.22	0.68	68	32
F	0.04	0.43	25	75
G	0.41	0.44	27	73
H	0.35	0.46	31	69
I	0.36	0.62	58	42
J	0.33	0.49	36	64
K	0.31	0.69	71	29
L	0.18	0.73	78	22
M	0.51	0.50	37	63
N	0.13	0.64	62	38
O	0.27	0.67	67	33
P	0.17	0.62	59	41
Q	0.20	0.69	70	30
R	0.16	0.68	69	31
S	0.14	0.61	57	43
T	0.20	0.69	70	30
U	0.14	0.65	64	36
V	0.17	0.72	77	23
W	0.31	0.65	65	35
X	0.23	0.71	74	26
Y	0.24	0.43	25	75
Z	0.08	0.43	25	75
AA	0.59	0.40	20	80
BB	0.20	0.74	80	20
CC	0.48	0.46	31	69
DD	0.19	0.71	75	25
EE	0.40	0.72	75	25
FF	0.39	0.73	77	23
GG	0.24	0.47	33	67
HH	0.12	0.72	75	25
II	0.33	0.44	27	73
JJ	0.31	0.31	48	52
KK	12.53	0.77	85	15
LL	19.42	0.77	85	15



PIPE DIA (IN)	TYPE	CLASS	LENGTH (FT)
15	RCCP	V	750
18	RCCP	V	1240
21	RCCP	V	307
24	RCCP	V	880
27	RCCP	V	222
30	RCCP	V	45
42	RCCP	V	500
54	RCCP	V	192
60	RCCP	V	128

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

Approved: *[Signature]* Date: 2/23/99  
/Howard S.C.D.

Reviewed for: HOWARD S.C.D.  
Name: [Signature]  
and meets Technical Requirements  
Signature: [Signature] Date: 2/23/99  
USDA, NATURAL RESOURCES CONSERVATION SERVICE

\*FLOOD PLAIN, WSEL's, & CROSS SECTION LOCATIONS ARE AS INDICATED IN THE 'EXISTING & PROPOSED 100 YEAR FLOODPLAIN STUDY REPORT TRIBUTARIES 1 AND 2 OF BEALMEAR BRANCH AT TROYHILL CORPORATE CENTER', DATED JAN. 30, 1991. AS PREPARED BY VIKI, INC.

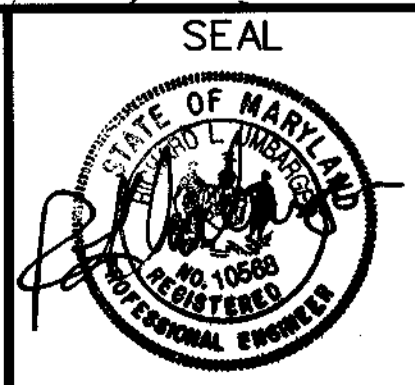
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* 3-8-99 DATE  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*[Signature]* 3/12/99 DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 3/9/99 DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION



GEORGE W. STEPHENS, JR.  
AND ASSOCIATES, INC.  
Civil Engineers and Land Surveyors  
658 Kenilworth Drive, Suite 100  
Towson Maryland 21204 (410) 825-8120  
203 East Broadway  
Bel Air, Maryland 21014 (410) 838-3800



DESIGNED : CWC  
DRAFTED : CWC  
CHECKED : RLU

**DRAINAGE AREA MAP**

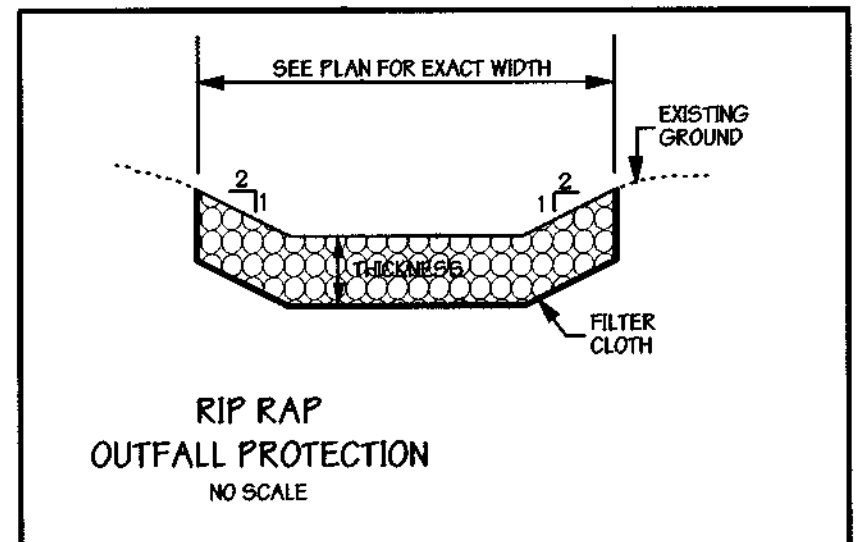
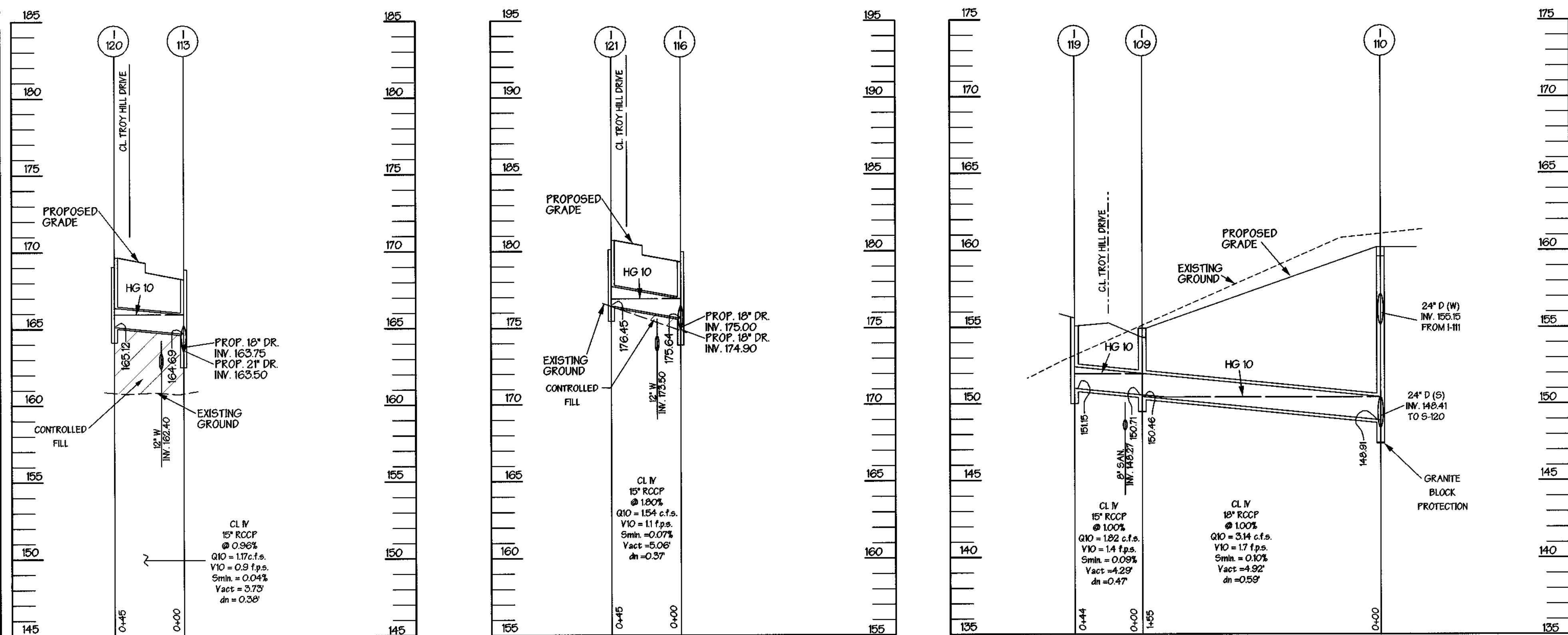
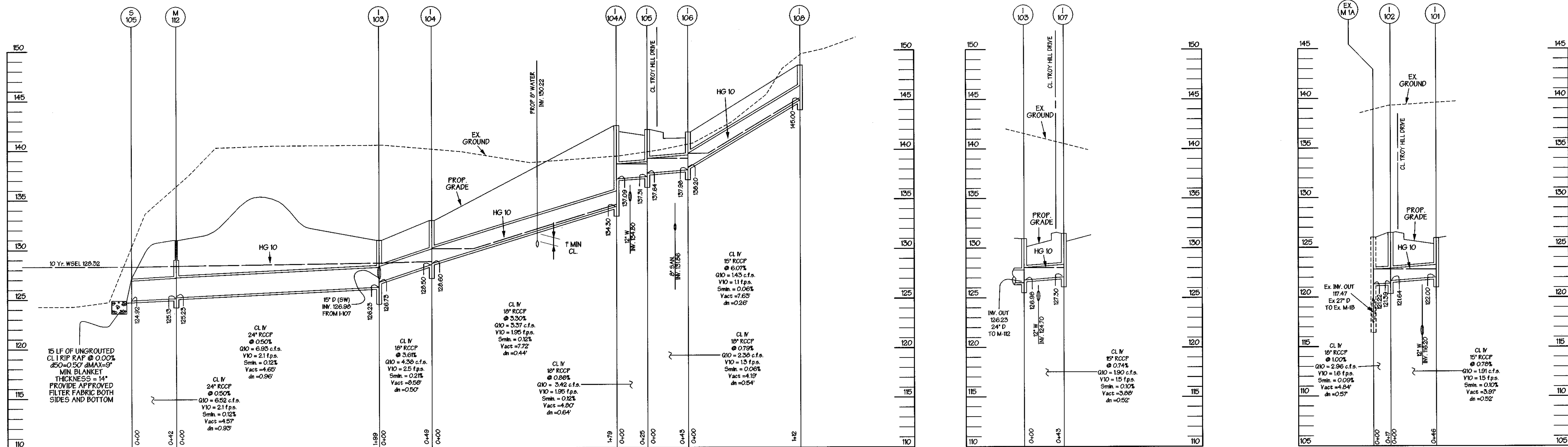
SCALE : AS SHOWN

**TROY HILL CORPORATE CENTER  
PHASE II**

HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1

FEB. 10, 1999  
SHEET 8 OF 14





**PROFILE**

SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'

OWNER / APPLICANT  
TROY HILL BUSINESS PARK PARTNERSHIP  
C/O MANEKIN CORP.  
1165 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046  
(410) 290-1400  
ATTN: COLE SCHNORF

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-8-99  
CHEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Conita Haszler* 3/12/99  
CHEF, DIVISION OF LAND DEVELOPMENT

*John P. ...* 3/16/99  
CHEF, DEVELOPMENT ENGINEERING DIVISION



**GEORGE W. STEPHENS, JR.  
AND ASSOCIATES, INC.**  
Civil Engineers and Land Surveyors  
658 Kenilworth Drive, Suite 100  
Towson Maryland 21204 (410) 825-8120  
203 East Broadway  
Bel Air, Maryland 21014 (410) 838-3800



DESIGNED: CWC  
DRAFTED: RLM  
CHECKED: RLU

**TROY HILL DRIVE  
STORM DRAIN PROFILES**

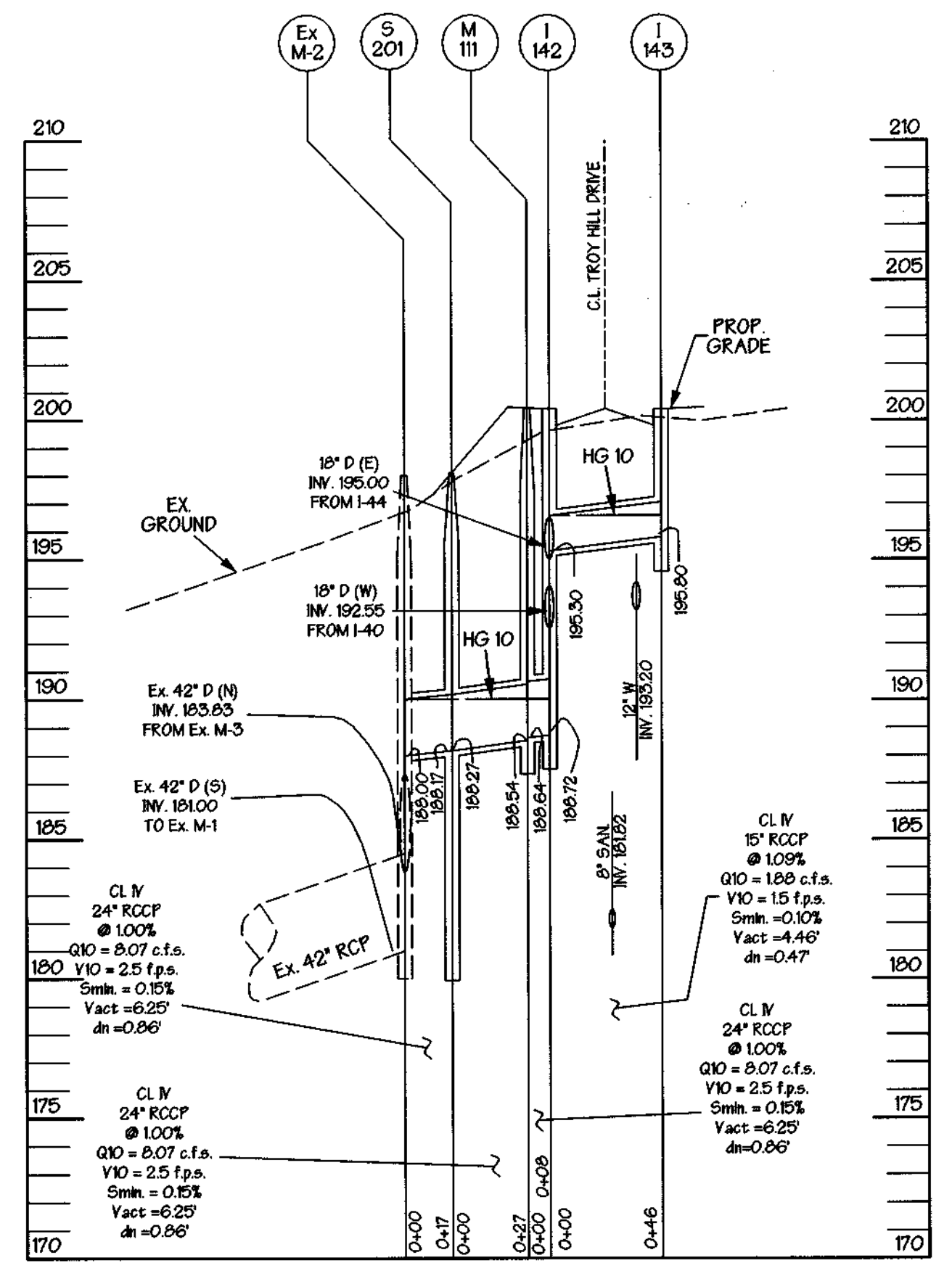
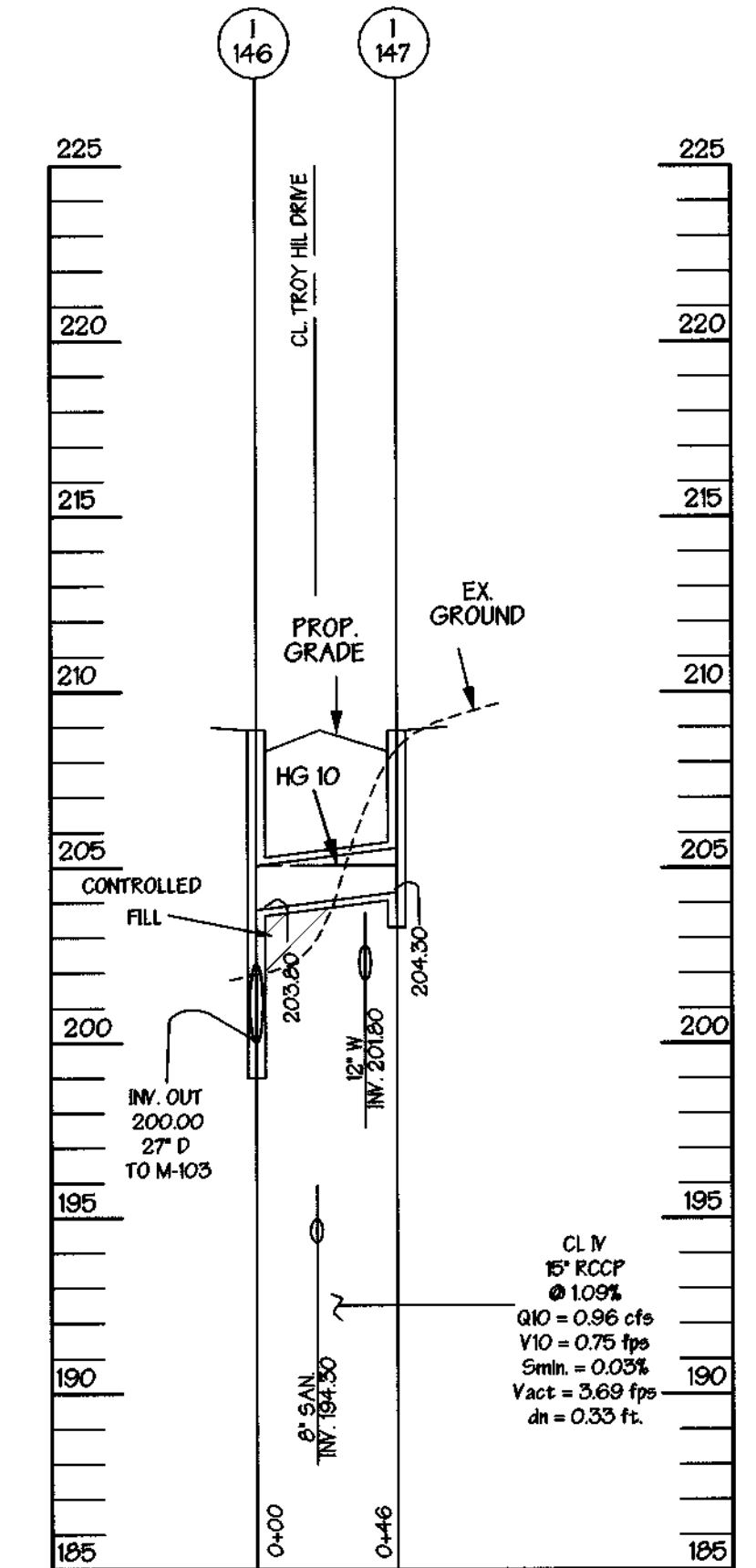
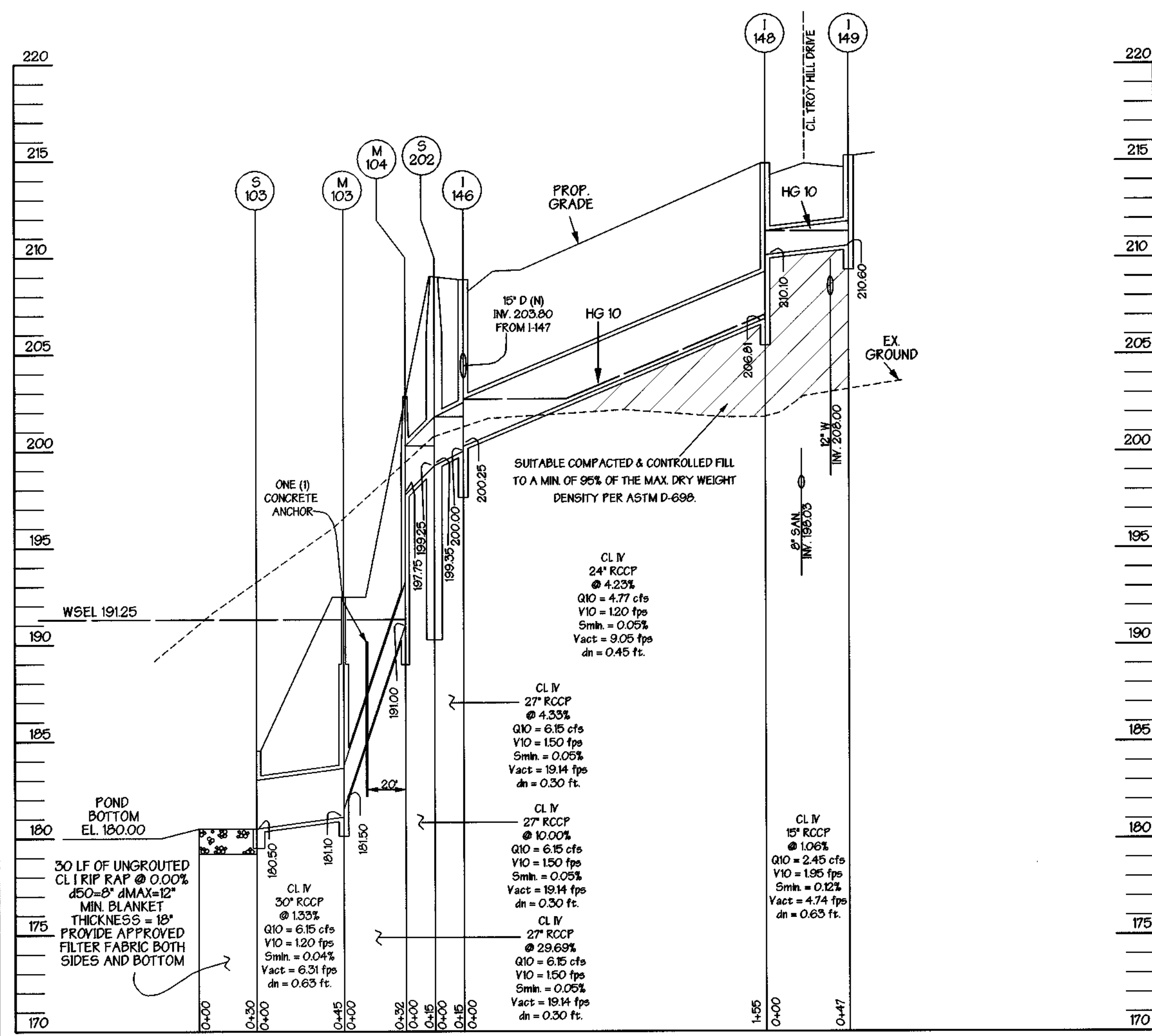
SCALE: 1" = 50'

**TROY HILL CORPORATE CENTER  
PHASE II**

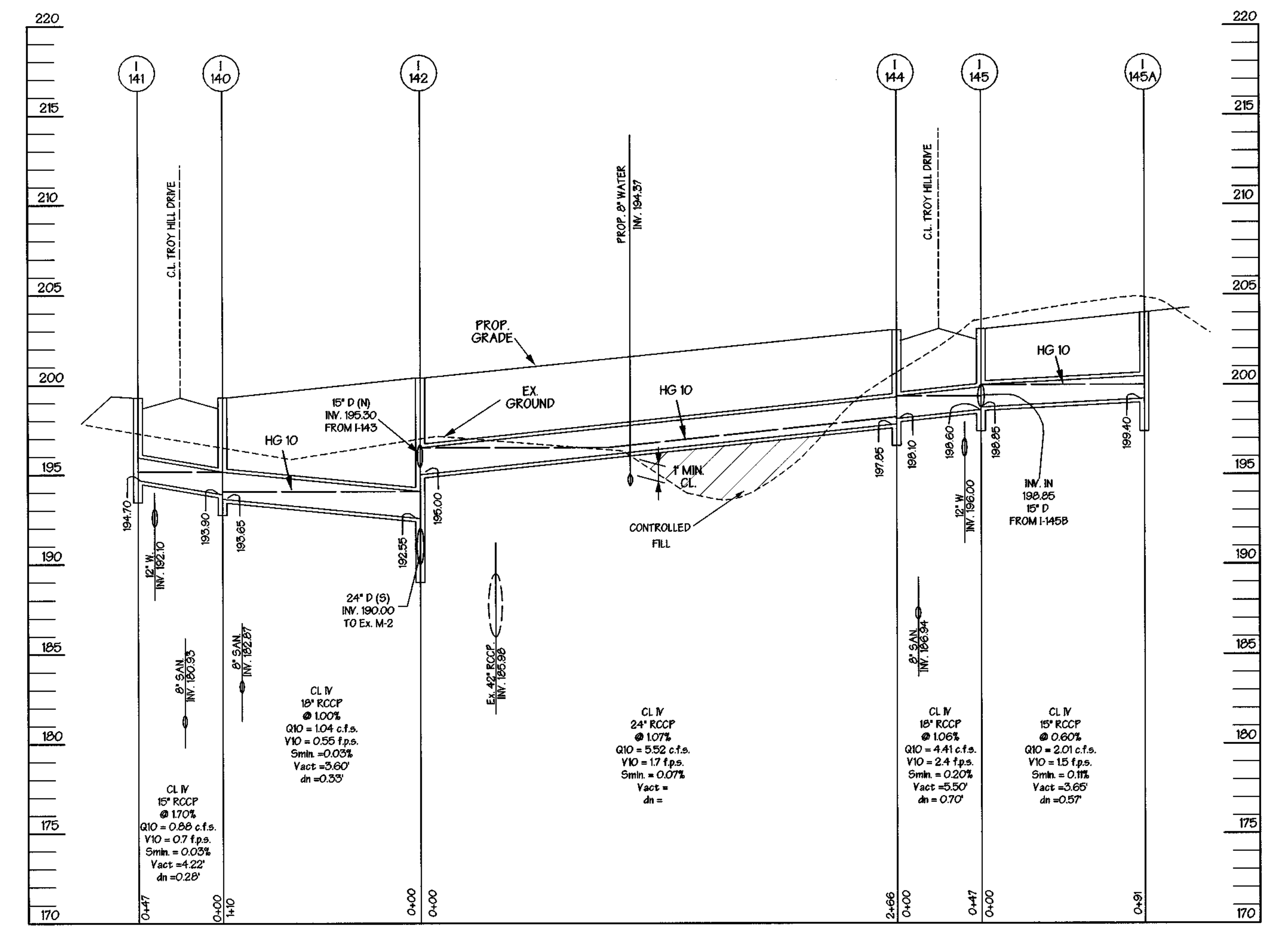
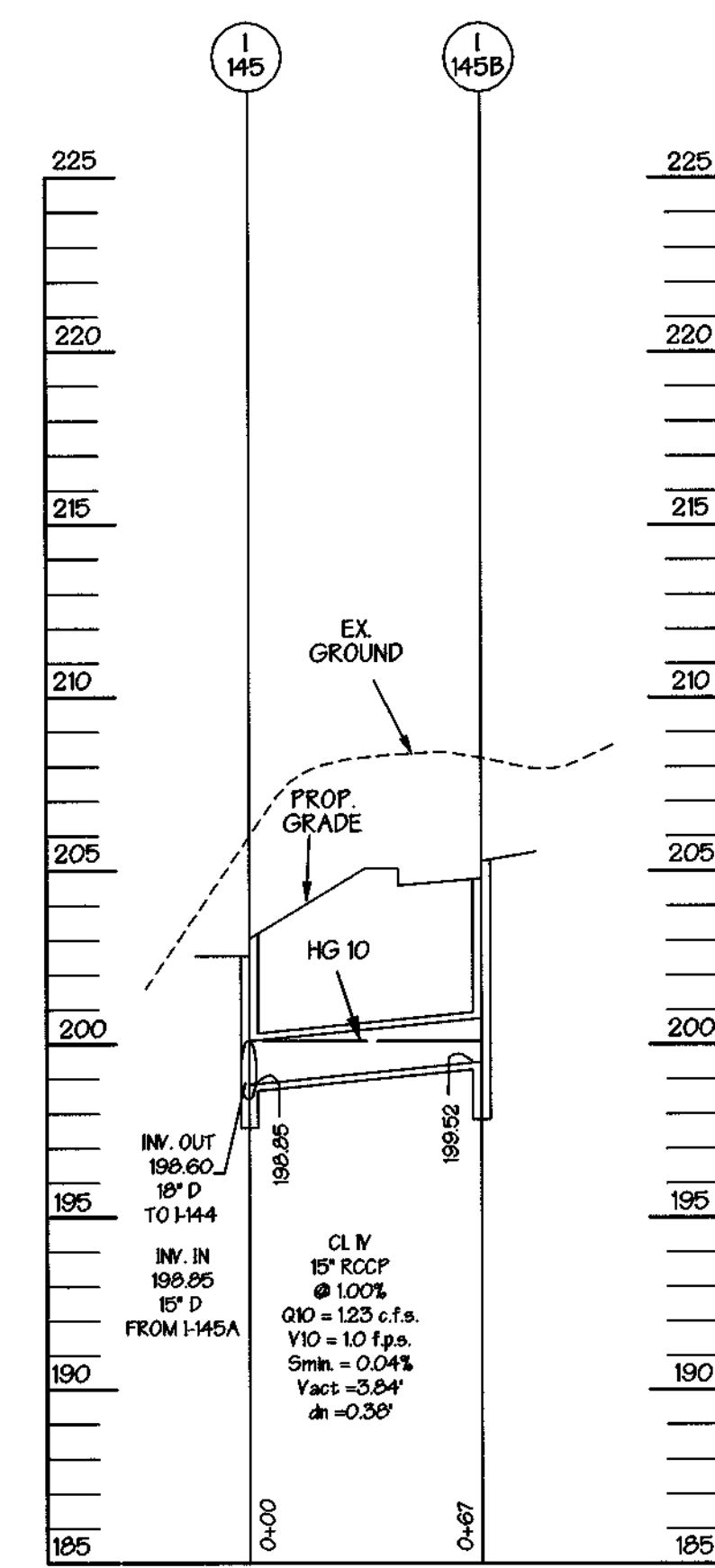
HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT \*1

FEB. 10, 1999  
SHEET 9 OF 14



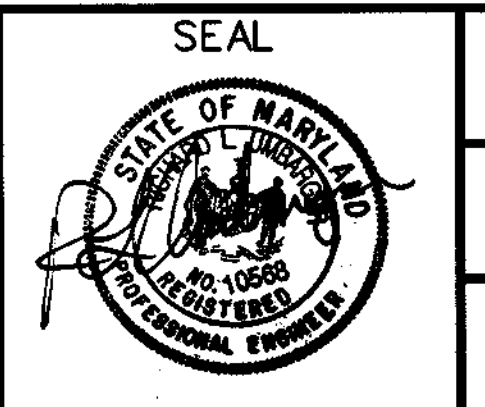


**PROFILES**  
 SCALE: HORZ. : 1" = 50'  
 VERT. : 1" = 5'



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Sandra Hamstra* 7/12/98  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
*Michael R. ...* 3/9/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

**GWS**  
 GEORGE W. STEPHENS, JR.  
 AND ASSOCIATES, INC.  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson, Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800



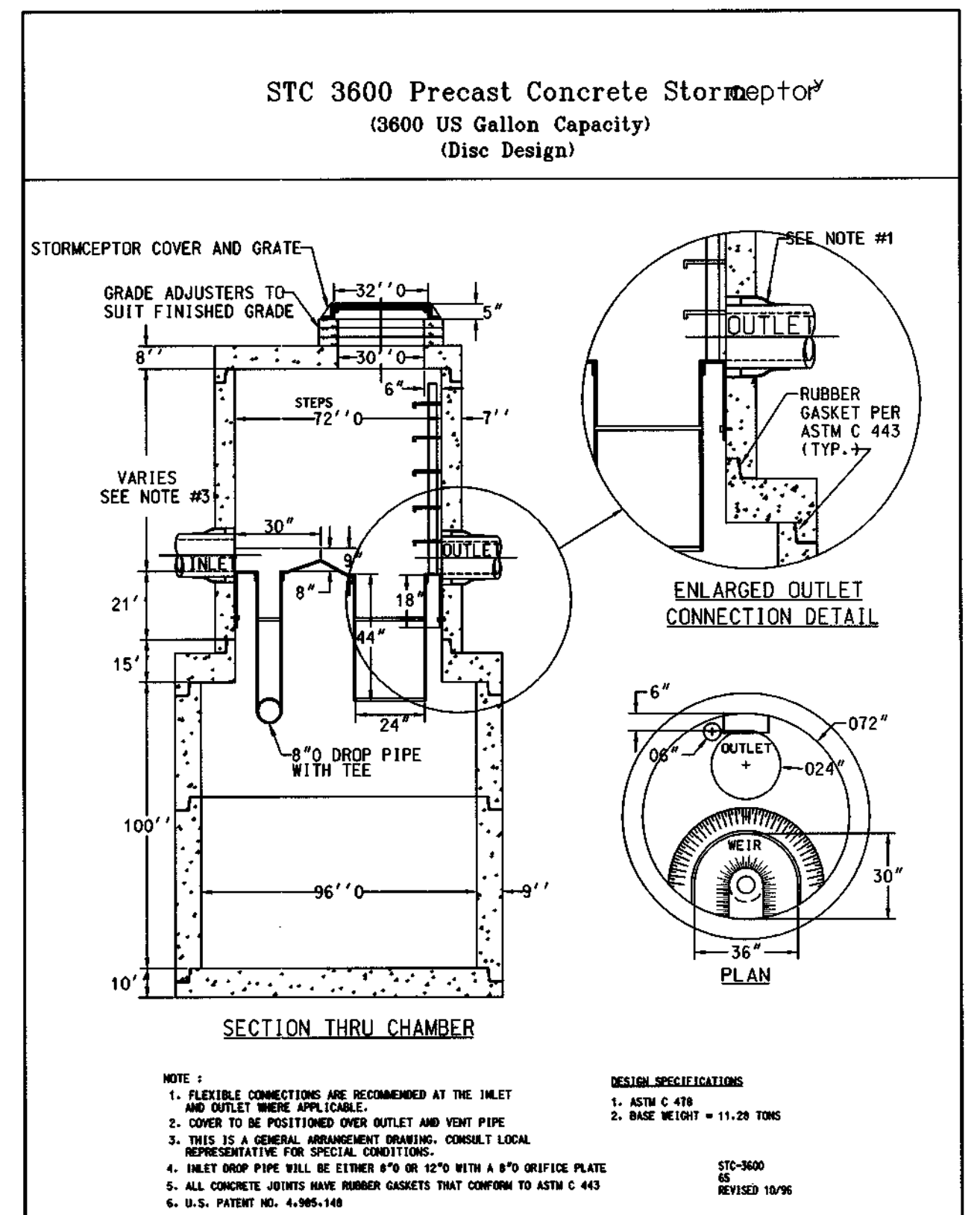
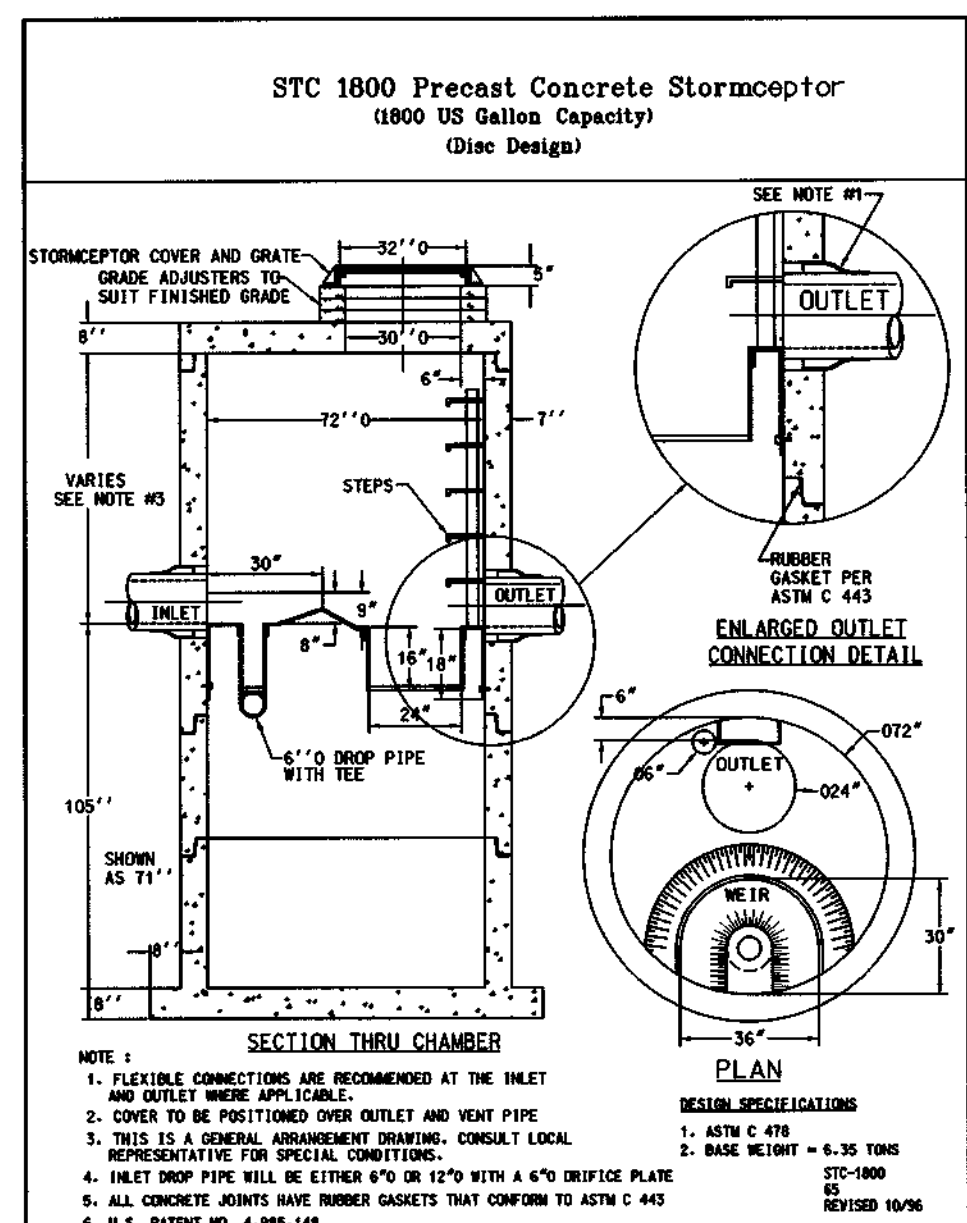
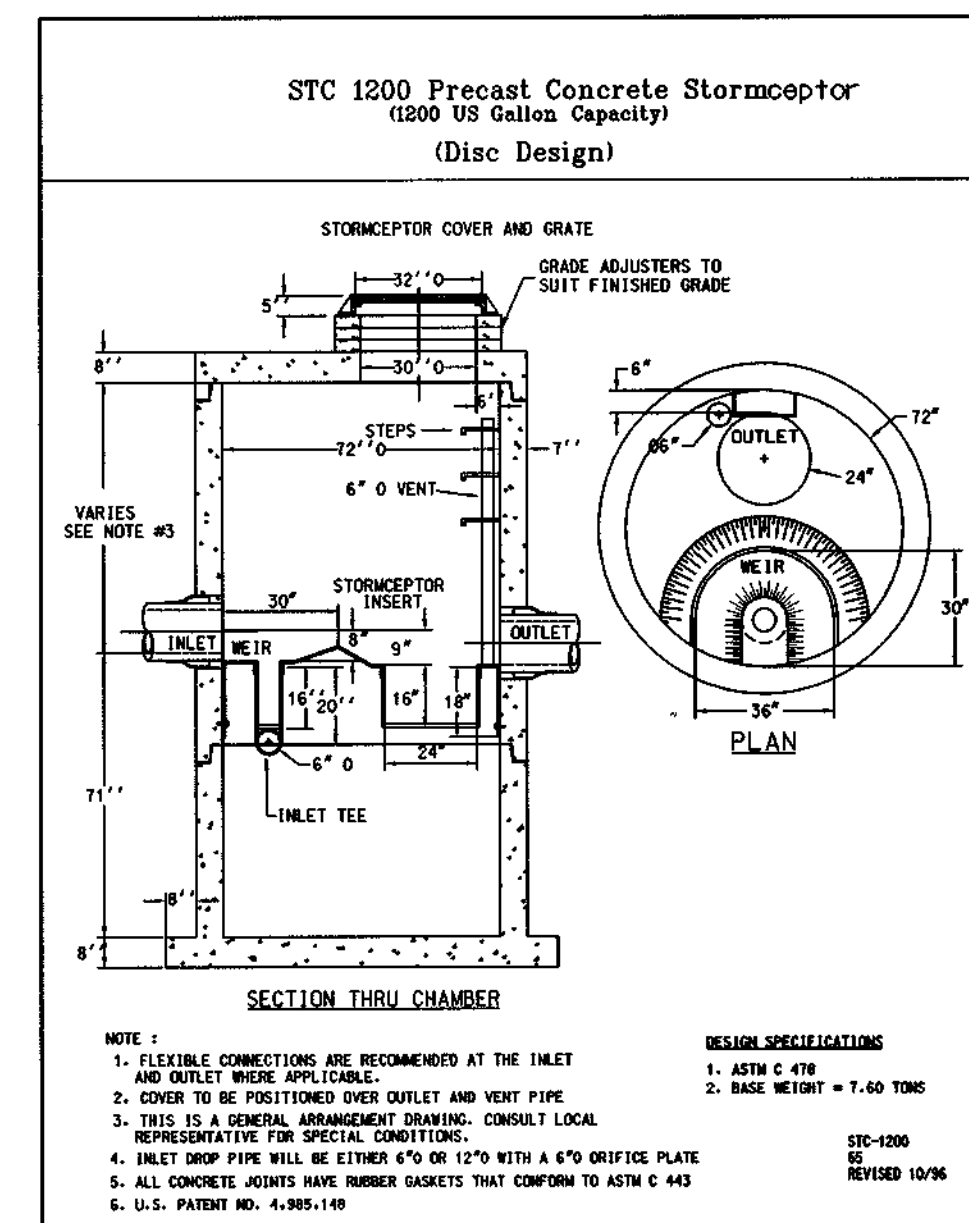
DESIGNED : CWC  
 DRAFTED : RLM  
 CHECKED : RLU

**TROY HILL DRIVE  
 STORM DRAIN PROFILES**  
 SCALE : 1" = 50'

**TROY HILL CORPORATE CENTER  
 PHASE II**  
 HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT #1  
 FEB. 10, 1999  
 SHEET 11 OF 14  
 F98169 P/N 8130 - sdprof.s11

**STRUCTURE SCHEDULE**

STR. NO.	TYPE	IN	INVERTS IN	OUT	TOP ELEV.	REMARKS	
I-101	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			122.00	125.94		
I-102	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	121.64		121.39	126.46		
I-103	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	126.98		126.23	130.94		
I-104	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	128.60		128.50	132.90		
I-104A	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	137.09		134.30	142.56		
I-105	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	137.64		137.31	142.12		
I-106	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	138.20		137.98	141.84		
I-107	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			127.30	131.40		
I-108	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			145.00	148.54		
I-109	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	160.71		150.46	164.92		
I-110	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	155.15	148.91	148.41	160.19	GRANITE BLOCK PROTCTN.	
I-111	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	158.65		158.40	163.74		
I-112	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	169.60		169.40	164.62		
I-112B	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	162.10		162.00	167.33		
I-113	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	164.69	163.75	163.50	168.86		
I-114	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	166.00		165.90	170.66		
I-115	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	170.00		169.90	174.17		
I-116	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	175.64	175.00	174.90	179.64		
I-117	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	182.00		181.90	186.33		
I-117A	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	187.80		187.55	192.80		
I-118	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			188.28	193.44		
I-119	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			151.15	155.66		
I-120	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			165.12	169.66		
I-121	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			176.45	180.71		
I-140	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	193.90		193.65	199.31		
I-141	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			194.70	199.31		
I-142	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	196.30	195.00	192.25 / 196.00	200.41		
I-143	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			195.80	200.41		
I-144	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	198.10		197.85	203.01		
I-145	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	198.85		198.60	203.11		
I-146A	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			199.40	204.06		
I-146B	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			199.62			
I-146	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	203.80		200.00	208.91		
I-147	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			204.30	208.91		
I-148	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	210.10		206.81	214.91		
I-149	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			210.60	216.31		
M-103	HC STD. G 5.03 BRICK MANHOLE			181.50	181.10	192.50	
M-104	HC STD. G 5.03 BRICK MANHOLE			197.75	191.00	202.90	
M-109	HC STD. G 5.03 BRICK MANHOLE			151.02	141.92	160.00	GRANITE BLOCK PROTCTN.
M-110	HC STD. G 5.03 BRICK MANHOLE			160.00	159.90	165.17	
M-111	HC STD. G 5.03 BRICK MANHOLE	146.20	139.40	138.90	153.77		
S-105	HC STD SD 5.81 24" I.D.				124.92		
S-110	HC STD SD 5.81 60" I.D.				138.00	144.50	
S-111	HC STD SD 5.81 48" I.D.		142.50			148.50	
S-113	HC STD SD 5.81 48" I.D.		156.00			161.00	
S-114	HC STD SD 5.81 60" I.D.				138.00	143.00	
S-200	STORMCEPTOR - STC 3600	148.15		148.06	160.75	SEE DETAILS THIS SHEET	
S-201	STORMCEPTOR - STC 1200	188.27		188.17	198.25	SEE DETAILS THIS SHEET	
S-202	STORMCEPTOR - STC 1800	199.35		199.25	209.10	SEE DETAILS THIS SHEET	
S-103	HC STD SD 5.81 30" I.D.				180.50	184.90	
S-112	H.C. STD. G 9.01 BRICK MANHOLE	125.23		125.13	131.20		
S-113	H.C. STD. G 9.01 BRICK MANHOLE	128.64		128.54	200.40		



**Concrete Stormceptor Order Request Form\***  
Structure - S200

Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Insert Size: 22", 32", 44", 7200. Data: Manhole/Structure Number, Top Elevation, Inlet/Outlet Pipe Invert, Pipe Type, Disc, Pipe Inside/Outside Diameter.

Impervious Drainage Area (ac): 2.93

Project Name, Approximate time frame until required delivery (weeks), Exact Delivery Address: Street, City, State, Zip Code.

Designer Company, Designer Contact: Name, Phone, Fax.

Please fax this sheet to Stormceptor Corporation at (301) 762-4190. For Technical Information Please Call Stormceptor Corporation at (301) 762-8361 or Toll Free at 1-800-762-4703.

**Concrete Stormceptor Order Request Form\***  
Structure - S201

Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Insert Size: 22", 32", 44", 7200. Data: Manhole/Structure Number, Top Elevation, Inlet/Outlet Pipe Invert, Pipe Type, Disc, Pipe Inside/Outside Diameter.

Impervious Drainage Area (ac): 0.84

Project Name, Approximate time frame until required delivery (weeks), Exact Delivery Address: Street, City, State, Zip Code.

Designer Company, Designer Contact: Name, Phone, Fax.

Please fax this sheet to Stormceptor Corporation at (301) 762-4190. For Technical Information Please Call Stormceptor Corporation at (301) 762-8361 or Toll Free at 1-800-762-4703.

**Concrete Stormceptor Order Request Form\***  
Structure - S202

Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Insert Size: 22", 32", 44", 7200. Data: Manhole/Structure Number, Top Elevation, Inlet/Outlet Pipe Invert, Pipe Type, Disc, Pipe Inside/Outside Diameter.

Impervious Drainage Area (ac): 0.93

Project Name, Approximate time frame until required delivery (weeks), Exact Delivery Address: Street, City, State, Zip Code.

Designer Company, Designer Contact: Name, Phone, Fax.

Please fax this sheet to Stormceptor Corporation at (301) 762-4190. For Technical Information Please Call Stormceptor Corporation at (301) 762-8361 or Toll Free at 1-800-762-4703.

**OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE**

- The Stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Stormceptor Inspection/Monitoring Form. Inspections shall be done by using a clear plexiglass tube ("sludge judge") to extract a water column sample. When the sediment depths exceed the level specified in Table 6 of the Stormceptor Technical Manual, the unit must be cleaned.
- The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies.
- The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons, and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- The inlet and outlet pipes shall be checked for any obstructions at least once every six months. If obstructions are found the owner shall have them removed. Structural parts of the Stormceptor unit shall be repaired as needed.
- The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available the Howard County officials upon their request.

12/30/99 BY G.W.S.  
REVISED STRUCTURE SCHEDULE,  
ADD S103, M112, M113 TO SCHEDULE.

**OWNER / APPLICANT**  
TROY HILL BUSINESS PARK PARTNERSHIP  
C/O MANEKIN CORP.  
7165 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046  
(301) 290-1400  
ATTN: COLE SCHNORF

APPROVED - HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-8-99  
CHIEF, BUREAU OF HIGHWAYS

APPROVED - HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Candis Hamata* 7/12/99  
CHIEF, DIVISION OF LAND DEVELOPMENT

*M.D. Dawson* 2/1/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
Civil Engineers and Land Surveyors  
658 Kenilworth Drive, Suite 100  
Towson Maryland 21204 (410) 825-8120  
203 East Broadway  
Bel Air, Maryland 21014 (410) 838-3800

DESIGNED : CWC  
DRAFTED : RLM  
CHECKED : RLU

SEAL  
STATE OF MARYLAND  
PROFESSIONAL ENGINEER

**TROY HILL DRIVE  
STRUCTURE SCHEDULE AND  
STORMWATER MANAGEMENT DETAILS**

SCALE : NO SCALE

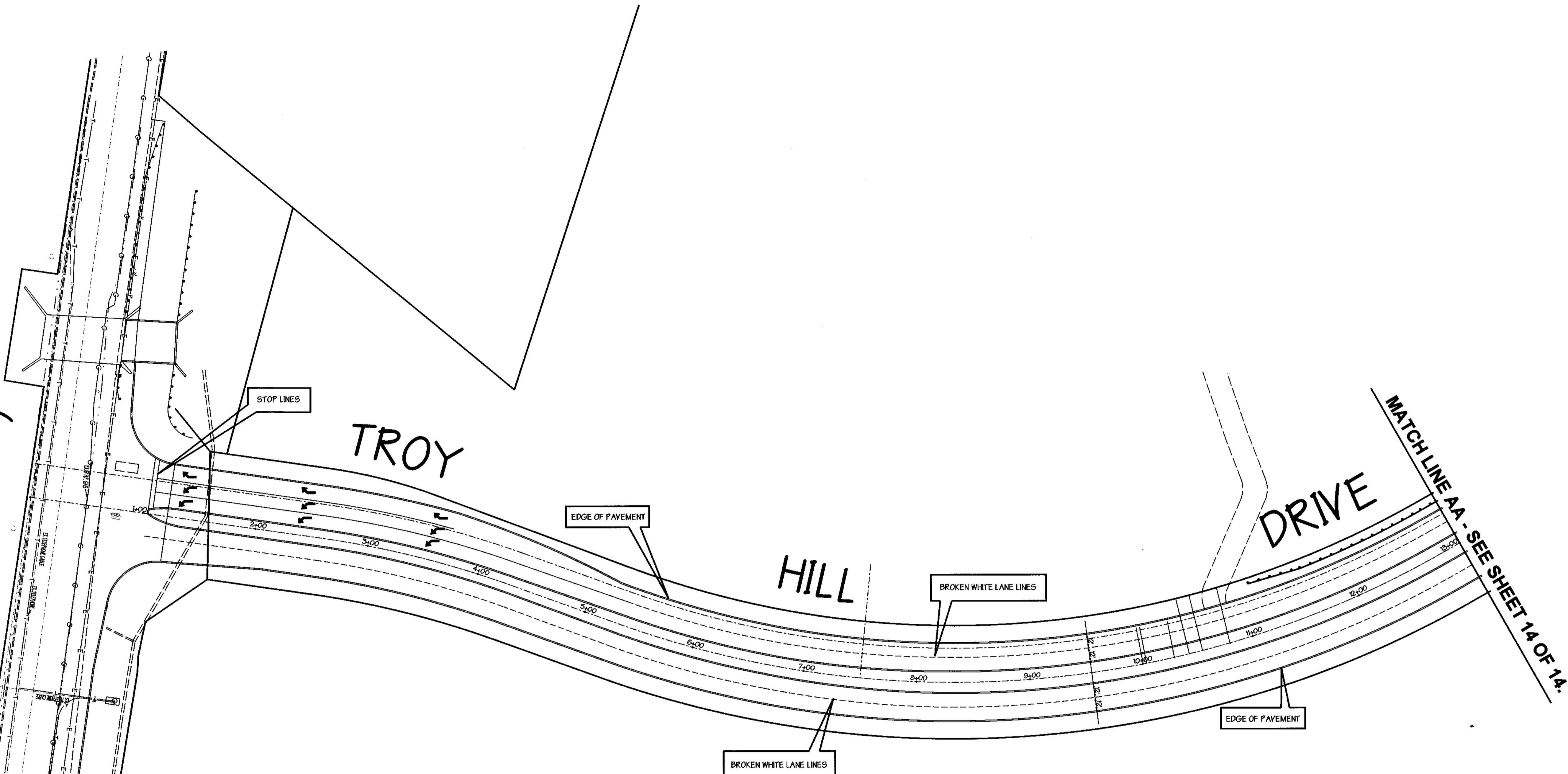
**TROY HILL CORPORATE CENTER  
PHASE II**

HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1

FEB. 10, 1999  
SHEET 12 OF 14

F98169 P/N B130 - sddet.s12

BALTIMORE WASHINGTON BOULEVARD  
(U.S. RTE. 1)



**PLAN**

SCALE : 1" = 50'

- PAVEMENT MARKING NOTES :
1. ALL LINES ON THE PROJECT, UNLESS OTHERWISE NOTED SHALL BE 4 IN. WIDE AND REFLECTORIZED.
  2. THE INDICATED BROKEN WHITE LANE LINES SHALL HAVE 10 FT. MARKS SEPERATED BY 30 FT. GAPS.
  3. ALL STOP LINES SHALL BE 24 IN. WIDE AND WHITE.
  4. PAINTED TRAFFIC ISLANDS SHALL HAVE 8" IN. WIDE, WHITE EDGELINES AND CHEVRON MARKINGS SHALL BE 24 IN. WIDE AND WHITE WITH 25 FT. BETWEEN MARKINGS.
  5. PAINTED MEDIANS SHALL HAVE 8" WIDE, YELLOW EDGELINES AND HATCHING SHALL BE 24 IN. WIDE AND WHITE WITH 25 FT. BETWEEN MARKINGS.
  6. ALL PAVEMENT MARKINGS INSTALLED IN ACCORDANCE WITH THE MUTCD AND MARYLAND SUPPLEMENTS.

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cindy Hanetta* 3/12/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chick Dorman* 2/19/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



**GEORGE W. STEPHENS, JR.  
AND ASSOCIATES, INC.**  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800



DESIGNED : RLM  
 DRAFTED : RLM  
 CHECKED : RLU

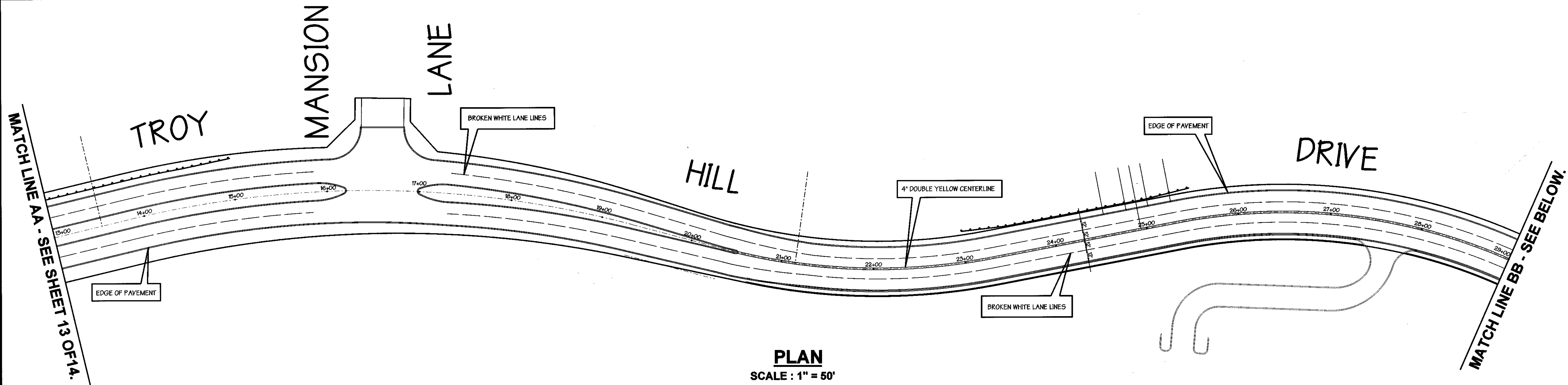
**TROY HILL DRIVE  
PAVEMENT STRIPING PLAN**

SCALE : AS SHOWN

**TROY HILL CORPORATE CENTER  
PHASE II**

HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1

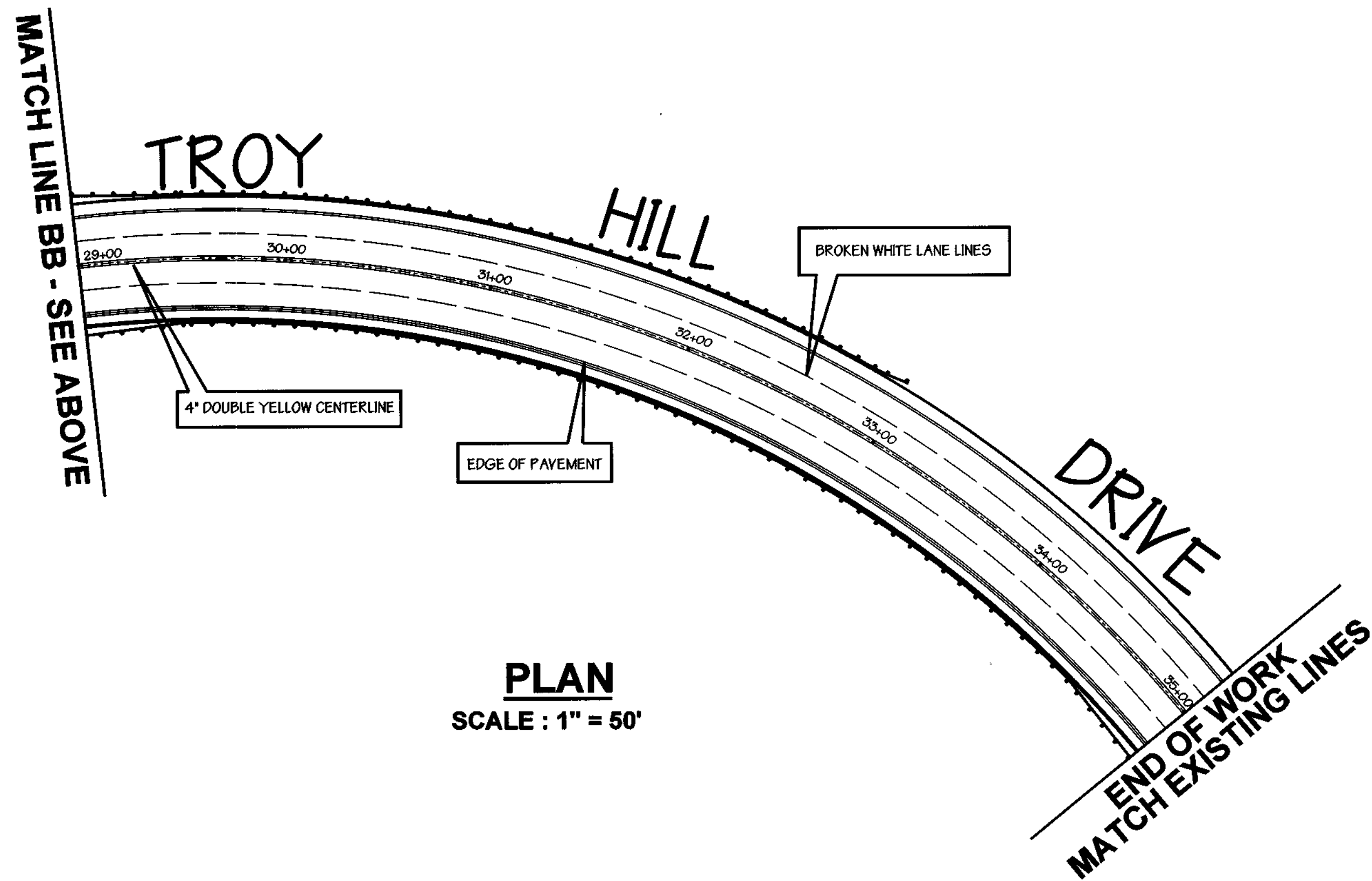
FEB. 10, 1999  
SHEET 13 OF 14



**PLAN**  
SCALE : 1" = 50'

**PAVEMENT MARKING NOTES :**

1. ALL LINES ON THE PROJECT, UNLESS OTHERWISE NOTED SHALL BE 4 IN. WIDE AND REFLECTORIZED.
2. THE INDICATED BROKEN WHITE LANE LINES SHALL HAVE 10 FT. MARKS SEPERATED BY 30 FT. GAPS.
3. ALL STOP LINES SHALL BE 24 IN. WIDE AND WHITE.
4. PAINTED TRAFFIC ISLANDS SHALL HAVE 8" IN. WIDE, WHITE EDGELINES AND CHEVRON MARKINGS SHALL BE 24 IN. WIDE AND WHITE WITH 25 FT. BETWEEN MARKINGS.
5. PAINTED MEDIANS SHALL HAVE 8" WIDE, YELLOW EDGELINES AND HATCHING SHALL BE 24 IN. WIDE AND WHITE WITH 25 FT. BETWEEN MARKINGS.
6. ALL PAVEMENT MARKINGS INSTALLED IN ACCORDANCE WITH THE MUTCD AND MARYLAND SUPPLEMENTS.



**PLAN**  
SCALE : 1" = 50'

APPROVED - HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Canale* 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED - HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Chris Hamilton* 3/12/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Mark D...* 3/1/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800



DESIGNED : RLM  
 DRAFTED : RLM  
 CHECKED : RLU

**TROY HILL DRIVE  
 PAVEMENT STRIPING PLAN**

SCALE : AS SHOWN

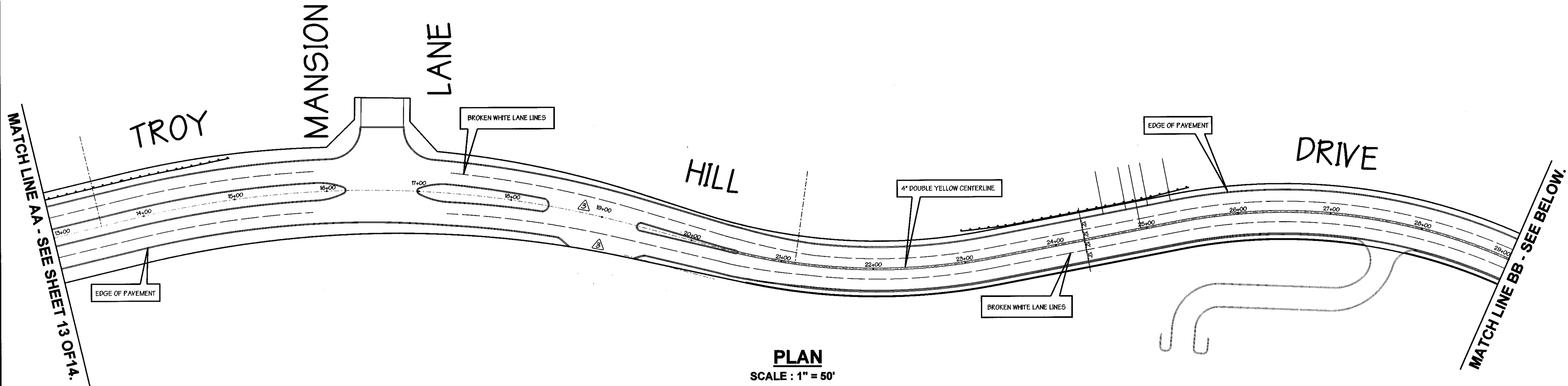
**TROY HILL CORPORATE CENTER  
 PHASE II**

HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT #1

FEB. 10, 1999  
 SHEET 14 OF 14

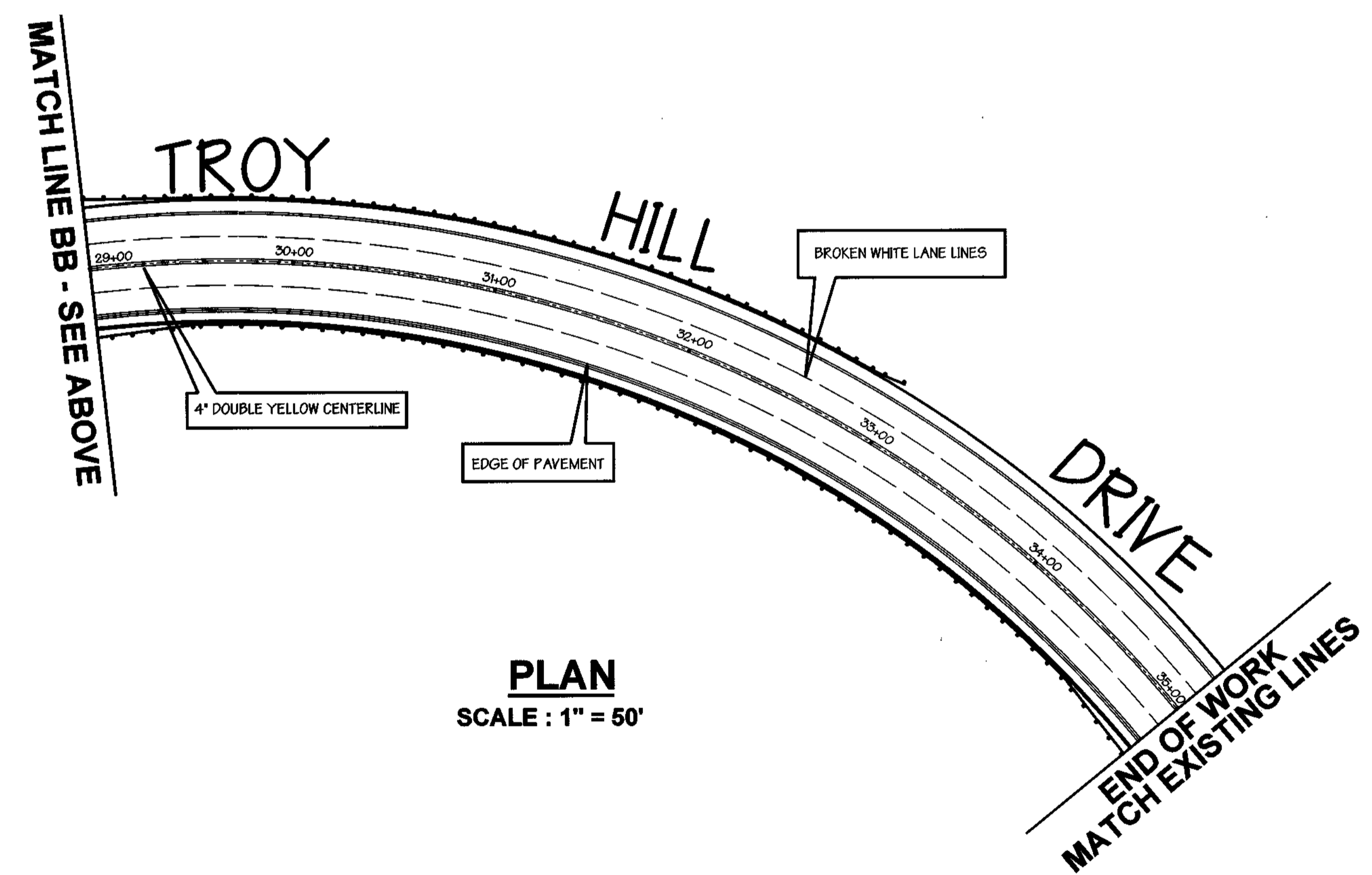
F18169

P/N 8130 - strip.s14




**PLAN**  
SCALE : 1" = 50'

- PAVEMENT MARKING NOTES :
1. ALL LINES ON THE PROJECT, UNLESS OTHERWISE NOTED SHALL BE 4 IN. WIDE AND REFLECTORIZED.
  2. THE INDICATED BROKEN WHITE LANE LINES SHALL HAVE 10 FT. MARKS SEPERATED BY 30 FT. GAPS.
  3. ALL STOP LINES SHALL BE 24 IN. WIDE AND WHITE.
  4. PAINTED TRAFFIC ISLANDS SHALL HAVE 8" IN. WIDE, WHITE EDGELINES AND CHEVRON MARKINGS SHALL BE 24 IN. WIDE AND WHITE WITH 25 FT. BETWEEN MARKINGS.
  5. PAINTED MEDIANS SHALL HAVE 8" WIDE, YELLOW EDGELINES AND HATCHING SHALL BE 24 IN. WIDE AND WHITE WITH 25 FT. BETWEEN MARKINGS.
  6. ALL PAVEMENT MARKINGS INSTALLED IN ACCORDANCE WITH THE MUTCD AND MARYLAND SUPPLEMENTS.



**PLAN**  
SCALE : 1" = 50'

0213-01	REV. MEDIAN AND ADDED ENTRANCE
DATE	NO. REVISION
REVISION No. 3 BY: RIEMER MUEGGE a division of: Patton Harris Rust & Associates, P.C. 8818 CENTER PARK DR. COLUMBIA, MD 21045 TEL. 410-997-8700 FAX 410-997-9282	
 CHRISTOPHER J. REID #19949 DATE 2.19.01	

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew W. Canale* 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Chris Hamden* 2/12/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE R

*Mike P...* 2/19/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**GWS**

**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800



DESIGNED : RLM  
 DRAFTED : RLM  
 CHECKED : RLU

**TROY HILL DRIVE  
 PAVEMENT STRIPING PLAN**

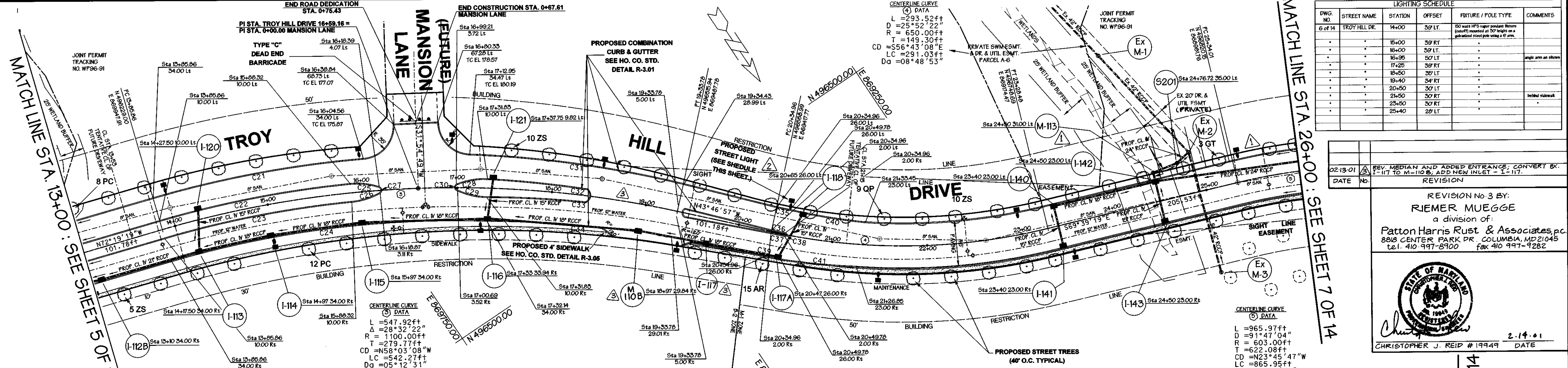
SCALE : AS SHOWN

**TROY HILL CORPORATE CENTER  
 PHASE II**

HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT \*1

FEB. 10, 1999  
 SHEET 14 OF 14

F18169 P7N 8130 - strip.s14



DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE / POLE TYPE	COMMENTS
6 of 14	TROY HILL DR.	14+00	39' LT.	39' LT.	50' max HPS vapor resistant fixture (cast) mounted at 50' height on a galvanized steel pole using a 6" arm.
		16+00	39' LT.		
		16+95	50' LT.		angle arm as shown
		17+25	39' RT.		
		18+50	36' LT.		
		20+50	30' LT.		inlet sidewalk
		23+50	30' RT.		
		25+40	28' LT.		

DATE	NO.	REVISION
02/13/01	1	REV. MEDIAN AND ADDED ENTRANCE; CONVERT EX. I-117 TO M-110B; ADD NEW INLET - I-117.
	2	REVISION

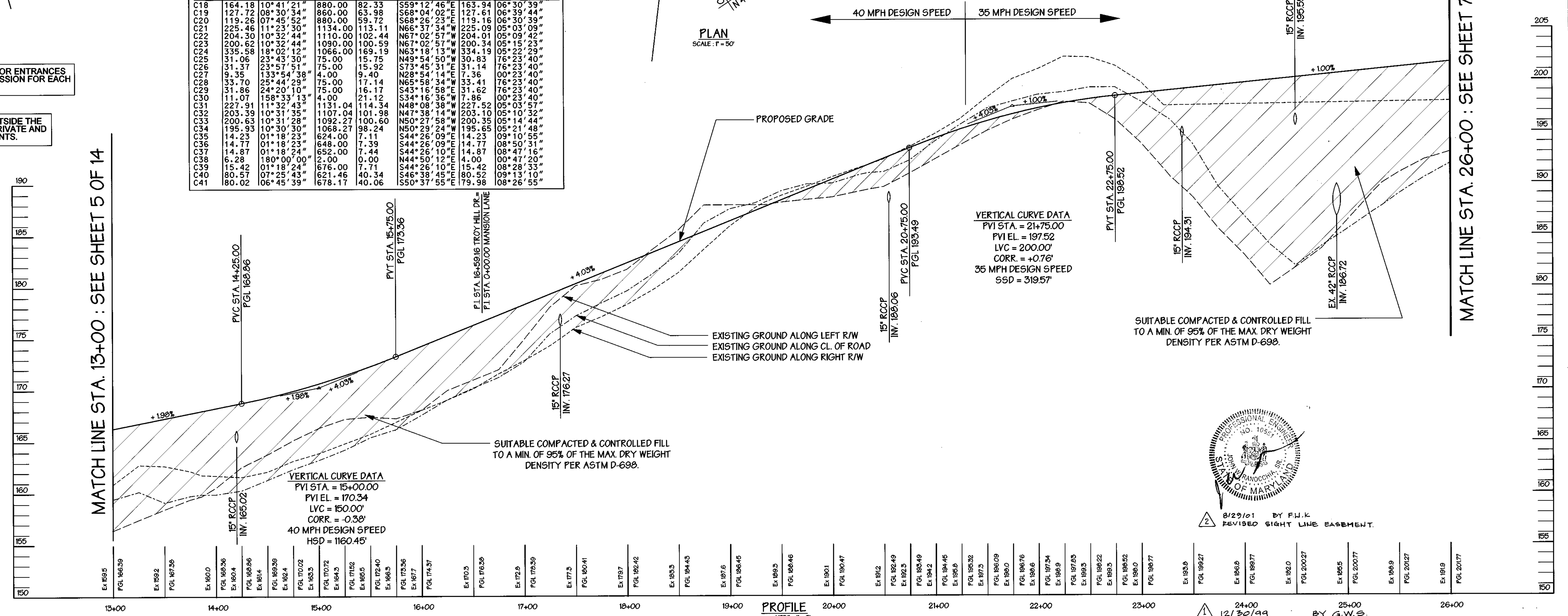
REVISION No 3 BY:  
**RJEMER MUEGGE**  
 a division of:  
**Patton Harris Rust & Associates, P.C.**  
 8815 CENTER PARK DR. COLUMBIA, MD 21045  
 tel. 410-997-6900 fax 410-997-9282

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 No. 19949  
 CHRISTOPHER J. REID #19949 DATE 2.14.01

CURVE	LENGTH Feet	DELTA	RADIUS Feet	TANGENT Feet	DIRECTION	CHORD Feet	DEGREE (ARC)
C18	164.78	10°41'21"	880.00	82.33	S59°12'46"E	163.94	06°30'39"
C19	127.18	08°30'34"	860.00	63.98	S68°04'02"E	127.61	06°39'44"
C20	119.26	07°45'52"	880.00	59.72	S68°26'23"E	119.16	06°30'39"
C21	225.46	11°23'30"	1134.00	113.11	N66°37'34"W	225.09	05°03'09"
C22	204.30	10°32'44"	1110.00	102.44	N67°02'57"W	204.01	05°09'42"
C23	200.62	10°32'44"	1090.00	100.53	N67°02'57"W	200.34	05°15'23"
C24	335.58	18°02'12"	1066.00	169.19	N63°18'13"W	333.13	05°22'29"
C25	31.06	23°43'30"	75.00	15.75	N49°54'50"W	30.83	76°23'40"
C26	31.37	23°57'51"	75.00	15.92	S73°45'31"E	31.14	76°23'40"
C27	9.35	133°54'38"	4.00	9.40	N28°54'14"E	7.36	00°23'40"
C28	33.70	23°44'29"	75.00	17.14	N63°58'34"W	33.41	76°23'40"
C29	31.86	24°20'10"	75.00	16.17	N63°18'13"W	31.12	76°23'40"
C30	11.07	158°33'13"	4.00	21.12	S34°16'36"W	7.86	00°23'40"
C31	227.91	11°32'43"	1131.04	114.34	N48°08'38"W	227.52	05°03'57"
C32	203.39	10°31'35"	1107.04	101.98	N47°38'14"W	203.10	05°10'32"
C33	200.63	10°31'28"	1092.27	100.60	N50°27'58"W	200.35	05°14'44"
C34	195.93	10°30'30"	1069.27	98.24	N50°27'58"W	195.65	05°21'48"
C35	14.23	01°18'23"	624.00	7.11	S44°26'09"E	14.23	09°10'55"
C36	14.77	01°18'23"	648.00	7.39	S44°26'09"E	14.77	08°50'31"
C37	14.87	01°18'24"	652.00	7.44	S44°26'10"E	14.87	08°47'16"
C38	6.28	180°00'00"	2.00	0.00	N44°50'12"E	4.00	00°47'20"
C39	15.42	01°18'24"	676.00	7.71	S44°26'10"E	15.42	08°28'33"
C40	80.57	07°25'43"	621.46	40.34	S46°38'45"E	80.52	09°13'10"
C41	80.02	06°45'39"	678.17	40.06	S50°37'55"E	79.98	08°26'55"

NOTE: COUNTY REQUIREMENTS FOR ENTRANCES SHALL BE MET AT THE SDP SUBMISSION FOR EACH LOT.

NOTE: ALL STORM DRAINS OUTSIDE THE PUBLIC RIGHT-OF-WAY ARE PRIVATE AND ARE WITHIN PRIVATE EASEMENTS.

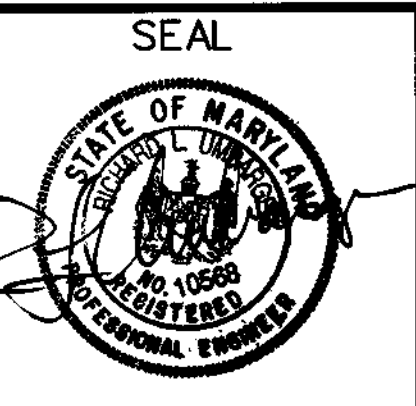


MATCH LINE STA. 13+00 : SEE SHEET 5 OF 14

MATCH LINE STA. 26+00 : SEE SHEET 7 OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Conita Hammett* 3/12/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
*Chris Williams* 3/9/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

**GWS**  
**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800

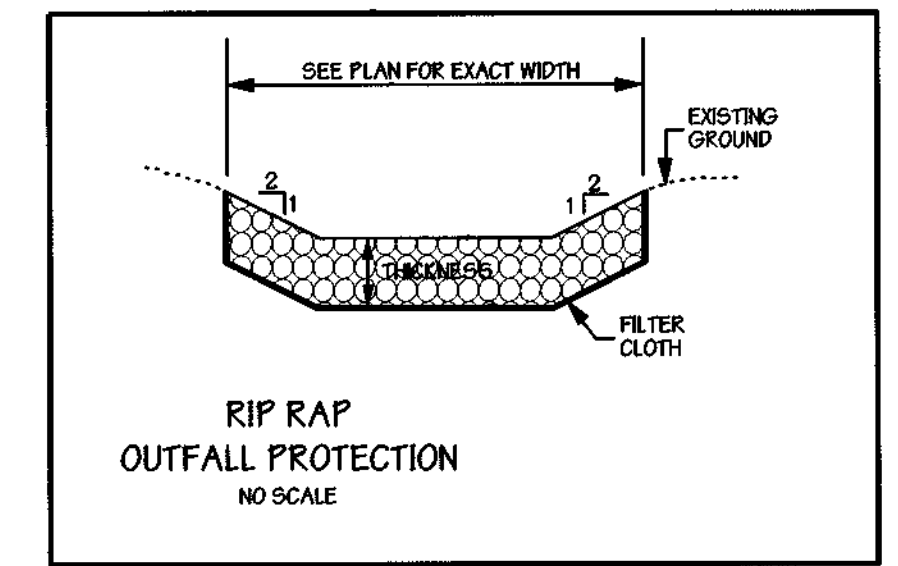
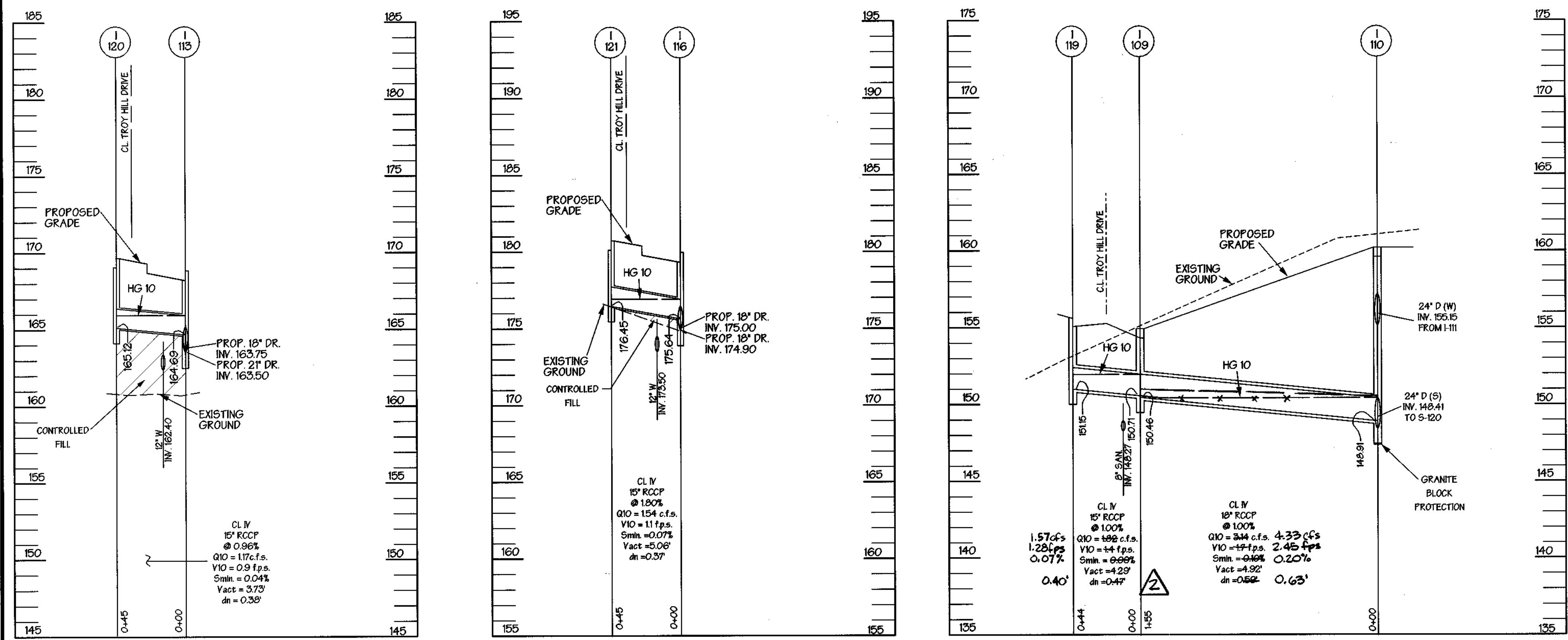
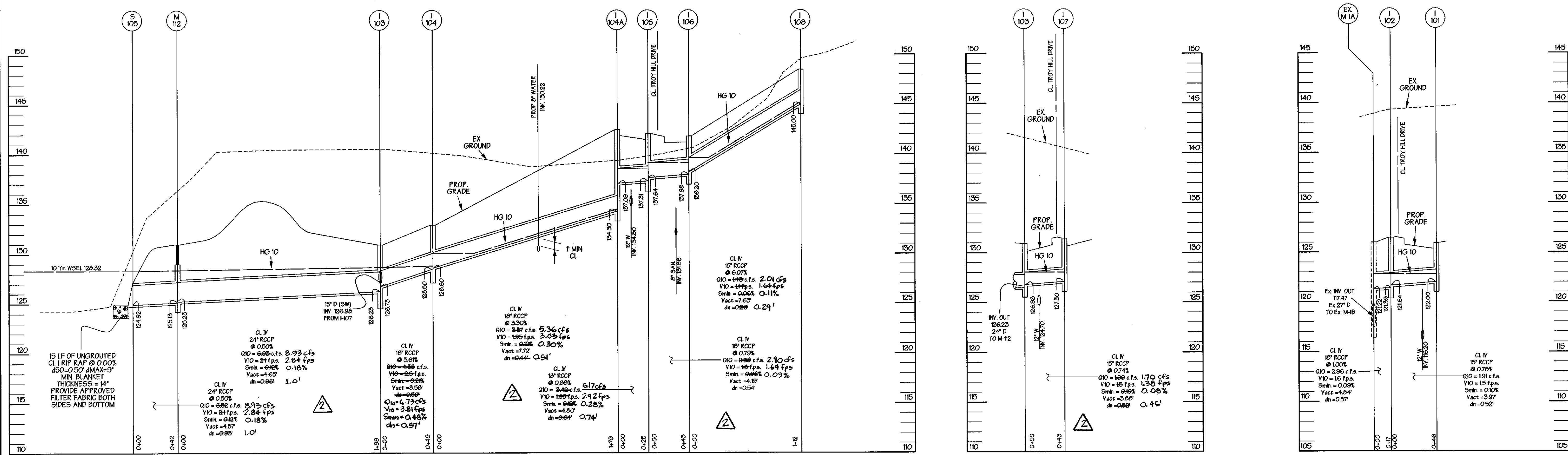


DESIGNED: CWC  
 DRAFTED: RLM  
 CHECKED: RLU

**TROY HILL DRIVE ROAD PLAN AND PROFILE**  
 STA. 13+00 TO STA. 26+00  
 SCALE: 1" = 50'

**TROY HILL CORPORATE CENTER**  
 PHASE II  
 HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT #1  
 FEB. 11, 1999  
 SHEET 6 OF 14  
 F98169  
 P/W 8130 - rdshl.s06





**PROFILE**

SCALE: HORZ. : 1" = 50'  
VERT. : 1" = 5'

OWNER / APPLICANT  
TROY HILL BUSINESS PARK PARTNERSHIP  
C/O MANEKIN CORP  
1165 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046  
(410) 290-1400  
ATTN: COLE SCHNORF

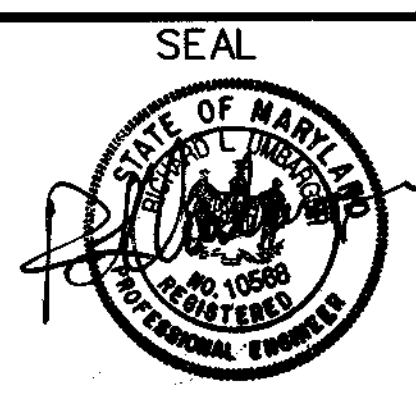


12/22/00 BY MATIS WARFIELD, INC.  
CHANGE FLOW RATE & VELOCITY DATA  
DUE TO MEDIAN CUTS/NEW ENTRANCES

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-8-99  
CHEF, BUREAU OF HIGHWAYS  
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cecilia Hammett* 3/12/99  
CHEF, DIVISION OF LAND DEVELOPMENT  
*Mike Danner* 3/16/99  
CHEF, DEVELOPMENT ENGINEERING DIVISION



**GEORGE W. STEPHENS, JR.  
AND ASSOCIATES, INC.**  
Civil Engineers and Land Surveyors  
658 Kenilworth Drive, Suite 100  
Towson Maryland 21204 (410) 825-8120  
203 East Broadway  
Bel Air, Maryland 21014 (410) 838-3800



DESIGNED: CWC  
DRAFTED: RLM  
CHECKED: RLU

**TROY HILL DRIVE  
STORM DRAIN PROFILES**

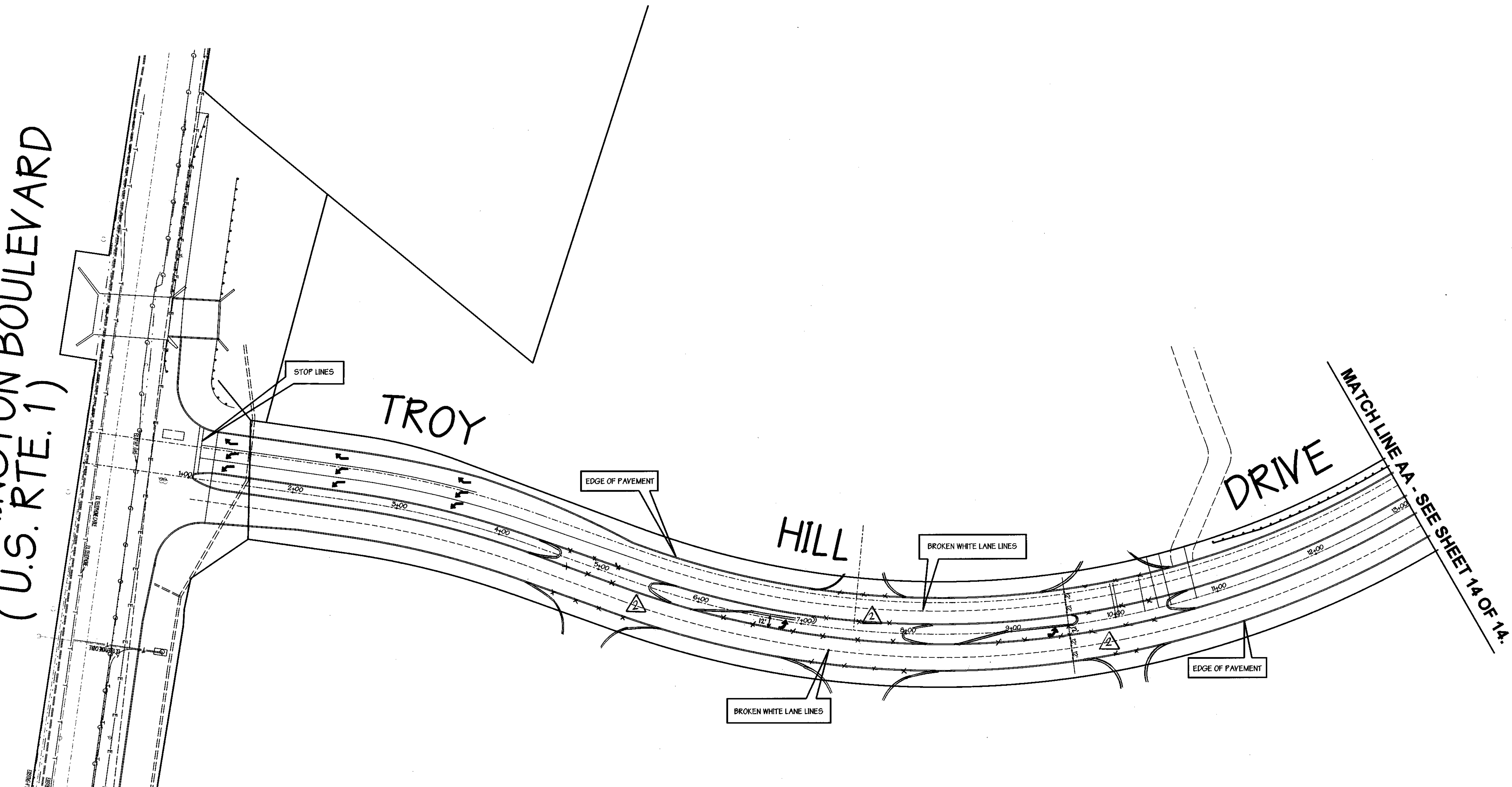
SCALE: 1" = 50'

**TROY HILL CORPORATE CENTER  
PHASE II**

HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1

FEB. 10, 1999  
SHEET 9 OF 14

BALTIMORE WASHINGTON BOULEVARD  
(U.S. RTE. 1)



**PLAN**  
SCALE : 1" = 50'

- PAVEMENT MARKING NOTES:
1. ALL LINES ON THE PROJECT, UNLESS OTHERWISE NOTED SHALL BE 4 IN. WIDE AND REFLECTORIZED.
  2. THE INDICATED BROKEN WHITE LANE LINES SHALL HAVE 10 FT. MARKS SEPERATED BY 30 FT. GAPS.
  3. ALL STOP LINES SHALL BE 24 IN. WIDE AND WHITE.
  4. PAINTED TRAFFIC ISLANDS SHALL HAVE 8" IN. WIDE, WHITE EDGELINES AND CHEVRON MARKINGS SHALL BE 24 IN. WIDE AND WHITE WITH 25 FT. BETWEEN MARKINGS.
  5. PAINTED MEDIANS SHALL HAVE 8" WIDE, YELLOW EDGELINES AND HATCHING SHALL BE 24 IN. WIDE AND WHITE WITH 25 FT. BETWEEN MARKINGS.
  6. ALL PAVEMENT MARKINGS INSTALLED IN ACCORDANCE WITH THE MUTCD AND MARYLAND SUPPLEMENTS.



NICHOLAS J. ERAPEK, III, PE 18558  
 12/22/00 BY MATIS WARFIELD, INC.  
 ADD ENTRANCES/MEDIAN BREAKS

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cindy Hamstra* 3/12/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chad Deussen* 3/19/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



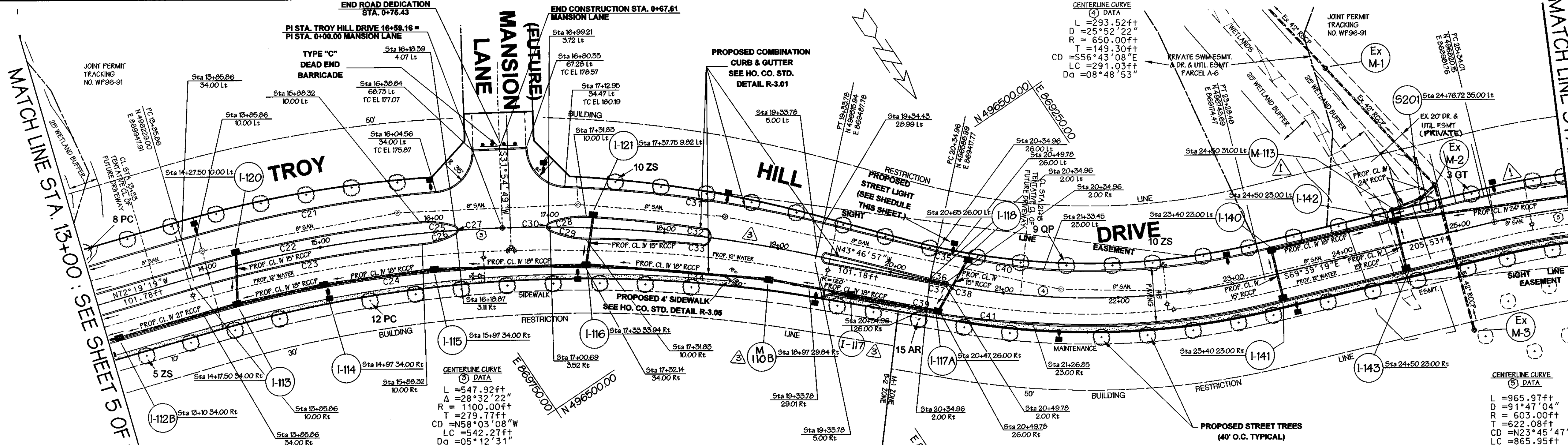
**GEORGE W. STEPHENS, JR.  
AND ASSOCIATES, INC.**  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800



DESIGNED : RLM  
 DRAFTED : RLM  
 CHECKED : RLU

**TROY HILL DRIVE  
PAVEMENT STRIPING PLAN**  
 SCALE : AS SHOWN

**TROY HILL CORPORATE CENTER  
PHASE II**  
 HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT \*1  
 FEB. 10, 1999  
 SHEET 13 OF 14  
 F98-169 P/N 8130 - strip.s13



DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE / POLE TYPE	COMMENTS
6 of 14	TROY HILL DR.	14+00	50' LT.	150 watt HPS vapor luminaire fixture (height) mounted on 30' height on a galvanized steel pole using a 6" arm	
		15+00	50' RT.		single arm as shown
		16+00	50' LT.		
		16+50	50' LT.		
		17+25	30' RT.		
		18+50	30' LT.		
		20+50	30' RT.		detached sidewalk
		23+50	30' RT.		
		25+40	20' LT.		

02-13-01 REV. MEDIAN AND ADDED ENTRANCE, CONVERT EX. -117 TO M-110 & ADD NEW INLET - 1-117.  
DATE NO. REVISION

REVISION NO. 3 BY:  
**RIEMER MUEGGE**  
a division of:  
**Patton Harris Rust & Associates, P.C.**  
8018 CENTER PARK DR. COLUMBIA, MD 21045  
Tel. 410-997-8900 Fax 410-997-9282

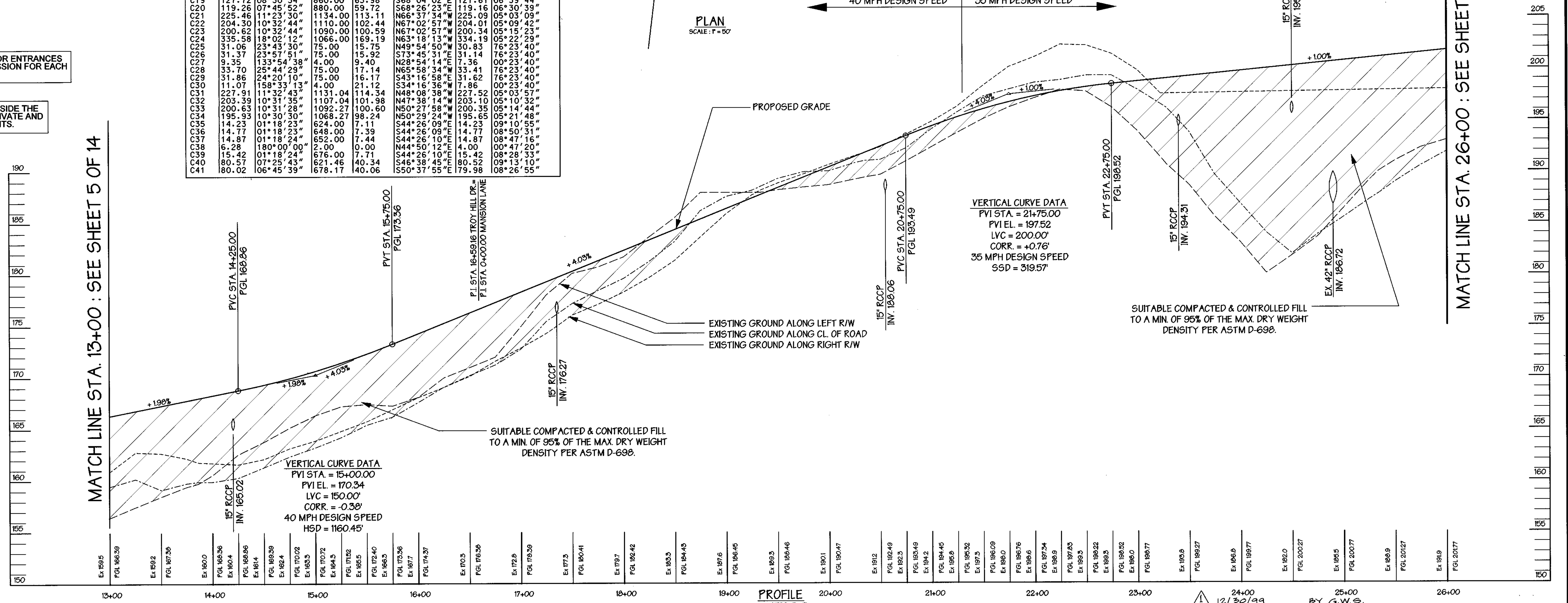


**CURVE DATA - FLOW LINE OF CURB & GUTTER**

CURVE	LENGTH Feet	DELTA	RADIUS Feet	TANGENT Feet	DIRECTION	CHORD Feet	DEGREE (ARC)
C18	164.18	10°41'21"	880.00	82.33	S59°12'46"E	163.94	06°30'39"
C19	127.12	08°30'34"	860.00	63.98	S68°04'02"E	127.61	06°39'44"
C20	119.26	07°45'52"	880.00	59.72	S68°26'23"E	119.16	06°30'39"
C21	225.46	11°23'30"	1134.00	113.11	N66°37'34"W	225.09	05°03'09"
C22	204.30	10°32'44"	1110.00	102.44	N67°02'57"W	204.01	05°09'42"
C23	200.62	10°32'44"	1090.00	100.59	N67°02'57"W	200.34	05°15'23"
C24	335.56	18°02'12"	1066.00	169.13	N63°18'13"W	334.19	05°22'29"
C25	31.06	23°43'30"	75.00	15.75	N49°54'50"W	30.83	76°23'40"
C26	31.37	23°57'51"	75.00	15.92	S73°45'31"E	31.14	76°23'40"
C27	9.35	133°54'38"	4.00	9.40	N28°54'14"E	7.36	00°23'40"
C28	133.70	25°44'28"	75.00	17.14	N63°58'34"W	33.41	76°23'40"
C29	131.86	24°20'10"	75.00	16.17	S63°16'58"E	51.62	76°23'40"
C30	11.07	158°33'13"	4.00	21.12	S34°16'36"W	7.86	00°23'40"
C31	227.91	11°32'43"	1131.00	114.34	N48°08'38"W	227.52	05°03'57"
C32	203.39	10°31'35"	1107.00	101.98	N47°38'14"W	203.10	05°10'32"
C33	200.63	10°31'28"	1092.27	100.60	N50°27'58"W	200.35	05°14'44"
C34	195.33	10°30'30"	1068.24	98.24	S64°29'24"W	195.65	05°21'48"
C35	14.23	01°18'23"	624.00	7.11	S44°26'09"E	14.23	09°10'55"
C36	14.77	01°18'23"	648.00	7.39	S44°26'09"E	14.77	08°50'31"
C37	14.87	01°18'24"	652.00	7.44	S44°26'10"E	14.87	08°47'16"
C38	6.28	180°00'00"	2.00	0.00	N44°50'12"E	4.00	08°47'20"
C39	15.42	01°18'24"	676.00	7.71	S44°26'10"E	15.42	08°28'53"
C40	80.57	07°25'43"	621.46	40.34	S46°38'45"E	80.52	09°13'10"
C41	80.02	06°45'39"	678.17	40.06	S50°37'55"E	79.98	08°26'55"

NOTE: COUNTY REQUIREMENTS FOR ENTRANCES SHALL BE MET AT THE SDP SUBMISSION FOR EACH LOT.

NOTE: ALL STORM DRAINS OUTSIDE THE PUBLIC RIGHT-OF-WAY ARE PRIVATE AND ARE WITHIN PRIVATE EASEMENTS.

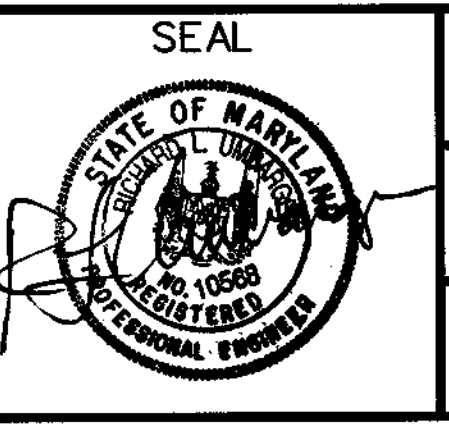


MATCH LINE STA. 13+00 : SEE SHEET 5 OF 14

MATCH LINE STA. 26+00 : SEE SHEET 7 OF 14

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danke* 3-8-99  
CHIEF, BUREAU OF HIGHWAYS  
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Condi Hammit* 3/12/99  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*Chris Dammann* 3/1/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
Civil Engineers and Land Surveyors  
658 Kenilworth Drive, Suite 100  
Towson Maryland 21204 (410) 825-8120  
203 East Broadway  
Bel Air, Maryland 21014 (410) 838-3800



DESIGNED : CWC  
DRAFTED : RLM  
CHECKED : RLU

**TROY HILL DRIVE ROAD PLAN AND PROFILE**  
STA. 13+00 TO STA. 26+00  
SCALE : 1" = 50'

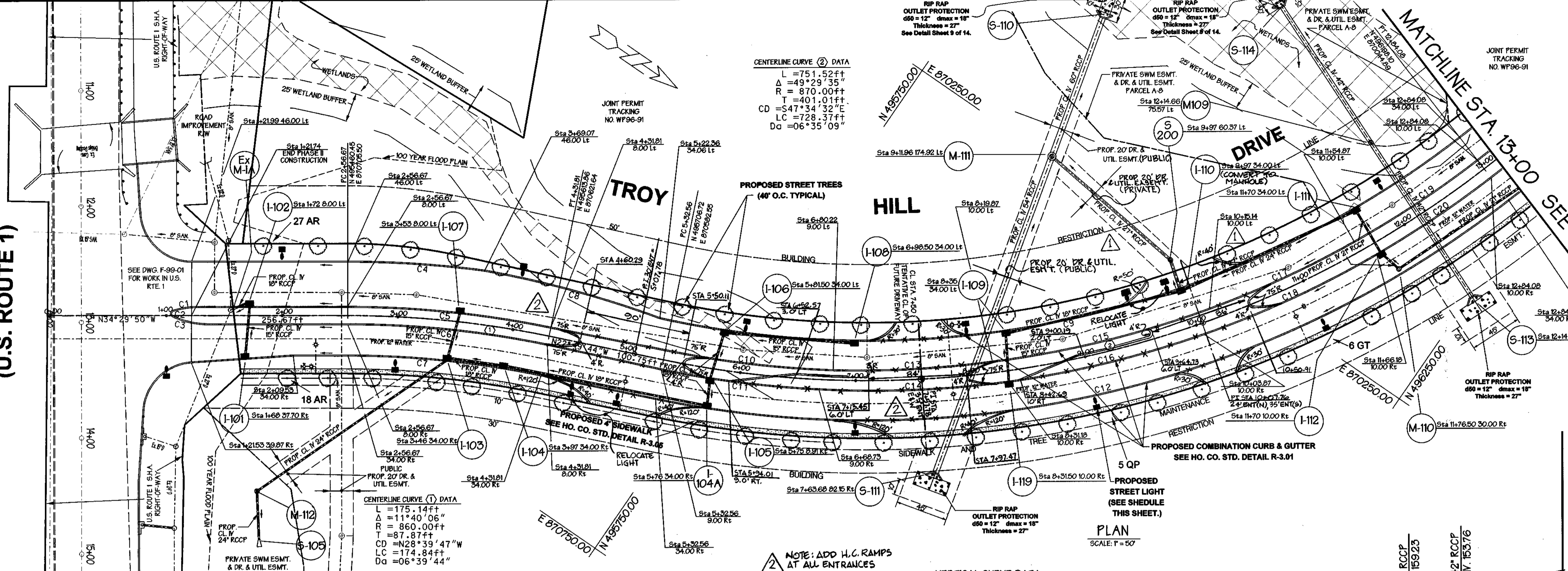
**TROY HILL CORPORATE CENTER**  
PHASE II  
HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1  
FEB. 11, 1999  
SHEET 6 OF 14  
F98169  
P/N 8130 - rdsht.s06

**BALTIMORE WASHINGTON BOULEVARD  
(U.S. ROUTE 1)**

LIGHTING SCHEDULE					
DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE / POLE TYPE	COMMENTS
5 of 14	TROY HILL DR.	1+00	46 FT		
		2+00	51 FT		
		3+00	39 FT		
		4+00	50 FT		
		5+00	39 FT		
		6+00	39 FT		
		7+00	39 FT		
		8+00	39 FT		
		9+00	39 FT		
		10+00	39 FT		
		11+00	39 FT		
		12+00	39 FT		
		13+00	39 FT		

NOTE: COUNTY REQUIREMENTS FOR ENTRANCES SHALL BE MET AT THE SDP SUBMISSION FOR EACH LOT.

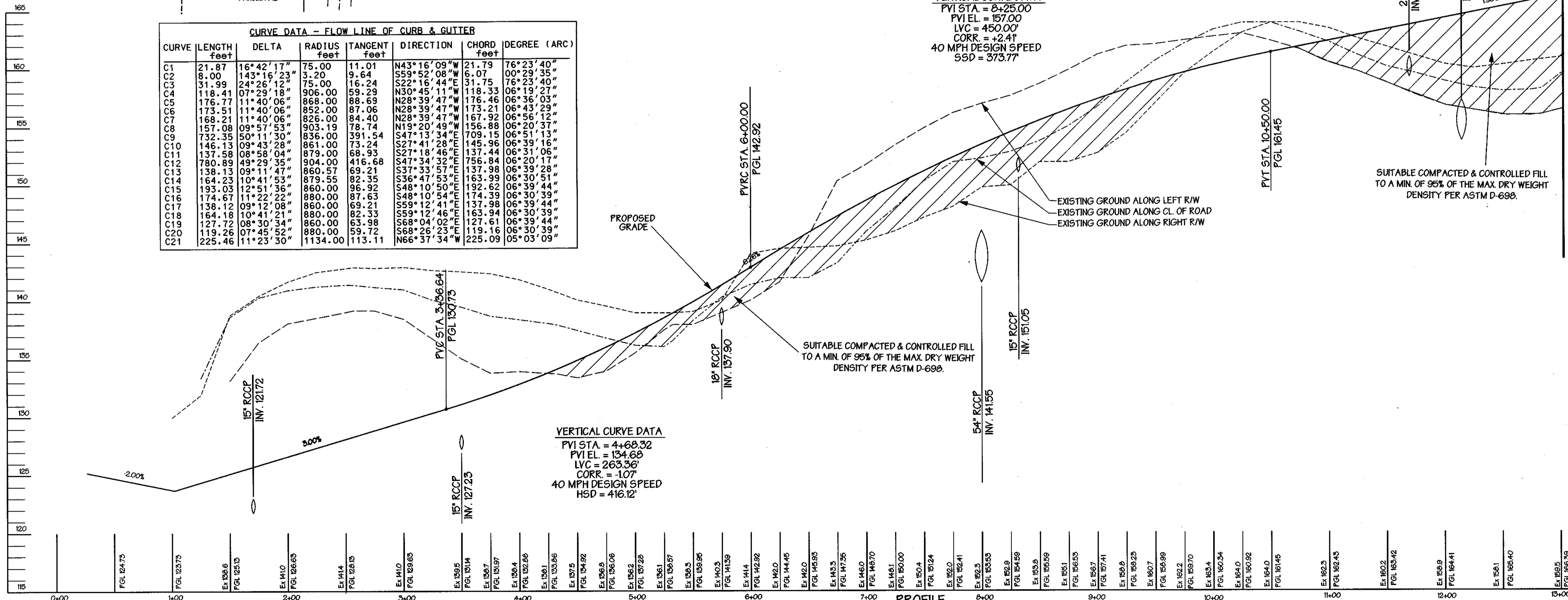
NOTE: ALL STORM DRAINS OUTSIDE THE PUBLIC RIGHT-OF-WAY ARE PRIVATE AND ARE WITHIN PRIVATE EASEMENTS.



NOTE: ADD H.C. RAMPS AT ALL ENTRANCES

**VERTICAL CURVE DATA**  
 PVI STA. = 8+25.00  
 PVI EL. = 157.00  
 LVC = 450.00'  
 CORR. = +2.41'  
 40 MPH DESIGN SPEED  
 SSD = 373.77'

CURVE DATA - FLOW LINE OF CURB & GUTTER						
CURVE	LENGTH feet	DELTA	RADIUS feet	TANGENT feet	DIRECTION	CHORD feet
C1	21.87	16° 42' 17"	75.00	11.01	N43° 16' 09" W	21.79
C2	8.00	143° 16' 23"	3.20	9.64	S59° 52' 08" W	6.07
C3	31.99	24° 26' 12"	75.00	16.24	S22° 16' 44" W	31.75
C4	118.41	07° 29' 18"	906.00	59.29	N30° 45' 11" W	118.33
C5	176.77	11° 40' 06"	868.00	89.69	N28° 39' 47" W	176.46
C6	173.51	11° 40' 06"	852.00	87.06	N28° 39' 47" W	173.21
C7	168.21	11° 40' 06"	826.00	84.40	N28° 39' 47" W	167.92
C8	157.08	09° 57' 53"	903.19	78.74	N19° 20' 49" W	156.88
C9	732.35	50° 11' 30"	836.00	391.54	S47° 13' 34" W	709.15
C10	146.13	09° 43' 28"	861.00	73.24	S27° 41' 22" W	145.96
C11	137.58	08° 58' 04"	879.00	68.93	S27° 18' 46" W	137.44
C12	780.89	49° 29' 35"	904.00	416.68	S47° 34' 32" W	756.84
C13	138.13	09° 11' 47"	860.57	69.21	S37° 33' 51" W	137.98
C14	164.23	10° 41' 53"	879.55	82.35	S36° 47' 55" W	163.99
C15	193.03	12° 51' 36"	860.00	96.92	S48° 10' 50" W	192.62
C16	174.61	11° 22' 22"	880.00	87.63	S48° 10' 50" W	174.39
C17	138.12	09° 12' 08"	860.00	69.21	S55° 12' 41" W	137.98
C18	164.18	10° 41' 21"	880.00	82.33	S59° 12' 46" W	163.94
C19	127.72	08° 30' 34"	860.00	63.98	S68° 04' 02" W	127.61
C20	119.26	07° 45' 52"	880.00	59.72	S68° 26' 12" W	119.14
C21	225.46	11° 23' 30"	1134.00	113.11	N66° 37' 54" E	225.09



**VERTICAL CURVE DATA**  
 PVI STA. = 4+68.32  
 PVI EL. = 134.68  
 LVC = 263.36'  
 CORR. = -1.07'  
 40 MPH DESIGN SPEED  
 HSD = 416.12'



12/22/00 BY MATS WARFIELD, INC. ADD MEDIAN CUTS & ENTRANCES AT STA 5+07, 7+57 AND 10+07

12/30/99 BY G.W.S. REVISED STORM DRAIN SIZES BETWEEN M-111 TO S-200, S-200 TO I-110 TO MATCH PROFILES

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Andrew M. Sanchez 3-8-99  
 CHIEF, BUREAU OF HIGHWAYS  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Cindy Hammit 3/12/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 APPROVED: 2/19/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



**GEORGE W. STEPHENS, JR.  
AND ASSOCIATES, INC.**  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800



DESIGNED: CWC  
 DRAFTED: RLM  
 CHECKED: RLU

**TROY HILL DRIVE  
ROAD PLAN AND PROFILES  
STA. 0+00 TO STA. 13+00**

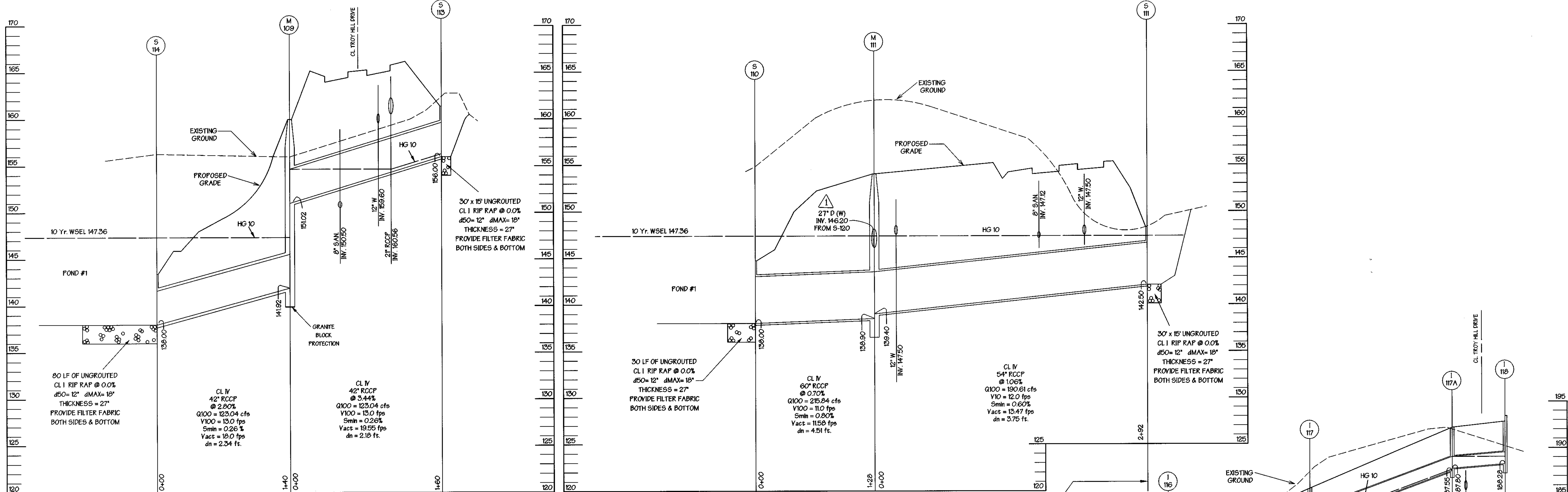
SCALE: 1" = 50'

**TROY HILL CORPORATE CENTER  
PHASE II**

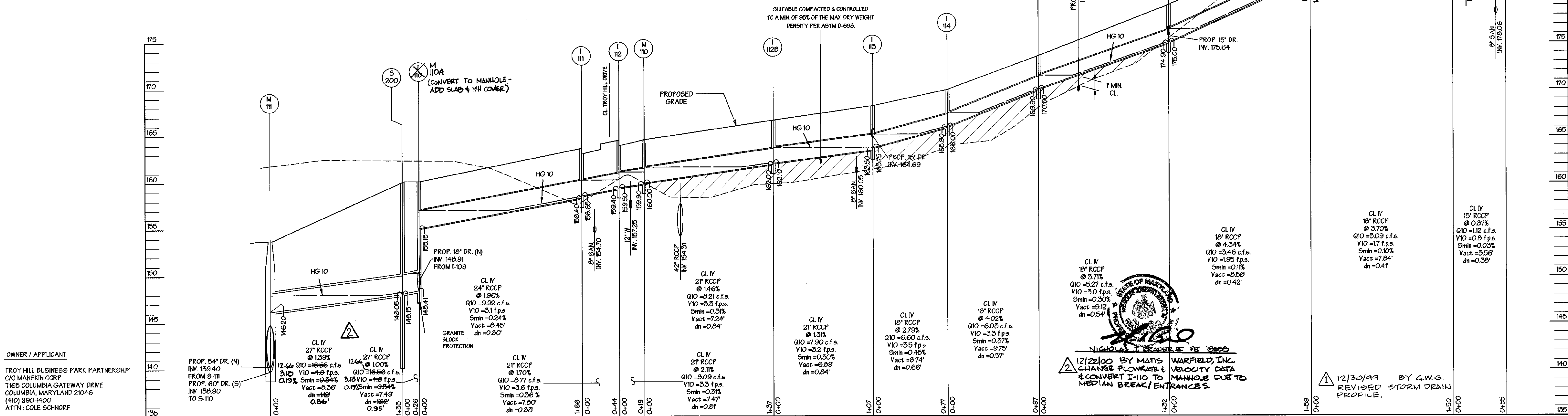
HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1

FEB. 11, 1999  
SHEET 5 OF 14





**PROFILES**  
SCALE: HORIZ. 1" = 50'  
VERT. 1" = 5'



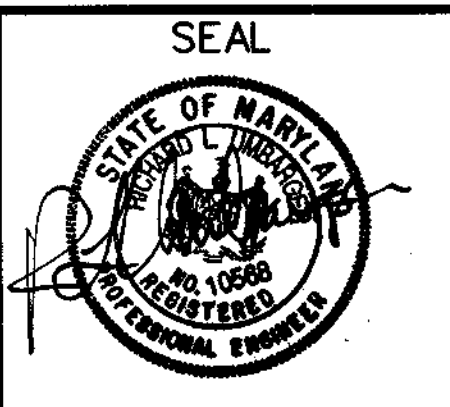
OWNER / AFFILIANT  
TROY HILL BUSINESS PARK PARTNERSHIP  
C/O MANEKIN CORP.  
1165 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046  
(410) 290-1400  
ATTN: COLE SCHNORF

STATE OF MARYLAND  
NICHOLAS J. READER, JR. PE 18550  
WARFIELD, INC.  
12/22/00 BY MATS  
CHANGE FLOWRATE &  
CONVERT I-110 TO  
MANHOLE DUE TO  
VELOCITY DATA  
MEDIAN BREAK/ENTRANCES

12/30/99 BY G.W.S.  
REVISED STORM DRAIN  
PROFILE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-8-99  
CHIEF, BUREAU OF HIGHWAYS  
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Emily Hamilton* 3/12/99  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*Mark Summers* 3/13/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**GWS**  
GEORGE W. STEPHENS, JR.  
AND ASSOCIATES, INC.  
Civil Engineers and Land Surveyors  
658 Kenilworth Drive, Suite 100  
Towson Maryland 21204 (410) 825-8120  
203 East Broadway  
Bel Air, Maryland 21014 (410) 838-3800



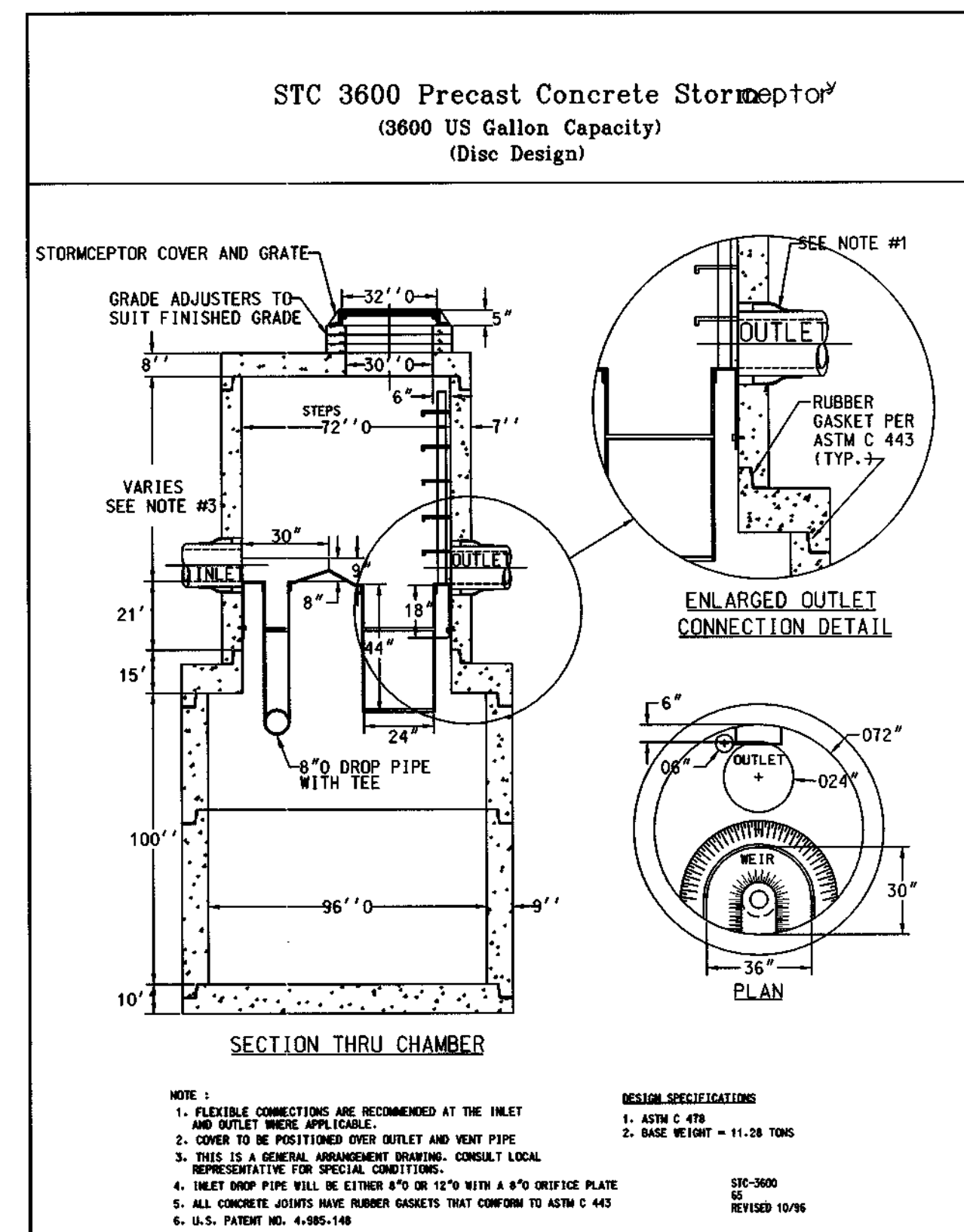
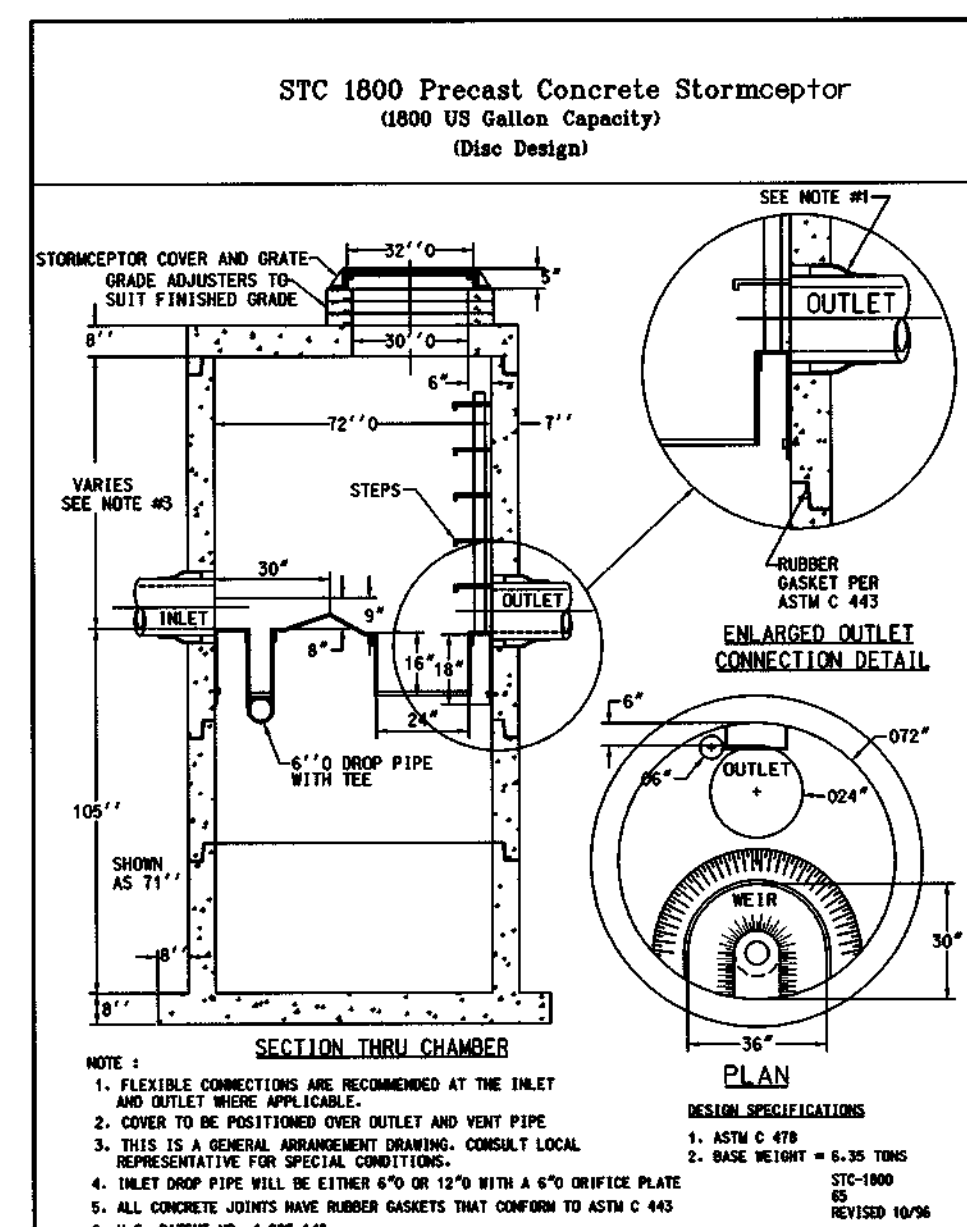
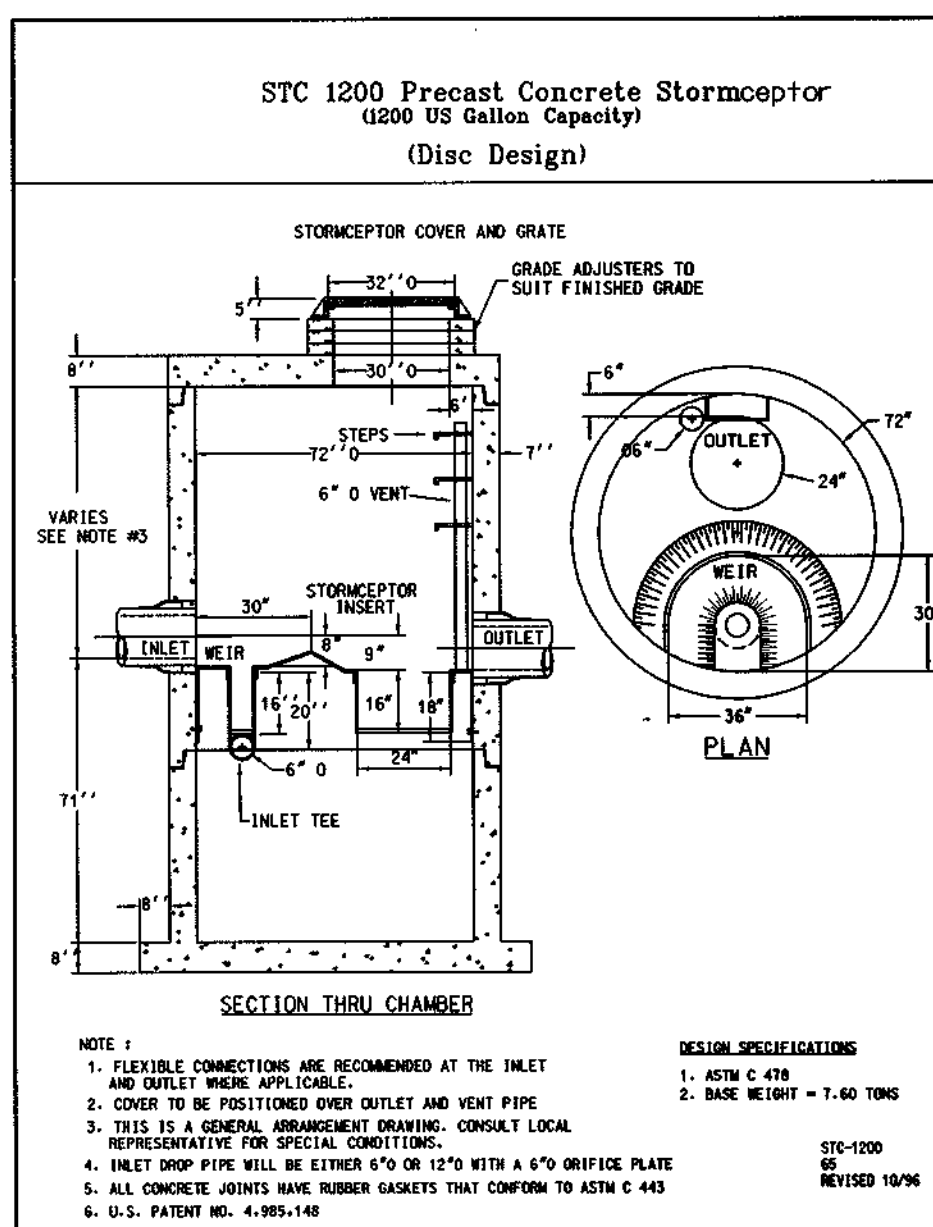
DESIGNED: CWC  
DRAFTED: RLM  
CHECKED: RLU

**TROY HILL DRIVE  
STORM DRAIN PROFILES**  
SCALE: 1" = 50'

**TROY HILL CORPORATE CENTER  
PHASE II**  
HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1  
FEB. 10, 1999  
SHEET 10 OF 14  
F98169 P/N 8130 - sdprof.10

**STRUCTURE SCHEDULE**

STR. NO.	TYPE	IN	INVERTS IN	OUT	TOP * ELEV. *	REMARKS
I-101	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			122.00	125.94	
I-102	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	121.64		121.39	126.46	
I-103	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	126.98		126.23	130.94	
I-104	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	128.60		128.50	132.90	
I-104A	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	137.09		134.30	142.66	
I-105	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	137.64		137.31	142.12	
I-106	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	138.20		137.98	141.84	
I-107	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			127.30	131.40	
I-108	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			145.00	148.54	
I-109	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	150.71		150.46	154.92	
I-110	<del>HC STD. SD 4.34 DOUBLE "S" COMB. INLET</del>	<del>155.46</del>	<del>148.01</del>	<del>148.41</del>	<del>160.40</del>	GRANITE BLOCK PROTECTN.
I-111	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	158.65		158.40	163.74	
I-112	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	159.50		159.40	164.62	
I-112B	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	162.10		162.00	167.33	
I-113	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	164.69	163.75	163.50	168.86	
I-114	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	166.00		165.90	170.56	
I-115	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	170.00		169.90	174.17	
I-116	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	175.64	175.00	174.90	179.64	
I-117	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	182.00		181.90	186.33	
I-117A	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	187.80		187.55	192.80	
I-118	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			188.28	193.44	
I-119	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			151.15	155.66	
I-120	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			166.12	169.66	
I-121	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			178.45	180.71	
I-140	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	193.90		193.65	199.31	
I-141	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			194.70	199.31	
I-142	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	195.30	195.00	192.85	200.41	
I-143	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			195.80	200.41	
I-144	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	198.10		197.85	203.01	
I-145	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	198.85		198.60	203.11	
I-146A	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			199.40	204.06	
I-145B	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			199.82		
I-146	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	203.80		200.00	206.91	
I-147	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			204.30	206.91	
I-148	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	210.10		206.81	214.91	
I-149	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			210.60	215.31	
M-103	HC STD. G 5.03 BRICK MANHOLE	181.50		181.10	192.50	
M-104	HC STD. G 5.03 BRICK MANHOLE	197.75		191.00	202.90	
M-109	HC STD. G 5.03 BRICK MANHOLE	151.02		141.92	160.00	GRANITE BLOCK PROTECTN.
M-110	HC STD. G 5.03 BRICK MANHOLE	160.00		159.90	165.17	
M-111	HC STD. G 5.03 BRICK MANHOLE	146.20	139.40	138.90	153.77	
S-105	HC STD SD 5.51 24" I.D.			124.92		
S-110	HC STD SD 5.51 60" I.D.			138.00	144.50	
S-111	HC STD SD 5.51 54" I.D.			142.50	148.50	
S-113	HC STD SD 5.51 48" I.D.			156.00	161.00	
S-114	HC STD SD 5.51 60" I.D.			138.00	143.00	
S-200	STORMCEPTOR - STC 3600	148.15		148.05	160.75	SEE DETAILS THIS SHEET
S-201	STORMCEPTOR - STC 1200	188.27		188.17	198.25	SEE DETAILS THIS SHEET
S-202	STORMCEPTOR - STC 1800	199.35		199.25	209.10	SEE DETAILS THIS SHEET
S-103	HC STD. SD. 5.51 30" I.D.			120.50	124.50	
S-112	HC STD. G 5.01 BRICK MANHOLE	125.23		125.13	131.20	
S-113	HC STD. G 5.01 BRICK MANHOLE	188.04		188.94	200.40	
M-110 A	HC STD. G 5.03 BRICK MANHOLE	155.15	148.91	148.41	160.19	GRANITE BLOCK PROTECTION



**Concrete Stormceptor Order Request Form\***  
Structure - S200

Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Insert Size: 22", 32", 44", Disc, Custom. Data: Manhole/Structure Number, Top Elevation, Inlet/Outlet Pipe Invert, Pipe Type, Pipe Inside/Outside Diameter.

Impervious Drainage Area (ac): 2.93

Project Name, Approximate time frame, Exact Delivery Address, City, State, Zip Code, Designer Company, Designer Contact.

Please fax this sheet to Stormceptor Corporation at (301) 762-4190. For Technical Information Please Call Stormceptor Corporation at (301) 762-8361 or Toll Free at 1-800-762-4703.

**Concrete Stormceptor Order Request Form\***  
Structure - S201

Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Insert Size: 22", 32", 44", Disc, Custom. Data: Manhole/Structure Number, Top Elevation, Inlet/Outlet Pipe Invert, Pipe Type, Pipe Inside/Outside Diameter.

Impervious Drainage Area (ac): 0.84

Project Name, Approximate time frame, Exact Delivery Address, City, State, Zip Code, Designer Company, Designer Contact.

Please fax this sheet to Stormceptor Corporation at (301) 762-4190. For Technical Information Please Call Stormceptor Corporation at (301) 762-8361 or Toll Free at 1-800-762-4703.

**Concrete Stormceptor Order Request Form\***  
Structure - S202

Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Insert Size: 22", 32", 44", Disc, Custom. Data: Manhole/Structure Number, Top Elevation, Inlet/Outlet Pipe Invert, Pipe Type, Pipe Inside/Outside Diameter.

Impervious Drainage Area (ac): 0.38

Project Name, Approximate time frame, Exact Delivery Address, City, State, Zip Code, Designer Company, Designer Contact.

Please fax this sheet to Stormceptor Corporation at (301) 762-4190. For Technical Information Please Call Stormceptor Corporation at (301) 762-8361 or Toll Free at 1-800-762-4703.

**OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE**

- The Stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Stormceptor Inspection/Monitoring Form. Inspections shall be done by using a clear plexiglass tube ("sludge judge") to extract a water column sample. When the sediment depths exceed the level specified in Table 6 of the Stormceptor Technical Manual, the unit must be cleaned.
- The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies.
- The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons, and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- The inlet and outlet pipes shall be checked for any obstructions at least once every six months. If obstructions are found the owner shall have them removed. Structural parts of the Stormceptor unit shall be repaired as needed.
- The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available the Howard County officials upon their request.



NICHOLAS J. GRADER, III PE 18558  
12/22/00 BY MATIS WARFIELD, INC.  
CHANGE/CONVERT I-110 TO A MANHOLE  
- M-10A

12/30/99 BY G.W.S.  
REVISED STRUCTURE SCHEDULE,  
ADD S103, M112, M113 TO SCHEDULE.

**OWNER / APPLICANT**  
TROY HILL BUSINESS PARK PARTNERSHIP  
C/O MANEKIN CORP.  
7165 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046  
(301) 290-1400  
ATTN: COLE SCHNORF

APPROVED - HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-5-99  
CHIEF, BUREAU OF HIGHWAYS

APPROVED - HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Sandy Hamata* 7/12/99  
CHIEF, DIVISION OF LAND DEVELOPMENT

*Mike Daumann* 3/5/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
Civil Engineers and Land Surveyors  
658 Kenilworth Drive, Suite 100  
Towson Maryland 21204 (410) 825-8120  
203 East Broadway  
Bel Air, Maryland 21014 (410) 838-3800

DESIGNED : CWC  
DRAFTED : RLM  
CHECKED : RLU


**TROY HILL DRIVE  
STRUCTURE SCHEDULE AND  
STORMWATER MANAGEMENT DETAILS**

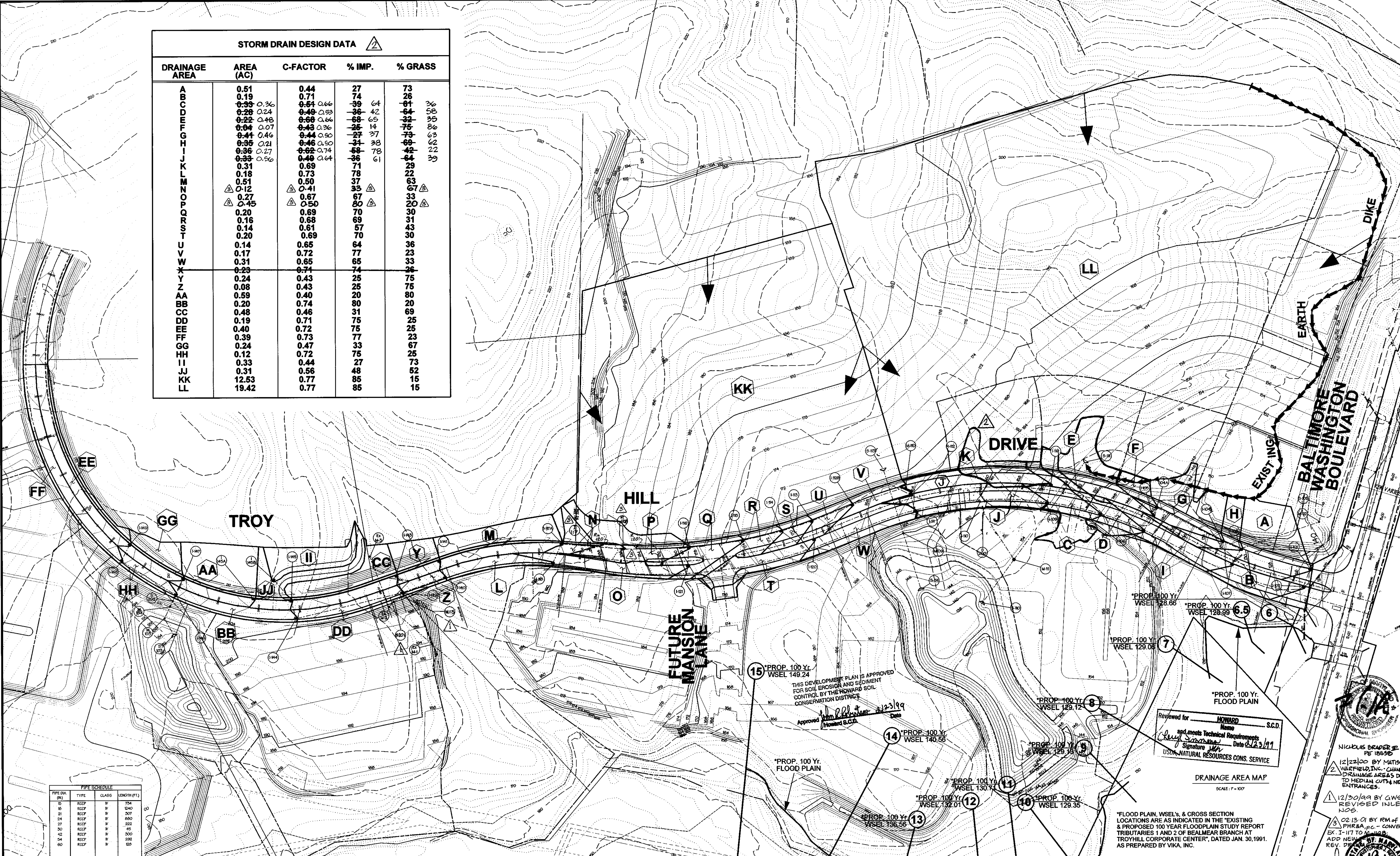
SCALE : NO SCALE

**TROY HILL CORPORATE CENTER  
PHASE II**

HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1

FEB. 10, 1999  
SHEET 12 OF 14

STORM DRAIN DESIGN DATA 				
DRAINAGE AREA	AREA (AC)	C-FACTOR	% IMP.	% GRASS
A	0.51	0.44	27	73
B	0.19	0.71	74	26
C	0.35	0.64	39	61
D	0.28	0.49	36	64
E	0.22	0.48	68	32
F	0.04	0.07	25	75
G	0.41	0.44	27	73
H	0.35	0.21	24	76
I	0.36	0.27	68	32
J	0.33	0.49	36	64
K	0.31	0.69	71	29
L	0.18	0.73	78	22
M	0.51	0.50	37	63
N	0.12	0.41	33	67
O	0.27	0.67	67	33
P	0.45	0.50	80	20
Q	0.20	0.69	70	30
R	0.16	0.68	69	31
S	0.14	0.61	57	43
T	0.20	0.69	70	30
U	0.14	0.65	64	36
V	0.17	0.72	77	23
W	0.31	0.65	65	35
X	0.23	0.74	74	26
Y	0.24	0.43	25	75
Z	0.08	0.43	25	75
AA	0.59	0.40	20	80
BB	0.20	0.74	80	20
CC	0.48	0.46	31	69
DD	0.19	0.71	75	25
EE	0.40	0.72	75	25
FF	0.39	0.73	77	23
GG	0.24	0.47	33	67
HH	0.12	0.72	75	25
II	0.33	0.44	27	73
JJ	0.31	0.56	48	52
KK	12.53	0.77	85	15
LL	19.42	0.77	85	15



PIPE SCHEDULE			
PIPE DIA (IN)	TYPE	CLASS	LENGTH (FT)
15	RCCP	IV	754
18	RCCP	IV	1240
21	RCCP	IV	307
24	RCCP	IV	860
27	RCCP	IV	222
30	RCCP	IV	405
42	RCCP	IV	300
54	RCCP	IV	288
60	RCCP	IV	128

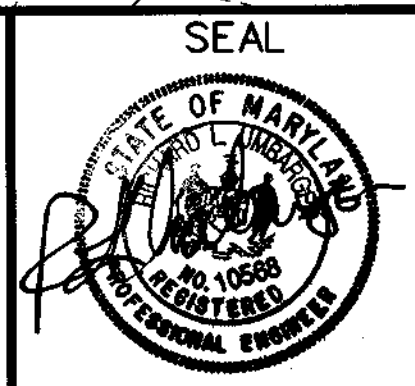
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 3-8-99 DATE  
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Chris Hamlett* 3/12/99 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*John Williamson* 3/9/99 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



GEORGE W. STEPHENS, JR.  
 AND ASSOCIATES, INC.  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 303 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800



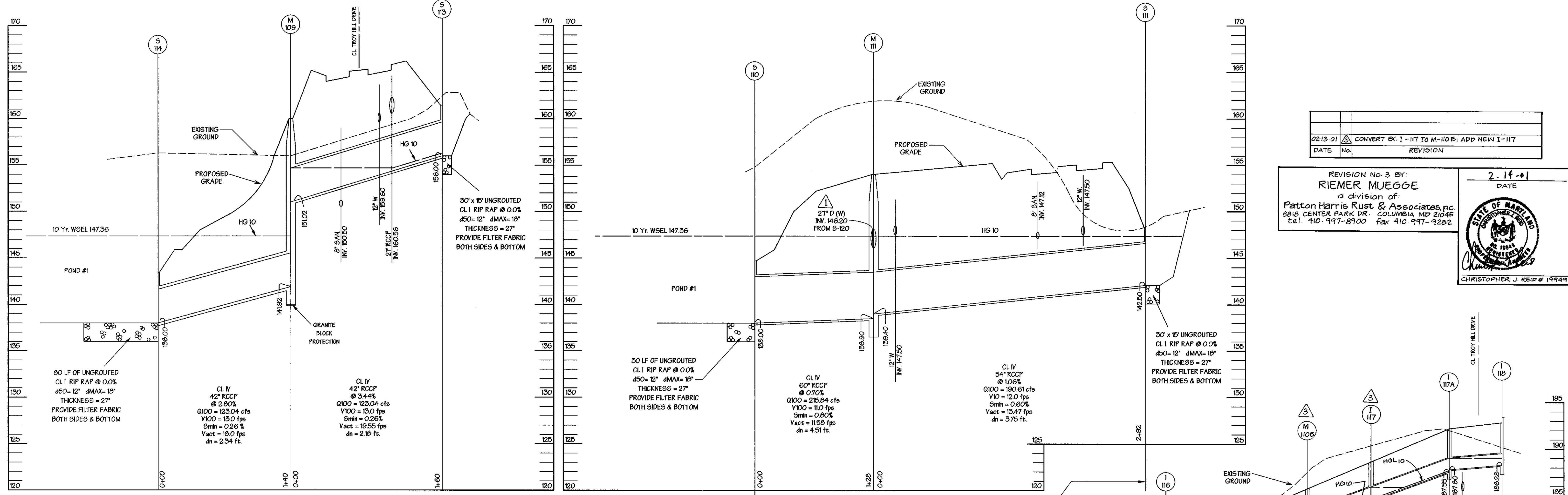
DESIGNED : CWC  
 DRAFTED : CWC  
 CHECKED : RLU

**DRAINAGE AREA MAP**  
 SCALE : AS SHOWN

**TROY HILL CORPORATE CENTER**  
 PHASE II

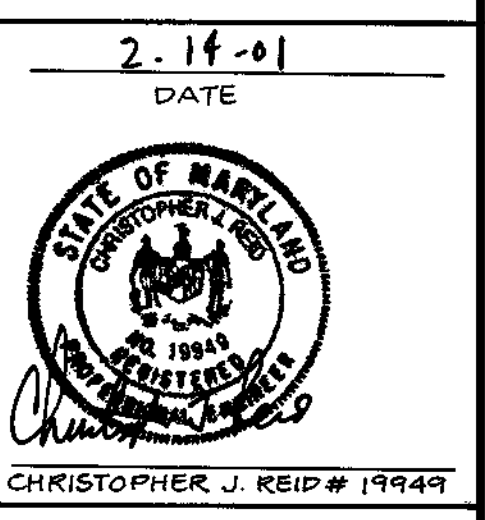
HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT \*1  
 FEB. 10, 1999  
 SHEET 8 OF 14



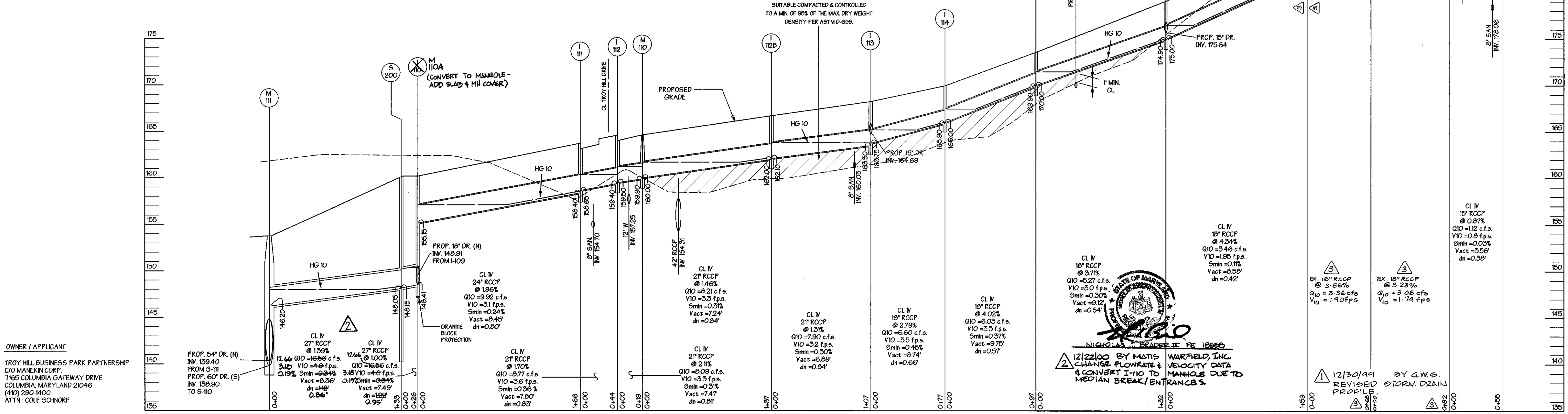


02-13-01	CONVERT EX. I-117 TO M-110B; ADD NEW I-117
DATE	REVISION

REVISION NO. 3 BY:  
**RIEMER MUEGGE**  
 a division of:  
**Patton Harris Rust & Associates, Inc.**  
 8818 CENTER PARK DR. COLUMBIA, MD 21045  
 TEL. 410-997-8900 FAX 410-997-9282



**PROFILES**  
 SCALE: HORIZ. 1" = 50'  
 VERT. 1" = 5'



OWNER / APPLICANT  
 TROY HILL BUSINESS PARK PARTNERSHIP  
 C/O MANEKIN CORP.  
 7165 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND 21046  
 (410) 290-1400  
 ATTN: COLE SCHNORF

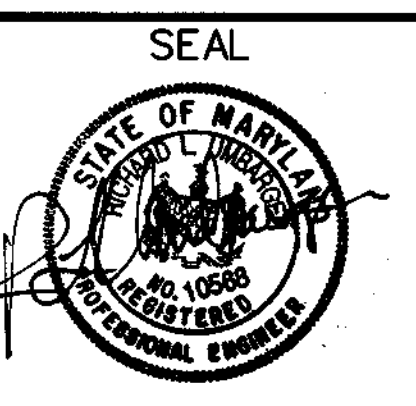
STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 NICHOLAS J. BRADLEY, PE 12880  
 12/21/00 BY MATIS & WARFIELD, INC.  
 CHANGE FLOWRATE & VELOCITY DATA  
 & CONVERT I-110 TO MANHOLE DUE TO  
 MEDIAN BREAK/ENTRANCES

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Duvick* 3-8-99 DATE  
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Andy Hamilton* 3/12/99 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*David Williams* 3/19/99 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

**GEORGE W. STEPHENS, JR.**  
 AND ASSOCIATES, INC.  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21204 (410) 825-8120  
 203 East Broadway  
 Bel Air, Maryland 21014 (410) 838-3800



DESIGNED : CWC  
 DRAFTED : RLM  
 CHECKED : RLU

**TROY HILL DRIVE  
 STORM DRAIN PROFILES**

SCALE: 1" = 50'

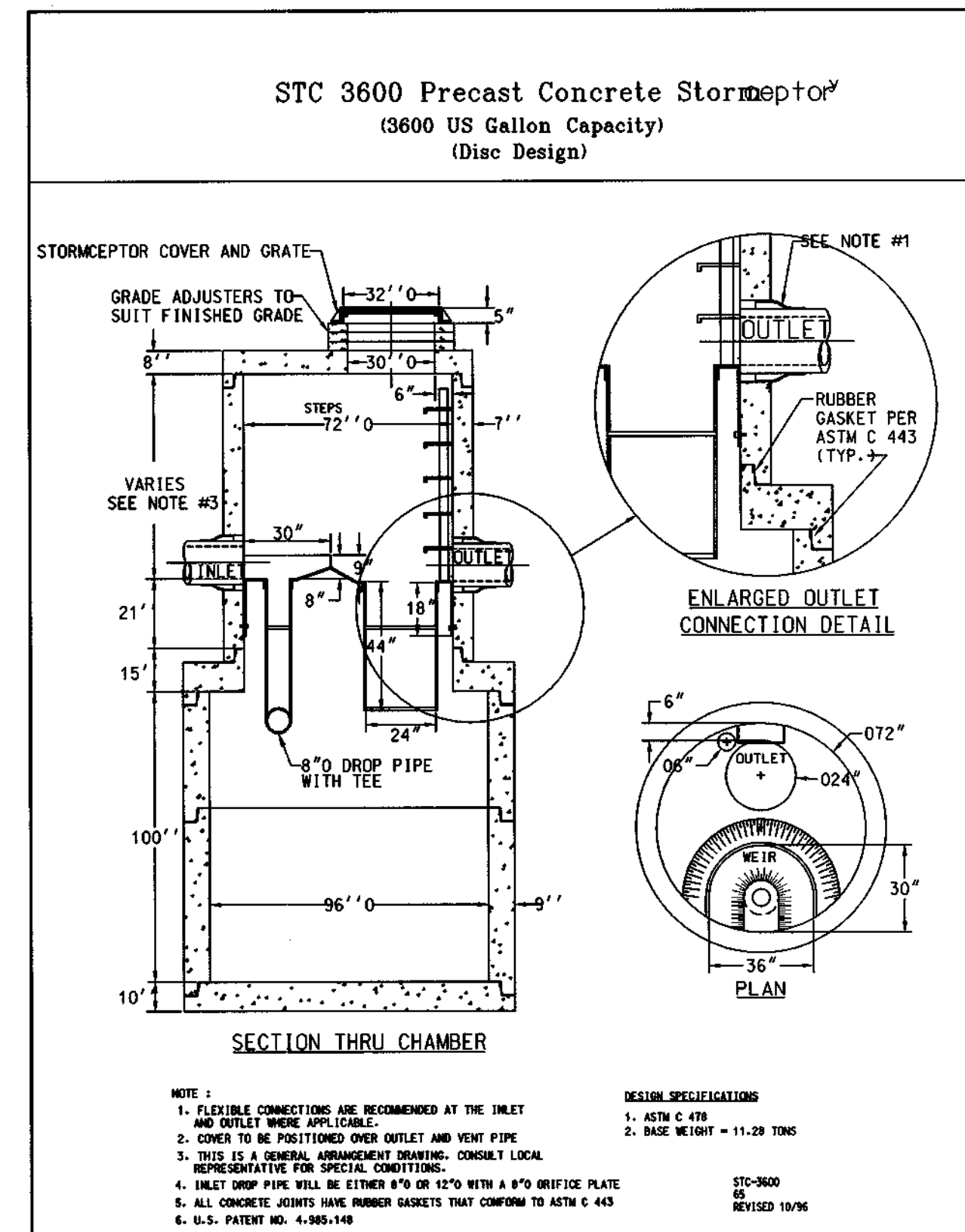
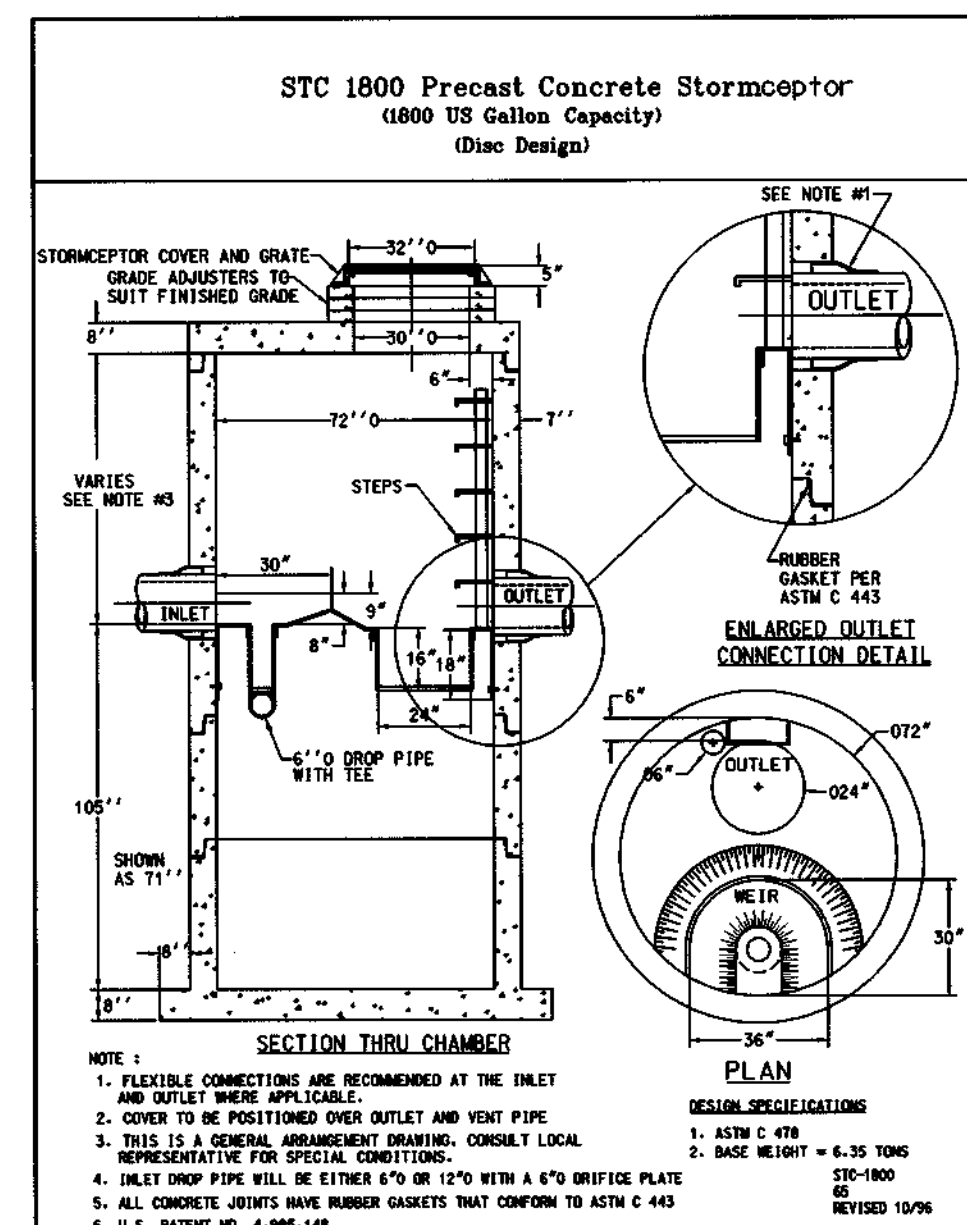
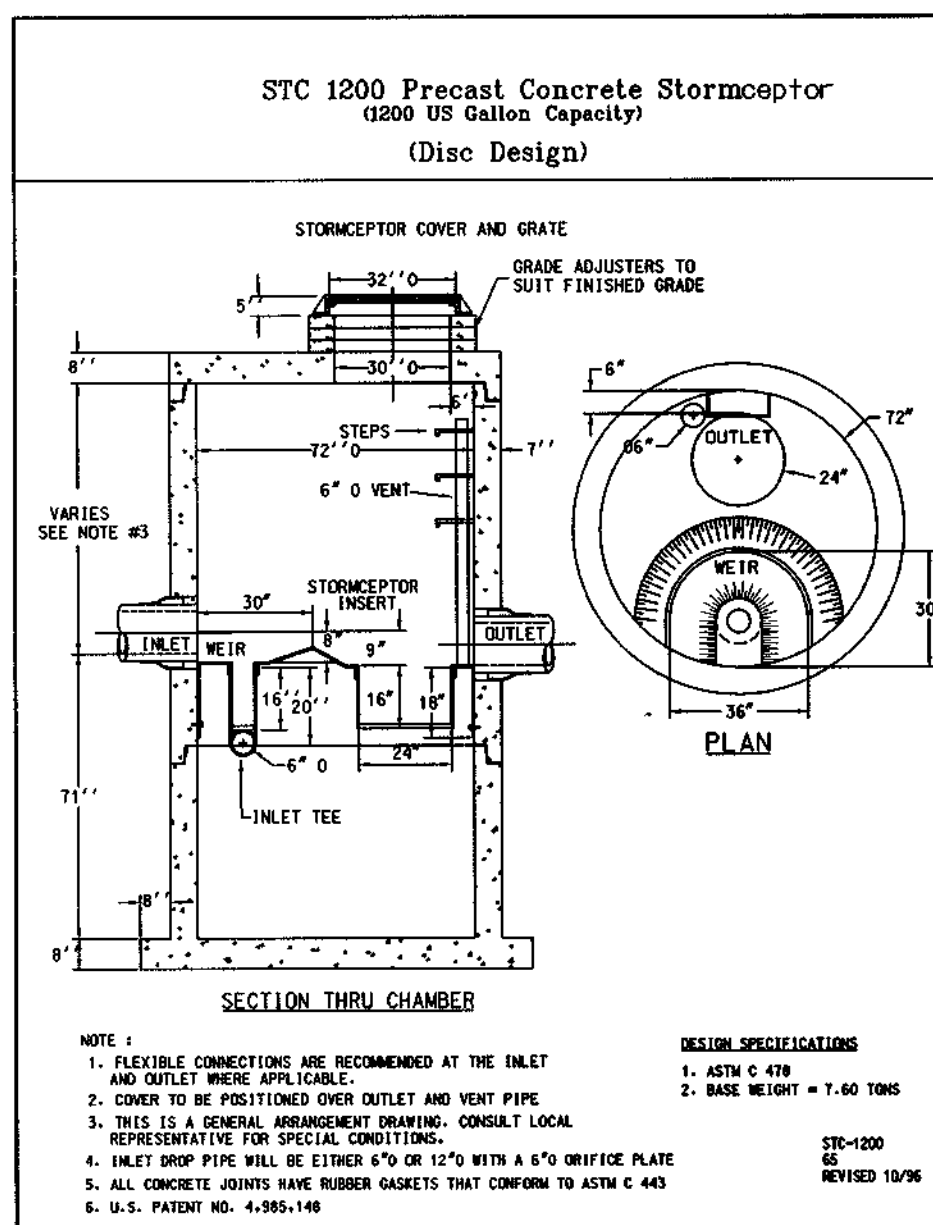
**TROY HILL CORPORATE CENTER  
 PHASE II**

HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT \*1

FEB. 10, 1999  
 SHEET 10 OF 14

**STRUCTURE SCHEDULE**

STR. NO.	TYPE	IN	INVERTS IN	OUT	TOP * ELEV.*	REMARKS
I-101	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			122.00	126.94	
I-102	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	121.64		121.39	126.46	
I-103	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	126.98		126.23	130.94	
I-104	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	128.60		128.50	132.90	
I-104A	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	137.09		134.30	142.66	
I-105	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	137.64		137.31	142.12	
I-106	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	138.20		137.98	141.84	
I-107	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			127.30	131.40	
I-108	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			145.00	148.54	
I-109	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	150.71		150.46	154.92	
I-110	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	155.45	148.01	148.41	159.10	GRANITE BLOCK PROTECTN
I-111	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	158.65		158.40	163.74	
I-112	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	159.50		159.40	164.62	
I-112B	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	162.10		162.00	167.33	
I-113	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	164.69	163.75	163.50	168.86	
I-114	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	166.00		165.90	170.56	
I-115	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	170.00		169.90	174.17	
I-116	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	175.64	175.00	174.90	179.64	
M-110B	HC STD. 65-03 BRICK MANHOLE	182.00		181.90	186.33	
I-117A	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	187.80		187.55	192.80	
I-118	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			188.28	193.44	
I-119	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			161.15	165.66	
I-120	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			165.12	169.66	
I-121	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			178.45	180.71	
I-140	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	193.90		193.65	199.31	
I-141	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			194.70	199.31	
I-142	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	195.30	195.00	192.65/190.00	200.41	
I-143	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			195.80	200.41	
I-144	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	198.10		197.85	203.01	
I-145	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	198.85		198.60	203.11	
I-145A	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			199.40	204.06	
I-145B	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			199.52		
I-146	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	203.80		200.00	208.91	
I-147	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			204.30	208.91	
I-148	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	210.10		206.81	214.91	
I-149	HC STD. SD 4.34 DOUBLE "S" COMB. INLET			210.60	215.31	
M-103	HC STD. G 5.03 BRICK MANHOLE	161.50		161.10	192.50	
M-104	HC STD. G 5.03 BRICK MANHOLE	197.75		191.00	202.90	
M-109	HC STD. G 5.03 BRICK MANHOLE	151.02		141.92	160.00	GRANITE BLOCK PROTECTN
M-110	HC STD. G 5.03 BRICK MANHOLE	160.00		159.90	165.17	
M-111	HC STD. G 5.03 BRICK MANHOLE	146.20	139.40	138.90	163.77	
S-105	HC STD SD 5.51 24" I.D.			124.92		
S-110	HC STD SD 5.51 60" I.D.			138.00	144.50	
S-111	HC STD SD 5.51 54" I.D.			142.50	148.90	
S-113	HC STD SD 5.51 48" I.D.			156.00	161.00	
S-114	HC STD SD 5.51 60" I.D.			138.00	143.00	
S-200	STORMCEPTOR - STC 3600	148.15		148.05	160.75	SEE DETAILS THIS SHEET
S-201	STORMCEPTOR - STC 1200	188.27		188.17	198.25	SEE DETAILS THIS SHEET
S-202	STORMCEPTOR - STC 1800	199.35		199.25	209.10	SEE DETAILS THIS SHEET
S-103	HC STD. SD 5.51 30" I.D.			180.50	184.90	
S-112	HC STD. G 5.01 BRICK MANHOLE	129.23		125.13	131.20	
S-113	HC STD. G 5.01 BRICK MANHOLE	188.04		188.54	200.40	
M-110 A	HC STD. G 5.03 BRICK MANHOLE	155.15	148.91	148.41	160.19	GRANITE BLOCK PROTECTION
I-117	HC STD. SD 4.34 DOUBLE "S" COMB. INLET	184.61		184.42	189.29	



**Concrete Stormceptor Order Request Form\***  
Structure - S200

Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Inset Size: 22", 32", 44", 7200. Manhole/Structure Number: S 200. Top Elevation (ft): 180.75, 188.27, 188.17, 188.25. Inlet Pipe Invert (ft): 128.15, 128.05. Outlet Pipe Invert (ft): 128.05. Pipe Type: RCCP. Pipe Inside Diameter (in) [ID]: 27. Pipe Outside Diameter (in) [OD]: 27.

Impervious Drainage Area (ac): 2.93

Project Name, Approximate time frame until required delivery (weeks), Exact Delivery Address: Street, City, State, Zip Code, Designer Company, Designer Contact.

**Concrete Stormceptor Order Request Form\***  
Structure - S201

Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Inset Size: 22", 32", 44", 7200. Manhole/Structure Number: S 201. Top Elevation (ft): 180.75, 188.27, 188.17, 188.25. Inlet Pipe Invert (ft): 128.15, 128.05. Outlet Pipe Invert (ft): 128.05. Pipe Type: RCCP. Pipe Inside Diameter (in) [ID]: 24. Pipe Outside Diameter (in) [OD]: 24.

Impervious Drainage Area (ac): 0.84

Project Name, Approximate time frame until required delivery (weeks), Exact Delivery Address: Street, City, State, Zip Code, Designer Company, Designer Contact.

**Concrete Stormceptor Order Request Form\***  
Structure - S202

Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Inset Size: 22", 32", 44", 7200. Manhole/Structure Number: S 202. Top Elevation (ft): 203.10, 188.25, 188.25. Inlet Pipe Invert (ft): 128.15, 128.05. Outlet Pipe Invert (ft): 128.05. Pipe Type: RCCP. Pipe Inside Diameter (in) [ID]: 27. Pipe Outside Diameter (in) [OD]: 27.

Impervious Drainage Area (ac): 0.98

Project Name, Approximate time frame until required delivery (weeks), Exact Delivery Address: Street, City, State, Zip Code, Designer Company, Designer Contact.

**OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE**

- The Stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Stormceptor Inspection/Monitoring Form. Inspections shall be done by using a clear plexiglass tube ("sludge judge") to extract a water column sample. When the sediment depths exceed the level specified in Table 6 of the Stormceptor Technical Manual, the unit must be cleaned.
- The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies.
- The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons, and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- The inlet and outlet pipes shall be checked for any obstructions at least once every six months. If obstructions are found the owner shall have them removed. Structural parts of the Stormceptor unit shall be repaired as needed.
- The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available the Howard County officials upon their request.

02.13.01	REV. STRUCTURE SCHEDULE - CHANGE/CONVERT I-117 TO MANHOLE - M-110B; ADD NEW INLET - I-117.
DATE	REVISION

REVISION No. 3 BY:  
**RIEMER MUEGGE**  
a division of:  
**Patton Harris Rust & Associates, P.C.**  
8818 CENTER PARK DR. COLUMBIA, MD 21045  
tel. 410.997-8900 fax 410.997-9282

2-14-01  
DATE

**STATE OF MARYLAND**  
Professional Engineer  
CHRISTOPHER J. REID # 19449



NICHOLAS J. GRADER, III PE 18558  
12/22/00 BY MATIS WARFIELD, INC.  
CHANGE/CONVERT I-110 TO A MANHOLE - M-110A

12/30/99 BY G.W.S.  
REVISED STRUCTURE SCHEDULE, ADD S103, M112, M113 TO SCHEDULE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
**Andrew M. Daniels** 3-8-99  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
**Candy Hamata** 7/12/09  
CHIEF, DIVISION OF LAND DEVELOPMENT

**Mike Damiano** 3/1/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**GWS**  
**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
Civil Engineers and Land Surveyors  
658 Kenilworth Drive, Suite 100  
Towson Maryland 21204 (410) 825-8120  
203 East Broadway  
Bel Air, Maryland 21014 (410) 838-3800

SEAL  
**STATE OF MARYLAND**  
Professional Engineer

DESIGNED : CWC  
DRAFTED : RLM  
CHECKED : RLU

**TROY HILL DRIVE**  
**STRUCTURE SCHEDULE AND**  
**STORMWATER MANAGEMENT DETAILS**

SCALE : NO SCALE

**TROY HILL CORPORATE CENTER**  
PHASE II

HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT #1

FEB. 10, 1999  
SHEET 12 OF 14

F98169 P/N 8130 - sddet.s12