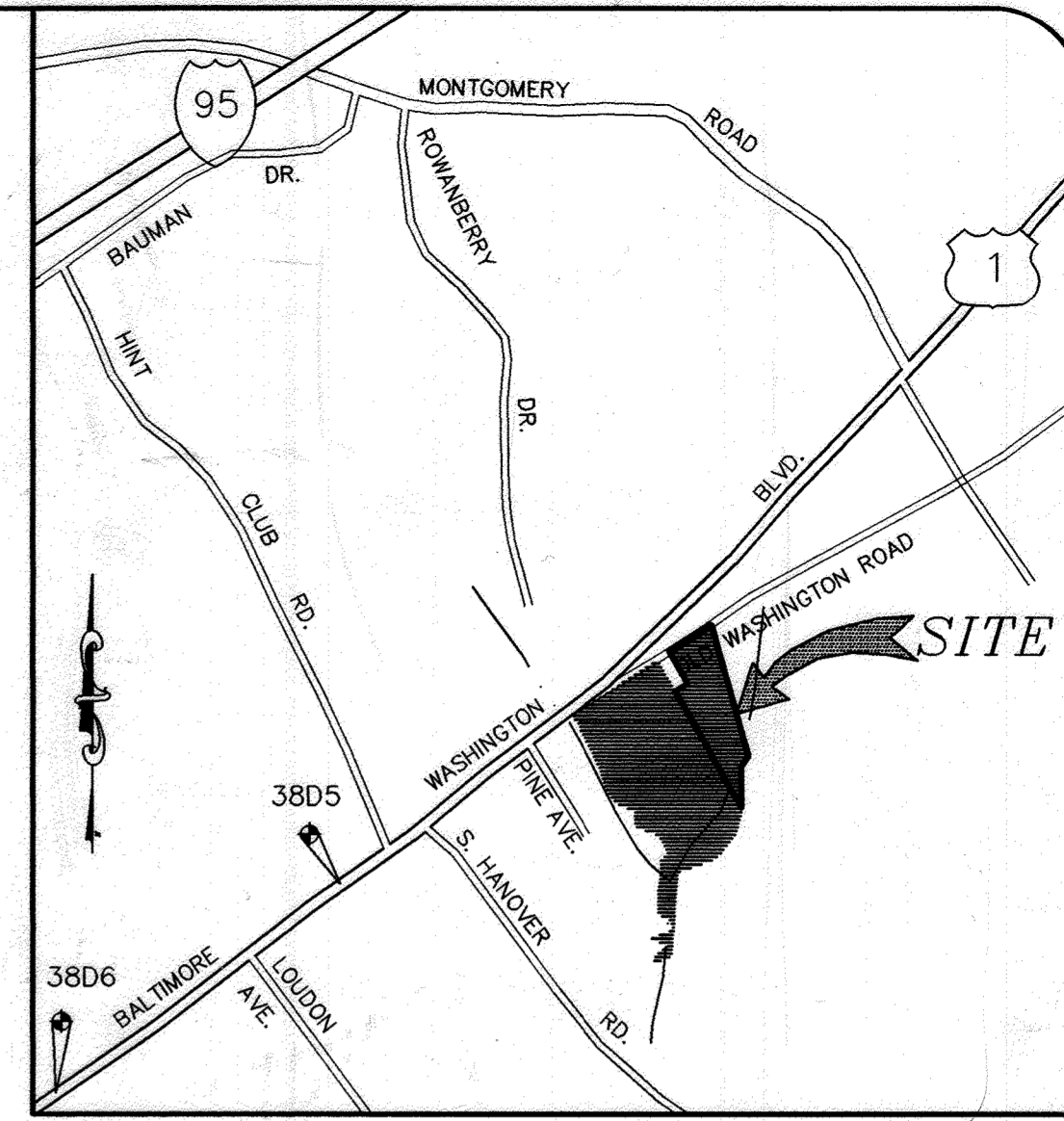


INDEX OF SHEETS

NO	TITLE
1	SITE DEVELOPMENT PLAN
2	GRADING & SEDIMENT CONTROL PLAN - PHASE I
3	GRADING & SEDIMENT CONTROL PLAN - PHASE II
4	SEDIMENT CONTROL NOTES AND DETAILS
5	STORMDRAIN PROFILES & STRUCTURE SCHEDULE
6	DRAINAGE AREA MAP
7	STORMWATER MANAGEMENT DETAILS & SPECIFICATIONS
8	SOIL BORING LOGS
9	LANDSCAPE PLAN
10	FOREST CONSERVATION & REFORESTATION PLAN
11	FOREST CONSERVATION & REFORESTATION PLAN
12	SITE DETAILS

LEGEND

- EXISTING GRADES
- 2' CONTOURS
- 10' CONTOURS
- LIMIT 100 YEAR FLOODPLAIN
- EX. TREELINE
- PARKING OR BUILDING REMOVAL
- SLOPES - 15% TO 24.9%
- SLOPES - 25% +
- FLOW ARROW
- PROP. TREELINE
- TRAFFIC FLOW
- WETLAND LIMIT
- 100 YEAR PUBLIC FLOODPLAIN AND UTILITY EASEMENT
- FOREST CONSERVATION EASEMENT
- EX. GABION WALL (SDP-98-139)
- VEHICLE STORAGE AREA



GENERAL NOTES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/ CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:
 - MISS UTILITY 1-800-257-7777
 - C&P TELEPHONE COMPANY (410) 725-9976
 - HOWARD COUNTY BUREAU OF UTILITIES (410) 313-4900
 - AT&T CABLE LOCATION DIVISION (410) 393-3533
 - BALTIMORE GAS & ELECTRIC (410) 685-0123
 - STATE HIGHWAY ADMINISTRATION (410) 531-5533
 - HOWARD COUNTY DEPT. OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION (410) 313-1880

DETAIL A

SCALE: 1" = 30'

DETAIL B

SCALE: 1" = 50'

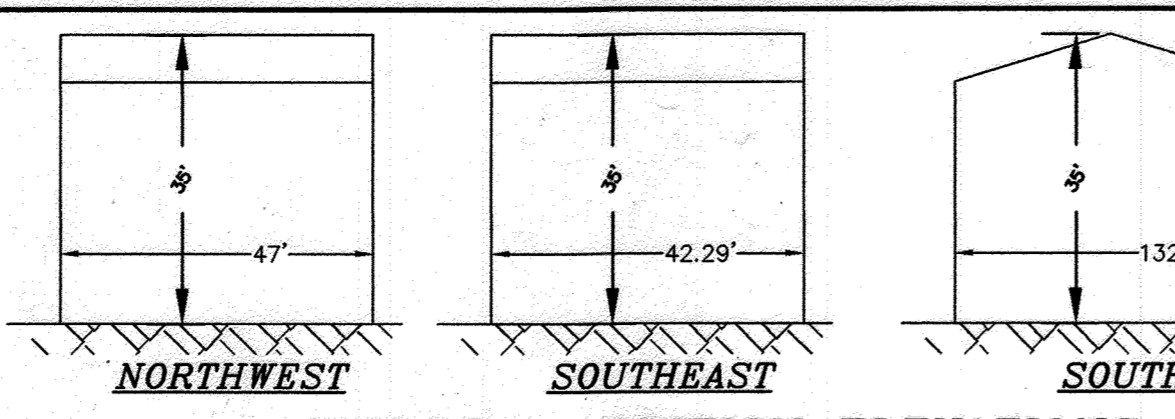
RELINE LEGEND

- REMOVE AND REPLACE CONCRETE
- NEW 500 GAL TANK (POLY WALL)
- BOLLARD (SEE ARCH PLANS FOR BOLLARD SPEC)
- PR. BUILDING
- PR. CURB
- PR. CONCRETE
- ASPHALT TO BE REMOVED
- T&R TO BE REMOVED

LINE TABLE

LINE	LENGTH	BEARING
L1	10.00'	S174°45'E
L2	22.49'	S28°36'04"W
L3	10.30'	S28°36'04"W
L4	10.00'	S174°45'E

OWNER/DEVELOPER
ALBAN TRACTOR CO., INC.
P. O. BOX 9595
BALTIMORE, MARYLAND 21237
(410) 686-7777
ATTN: CHUCK WITMER



TAX MAP 38, PARCEL 224
JAMES R. BALLANTINE
LIBER 1851, FOLIO 296
ZONED RSC

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION **MK**
DATE **3/23/00**

CHIEF, DIVISION OF LAND DEVELOPMENT **HB**
DATE **3/29/00**

CHARLES W. MILES, JR.
561/690
TAX MAP 38
PARCEL 303
ZONED M-1

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
CHARLES W. MILES, JR.
No. 1752
EXPIRES 12/31/02

W. W. SHIPMAN
413/278
TAX MAP 38
PARCEL 220
ZONED M-1

JACK W. ASHBOCK
TAX MAP 38
PARCEL 750
ZONED M-1

PERMIT INFORMATION CHART

NAME ALBAN TRACTOR CO., INC.	SECTION/AREA 221, 223 & 524	LOT/PARCEL # 221, 223 & 524
PLAT # OR L/F 1836/228 & 2173-98	ZONE M-1	ELEC. DIST. FIRST
WATER CODE A01	SEWER CODE 2150529	CENSUS TRACT 6012
PARCEL 221, 525 & 223	STREET ADDRESS 6455 WASHINGTON BLVD.	

FINANCIAL SECURITY FOR REQUIRED PERIMETER
LAND SCANS WILL BE USED AS PART OF THE GRADING PERMIT.

IN THE AMOUNT OF
\$ 750.00 PER 20 SHEETS AT \$30.00 EACH

1" ROLLER
COMPACTED CONC
4" GRADED
AGGREGATE SUBBASE

TYPICAL PAVING SECTION
NOT TO SCALE

Project	date	3/7/00
98014.10	engineering	
09/06/13	Illustration	
5	ADD WASH BAY FEELING AND PAVING	
4	REMOVE AND REPLACE CONCRETE AT BAY DOORS, APD	
3	REMOVE EXISTING ASPHALT DRIVE AND REUSE FOR PARKING	
2	REMOVE PROPERTY LINE AND PARKING AROUND DETAIL 'A'	
1	TO DELETE CURB & STORM DRAIN L.S. & R.L.	
	description	
	revisions	
	scale	1" = 50'
	FCL	
	PCL	
	approval	

TAX MAP 38, PARCELS 221, 524 & 223
ALBAN ENGINE
SITE DEVELOPMENT PLAN

FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Surveyors
Planners

5072 Dorsay Hall Drive, Suite 202, Elkton City, Maryland 21042
(410) 997-0296, Fax: (301) 621-5521, Wash. (410) 997-0298 Fax.

1 OF 12

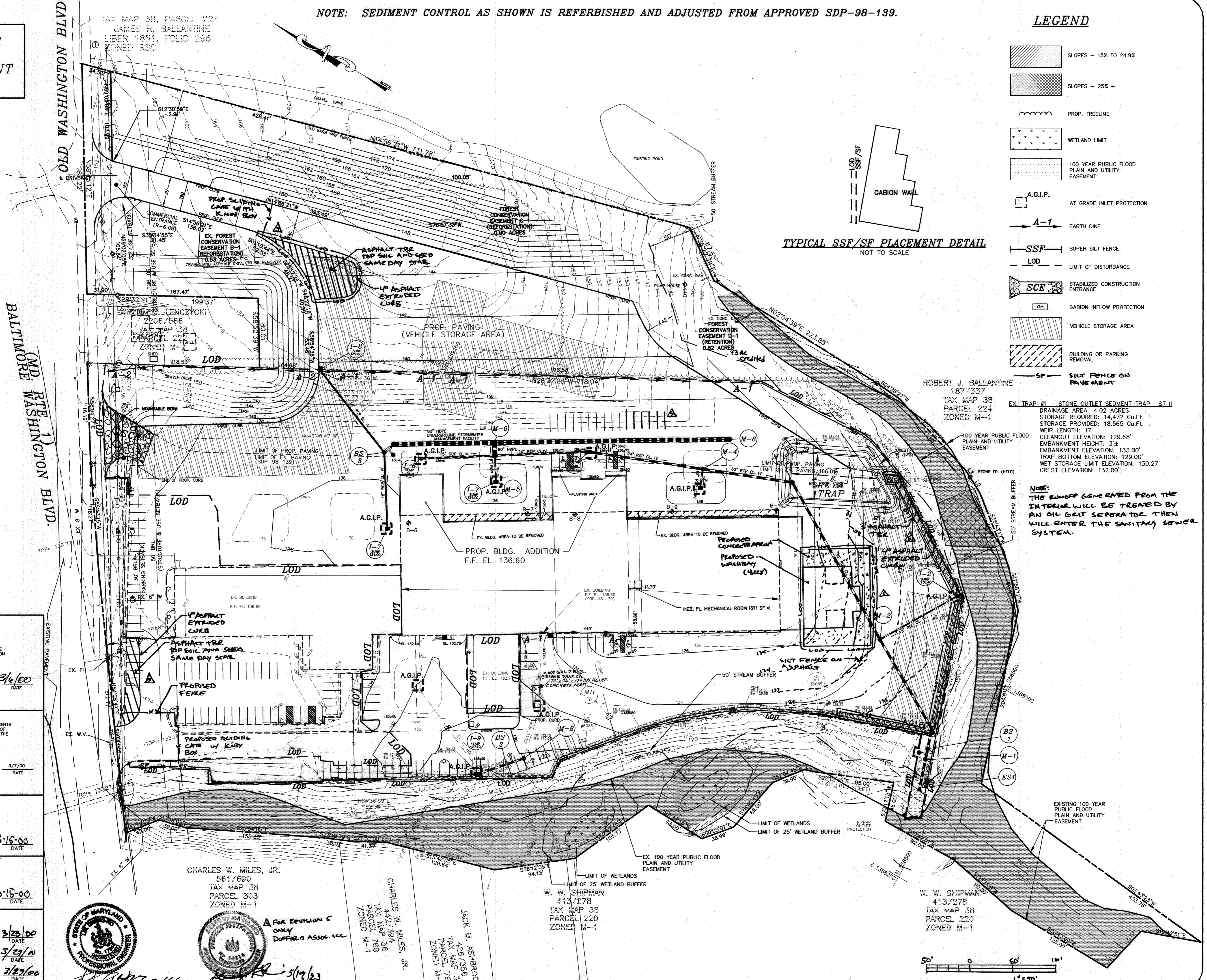
THIS PLAN IS FOR THE PURPOSE OF GRADING & SEDIMENT CONTROL ONLY

NOTE: SEDIMENT CONTROL AS SHOWN IS REFERBISHED AND ADJUSTED FROM APPROVED SDP-98-139.

LEGEND

- SLOPES - 15% TO 24.9%
- SLOPES - 25% +
- PROP. TREELINE
- WETLAND LIMIT
- 100 YEAR PUBLIC FLOOD PLAN AND UTILITY EASEMENT
- A.G.I.P. AT GRADE INLET PROTECTION
- A-1 EARTH DIKE
- SSF SUPER SILT FENCE
- LOD LIMIT OF DISTURBANCE
- SCE STABILIZED CONSTRUCTION ENTRANCE
- GABION INFLOW PROTECTION
- VEHICLE STORAGE AREA
- BUILDING OR PARKING REMOVAL
- SP SILT FENCE ON PAVEMENT

TYPICAL SSF/SF PLACEMENT DETAIL NOT TO SCALE



EX. TRAP #1 - STONE OUTLET SEDIMENT TRAP - ST II
 DRAINAGE AREA: 4.02 ACRES
 STORAGE REQUIRED: 14,472 Cu.Ft.
 STORAGE PROVIDED: 18,565 Cu.Ft.
 WEIR LENGTH: 17'
 CLEANOUT ELEVATION: 129.68'
 EMBANKMENT ELEVATION: 133.00'
 TRAP BOTTOM ELEVATION: 129.00'
 WET STORAGE LIMIT ELEVATION: 130.27'
 CREST ELEVATION: 132.00'

NOTE: THE RUNOFF GENERATED FROM THE INTERIOR WILL BE TREATED BY AN OIL GRIT SEPARATOR THEN WILL ENTER THE SANITARY SEWER SYSTEM.

ROBERT J. BALLANTINE
 187/337
 TAX MAP 38
 PARCEL 224
 ZONED M-1

DEVELOPERS CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

Michael E Lewis 3/6/00
 SIGNATURE OF DEVELOPER DATE
 MICHAEL E LEWIS
 PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

Cheng-Ho Lin 3/7/00
 SIGNATURE OF ENGINEER DATE
 CHENG-HO LIN
 PRINTED NAME OF ENGINEER

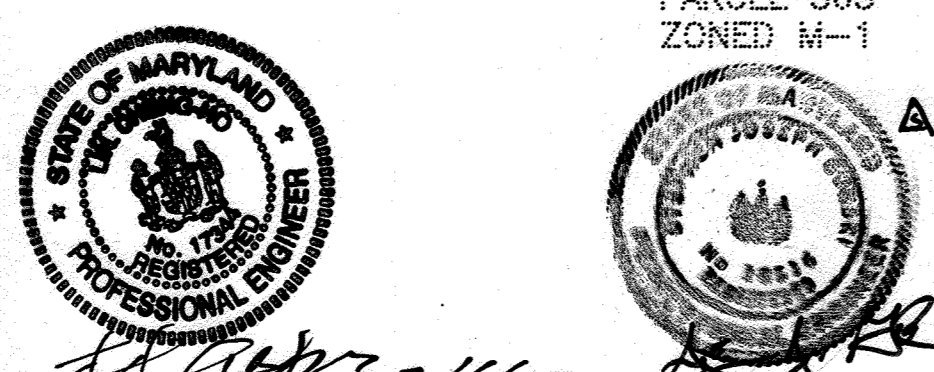
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Cheryl Simmons 3-16-00
 SIGNATURE OF REVIEWER DATE
 USDA - NATURAL RESOURCE CONSERVATION SERVICE

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

John P. Robertson 3-15-00
 SIGNATURE OF REVIEWER DATE
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cheryl Simmons 3/23/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
 DATE
Cathy Hamata 3/23/00
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE
John P. Robertson 3/29/00
 DIRECTOR DATE



CHARLES W. MILES, JR.
 561/690
 TAX MAP 38
 PARCEL 303
 ZONED M-1

CHARLES W. MILES, JR.
 442/734
 TAX MAP 38
 PARCEL 793
 ZONED M-1

JACK W. ASHBROOK
 426/756
 TAX MAP 38
 PARCEL 790
 ZONED M-1

W. W. SHIPMAN
 413/278
 TAX MAP 38
 PARCEL 220
 ZONED M-1

W. W. SHIPMAN
 413/278
 TAX MAP 38
 PARCEL 220
 ZONED M-1

A FOR REVISION 5 ONLY
 DUFFIELD ASSOC. LLC

3/19/03

project	date	description
98014.10	3/7/00	engineering
		FCL
		FCL
		approval
		1" = 50'

revision	date	description
1	3/7/00	ISSUE FOR PERMITS
2	3/7/00	REVISED PERMITS AND REVISED PERMITS
3	3/7/00	REVISED PERMITS AND REVISED PERMITS
4	3/7/00	REVISED PERMITS AND REVISED PERMITS

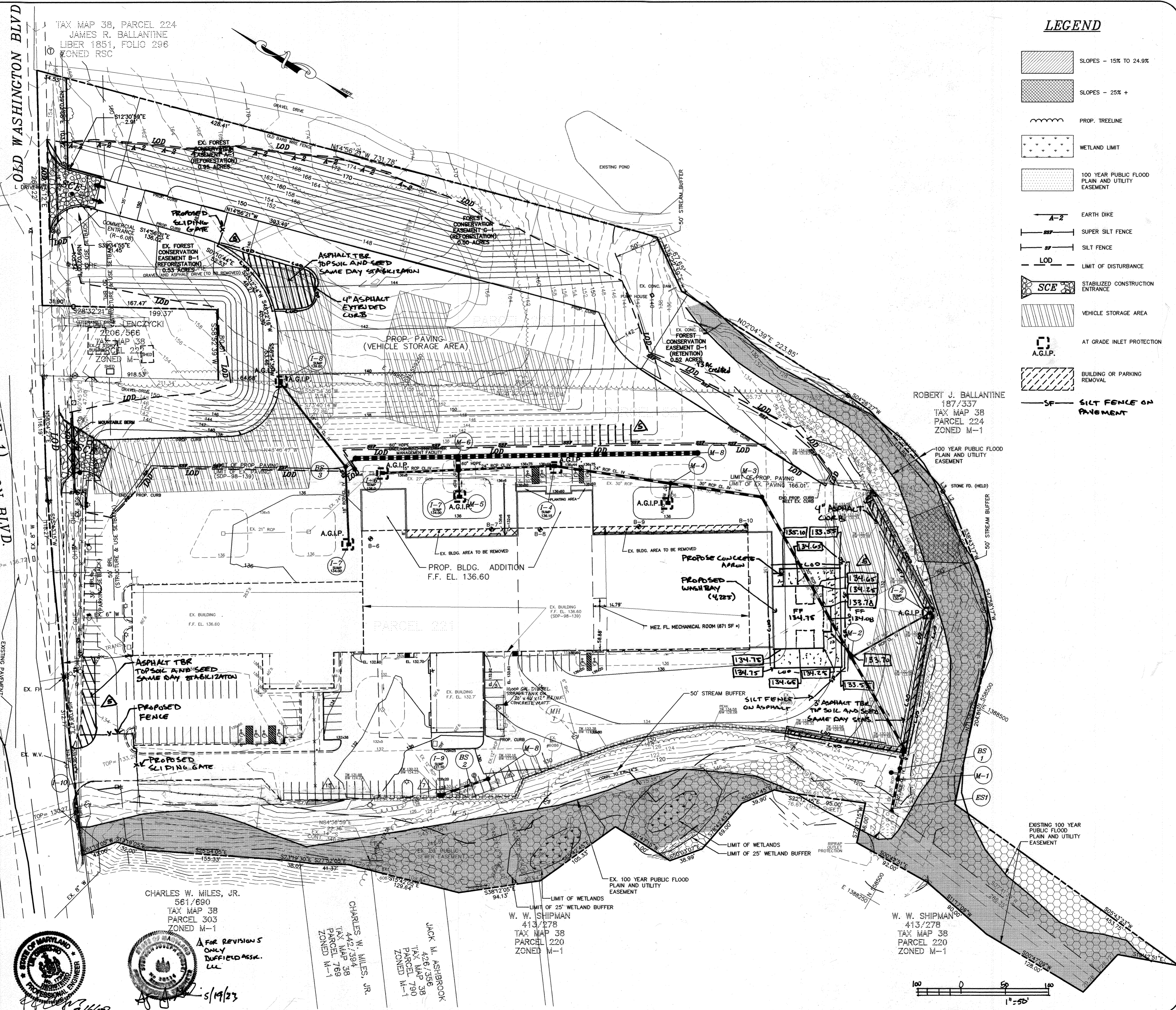
TAX MAP 38, PARCELS 221, 524 & 223
ALBAN ENGINE
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
GRADING & SEDIMENT CONTROL PLAN - PHASE I

MILDENBERG & ASSOC., INC.
 Engineers Surveyors
 Planners
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Fax (301) 621-5521 Wash. (410) 997-0298 Fax

THIS PLAN IS FOR THE PURPOSE OF GRADING & SEDIMENT CONTROL ONLY

LEGEND

- SLOPES - 15% TO 24.9%
- SLOPES - 25% +
- PROP. TREELINE
- WETLAND LIMIT
- 100 YEAR PUBLIC FLOOD PLAIN AND UTILITY EASEMENT
- EARTH DIKE
- SUPER SILT FENCE
- SILT FENCE
- LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- VEHICLE STORAGE AREA
- AT GRADE INLET PROTECTION
- BUILDING OR PARKING REMOVAL
- SILT FENCE ON PAVEMENT



ROBERT J. BALLANTINE
187/337
TAX MAP 38
PARCEL 224
ZONED M-1

TAX MAP 38, PARCEL 224
JAMES R. BALLANTINE
LIBER 1851, FOLIO 286
ZONED RSC

BALTIMORE (MD. RTE. 1)
WASHINGTON BLVD.

DEVELOPER'S CERTIFICATE
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

Michael E. Lewis 3/6/00
SIGNATURE OF DEVELOPER DATE
MICHAEL E. LEWIS
PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

[Signature] 3/7/00
SIGNATURE OF ENGINEER DATE
CHENG-HO LIN
PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Cheryl Simmons 3/15/00
USDA - NATURAL RESOURCE CONSERVATION SERVICE DATE

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

John R. Robertson 3/15/00
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
3/23/00
DATE
3/21/00
DATE
3/23/00
DATE

CHARLES W. MILES, JR.
561/690
TAX MAP 38
PARCEL 303
ZONED M-1

CHARLES W. MILES, JR.
TAX MAP 38
PARCEL 799
ZONED M-1

JACK M. ASHEROCK
406/356
TAX MAP 38
PARCEL 790
ZONED M-1

W. W. SHIPMAN
413/278
TAX MAP 38
PARCEL 220
ZONED M-1

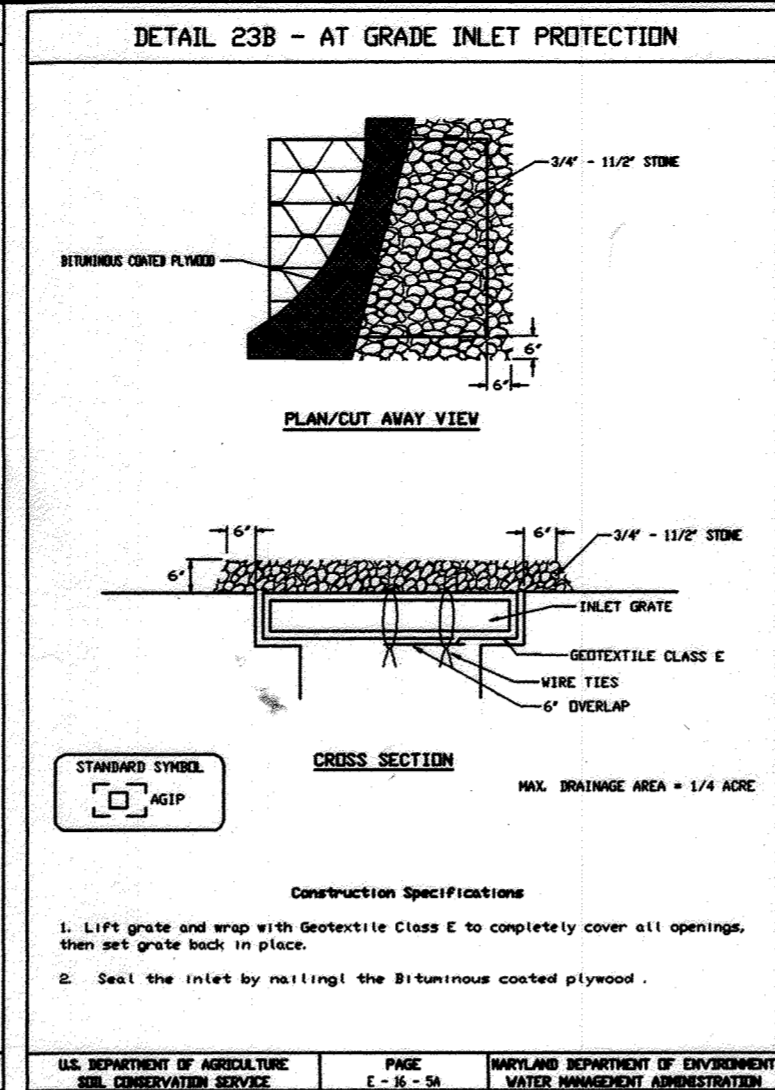
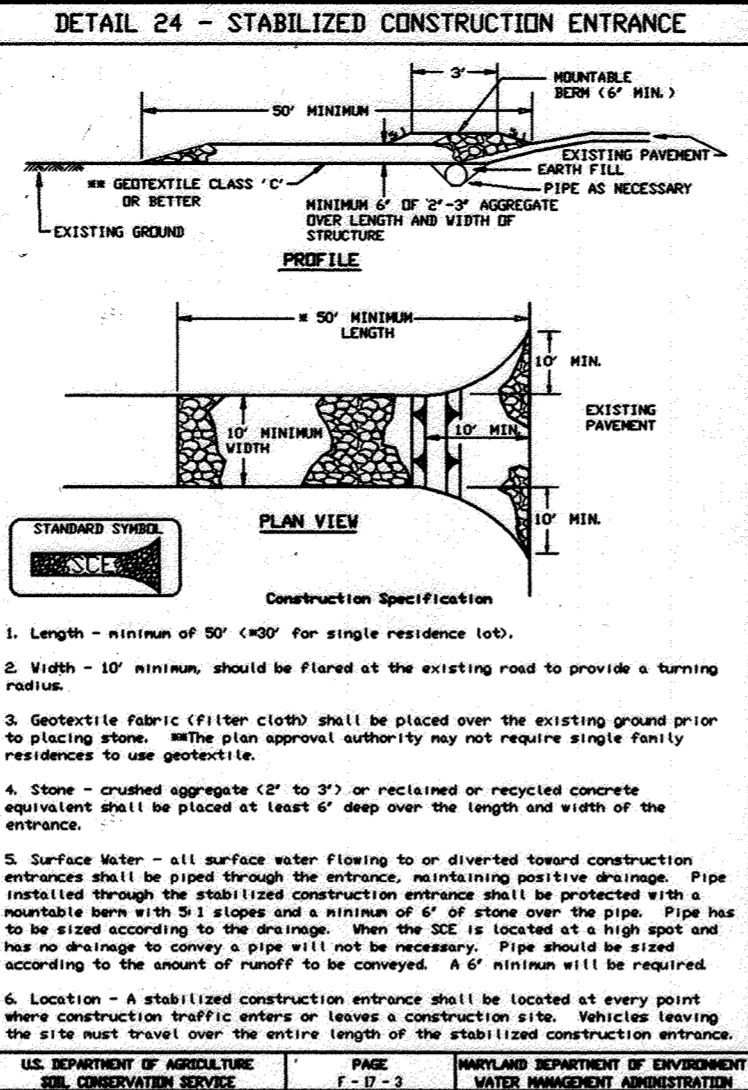
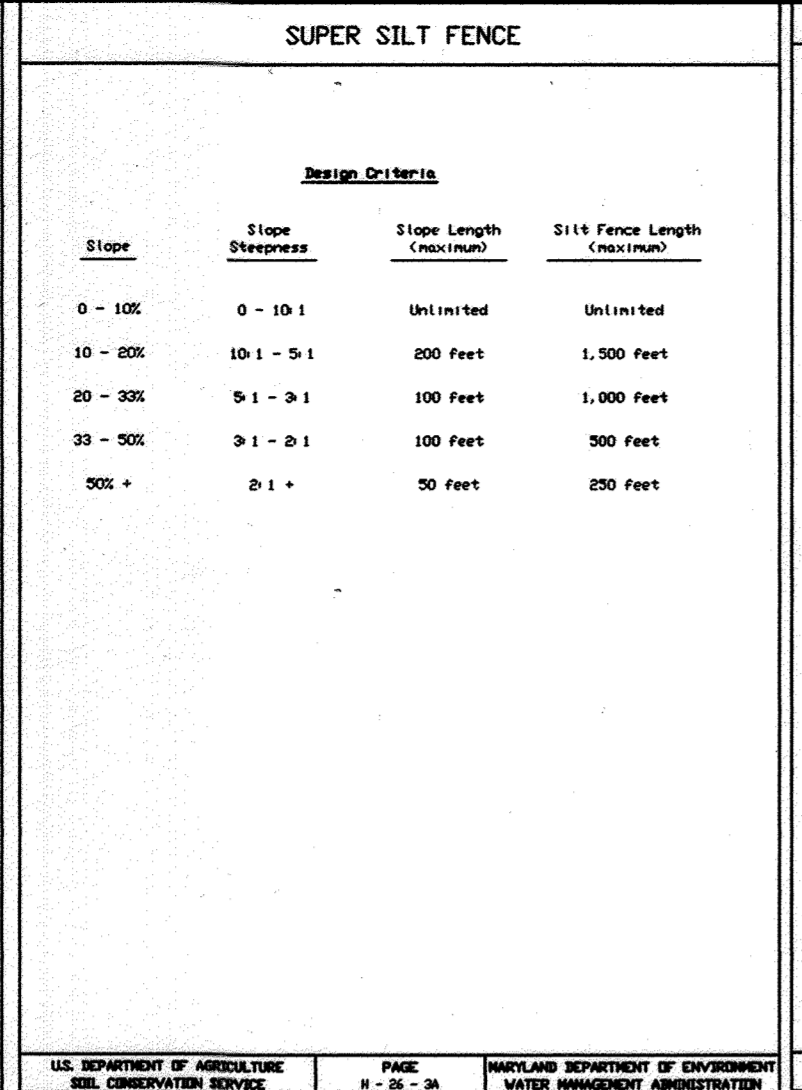
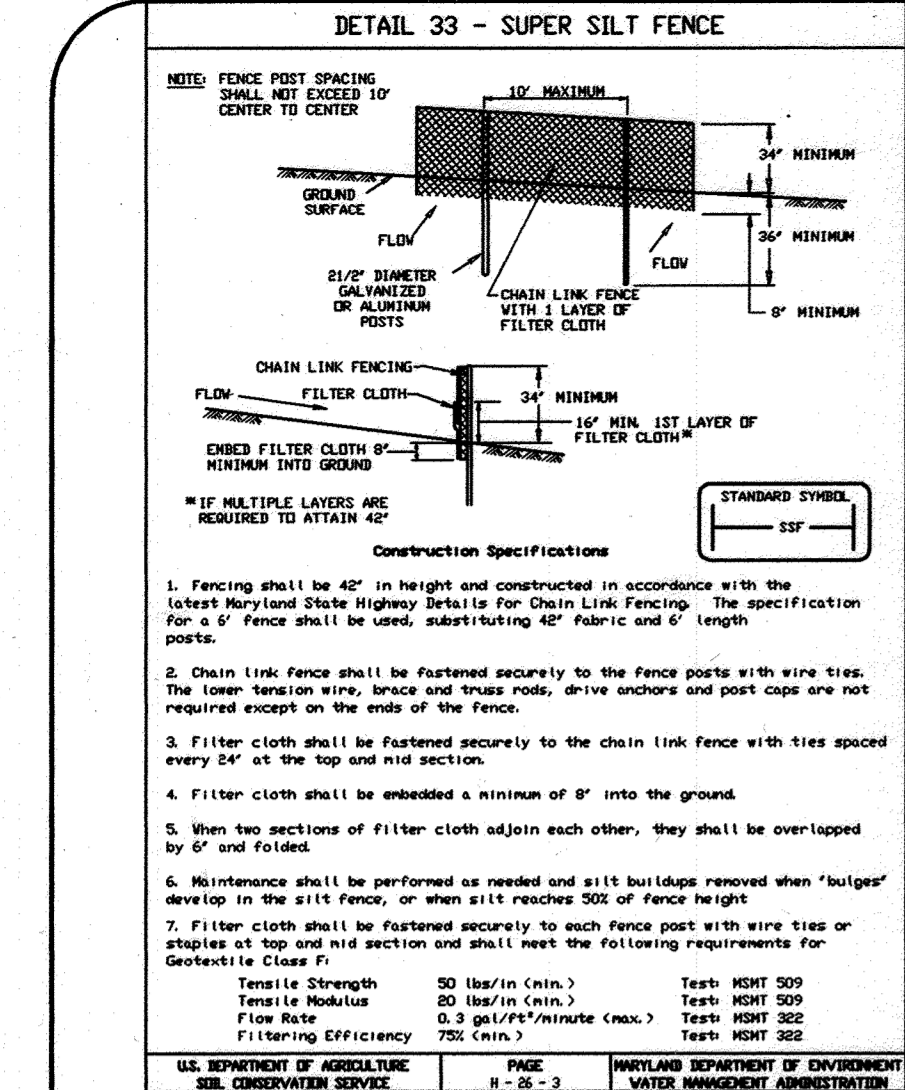
W. W. SHIPMAN
413/278
TAX MAP 38
PARCEL 220
ZONED M-1

Project	98014.10	date	3/7/00
Illustration	FCL	engineering	FCL
Scale	1" = 50'	approval	RJH

ADD WASHBAY, FENCE, AND PAVEMENT	DATE	BY
1	3/7/00	RJH
2	3/7/00	RJH
3	3/7/00	RJH

TAX MAP 38, PARCELS 221, 524 & 223
ALBAN ENGINE
HOWARD COUNTY, MARYLAND
FIRST ELECTION DISTRICT
GRADING & SEDIMENT CONTROL PLAN - PHASE II

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dreyfus Hall Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 987-0286 Bal. (301) 621-5521 West. (410) 987-0286 Fax.



HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES

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

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING.
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE 1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. PER ACRE KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOD. OPTION (3) - SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW pH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

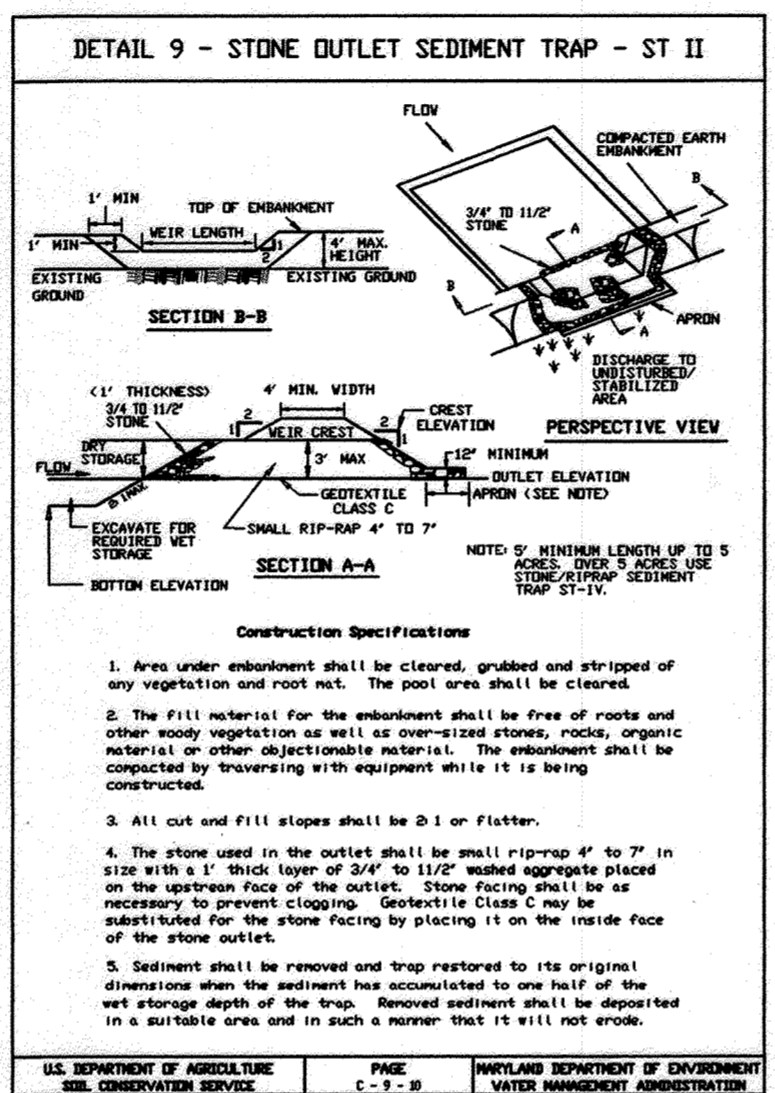
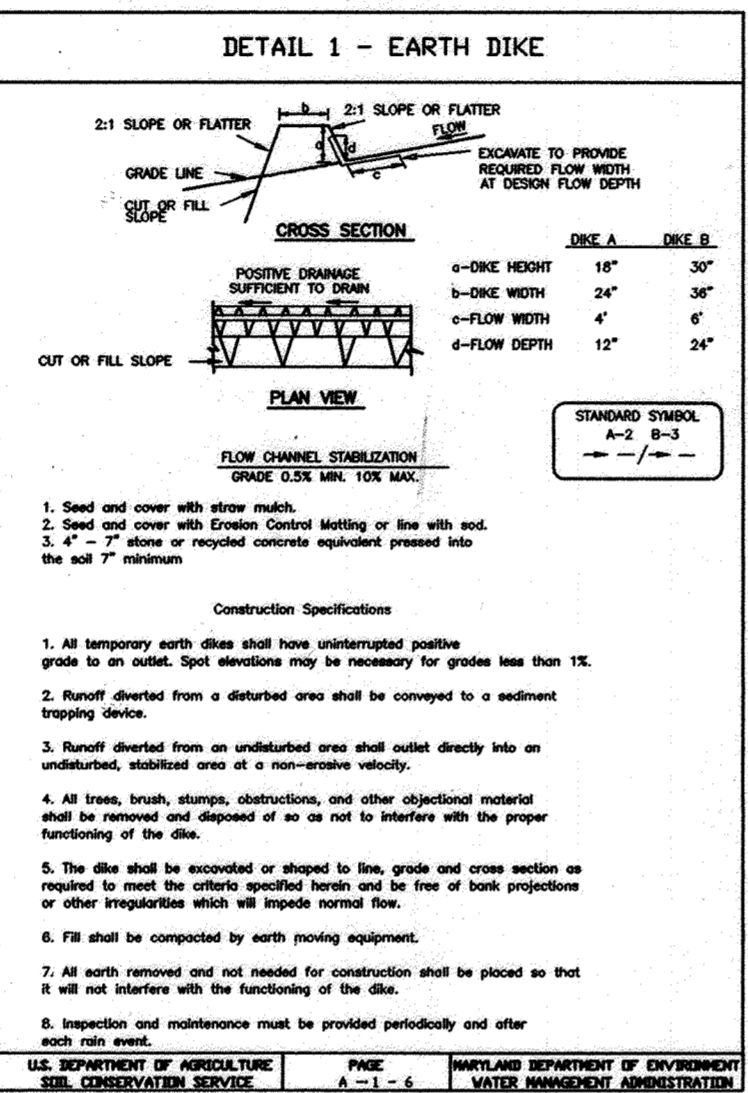
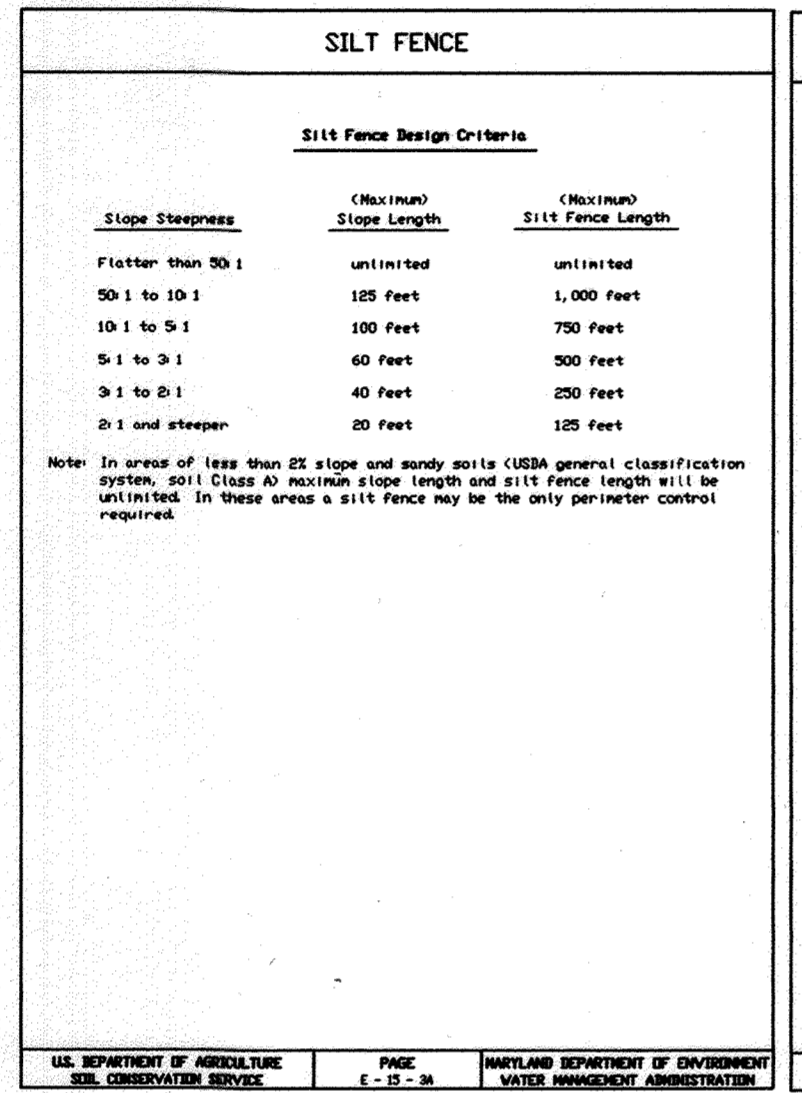
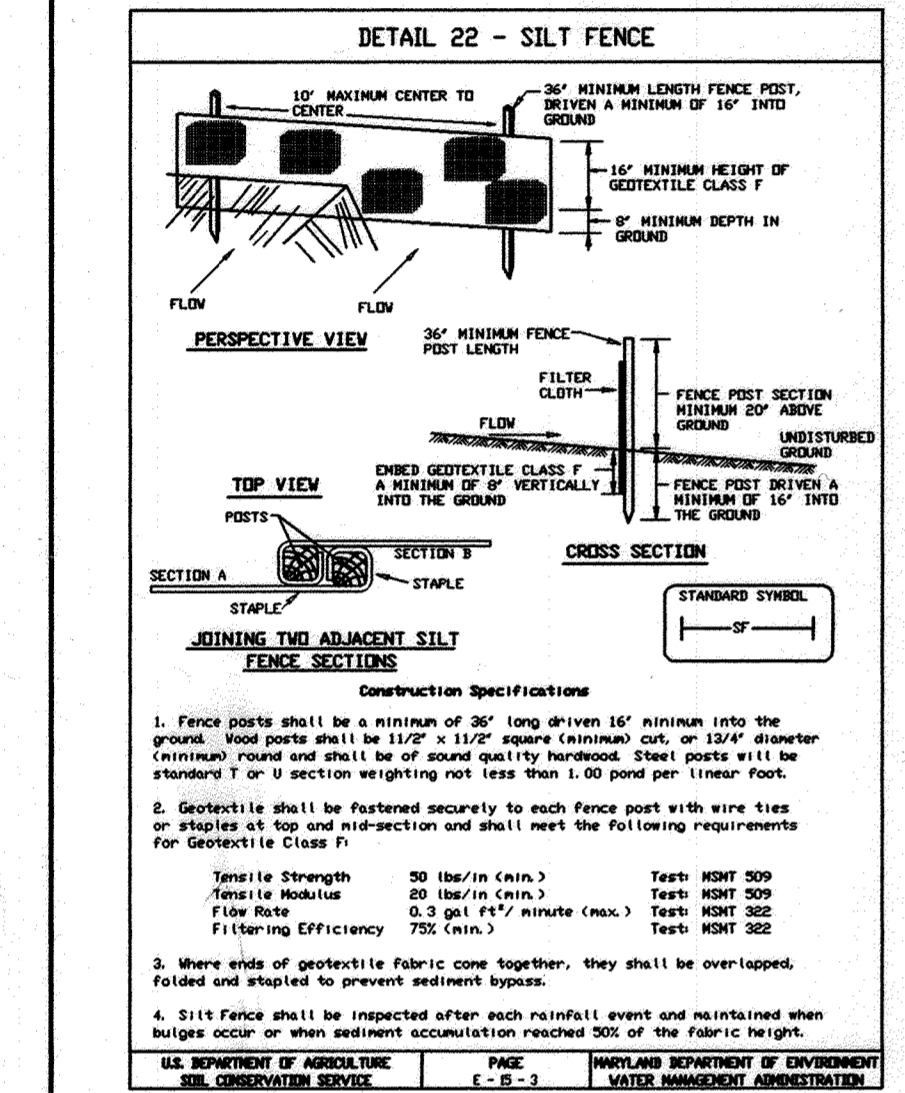
CONDITIONS WHERE PRACTICE APPLIES

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF SANDS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, TRASH OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS, OR PLANT PARTS SUCH AS BERMIUDA GRASS, QUACKGRASS, JOHNSON-SOON GRASS, NUTSEDGE, POISON IVY, THISLE, OR OTHERS AS SPECIFIED.
 - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
 - FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
 - FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - pH FOR TOPSOILS SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A pH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE pH TO 6.5 OR HIGHER.
 - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 - NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
 - NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
 - TOPSOIL APPLICATION
 - WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKS, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
 - GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4" - 8" HIGHER IN ELEVATION.
 - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" TO 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
 - ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
 - COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS WHO ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 - COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM AND HAVE A pH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
 - COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
 - COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB./1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING, MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.



TEMPORARY SEEDING NOTES

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

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, FOR NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)

SEEDING - FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SO.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WOOD FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

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

STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF NAY CONSTRUCTION, (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERE TO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKS, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHALL BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC.51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC.52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE:	17.16	ACRES±
AREA TO BE ROOFED OR PAVED:	12.2	ACRES±
AREA TO BE VEGETATIVELY STABILIZED:	10.0	ACRES±
TOTAL CUT:	2.7	CU. YDS.
TOTAL FILL:	25,000	CU. YDS.
TOTAL WASTE/BORROW AREA LOCATION:	N/A	

THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITY MEASUREMENTS.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

DETAIL 6 - GABION INFLOW PROTECTION

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEVELOPMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINS THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature: Michael E. Lewis 3/6/00
SIGNATURE OF DEVELOPER DATE

Signature: Michael E. Lewis
PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature: [Redacted] 3/7/00
SIGNATURE OF ENGINEER DATE

Signature: [Redacted]
PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

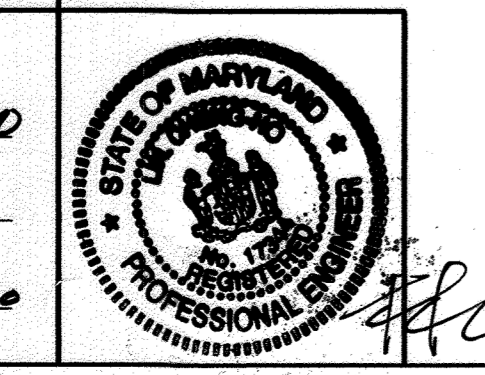
Signature: Cheryl Simmer 3-15-00
USDA - NATURAL RESOURCE CONSERVATION SERVICE DATE

Signature: [Redacted] 3-15-00
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Signature: [Redacted] 3/23/00
CHIEF DEVELOPMENT ENGINEERING DIVISION MK DATE

Signature: [Redacted] 3/6/00
CHIEF DIVISION OF LAND DEVELOPMENT DATE

Signature: [Redacted] 3/29/00
DIRECTOR DATE



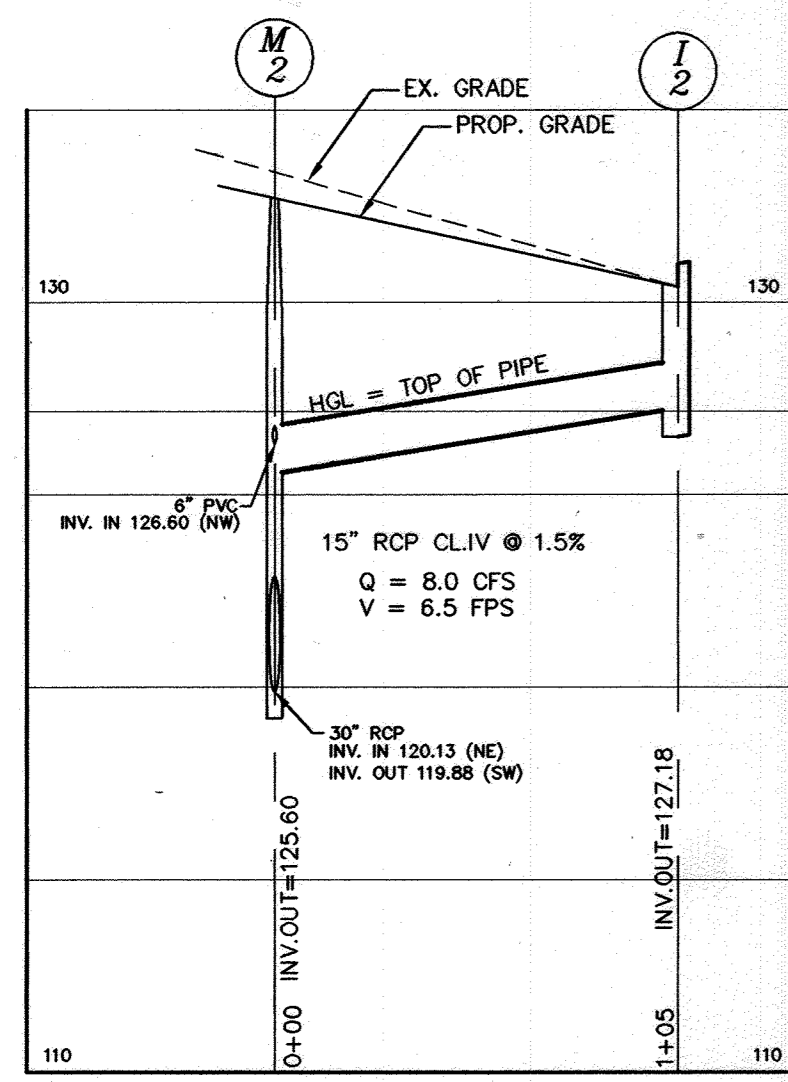
TAX MAP 38, PARCELS 221, 524 & 223
ALBAN ENGINE
HOWARD COUNTY, MARYLAND
SEDIMENT CONTROL PLAN

DATE: 3/7/00
PROJECT: 98014.10
ILLUSTRATION: FCL
SCALE: 1" = 50'
DATE: [Redacted]
DESCRIPTION: [Redacted]

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Beltsville City, Maryland 21042
(410) 997-0296 Fax: (301) 621-5321 Wash. (410) 997-0298 Fax.

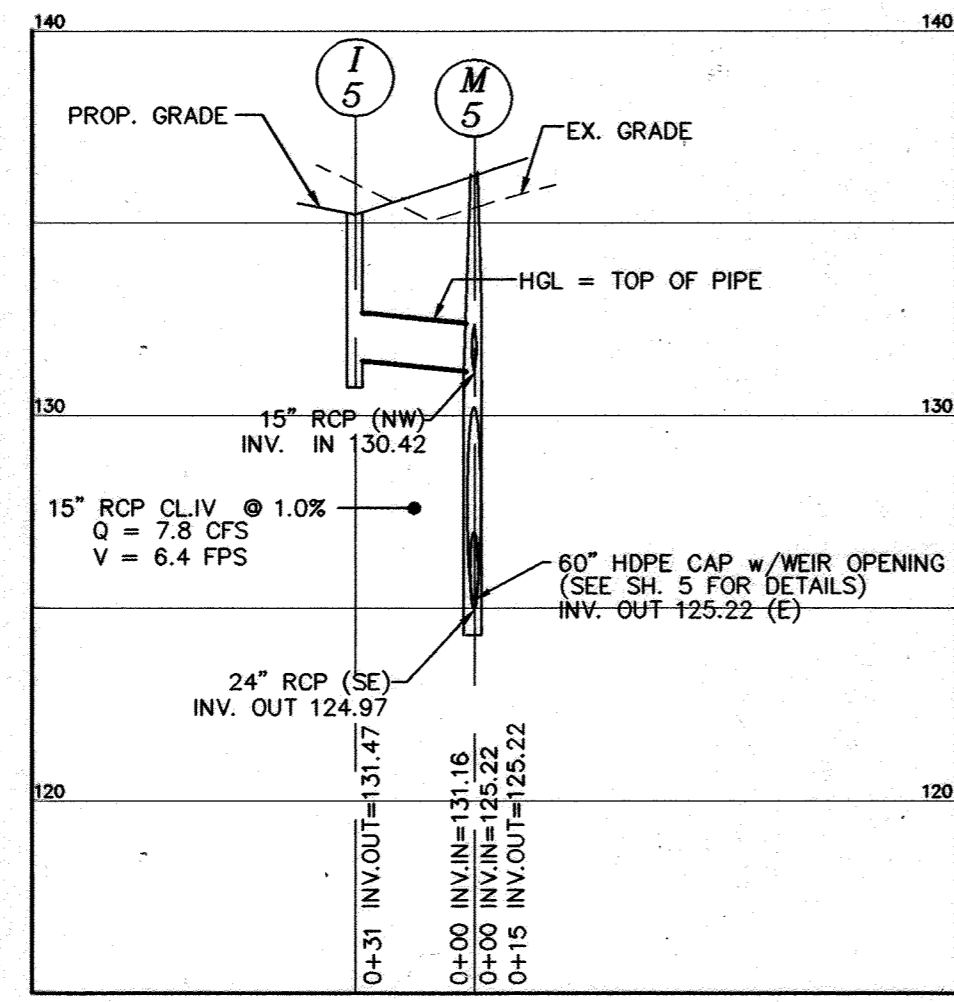
OWNER/DEVELOPER
ALBAN TRACTOR CO., INC.
P. O. BOX 9595
BALTIMORE, MARYLAND 21237
(410) 686-7777
ATTN: CHUCK WITMER

4 OF 12
SDP-00-19



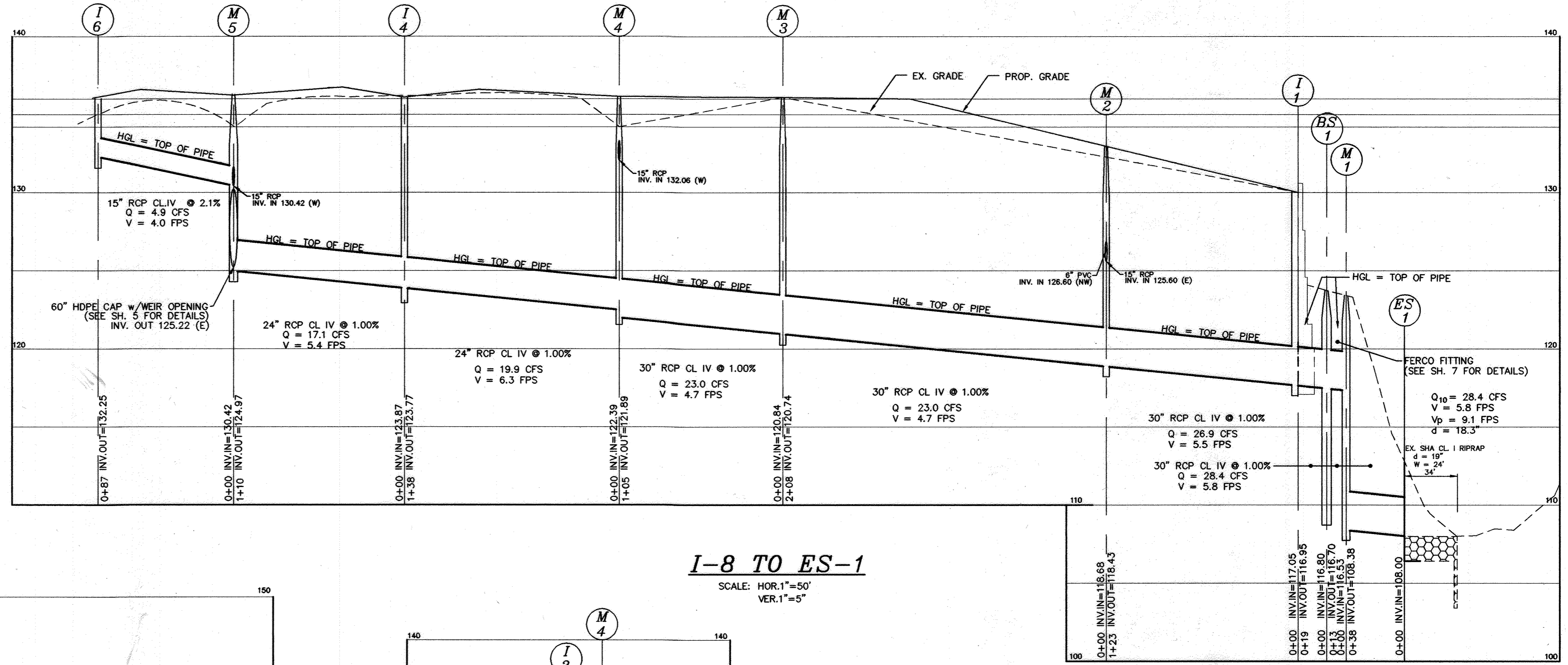
I-2 TO M-5

SCALE: HOR. 1"=50'
VER. 1"=5'



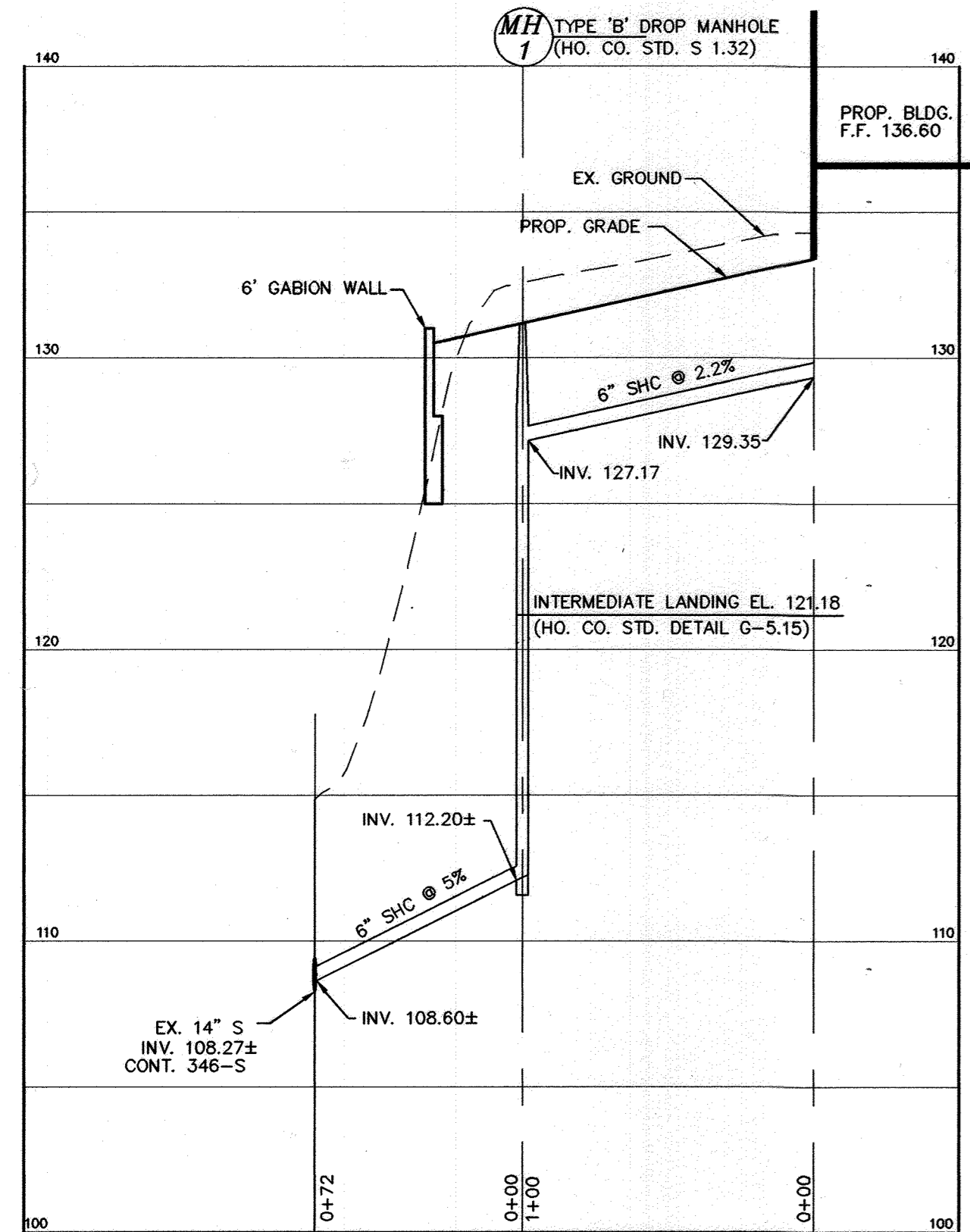
I-5 TO M-5

SCALE: HOR. 1"=50'
VER. 1"=5'



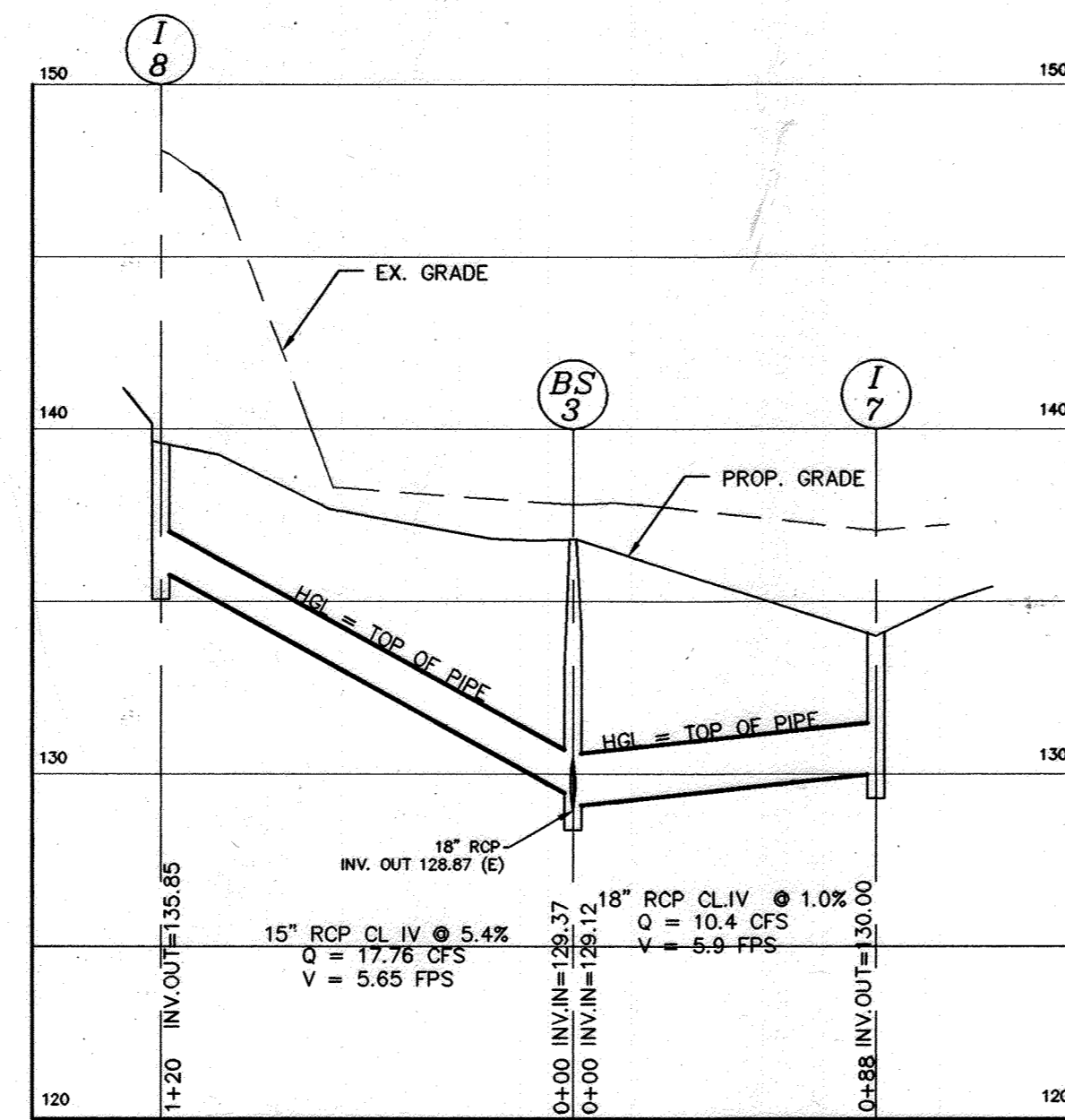
I-8 TO ES-1

SCALE: HOR. 1"=50'
VER. 1"=5'



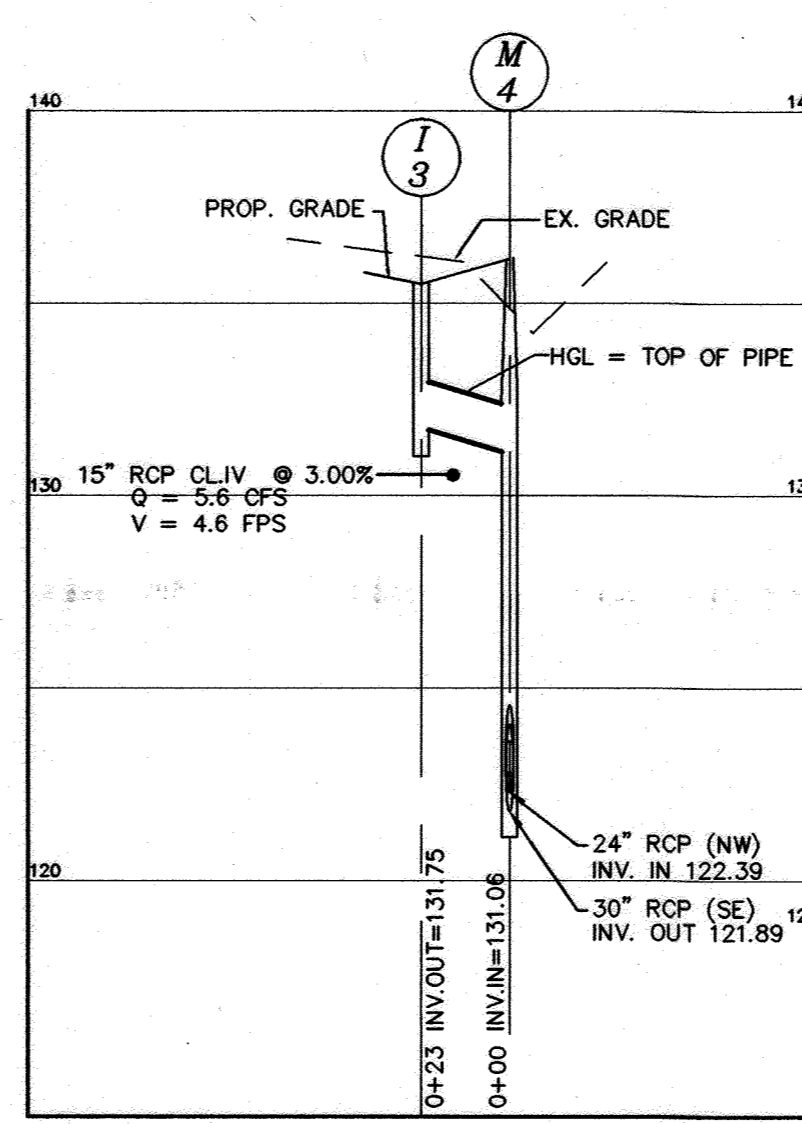
6" SHC PROFILE

SCALE: HOR. 1"=50'



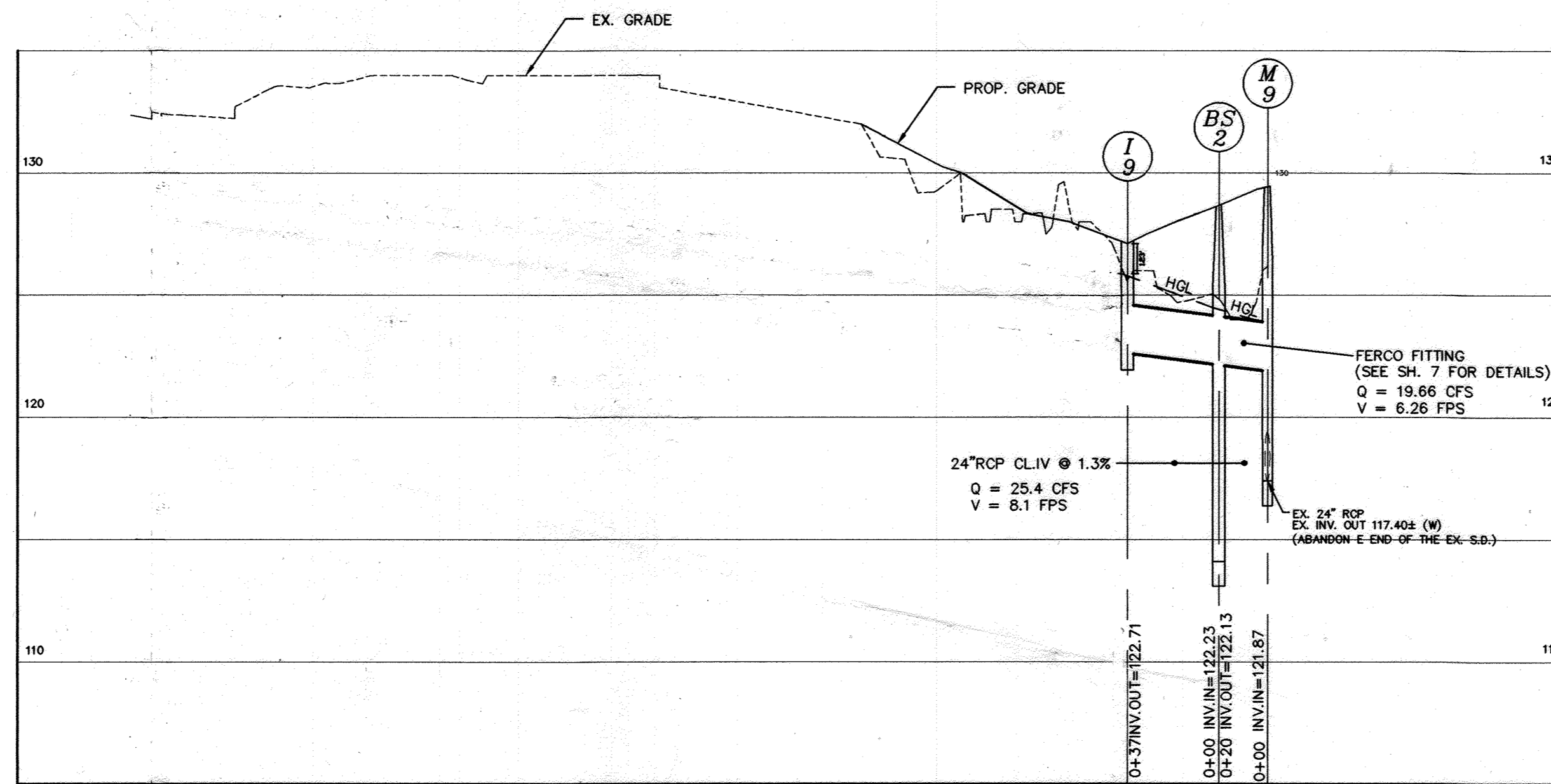
I-8 TO BS-3

SCALE: HOR. 1"=50'
VER. 1"=5'



I-3 TO M-4

SCALE: HOR. 1"=50'
VER. 1"=5'



I-10 TO M-8

SCALE: HOR. 1"=50'
VER. 1"=5'

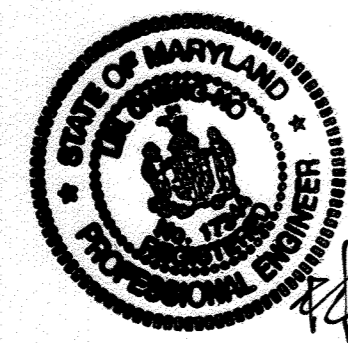
STRUCTURE SCHEDULE

NO.	LOCATION*	TOP**	INV. IN	INV. OUT	COMMENTS
I-1	N 558,551.23 E 1,388,415.35	117.10	116.95	116.54	TYPE 'E' INLET (STD. SD-4.21) - SUMP
I-2	N 558,603.46 E 1,388,566.00	130.40	-----	127.18	DOUBLE TYPE 'S' INLET (STD. SD-4.23) - SUMP
I-3	N 558,925.00 E 1,388,525.19	135.50	-----	131.75	TYPE 'C' INLET Y=2'7" X=5' (STD. SD-4.15) - SUMP
I-4	N 559,057.89 E 1,388,496.73	136.15	123.87	123.77	TYPE 'S' INLET (STD. SD-4.22) - SUMP
I-5	N 559,1134.16 E 1,388,412.59	135.22	-----	131.47	TYPE 'C' INLET Y=2'7" X=5' (STD. SD-4.15) - SUMP
I-6	N 559,224.01 E 1,388,391.89	136.00	-----	132.25	TYPE 'S' INLET (STD. SD-4.22) - SUMP
I-7	N 559,216.54 E 1,388,302.53	135.44	-----	130.00	TYPE 'C' INLET Y=2'7" X=5' (STD. SD-4.15) - SUMP
I-8	N 559,376.28 E 1,388,424.57	139.60	-----	135.85	TYPE 'E' INLET (STD. SD-4.21) - SUMP
I-9	N 559,983.74 E 1,388,107.86	127.10	-----	122.71	TYPE 'S' COMB. INLET (STD. SD-4.32) - SUMP
M-1	N 558,540.95 E 1,388,383.90	116.41	116.53	108.38	MANHOLE (STD. G-5.13)
M-2	N 558,656.17 E 1,388,477.65	133.40	126.80(NW) 125.60(SW) 118.68(S)	118.43	MANHOLE (STD. G-5.13)
M-3	N 558,835.47 E 1,388,584.48	136.10	120.84	120.74	MANHOLE (STD. G-5.13)
M-4	N 558,933.41 E 1,388,545.84	136.15	132.96 (SW) 123.39 (NW)	121.89	MANHOLE (STD. G-5.13)
M-5	N 559,150.41 E 1,388,438.34	136.23	125.22(E) 130.42(W)	124.08	MANHOLE (STD. G-5.12)
M-6	N 559,158.39 E 1,388,450.97	136.66	125.22(NW)	125.22	MANHOLE (STD. G-5.03)
M-7	N 559,258.81 E 1,388,390.94	136.60	128.72	125.22	MANHOLE (STD. G-5.03)
M-8	N 559,242.84 E 1,388,380.01	136.93	-----	125.22	MANHOLE (STD. G-5.03)
M-9	N 558,945.77 E 1,388,150.94	129.55	-----	121.87	MANHOLE (STD. G-5.03)
BS-1	N 558,544.98 E 1,388,395.73	123.80	116.80	116.70	BAYSAVER 5K SYSTEM
BS-2	N 558,958.96 E 1,388,135.90	128.80	122.23	122.13	BAYSAVER 3K SYSTEM
BS-3	N 559,263.92 E 1,388,377.32	136.60	128.37(NE) 122.12 (SW)	128.87	BAYSAVER 3K SYSTEM
ES1	N 558,528.49 E 1,388,348.71	-----	108.00	108.00	TYPE 'C' ENDWALL (STD. SD-5.21)

NOTE: LOCATION SHOWN IS AT CENTER OF INLET.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

3/23/00
DATE
3/29/00
DATE
3/29/00
DATE



OWNER/DEVELOPER

ALBAN TRACTOR CO., INC.
P. O. BOX 9595
BALTIMORE, MARYLAND 21237
(410) 686-7777
ATTN: CHUCK WTMER

project	98014.10	date	1/14/00
illustration	RCL/RJ	engineering	FCL
scale	1" = 50'	approval	JH

no.	1	description	DELETED I-10 I-11 STORMDRAIN BETWEEN I-10 I-11
date	7/27/2000	revisions	

TAX MAP 38, PARCELS 221, 524 & 223
ALBAN ENGINE
HOWARD COUNTY, MARYLAND
FIRST ELECTION DISTRICT
STORMDRAIN AND SHC PROFILES

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Fax (301) 621-5521 Wash. (410) 997-0298 Fax

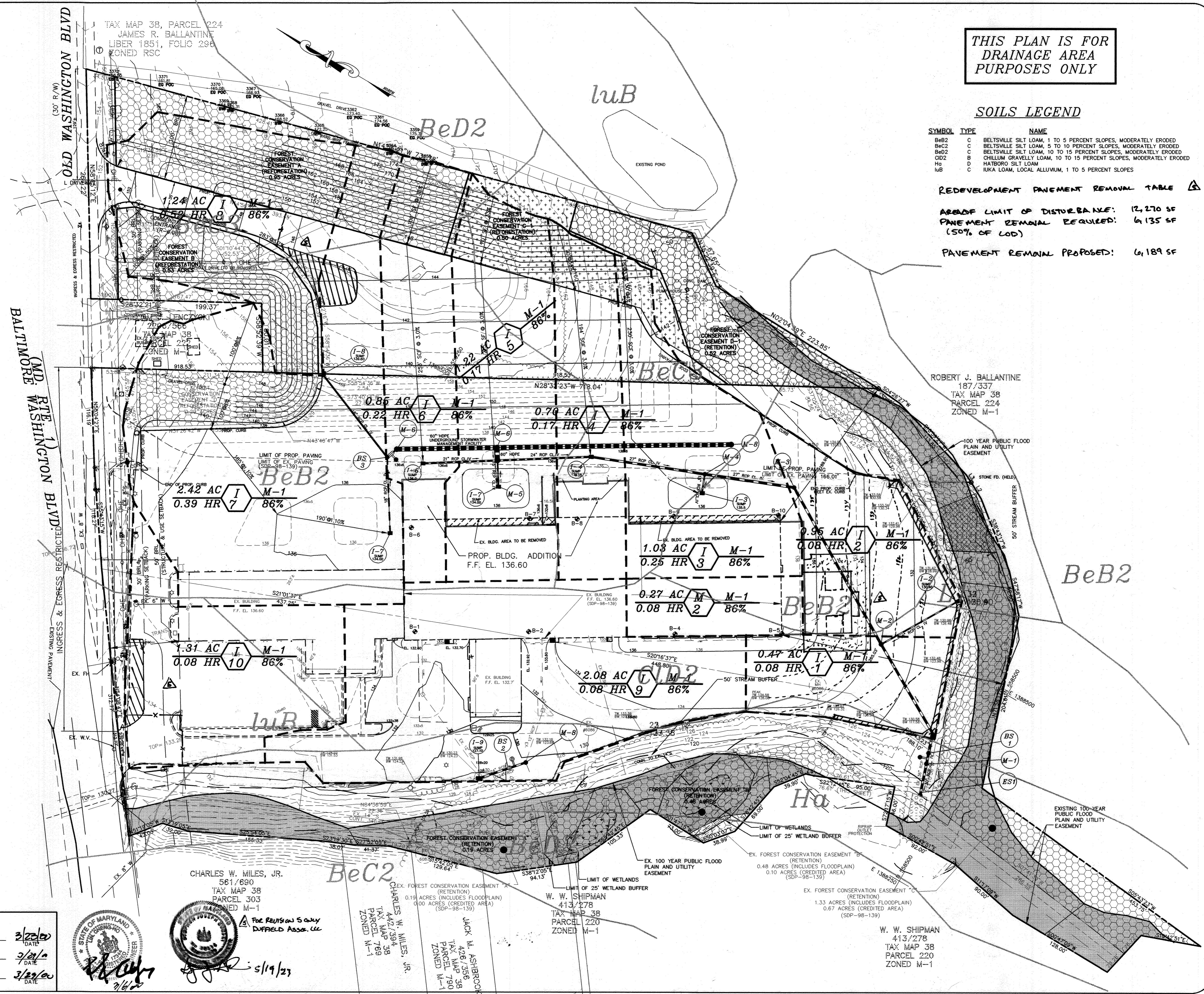
THIS PLAN IS FOR DRAINAGE AREA PURPOSES ONLY

SOILS LEGEND

SYMBOL	TYPE	NAME
BeB2	C	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
BeC2	C	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED
BeD2	C	BELTSVILLE SILT LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED
ChD2	B	CHILLUM GRAVELLY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED
Hu	B	HATBORO SILT LOAM
IuB	C	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES

REDEVELOPMENT PAVEMENT REMOVAL TABLE

AREAS LIMIT OF DISTURBANCE: 12,270 SF
 PAVEMENT REMOVAL REQUIRED: 6,135 SF (50% OF LOD)
 PAVEMENT REMOVAL PROPOSED: 6,189 SF



OLD WASHINGTON BLVD (30' R/W)
 BALTIMORE (MD) RTE 1 WASHINGTON BLVD
 INGRESS & EGRESS RESTRICTED EXISTING PAVEMENT

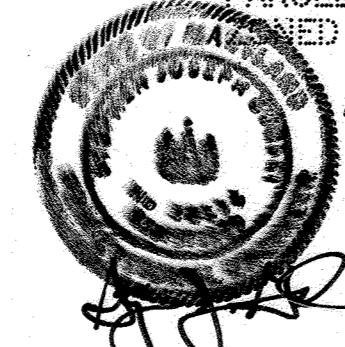
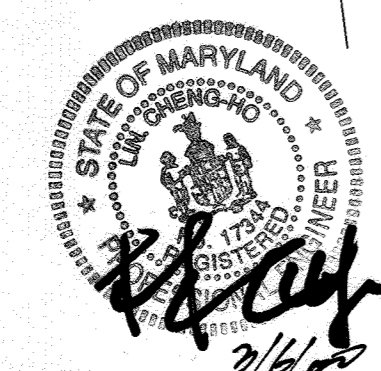
ROBERT J. BALLANTINE
 187/337
 TAX MAP 38
 PARCEL 224
 ZONED M-1

CHARLES W. MILES, JR.
 581/690
 TAX MAP 38
 PARCEL 303
 ZONED M-1

W. W. SHIPMAN
 413/278
 TAX MAP 38
 PARCEL 220
 ZONED M-1

W. W. SHIPMAN
 413/278
 TAX MAP 38
 PARCEL 220
 ZONED M-1

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 3/23/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MKK
 DATE: 3/21/00
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3/23/00



FOR REVISION 5 ONLY
 DIFFIELD ASSO. LLC

CHARLES W. MILES, JR.
 442/358
 TAX MAP 38
 PARCEL 269
 ZONED M-1

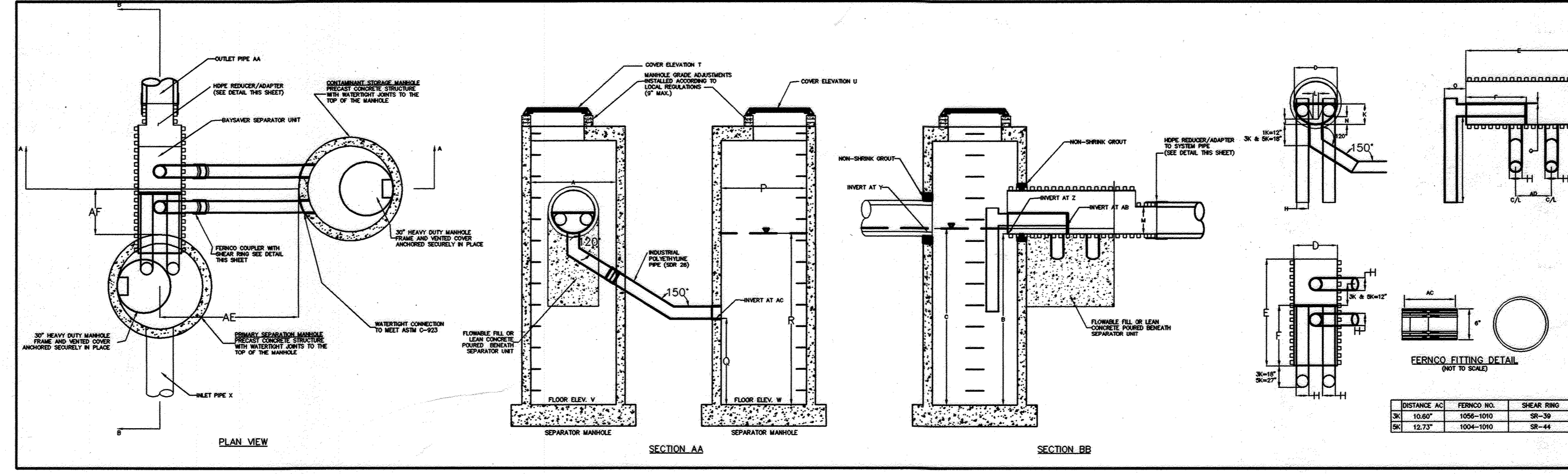
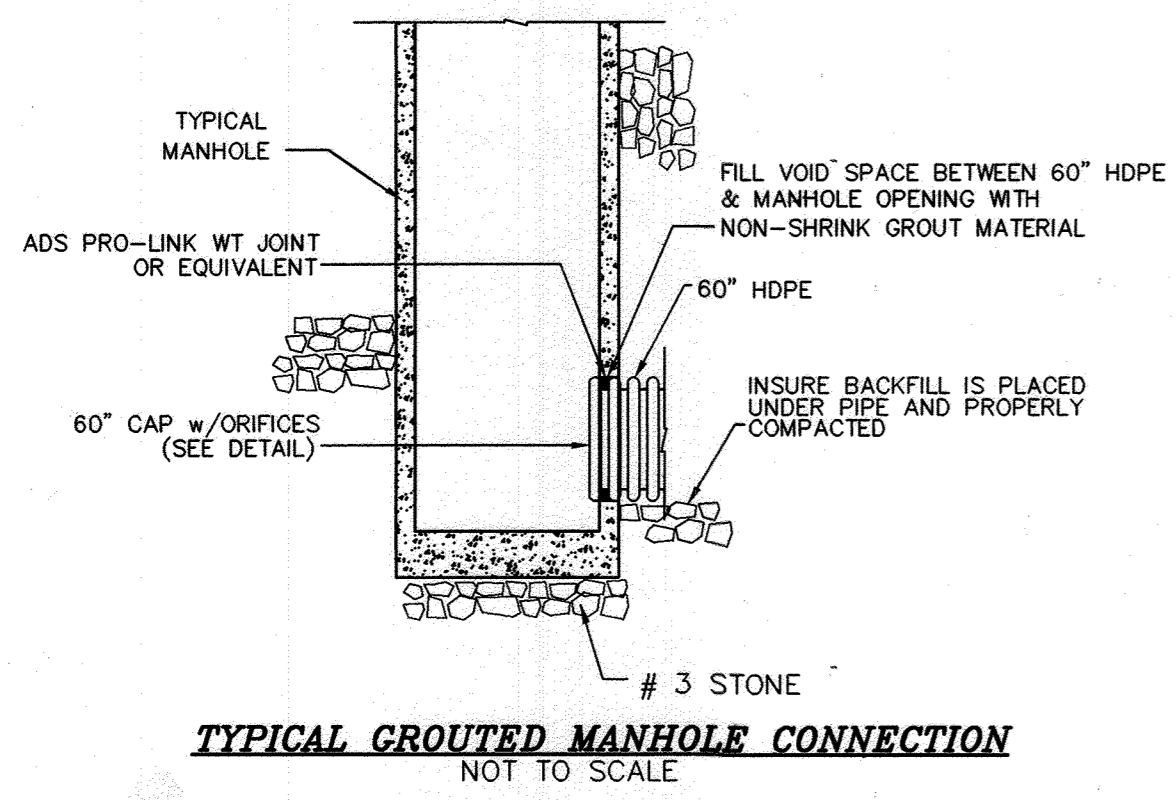
JACK W. ASHEROCK
 426/356
 TAX MAP 38
 PARCEL 780
 ZONED M-1

Project	98014.10	Date	2/28/00
Illustration	FCL	Engineering	FCL
Scale	1" = 50'	Approval	RH

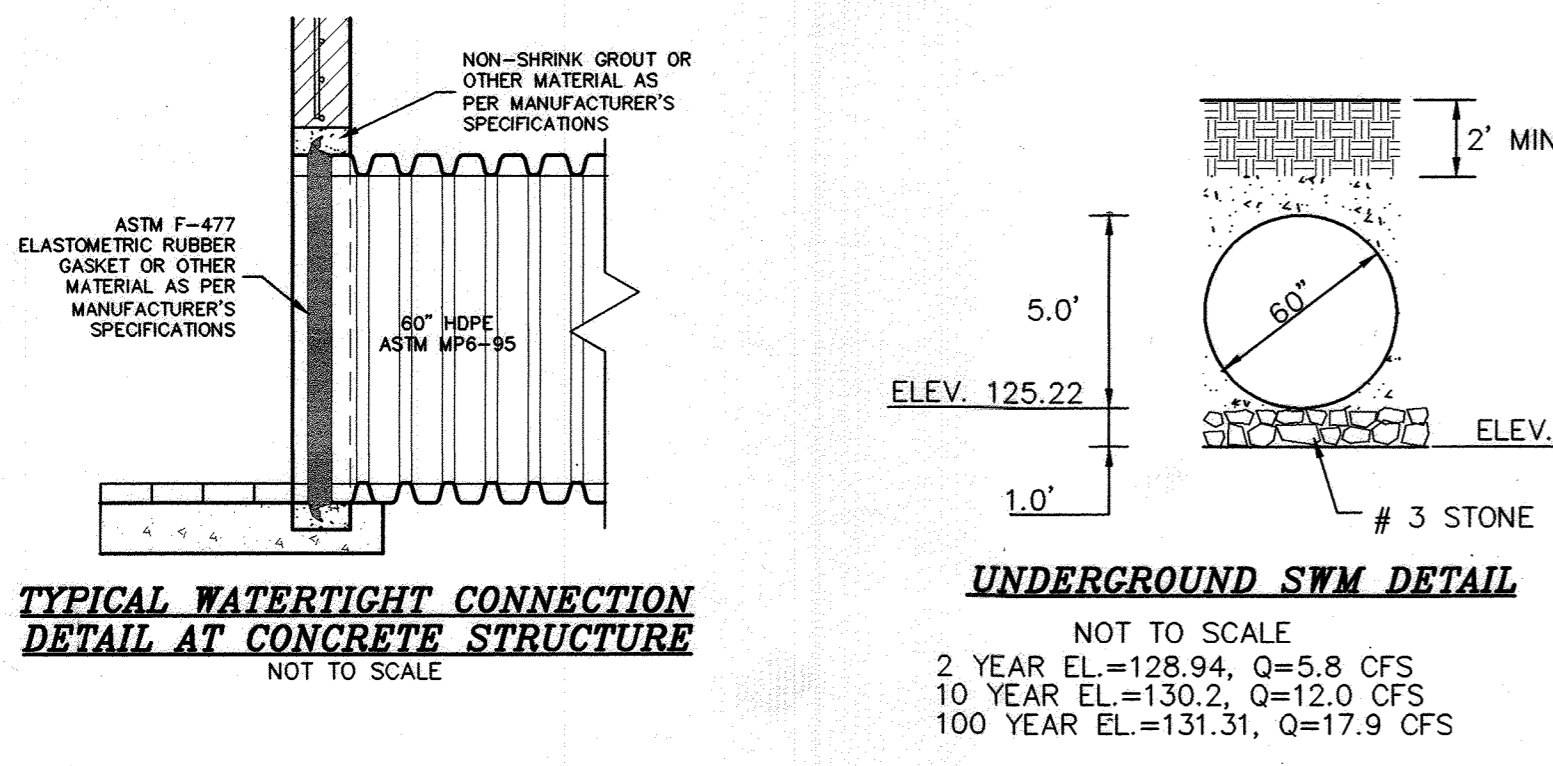
5	ADD WASHBAY, FENCING, AND REMAINING PAVING	03/14/03
7	REVISE PROPERTY LINE TO BESEZEL PROPERTY BETWEEN E. 1-1-1-0	5/14/03
8	REVISE PROPERTY LINE TO BESEZEL PROPERTY BETWEEN E. 1-1-1-0	5/14/03
9	REVISE PROPERTY LINE TO BESEZEL PROPERTY BETWEEN E. 1-1-1-0	5/14/03
10	REVISE PROPERTY LINE TO BESEZEL PROPERTY BETWEEN E. 1-1-1-0	5/14/03

TAX MAP 38, PARCELS 221, 524 & 223
ALBAN ENGINE
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 DRAINAGE AREA & SOILS MAP

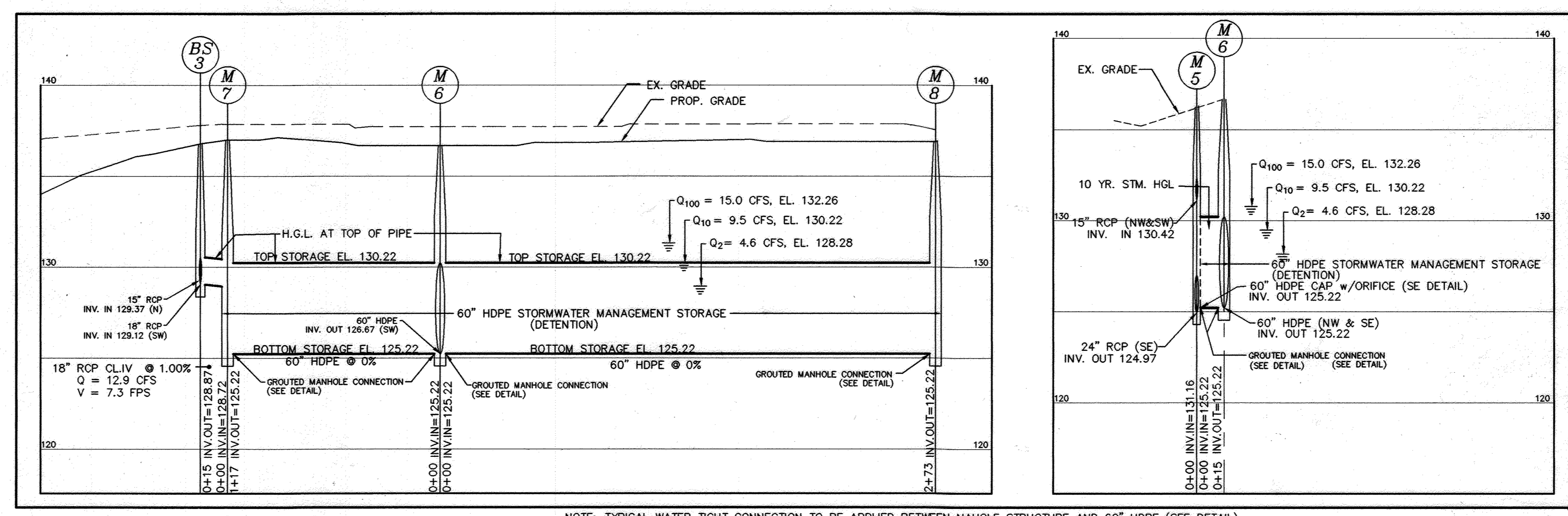
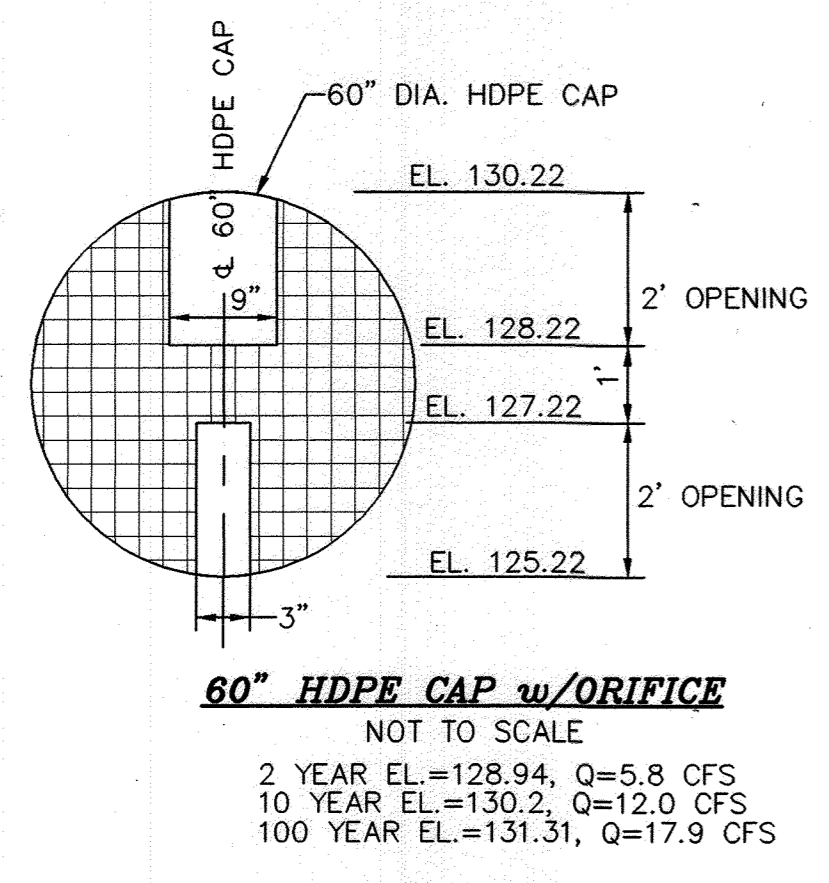
MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Belknot City, Maryland 21042
 (410) 987-0286 Bal. (301) 621-5521 Wash. (410) 997-0288 Fax



BAYSAVER SYSTEM DIMENSIONS			
DESCRIPTION	3K SYSTEM		5K SYSTEM
	SEPARATOR MANHOLE DIMENSIONS		
A PRIMARY MANHOLE DIAMETER	60"	72"	
B MANHOLE DEPTH BELOW OUTLET	8' - 0"	8' - 0"	
C MINIMUM FLUID DEPTH	8' - 4 1/2"	8' - 6"	
STANDARD SEPARATOR UNIT DIMENSIONS			
D SEPARATOR UNIT ID	36"	48"	
E SEPARATOR UNIT LENGTH	78.2"	75.4"	
F BYPASS PLATE LENGTH	45"	45"	
G WEIR/BYPASS PLATE THICKNESS	3/4"	3/4"	
H ELBOW AND CONNECTING PIPE OD	10.75"	12.75"	
I ELBOW LENGTH	48"	48"	
J WEIR HEIGHT ABOVE INVERT	4"	4"	
K BYPASS PLATE HEIGHT ABOVE INVERT	18"	24"	
L WIDTH OF WEIR AT BASE	4 1/2"	6"	
M OUTLET PIPE DIAMETER	M	M	
N ELBOW INVERT HEIGHT ABOVE UNIT INVERT	7 1/2"	11"	
O ELBOW PIPE OVERHANG	18"	24"	
STORAGE MANHOLE DIMENSIONS			
P STORAGE MANHOLE DIAMETER	60"	72"	
Q MANHOLE DEPTH BELOW INLET/OUTLET	48"	48"	
R FLUID DEPTH	8' - 0"	8' - 0"	
S TOTAL STORAGE VOLUME	300 CF	450 CF	
SYSTEM DIMENSIONS AND ELEVATIONS			
T SEPARATOR MANHOLE COVER ELEVATION	T	T	
U STORAGE MANHOLE COVER ELEVATION	U	U	
V SEPARATOR MANHOLE FLOOR ELEVATION	V	V	
W STORAGE MANHOLE FLOOR ELEVATION	W	W	
X INLET PIPE ID AND MATERIAL	X1	X1	
Y INLET PIPE INVERT	Y1	Y1	
Z SEPARATOR UNIT INVERT	Z	Z	
AA OUTLET PIPE ID AND MATERIAL	AA	AA	
AB ELBOW INVERT ELEVATION	AB	AB	
AC CONNECTING PIPE INVERT ELEVATION	AC	AC	
AD CONNECTION PIPE SPACING	24"	24"	
AE STORAGE MANHOLE SIDE OFFSET	72 ± 6"	72 ± 6"	
AF STORAGE MANHOLE DOWNSTREAM OFFSET	31"	25"	



BAYSAVER SEPARATION SYSTEM - BS1 SEPARATOR UNIT ORDER FORM	BAYSAVER SEPARATION SYSTEM - BS2 SEPARATOR UNIT ORDER FORM	BAYSAVER SEPARATION SYSTEM - BS3 SEPARATOR UNIT ORDER FORM
PROJECT: ALBAN ENGINE ADDRESS: _____ DELIVERY DATE: _____ OWNER: _____ CONTACT: _____ ADDRESS: _____	PROJECT: ALBAN ENGINE ADDRESS: _____ DELIVERY DATE: _____ OWNER: _____ CONTACT: _____ ADDRESS: _____	PROJECT: ALBAN ENGINE ADDRESS: _____ DELIVERY DATE: _____ OWNER: _____ CONTACT: _____ ADDRESS: _____
DESIGNER: MILDENBERG, BOENDER & ASSOC., INC. CONTACT: FRANK C. LIN PHONE: (410) 997-0296 FAX: (410) 997-0298	DESIGNER: MILDENBERG, BOENDER & ASSOC., INC. CONTACT: FRANK C. LIN PHONE: (410) 997-0296 FAX: (410) 997-0298	DESIGNER: MILDENBERG, BOENDER & ASSOC., INC. CONTACT: FRANK C. LIN PHONE: (410) 997-0296 FAX: (410) 997-0298
CONTRACTOR: _____ PHONE: _____ FAX: _____	CONTRACTOR: _____ PHONE: _____ FAX: _____	CONTRACTOR: _____ PHONE: _____ FAX: _____
SEPARATOR UNIT MODEL: 5K □	SEPARATOR UNIT MODEL: 3K □	SEPARATOR UNIT MODEL: 3K □
MANHOLE SPECIFICATIONS: PRIMARY MANHOLE DIAMETER: 72" STORAGE MANHOLE DIAMETER: 72" FLOOR ELEVATIONS: PRIMARY MANHOLE: 177.38 STORAGE MANHOLE: 177.30 PRIMARY MANHOLE INVERT ELEVATIONS: SEPARATOR UNIT: 177.38 INLET PIPE(S): 177.38 (IN) 30" RCP (OUT) MANHOLE COVER ELEVATIONS: PRIMARY MANHOLE: 123.80 STORAGE MANHOLE: 123.80	MANHOLE SPECIFICATIONS: PRIMARY MANHOLE DIAMETER: 60" STORAGE MANHOLE DIAMETER: 60" FLOOR ELEVATIONS: PRIMARY MANHOLE: 123.00 STORAGE MANHOLE: 122.90 PRIMARY MANHOLE INVERT ELEVATIONS: SEPARATOR UNIT: 123.00 INLET PIPE(S): 24" RCP IN 24" RCP OUT MANHOLE COVER ELEVATIONS: PRIMARY MANHOLE: 126.50 STORAGE MANHOLE: 126.70	MANHOLE SPECIFICATIONS: PRIMARY MANHOLE DIAMETER: 60" STORAGE MANHOLE DIAMETER: 60" FLOOR ELEVATIONS: PRIMARY MANHOLE: 129.52 STORAGE MANHOLE: 129.42 PRIMARY MANHOLE INVERT ELEVATIONS: SEPARATOR UNIT: 129.52 INLET PIPE(S): 24" RCP IN 24" RCP OUT MANHOLE COVER ELEVATIONS: PRIMARY MANHOLE: 136.00 STORAGE MANHOLE: 136.00



OPERATION AND MAINTENANCE SCHEDULE FOR UNDERGROUND STORMWATER MANAGEMENT SYSTEM

- MAINTENANCE REQUIREMENTS:**
- REMOVAL OF SILT WHEN ACCUMULATION EXCEEDS SIX (6) INCHES. REMOVAL SHALL BE ACCOMPLISHED BY PRESSURE WASHING OF FACILITY.
 - REMOVE ACCUMULATED PAPER AND DEBRIS, AS REQUIRED, AT ALL MANHOLES.
 - INSPECT SYSTEM TO ENSURE THAT OUTLET IS FUNCTIONING AND NOT BLOCKED.
- ROUTINE MAINTENANCE:**
- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONALLY PROPERLY.
 - REMOVE ACCUMULATED PAPER, TRASH AND DEBRIS AS NECESSARY.
- NON-ROUTINE MAINTENANCE:**
- STRUCTURAL COMPONENTS OF THE FACILITY, SUCH AS THE MANHOLES, PIPES, TRASH RACKS, AND GRITTE PLATES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE.
 - SEDIMENT MUST BE REMOVED FROM THE FACILITY WHENEVER AN ACCUMULATION OF SIX (6) INCHES OR MORE IS OBSERVED IN THE OBSERVATION MANHOLES, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
 - SURFACE CONDITIONS OVER THE FACILITY SHOULD BE INSPECTED MONTHLY TO DETERMINE IF STRUCTURAL FAILURES HAVE OCCURRED. REPAIR AND REPLACE DAMAGED PIPES AND STONE AREAS AS NECESSARY.

OPERATIONS & MAINTENANCE SCHEDULE FOR BAYSAVER WATER QUALITY DEVICE

- BAYSAVER MAINTENANCE**
- BAYSAVER SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE DEPTH IN EITHER MANHOLE EXCEEDS 2 FEET. MINIMUM INSPECTION IS REQUIRED TWICE A YEAR TO MAINTAIN OPERATION AND FUNCTION OF BAYSAVER.
- MAINTENANCE CONSISTS OF THE FOLLOWING:**
- A. CONTAMINANT STORAGE MANHOLE**
- REMOVE THE ENTIRE VOLUME OF THE CONTAMINATED WATER BY VACUUM TRUCK.
 - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
- B. PRIMARY SEPARATION MANHOLE**
- USING A SUBMERSIBLE PUMP, PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY INTO THE EMPTY STORAGE MANHOLE UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
 - REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
 - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
 - CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.

BAYSAVER INSTALLATION INSTRUCTIONS

- EXCAVATION MUST PROVIDE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO SEPARATOR MANHOLE AND BAYSAVER UNIT. INSTALL PRECAST DROP STRUCTURES ON SOLID GROUND AS VERIFIED BY A GEOTECHNICAL ENGINEER.
- VERIFY THE SUBGRADE ELEVATION AGAINST THE MANHOLE DIMENSIONS AND CONNECTING STORM DRAIN INVERTS.
- MAKING SURE THE BASES ARE LEVEL AND THE STORAGE MANHOLE OPENINGS ARE ALIGNED WITH THE SEPARATOR UNIT, INSTALL PRIMARY AND STORAGE MANHOLES. INSTALL RUBBER GASKETS ON BASE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTIONS AS REQUIRED. SEAL LIFT HOLES WITH NON-SHRINK GROUT.
- BACKFILL BASE SECTIONS OF MANHOLES TO INVERT OF STORAGE MANHOLE CONNECTING PIPES. USING APPROVED BACKFILL MATERIAL, BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL AND COMPACTION SHOULD BE MONITORED BY A GEOTECHNICAL ENGINEER.
- INSTALL BAYSAVER SEPARATOR UNIT AND CONNECTING PIPES. SEAL ALL CONNECTING JOINTS AND INSTALL SEPARATOR UNIT/STORM DRAIN JOINT COLLAR. CUT EXCESS LENGTH OFF CONNECTING PIPES INSIDE STORAGE MANHOLE.
- BACKFILL SEPARATOR UNIT AND MANHOLES. AREAS NOT ACCESSIBLE TO COMPACTOR EQUIPMENT MUST BE BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL.
- INSTALL AND SET MANHOLE COVER GRADE ADJUSTMENT RINGS AS NECESSARY.
- INSTALL AND SET MANHOLE FRAME AND COVER UNITS.

BAYSAVER GENERAL CONSTRUCTION NOTES

- ALL WORK MUST BE DONE WITH REGARD FOR THE SAFETY OF THE CONSTRUCTION CREW.
- ALL WORK AND MATERIALS MUST COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS.
- KNOW THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION BEGINS.

MAINTENANCE SCHEDULE

- REMOVE THE INLET GRATES AND INSPECT FOR DEBRIS EACH JANUARY 2, APRIL 1, JULY 1, SEPTEMBER 30, AND NOVEMBER 30. REMOVE ACCUMULATED LEAVES, TWIGS, SEDIMENT AND OTHER DEBRIS AS REQUIRED TO KEEP THE INLETS CLEAN.
- ON A SEMI-ANNUAL BASIS, INSPECT CONTROL STRUCTURES FOR ANY ACCUMULATED DEBRIS AT THE TRASH RACK. REMOVE ANY DEBRIS FOUND DURING THE INSPECTION.
- ON AN ANNUAL BASIS, INSPECT THE DETENTION SYSTEM PIPING FOR DEBRIS OR SEDIMENT ACCUMULATION AND FOR SYSTEM INTEGRITY. REMOVE ANY ACCUMULATED FOREIGN MATERIALS.
- NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS OF ANY PROBLEMS OR FAILURES OBSERVED IN THIS SYSTEM.

OWNER/DEVELOPER

P. O. BOX 9595
BALTIMORE, MARYLAND 21237
(410) 658-7777
ATTN: CHUCK WITMER

NOTES: 1. STORMWATER MANAGEMENT FACILITY IS TO BE PRIVATELY OWNED AND MAINTAINED.
2. ALL DEBRIS IS TO BE KEPT OUT OF THE FACILITY DURING AND AFTER CONSTRUCTION.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Steve Daneman
CHIEF, DEVELOPMENT-ENGINEERING DIVISION MK
DATE: 3/2/00

Chuck Horvath
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 3/2/00

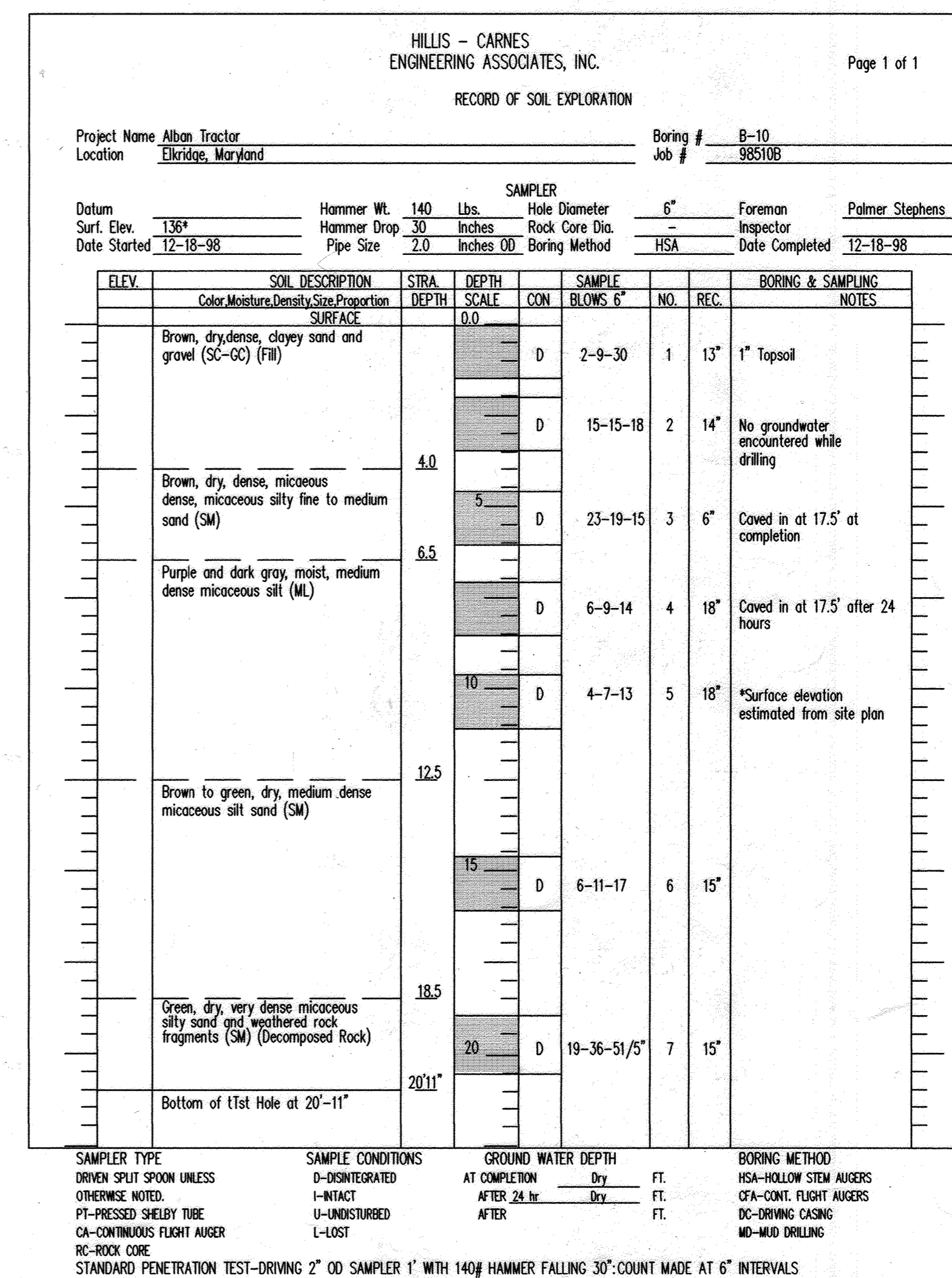
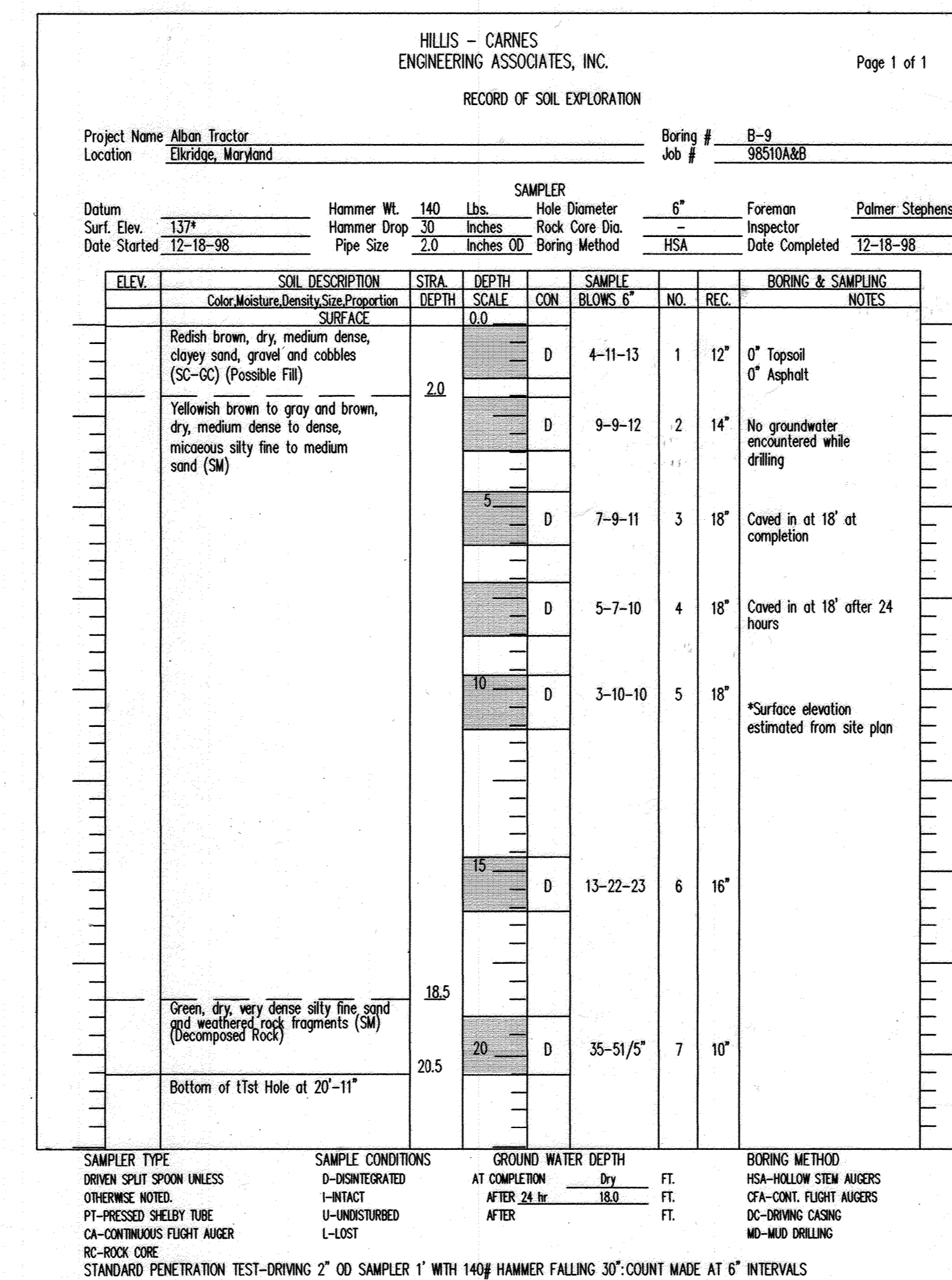
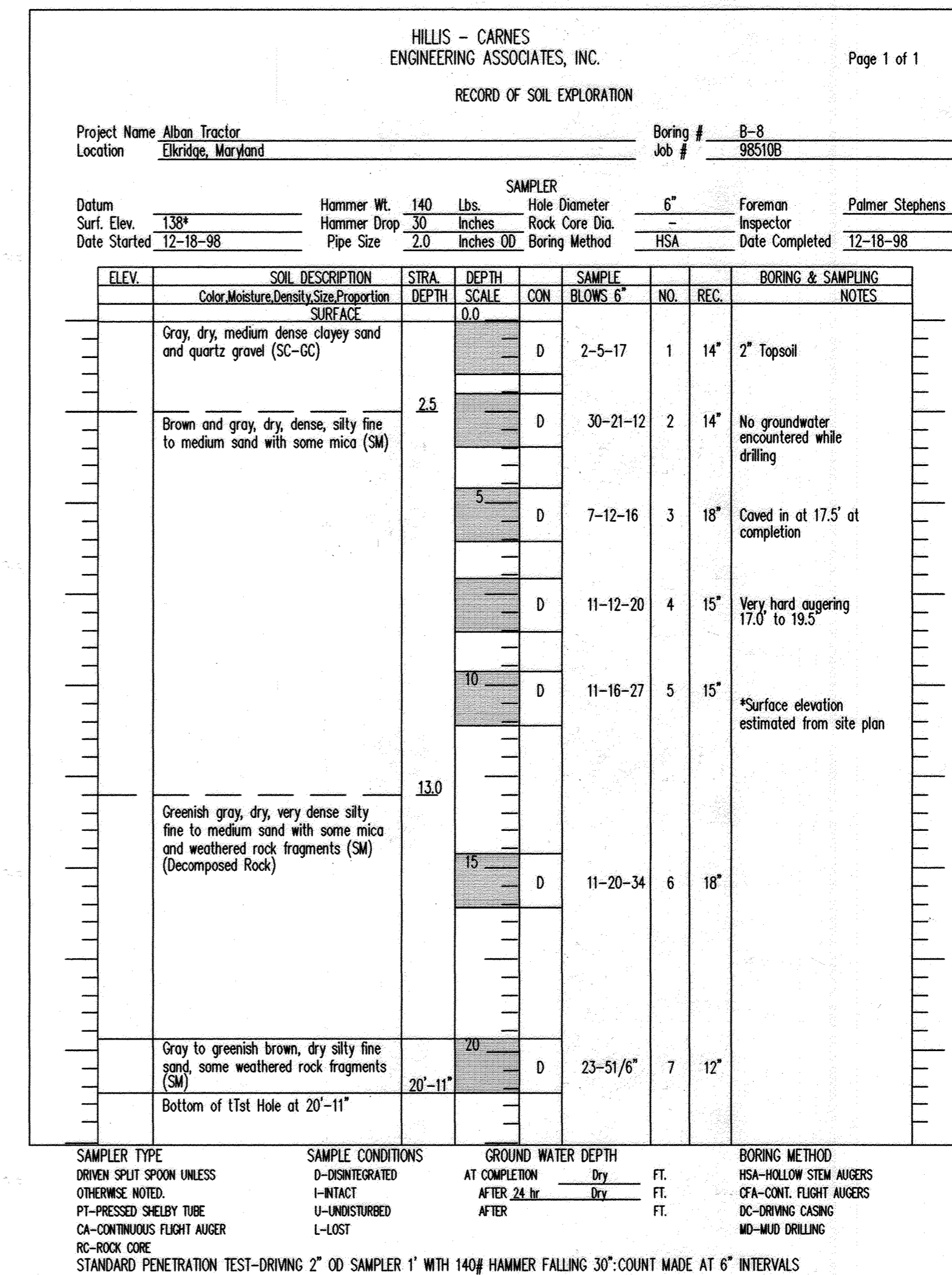
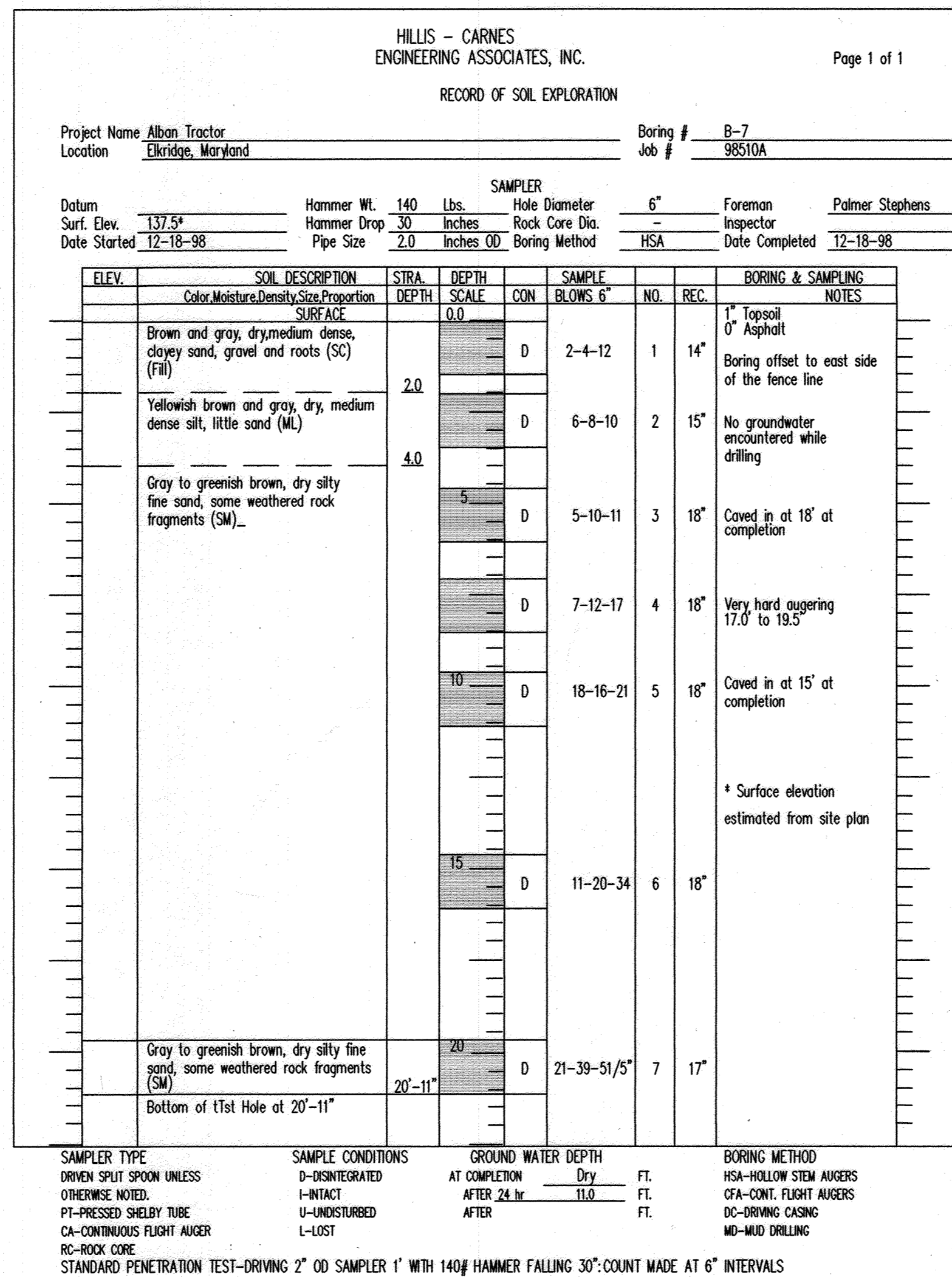
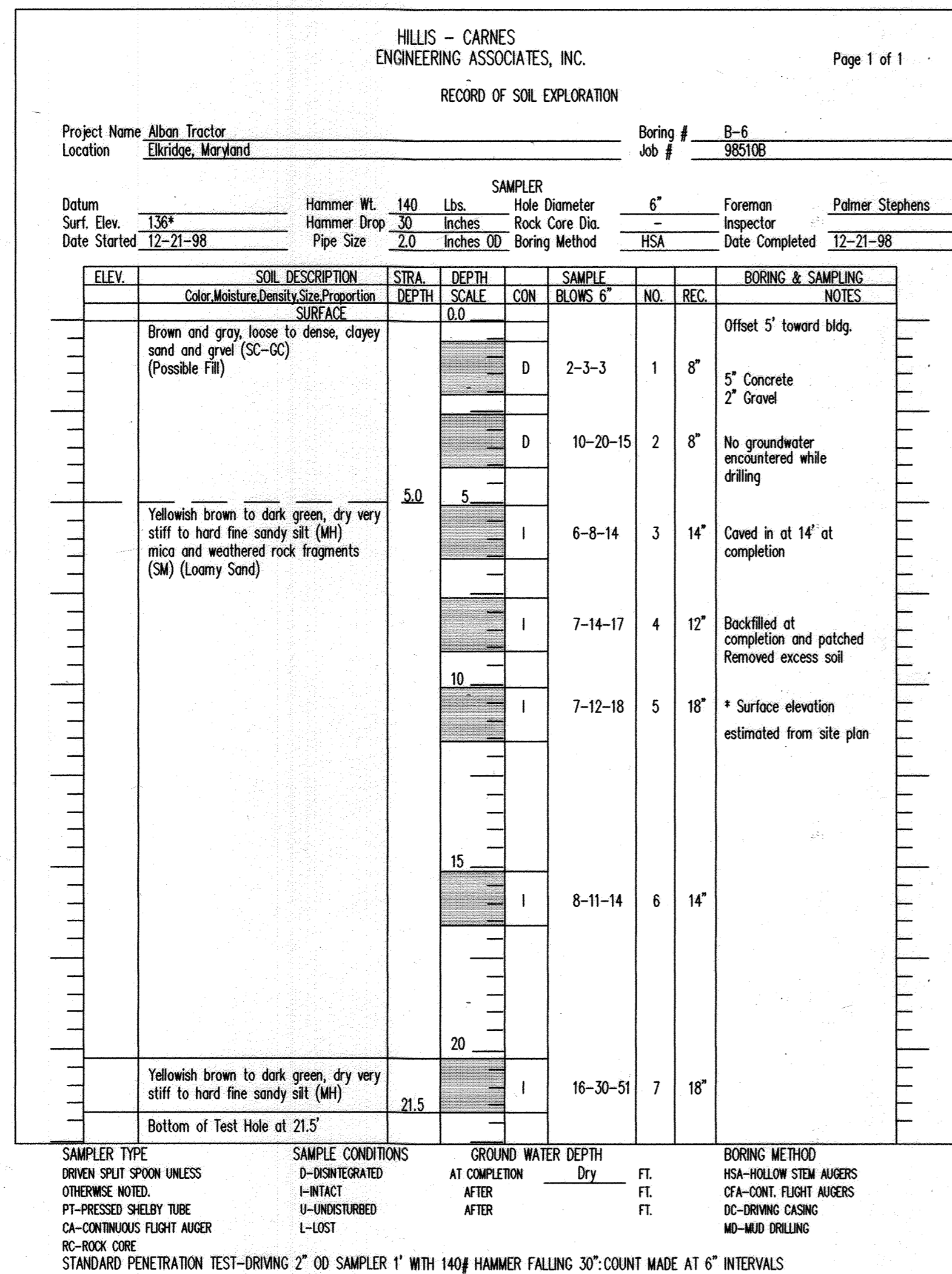
Frank C. Lin
DATE: 3/2/00

Project: 98014.10
date: 12/17/99
engineering: FCL
illustration: FCL
scale: 1" = 50'
approval: JH

description: revisions

TAX MAP 38, PARCELS 221, 524 & 223
ALBAN ENGINE
HOWARD COUNTY, MARYLAND
FIRST ELECTION DISTRICT
STORMWATER MANAGEMENT DETAILS & SPECIFICATIONS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax



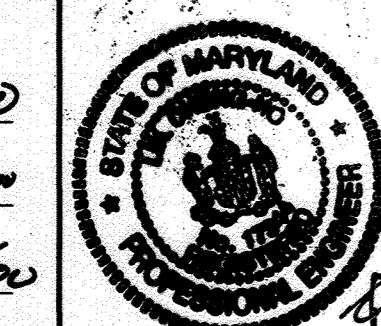
98014/DWG/SDP222/SWMDTL

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 3/23/00 DATE

[Signature] 3/21/00 DATE

[Signature] 2/29/00 DATE



date 10/10/99
project 98014.10
illustration FCL
scale 1" = 50'
approval JH

TAX MAP 38, PARCELS 221, 524 & 223
ALBAN ENGINE
HOWARD COUNTY, MARYLAND
SOIL BORING LOGS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorney Field Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0286 Balt. (301) 621-5521 Wash. (410) 997-0288 Fax.

8 OF 12
SDP-00-19

NOTE: THIS DRAWING IS TO BE USED FOR LANDSCAPE PLAN PURPOSES ONLY.

- NOTES:**
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
 - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$19,950.00.
 - SWM PERIMETER LANDSCAPING IS NOT REQUIRED.
 - NO PARKING SPACES ARE PROPOSED UNDER THIS SITE DEVELOPMENT PLAN.
 - NO PERIMETER LANDSCAPING IS PROPOSED ADJACENT TO PARCEL 524, WHICH IS UNDER THE SAME OWNERSHIP.
 - EXISTING LANDSCAPING SHOWN ON PARCELS 221 & 524 IS PER SDP-98-139.
 - FINANCIAL SURETY FOR REQUIRED PERIMETER LANDSCAPING WILL BE POSTED AS PART OF THE BUILDER'S GRADING PERMIT, IN THE AMOUNT OF \$780.00 FOR 26 SHRUBS AT \$30.00 EACH.

STREET TREE CALCULATIONS
 OLD BALTIMORE-WASHINGTON BLVD - 267 / 30 = 9
 TOTAL TREES REQUIRED = 9 SMALL TREES
 TOTAL TREES PROVIDED = 9 SMALL TREES

PERIMETER	EDGE TYPE	NON-RES TO RES	EXISTING TREES TO REMAIN	SHADE TREES	EVERGREEN TREES	SHRUBS
PERIMETER 1	N/A	ENTRANCES - 35 LF				
PERIMETER 2	B	NON-RES TO ROAD - 120.22 LF		1 SHADE TREE / 50 LF	1 EVERGREEN / 40 LF	2
		NON-RES TO ROAD - 112 LF		1 SHADE TREE / 60 LF	1 EVERGREEN / 10 LF	11
PERIMETER 3	D	NON-RES TO RES - 180 LF		1 SHADE TREE / 60 LF	1 EVERGREEN / 10 LF	5
		EXISTING TREES TO REMAIN				
PERIMETER 4	D	NON-RES TO RES - 80 LF		1 SHADE TREE / 60 LF	1 EVERGREEN / 10 LF	8
		EXISTING TREES TO REMAIN				
PERIMETER 5	D	NON-RES TO RES - 199.37 LF		1 SHADE TREE / 60 LF	1 EVERGREEN / 10 LF	20
		EXISTING TREES TO REMAIN				
TOTAL PLANTING OBLIGATION				18 SHADE TREES	97 EVERGREEN TREES	0 SHRUBS

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES	
	B (PERIMETER 1B)	D (PERIMETER 1A, 2, 4, & 5)	C (PERIMETER 3)	
LANDSCAPE TYPE	B (PERIMETER 1B)	D (PERIMETER 1A, 2, 4, & 5)	C (PERIMETER 3)	
LINEAR FEET OF PERIMETER	120.22 LF	1123.15 LF	291.50 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	YES, 180 LF OF EXISTING TREES TO REMAIN	YES, 291.50 LF OF EXISTING TREES TO REMAIN	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	
NUMBER OF PLANTS REQUIRED	2 SHADE TREES 3 EVERGREEN TREES 0 SHRUBS	16 SHADE TREES 94 EVERGREEN TREES 26 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	
NUMBER OF PLANTS PROVIDED	2 SHADE TREES 3 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	16 SHADE TREES 94 EVERGREEN TREES 0 SUBSTITUTION TREES 26 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

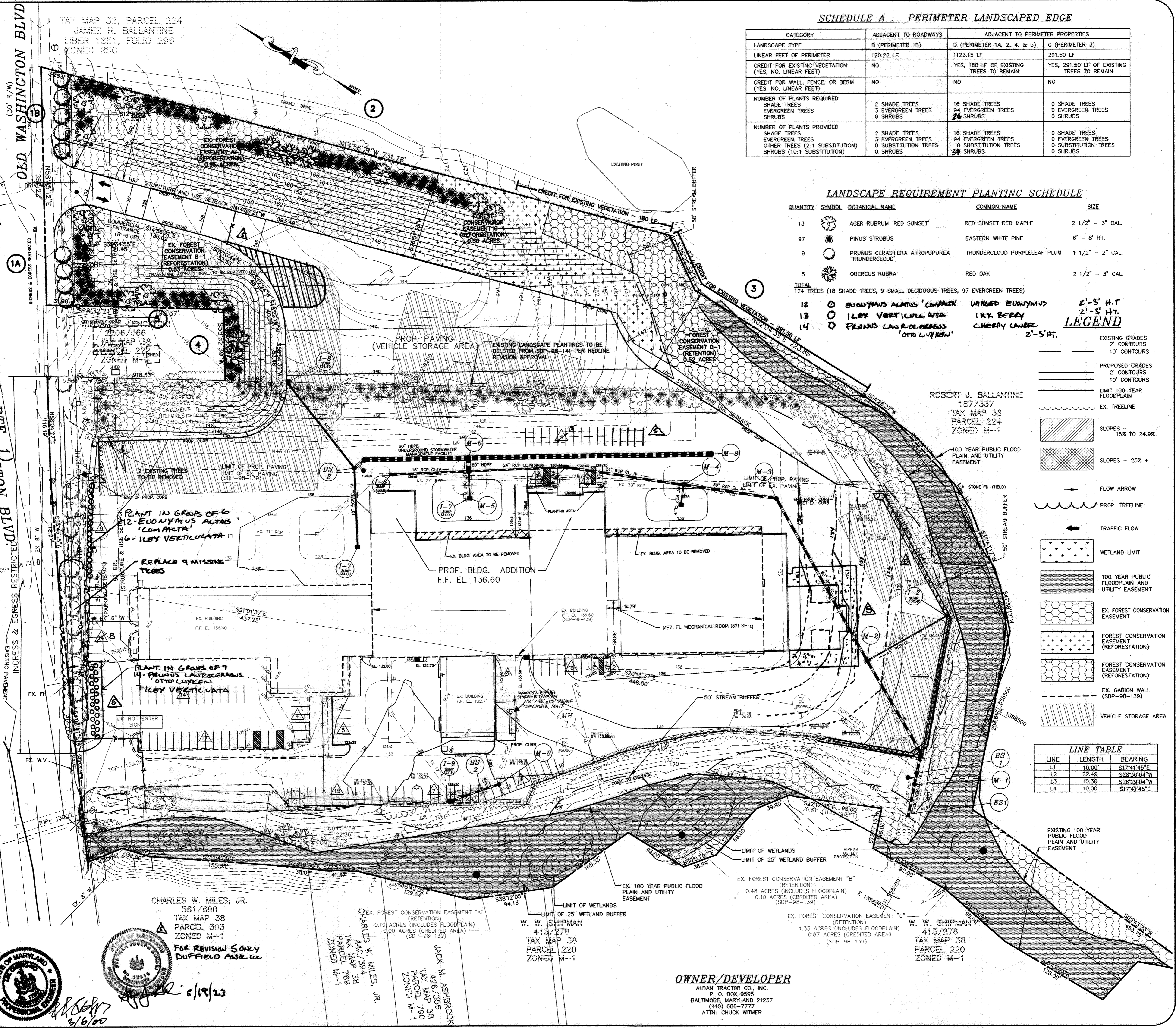
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
13	○	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
97	○	PINUS STROBUS	EASTERN WHITE PINE	6' - 8' HT.
9	○	PRUNUS CERASIFERA ATROPUPUREA 'THUNDERCLOUD'	THUNDERCLOUD PURPLELEAF PLUM	1 1/2" - 2" CAL.
5	○	QUERCUS RUBRA	RED OAK	2 1/2" - 3" CAL.
TOTAL 124 TREES (18 SHADE TREES, 9 SMALL DECIDUOUS TREES, 97 EVERGREEN TREES)				
12	○	EUONYMUS ALATUS 'COMACTA'	WINGED EUONYMUS	2'-3' H.T.
13	○	ILEX VERTICILLATA	HICK BERRY	2'-3' H.T.
14	○	PRUNUS LAURO-CASSIA	CHERRY LAUREL	2'-5' H.T.

LEGEND

- EXISTING GRADES
- 2' CONTOURS
- 10' CONTOURS
- PROPOSED GRADES
- 2' CONTOURS
- 10' CONTOURS
- LIMIT 100 YEAR FLOODPLAIN
- EX. TREELINE
- SLOPES - 15% TO 24.9%
- SLOPES - 25% +
- FLOW ARROW
- PROP. TREELINE
- TRAFFIC FLOW
- WETLAND LIMIT
- 100 YEAR PUBLIC FLOODPLAIN AND UTILITY EASEMENT
- EX. FOREST CONSERVATION EASEMENT
- FOREST CONSERVATION EASEMENT (REFORESTATION)
- FOREST CONSERVATION EASEMENT (REFORESTATION)
- EX. GABION WALL (SDP-98-139)
- VEHICLE STORAGE AREA

LINE TABLE

LINE	LENGTH	BEARING
L1	10.00'	S17°41'45"E
L2	22.49'	S28°36'04"W
L3	10.30'	S28°29'04"W
L4	10.00'	S17°41'45"E



date	3/7/00
project	98014.10
illustration	FCL/SD
scale	1" = 50'

date	03/02/23
description	ADD WALKWAY, FENCING, AND LEANING PLANTING
revision	1
revision	2
revision	3
revision	4
revision	5

TAX MAP 38, PARCELS 221, 524 & 223
ALBAN ENGINE
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 LANDSCAPE PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsy Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Fax: (301) 621-5521 Wash. (410) 997-0586 Fax

98014.10.DWG/SDP223/14-223-br.dwg 2-29-00 11:07:35 am EST

APPROVED: DEPARTMENT OF PLANNING & ZONING
 Chief, Development Engineering Division MK
 Chief, Division of Land-Development
 Director

DATE: 3/2/00
 DATE: 3/2/00
 DATE: 3/25/00



CHARLES W. MILES, JR.
 561/890
 TAX MAP 38
 PARCEL 303
 ZONED M-1
 For Revision Only
 DUFFIELD ASSR. LLC

JACK M. ASHBROOK
 446/358
 TAX MAP 38
 PARCEL 789
 ZONED M-1

W. W. SHIPMAN
 413/878
 TAX MAP 38
 PARCEL 220
 ZONED M-1

OWNER/DEVELOPER
 ALBAN TRACTOR CO., INC.
 P. O. BOX 9595
 BALTIMORE, MARYLAND 21237
 (410) 686-7777
 ATTN: CHUCK WITMER

NOTE: THIS PLAN IS TO BE USED FOR FOREST CONSERVATION PURPOSES ONLY.

PLANTING SPECIFICATIONS AND NOTES

SITE PREPARATION AND SOILS

- PROTECTION FENCING AND SILT FENCES FOR SEDIMENT AND EROSION CONTROL ARE TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
- DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. AS SHOWN ON THE DETAIL VIEW, A PLANTING FIELD OF RADIUS = 5 X DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
- SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE.
- SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
- ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

PLANT STORAGE AND INSPECTION

- FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
- FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
- PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
- UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

PLANT INSTALLATION

- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILING SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
- PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST.
- CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THRU LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2 INCH ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES THEY WERE HERE FIRST.
- CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND SOIL GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
- FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
- FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FOUR (4), PER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
- AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LISTS TO OBTAIN A MORE NATURAL APPEARANCE.
- NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE WELL DRAINED NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.

FERTILIZING

- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
- NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
- IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE LOCALLY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
- ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
- VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY EFFECTING THE PLANTED STOCK.
- REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
- REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN ENTIRE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS SMOTHERING PLANTING STOCK.
- A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS MAY BE REQUIRED TO ACHIEVE THIS GOAL.

SUPERVISION

ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER "QUALIFIED PROFESSIONAL" AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

STANDARD NON-DISTURBANCE NOTE:

"THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENTS EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM."

GENERAL NOTES

FOREST PROTECTION

- ALL FOREST RETENTION AREAS AND ISOLATED POTENTIAL SPECIMEN TREES SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED, BLAZE ORANGE PLASTIC MESH FENCING AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY AND AROUND ISOLATED POTENTIAL SPECIMEN TREES PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
- THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES. IT IS UNDERSTOOD THAT THE INSTALLATION OF THE FENCING IN THIS MANNER WILL CREATE AN IRREGULAR EDGE.
- ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THE PROTECTED AREAS.
- INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
- THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS.
- REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
- ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL FORESTED AREAS. PLEASE REFER TO ROOT PRUNING DETAIL THIS SHEET.

- AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
 - TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS;
 - INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
 - MAKE ALL NECESSARY ADJUSTMENTS;
 - ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

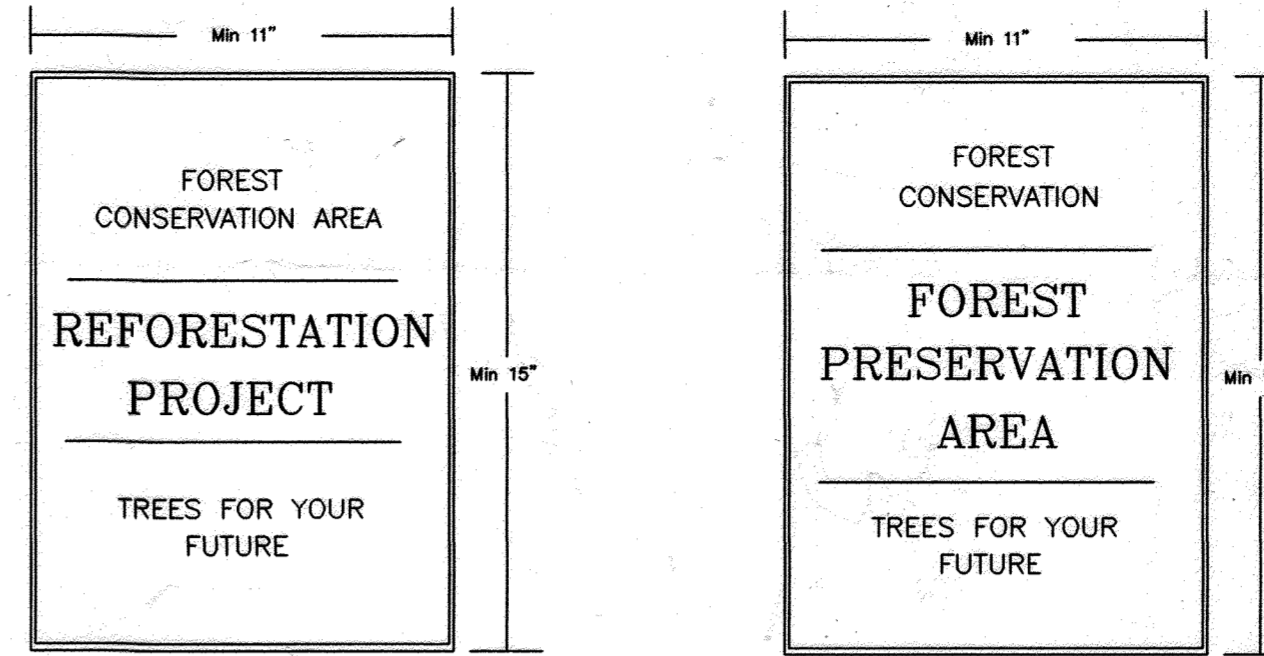
- CONSTRUCTION MONITORING
- THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST.

LIMITS OF WORK
THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

REFORESTATION PLANT LIST

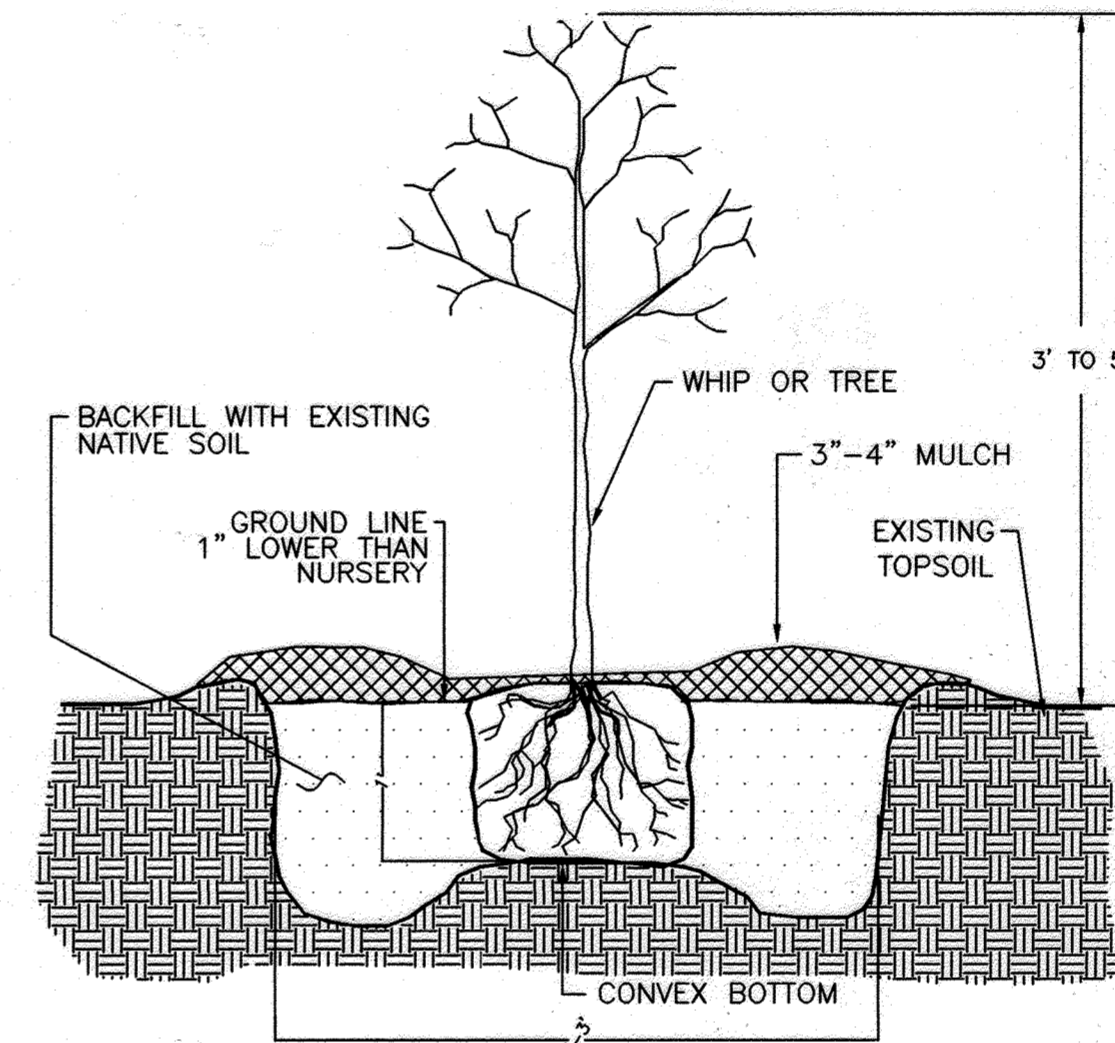
QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C.	SIZE & SPACING	REMARKS
14	Acer rubrum Red Maple	VT	D-W	FAC	15'	CONT/B & B 1" CALIPER	
19	Cornus florida Flowering Dogwood	VT	D-M	FACU-	8'	CONT/B & B 3'-5' HEIGHT	
20	Nyssa sylvatica Black Gum	T	M-W	FAC	11'	CONT/B & B 1" CALIPER	
19	Prunus serotina Wild Black Cherry	I	M	FACU	11'	CONT/B & B 3'-5' HEIGHT	
14	Quercus palustris Pin Oak	I	M-W	FACW	15'	CONT/B & B 1" CALIPER	
14	Quercus rubra Red Oak	MT	D-M	UPL	15'	CONT/B & B 1" CALIPER	
TOTAL							
100 TREES							

NOTE: WHIPS OR SEEDLINGS MAY BE SUBSTITUTED FOR THE 1" CALIPER OR 3' - 5' TREES. IF WHIPS OR SEEDLINGS ARE TO BE USED, MULTIPLY THE QUANTITIES BY 3.5 TO DETERMINE THE NUMBER OF TREES REQUIRED.



SIGNAGE DETAIL

NOT TO SCALE

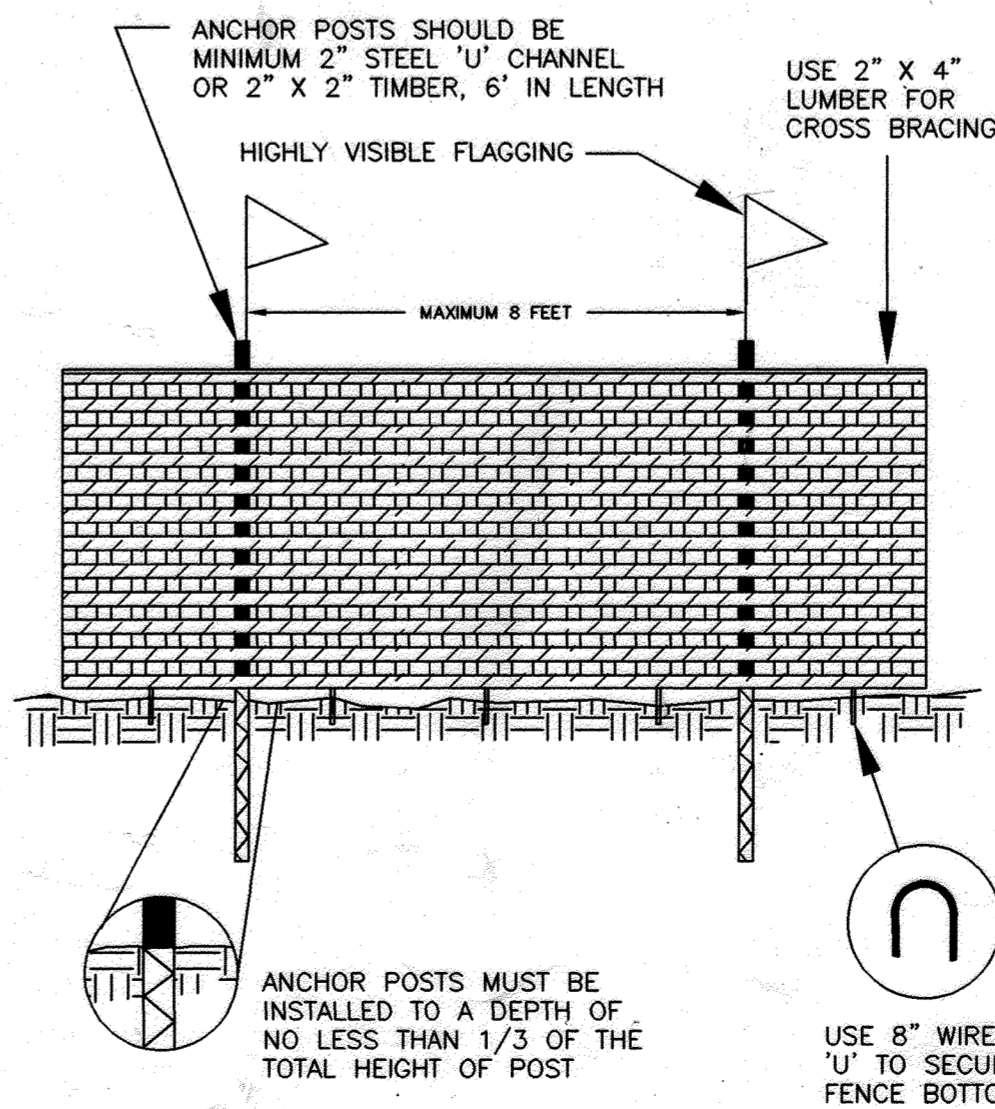


TREE PLANTING DETAIL

CONTAINER GROWN

PROTECTIVE FENCE DETAIL

BLAZE ORANGE PLASTIC MESH



- FOREST PROTECTION DEVICE ONLY.
- RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
- BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
- ROOT DAMAGE SHOULD BE AVOIDED.
- PROTECTIVE SIGNAGE MAY ALSO BE USED.
- DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

MD DNR QUALIFIED PROFESSIONAL

Stephanie Demchik 3/6/00
STEPHANIE DEMCHIK

98014.DWG/SDP/2223/14-223-kpr.dwg 10-14-99 2:08:16 PM EST

APPROVED: DEPARTMENT OF PLANNING & ZONING

John Dammann 3/23/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
Cathy Hanrahan 3/23/00
CHIEF, DIVISION OF LAND DEVELOPMENT
Lyndell Smith 3/23/00
DIRECTOR

Project	98014.10	date	OCT 99
Illustration	SJD	engineering	SJD
scale	NTS	approval	SJD
revisions			

no.	description	date

TAX MAP 38, PARCELS 221, 524 & 223
ALBAN ENGINE
HOWARD COUNTY, MARYLAND
FIRST ELECTION DISTRICT
FOREST CONSERVATION & REFORESTATION PLAN

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(410) 997-0296 Bldg. (301) 621-5521 Wash. (410) 997-0298 Fax.