

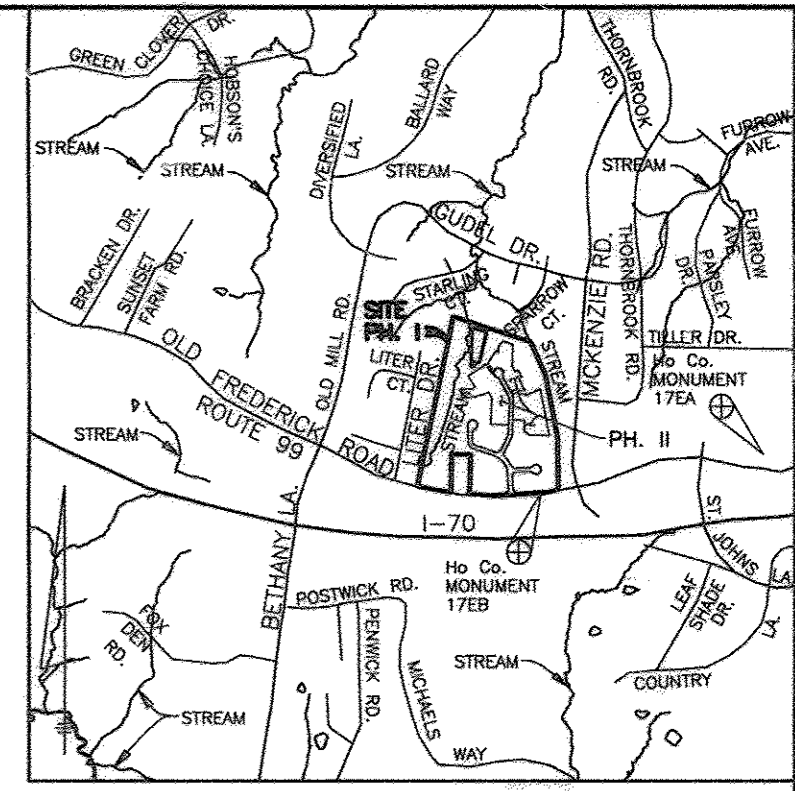
GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- PROJECT BACKGROUND:
LOCATION: TAX MAP 17 - BLOCK 9 - PARCEL 59
ZONING: R-20
ELECTION DISTRICT: 2nd
TOTAL TRACT AREA: 44.15 AC.
NUMBER OF PROPOSED LOTS (PHASE 1): 44
NUMBER OF PROPOSED OPEN SPACE LOTS: 4
NUMBER OF PROPOSED NON-BUILDABLE PARCELS: 3
NUMBER OF LOTS (PHASE 2): 20
DPZ REFERENCE FILE: S-99-15, P-00-05
SKETCH PLAN APPROVED ON JUNE 23, 1999.
PRELIMINARY PLAN APPROVED ON MARCH 1, 2000.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- TOPOGRAPHY SHOWN HEREON WAS TAKEN FROM FIELD RUN SURVEY DONE BY BENCHMARK ENGINEERING, INC. DATED 12/99 AND SUPPLEMENTED WITH TOPOGRAPHIC FILE INFORMATION PURCHASED FROM HOWARD COUNTY GEOGRAPHICAL INFORMATION SERVICES. CONTOURS SHOWN ARE 2 FOOT INTERVALS.
- BOUNDARY SURVEY WAS PERFORMED BY BENCHMARK ENGINEERING, INC. DATED MARCH, 2000. COORDINATES ARE BASED ON NAD 83, MARYLAND STATE PLAN GRID AS PROJECTED BY HOWARD CO. GEODETIC CONTROL STATIONS Nos. 17EA AND 17EB.
- THE PROJECT IS WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER FOR THIS PROJECT SHALL BE PUBLIC AND WILL BE PROVIDED FOR ALL LOTS (PUBLIC WATER AND SEWER CONTRACT NO. 24-3867-D).
- WATER QUALITY AND QUANTITY TREATMENT FOR THE PROPOSED ROADWAYS AND LOTS IS BEING PROVIDED BY AN EXTENDED DETENTION FACILITY. THIS FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
- THE FLOODPLAIN LIMIT SHOWN HAS BEEN CALCULATED BY BENCHMARK ENGINEERING, INC. DATED JUNE 29, 1999 AND APPROVED ON MARCH 8, 2000 (P-00-05).
- WETLAND LIMITS SHOWN HEREON ARE BASED ON A DELINEATION BY ECO-SCIENCE PROFESSIONALS, INC., DATED FEBRUARY 10, 1999, APPROVED ON MARCH 8, 2000.
- ADAPTED PUBLIC FACILITIES ORDINANCE TRAFFIC ANALYSIS WAS PREPARED BY THE TRAFFIC GROUP, DATED JANUARY 26, 1999 AND APPROVED ON MARCH 8, 2000.
- NOISE STUDY WAS PREPARED BY BENCHMARK ENGINEERING, INC. AND DATED DECEMBER 21, 1999 (REVISED) AND APPROVED MARCH 8, 2000 (P-00-05) AND IS REVISED UNDER THIS SUBMISSION, REVISION DATED JUNE 9, 2000.
- THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLS-CARNES AND ASSOCIATES, DATED SEPTEMBER 24, 1999.
- EXISTING UTILITIES SHOWN ARE TAKEN FROM RECORD INFORMATION AND FIELD LOCATIONS. CONTRACTOR TO VERIFY LOCATION PRIOR TO STARTING CONSTRUCTION.
- FOREST STAND DELINEATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED FEBRUARY 8, 1999 AND APPROVED ON JUNE 23, 1999 (S-99-15).
- NO DISTURBANCE SHALL OCCUR IN THE WETLANDS, 25' STREAM BUFFER, STREAM, 75' OR 50' STREAM BUFFER, 100-YEAR FLOODPLAIN LIMITS OR FOREST CONSERVATION EASEMENT AREAS EXCEPT AS APPROVED AS A PART OF THESE PLANS. A DEPARTMENT OF THE ARMY WETLANDS PERMIT HAS BEEN APPLIED FOR AND THE TRACKING NO. IS 2001-606227-15.
- A SIGHT DISTANCE ANALYSIS FOR WEATHERSTONE DRIVE AND OLD FREDERICK ROAD (ROUTE 99) WAS PROVIDED TO THE DEVELOPMENT ENGINEERING DIVISION AND APPROVED AS PART OF THE PRELIMINARY PLAN (P-00-05) SUBJECT TO OBTAINING AN ACCESS PERMIT FROM MARYLAND DEPARTMENT OF TRANSPORTATION. THIS PERMIT WILL COVER THE IMPROVEMENTS TO MARYLAND ROUTE 99 OLD FREDERICK ROAD, MILE POST 6.10.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERY LOCATIONS ON-SITE.
- DRIVEWAYS THAT SERVE ONE RESIDENCE SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY.
- DRIVEWAYS THAT SERVE MULTIPLE RESIDENCES SHALL BE PROVIDED PRIOR TO BUILDING PERMIT ISSUANCE IN ORDER TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
a) WIDTH - 12' (14' SERVING MORE THAN ONE RESIDENCE).
b) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING.
c) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS.
d) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
e) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
f) STRUCTURE CLEARANCES - MINIMUM 12 FEET.
g) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- ALL ROAD FILLS SHALL BE COMPACTED TO 98% AS DETERMINED BY AASHTO T-180.
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN THE AREA OF ANY OVERHEAD POWERLINES.
- LANDSCAPING SURETY FOR THIS PROJECT SHALL BE PART OF THE DEVELOPERS AGREEMENT IN THE AMOUNT OF \$43,950.00.
- THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY 13.3 ACRES OF RETENTION ON-SITE. FINANCIAL SURETY FOR THE REQUIRED OBLIGATION MUST BE POSTED AS PART OF THE DEVELOPERS AGREEMENT IN THE AMOUNT OF \$57,934.80.
- STREET LIGHT LOCATION, TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III.
- EXISTING WELLS AND SEPTIC SHALL BE ABANDONED PRIOR TO SUBMISSION OF THE RECORD PLAN FOR RECORDATION. THE HEALTH DEPARTMENT SHALL BE NOTIFIED PRIOR TO ANY ABANDONMENT.

TREYBURN

2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

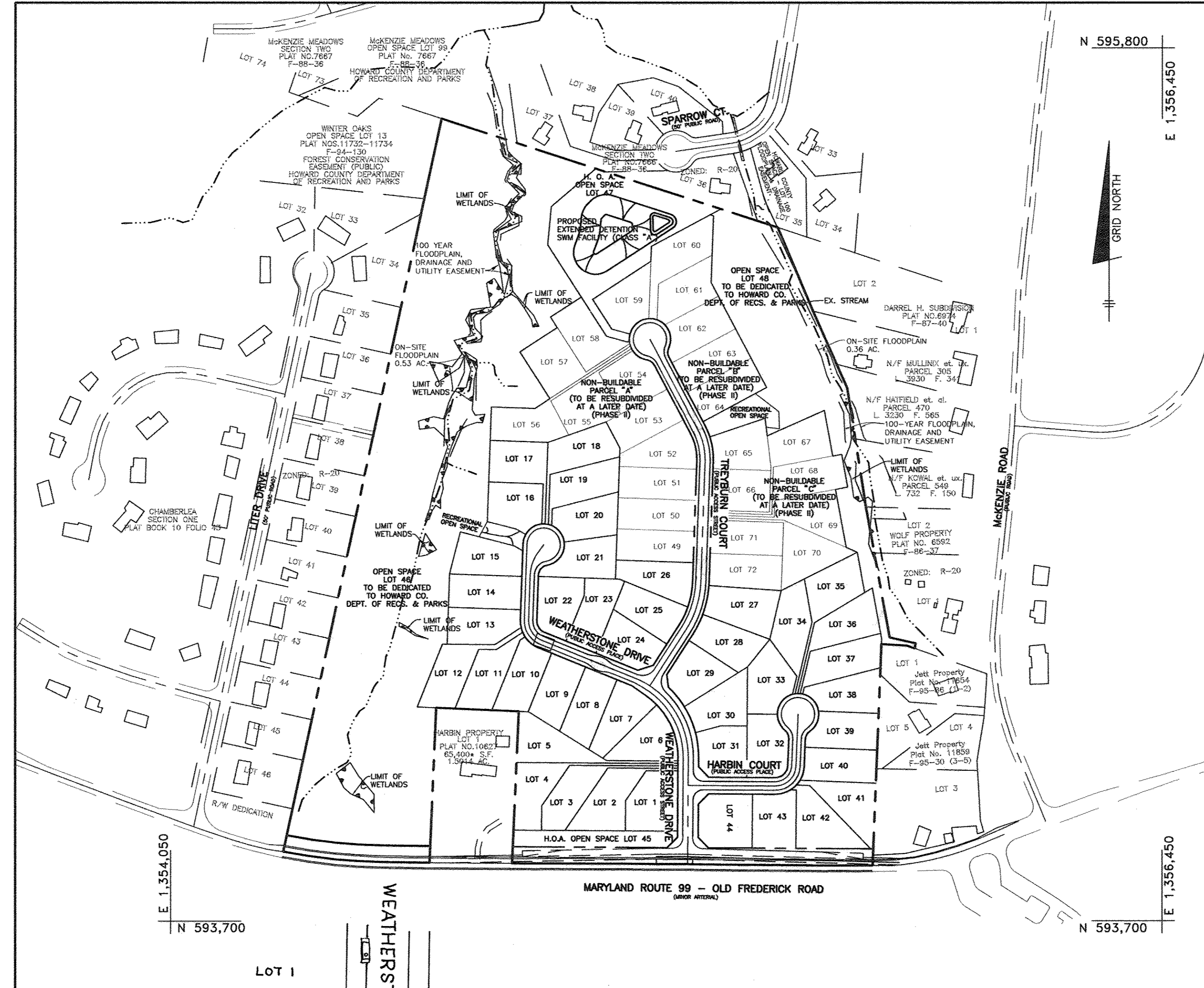
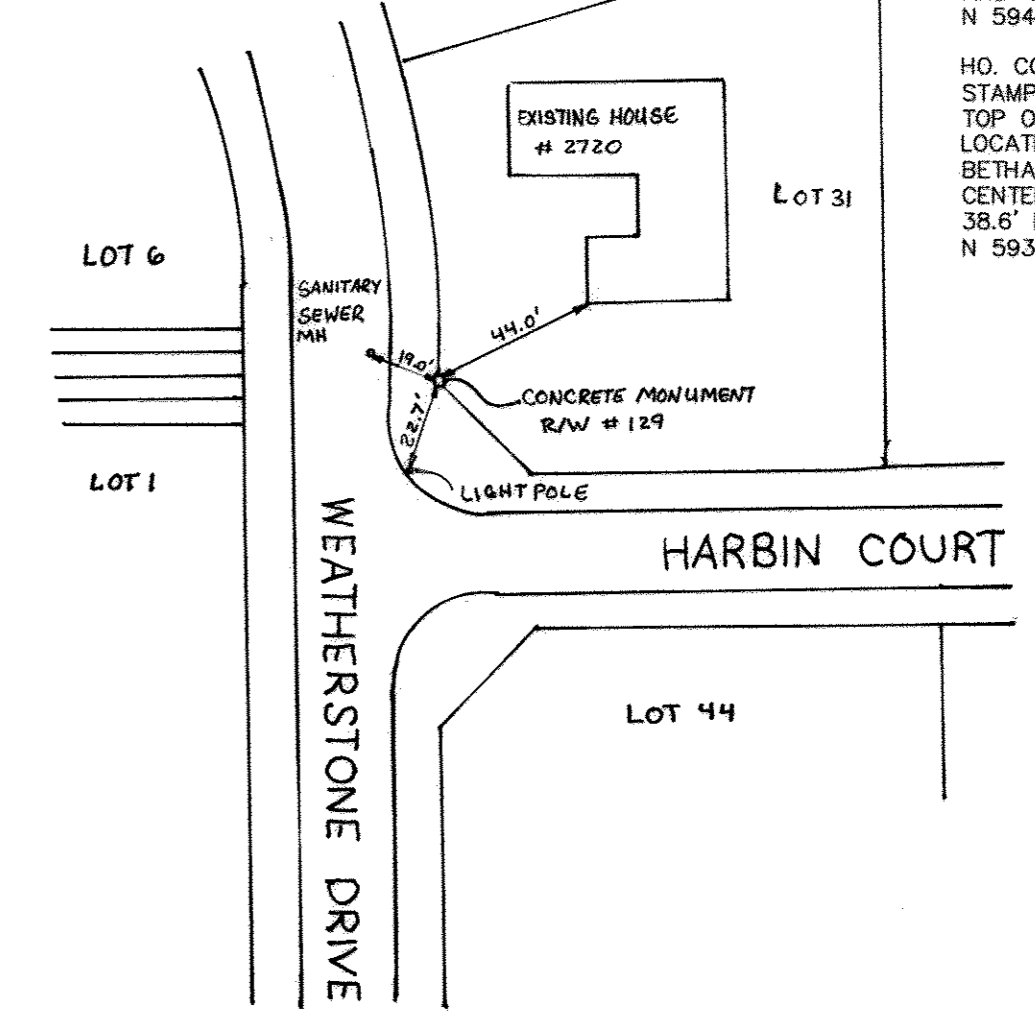
FINAL ROAD, STORMWATER MANAGEMENT AND STORM DRAIN CONSTRUCTION PLANS



VICINITY MAP
SCALE: 1" = 2000'

BENCH MARKS (NAD83)
HO. CO. No. 17EA ELEV. 373.36
STAMPED BRASS DISK SET ON TOP OF CONCRETE (3" DEEP) COLUMN. LOCATED IN THE ISLAND IN FRONT OF MOUNT HEBRON HIGH SCHOOL, 33.7' SOUTH OF THE FLAG POLE AND 21.3' NORTH OF THE CURB AND 40.7' WEST OF A 15' WHITE PINE. N 594,357.7264' E 1,357,519.3741'

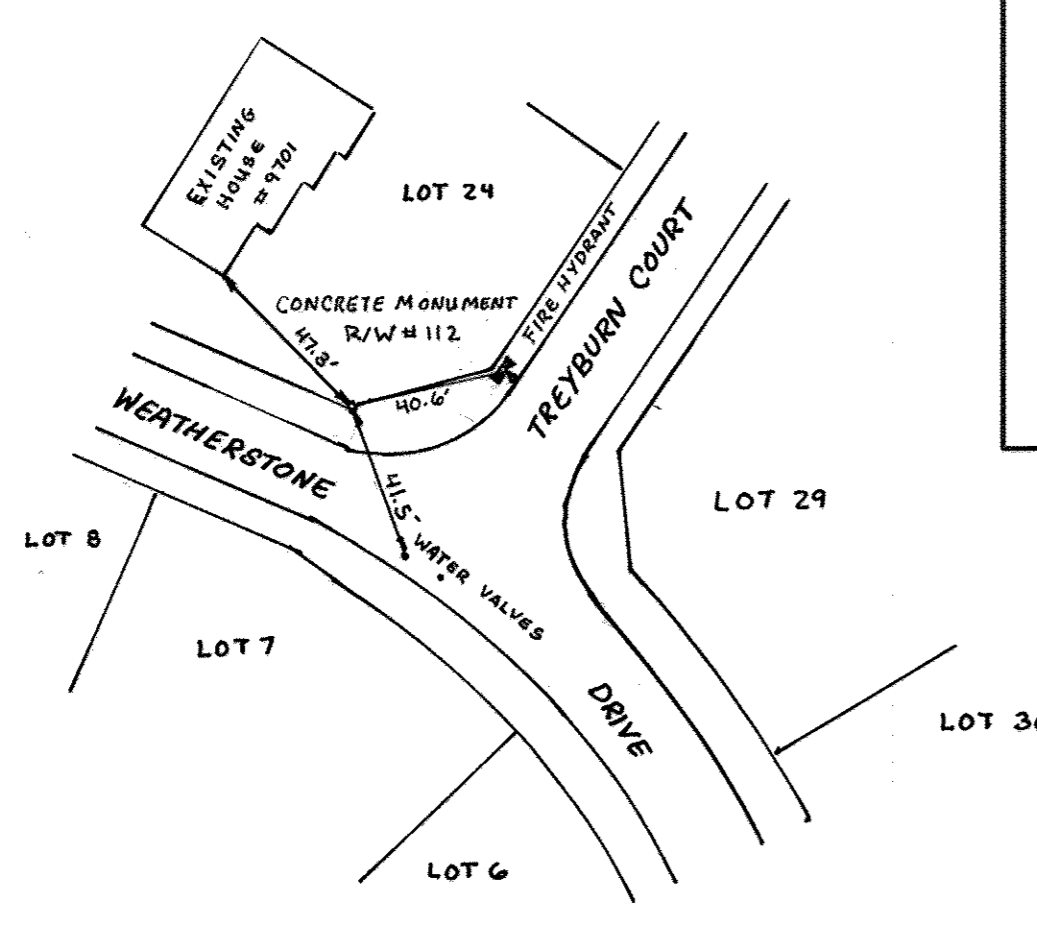
HO. CO. No. 17EB ELEV. 348.10
STAMPED BRASS DISK SET ON TOP OF CONCRETE (3" DEEP) CYLINDRICAL BASE LOCATED 224' WEST OF THE ENTRANCE TO BETHANY FIRE STATION, 19' SOUTH OF THE CENTERLINE OF OLD FREDERICK ROAD AND 38.6' EAST OF G&E POLE #474631. N 595,814.0053' E 1,335,731.8846'



R/W P.T. NO.	DESCRIPTION	ELEVATION
1100	PUNCH HOLE SET	468.60
1101	CONCRETE MONUMENT	464.63
1102	REBAR & CAP FOUND	470.11
1103	REBAR & CAP FOUND	474.18
1104	REBAR & CAP FOUND	474.90
1105	REBAR & CAP FOUND	468.27
1106	PUNCH HOLE FOUND	464.41
1107	REBAR & CAP FOUND	463.74
1108	REBAR & CAP FOUND	465.12
1109	REBAR & CAP FOUND	467.95
1110	REBAR & CAP FOUND	464.61
1111	REBAR & CAP FOUND	468.19
1112	CONCRETE MONUMENT	474.51
1113	REBAR & CAP FOUND	472.78
1114	REBAR & CAP FOUND	469.84
1115	REBAR & CAP FOUND	465.62
1116	REBAR & CAP FOUND	469.03
1117	REBAR & CAP FOUND	460.08
1118	REBAR & CAP FOUND	467.99
1119	REBAR & CAP FOUND	467.23
1120	PUNCH HOLE FOUND	467.04
1121	REBAR & CAP FOUND	467.94
1122	REBAR & CAP SET	460.32
1123	PLAT COR. R/W	470.85
1124	REBAR & CAP FOUND	470.85
1125	PUNCH HOLE FOUND	479.40
1126	REBAR & CAP FOUND	469.10
1127	REBAR & CAP FOUND	473.20
1128	REBAR & CAP FOUND	470.27
1129	CONCRETE MONUMENT	469.57
1130	REBAR & CAP FOUND	466.61
1131	PLAT COR. R/W	462.68
1132	PLAT COR. R/W	461.99
1133	PLAT COR. R/W	461.20
1134	PLAT COR. R/W	461.01
1135	PLAT COR. R/W	460.69
1136	PLAT COR. R/W	461.07
1137	PLAT COR. R/W	461.90
1138	PLAT COR. R/W	462.86
1139	REBAR & CAP FOUND	466.39
1140	REBAR & CAP FOUND	466.77
1141	REBAR & CAP SET	464.18
1142	REBAR & CAP CFS FOUND	461.46
1143	REBAR & CAP FOUND	467.99
1144	REBAR & CAP SET	461.73
1145	REBAR & CAP SET	462.72
1146	REBAR & CAP SET	465.36
1147	REBAR & CAP SET	464.22
1148	REBAR & CAP SET	470.85
1149	REBAR & CAP SET	470.85
1150	REBAR & CAP SET	470.85
1151	REBAR & CAP FOUND B&Z	479.40

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2-3	ROAD AND STORM DRAIN PLAN
4-5	ROAD PROFILES
6	CURB RETURN PROFILE
7	SPEED CONTROL DETAILS
8-9	STORM DRAIN PROFILES
10	STORM DRAIN PROFILES AND SCHEDULES
11-12	GRADING, SEDIMENT & EROSION CONTROL PLAN
13	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
14	STORM DRAIN DRAINAGE AREA MAP
15-16	STORM WATER MANAGEMENT NOTES AND DETAILS
17	LANDSCAPE PLAN
18	FOREST CONSERVATION PLAN
19	FOREST CONSERVATION AND LANDSCAPE NOTES & DETAILS
20	OLD FREDERICK ROAD IMPROVEMENT PLAN

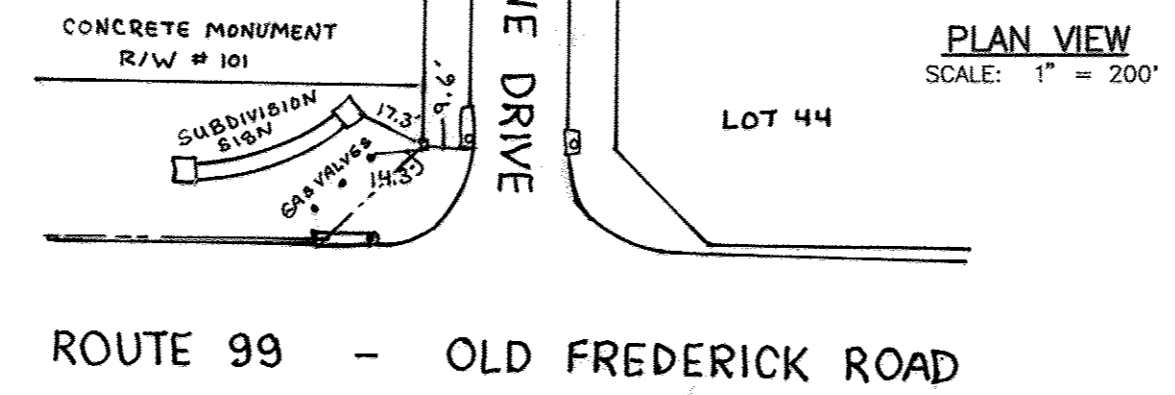
PLAN REVISION NOTE: ON OR AROUND 12/6/2017 CAPITAL PROJECT D-1158, TITLED STARLING ROAD STREAM REHABILITATION WAS CREATED TO STABILIZE APPROXIMATELY 2,500 LINEAR FEET OF AN UNNAMED TRIBUTARY TO THE PATAPSCO RIVER. LOCATED WITHIN TWO HOWARD COUNTY OPEN SPACE LOTS. ILLUSTRATED WITHIN THE LIMITS OF THIS PLAN. AN ALTERNATIVE COMPLIANCE WAS PROCESSED THROUGH THE DEPARTMENT OF PLANNING AND ZONING UNDER HCP-18-035, APPROVED ON 12/8/2017. TO AVOID SECTIONS 16.155(A)(1)(II), 16.1201(A) AND 16.1205(A)(7) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. SUBJECT TO 5 CONDITIONS OF APPROVAL. FOR THE DETAILED CONDITIONS OF APPROVAL AND THE CURRENT SITE CONDITIONS WITHIN THE DISTURBED AREA, PLEASE SEE THE CAPITAL PROJECT PLANS.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Donald M. Mason 4/5/01
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Womack 4/7/01
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: *John J. Williams* 4/9/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION



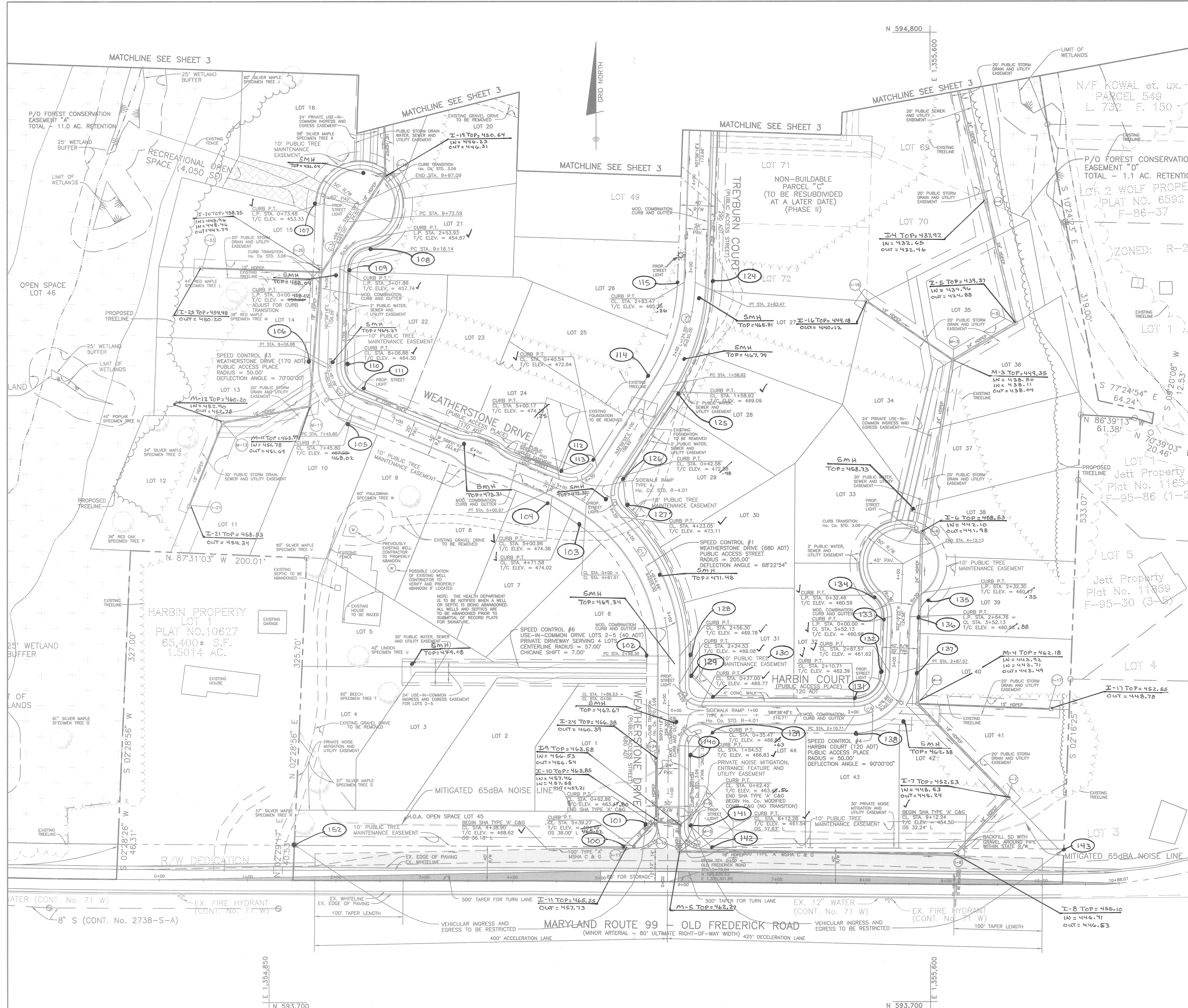
Donald M. Mason
AS-BUILT 3/9/05

NO.	DATE	REVISION
3-7-05		ADD RECOVERY SKETCHES AND R/W ELEVATION CHART PER AS-BUILT CONDITIONS
2-26-02		REMOVE ISLAND AND SPEED CONTROL DEVICES

BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS
8480 BALTIMORE NATIONAL PIKE SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644

Donald M. Mason

OWNER/DEVELOPER: TREYBURN, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: TREYBURN PHASE 1, LOTS 1-48 AND NON-BUILDABLE PARCELS "A" - "C"
LOCATION: TAX MAP 17 - BLOCK 9 - PARCEL 59 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: COVER SHEET
DATE: JUNE, 2000	PROJECT NO. 0697
DESIGN: JMC	DRAFT: JMC
SCALE: AS SHOWN	DRAWING 1 OF 20



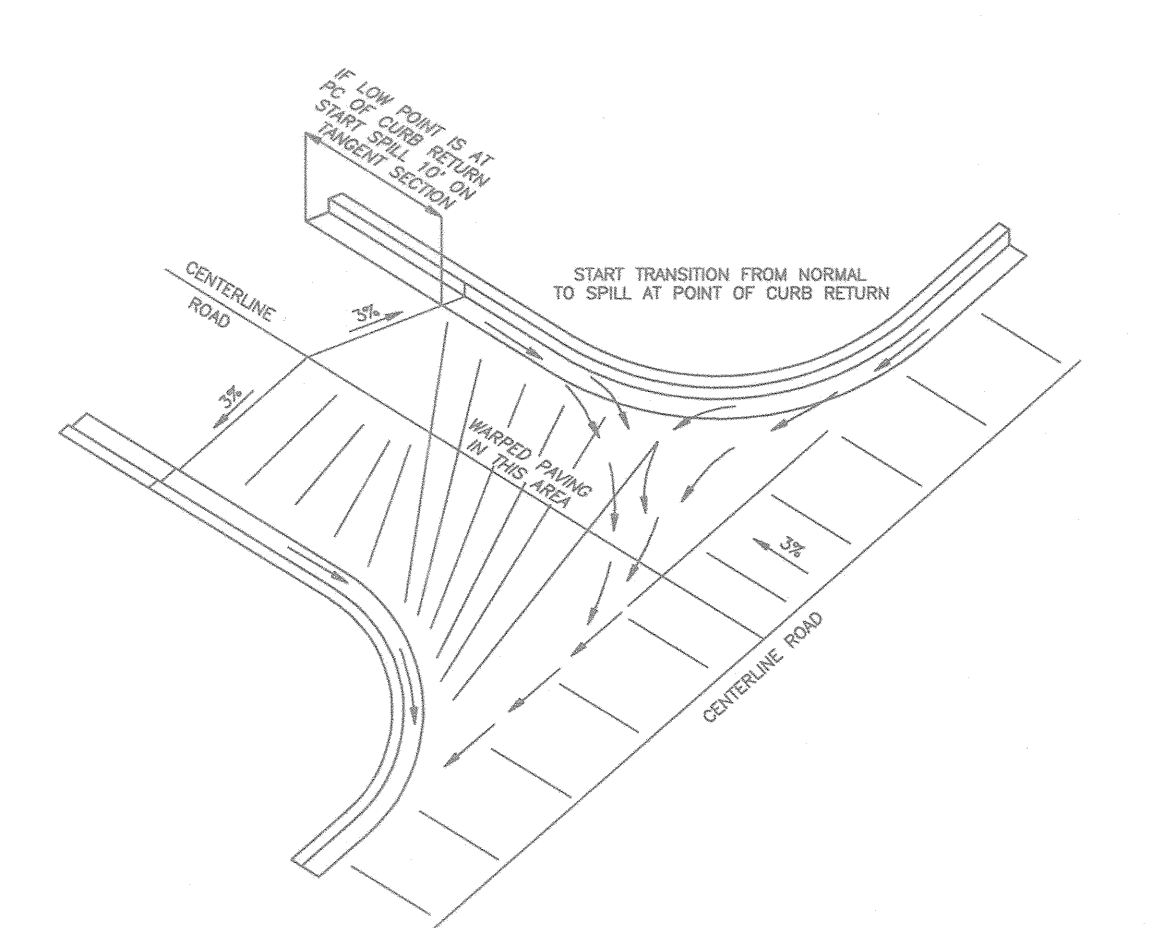
STREET LIGHT SCHEDULE

WEATHERSTONE DRIVE	STA: 0+47 OFFSET: 22' R	150 WATT	ANGLE ARM AS SHOWN
	STA: 2+13 OFFSET: 18' R	100 WATT	
	STA: 4+36 OFFSET: 19' R	100 WATT	
	STA: 5+92 OFFSET: 19' R	100 WATT	
	STA: 7+73 OFFSET: 14' L	100 WATT	
WEATHERSTONE DRIVE L.P.	STA: 0+82 OFFSET: 3' L	100 WATT	
HARBIN COURT	STA: 2+80 OFFSET: 14' R	100 WATT	
HARBIN COURT L.P.	STA: 1+45 OFFSET: 3' L	100 WATT	
TREBURN COURT	STA: 3+15 OFFSET: 9' L	100 WATT	
TREBURN COURT L.P.	STA: 6+67 OFFSET: 9' R	100 WATT	
	STA: 0+85 OFFSET: 3' L	100 WATT	

STREET LIGHTS TO BE EITHER A 100 WATT HPS VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE OR A 150 WATT HPS VAPOR PENDANT FIXTURE (CUTOFF) MOUNTED AT 30" ON A BRONZE FIBERGLASS POLE WITH A 12" ARM.

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD
C1	205.00'	244.66'	68°22'54"	139.27'	N33°50'15"W 230.40'
C2	50.00'	61.09'	70°00'00"	35.01'	S33°01'42"E 87.36'
C3	95.00'	56.45'	34°02'51"	29.09'	S18°59'44"W 55.63'
C4	50.00'	76.86'	88°04'46"	48.35'	N46°18'48"E 69.52'
C5	230.00'	124.55'	31°01'37"	63.84'	N17°29'07"E 123.03'



INTERSECTION DRAINAGE DETAIL
SCALE: NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard S. Shilper 1/9/01
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cinda Cantor 1/7/01
CHIEF, DIVISION OF LAND DEVELOPMENT

Chris Dammann 1/9/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 211043
PHONE: 410-465-6105 FAX: 410-465-6844

NO. DATE REVISION

3-7-05	REVISED PER AS-BUILT CONDITIONS
2-26-02	REMOVE ISLAND AND SPEED CONTROL DEVICES - RELOCATE STREET LIGHT

OWNER/DEVELOPER: TREYBURN, L.L.C.
P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

PROJECT: TREYBURN
PHASE 1, LOTS 1-48 AND
NON-BUILDABLE PARCELS "A" - "C"

LOCATION: TAX MAP 17 - BLOCK 9 - PARCEL 59
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: ROAD AND STORM DRAIN PLAN

DATE: JULY, 2000 PROJECT NO. 0697
OCTOBER, 2000

DESIGN: JMC DRAFT: JMC SCALE: 1" = 50' DRAWING 2 OF 20

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD
C6	150.00	78.54	30°00'00"	40.19	N13°01'42"W 77.85



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard Shilper 1/10/01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Deuster 1/17/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris Deuster 1/13/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

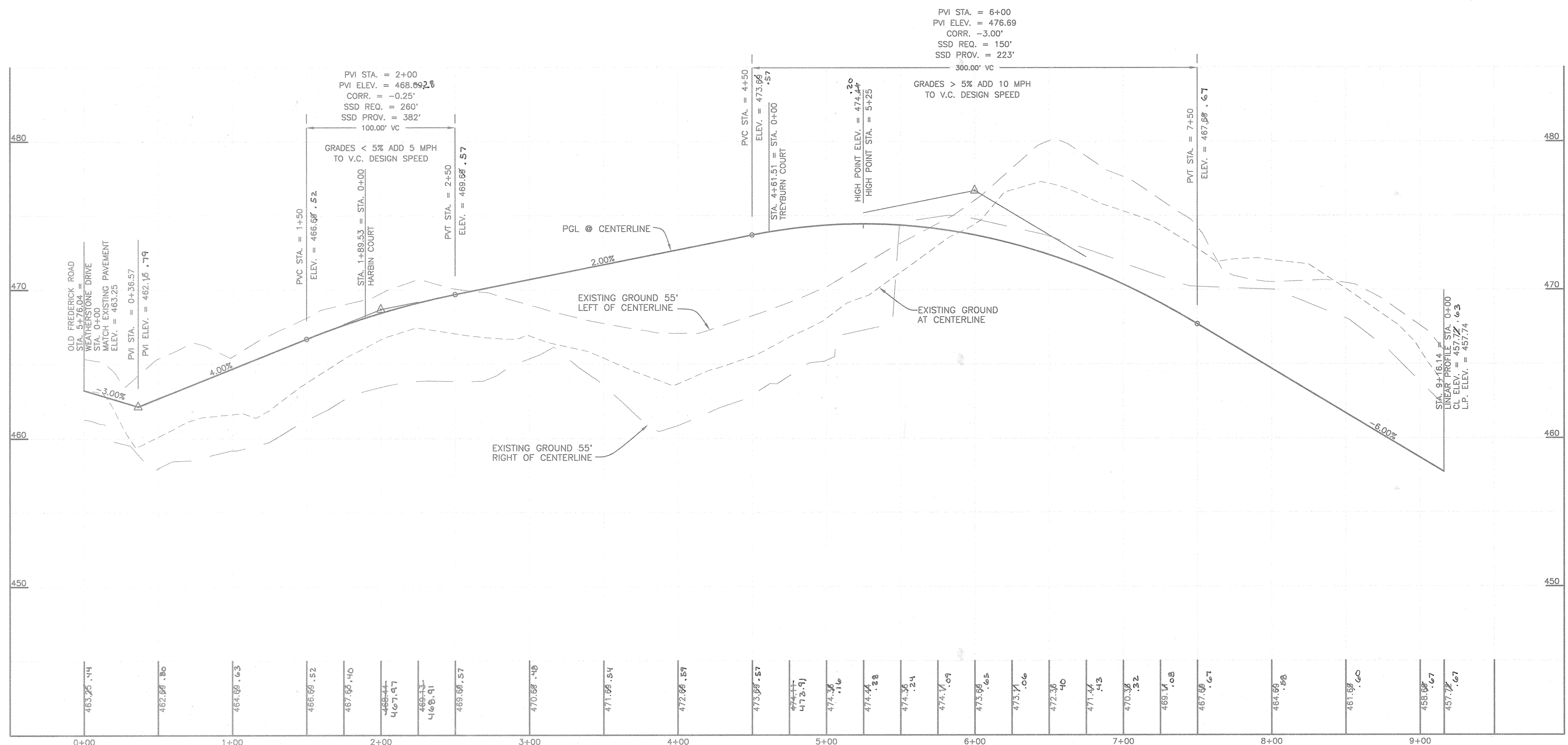
NO.	DATE	REVISION
3-7-05		REVISE PER AS-BUILT CONDITIONS
2-26-02		REMOVE ISLAND AND SPEED CONTROL DEVICES AND RELOCATE STREETLIGHT

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6844

Donald Maan
 PROFESSIONAL ENGINEER

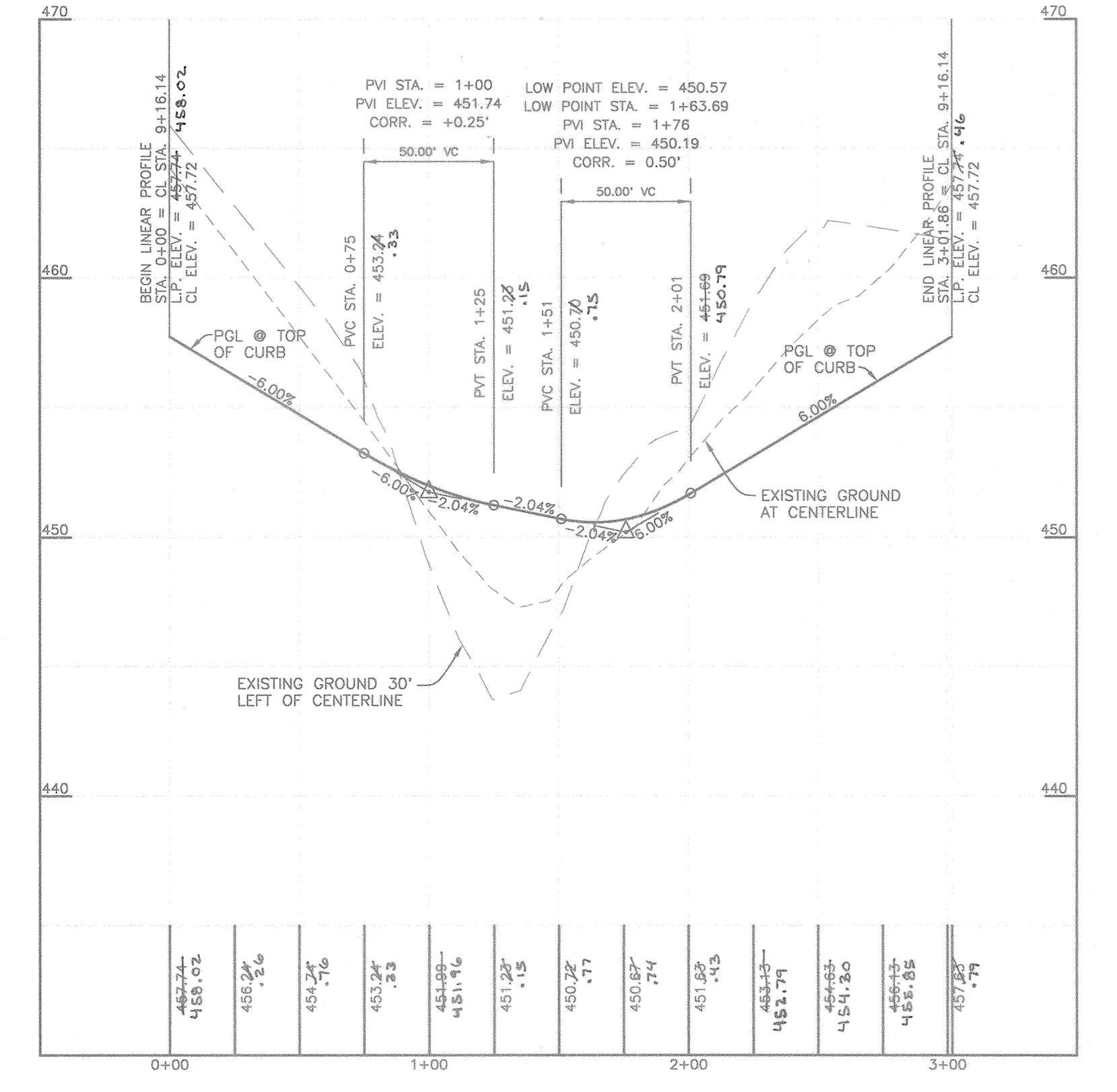
12/22/00

OWNER/DEVELOPER: TREYBURN, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: TREYBURN PHASE 1, LOTS 1-48 AND NON-BUILDABLE PARCELS "A" - "C"
DESIGN: JMC	DRAFT: JMC
DATE: JULY, 2000 OCTOBER, 2000	PROJECT NO. 0697
SCALE: 1" = 50'	DRAWING 3 OF 20

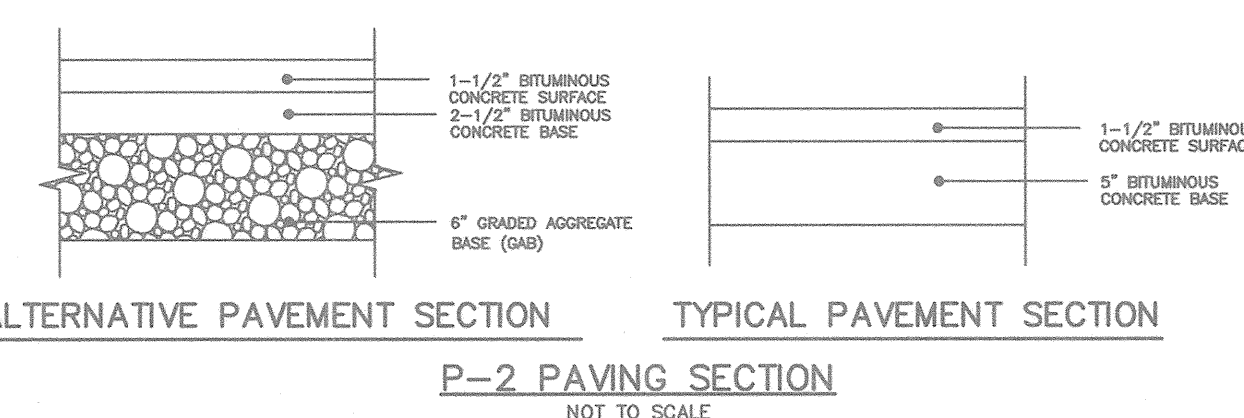
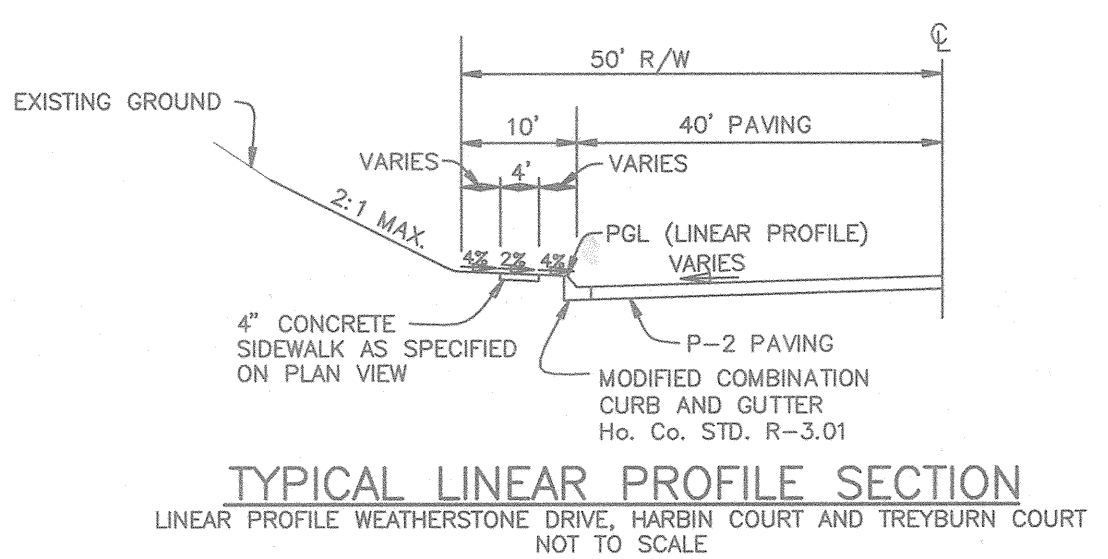
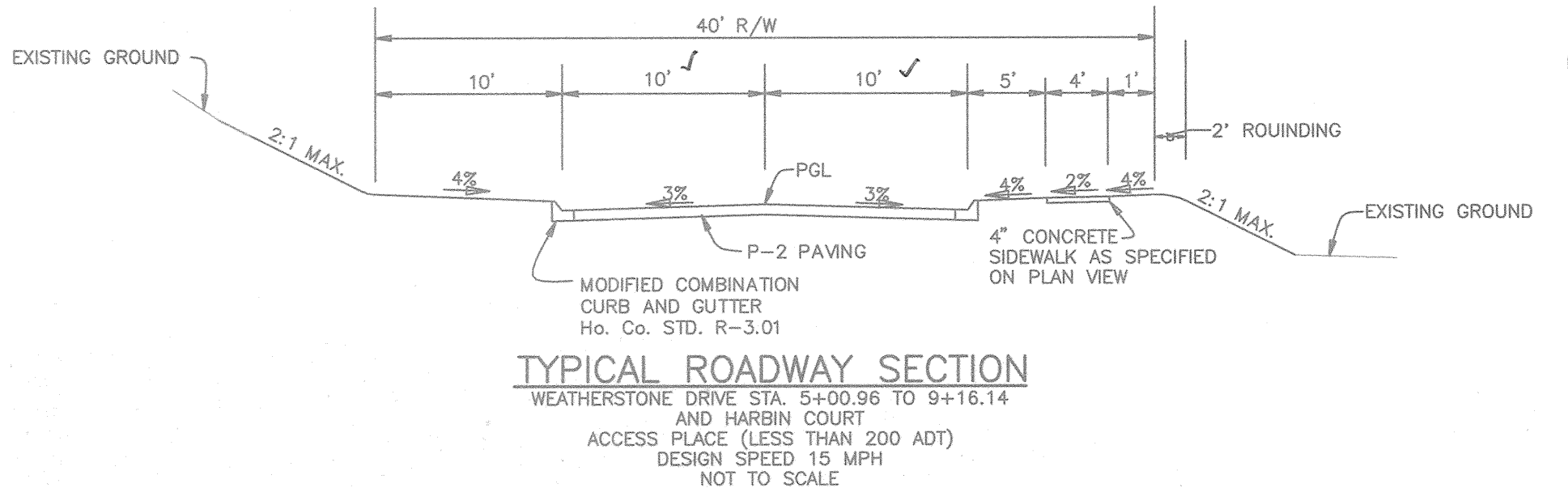
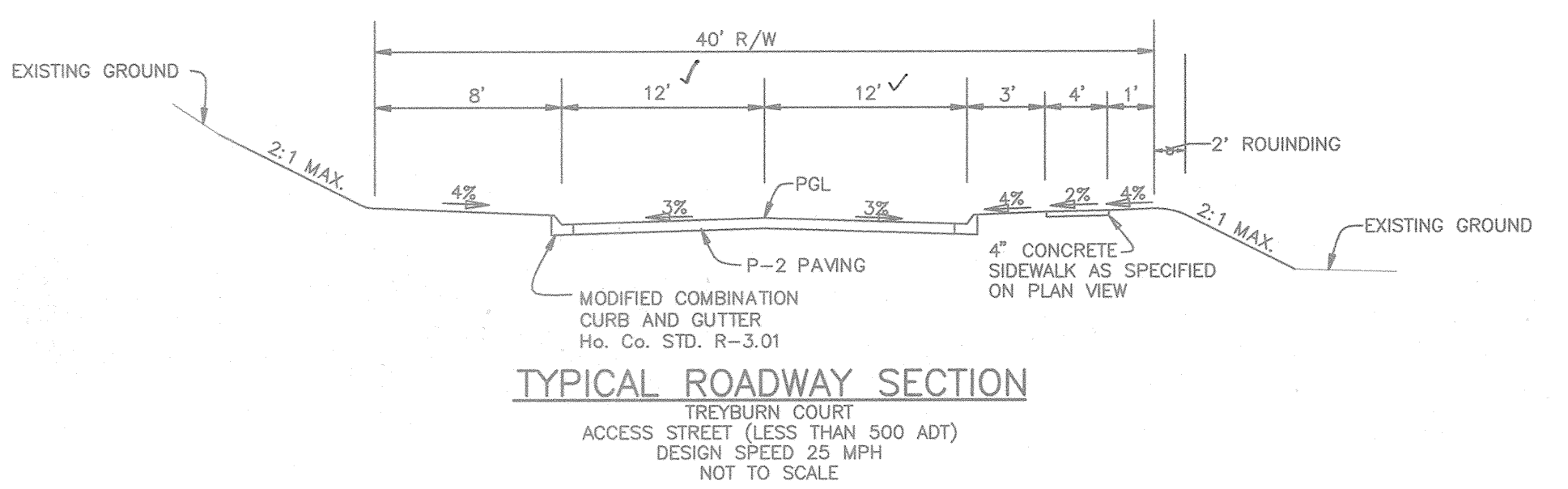
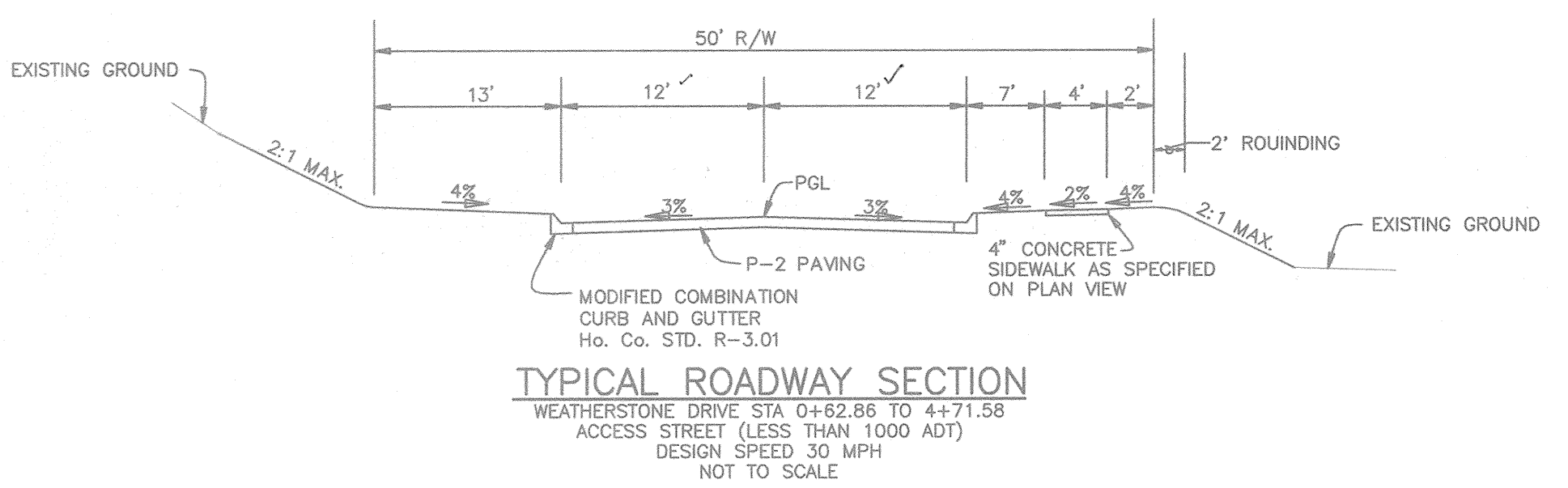


WEATHERSTONE DRIVE
PUBLIC ACCESS STREET
STA. 0+00 TO 4+61.51
30 MPH DESIGN SPEED

WEATHERSTONE DRIVE
PUBLIC ACCESS PLACE
STA. 4+61.51 TO CUL-DE-SAC
15 MPH DESIGN SPEED



WEATHERSTONE DRIVE LINEAR PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



Donald Moor
AS-6010 3/18/05

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Edward S. Hill 1/15/01
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamstra 1/17/01
CHIEF, DIVISION OF LAND DEVELOPMENT

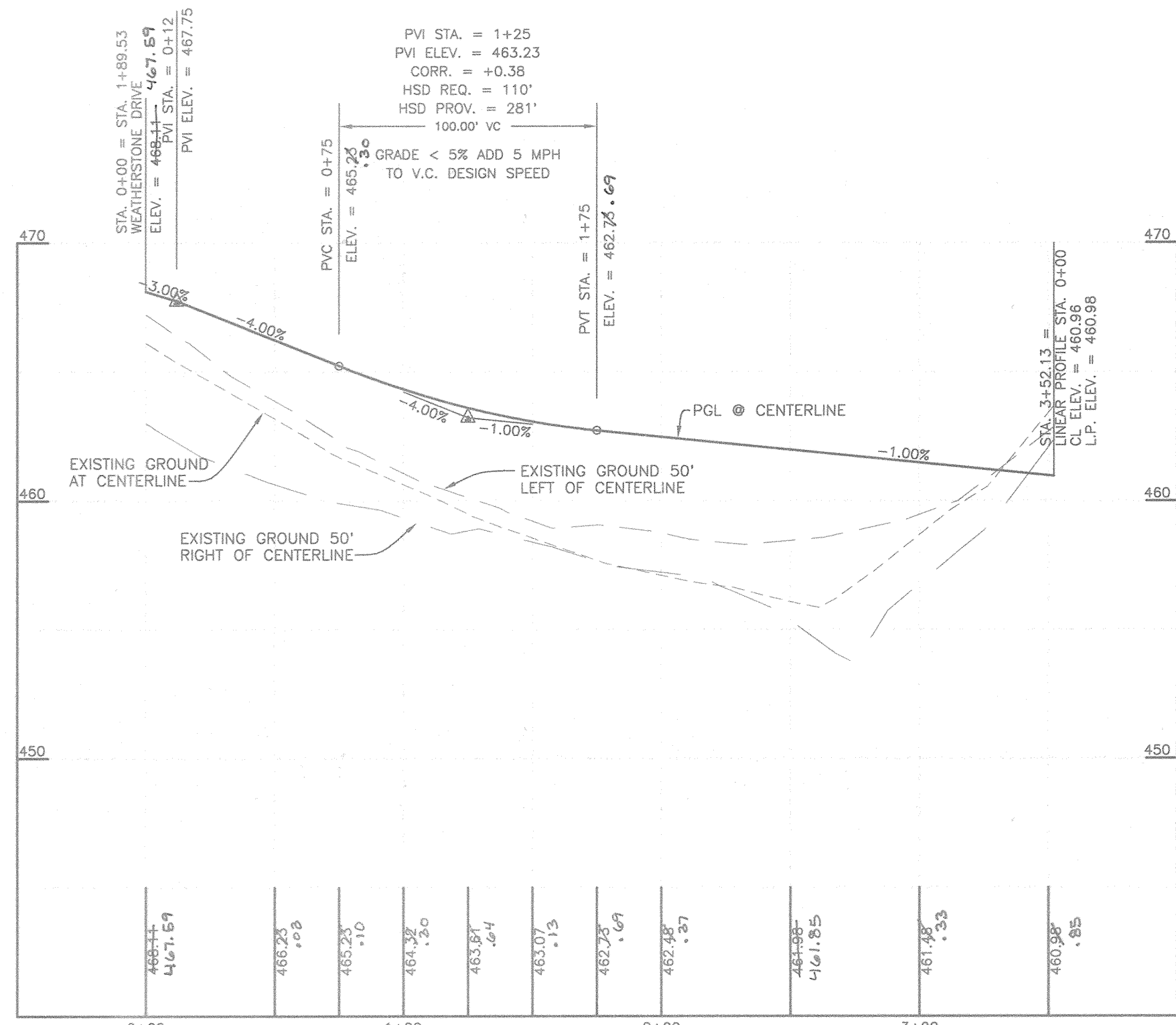
John P. ... 1/17/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	DATE	REVISION
3-7-05		REVISED PER AS-BUILT CONDITIONS

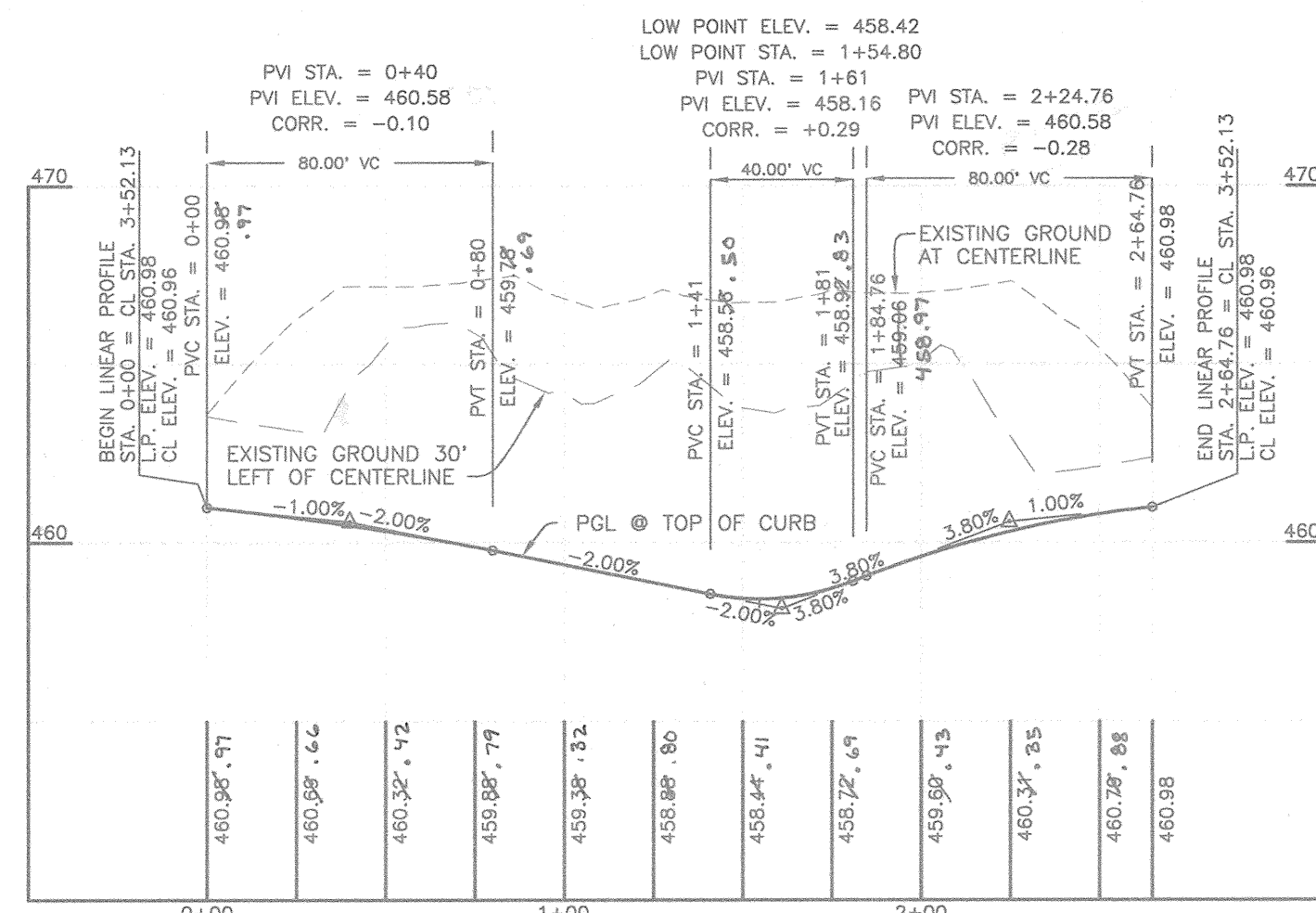
BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6844

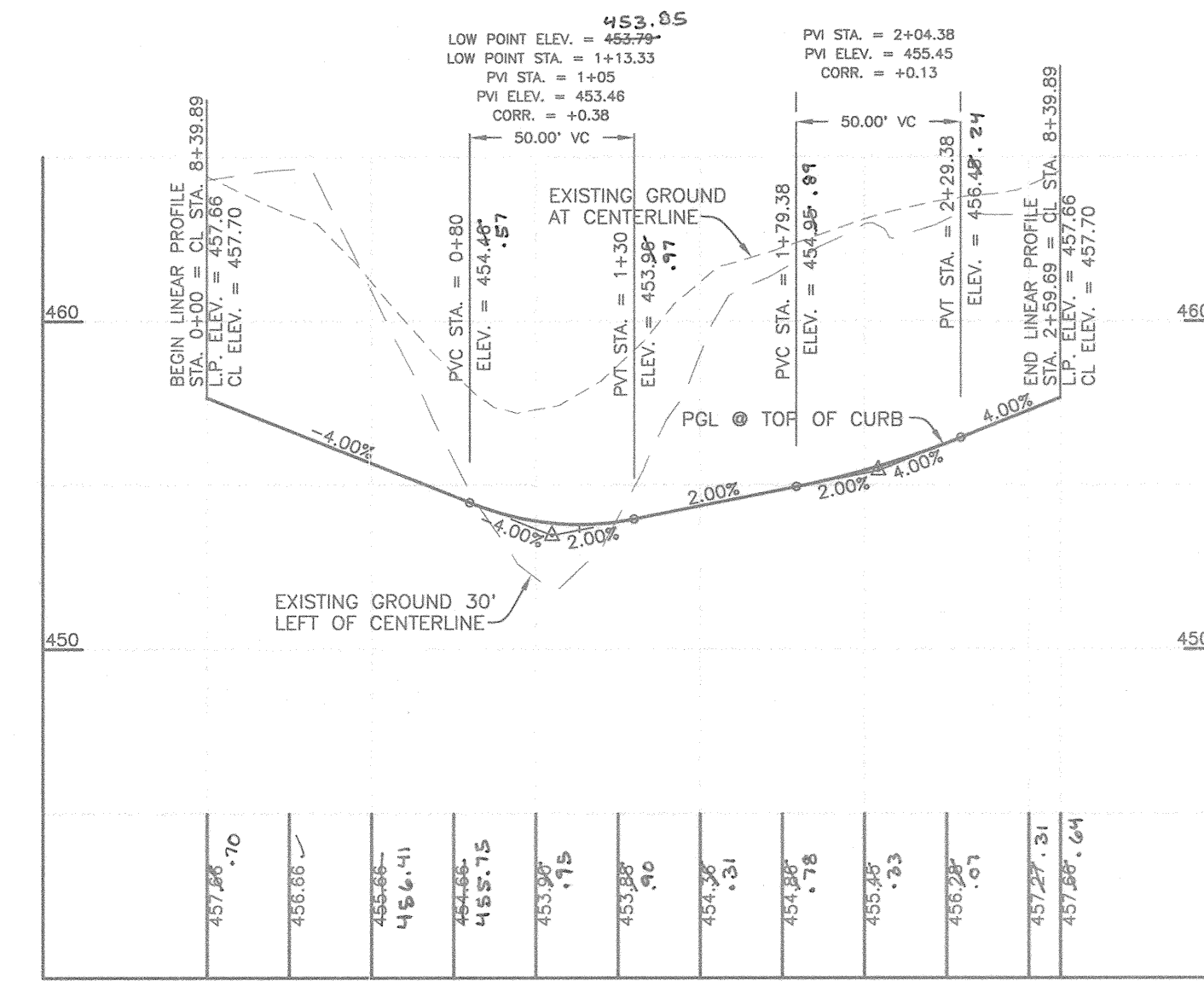
OWNER/DEVELOPER:	TREYBURN, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244
PROJECT:	TREYBURN PHASE 1, LOTS 1-48 AND NON-BUILDABLE PARCELS "A" - "C"
LOCATION:	TAX MAP 17 - BLOCK 9 - PARCEL 59 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE:	ROAD PROFILES
DATE:	JULY, 2000
PROJECT NO.:	0697
DESIGN:	JMC
DRAFT:	JMC
SCALE:	AS SHOWN
DRAWING:	4 OF 20



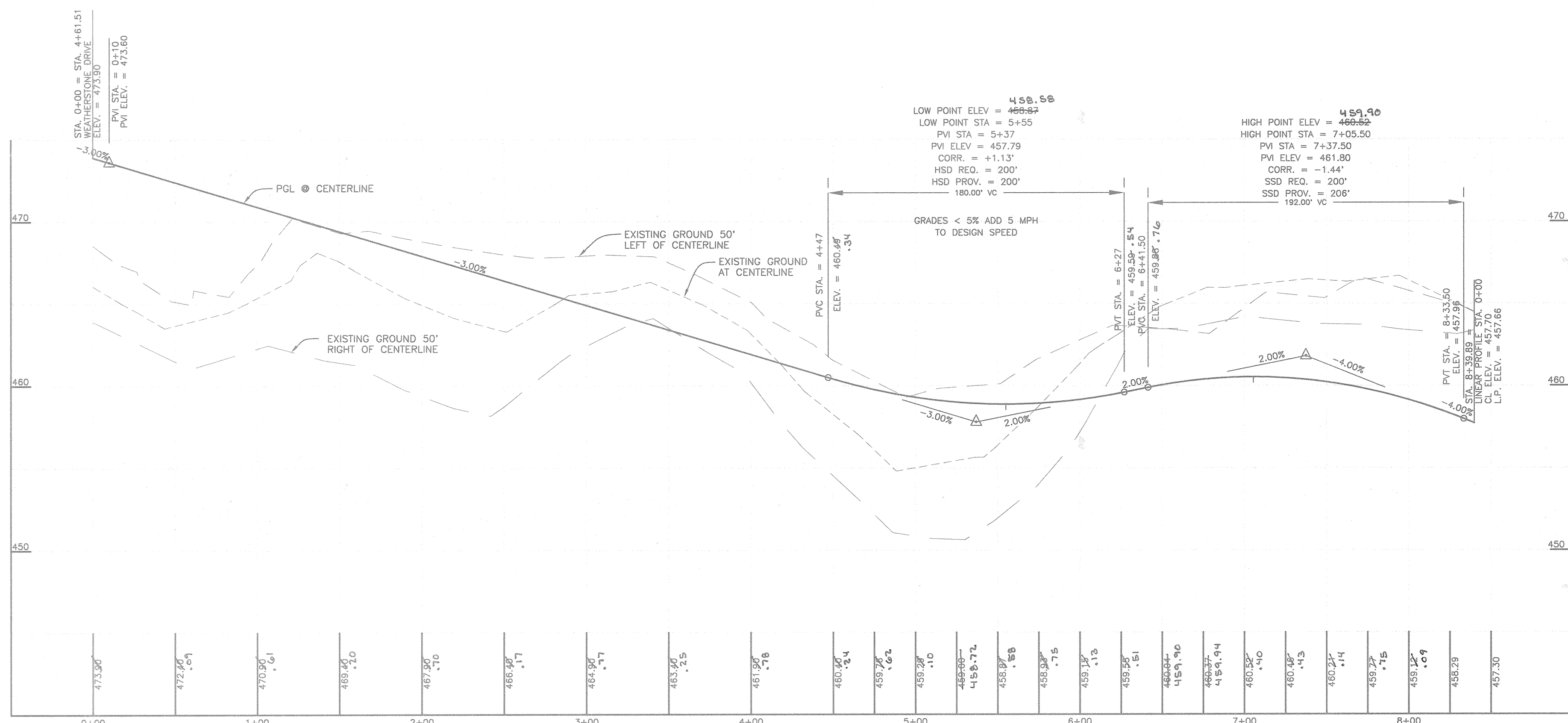
HARBIN COURT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 PUBLIC ACCESS PLACE
 15 MPH DESIGN SPEED



HARBIN COURT LINEAR PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



TREYBURN COURT LINEAR PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



TREYBURN COURT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 PUBLIC ACCESS STREET
 25 MPH DESIGN SPEED

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard S. ... 1/19/01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Andy ... 1/17/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris ... 1/19/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

3-7-05 REVISED PER AS-BUILT CONDITIONS
 NO. DATE REVISION

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

Donald M. ...
 PROFESSIONAL ENGINEER

12/26/00

OWNER/DEVELOPER:
 TREYBURN, L.L.C.
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

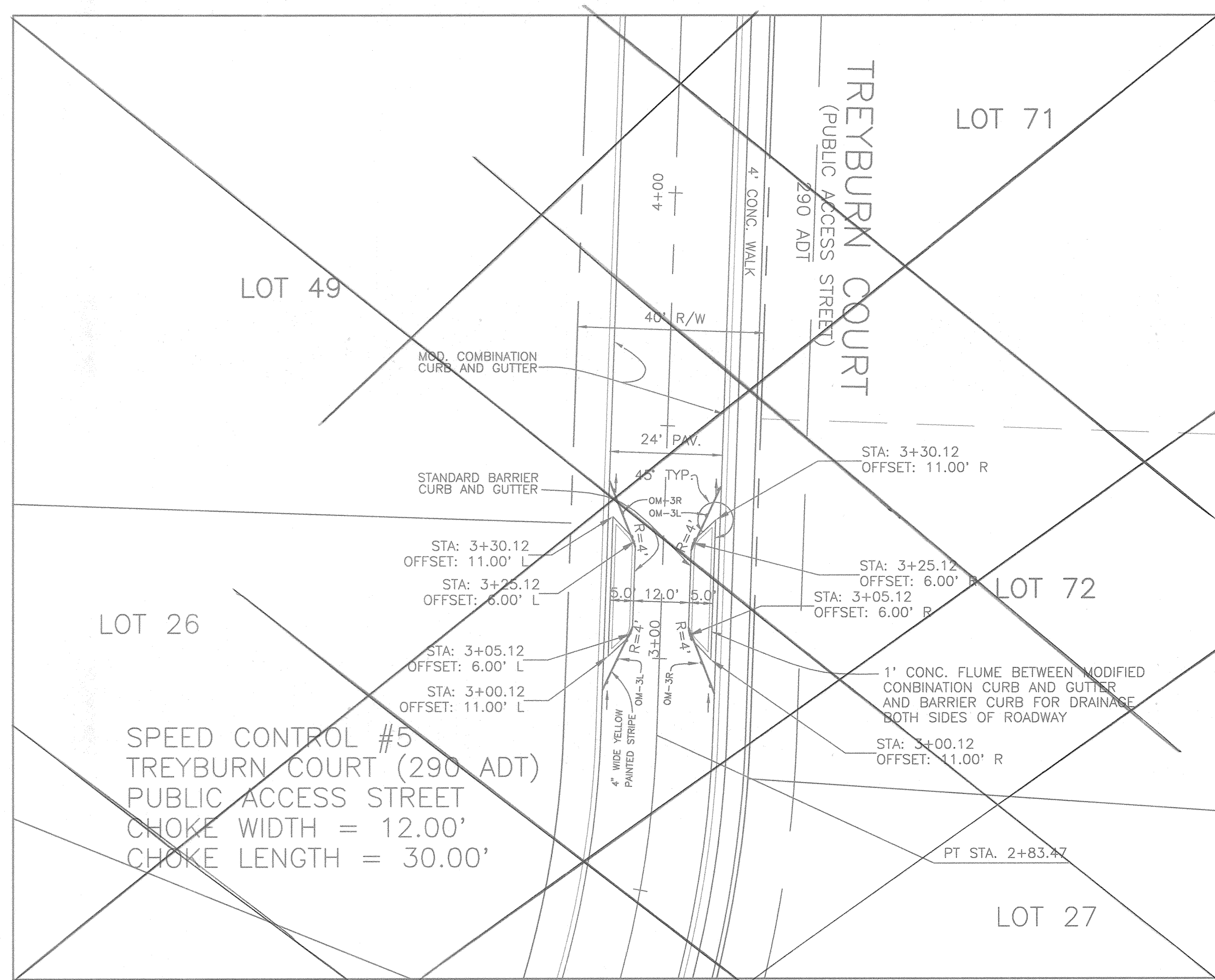
PROJECT:
TREYBURN
 PHASE 1, LOTS 1-48 AND
 NON-BUILDABLE PARCELS "A" - "C"

LOCATION:
 TAX MAP 17 - BLOCK 9 - PARCEL 59
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

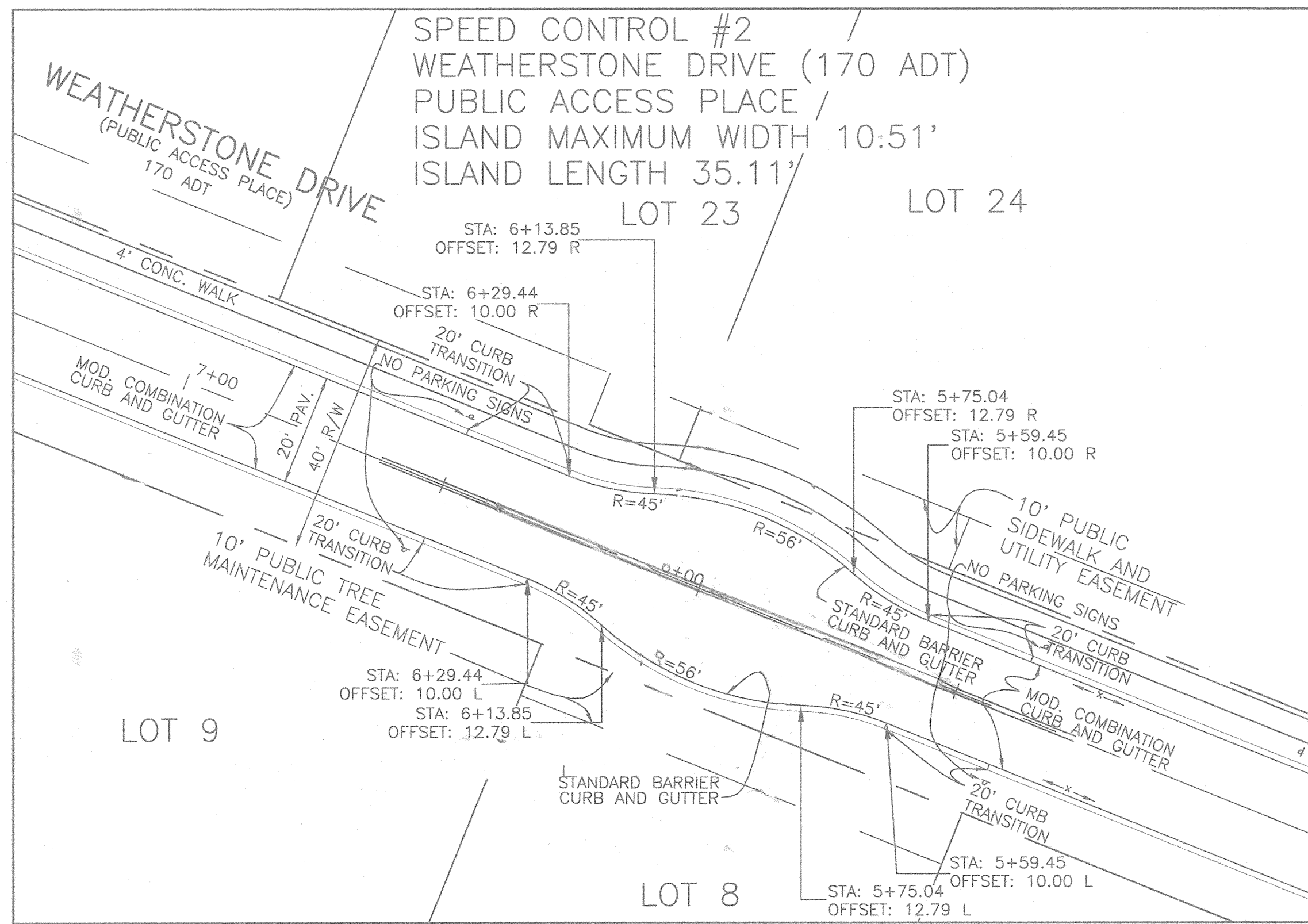
TITLE:
ROAD PROFILES

DATE: JUNE, 2000 PROJECT NO. 0697
 DESIGN: JMC DRAFT: JMC SCALE: AS SHOWN DRAWING 5 OF 20

Donald M. ...
 PROFESSIONAL ENGINEER
 AS-BUILT 3/9/05



~~SPEED CONTROL DEVICE #5~~
SCALE: 1" = 20'



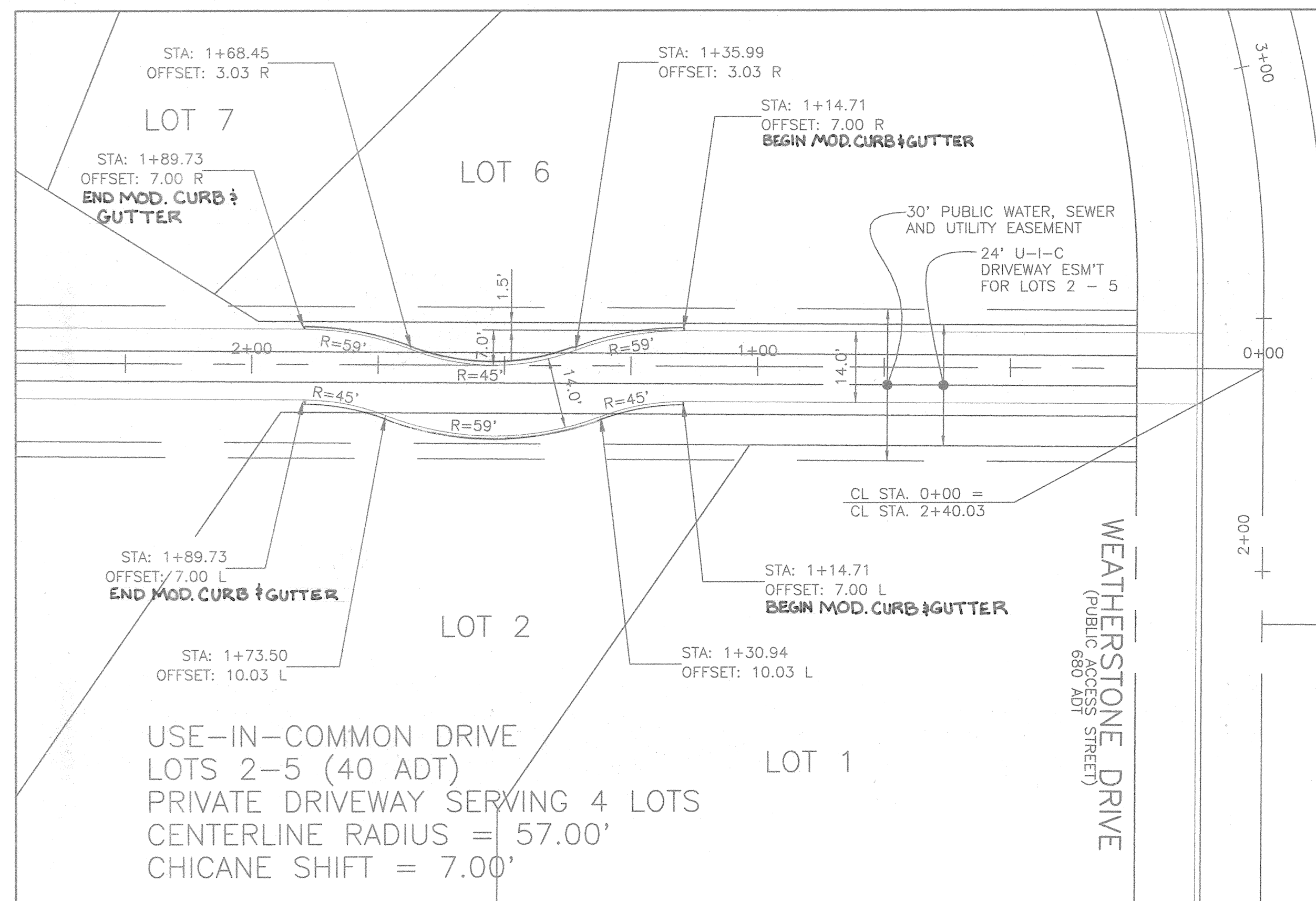
~~SPEED CONTROL DEVICE #2~~
SCALE: 1" = 20'

SIGN SCHEDULE

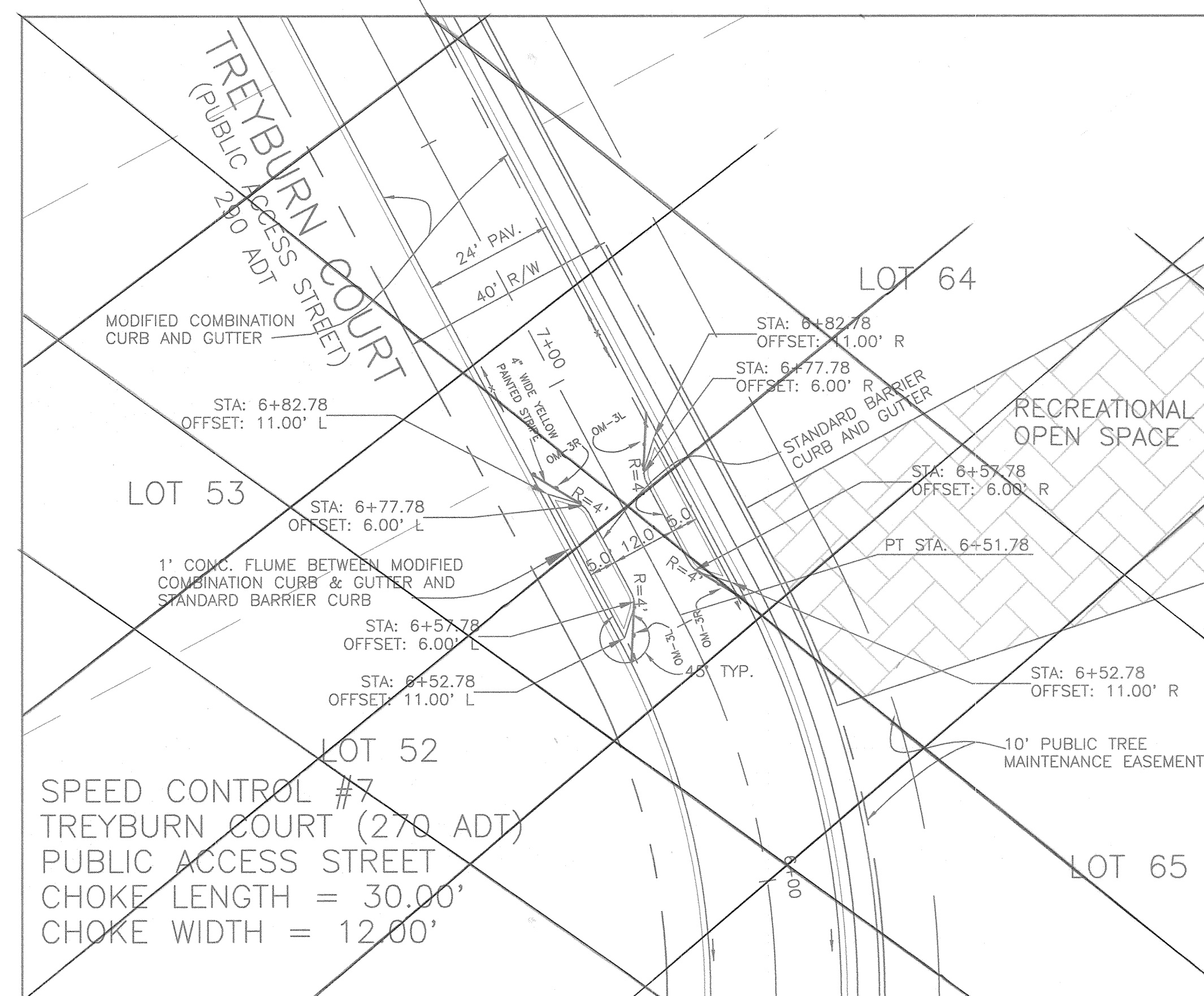
TYPE	LOCATION	NOTES
OM-3 R	3+04.45 OFFSET 7' R	12"x36" OBJECT MARKER (TYP.)
OM-3 R	2+99.74 OFFSET 9' R	12"x36" OBJECT MARKER (TYP.)
OM-3 R	2+95.48 OFFSET 11' R	12"x36" OBJECT MARKER (TYP.)
OM-3 L	3+03.70 OFFSET 7' L	12"x36" OBJECT MARKER (TYP.)
OM-3 L	2+99.57 OFFSET 9' L	12"x36" OBJECT MARKER (TYP.)
OM-3 L	2+95.15 OFFSET 11' L	12"x36" OBJECT MARKER (TYP.)
OM-3 L	3+25.63 OFFSET 7' R	12"x36" OBJECT MARKER (TYP.)
OM-3 L	3+30.94 OFFSET 9' R	12"x36" OBJECT MARKER (TYP.)
OM-3 L	3+35.34 OFFSET 11' R	12"x36" OBJECT MARKER (TYP.)
OM-3 R	3+26.23 OFFSET 7' L	12"x36" OBJECT MARKER (TYP.)
OM-3 R	3+30.95 OFFSET 9' L	12"x36" OBJECT MARKER (TYP.)
OM-3 R	3+35.36 OFFSET 11' L	12"x36" OBJECT MARKER (TYP.)
OM-3 L	6+79.13 OFFSET 7' R	12"x36" OBJECT MARKER (TYP.)
OM-3 L	6+88.51 OFFSET 9' R	12"x36" OBJECT MARKER (TYP.)
OM-3 L	6+85.90 OFFSET 11' R	12"x36" OBJECT MARKER (TYP.)
OM-3 R	6+79.09 OFFSET 7' L	12"x36" OBJECT MARKER (TYP.)
OM-3 R	6+82.73 OFFSET 9' L	12"x36" OBJECT MARKER (TYP.)
OM-3 R	6+87.0 OFFSET 11' L	12"x36" OBJECT MARKER (TYP.)
OM-3 R	6+56.77 OFFSET 7' R	12"x36" OBJECT MARKER (TYP.)
OM-3 R	6+53.42 OFFSET 9' R	12"x36" OBJECT MARKER (TYP.)
OM-3 R	6+50.16 OFFSET 11' R	12"x36" OBJECT MARKER (TYP.)
OM-3 L	6+56.71 OFFSET 7' L	12"x36" OBJECT MARKER (TYP.)
OM-3 L	6+52.76 OFFSET 9' L	12"x36" OBJECT MARKER (TYP.)
OM-3 L	6+49.80 OFFSET 11' L	12"x36" OBJECT MARKER (TYP.)
R 4-7	5+78.56 OFFSET 0.13'	W16-1 TYPE 1 OBJECT MARKER
R 4-7	6+10.11 OFFSET 0.01'	W16-1 TYPE 1 OBJECT MARKER
R 7-1	5+37.99 OFFSET 13.19'	"NO PARKING" WITH ARROW
R 7-1	5+38.89 OFFSET 13.08'	"NO PARKING" WITH ARROW
R 7-1	6+49.95 OFFSET 13.05'	"NO PARKING" WITH ARROW
R 7-1	6+51.97 OFFSET 13.14'	"NO PARKING" WITH ARROW
	4+87.99 OFFSET 13.19'	36"x36" W 6-1
	6+99.65 OFFSET 14.06'	36"x36" W 6-1

SIGN TYPES

TYPE	DESCRIPTION
R 7-1	"NO PARKING" WITH ARROW
R 16-1	"KEEP RIGHT"
OM-3 R	OBJECT MARKER (TYP.)
OM-3 L	OBJECT MARKER (TYP.)
W 6-1	"DIVIDED ROAD"



~~SPEED CONTROL DEVICE #6~~
SCALE: 1" = 20'



~~SPEED CONTROL DEVICE #7~~
SCALE: 1" = 20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Howard Shuler 1/15/01
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Andy Hunda 1/12/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

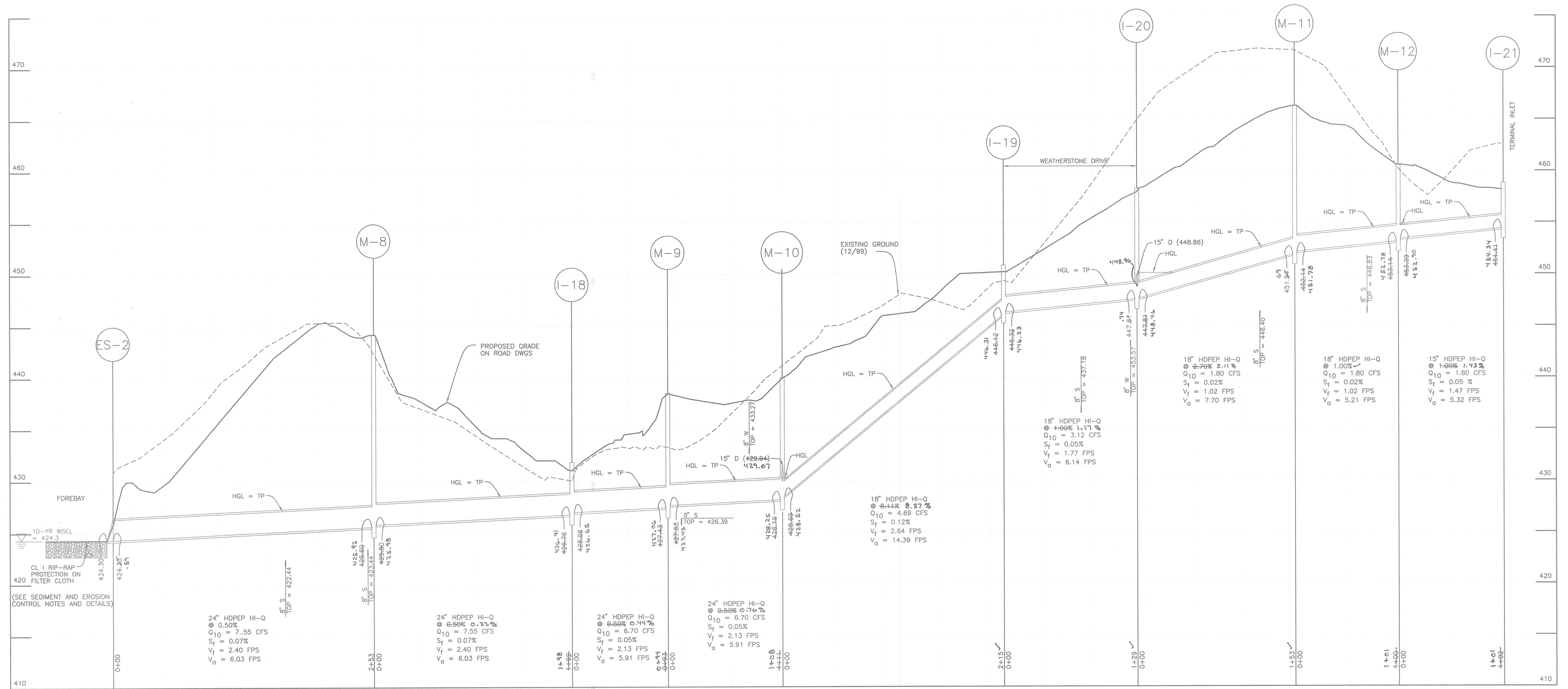
Chris Dammann 1/15/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	DATE	REVISION
2-26-20		REMOVE ISLAND AND SPEED CONTROL DEVICES - RELOCATE STREET LIGHTS

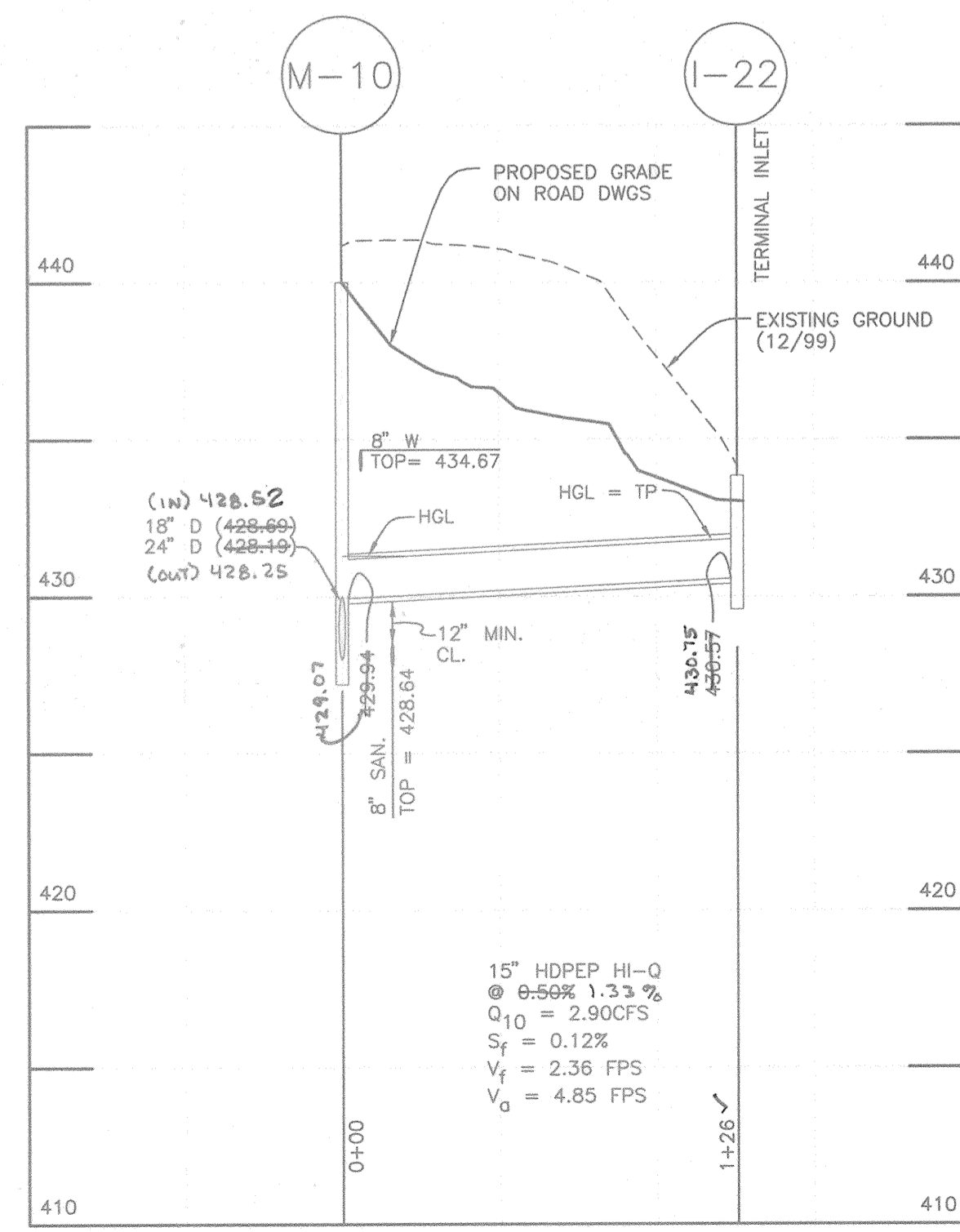
BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6844

Donald Maan
PROFESSIONAL ENGINEER

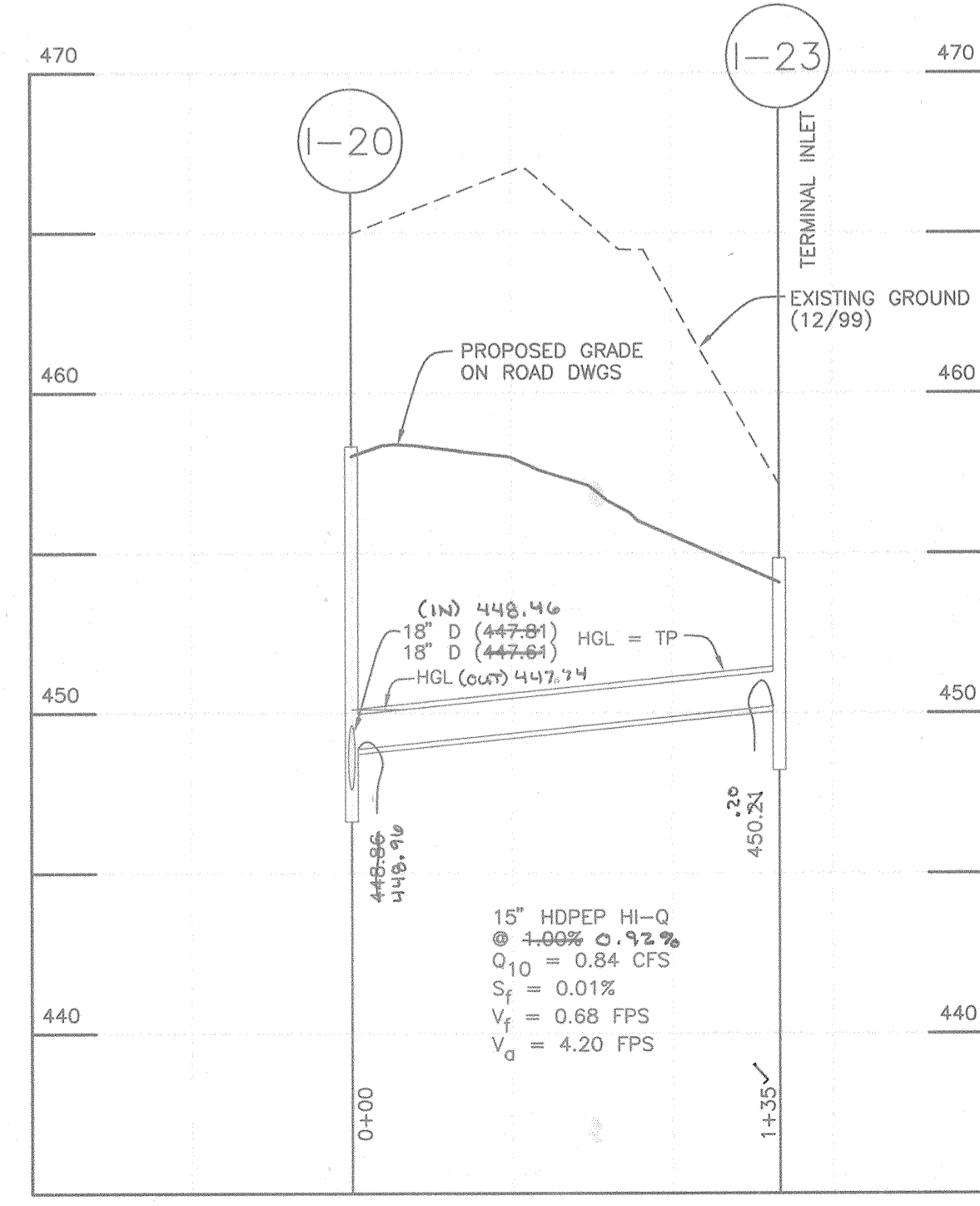
OWNER/DEVELOPER: TREYBURN, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: TREYBURN PHASE 1, LOTS 1-48 AND NON-BUILDABLE PARCELS "A" - "C"
DESIGN: JMC	DRAFT: JMC/EDD
DATE: JULY, 2000 OCTOBER, 2000	PROJECT NO. 0697
SCALE: 1" = 20'	DRAWING 7 OF 29



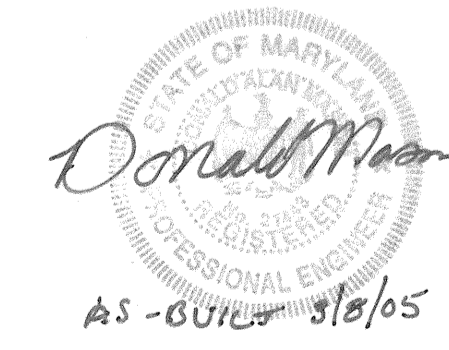
STORM DRAIN PROFILE ES-2 TO I-21
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



STORM DRAIN PROFILE M-9 TO I-22
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



STORM DRAIN PROFILE I-20 TO I-23
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard Shilka 1/17/01
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Harvill 1/17/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: *Donald Mean* 1/17/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	DATE	REVISION
3-7-05		REVISED PER AS-BUILT CONDITIONS

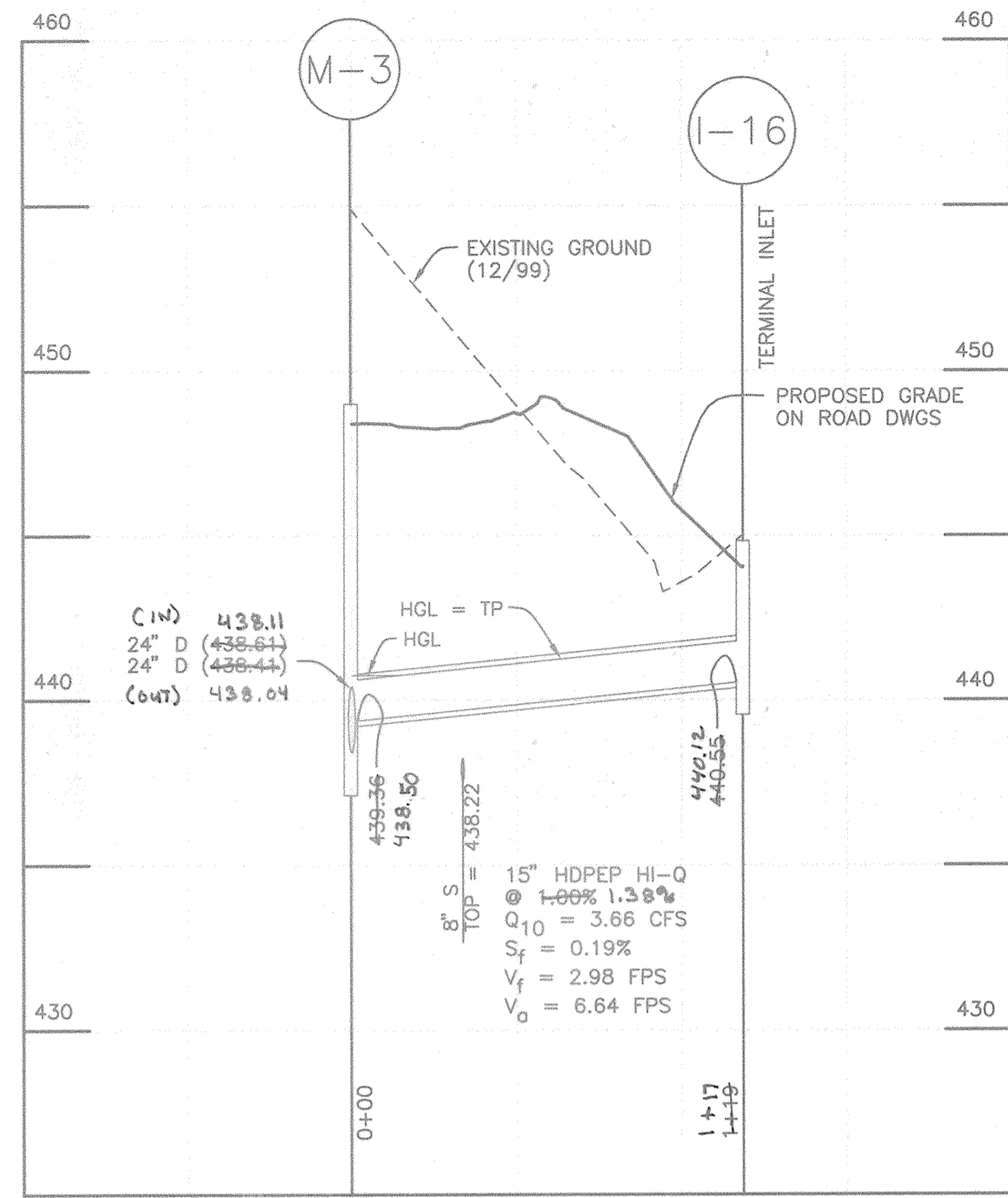
BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS

8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

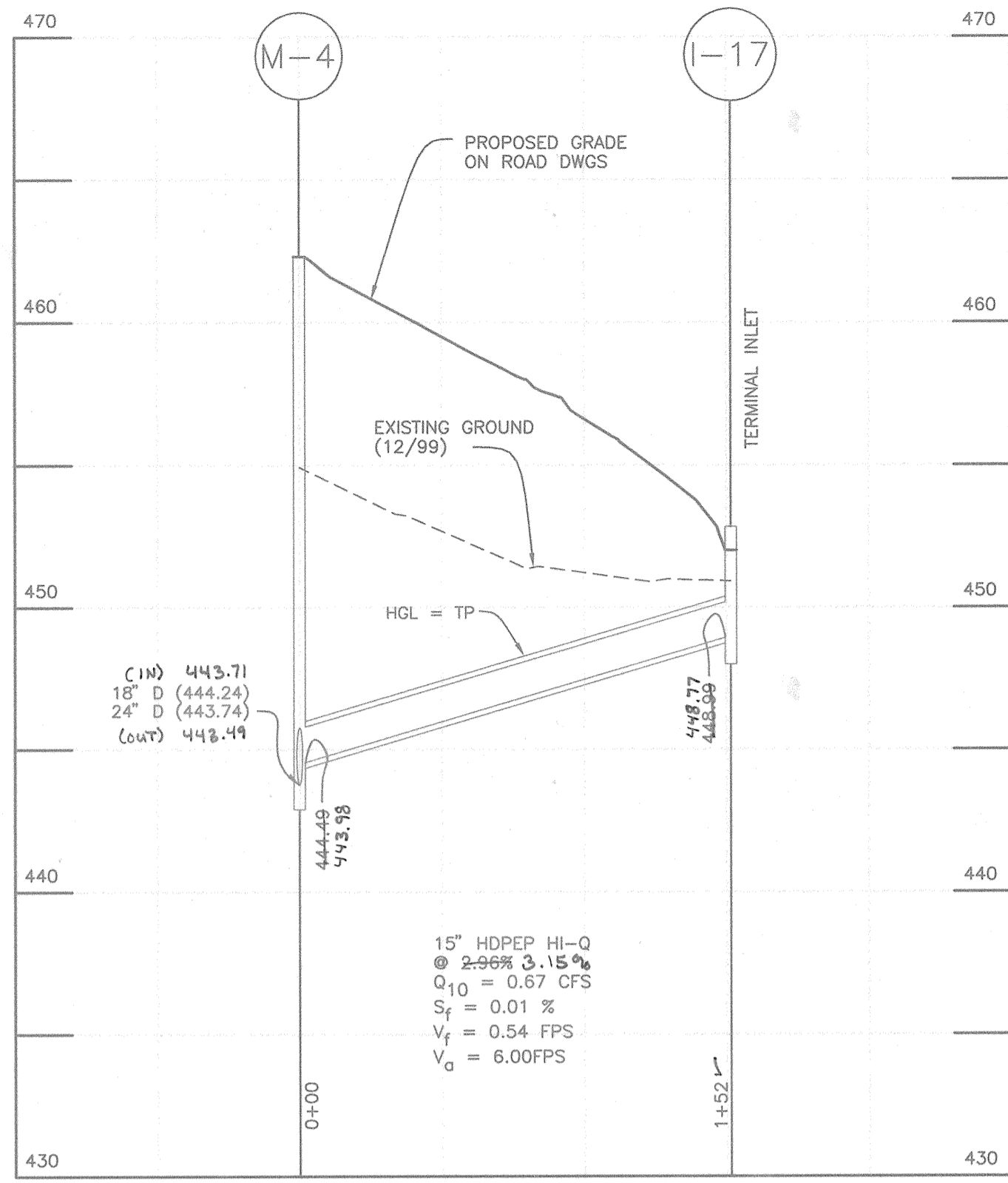
Donald Mean
 PROFESSIONAL ENGINEER

12/22/00

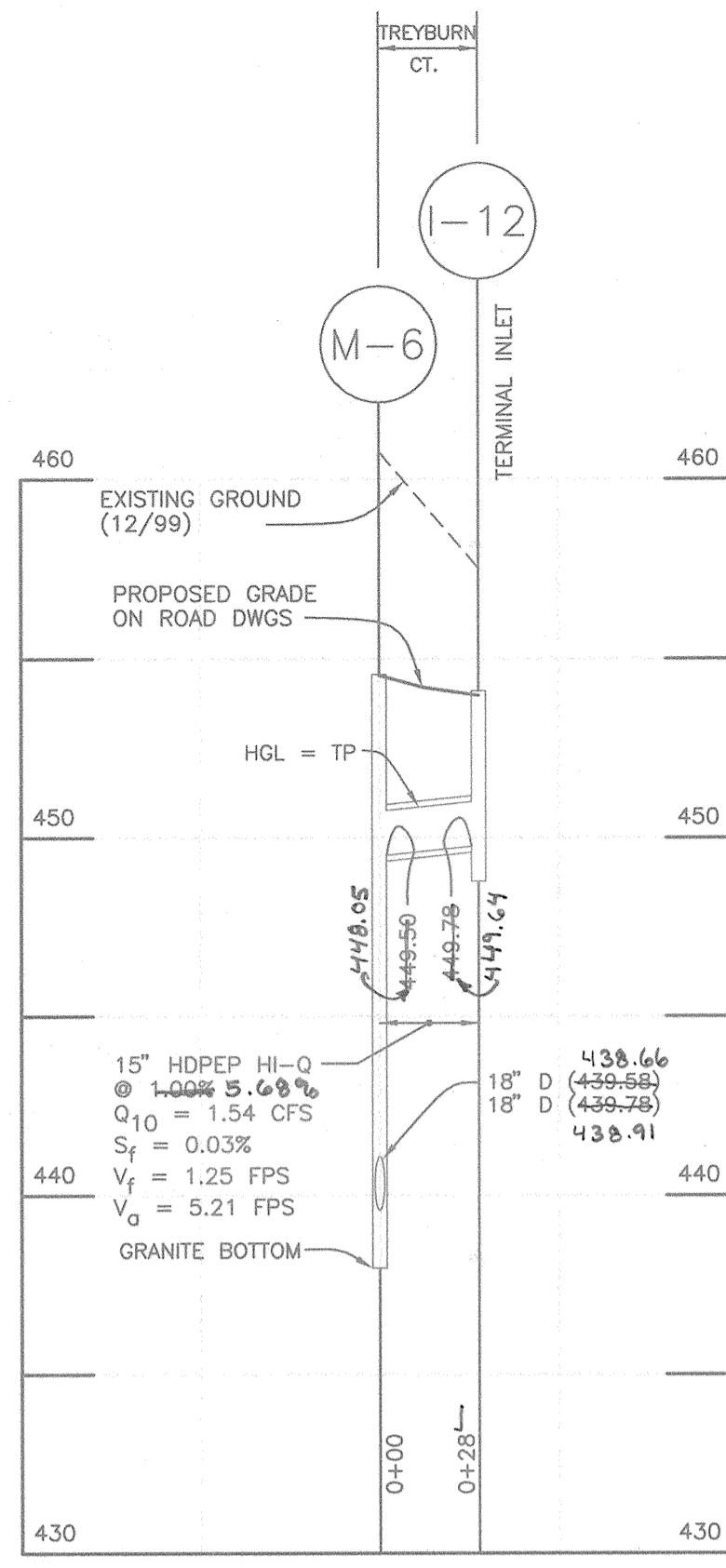
OWNER/DEVELOPER: TREYBURN, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: TREYBURN PHASE 1, LOTS 1-48 AND NON-BUILDABLE PARCELS "A" - "C"
DESIGN: MLV	DRAFT: JMC/EDD
DATE: JULY, 2000 OCTOBER, 2000	PROJECT NO. 0697
SCALE: AS SHOWN	DRAWING 9 OF 20



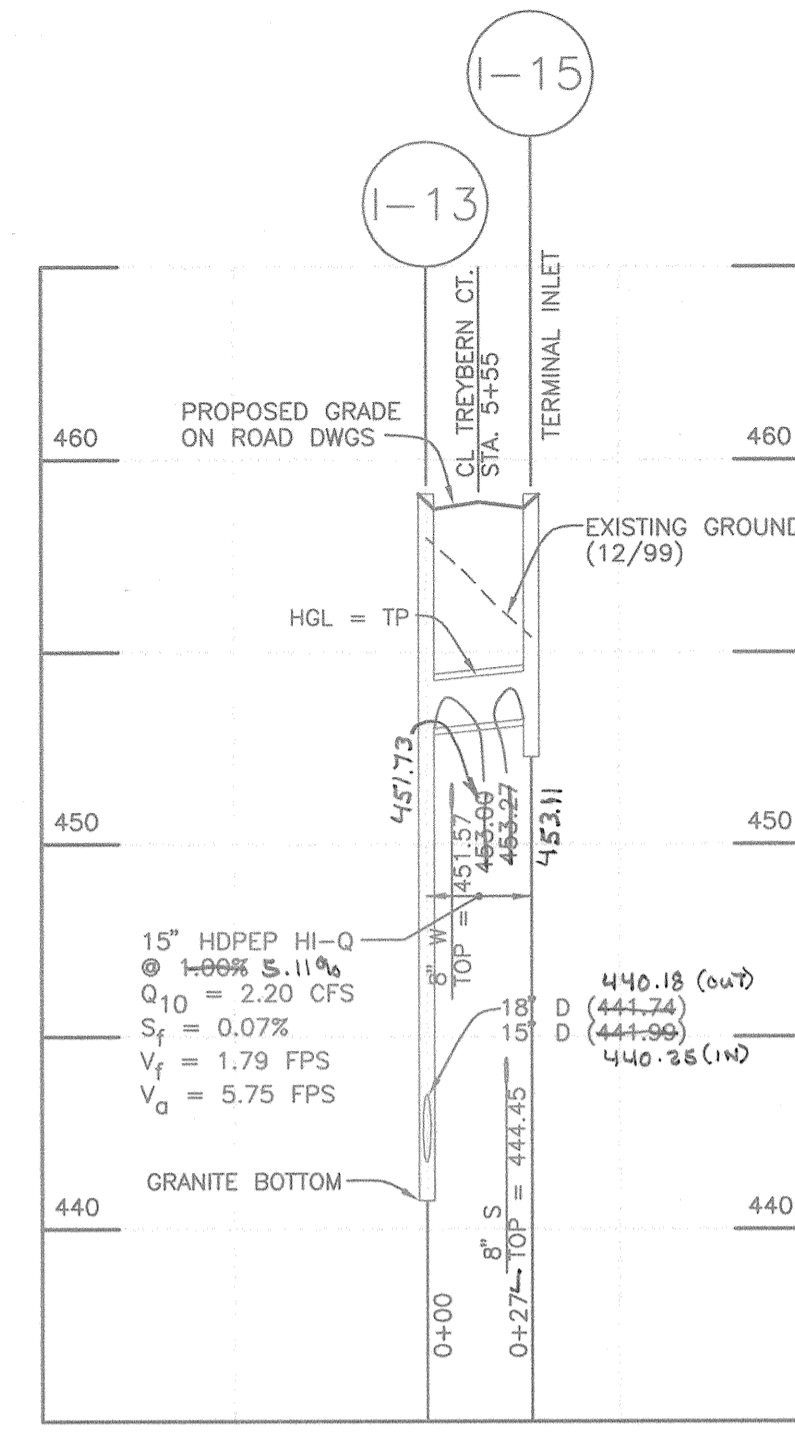
STORM DRAIN PROFILE M-3 TO I-16
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



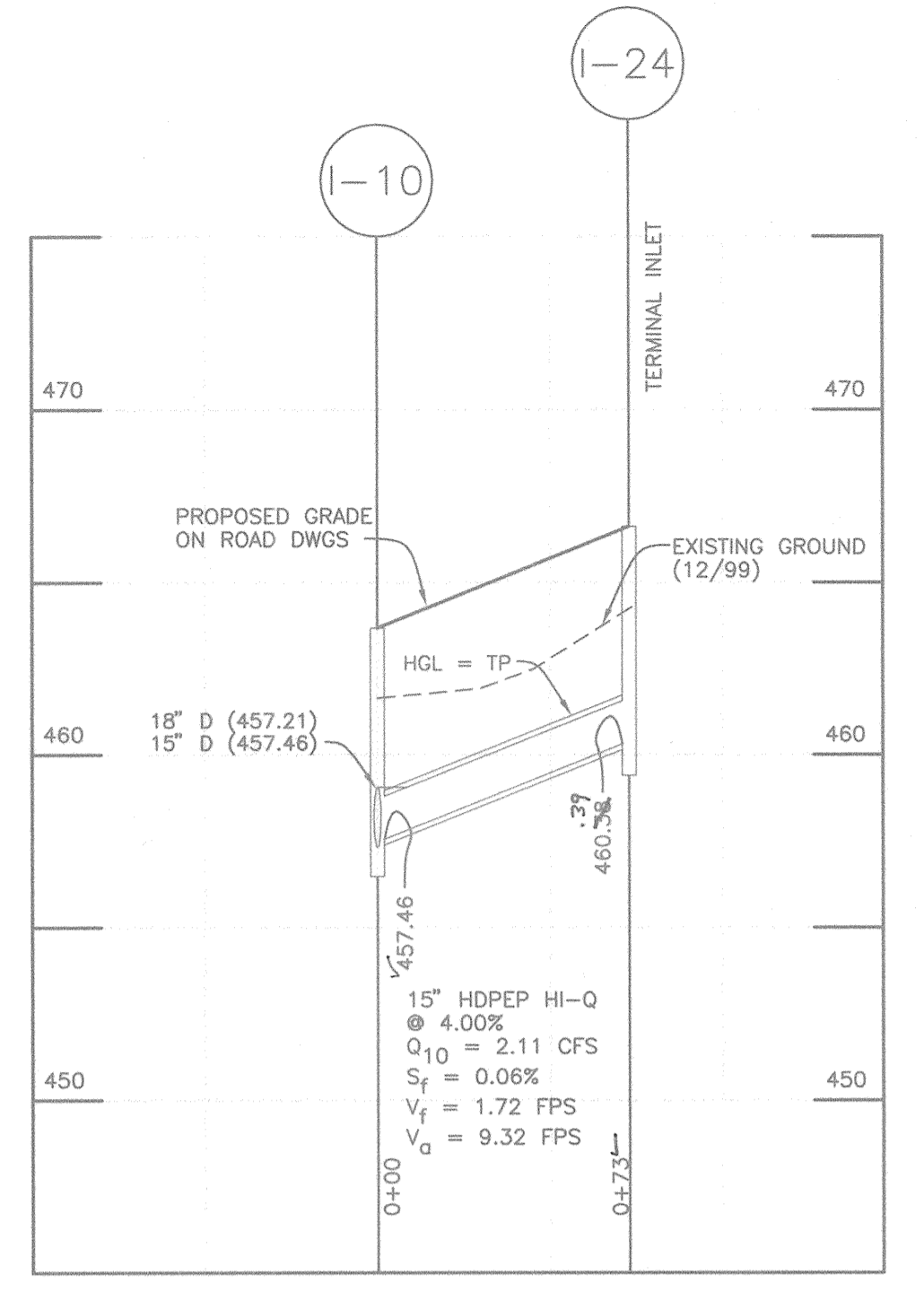
STORM DRAIN PROFILE M-4 TO I-17
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



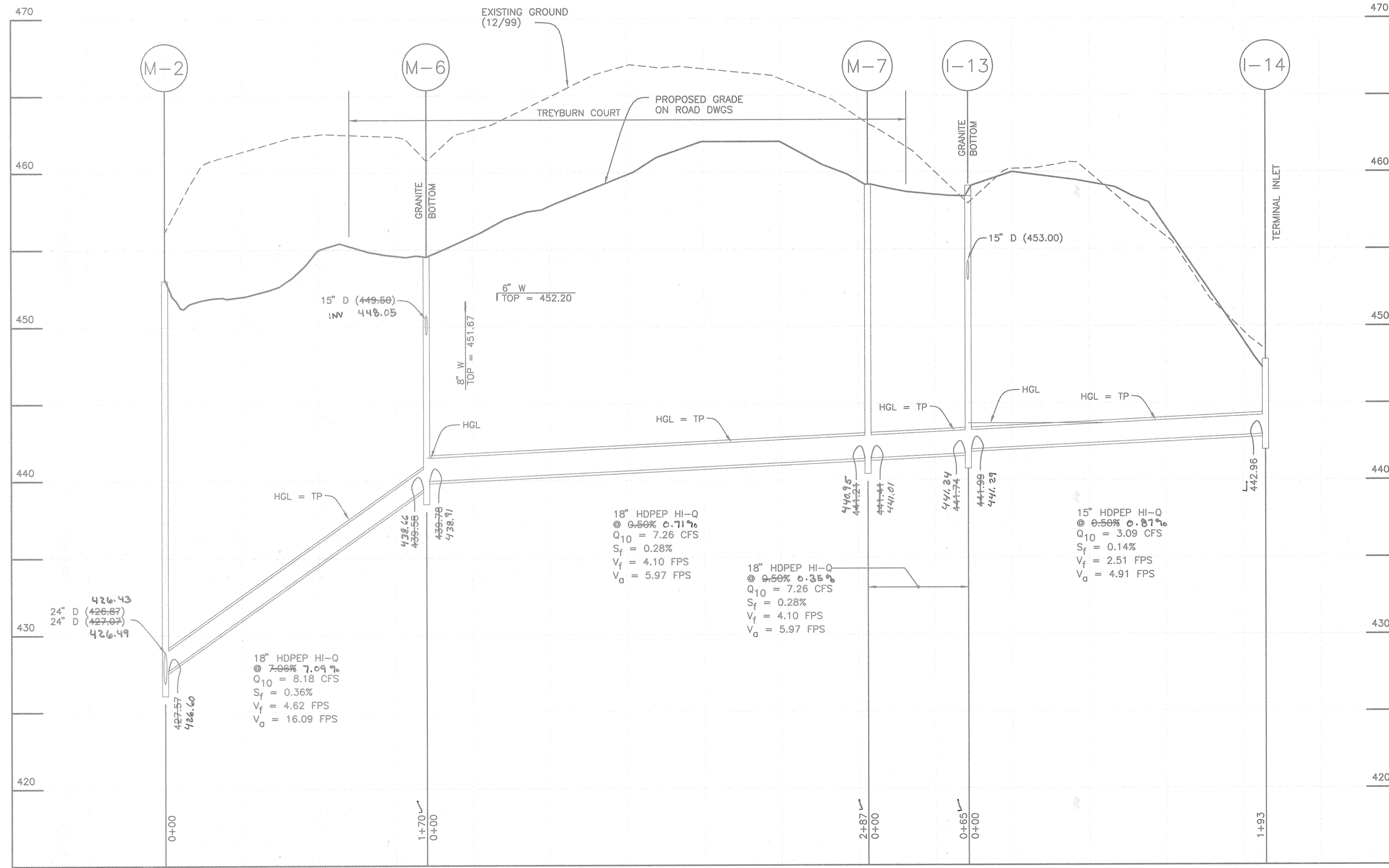
STORM DRAIN PROFILE M-5 TO I-12
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



STORM DRAIN PROFILE I-13 TO I-15
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



STORM DRAIN PROFILE I-10 TO I-24
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



STORM DRAIN PROFILE M-2 TO I-14
SCALE: HORZ. 1" = 50' VERT. 1" = 5'

RUN	LENGTH (LF)	DESCRIPTION
ES-1 TO I-1	104	24 HDPEP
I-1 TO M-2	152	24 HDPEP
M-2 TO I-2	168	24 HDPEP
I-2 TO I-3	268	24 HDPEP
I-3 TO I-4	248	24 HDPEP
I-4 TO I-5	143	24 HDPEP
I-5 TO M-3	82	24 HDPEP
M-3 TO I-6	199	24 HDPEP
I-6 TO M-4	184	24 HDPEP
M-4 TO I-7	148	18 HDPEP
I-7 TO I-8	97	18 HDPEP
I-8 TO M-5	313	18 HDPEP
M-5 TO I-9	51	18 HDPEP
I-9 TO I-10	27	18 HDPEP
I-10 TO I-11	38	15 HDPEP
M-6 TO M-7	170	18 HDPEP
M-7 TO I-13	85	18 HDPEP
I-13 TO I-14	133	15 HDPEP
M-8 TO I-12	28	15 HDPEP
I-12 TO I-15	97	15 HDPEP
M-9 TO I-16	119	15 HDPEP
M-4 TO I-17	152	15 HDPEP
I-10 TO I-24	74	15 HDPEP
ES-2 TO M-8	253	24 HDPEP
M-8 TO I-18	192	24 HDPEP
I-18 TO M-9	83	24 HDPEP
M-9 TO M-10	111	24 HDPEP
M-10 TO I-19	215	18 HDPEP
I-19 TO I-20	129	18 HDPEP
I-20 TO M-11	153	18 HDPEP
M-11 TO I-21	100	15 HDPEP
M-12 TO I-21	102	15 HDPEP
M-10 TO I-22	128	15 HDPEP
I-20 TO I-23	128	15 HDPEP
I-23 TO M-1	131	36 RCP
M-1 TO HW-1	18	36 RCP

STRUCTURE	LOCATION	TOP ELEV.	INVERT IN	INVERT OUT	TYPE	DETAIL REFERENCE	REMARKS
I-1	N 585,336.8646 E 1,355,352.2571	429.80	425.35	425.15	D	SD-4-39	OPEN ON 2 SIDES
I-2	N 585,029.1212 E 1,355,407.8923	442.20	443.10	442.34	D	SD-4-39	OPEN ON 2 SIDES
I-3	N 584,844.9216 E 1,354,651.1731	434.82	432.82	432.86	D	SD-4-39	OPEN ON 2 SIDES
I-4	N 584,608.5042 E 1,355,682.5818	437.83	432	432.79	D	SD-4-39	OPEN ON 2 SIDES
I-5	N 584,470.2658 E 1,355,697.7500	439.83	437	436.84	D	SD-4-39	OPEN ON 2 SIDES
I-6	HARBIN COURT I.P. STA. 1+11.00	438.70	441.80	441.80	A-5	SD-4-40	
I-7	N 585,931.7983 E 1,355,888.3904	457.20	452.63	452.92	D	SD-4-39	OPEN ON 2 SIDES
I-8	OLD FRED. ROAD STA. 9+02.00 OS 32.40' L	457.48	458.10	457.96	D	SD-4-40	
I-9	WEATHERSTONE DRIVE STA. 0+65.25 OS 12.43' R	463.84	458	456.47	D	SD-4-40	
I-10	WEATHERSTONE DRIVE STA. 0+68.20 OS 12.43' L	463.86	458	457.46	D	SD-4-40	
I-11	OLD FRED. ROAD STA. 9+17.00 OS 38.02' L	463.86	463.02	463.02	D	SD-4-40	
I-12	TREYBURN CT. I.P. STA. 1+12.97	464.00	464.50	464.13	A-5	SD-4-40	
I-13	TREYBURN CT. STA. 5+33.45 OS 12.43' L	466.11	466.11	444.98	D	SD-4-40	GRANITE BOTTOM
I-14	N 594,793.5817 E 1,355,136.3897	447.83	446	442.96	D	SD-4-39	OPEN ON 2 SIDES
I-15	TREYBURN CT. STA. 5+33.45 OS 12.43' R	466.11	466.11	453.27	D	SD-4-40	OPEN ON 2 SIDES
I-16	N 584,495.1788 E 1,355,328.0048	444.85	448	440.85	D	SD-4-39	OPEN ON 2 SIDES
I-17	N 584,032.0834 E 1,355,736.8289	452.83	450	448.96	D	SD-4-39	OPEN ON 2 SIDES
I-18	N 585,040.8890 E 1,354,975.8475	431.83	428	428.36	D	SD-4-39	OPEN ON 2 SIDES
I-19	WEATHERSTONE DR. I.P. STA. 1+14.32	450.80	446	446.30	D	SD-4-39	OPEN ON 2 SIDES
I-20	WEATHERSTONE DR. STA. 9+11.81 OS 10.43' L	458.30	448	447.86	D	SD-4-41	OPEN ON 2 SIDES
I-21	N 584,283.3667 E 1,354,759.7092	458.83	458	454.41	D	SD-4-39	OPEN ON 2 SIDES
I-22	N 584,855.8173 E 1,354,852.9141	433.80	433	430.52	D	SD-4-39	OPEN ON 2 SIDES
I-23	N 584,533.9216 E 1,354,773.4188	454.80	454	450.21	D	SD-4-39	OPEN ON 2 SIDES
I-24	WEATHERSTONE DR. STA. 1+41.83 OS 12.43' L	466.10	466.10	466.10	A-10	SD-4-41	
M-1	N 585,387.4308 E 1,354,841.5127	408.98	399.44	394.13	MANHOLE	G-5-11	GRANITE BOTTOM
M-2	N 584,184.7188 E 1,355,428.8608	444.85	448.00	448.00	MANHOLE	G-5-11	
M-3	N 584,498.1037 E 1,355,828.8295	449.30	438.80	438.80	MANHOLE	G-5-11	
M-4	HARBIN CT. STA. 2+85.80 OS 30.19' R	482.33	482	443.40	MANHOLE	G-5-11	
M-5	WEATHERSTONE DR. STA. 0+34.12 OS 13.67' R	464.80	463.27	455.35	MANHOLE	G-5-11	
M-6	N 585,104.8582 E 1,355,198.5323	454.86	449.50	448.78	MANHOLE	G-5-11	GRANITE BOTTOM
M-7	TREYBURN CT. STA. 6+21.51 OS 8.64' L	459.82	454.80	449.82	MANHOLE	G-5-11	
M-8	N 584,150.0244 E 1,354,082.7800	444.71	425.80	425.80	MANHOLE	G-5-11	
M-9	N 584,862.5885 E 1,354,976.6337	435.33	427	427.83	MANHOLE	G-5-11	
M-10	N 584,811.9338 E 1,354,978.5004	449.80	435.50	428.10	MANHOLE	G-5-11	
M-11	WEATHERSTONE DR. STA. 7+76.34 OS 33.95' L	466.11	464.44	461.28	MANHOLE	G-5-11	
M-12	N 584,327.9583 E 1,354,797.8724	480.58	453.30	456.44	MANHOLE	G-5-11	
HW-1	N 585,588.1812 E 1,354,818.1181	424.30	424.30	424.30	HPD		SEE MANUFACTURE SPECS FOR 36\"/>

NOTE: ELEVATIONS FOR CURB INLETS ARE AT THE TOP FACE OF INLET. ELEVATIONS AND LOCATIONS FOR YARD INLETS, MANHOLES AND RISER ARE AT THE TOP CENTER OF THE STRUCTURE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard Shuler 1/10/01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Andy Hamilton 1/10/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO. 3-7-05 DATE REVISED PER AS-BUILT CONDITIONS

BENCHMARK ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE Δ SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 Δ FAX: 410-465-6844

OWNER/DEVELOPER: TREYBURN, L.L.C.
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

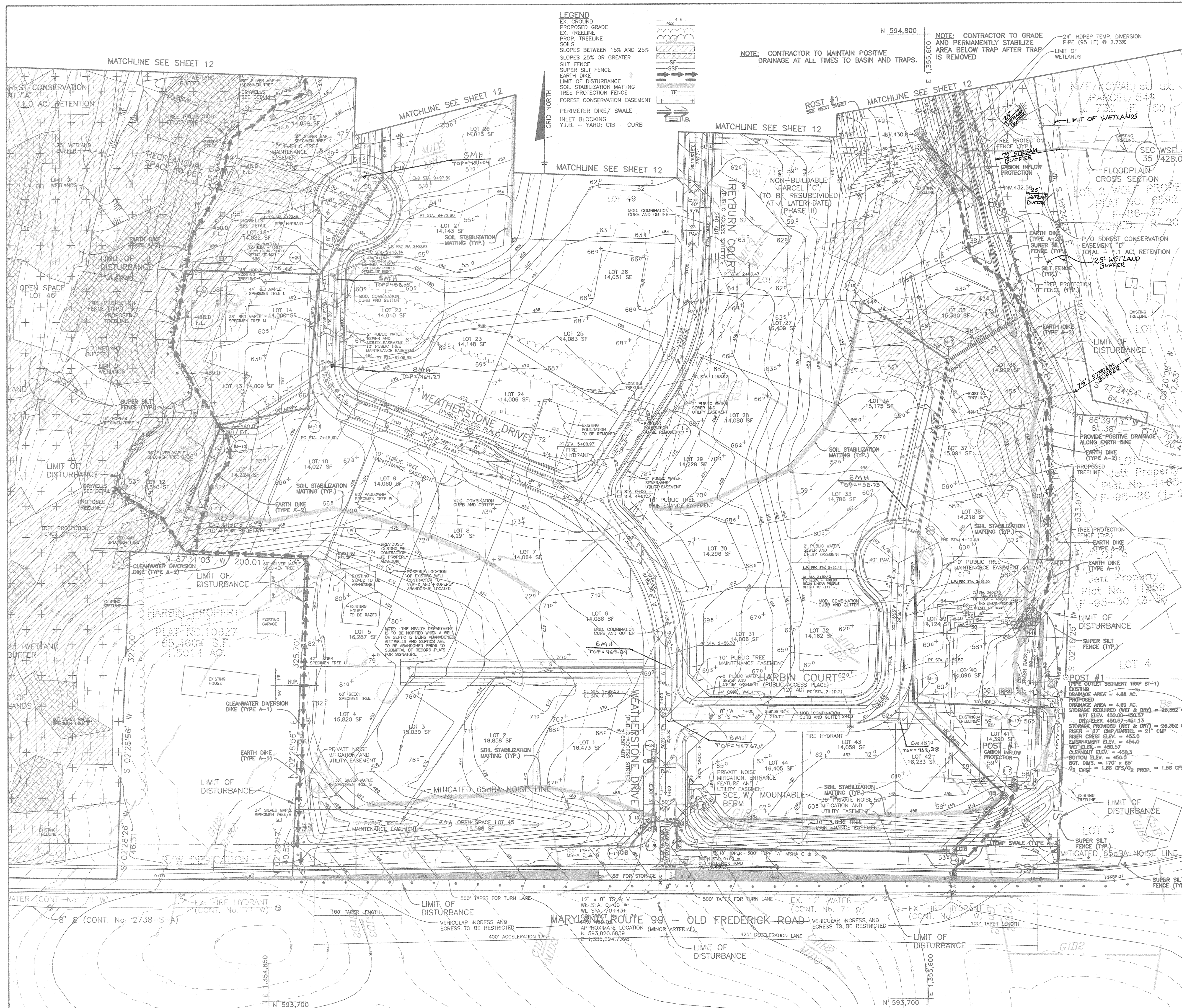
PROJECT: TREYBURN
 PHASE 1, LOTS 1-48, AND
 NON-BUILDABLE PARCELS "A" - "C"

LOCATION: TAX MAP 17 - BLOCK 9 - PARCEL 59
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN PROFILES AND SCHEDULES

DATE: JULY, 2000 PROJECT NO. 0697
 OCTOBER, 2000

DESIGN: MLV DRAFT: JMC/EDD SCALE: AS SHOWN DRAWING 10 OF 20



LEGEND

- EX. GROUND
- PROPOSED GRADE
- EX. TREELINE
- PROP. TREELINE
- SOILS
- SLOPES BETWEEN 15% AND 25%
- SLOPES 25% OR GREATER
- SILT FENCE
- SUPER SILT FENCE
- EARTH DIKE
- LIMIT OF DISTURBANCE
- SOIL STABILIZATION MATING
- TREE PROTECTION FENCE
- FOREST CONSERVATION EASEMENT
- PERIMETER DIKE/ SWALE
- INLET BLOCKING
- Y.I.B. - YARD; CIB - CURB

NOTE: CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE AT ALL TIMES TO BASIN AND TRAPS.

NOTE: CONTRACTOR TO GRADE AND PERMANENTLY STABILIZE AREA BELOW TRAP AFTER TRAP IS REMOVED

30.0 Dust Control

Definition
Controlling dust blowing and movement on construction sites and roads.

Purpose
To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies
This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

Temporary Methods

- Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tracked to prevent blowing.
- Vegetative Cover - See standards for temporary vegetative cover.
- Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12' apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
- Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.
- Barriers - Solid board fences, silt fences, snow fences, burp fences, straw bales, and similar material can be used to control dust currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
- Calcium Chloride - Apply at rates that will keep surface moist. May need reapplication.

Permanent Methods

- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
- Topsoiling - Covering with less erosive soil materials. See standards for topsoiling.
- Stone - Cover surface with crushed stone or coarse gravel.

References

- Agriculture Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
- Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA-ARS.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

ENGINEER: Donald Moan PE NO. 21443 DATE: 12/26/00

DEVELOPER: STEVEN K. TREBURN DATE: 12/26/00

BY THE ENGINEER:
I/VE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

By: Donald Moan MEMBER DATE: 12/26/00

By: Olga Wapfield MEMBER DATE: 1/4/01

By: John S. ... MEMBER DATE: 1/4/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

By: Howard S. ... CHIEF BUREAU OF HIGHWAYS DATE: 1/5/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

By: Cindy Hamrick CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 1/17/01

By: Chris Wammann CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 1/9/01

NO.	DATE	REVISION
3-7-05		REVISED PER AS-BUILT CONDITIONS
2-26-02		REMOVE ISLAND AND SPEED CONTROL DEVICES

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE Δ SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 Δ FAX: 410-465-6644

Donald Moan
REGISTERED PROFESSIONAL ENGINEER

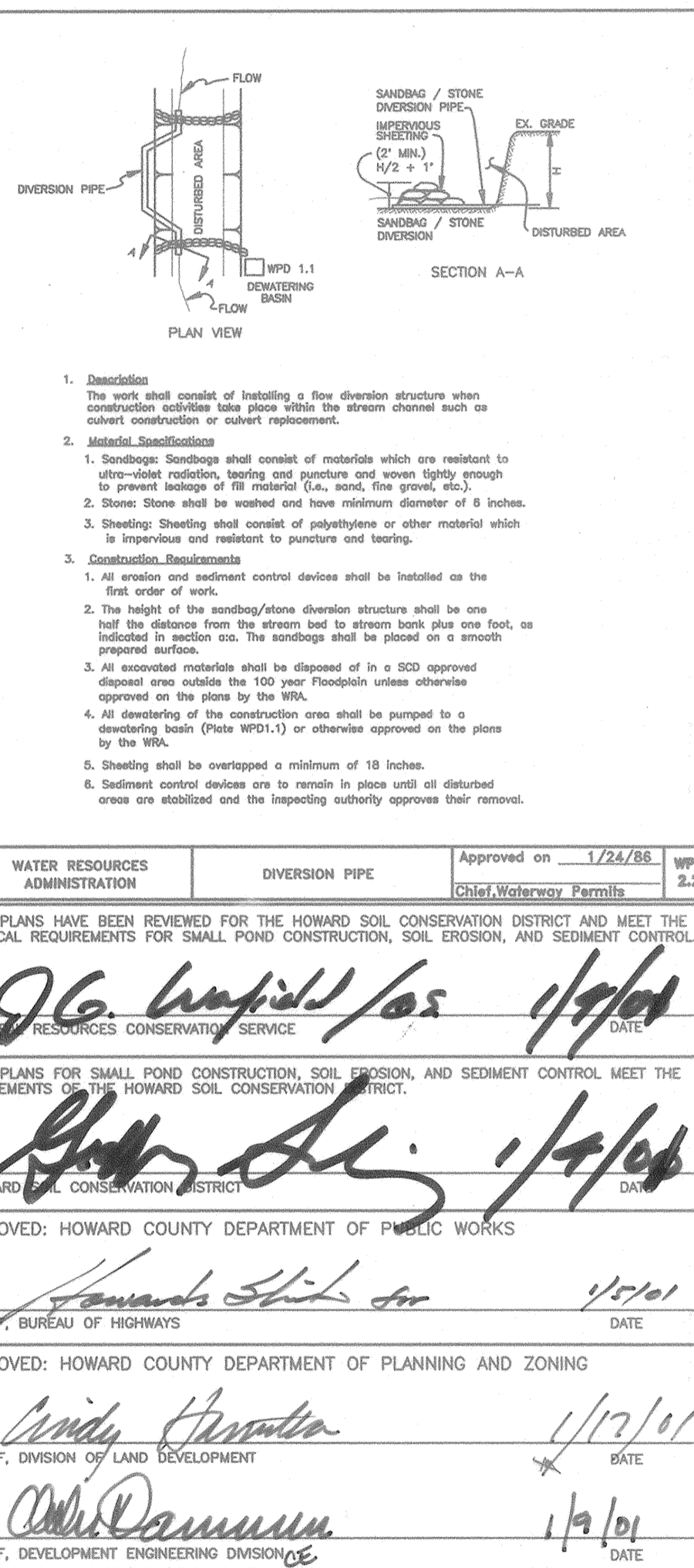
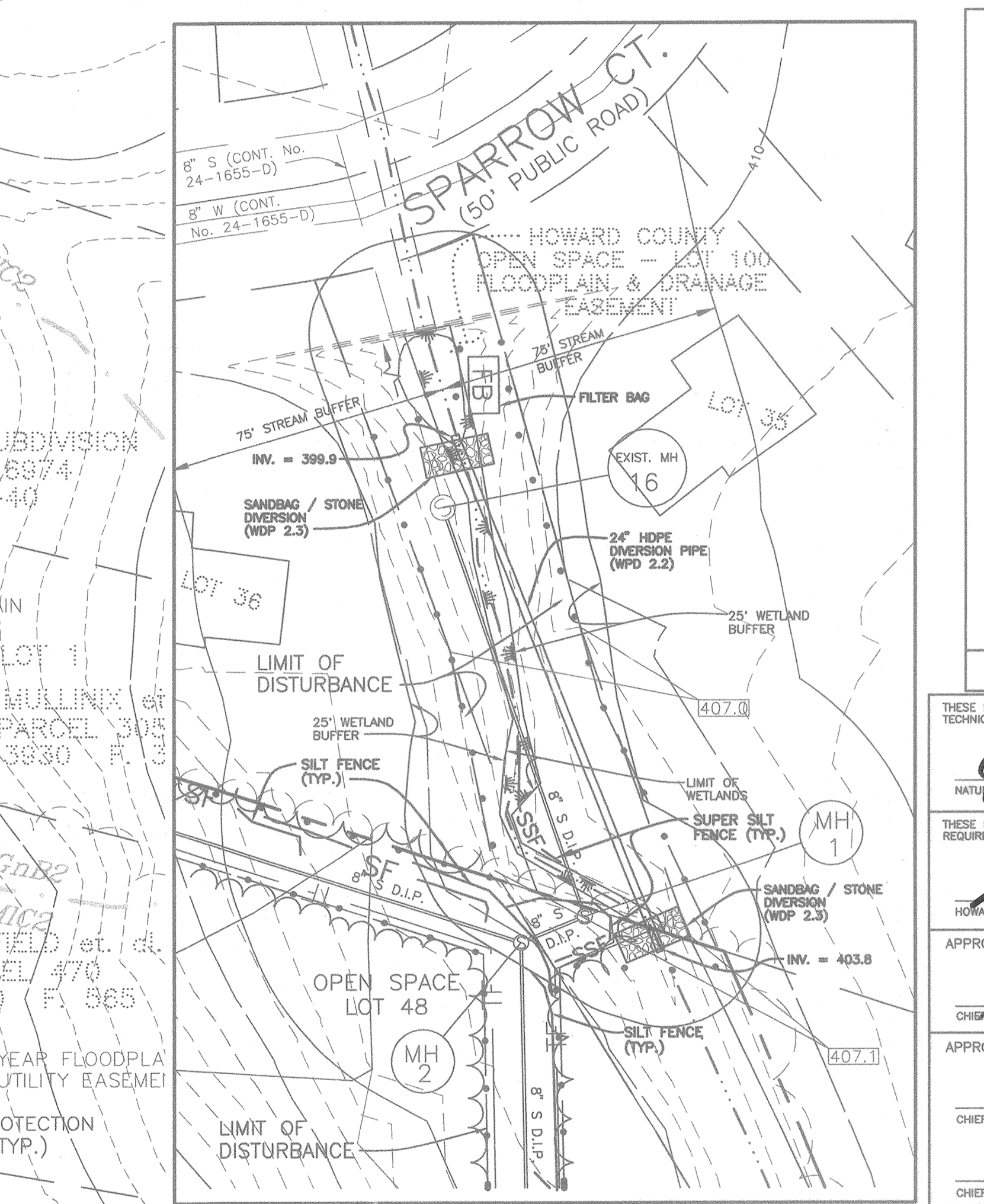
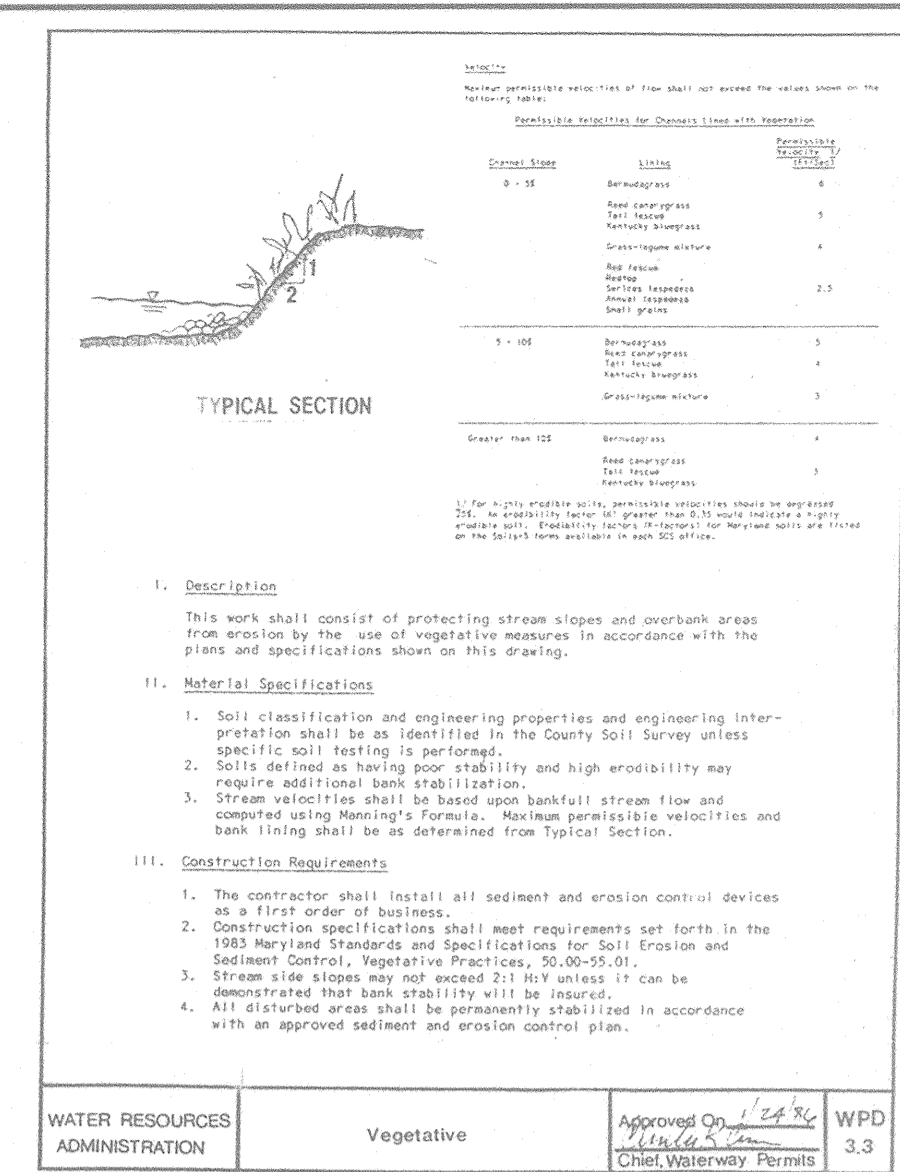
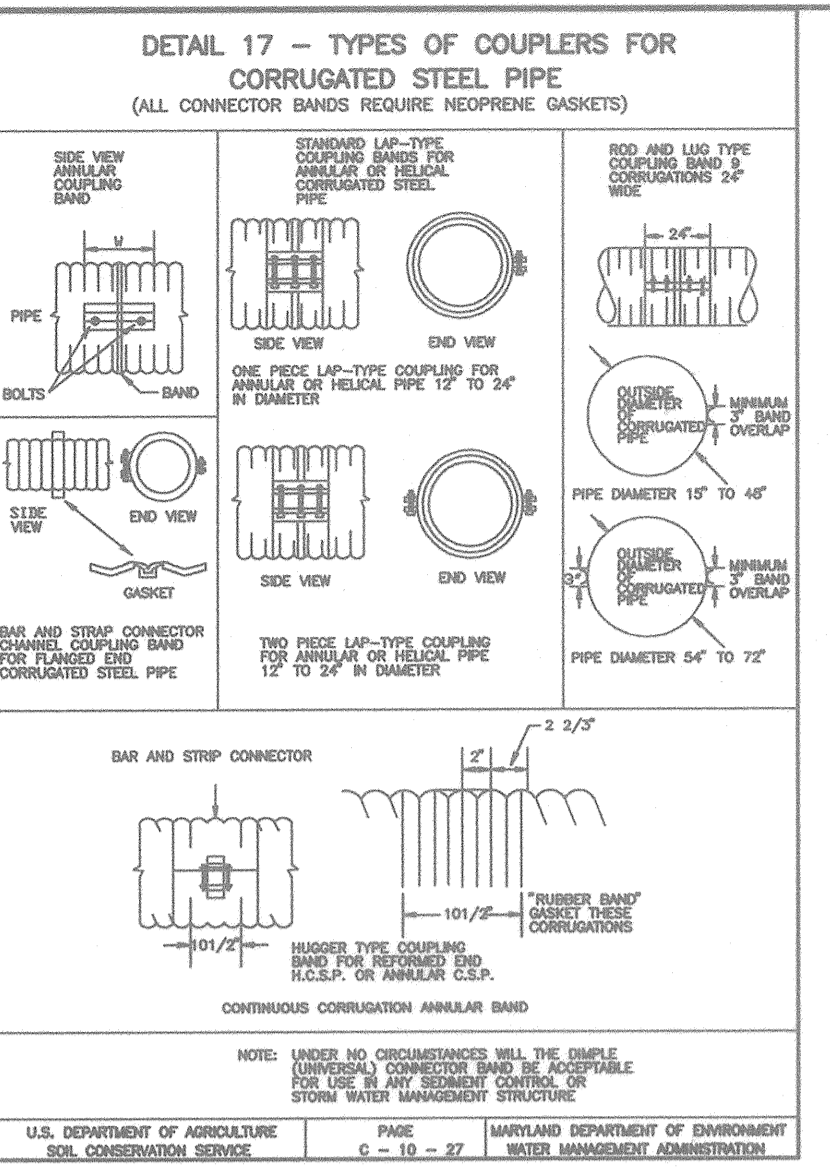
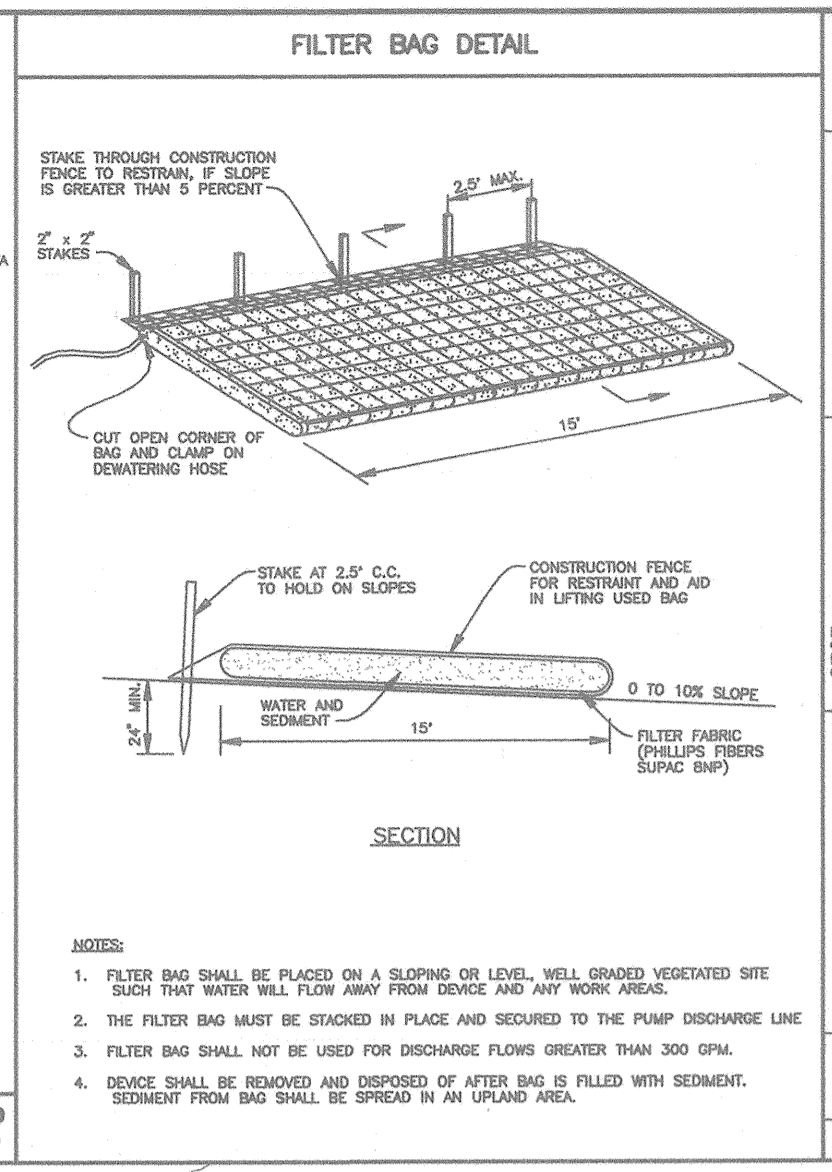
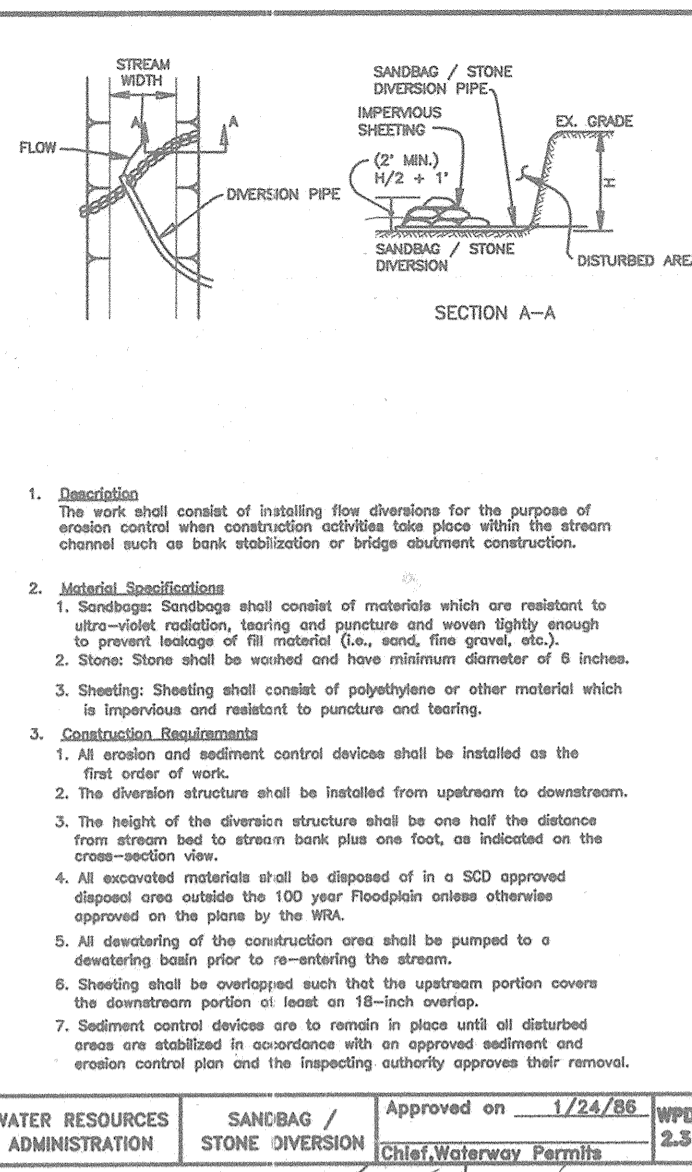
OWNER/DEVELOPER:
TREYBURN, L.L.C.
P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

PROJECT: **TREYBURN**
PHASE 1 LOTS 1 B AND NON-BUILDABLE PARCELS "A" - "C"
LOCATION: TAX MAP 17 - BLOCK 9 - PARCEL 59
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **GRADING, SEDIMENT AND EROSION CONTROL PLAN**

DATE: JULY, 2000 PROJECT NO. 0697

DESIGN: JMC DRAFT: JMC SCALE: 1" = 50' DRAWING 11 OF 20



THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

J.G. Waples/AS 1/9/08
 NATURAL RESOURCES CONSERVATION SERVICE

John Sig 1/9/08
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Howard Sigler 1/26/01
 CHIEF, BUREAU OF HIGHWAYS

Andy Howard 1/7/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

Chris Damman 1/9/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

BENCHMARK ENGINEERS, LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-8105 FAX: 410-465-8644

TREYBURN
 GROVEMONT DEVELOPMENT, L.L.C.
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

PROJECT: TREYBURN
 PHASE 1, LOTS 1-48 AND NON-BUILDABLE PARCELS "A" - "C"

LOCATION: TAX MAP 17 - BLOCK 9 - PARCEL 59
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: GRADING, SEDIMENT AND EROSION CONTROL PLAN

DATE: JULY, 2000
 OCTOBER, 2000

PROJECT NO. 0697

SCALE: AS SHOWN DRAWING 12 OF 20

DESIGN: MLV DRAFT: JMC/EDD

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

Donald Mason PE NO. 21443
 ENGINEER DATE 3/18/05

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

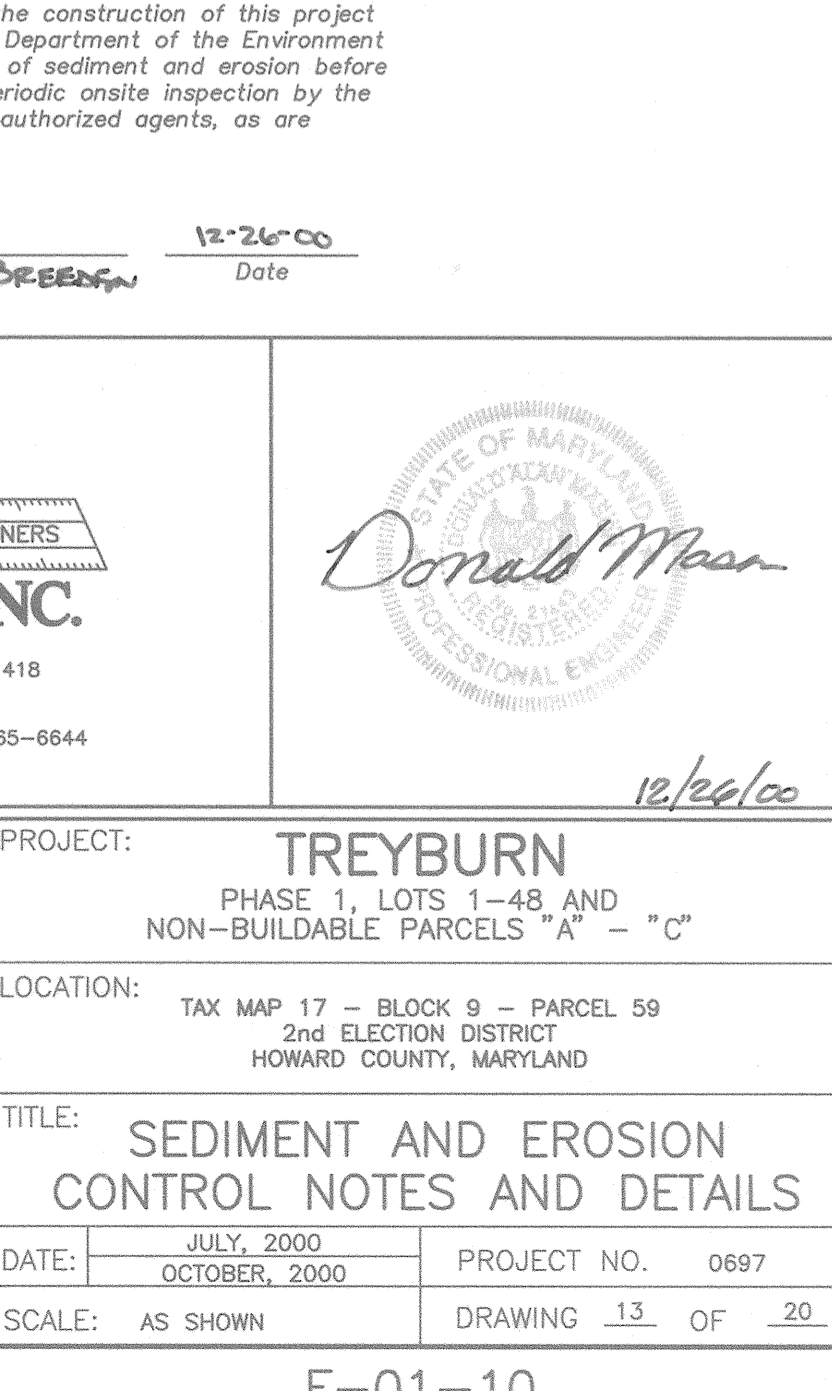
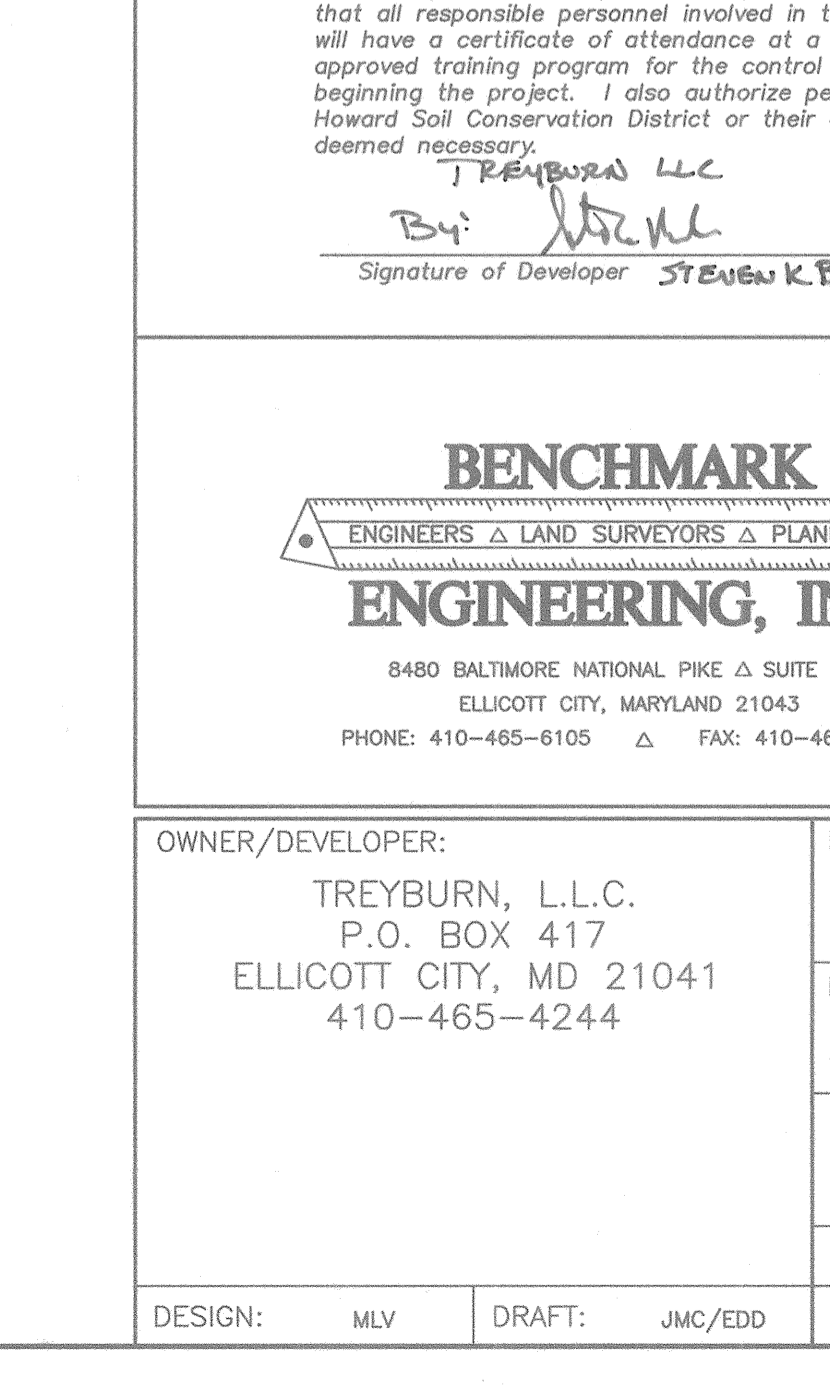
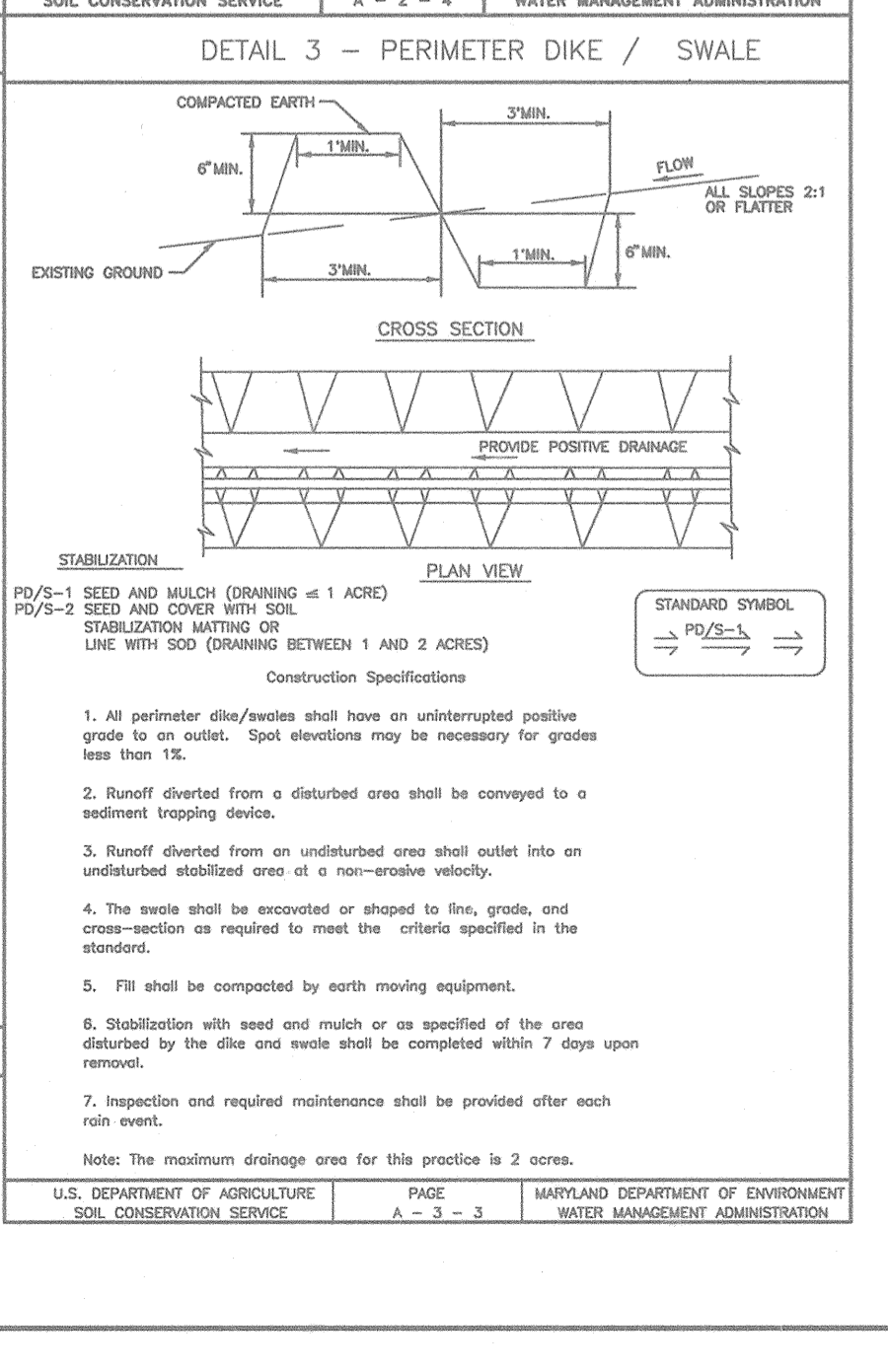
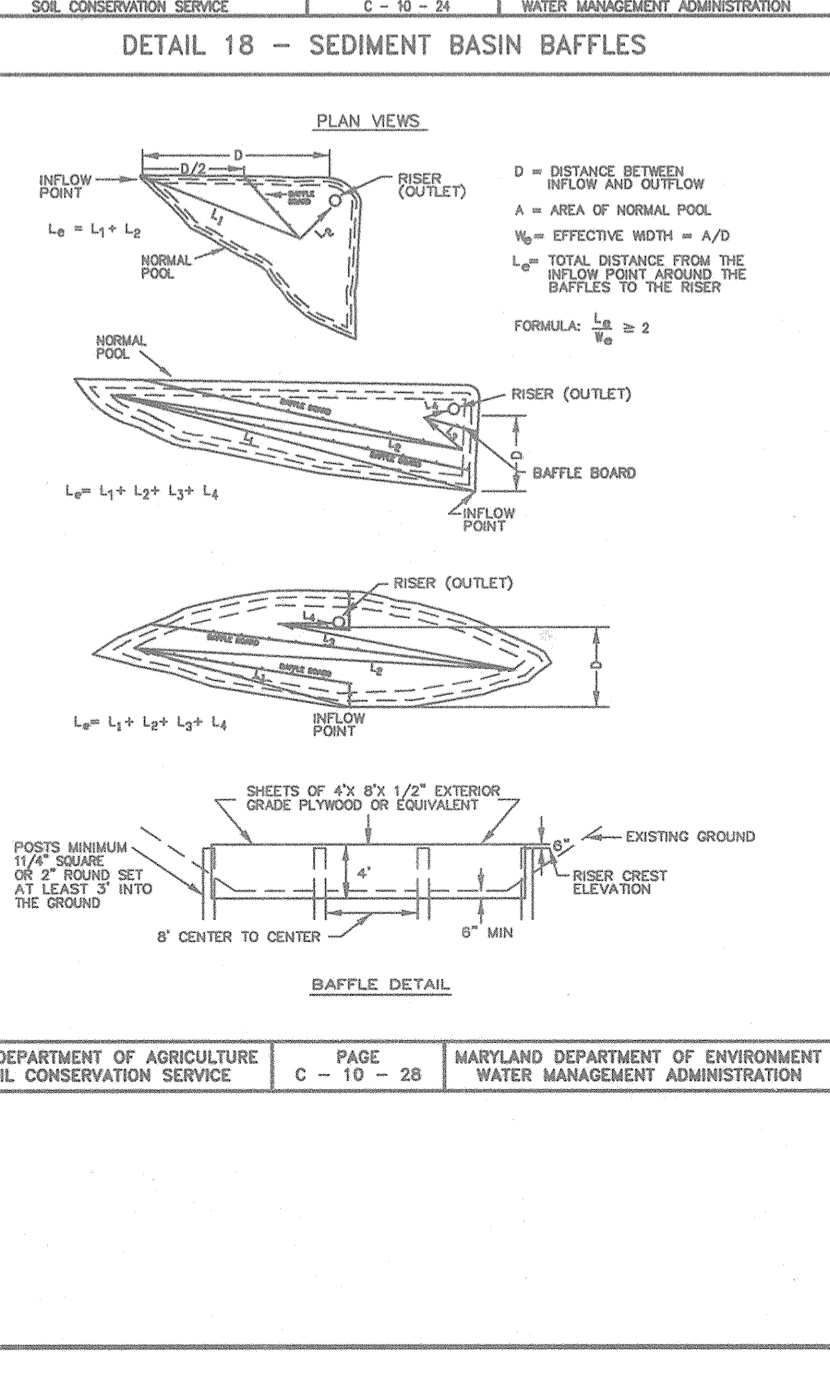
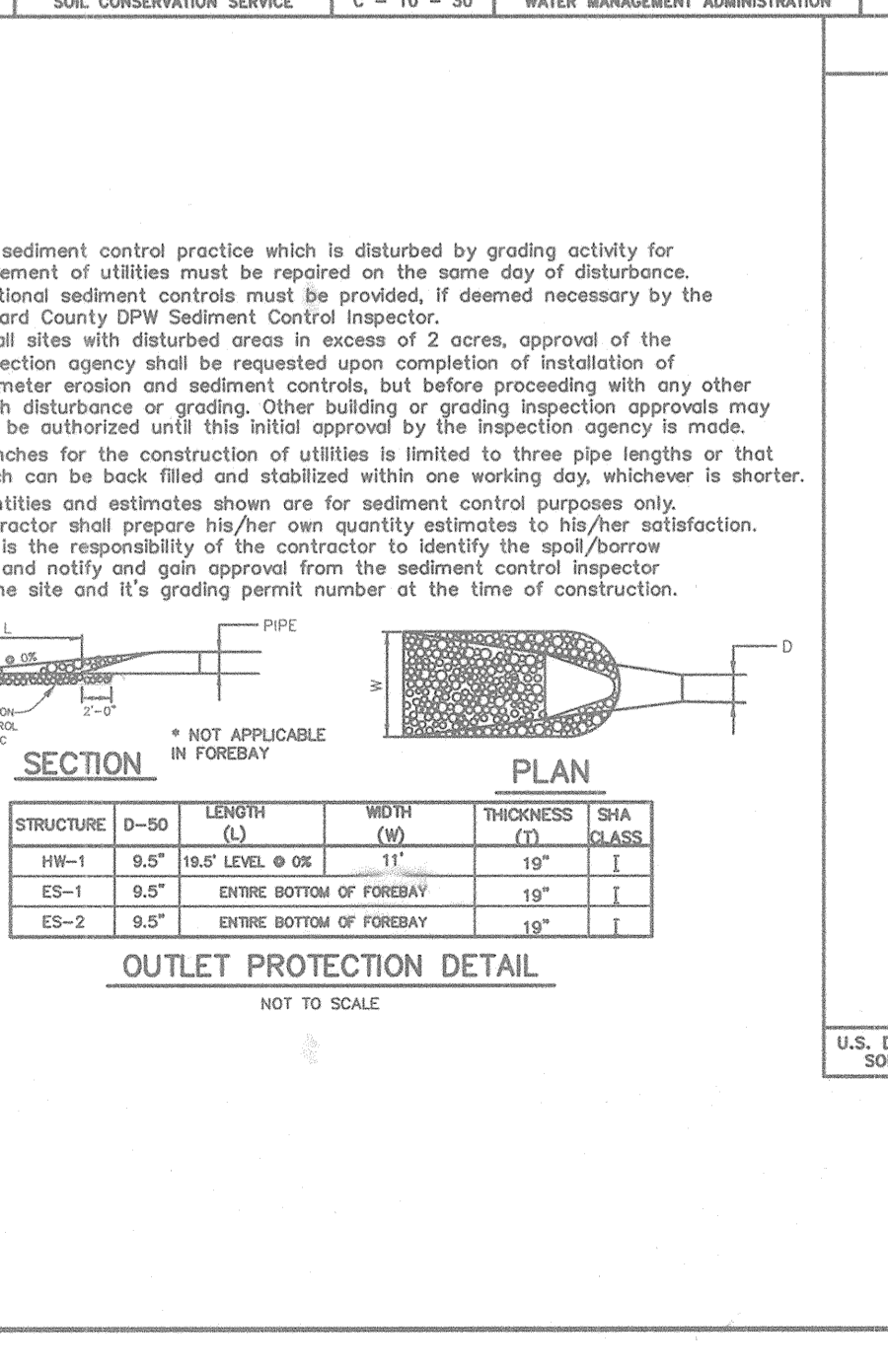
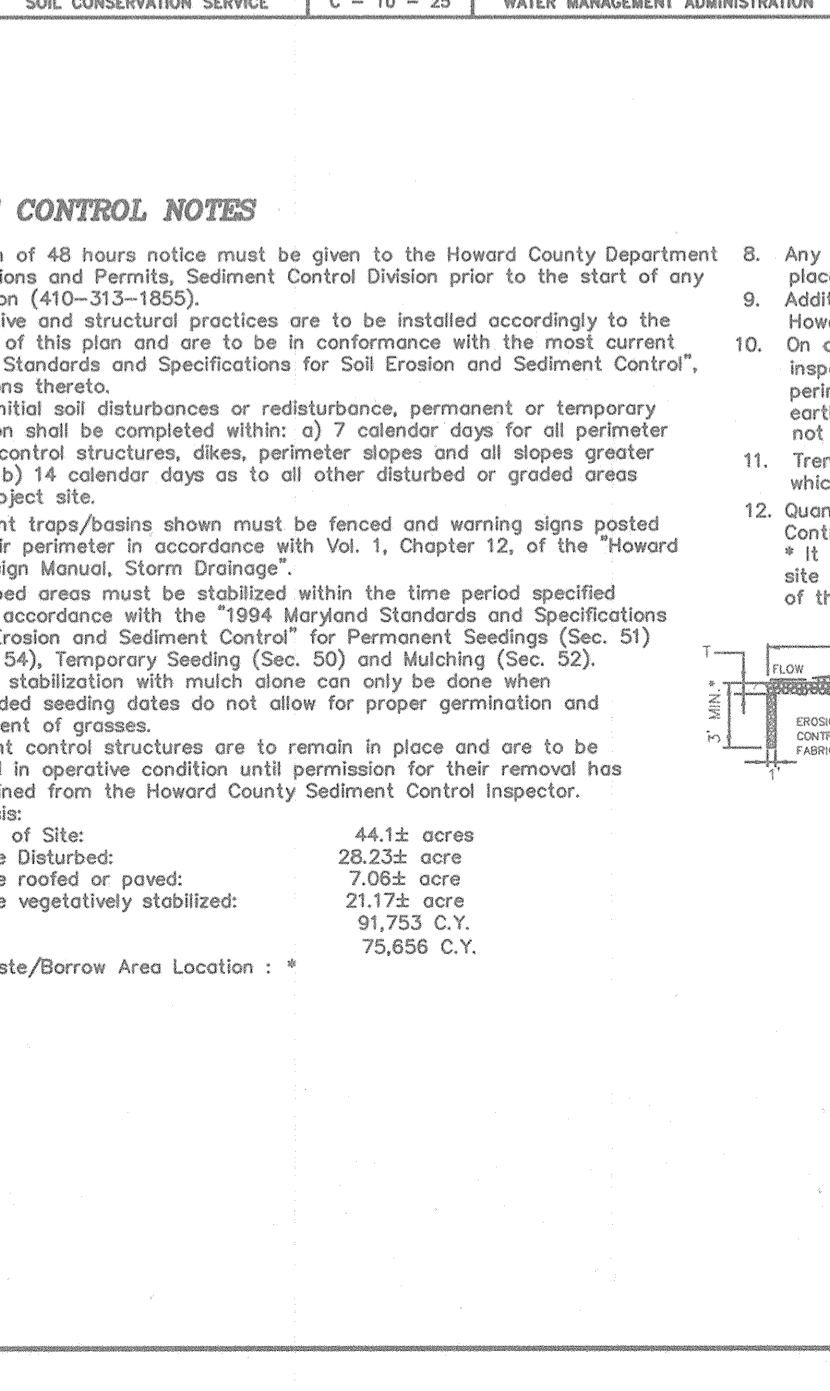
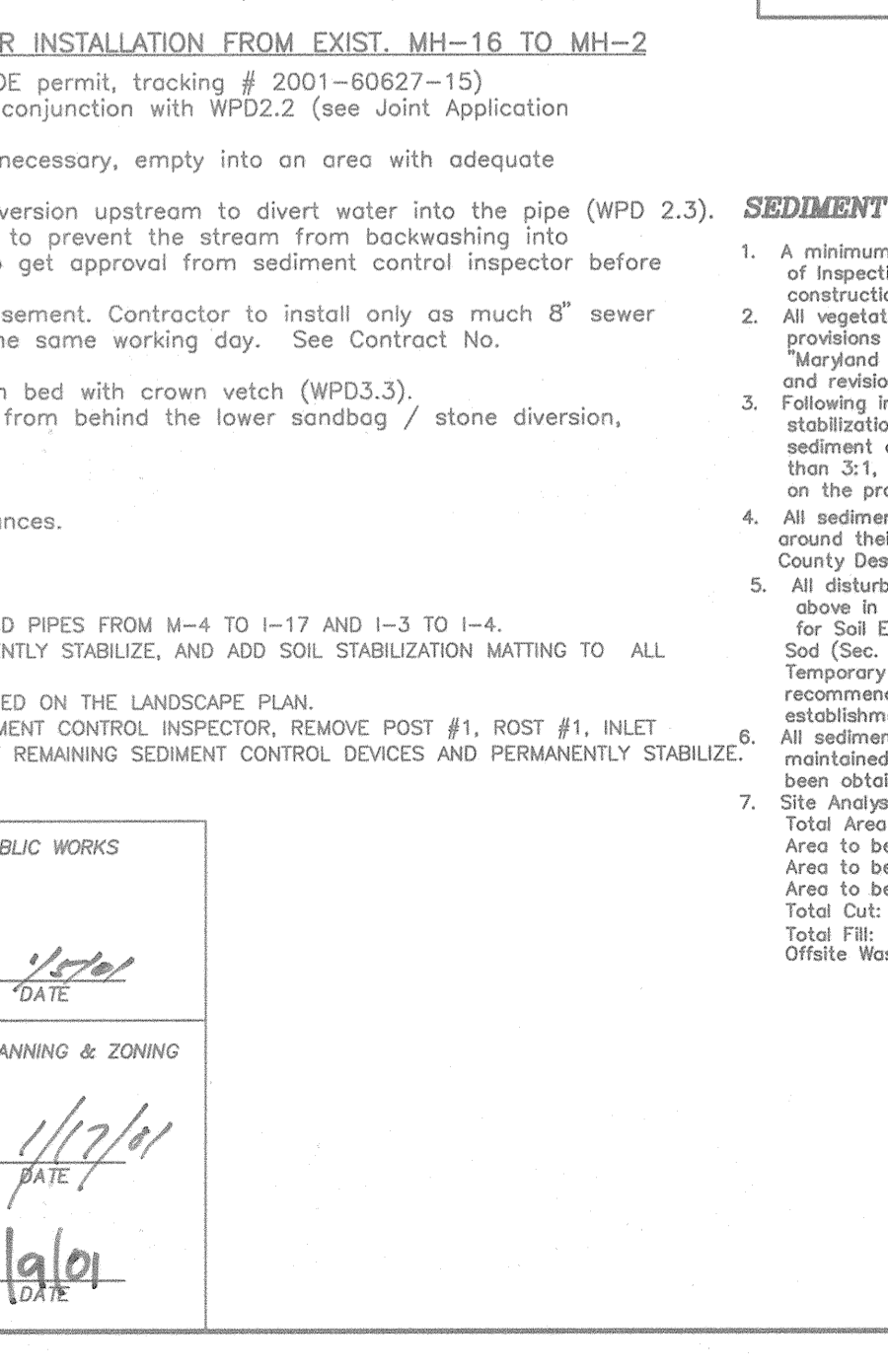
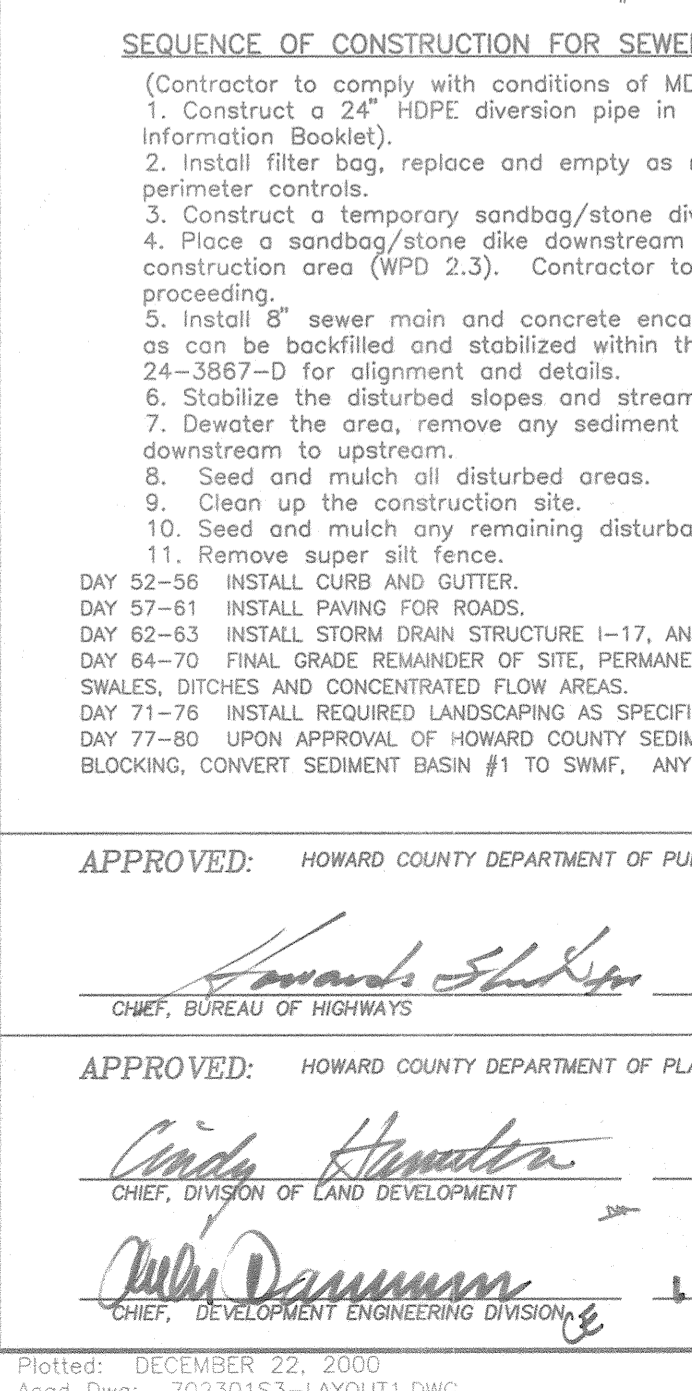
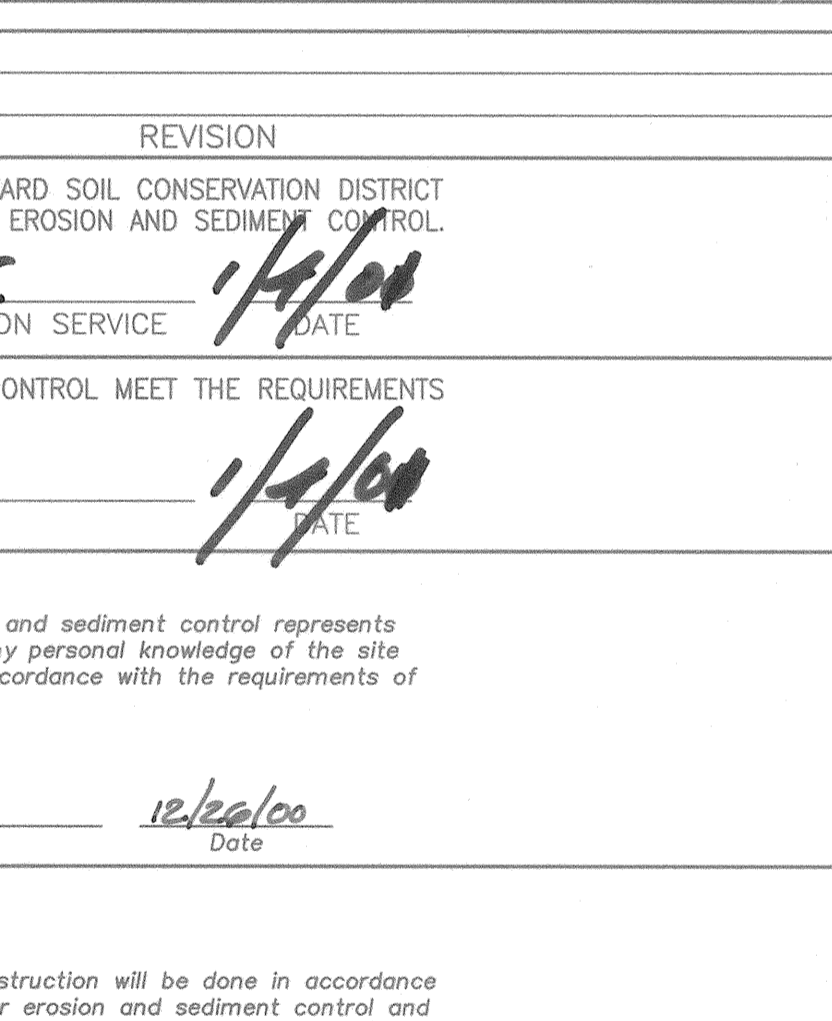
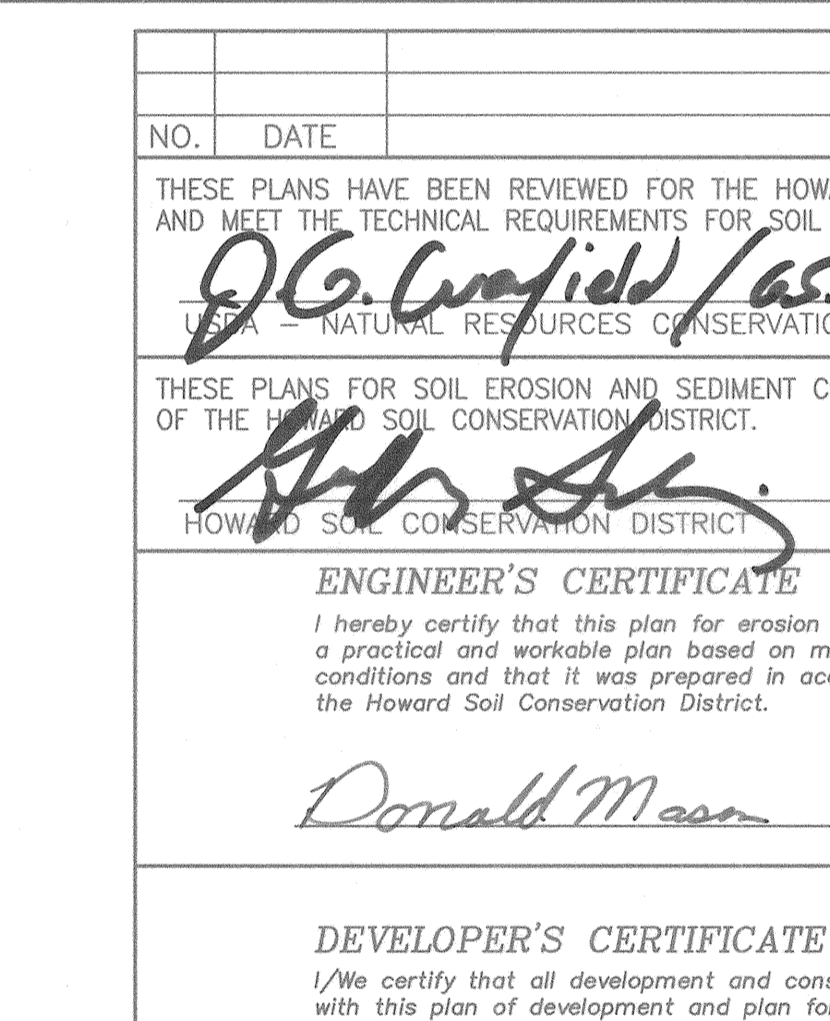
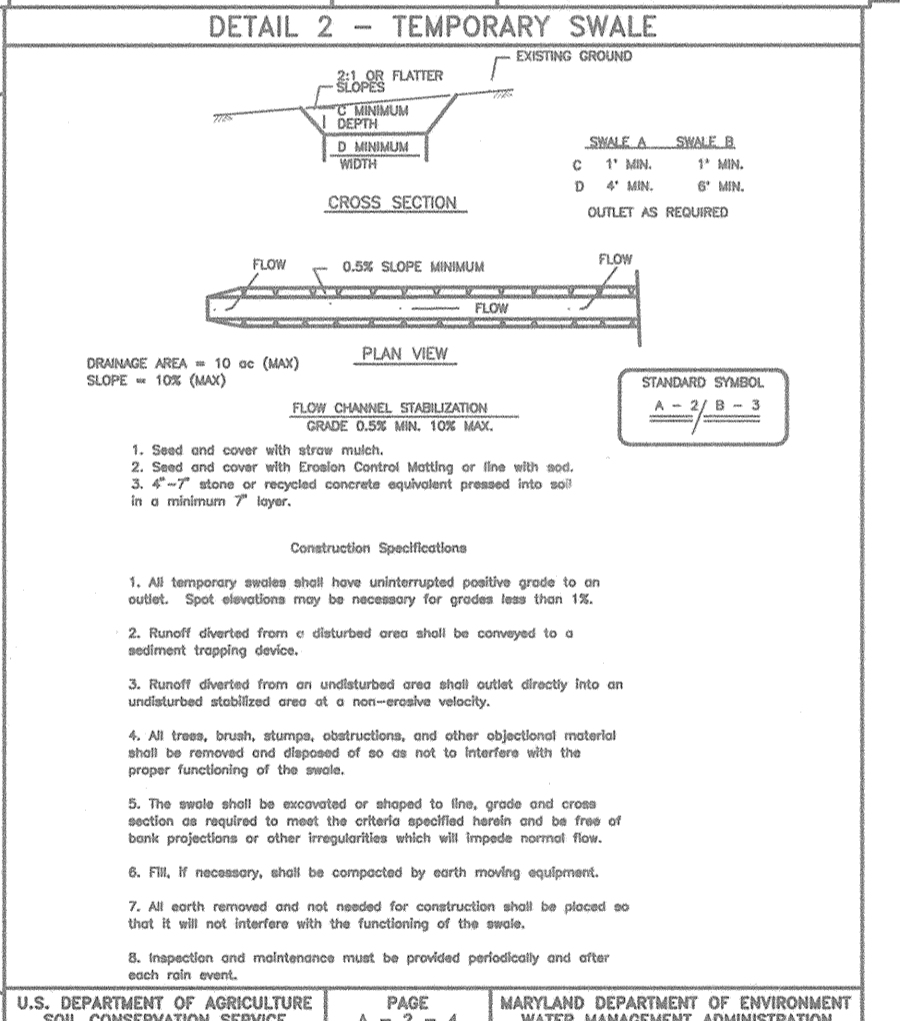
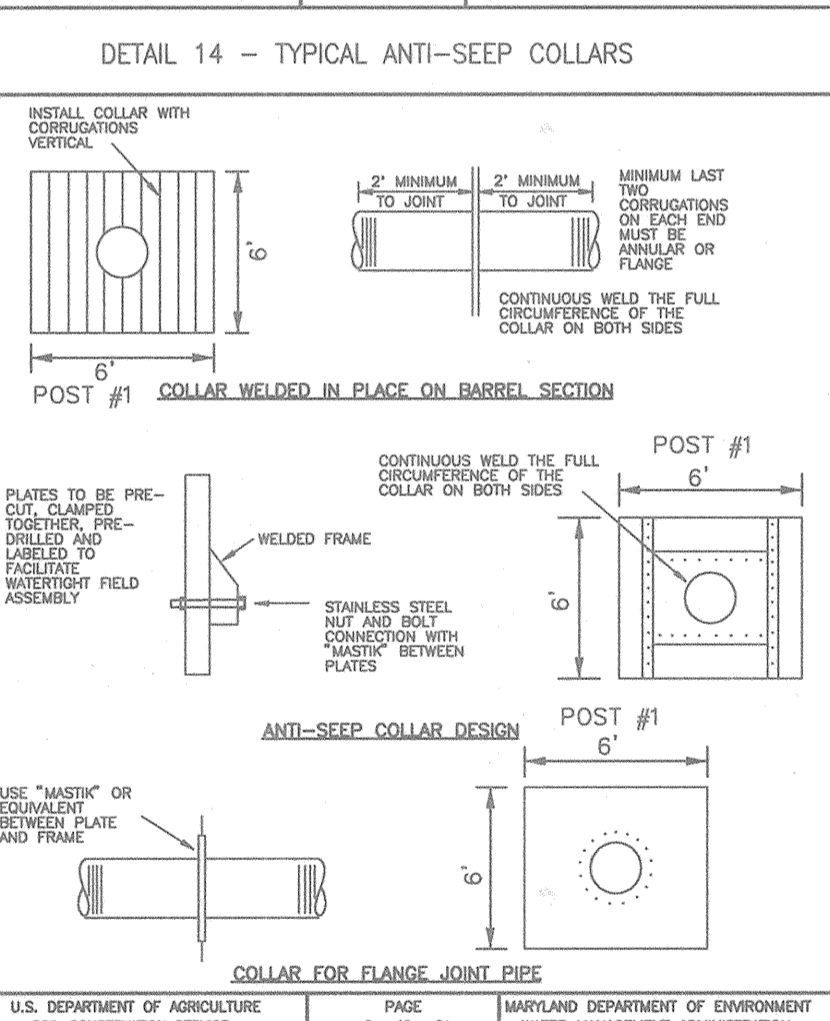
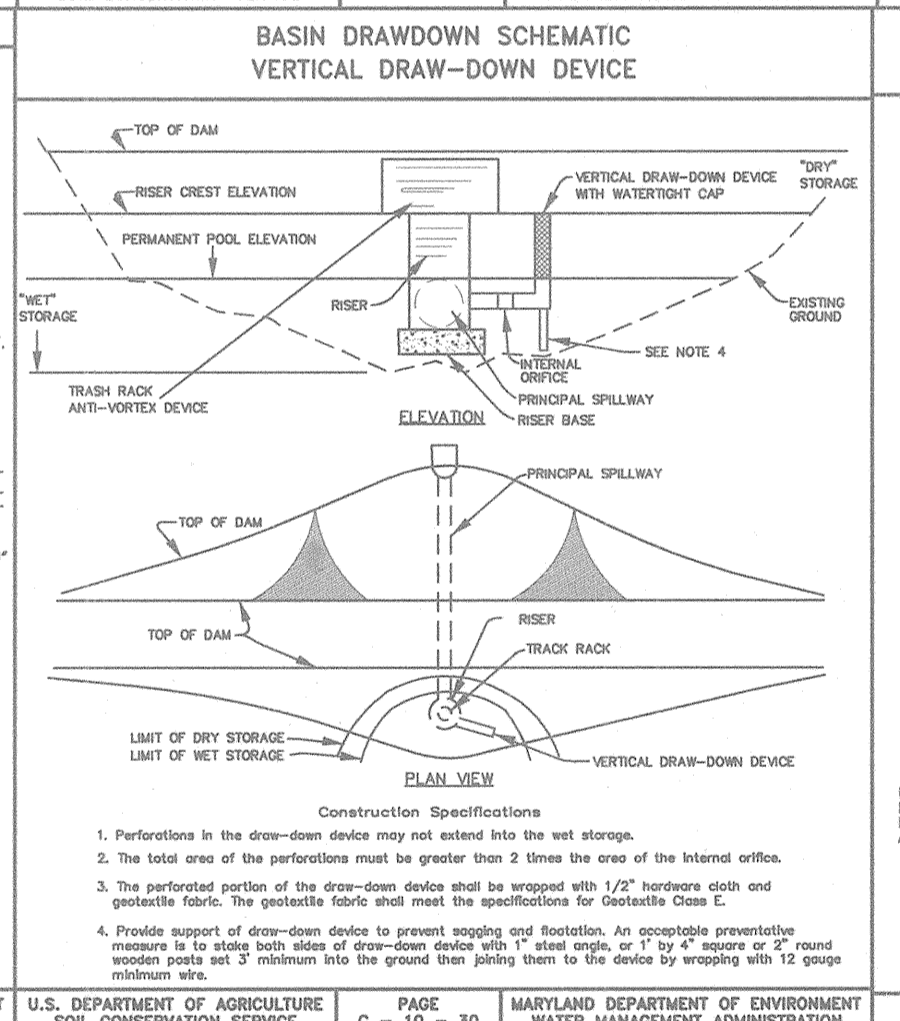
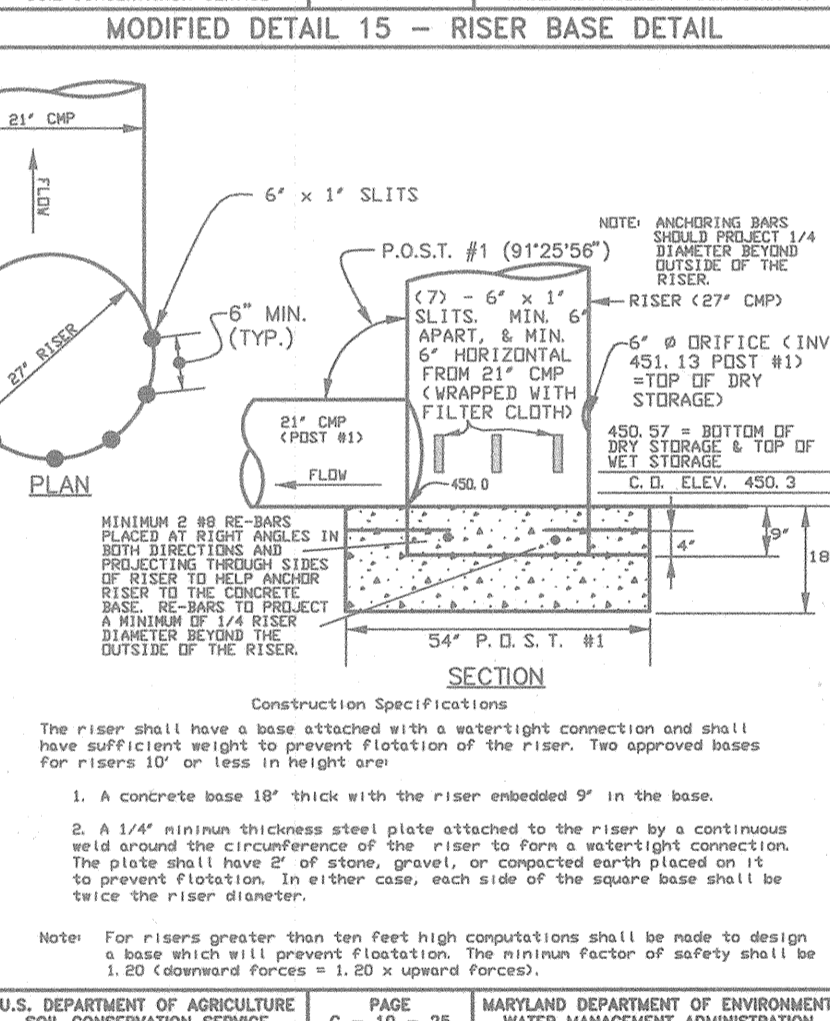
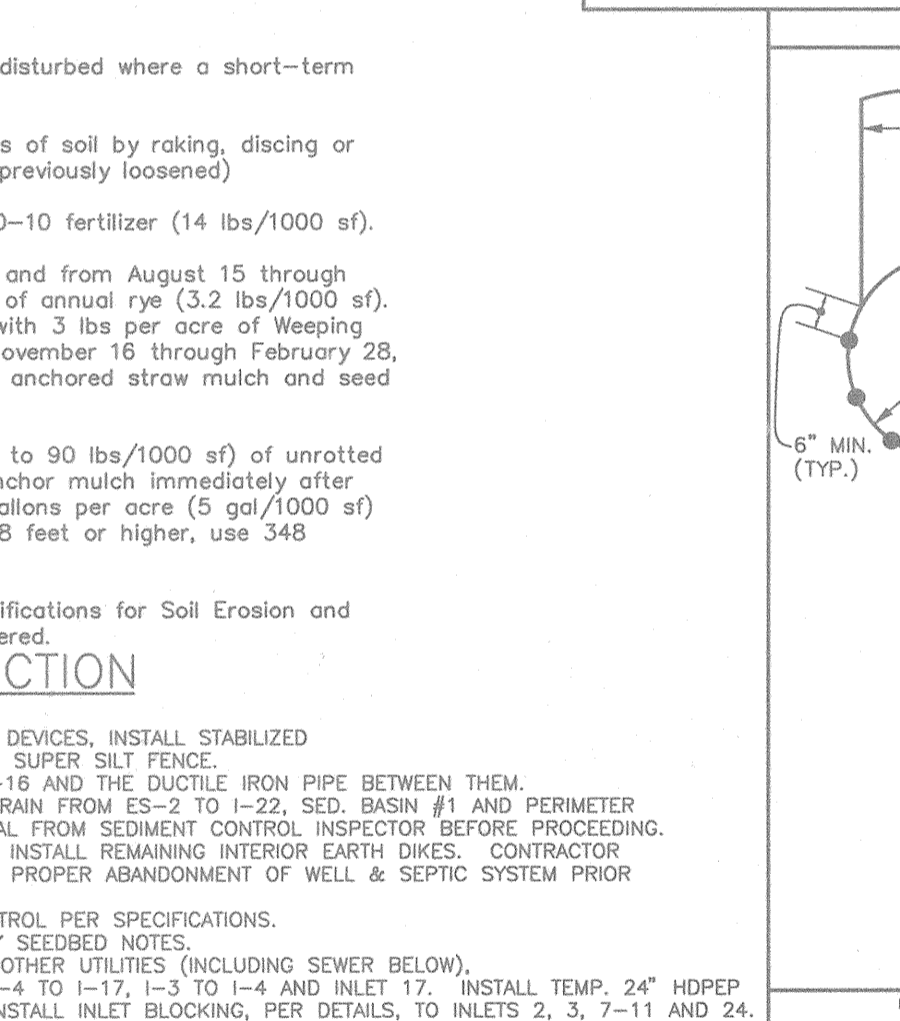
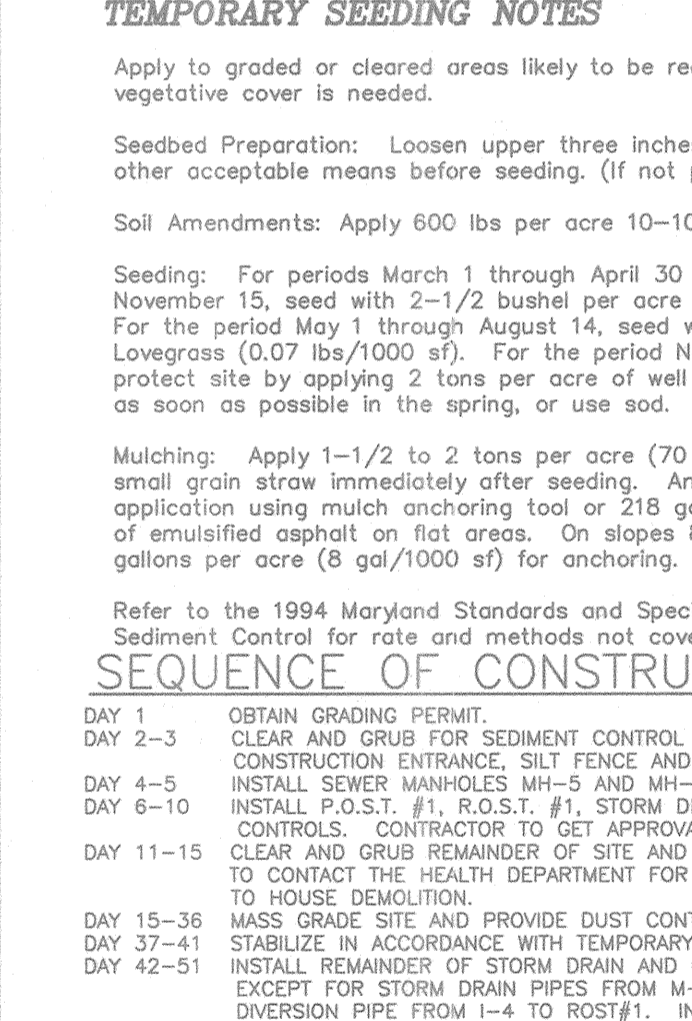
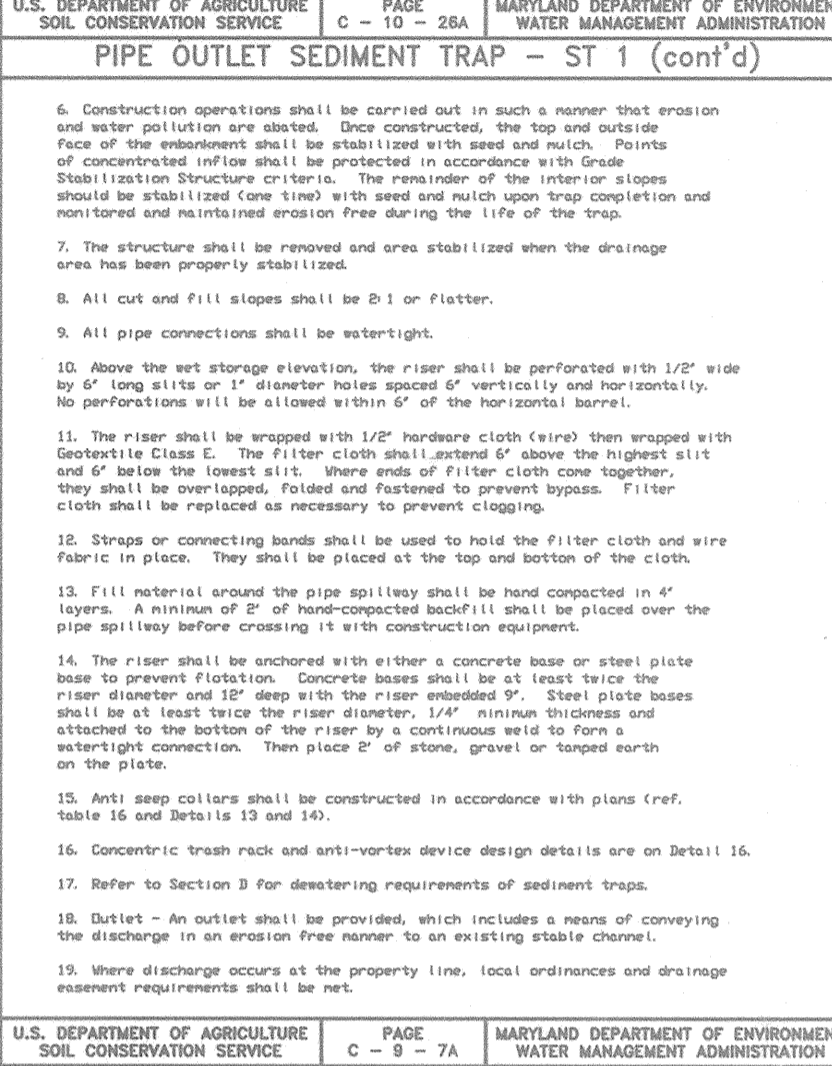
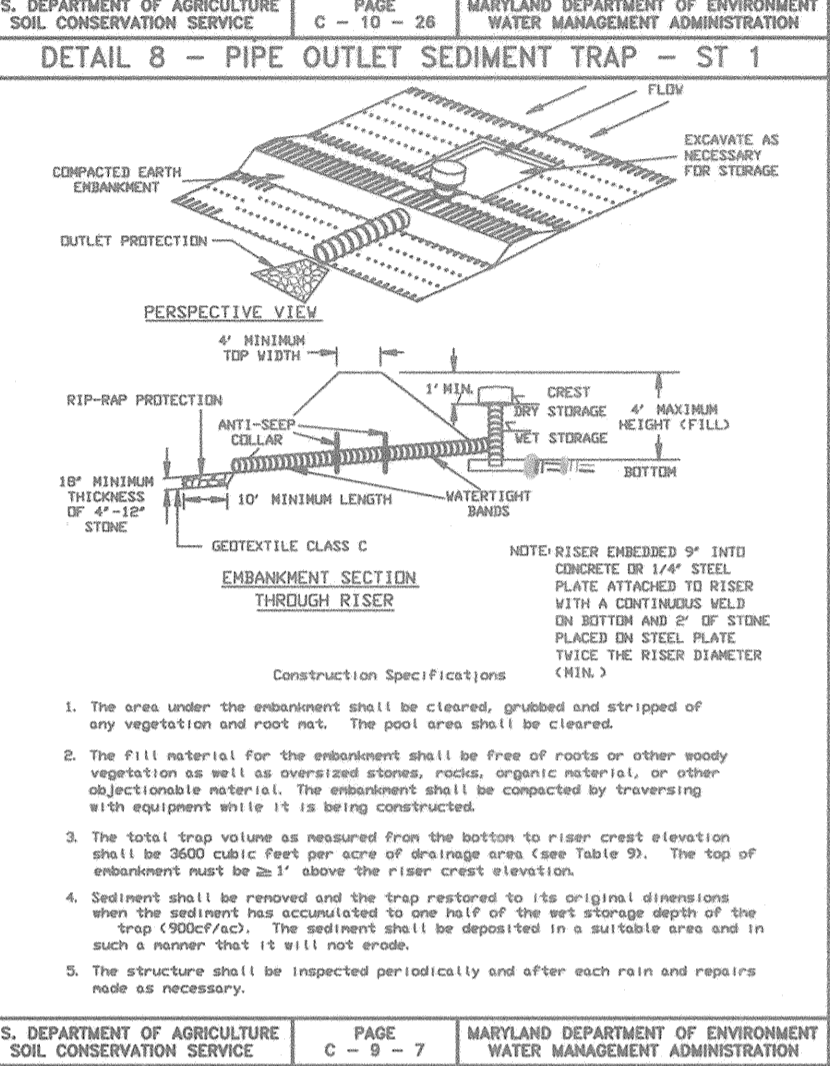
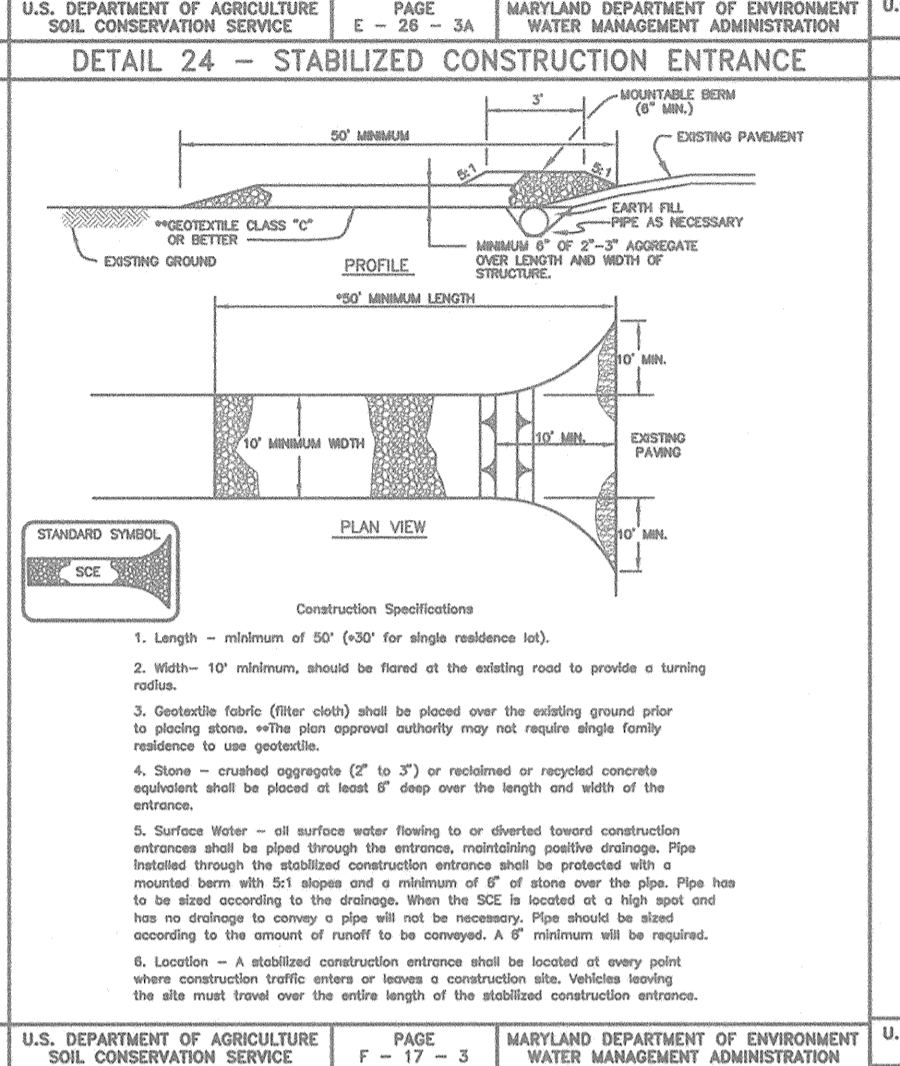
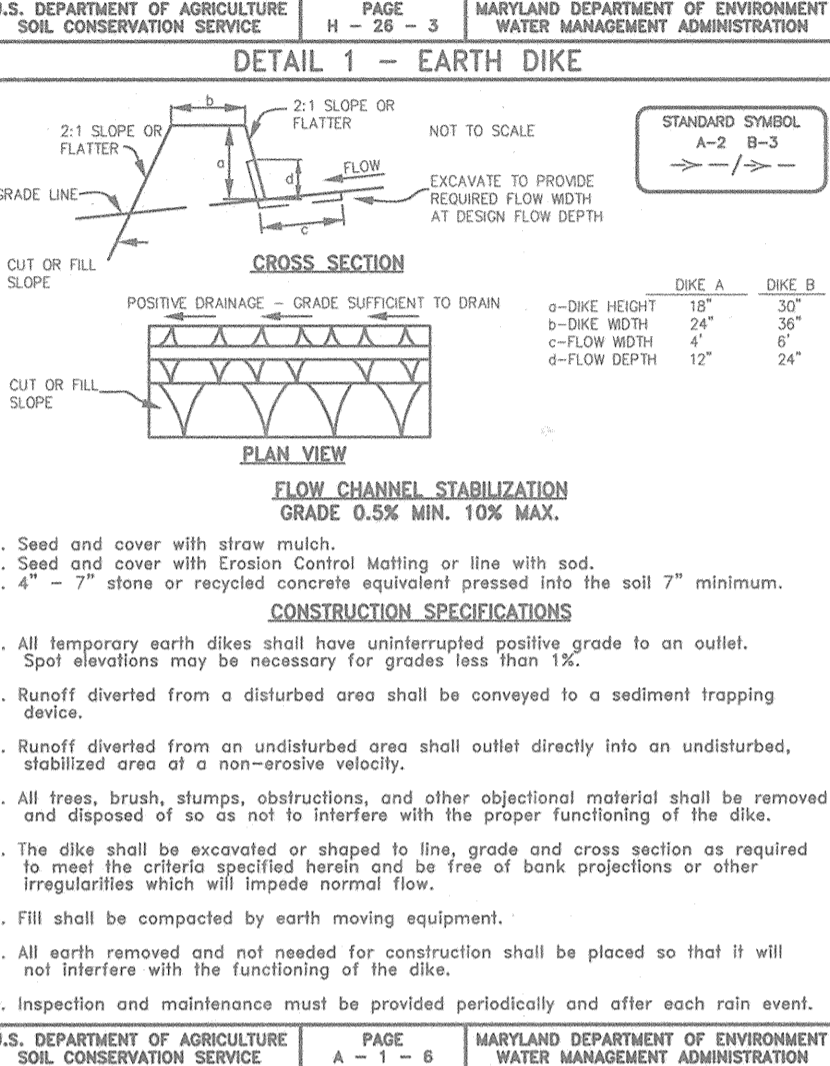
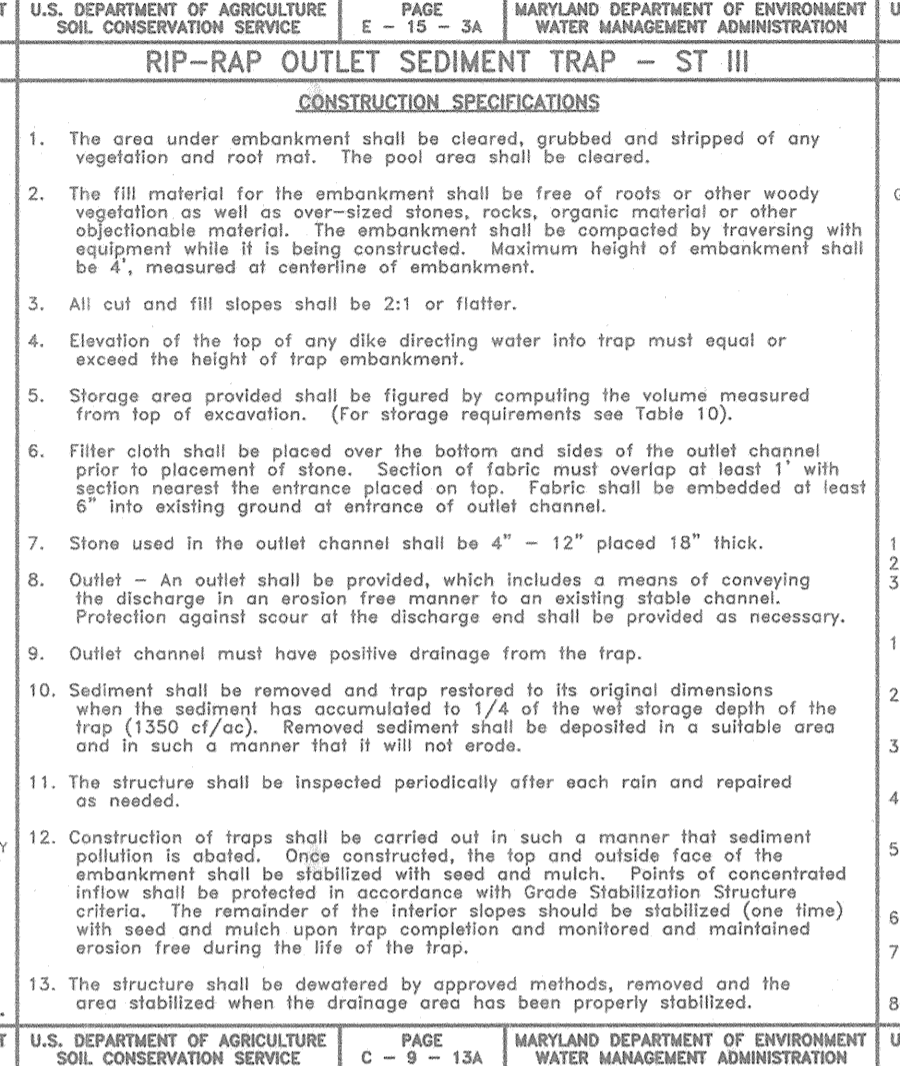
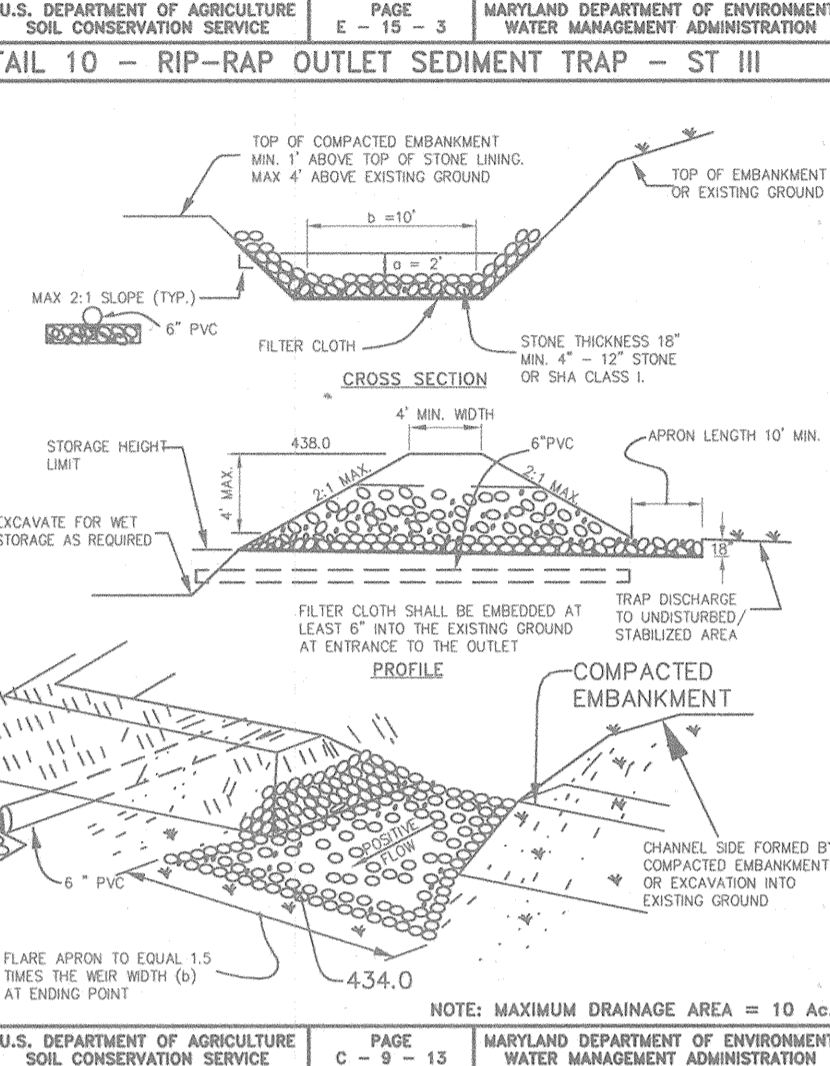
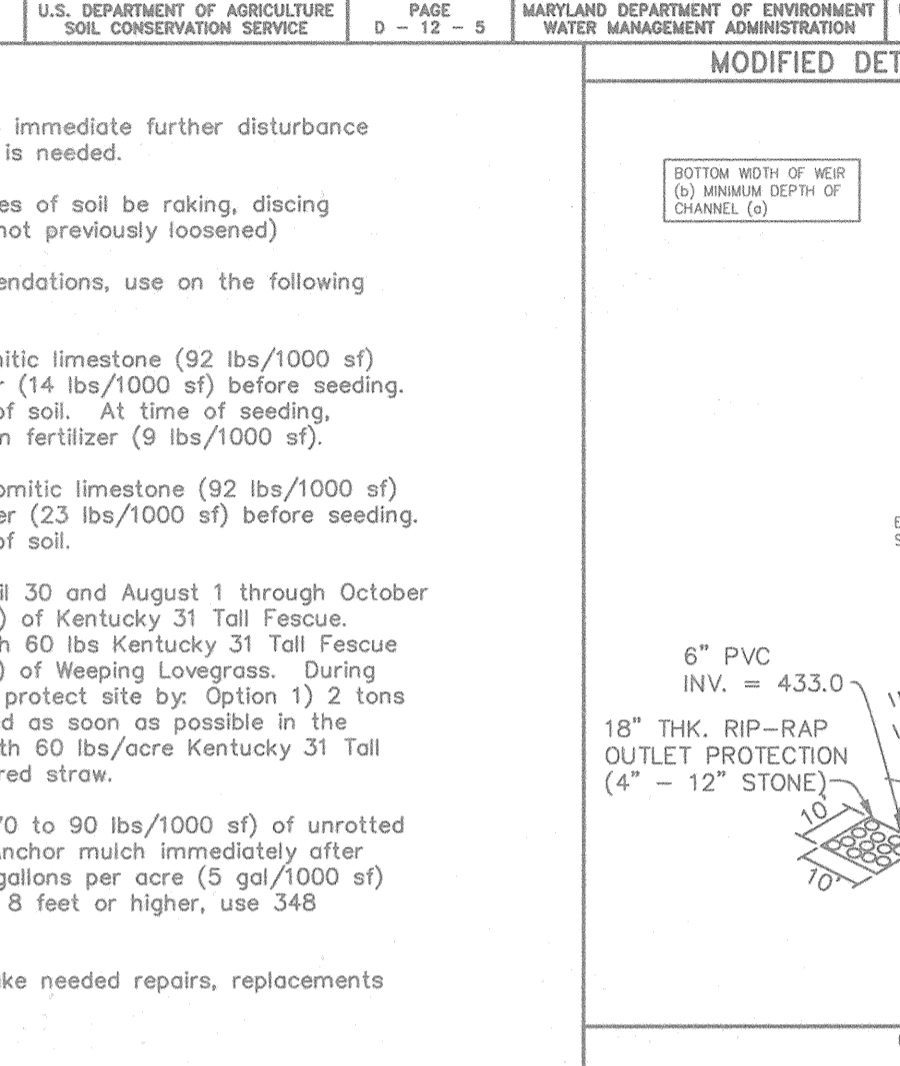
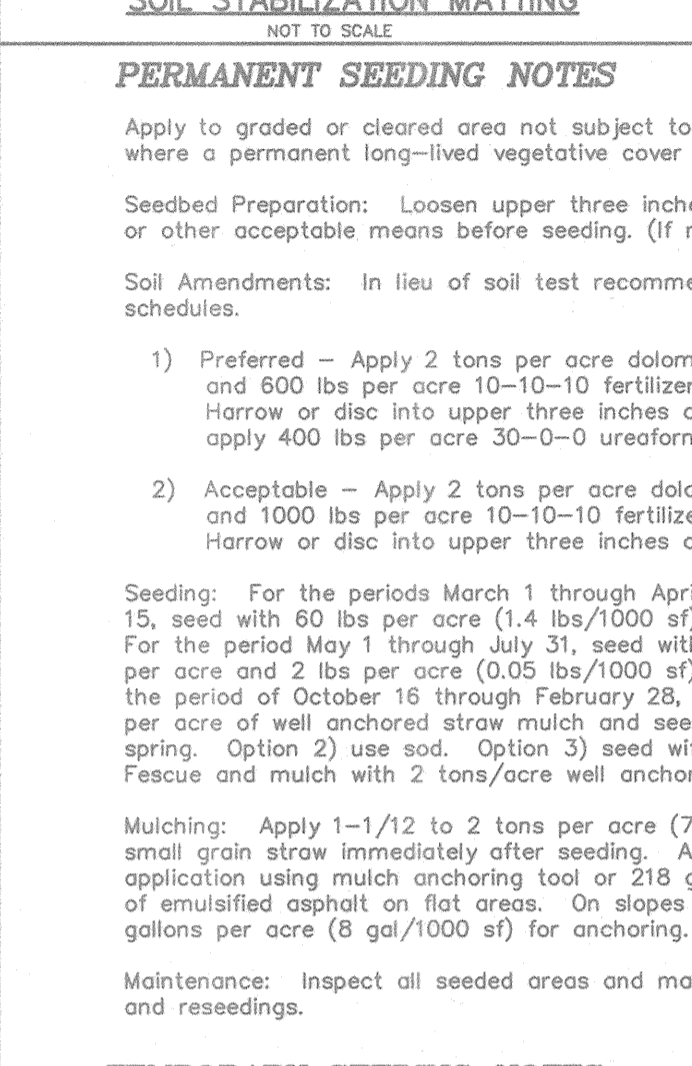
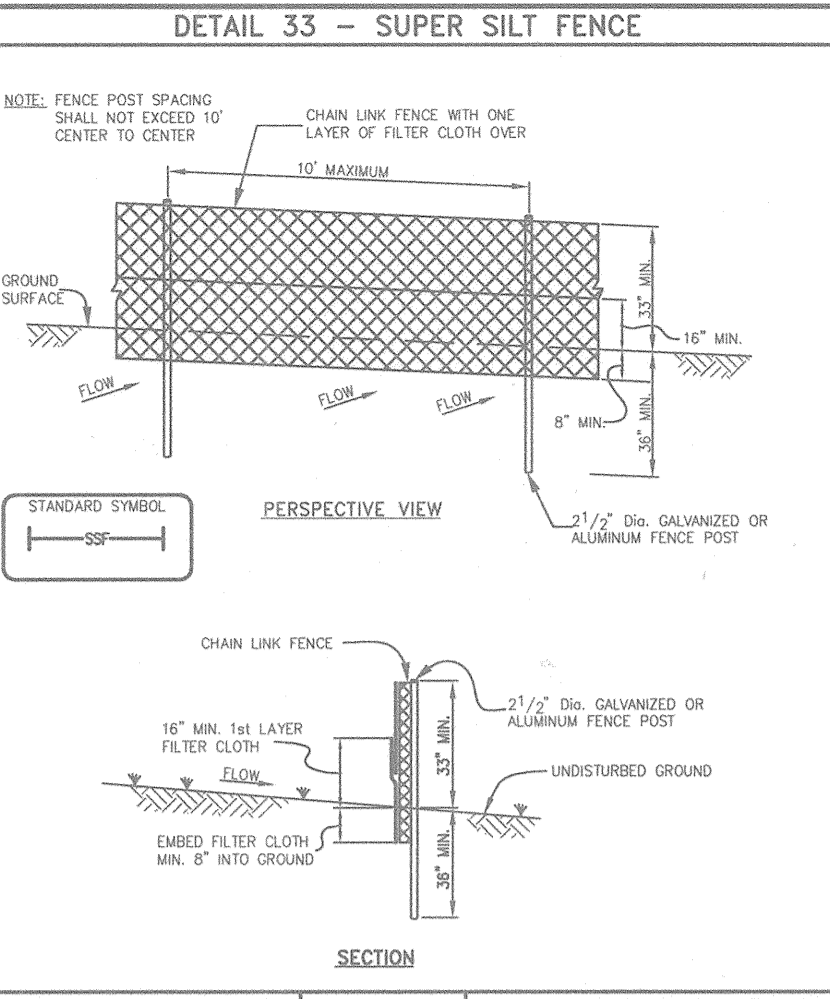
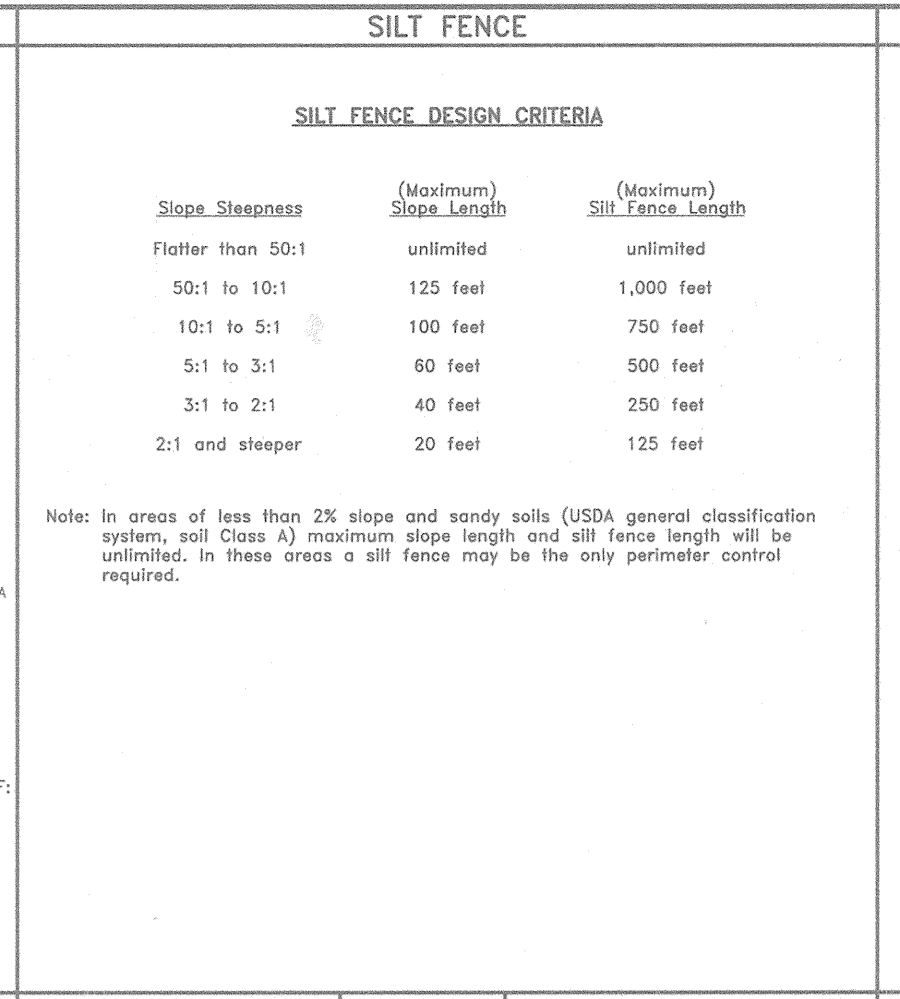
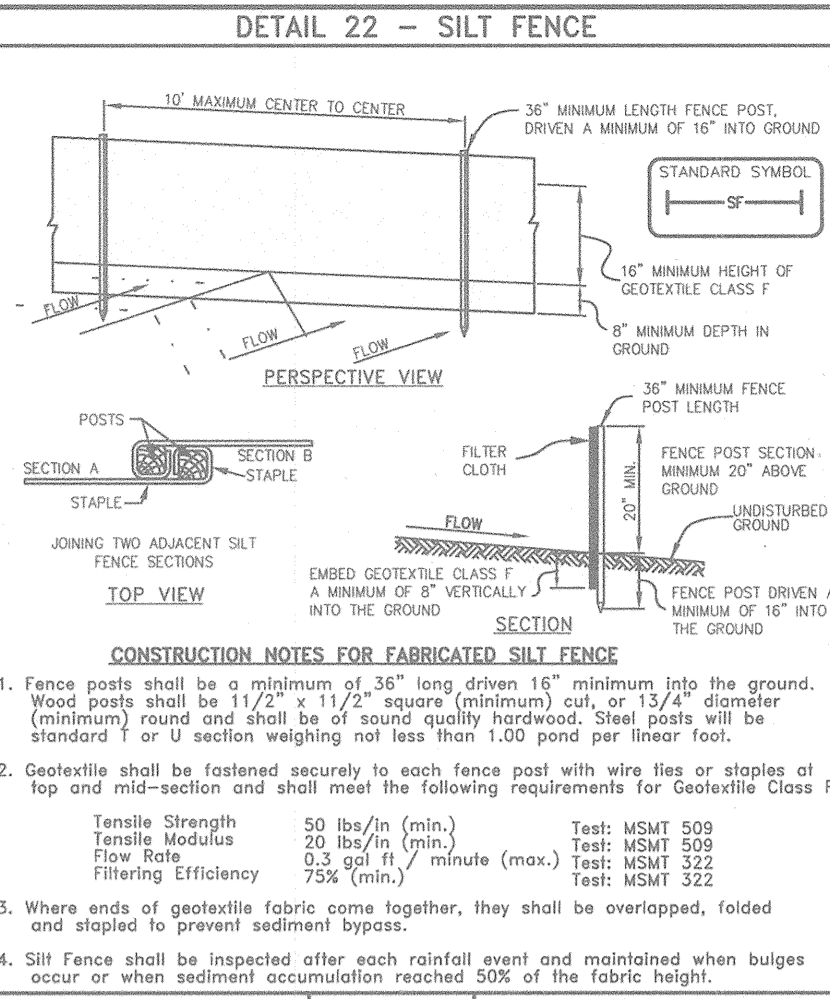
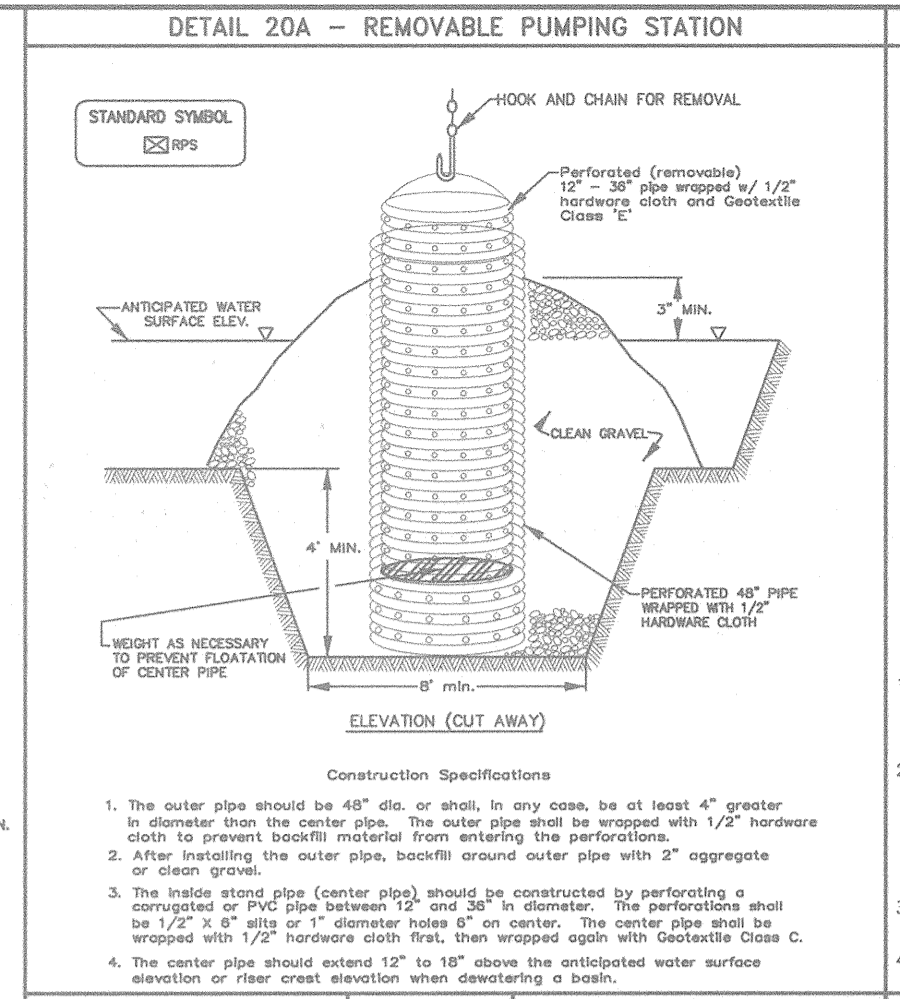
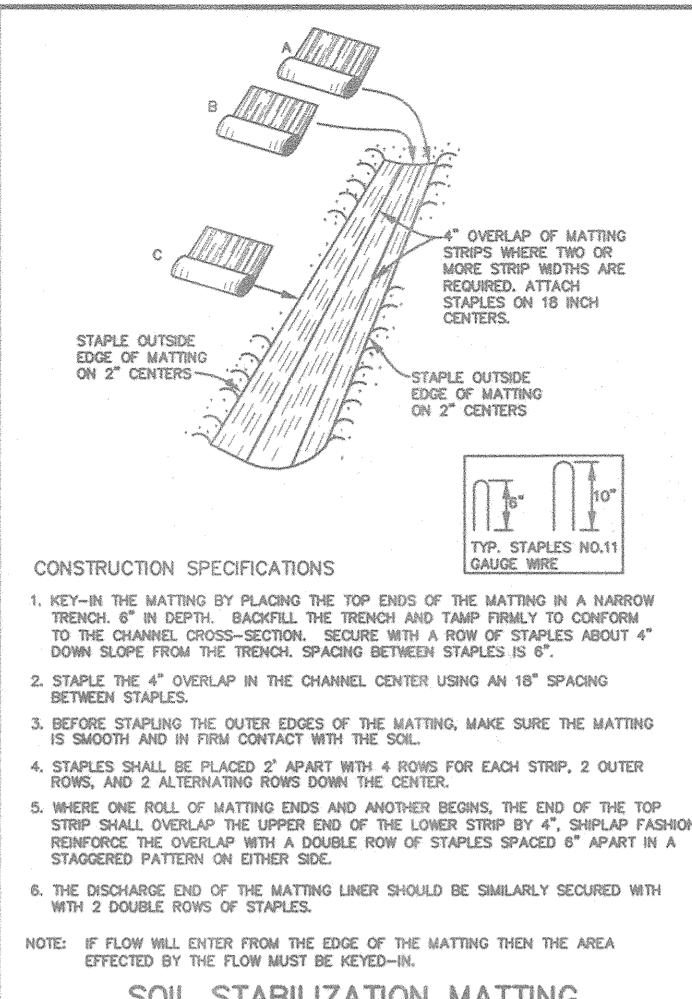
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

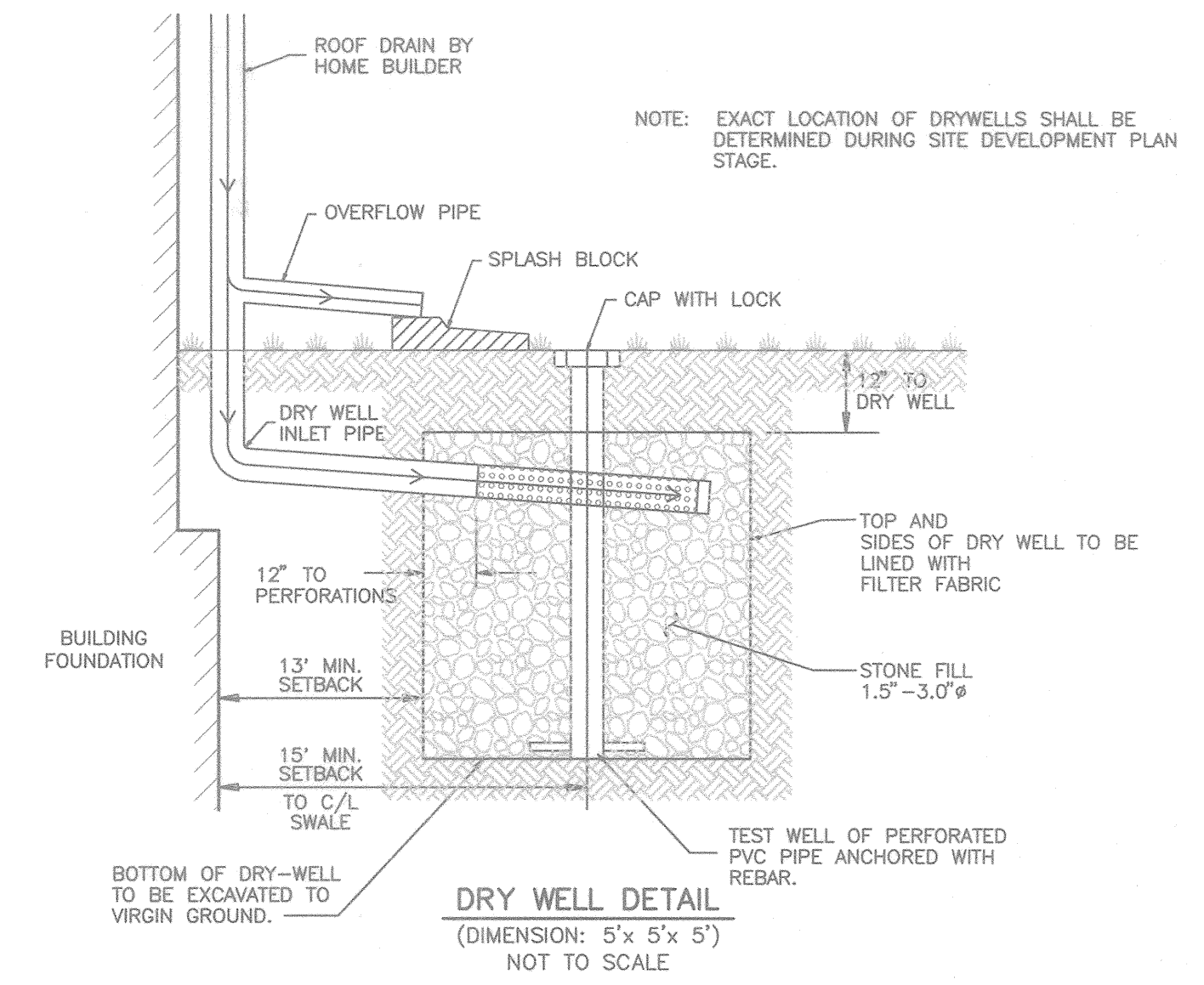
Stevan K. Beebe MEMBER 12-26-00
 DEVELOPER DATE

BY THE ENGINEER:

I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Donald Mason 12/26/00
 ENGINEER DATE





SOILS CLASSIFICATION*		
MAP SYMBOL	DESCRIPTION	HYDROLOGIC GROUP
Ba	BAILE SILT LOAM	D
B/B2	BRANDYWINE LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
B/C3	BRANDYWINE LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	C
B/D3	BRANDYWINE LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	C
CuB	COMUS SILT LOAM, LOCAL ALLUVIUM, 3 TO 8 PERCENT SLOPES	B
EB2	ELDAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GD3	GLENELG LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
GhB2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
MIB2	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MIC2	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
MIC3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
MD2	MANOR LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
MD3	MANOR LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
MIe	MANOR LOAM, 25 TO 45 PERCENT SLOPES	B
MhD	MANOR VERY STONY LOAM, 3 TO 25 PERCENT SLOPES	B
MhF	MANOR VERY STONY LOAM, 25 TO 45 PERCENT SLOPES	B
MIC3	MT. AIRY CHANNERY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
MD2	MT. AIRY CHANNERY LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B

* HOWARD COUNTY SOILS MAP PAGE 9.

NO.	2-26-02	REVISION	REMOVE ISLAND AND SPEED CONTROL DEVICES
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BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE Δ SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 Δ FAX: 410-465-8644

OWNER/DEVELOPER:	TREYBURN, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT:	TREYBURN PHASE 1, LOTS 1-48 AND NON-BUILDABLE PARCELS "A" - "C"
LOCATION:	TAX MAP 17 - BLOCK 9 - PARCEL 59 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE:	STORM DRAIN DRAINAGE AREA MAP
DATE:	JULY, 2000 OCTOBER, 2000	PROJECT NO.	0697
DESIGN:	MLV	DRAFT:	JMC
SCALE:	1" = 100'	DRAWING	14 OF 20

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard Shick 11/17/01
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Herdette 11/17/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

Paula Dammann 11/16/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped to topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable material. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 5 inch (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 85% of maximum dry density with a moisture content within ± 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be a least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the cores shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi, 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the side of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section

Corrugated Metal Pipe - all of the following criteria shall apply for corrugated metal pipe:

1. **Materials** - (Polymer Coated Steel Pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. **Connections** - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connection shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled on adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24 inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, pre-punched to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap type band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long annular corrugated band using a 3/8-inch thick closed cell circular neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. **Bedding** - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

5. Backfilling shall conform to "Structure Backfill".

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. **Materials** - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.

2. **Bedding** - Reinforced concrete pipe conduits shall be laid in a concrete bedding/cradle for their entire length. This bedding/cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.

3. **Laying pipe** - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be shown on the drawings.

Plastic Pipe - The following criteria shall apply for plastic pipe:

1. **Materials** - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirements of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirements of AASHTO M294 Type S.

2. **Joints and connections** to anti-seep collars shall be completely watertight.

3. **Bedding** - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Drainage Diaphragms - When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311.

Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

Care of Water during Construction

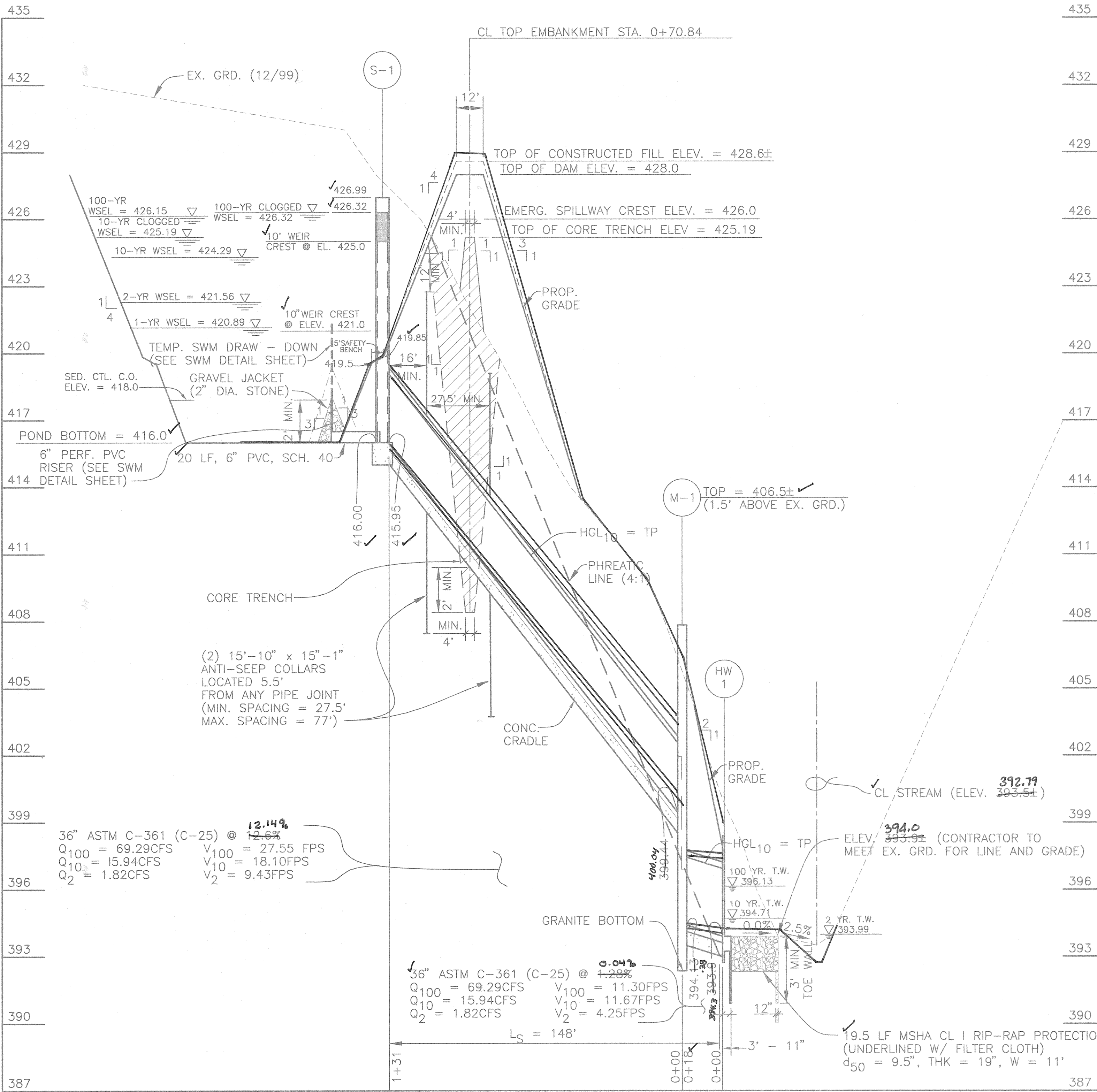
All work on permanent structures shall be carried out in areas free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the location being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.



SECTION THRU PRINCIPAL SPILLWAY

SCALE: HOR: 1" = 30' VERT: 1" = 3'

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY

ROUTINE MAINTENANCE

- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
- TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

NON-ROUTINE MAINTENANCE

- STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
- SEDIMENT SHOULD BE REMOVED FROM THE POND NO LATER THAN WHEN THE CAPACITY OF THE POND IS HALF FULL OF SEDIMENT, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY HOWARD COUNTY'S DEPARTMENT OF PUBLIC WORKS.

OPERATION, MAINTENANCE AND INSPECTION NOTE

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND RECORDING PROCEDURES OF STANDARDS AND SPECIFICATIONS FOR PONDS (MD-378), THE POND OWNERS' AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNERS SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

Donald Mason
ENGINEER
PE NO. 21443
DATE 8/8/05

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION, THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

By: *Stevan K. Bredner* MEMBER
DATE 12-26-00

DEVELOPER: *Stevan K. Bredner* DATE 12-26-00

BY THE ENGINEER:

I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Donald Mason
ENGINEER - DONALD A. MASON, P.E. # 21443
DATE 11/29/00

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

D. G. Waples 1/4/01
NATURAL RESOURCES CONSERVATION SERVICE DATE 1/4/01

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

John A. Stiles 1/4/01
HOWARD SOIL CONSERVATION DISTRICT DATE 1/4/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Howard Stiles 1/5/01
CHIEF, BUREAU OF HIGHWAYS DATE 1/5/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Howard 1/17/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 1/17/01

Donald Mason 1/19/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 1/19/01

NO.	DATE	REVISION
3-7-05		REVISE PER AS-BUILT CONDITIONS

BENCHMARK ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE A SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644

Donald Mason
REGISTERED PROFESSIONAL ENGINEER
DATE 11/29/00

OWNER/DEVELOPER:	PROJECT:
TREYBURN, L.L.C. P.O. BOX 417 ELLCOTT CITY, MD 21041 410-465-4244	TREYBURN PHASE 1, LOTS 1-48 AND NON BUILDABLE PARCELS "A - C"
DESIGN: MLV	DRAFT: JMC
DATE: JULY, 2000	PROJECT NO. 0697
SCALE: AS SHOWN	DRAWING 16 OF 20



THIS SHEET FOR LANDSCAPING
PURPOSES ONLY.
SEE SHEET 19 FOR LANDSCAPING
NOTES AND DETAILS

DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
Treyburn LLC
By: *Michael M. Mendenhall* 12-26-00
DEVELOPER OR STEVEN K. PREDAN DATE

NO.	DATE	REVISION
2-26-02		REMOVE ISLAND SPEED CONTROL DEVICES AND RELOCATE LANDSCAPE TREES

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644

Donald M. Mendenhall
Professional Engineer

12/26/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard Shickler 1/10/01
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamble 1/12/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert Dammann 1/10/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

OWNER/DEVELOPER: TREYBURN, L.L.C.
P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

PROJECT: TREYBURN
PHASE 1, LOTS 1-48, AND
NON-BUILDABLE PARCELS "A" - "C"

LOCATION: TAX MAP 17 - BLOCK 9 - PARCEL 59
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: LANDSCAPE PLAN

DATE: JULY, 2000 PROJECT NO. 0697
OCTOBER, 2000

DESIGN: JMC DRAFT: JMC SCALE: 1" = 100' DRAWING 17 OF 20



- LEGEND**
- APPROXIMATE HOUSE LOCATION
 - EX. STREAM OR EDGE OF POND
 - EX. TREE LINE
 - SPECIMEN TREE
 - SPECIMEN TREE TO BE REMOVED
 - WETLANDS
 - FOREST TO BE RETAINED
 - RETENTION AREA
 - STEEP SLOPES (25% OR GREATER)
 - TREE PROTECTION FENCE
 - LIMIT OF DISTURBANCE
 - 454 EXISTING CONTOUR
 - 464 PROPOSED CONTOUR
 - APPROXIMATE LOCATION OF FOREST CONSERVATION SIGNAGE

FOR FOREST CONSERVATION NOTES AND DETAILS SEE SHEET 19.

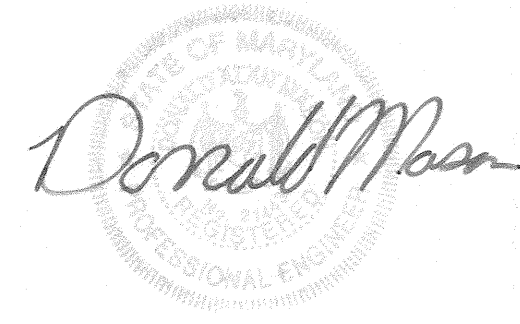
THIS PLAN IS FOR FOREST CONSERVATION ONLY.

Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS
 P.O. Box 5056 Glen Arden, MD 21057 (410) 592-6752

MD DNR Qualified Professional
 USAACE Wetland Deliberator
 Certificate # WTD-99-0006010044182
John F. Canale

NO.	DATE	REVISION
Δ	2-26-02	REMOVE ISLAND AND SPEED CONTROL DEVICES

BENCHMARK
 ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE Δ SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 Δ FAX: 410-465-6644

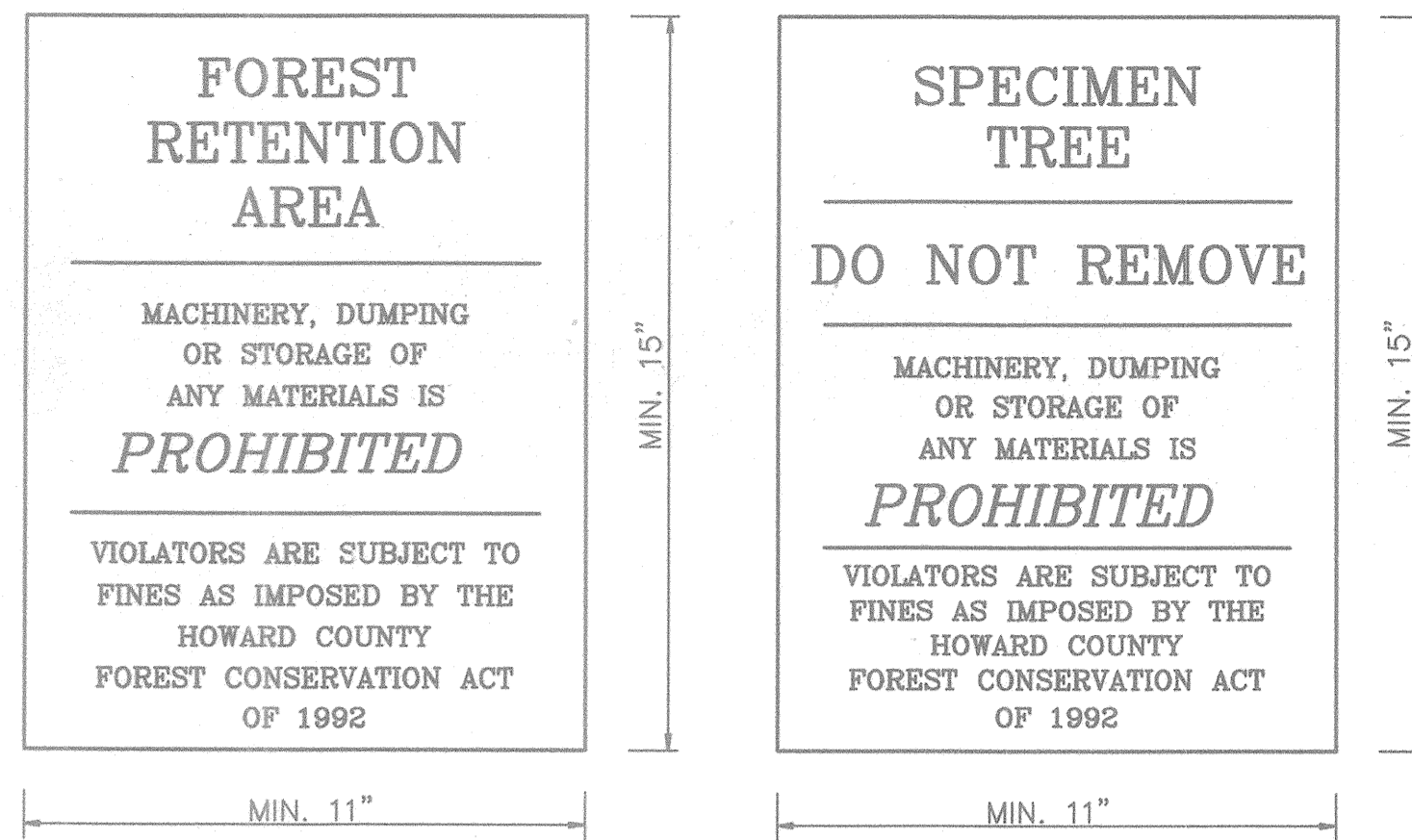

Donald M. Mean
 12/26/00

OWNER/DEVELOPER: TREYBURN, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: TREYBURN PHASE 1, LOTS 1-48, AND NON-BUILDABLE PARCELS "A" - "C"
LOCATION: TAX MAP 17 - BLOCK 9 - PARCEL 59 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: FOREST CONSERVATION PLAN
DATE: JULY, 2000 OCTOBER, 2000	PROJECT NO. 0697
DESIGN: JMC DRAFT: JMC	SCALE: 1" = 100' DRAWING 18 OF 20

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard Shick 1/17/01
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamilton 1/17/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

John Damman 1/17/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



SIGNAGE
NOT TO SCALE

SCHEDULE A PERIMETER LANDSCAPE EDGE					
CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES		
	① B	② B	③ A	④ A	⑤ A
LANDSCAPE TYPE					
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	772	349	859	2156	1826
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES* 349	YES* 390	YES* 2156	YES* 1333
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED					
SHADE TREES	15	-	8	-	8
EVERGREEN TREES	19	-	-	-	-
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-
SHRUBS	-	-	-	-	-
NUMBER OF PLANTS PROVIDED					
SHADE TREES	15	-	8	-	8
EVERGREEN TREES	19	-	-	-	-
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTE)	-	-	-	-	-
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)					

* - EXISTING TREES TO REMAIN

STREET TREE CALCULATIONS	
STREET TREES REQUIRED FOR LINEAR FEET OF RIGHT-OF-WAY	
MD ROUTE 99: 1121' - 349' OF CREDIT FOR PRES. EX. VEG. = 772' 772'/40 = 19 TREES REQ., 19 TREE PROV.	
HARBIN COURT: 880'/40 = 22 TREES REQ., 22 TREE PROV.	
WEATHERSTONE DRIVE: 2000'/40 = 50 TREES REQ., 50 TREE PROV.	
TREYBURN COURT: 2000'/40 = 50 TREES REQ., 50 TREE PROV.	
TOTAL STREET TREES PROVIDED: 141	

LANDSCAPING NOTES

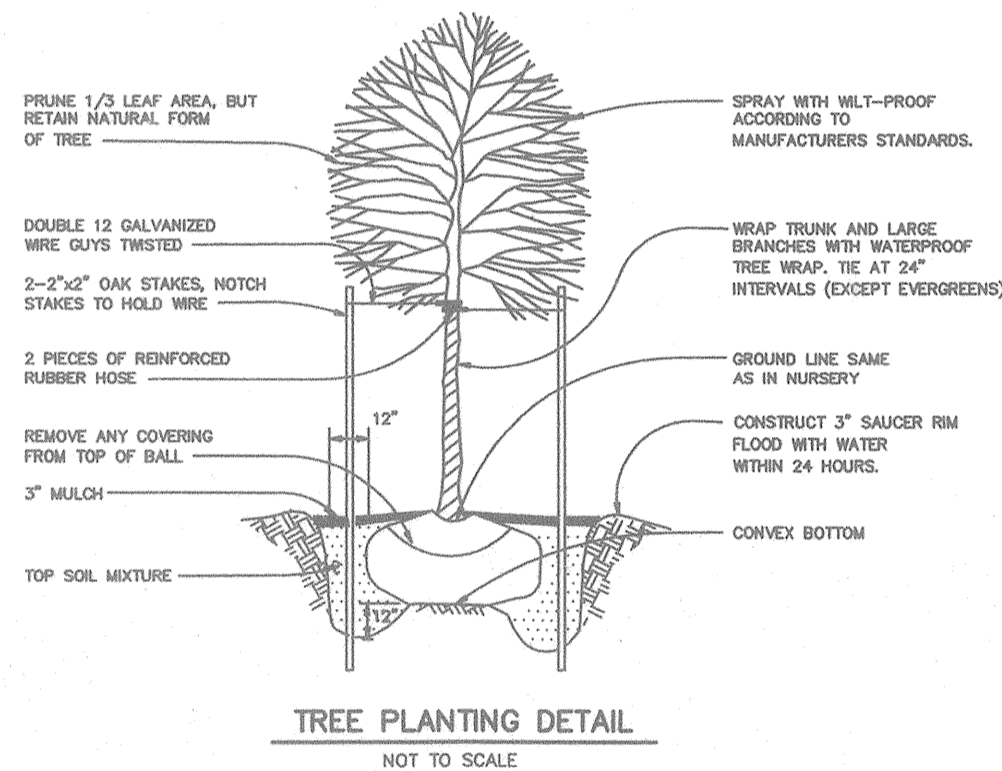
THE DEVELOPER SHALL BE RESPONSIBLE FOR THE STREET TREES, STORMWATER MANAGEMENT POND PLANTING, PERIMETER LANDSCAPE PLANTING AND THE PRESERVATION OF THE PERIMETER VEGETATION AS SHOWN ON THESE PLANS.

- PLANTING NOTES:**
- TREES MUST BE PLANTED A MINIMUM OF 4 FEET FROM THE EDGE OF PAVING, 10' FROM A DRIVEWAY AND MUST BE A MINIMUM OF 5 FEET FROM ANY STORM DRAIN.
 - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$19,350.00.
 - THE REQUIRED TYPE B "SIDE OF UNIT TO ROAD PLANTING" FOR THE INTERNAL ROADS WILL BE PROVIDED BY THE BUILDER ON THE SITE DEVELOPMENT PLANS.

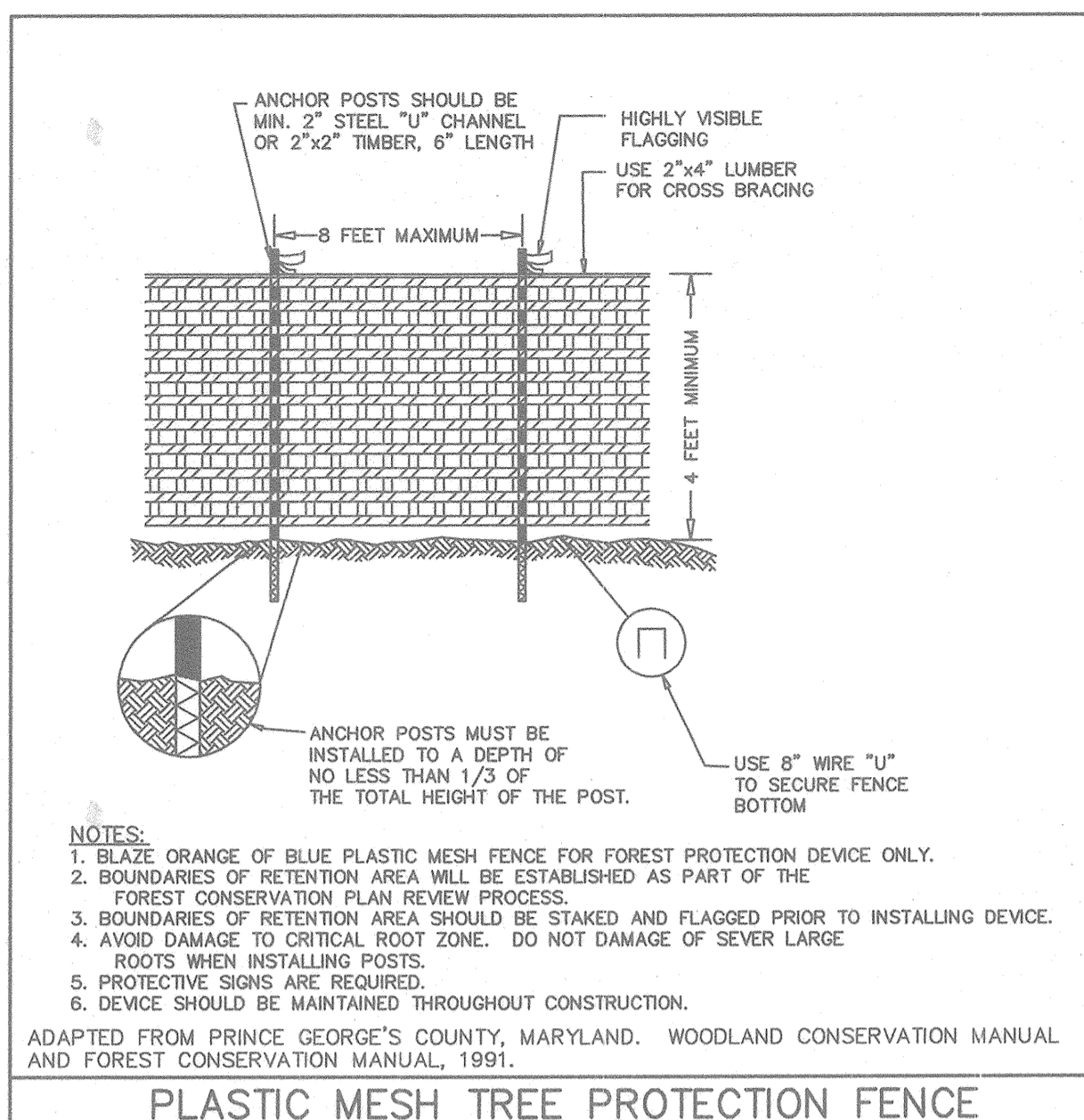
LANDSCAPE PLANTING LIST				STREET TREE PLANTING LIST			
SYMBOL	QUANTITY	NAME	REMARKS	SYMBOL	QUANTITY	NAME	REMARKS
⊙	15	PRUNUS SARGENTI (SARGENT CHERRY)	2 1/2" MIN. CAL. B & B FULL HEAD	⊙	50	PLATANUS X ACERIFOLIA 'BLOODGOOD' (BLOODGOOD LONDON PLANE)	2 1/2" MIN. CAL. B & B FULL HEAD
⊙	13	TILIA CORDATA 'GREENSPIRE' (GREENSPIRE LITTLELEAF LINDEN)	2 1/2" MIN. CAL. B & B FULL HEAD	⊙	40	TILIA CORDATA 'GREENSPIRE' (GREENSPIRE LITTLELEAF LINDEN)	2 1/2" MIN. CAL. B & B FULL HEAD
⊙	8	PLATANUS X ACERIFOLIA 'BLOODGOOD' (BLOODGOOD LONDON PLANE)	2 1/2" MIN. CAL. B & B FULL HEAD	⊕	51	ACER SACCHARUM 'GREEN MOUNTAIN' (GREEN MOUNTAIN SUGAR MAPLE)	2 1/2" MIN. CAL. B & B FULL HEAD
⊕	8	ACER SACCHARUM 'GREEN MOUNTAIN' (GREEN MOUNTAIN SUGAR MAPLE)	2 1/2" MIN. CAL. B & B FULL HEAD				
●	41	PICEA ABIES (NORWAY SPRUCE)	6'-8' HT. B & B				

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING	
LINEAR FEET OF PERIMETER	⊙ B(1136')
NUMBER OF TREES REQUIRED	23
SHADE TREES	28
EVERGREEN TREES	
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	YES (35% OR 398')
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
NUMBER OF TREES PROVIDED	
SHADE TREES	13
EVERGREEN TREES	18
OTHER TREES (2:1 SUBSTITUTE)	4*

* 4 PINES SUBSTITUTED FOR 2 SHADE TREES TO BETTER SCREEN MCKENZIE MEADOWS, SECTION TWO.



TREE PLANTING DETAIL
NOT TO SCALE



- NOTES:**
- BLAZE ORANGE OF BLUE PLASTIC MESH FENCE FOR FOREST PROTECTION DEVICE ONLY.
 - BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
 - BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 - AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OF SEVER LARGE ROOTS WHEN INSTALLING POSTS.
 - PROTECTIVE SIGNS ARE REQUIRED.
 - DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

ADAPTED FROM PRINCE GEORGE'S COUNTY, MARYLAND. WOODLAND CONSERVATION MANUAL AND FOREST CONSERVATION MANUAL, 1991.

PLASTIC MESH TREE PROTECTION FENCE

FCP NOTES:

- ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
- FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
- LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
- THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
- NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
- TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS.
- PERMANENT SIGNAGE SHALL BE PLACED 50-100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.
- FOREST CONSERVATION OBLIGATIONS ARE MET BY 13.3 ACRES OF RETENTION ON SITE. FINANCIAL SURETY FOR THE REQUIRED OBLIGATION MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$57,934.80.

SEQUENCE OF CONSTRUCTION

- SEDIMENT CONTROL AND TREE PROTECTION DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLAN FOR SITE. SITE SHALL BE GRADED IN ACCORDANCE WITH THE GENERAL CONSTRUCTION PLANS.
- UPON COMPLETION OF THE PLANTING, SIGNAGE SHALL BE INSTALLED AS PER THE FOREST PROTECTION DEVICES SHOWN ON THE FOREST CONSERVATION PLAN.

FOREST DATA	
	ACRES
GROSS AREA:	44.1
100 YEAR FLOODPLAIN:	0.91
NET TRACT AREA (NTA):	43.2
EXISTING FOREST (NTA):	26.8
CONSERVATION THRESHOLD:	8.6
BREAK-EVEN POINT:	12.4
FOREST TO BE CLEARED (NTA):	12.5
FOREST TO BE RETAINED IN FCE (RETENTION):	13.3

FOREST CONSERVATION TABULATION		
DESIGNATION	TYPE	ACREAGE
A	RETENTION	11.0
B	RETENTION	0.4
C	RETENTION	1.1
D	RETENTION	0.8
TOTAL	ALL RETENTION	13.3

**APPENDIX E
FOREST CONSERVATION WORKSHEET**

I. BASIC SITE DATA		ACRES (1/10 acre)
GROSS SITE AREA		44.1
AREA WITHIN 100 YEAR FLOODPLAIN		0.9
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)		N/A
NET TRACT AREA		43.2
LAND USE CATEGORY (R-RLD, R-RMD, R-S, C/I/O, I)		R-S

II. INFORMATION FOR CALCULATIONS		ACRES
A. NET TRACT AREA		43.2
B. REFORESTATION THRESHOLD (20% x A)		8.6
C. AFFORESTATION MINIMUM (15% x A)		6.5
D. EXISTING FOREST ON NET TRACT AREA		25.9
E. FOREST AREAS TO BE CLEARED		12.5
F. FOREST AREAS TO BE RETAINED (RETENTION)		13.3

III. DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION

- Reforestation**
If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and clearing of forest areas is proposed, reforestation requirements may apply.
GO TO SECTION IV

- Afforestation**
If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and no clearing of existing forest resources is proposed, no reforestation is required. No further calculations are needed.

- Afforestation**
If existing forest areas are less than the afforestation minimum (if D is less than C), afforestation requirements apply.
GO TO SECTION V

IV. REFORESTATION CALCULATIONS

IV. REFORESTATION CALCULATIONS		ACRES (1/10 acre)
A. NET TRACT AREA		43.2
B. REFORESTATION THRESHOLD (20% x A)		8.6
D. EXISTING FOREST ON NET TRACT AREA		25.9
E. FOREST AREAS TO BE CLEARED		12.5
F. FOREST AREAS TO BE RETAINED		13.3
G. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD (D-F, if F equals or is greater than B, Alternate 1) (D-B, if F is less than B, Alternate 2)		12.5
H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (B-F, if applicable)		0
I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD (F-B, Retention Credit, if applicable)		4.7

SELECT THE ALTERNATE THAT APPLIES:

- Clearing above the threshold only**
If forest areas to be retained equal or are greater than the reforestation threshold (if F equals or is greater than B), the following calculations apply:
REFORESTATION FOR CLEARING ABOVE THRESHOLD $G \times 1/4$ = 3.1
CREDIT FOR FOREST AREAS RETAINED ABOVE THRESHOLD $I =$ Retention Credit = 4.7
TOTAL REFORESTATION REQUIRED $(G \times 1/4) - I$ = 0
If the total reforestation requirement is equal to or less than 0, no reforestation is required.

- Clearing below the threshold**
If forest areas to be retained are less than the reforestation threshold (if F is less than B), the following calculations apply:
REFORESTATION FOR CLEARING ABOVE THRESHOLD $G \times 1/4$ = 3.1
REFORESTATION FOR CLEARING BELOW THRESHOLD $H \times 2$ = 0
TOTAL REFORESTATION REQUIRED $(G \times 1/4) + (H \times 2)$ = 3.1
Since clearing occurs below the threshold, no forest retention credit is possible.

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Charles Smith
CHIEF, BUREAU OF HIGHWAYS
DATE: 1/26/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Hamilton
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 1/26/01

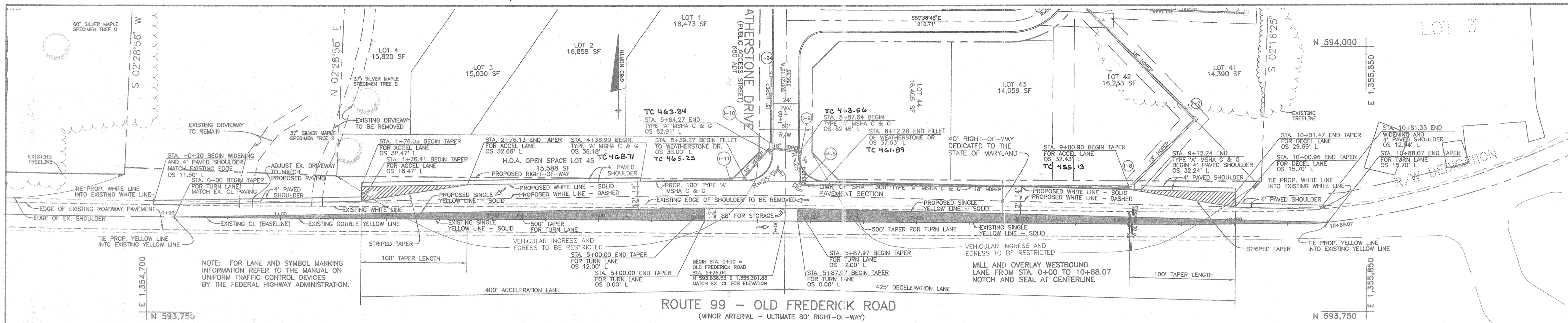
Maria Damiano
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 1/26/01

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

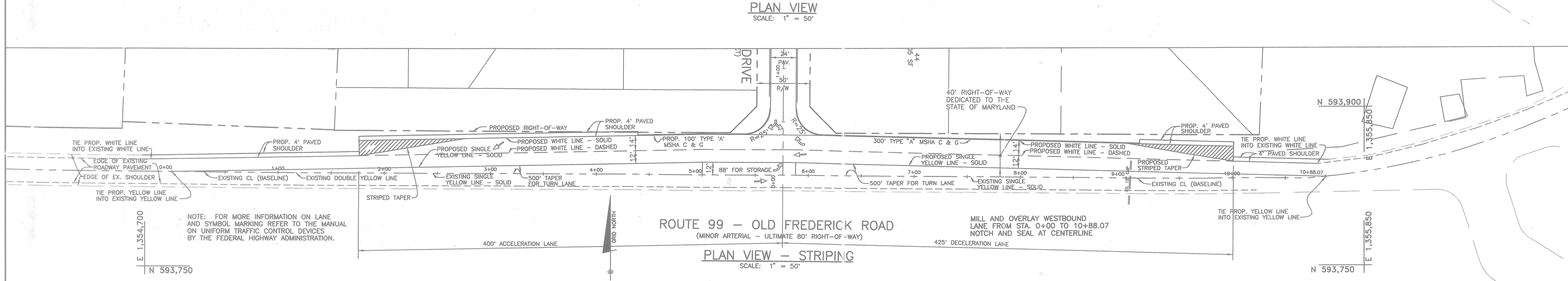
10000 Greenway Drive, Suite 100
P.O. Box 5906, Glen Arm, MD 21057 (410) 592-6752

Professional Engineer Seal for J.C. Mason, State of Maryland, License No. 12626.

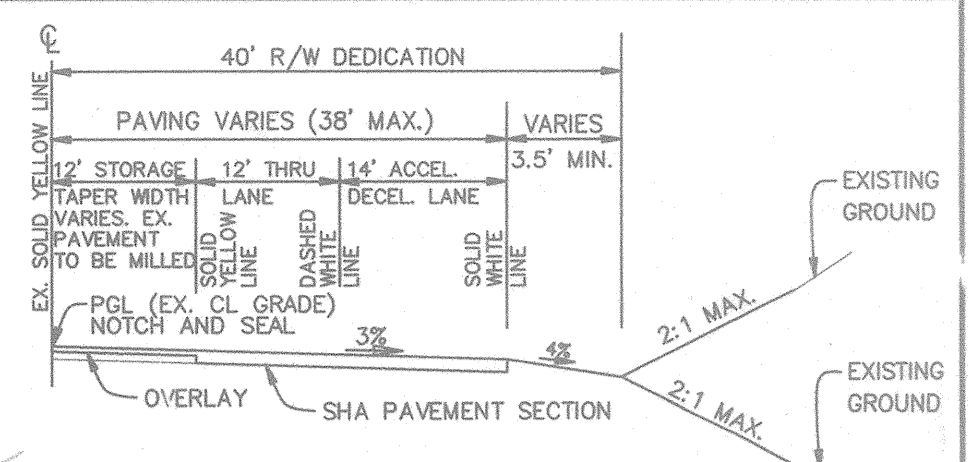
OWNER/DEVELOPER: TREYBURN, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: TREYBURN PHASE 1, LOTS 1-48 AND NON-BUILDABLE PARCELS "A" - "C"
DESIGN: JMC	DRAFT: JMC
DATE: JULY 2000 OCTOBER 2000	PROJECT NO. 0697
SCALE: AS SHOWN	DRAWING 19 OF 20



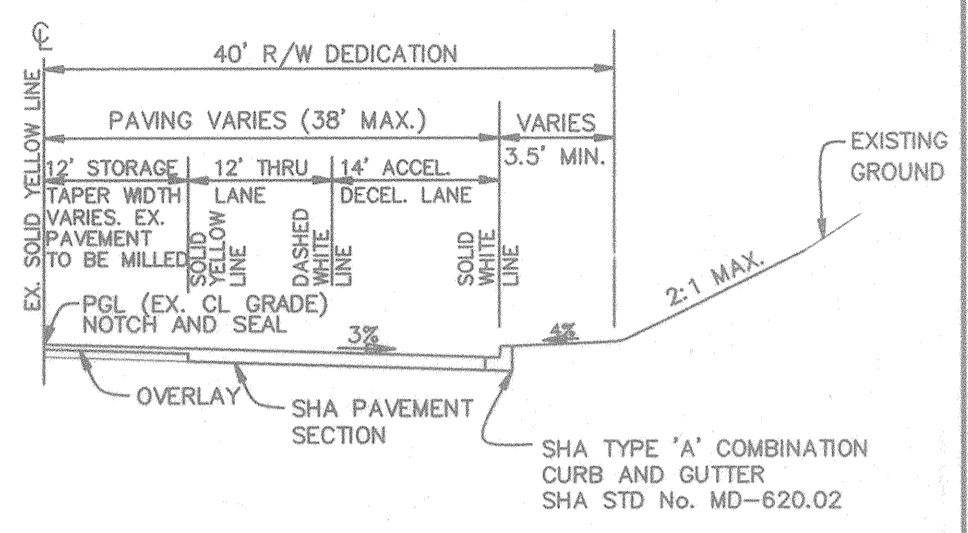
ROUTE 99 - OLD FREDERICK ROAD
(MINOR ARTERIAL - ULTIMATE 80' RIGHT-OF-WAY)
PLAN VIEW
SCALE: 1" = 50'



ROUTE 99 - OLD FREDERICK ROAD
(MINOR ARTERIAL - ULTIMATE 80' RIGHT-OF-WAY)
PLAN VIEW - STRIPING
SCALE: 1" = 50'

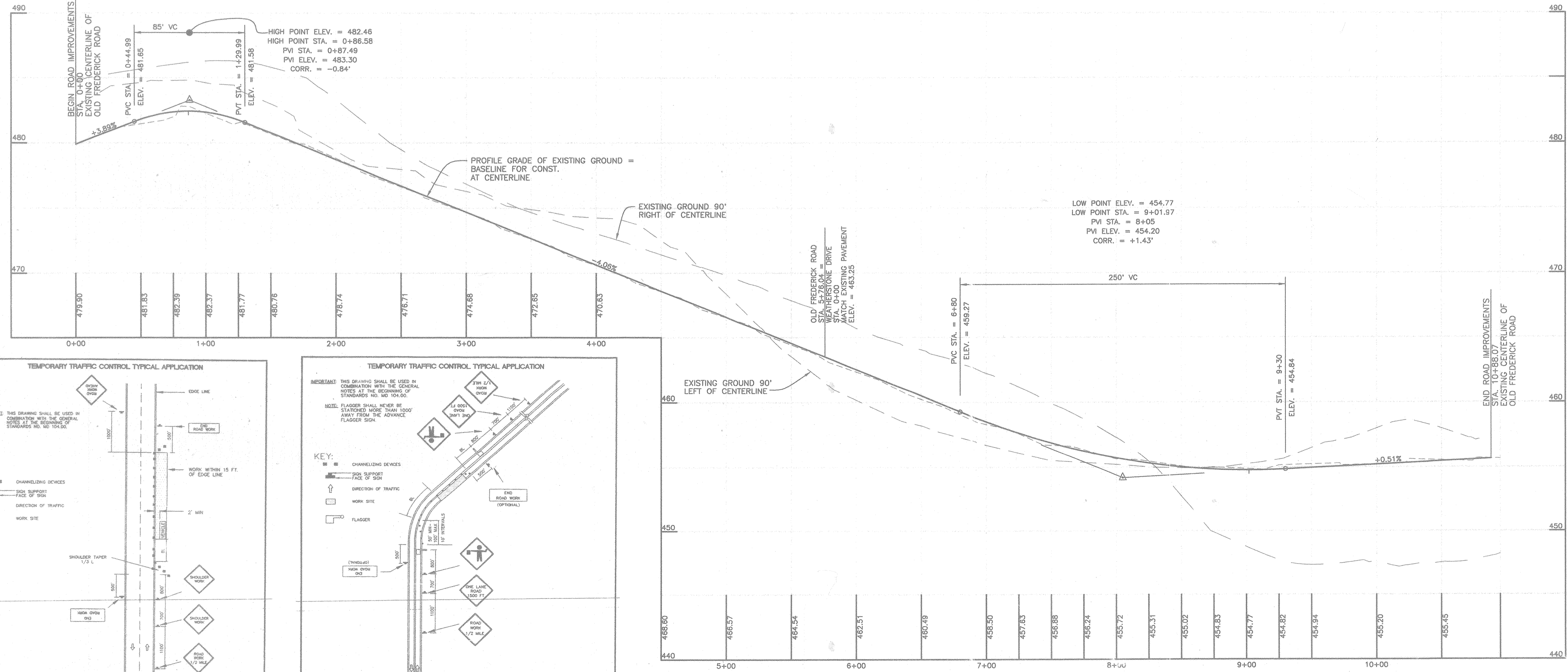


TYPICAL WIDENING SECTION
OLD FREDERICK ROAD - OPEN SECTION
NOT TO SCALE



TYPICAL WIDENING SECTION
OLD FREDERICK ROAD - CURB AND GUTTER
NOT TO SCALE

- SEQUENCE OF CONSTRUCTION FOR ROADWAY WIDENING
- 1) OBTAIN MSHA ACCESS PERMIT.
 - 2) STABILIZE IN ACCORDANCE WITH THE SEDIMENT AND EROSION CONTROL PLAN INCLUDED WITH THIS SET OF ROAD CONSTRUCTION PLANS OR AS DIRECTED BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 - 3) CLOSE THE SHOULDER AND DO THE NECESSARY WORK TO PREPARE OF THE ROADWAY WORK.
 - 4) CONSTRUCT THE STORM DRAIN INLET AND ASSOCIATED PIPES, PREPARE ROAD BED SUBGRADE.
 - 5) INSTALL GRADED AGGREGATE BASE.
 - 6) INSTALL BASE PAVING.
 - 7) CLOSE WESTBOUND LANE AS NECESSARY.
 - 8) PERFORM ANY MILLING OR PAVEMENT REMOVAL THAT IS NECESSARY WITHIN THE CURRENT WESTBOUND LANE.
 - 9) INSTALL FINAL PAVING.
 - 10) INSTALL ALL REQUIRED LANE AND TAPER MARKINGS.
 - 11) REMOVE ALL TRAFFIC CONTROL DEVICES.



OLD FREDERICK ROAD
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

Professional Engineer Seal for Donald Maan, State of Maryland, License No. 12000. Date: 12/26/00.

PAVING SECTION
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard Shickler 1/10/01
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Shickler 1/17/01
CHIEF, DIVISION OF LAND DEVELOPMENT

Donald Maan 1/17/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	DATE	REVISION
3-7-05		REVISED PER AS-BUILT CONDITIONS

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8644

OWNER/DEVELOPER: TREYBURN, L.L.C.
P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

PROJECT: TREYBURN
PHASE 1, LOTS 1-48, AND
NON-BUILDABLE PARCELS "A" - "C"

LOCATION: TAX MAP 17 - BLOC 9 - PARCEL 59
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: OLD FREDERICK ROAD IMPROVEMENTS

DATE: NOVEMBER, 2000 PROJECT NO. 0697

DESIGN: JMC DRAFT: JMC SCALE: AS SHOWN DRAWING 20 OF 20