

ROAD CONSTRUCTION PLANS

ZANTI PROPERTY

LOTS 4-11

AND OPEN SPACE LOTS 12 & 13

A RESUBDIVISION OF
ZANTI PROPERTY
LOTS 1 THRU 3

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

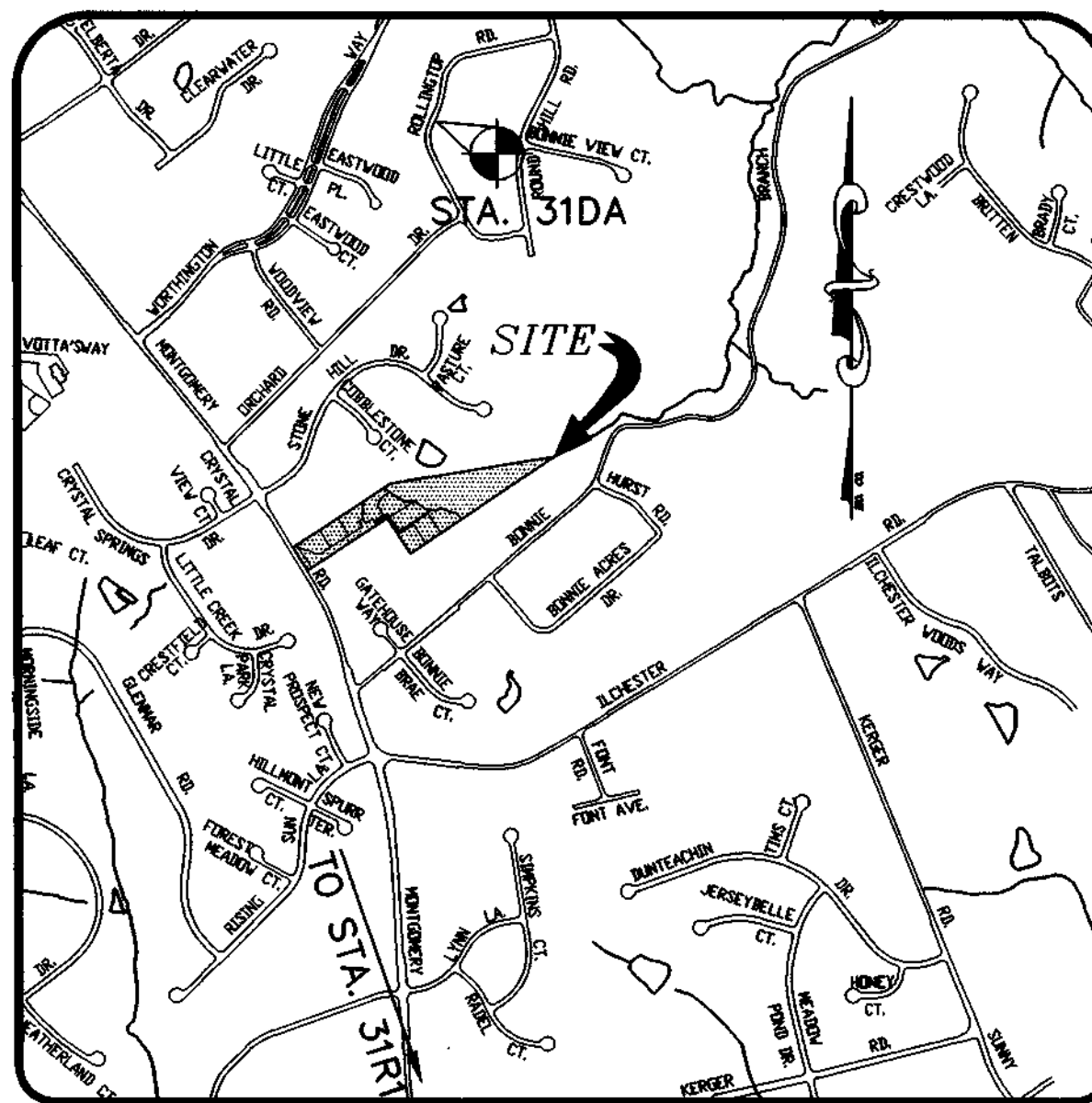
MIS UTILITY	(800) 257-7777
VERIZON TELEPHONE COMPANY	(410) 725-9976
HOWARD COUNTY BUREAU OF UTILITIES	(410) 313-4900
AT&T CABLE LOCATION DIVISION	(410) 393-3533
BALTIMORE GAS & ELECTRIC	(410) 685-0123
STATE HIGHWAY ADMINISTRATION	(410) 531-5533
HOWARD COUNTY DEPT. OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION	(410) 313-1880
- PROJECT BACKGROUND:
 - LOCATION: SECOND ELECTION DISTRICT - TAX MAP 31 - PARCELS 106
 - PREVIOUS DPZ REFERENCES: F-86-184, WP-00-107, SP-00-04
 - TAX MAP 31, GRID 14, PARCEL 106, LOTS 1, 2 & 3
 - ZONING: R-20
 - DEED REFERENCE: 4946/0230
 - GROSS AREA: 6.69 ACRES±
 - 100 YEAR FLOOD PLAIN AREA: 0.52 ACRES±
 - AREA OF PROPOSED BUILDABLE LOTS: 2.71 ACRES±
 - NO. OF BUILDABLE LOTS: 8
 - AREA OF OPEN SPACE REQUIRED: 6.69 X 30%=2.01 ACRES
 - AREA OF PROPOSED OPEN SPACE LOT: 3.46 ACRES±
 - NO. OF PROPOSED OPEN SPACE LOTS: 2
 - AREA OF PROPOSED PUBLIC ROAD DEDICATION: 0.52 ACRES±
- TOPOGRAPHY SHOWN HEREON IS FIELD RUN BY MILDENBERG, BOENDER & ASSOCIATES, INC. FOR ONSITE ON OR ABOUT OCTOBER, 1999.
- HORIZONTAL AND VERTICAL DATUMS BASED ON (NAD'83) MARYLAND STATE COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.

STA No. 31R1	N 565,303.465	EL = 401.678
	E 1,372,517.678	
STA No. 31DA	N 571,982.645	EL = 482.359
	E 1,372,144.970	
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- PUBLIC WATER AND SEWER WILL BE AVAILABLE UNDER CONTRACT #14-3827-D.
- STORMWATER MANAGEMENT QUANTITY CONTROL WILL BE PROVIDED VIA THE DETENTION POND FOR BOTH ZANTI PROPERTY AND JOHN T. BOWEN & WIFE'S PROPERTY. WATER QUALITY WILL BE VIA PRIVATELY OWNED AND MAINTAINED STORMWATER CONTROL STRUCTURE FOR CONTRIBUTING DRAINAGE AREA FROM ZANTI PROPERTY AND JOHN T. BOWEN & WIFE'S PROPERTY. SWM IS PRIVATELY OWNED AND MAINTAINED.
- WATER QUALITY FOR LOTS 9 THRU 11 WILL BE VIA DRYWELL.
- EXISTING STRUCTURE ON LOT 8 IS TO REMAIN.
- FLOODPLAIN STUDY IS BY MILDENBERG, BOENDER & ASSOCIATES, INC. IN FEBRUARY, 2000.
- WETLAND STUDY WAS COMPLETED BY WILDMAN ENVIRONMENTAL SERVICES IN OCTOBER, 1999.
- 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.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING CONSTRUCTION.
- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY RETENTION OF EXISTING FOREST IN THE AMOUNT OF 1.41 ACRES REQUIRED WITH 1.41 ACRES OF CREDITED EASEMENT AND 0.17 ACRES OF NON-CREDITED (FLOODPLAIN) EASEMENT FOR A TOTAL FOREST CONSERVATION EASEMENT AREA OF 1.58 ACRES.
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- OPEN SPACE LOT 12 WILL BE CONVEYED TO THE HOME OWNER'S ASSOCIATION, OPEN SPACE LOT 13 WILL BE CONVEYED TO HOWARD COUNTY, MARYLAND (DEPARTMENT OF RECREATION AND PARKS)
- NO STEEP SLOPES EXISTS ON SITE.
- A MINIMUM OF TWO (2) PARKING SPACES ARE PROVIDED FOR EACH LOT.
- CONTRACTOR MUST NOTIFY MR. SAM PORTS, PERMIT INSPECTOR, STATE HIGHWAY ADMINISTRATION, DAYTON MARYLAND (PHONE: 301 524-3119) 48 HOURS BEFORE THE COMMENCEMENT OF WORK WITHIN MONTGOMERY ROAD (MD. RTE. 103), AND PRIOR TO EACH SUCCESSIVE STAGE OF WORK.
- DENOTES BOLLARD.
(TOTAL OF 8 TO BE INSTALLED AT CORNERS OF THE 30' OPEN SPACE INGRESS & EGRESS ACCESS EASEMENT)
- THE PROPOSED SUBDIVISION DESIGN IS SUBJECT TO WAIVER WP-00-107 (APPROVED ON JUNE 14, 2000), A WAIVER TO THE MINIMUM PUBLIC ROAD FRONTAGE REQUIREMENT FROM 40 FEET TO 0 FEET FOR OPEN SPACE LOTS 12 & 13.
- THE PROPOSED DISTURBANCE TO INSTALL THE 8" SEWER LINE, SWM OUTFALL PIPE, RIP-RAP AND APRON LOCATED WITHIN THE STREAM BUFFER AND THE 100 YR FLOODPLAIN ARE CONSIDERED AS NECESSARY DISTURBANCE BY THE DEPARTMENT OF PLANNING AND ZONING AND HOWARD SOIL CONSERVATION DISTRICT IN ACCORDANCE WITH SECTION 16.116(c) OF THE SUBDIVISION REGULATIONS.
- THE TRAFFIC STUDY FOR THIS DEVELOPMENT WAS DONE BY LEE CUNNINGHAM & ASSOC. ON NOV. 1999. AND WAS APPROVED ON SEP. 20,2000
- THE TRAFFIC NOISE STUDY FOR THIS DEVELOPMENT WAS DONE BY WILDMAN ENVIRONMENTAL SERVICES ON NOV. 1999. AND WAS APPROVED ON SEP. 20,2000
- THE STREET LIGHT LOCATIONS AND TYPES OF LIGHTS ARE AS FOLLOWS:

STREET NAME	STATION	OFFSET	
WOOD POINT PLACE	0+35	16' R	100-watt HPS VAPOR PENDANT FIXTURE (CUTOFF) MOUNTED AT 30' ON A BLACK FIBERGLASS POLE USING A 1" ARM.
WOOD POINT PLACE	0+78	14' L	FIXTURE/POLE TYPE
WOOD POINT PLACE	1+20	14' R	100 watt HPS VAPOR "TRADITIONAL" POST TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE
WOOD POINT PLACE	3+35	10' R	

28. JOINT PERMIT TRACKING NUMBER: 200163868 APPROVED ON JUNE 25, 2001.

No.	SHEET TITLE
1	COVER SHEET
2	ROAD PLAN, PROFILES AND SECTIONS
3	FILLET PROFILES
4	GRADING, EROSION AND SEDIMENT CONTROL PLAN
5	EROSION & SEDIMENT CONTROL NOTES AND DETAILS
6	STORM DRAIN PROFILES AND DETAILS
7	DRAINAGE AREA MAP
8	STORMWATER MANAGEMENT POND PROFILES & DETAILS
9	STORMWATER MANAGEMENT POND DETAILS & NOTES
10	STORMWATER MANAGEMENT POND SPECIFICATIONS & BORING LOGS
11	SHA TRAFFIC CONTROL PLAN
12	LANDSCAPE PLAN
13	FOREST CONSERVATION PLAN



VICINITY MAP

SCALE: 1"=1000'

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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Don Reuwer 7-24-01
SIGNATURE OF DEVELOPER DATE
Don Reuwer
PRINTED NAME OF DEVELOPER

BY THE ENGINEER:

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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

R. Jacob Hikmat 7/23/01
SIGNATURE OF ENGINEER DATE
R. JACOB HIKMAT
PRINTED NAME OF ENGINEER

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

David M. Galt 7/27/01
USDA NATURAL RESOURCE CONSERVATION SERVICE DATE

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

John K. Selig 7/27/01
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Howard Shultz 8/1/01
CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Candy Stenhouse 8/2/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 8/16/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



OWNER/DEVELOPER
ELLCOTT CITY LAND HOLDING CO.
8000 MAIN STREET
ELLCOTT CITY MARYLAND 21043
PHONE No. (410) 740-2100

project	99026	date	JULY 2001
illustration	SA	engineering	SA
scale	AS SHWN	approval	RH

no.	description	date

ZANTI PROPERTY
LOTS 4-11 AND OPEN SPACE LOTS 12 & 13
TAX MAP 31 - PARCEL 106 - GRID 14
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
COVER SHEET

**MILDENBERG,
BOENDER & ASSOC., INC.**
Engineers Surveyors
Planners
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0286 Bldg. (301) 621-5521 Wash. (410) 997-0298 Fax.

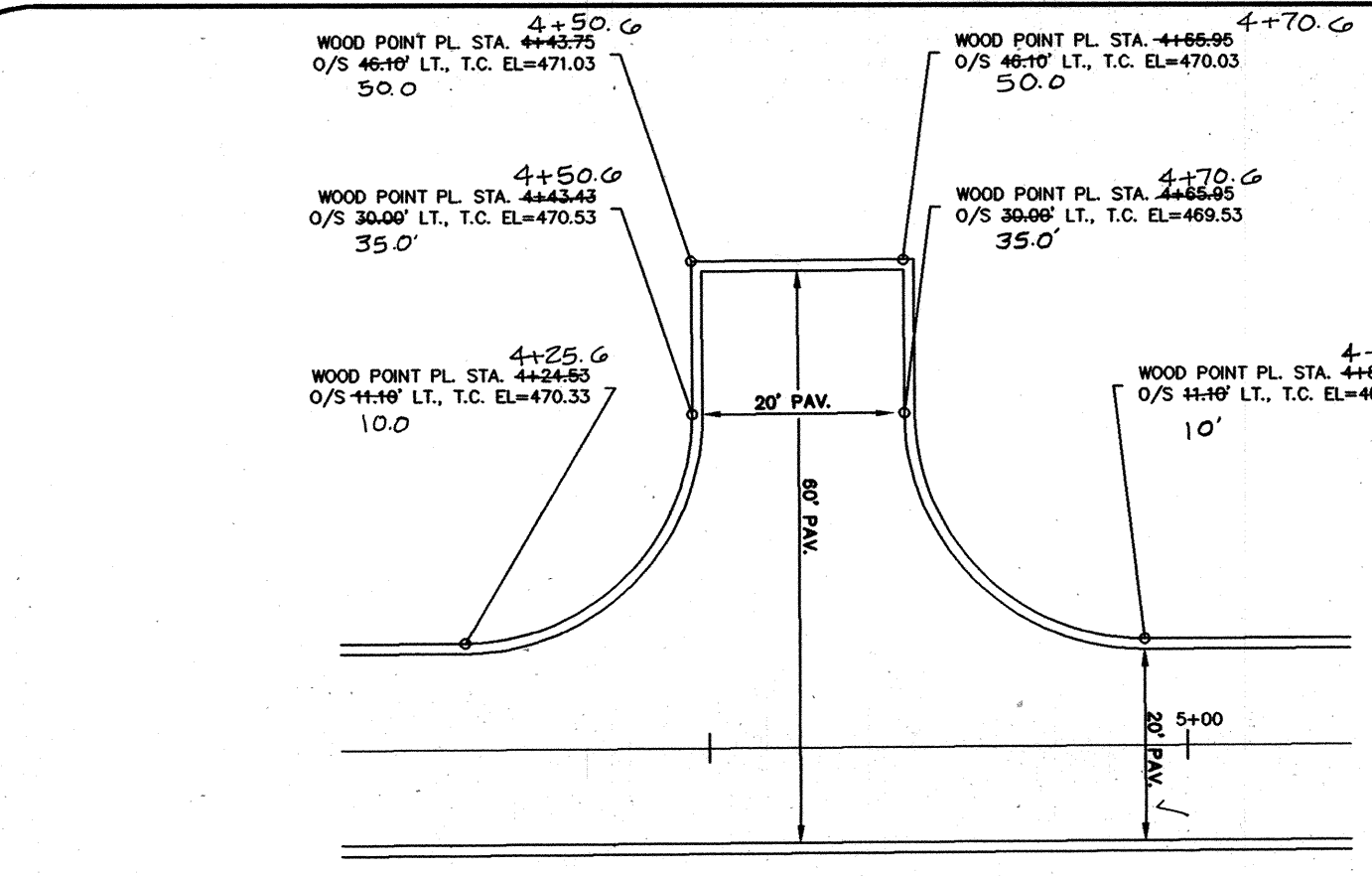
NOTE: FOR STREET TREES SEE LANDSCAPE PLAN ON SHEET 12 OF 13

Project	990226	date	JULY 2001
Illustration	SJA	engineering	SJA
scale	AS SHOWN	approval	RJH

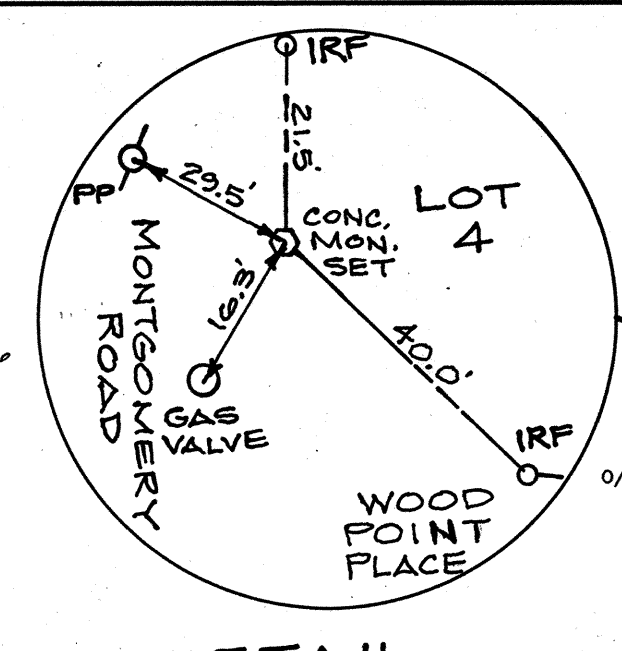
description	ADDED CONC. MON. SKETCH	date	8/2/03
revisions			

ZANTI PROPERTY
 LOTS 4-11 AND OPEN SPACE LOTS 12 & 13
 TAX MAP 31 - PARCEL 106 - GRID 14
 HOWARD COUNTY, MARYLAND
 SECOND ELECTION DISTRICT
 ROAD PLAN, PROFILES AND SECTIONS

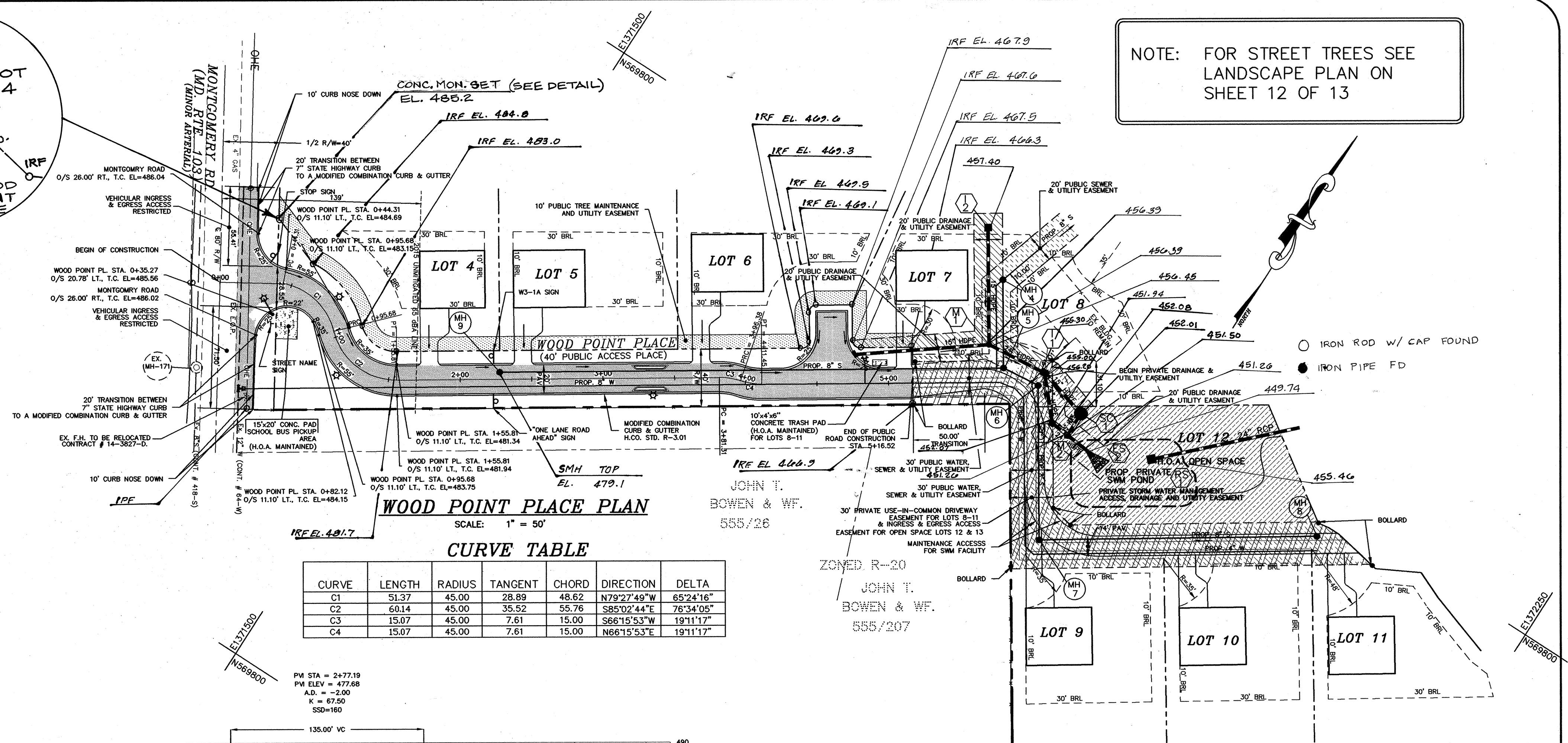
MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 987-0286 Bldg. (301) 621-5521 Wash. (410) 987-0288 Fax



T TURN AROUND DETAIL
 SCALE: 1" = 20'



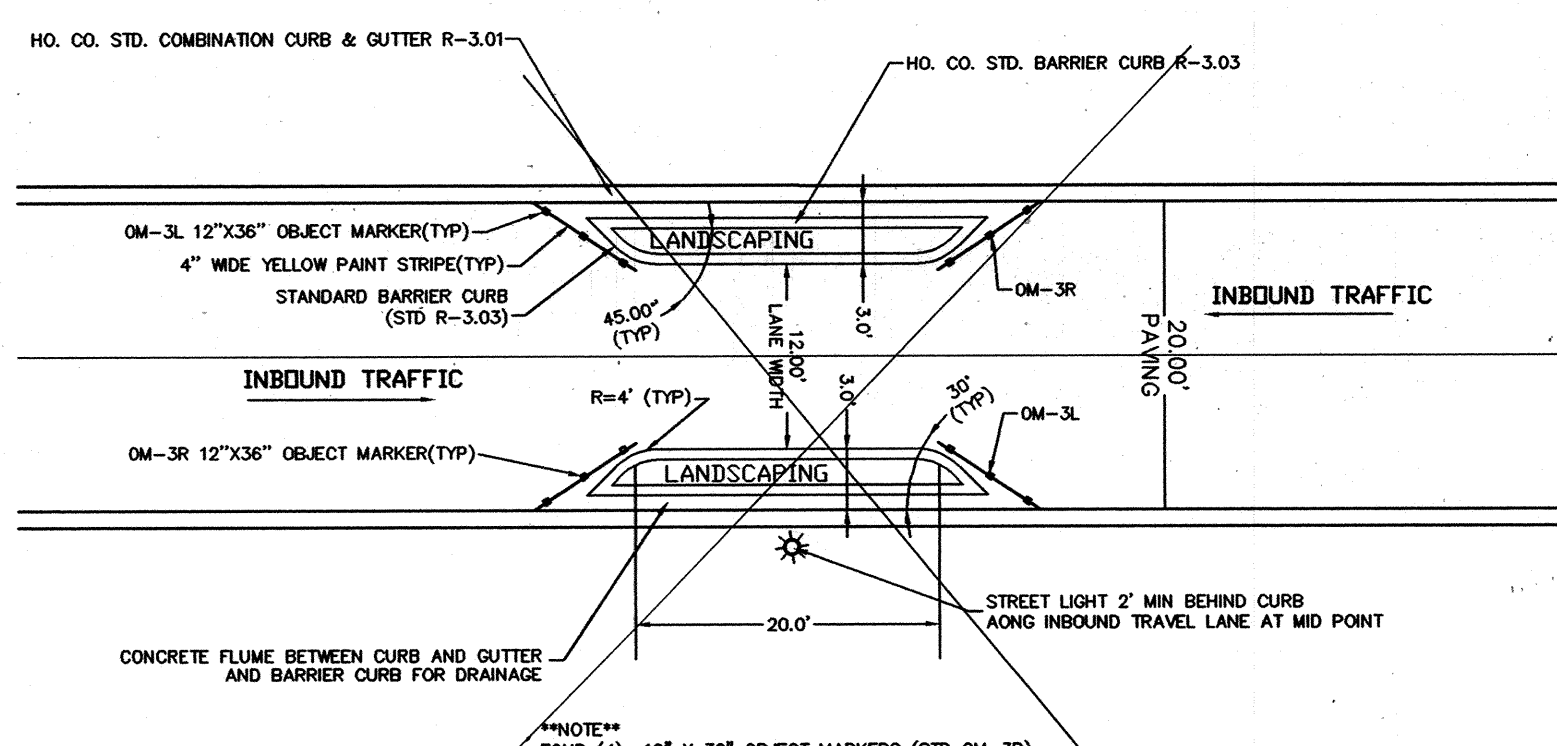
DETAIL NOT TO SCALE



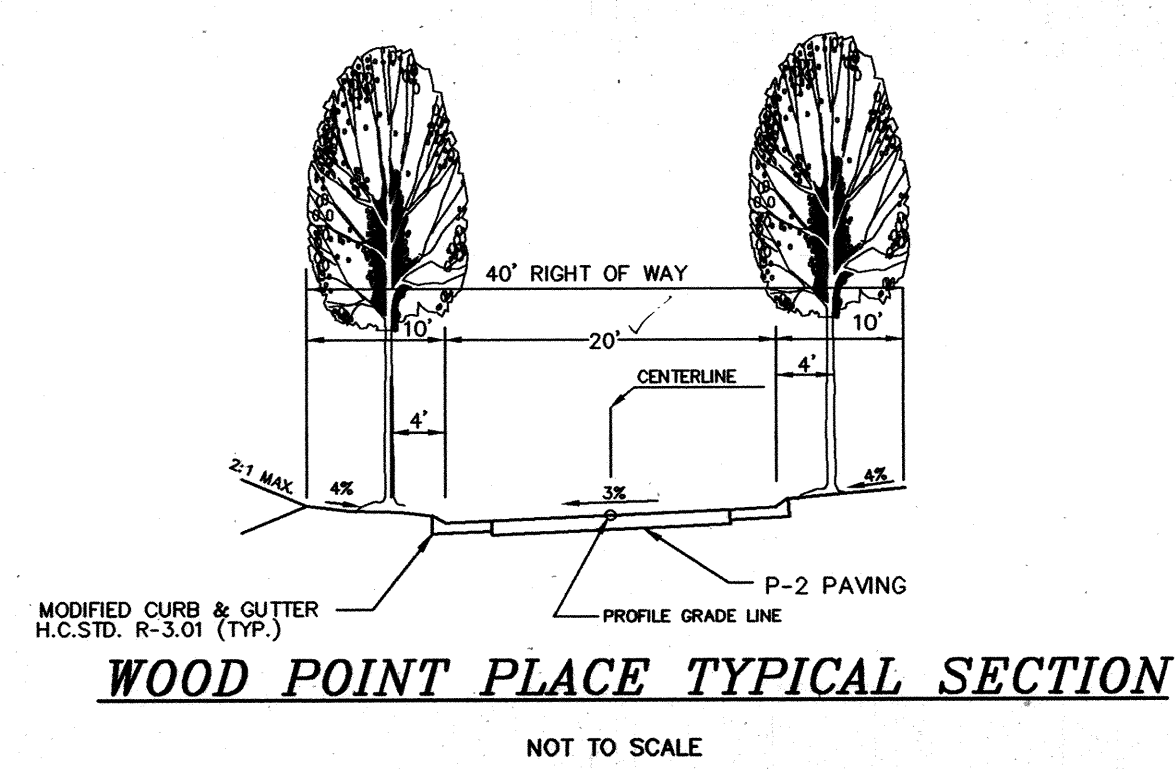
WOOD POINT PLACE PLAN
 SCALE: 1" = 50'

CURVE TABLE

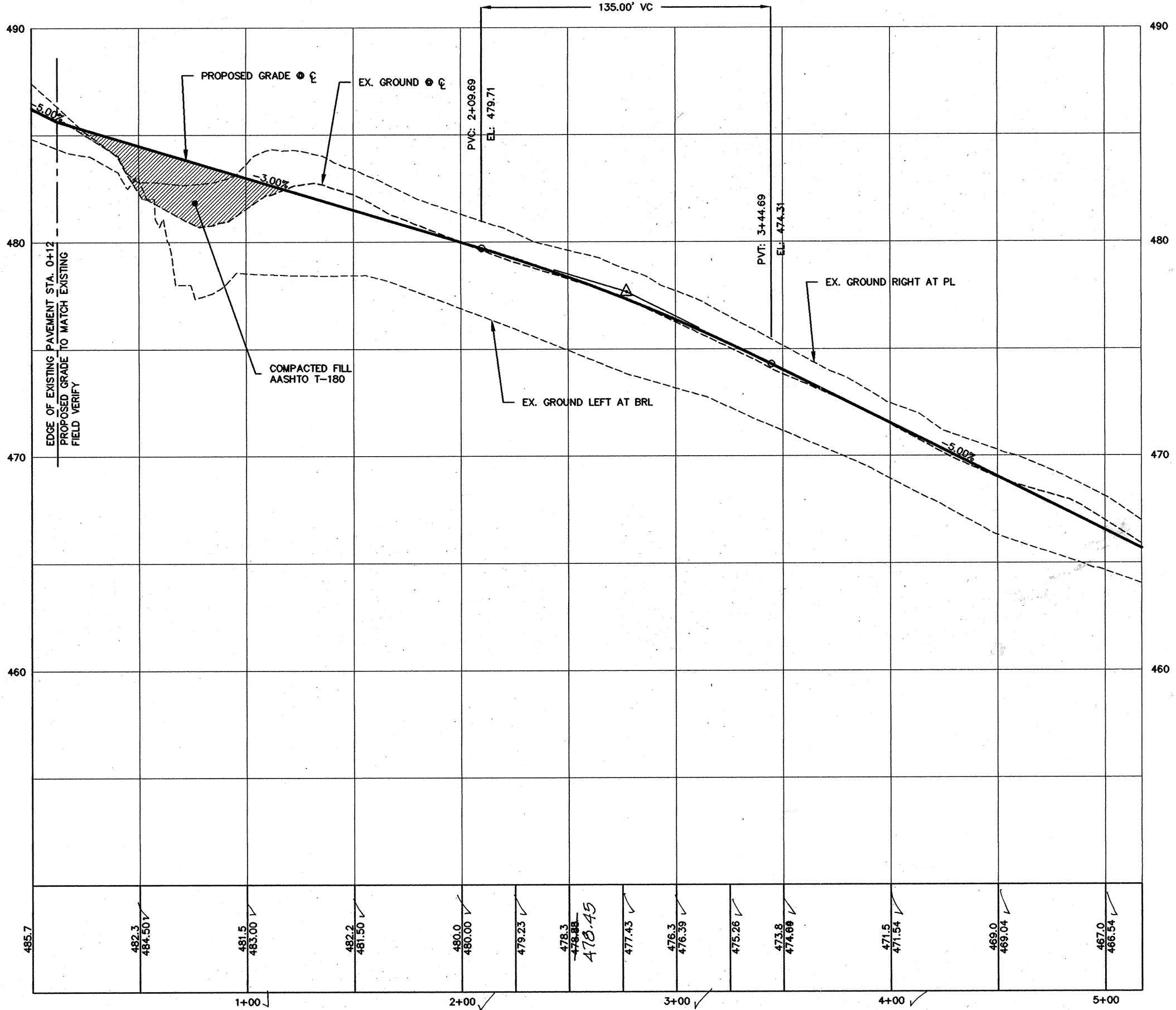
CURVE	LENGTH	RADIUS	TANGENT	CHORD	DIRECTION	DELTA
C1	51.37	45.00	28.89	48.62	N79°27'49"W	65°24'16"
C2	60.14	45.00	35.52	55.76	S85°02'44"E	76°34'05"
C3	15.07	45.00	7.61	15.00	S86°15'53"W	19°11'17"
C4	15.07	45.00	7.61	15.00	N66°15'53"E	19°11'17"



SPEED CALMING DEVICE DETAIL
 STA. 3+12.90 - STA. 3+57.57

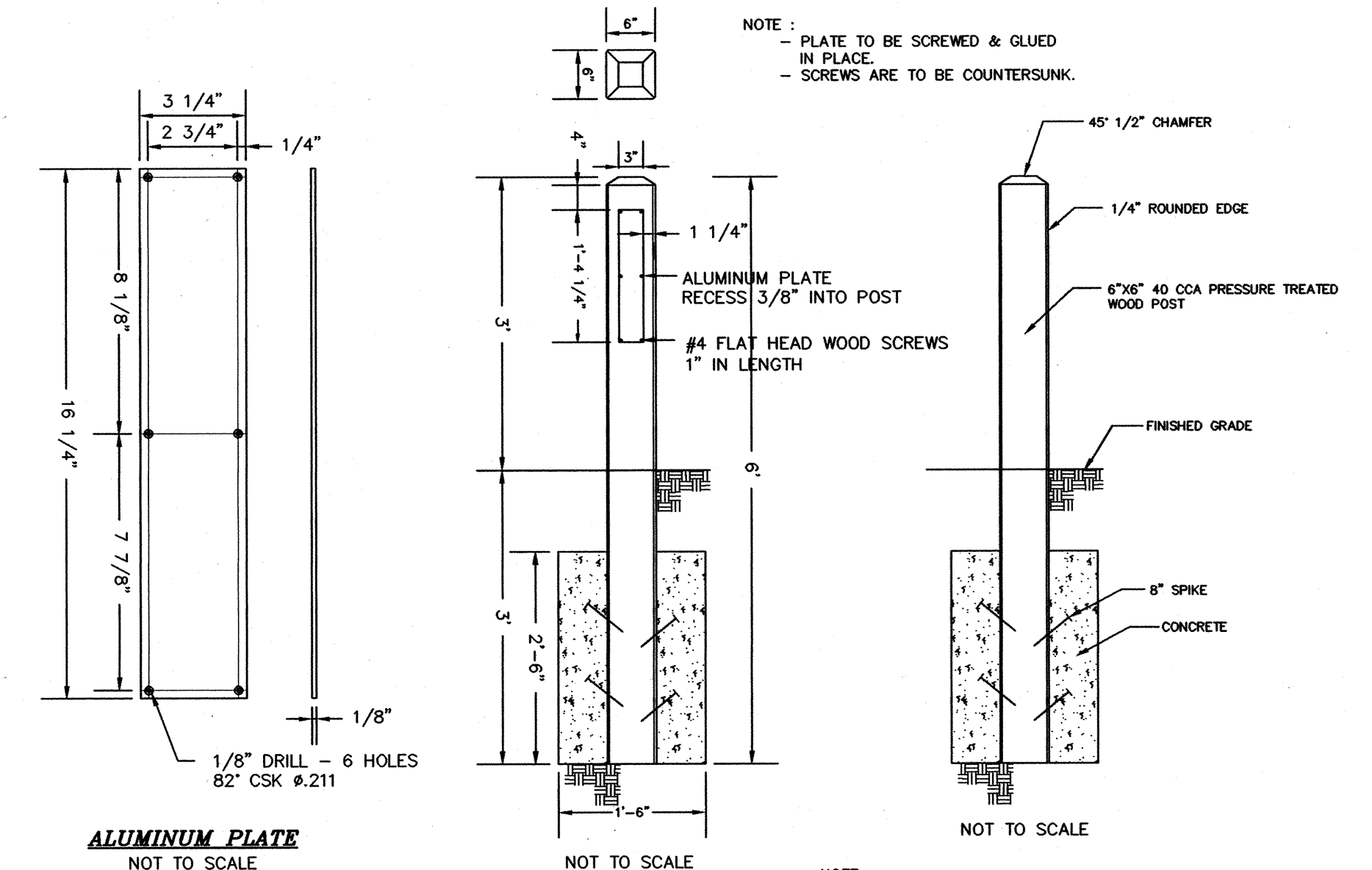


WOOD POINT PLACE TYPICAL SECTION
 NOT TO SCALE

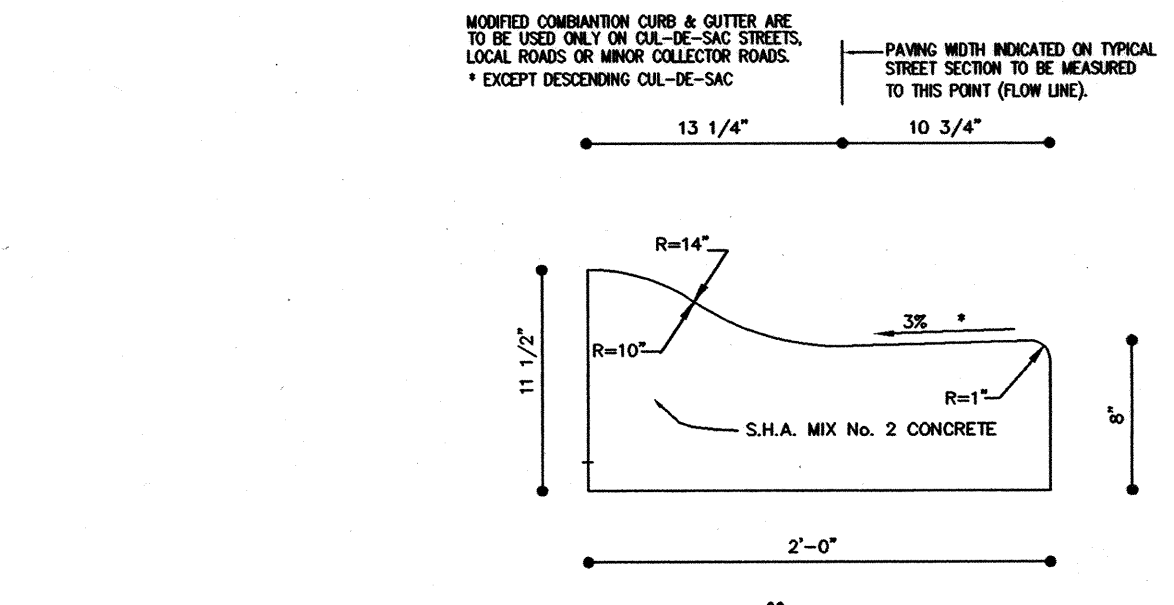


WOOD POINT PLACE PROFILE
 (PUBLIC ACCESS PLACE)

SCALE: HOR: 1" = 50'
 VER: 1" = 5'
 DESIGN SPEED 15 MPH (HOR.)
 DESIGN SPEED 25 MPH (VER.)



BOLLARD DETAIL
 NOT TO SCALE

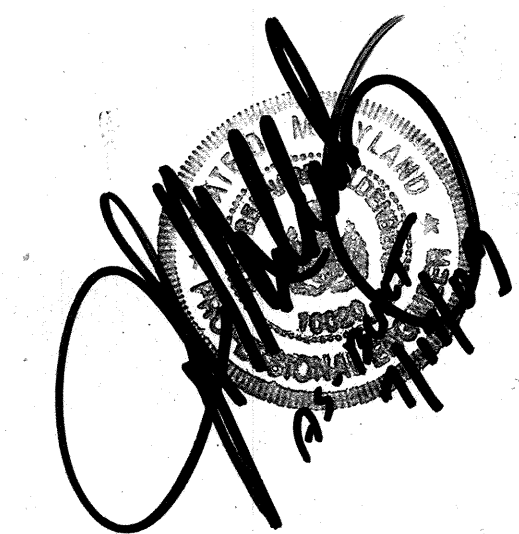
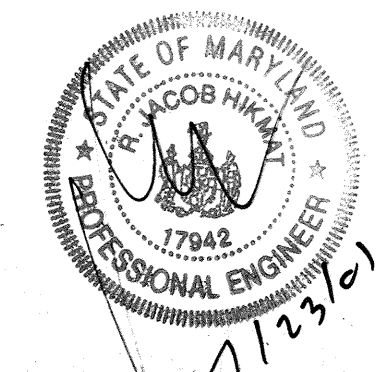


MODIFIED 7" COMBINATION CURB AND GUTTER
 NOT TO SCALE

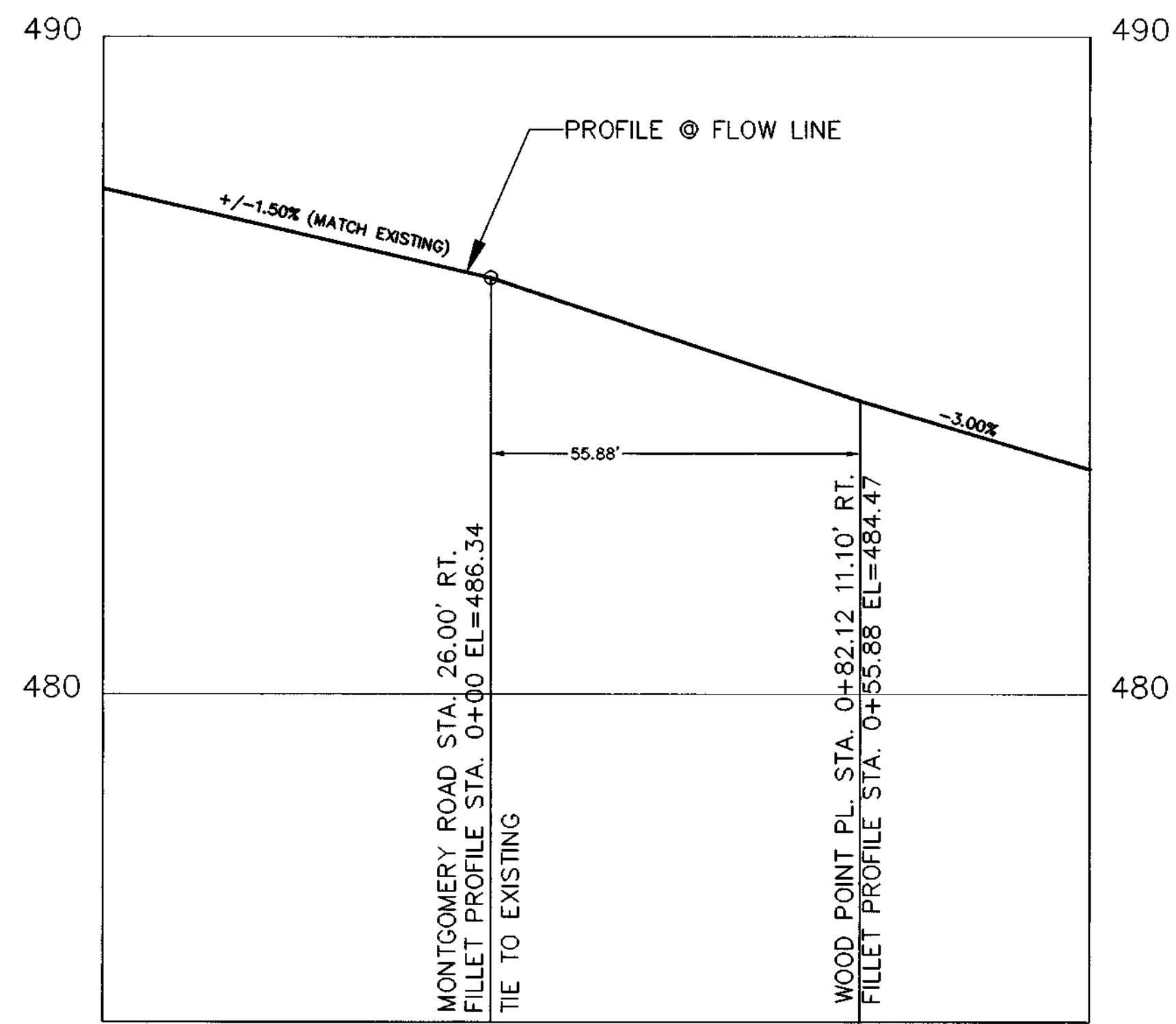
APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 8/1/01
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 8/1/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

CHIEF, DEVELOPMENT ENGINEERING DIVISION [Signature] 8/6/01

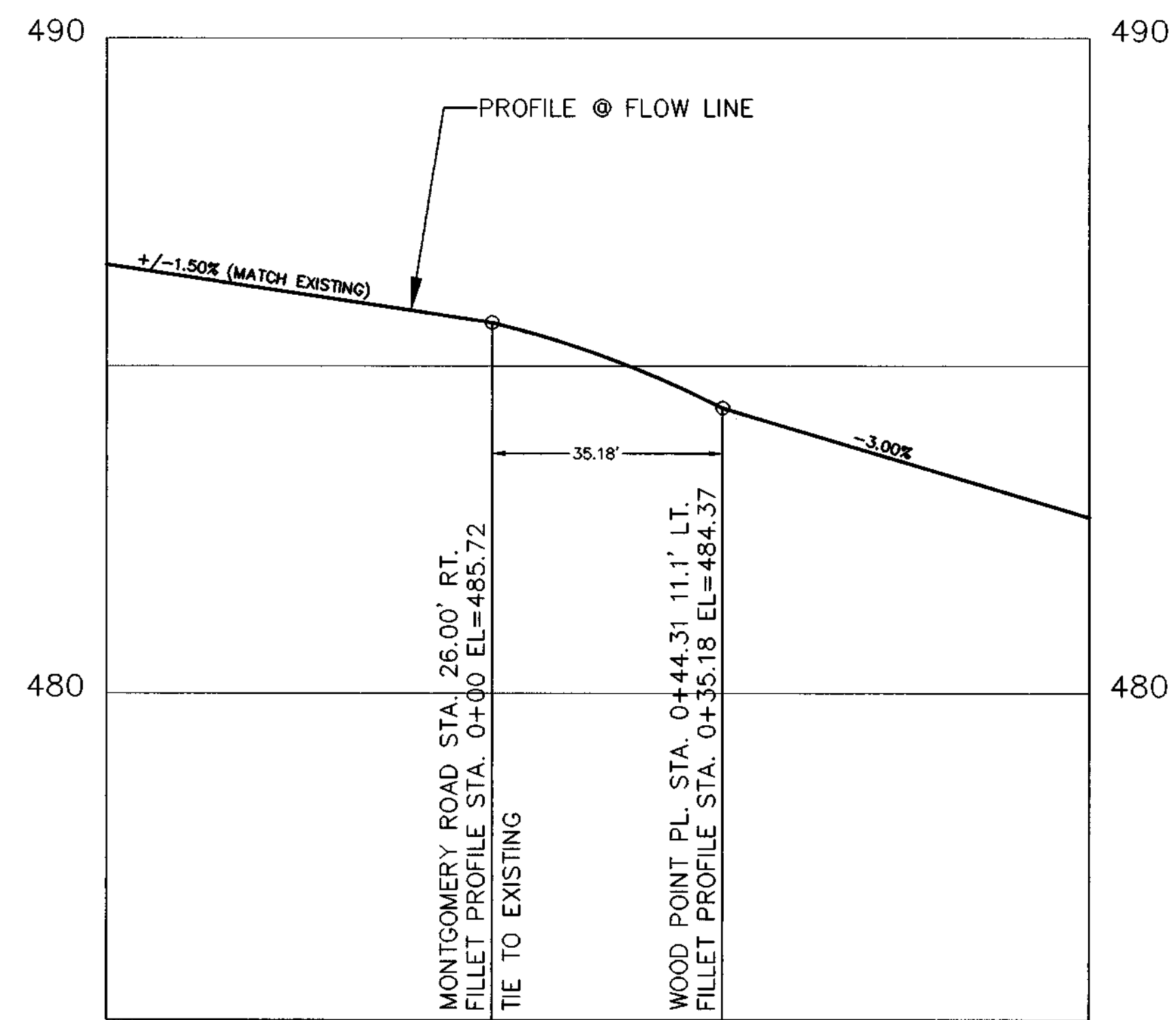


990226.DWG FINAL L025-ROAD-REV1.DWG



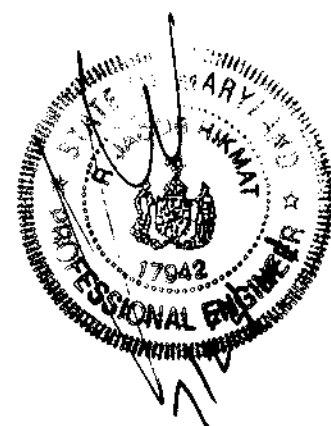
**MONTGOMERY ROAD RIGHT TURN
TO WOOD POINT PL.**

SCALE: HOR. 1" = 20', VER 1" = 2'



**MONTGOMERY ROAD LEFT TURN
TO WOOD POINT PL.**

SCALE: HOR. 1" = 20', VER 1" = 2'



APPROVED: DEPARTMENT OF PUBLIC WORKS
Howard S. Hill 8/1/01
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
David Bennett 8/1/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

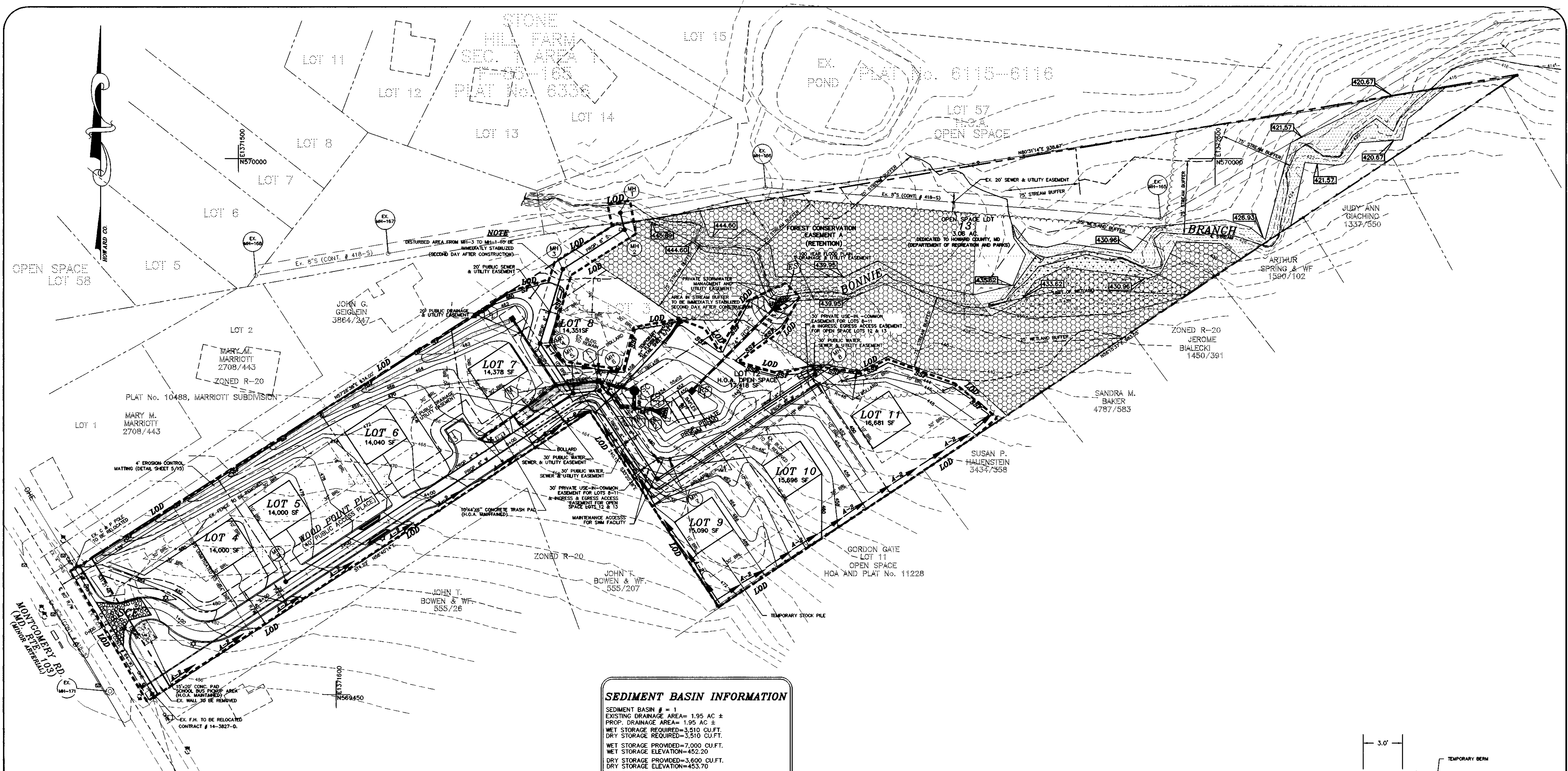
APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 8/1/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

date	JULY 2001
project	99026
illustration	SA
scale	AS SHOWN
approval	RJH

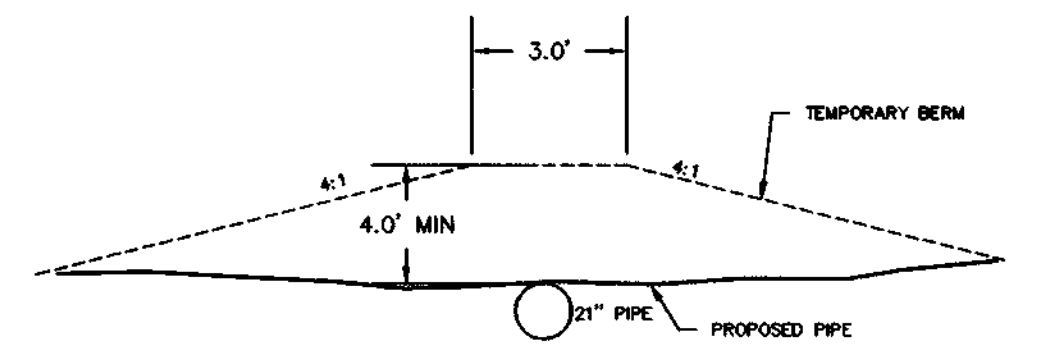
no.		description	revisions

ZANTI PROPERTY
 LOTS 4-11 AND OPEN SPACE LOTS 12 & 13
 TAX MAP 31 - PARCEL 106 - GRID 14
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 FILLET PROFILES

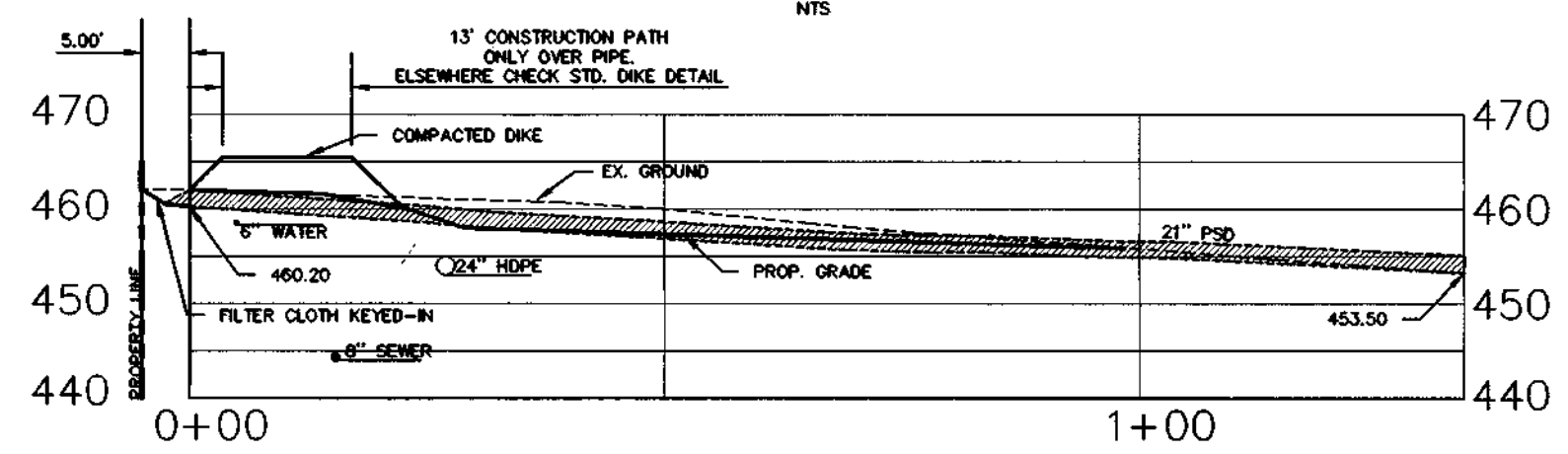
**MILDENBERG,
BOENDER & ASSOC., INC.**
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Fax (301) 621-5521 Wash. (410) 997-0298 Fax



SEDIMENT BASIN INFORMATION
 SEDIMENT BASIN # = 1
 EXISTING DRAINAGE AREA= 1.95 AC ±
 PROP. DRAINAGE AREA= 1.95 AC ±
 WET STORAGE REQUIRED=3,510 CU.FT.
 DRY STORAGE REQUIRED=3,510 CU.FT.
 WET STORAGE PROVIDED=7,000 CU.FT.
 WET STORAGE ELEVATION=452.20
 DRY STORAGE PROVIDED=3,600 CU.FT.
 DRY STORAGE ELEVATION=453.70
 RISER BARREL SIZE= 24"
 OUTLET WATER SURFACE EL.= 441.62
 TOP OF EMBANKMENT EL.= 456.20
 WEIR CREST EL.=453.70
 OUTLET ELEVATION=449.00
 CLEAT OUT ELE.=450.27
 CLEAT OUT ELE.=450.27
 BOTTOM EL.=449.0
 BOTTOM DIM.=40'X25'



FLEXIBLE PIPE SECTION



FLEXIBLE PIPE PROFILE

POST-GRADING POSITION

SCALE: H. 1"=50'
V. 1"=5'

NOTE:
PIPE TO BE CONSTRUCTED PER STANDARD B-5-4 SHEET 5

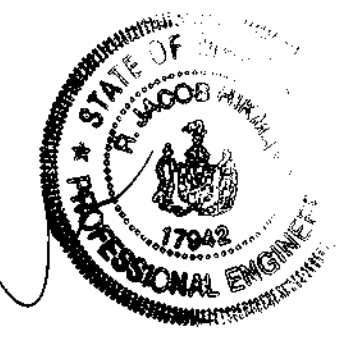
BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: [Signature] DATE: 7-24-01
 PRINTED NAME OF DEVELOPER: Don K. Rowe

BY THE ENGINEER:
 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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: [Signature] DATE: 7/23/01
 PRINTED NAME OF ENGINEER: R. JACOB MIKHAJAT

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.
 Signature: [Signature] DATE: 7/27/01
 USDI - NATURAL RESOURCE CONSERVATION SERVICE
 Signature: [Signature] DATE: 8/1/01
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: [Signature] DATE: 8/1/01
 CHIEF BUREAU OF HIGHWAYS
 Signature: [Signature] DATE: 8/7/01
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: [Signature] DATE: 8/7/01
 CHIEF, DIVISION OF LAND DEVELOPMENT
 Signature: [Signature] DATE: 8/7/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION (P&Z)

- LEGEND:**
- [Symbol] SCE STABILIZED CONSTRUCTION ENTRANCE
 - [Symbol] SF SILT FENCE
 - [Symbol] SSF SUPER SILT FENCE
 - [Symbol] A-1 EARTH DIKE
 - [Symbol] WETLANDS
 - [Symbol] FLOODPLAIN
 - [Symbol] FOREST CONSERVATION EASEMENT
 - [Symbol] LOD LIMIT OF DISTURBANCE

THIS PLAN IS FOR GRADING, EROSION & SEDIMENT CONTROL PURPOSES ONLY



date	JULY 2001
project	99028
illustration	SA
scale	1" = 50'
approval	SA
revision	RH

description	revisions
no.	date

ZANTI PROPERTY
 LOTS 4-11 AND OPEN SPACE LOTS 12 & 13
 TAX MAP 31 - PARCEL 106 - GRID 14
 SECOND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
 GRADING, EROSION AND SEDIMENT CONTROL PLAN

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

**HOWARD SOIL CONSERVATION DISTRICT
PERMANENT SEEDING NOTES**

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

SEEDING 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 DOLOMITE LIMESTONE (92 LBS/1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ.FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS/1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

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

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 210 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 5 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

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

TEMPORARY SEEDING NOTES

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF 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 PERIOD MAY 1 THRU NOVEMBER 15, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVGRASS (.07 LBS./1000 SQ.FT.). FOR 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. APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED IN THE SPRING, OR USE SOO.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEEF SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 210 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 5 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.

GEOTECHNICAL RECOMMENDATIONS

- WEATHERED ROCK MATERIALS WERE ENCOUNTERED IN SEVERAL BORINGS. IT IS LIKELY THAT THIS MATERIAL ABOVE 11 FEET CAN BE RIPPED. BLASTING IS NOT RECOMMENDED TO EXCAVATE ROCK IN SWM POND.
- CONSTRUCTION Dewatering SHOULD BE IMPLEMENTED TO FACILITATE EXCAVATION OF POND BOTTOMS AND CUT TRENCH, AS REQUIRED.
- WHEN DRAINING EXISTING POND, EXCAVATE POND BOTTOM TO STABLE MATERIAL. IF EXISTING FILLS ARE ENCOUNTERED IN THIS AREA, THEY SHOULD BE CAREFULLY REVIEWED TO IDENTIFY AND REMOVE EXISTING FILLS PLACED DURING EMBANKMENT CONSTRUCTION.
- FILLS FOR CUTOFF TRENCH AND EMBANKMENT CONSTRUCTION SHOULD BE CONSTRUCTED IN EIGHT INCH AND COMPACTED TO 95% ASTM D-698.
- FILLS AROUND OUTFALL WORKS: THE OUTFALL PIPE AND ANTI-SEEP COLLARS SHOULD BE PLACED IN 4-INCH LIFTS AND COMPACTED TO THE SAME STANDARD WITH HAND EQUIPMENT.
- REFER TO GEOTECHNICAL REPORT FOR FURTHER RECOMMENDATIONS AND INFORMATION.

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 CON-TRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CONCRETS, SLAGS, COAL WASTES, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, NUTSEDGE, POISON IVY, THISTLE, 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 SOO 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 DIKES, 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 SOODING 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 28.04.06.
 - COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOROUS, 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.

- EXTENSION SERVICE: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SOODING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1997.

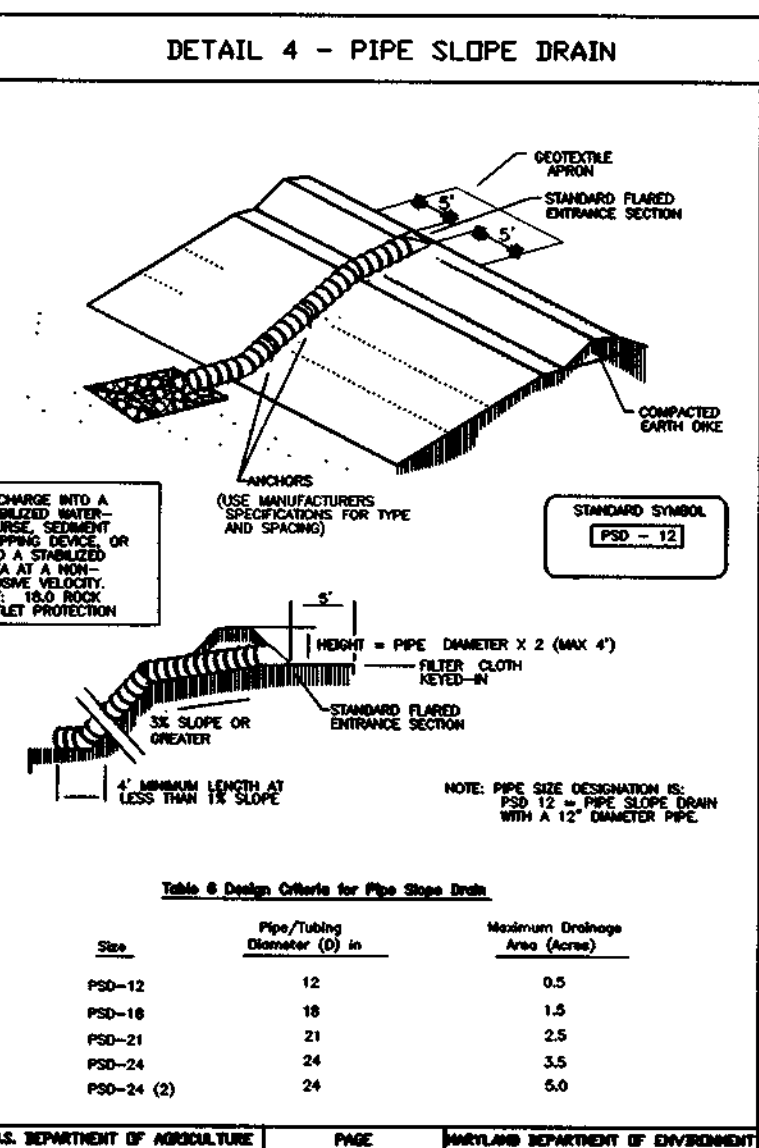
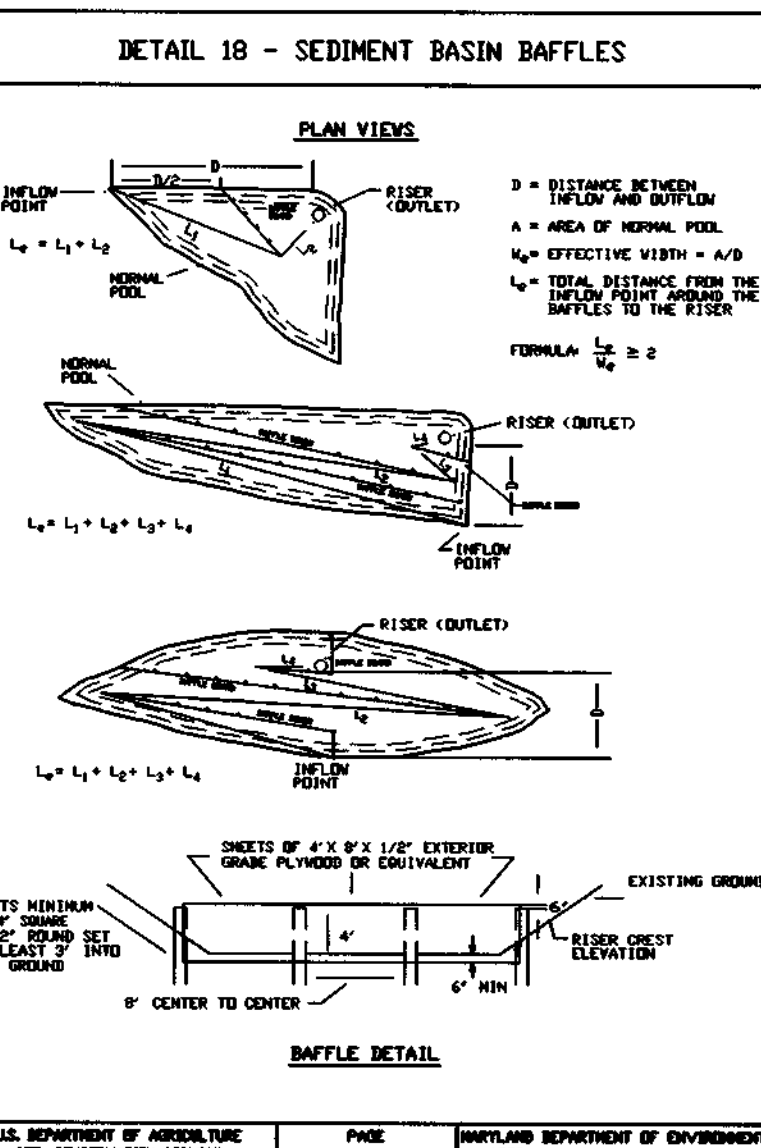
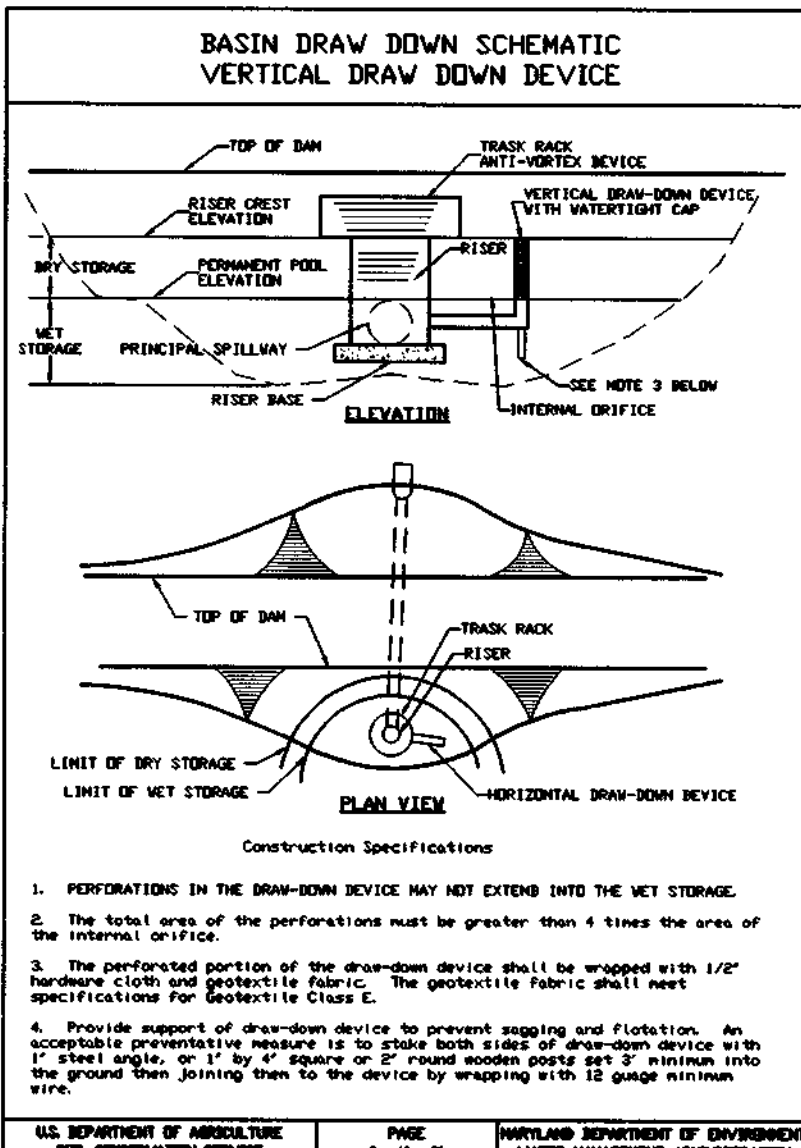
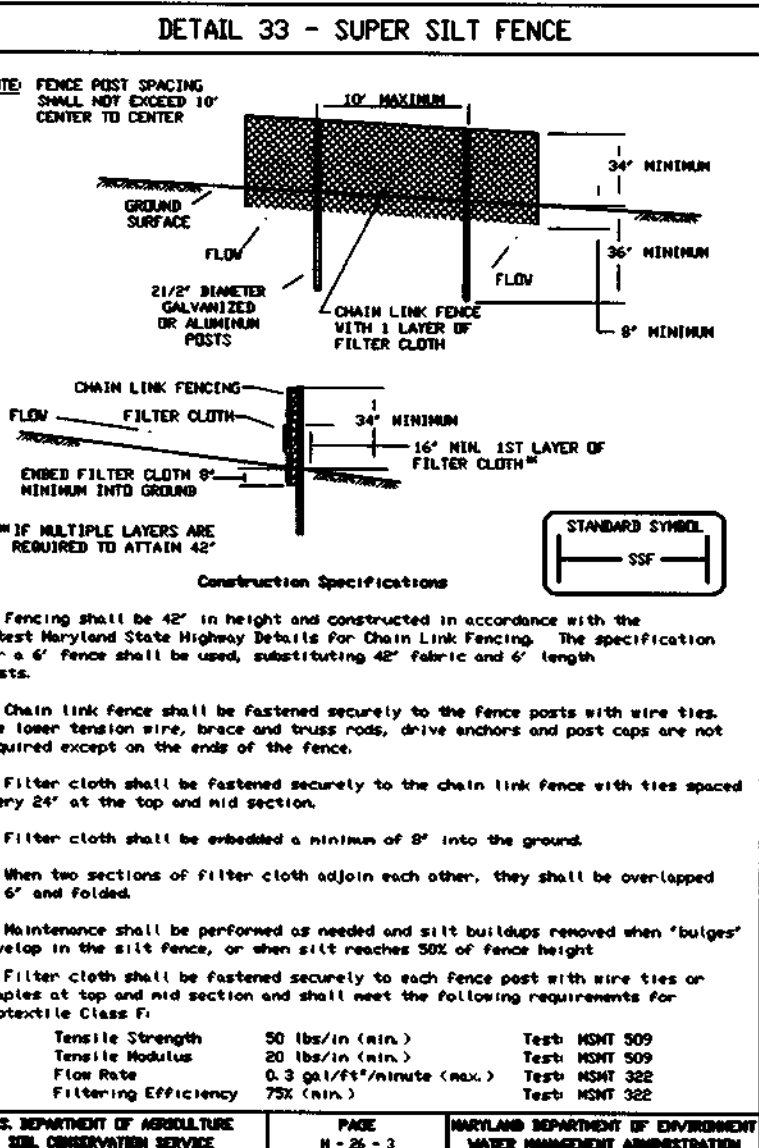
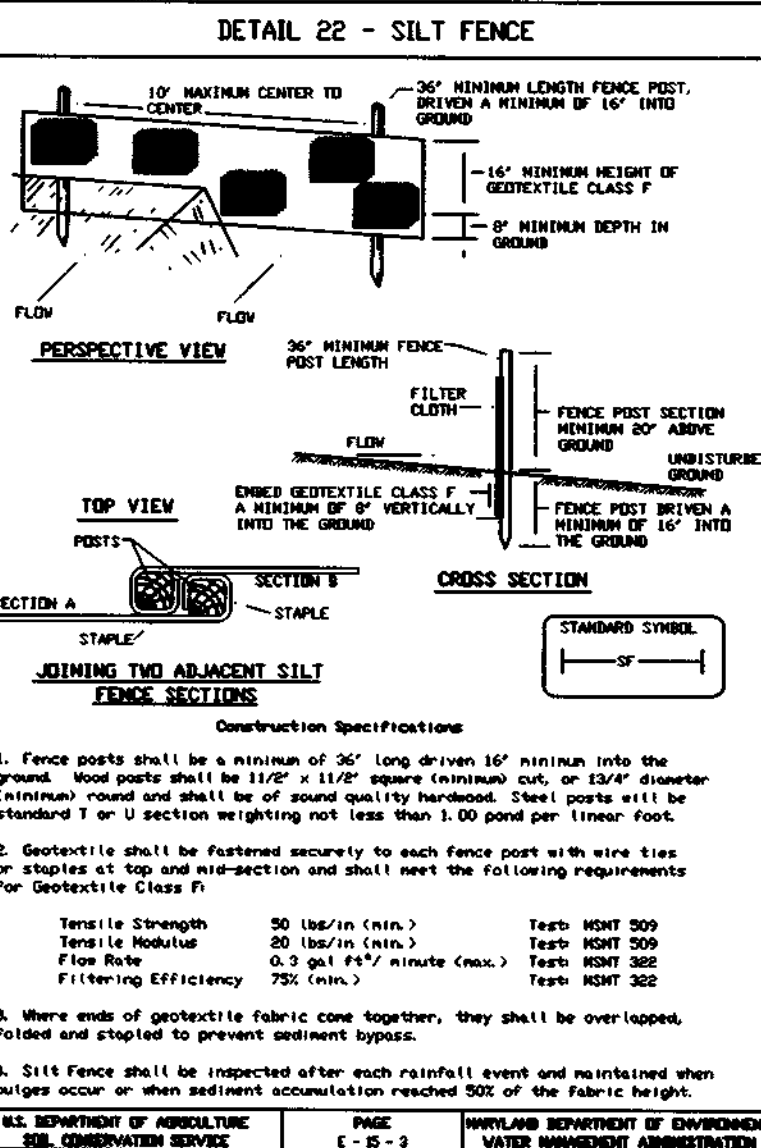
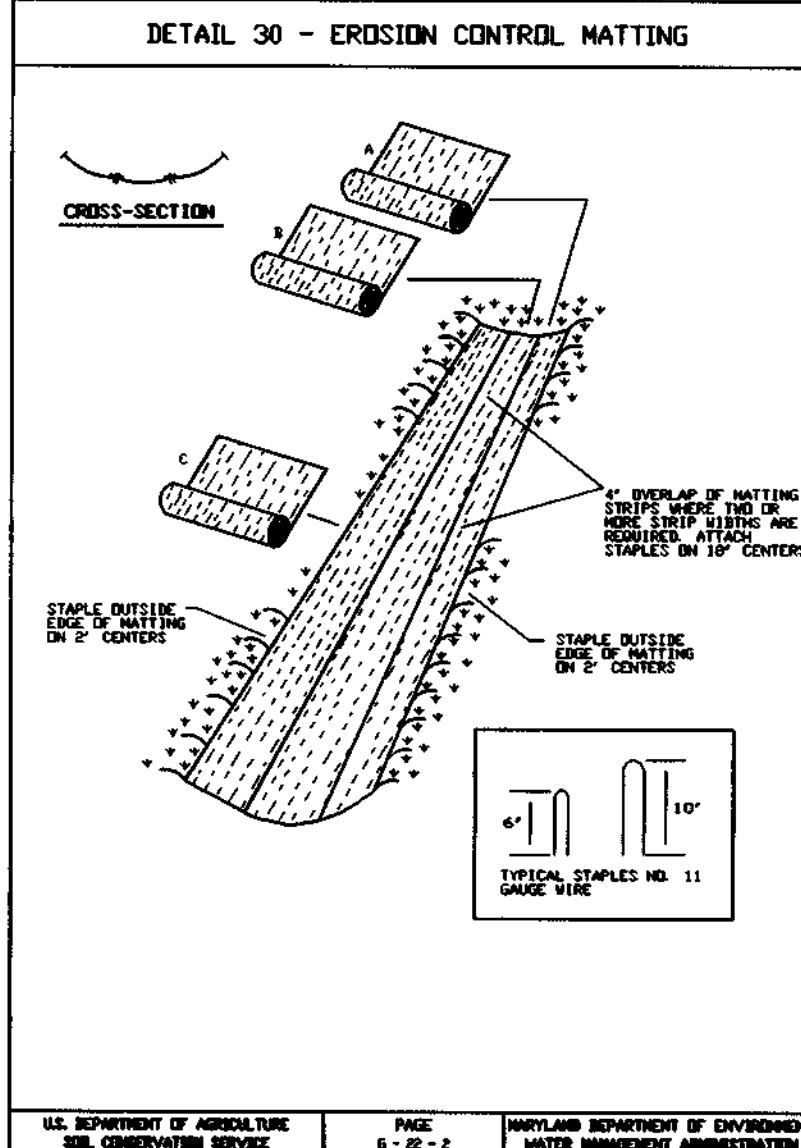
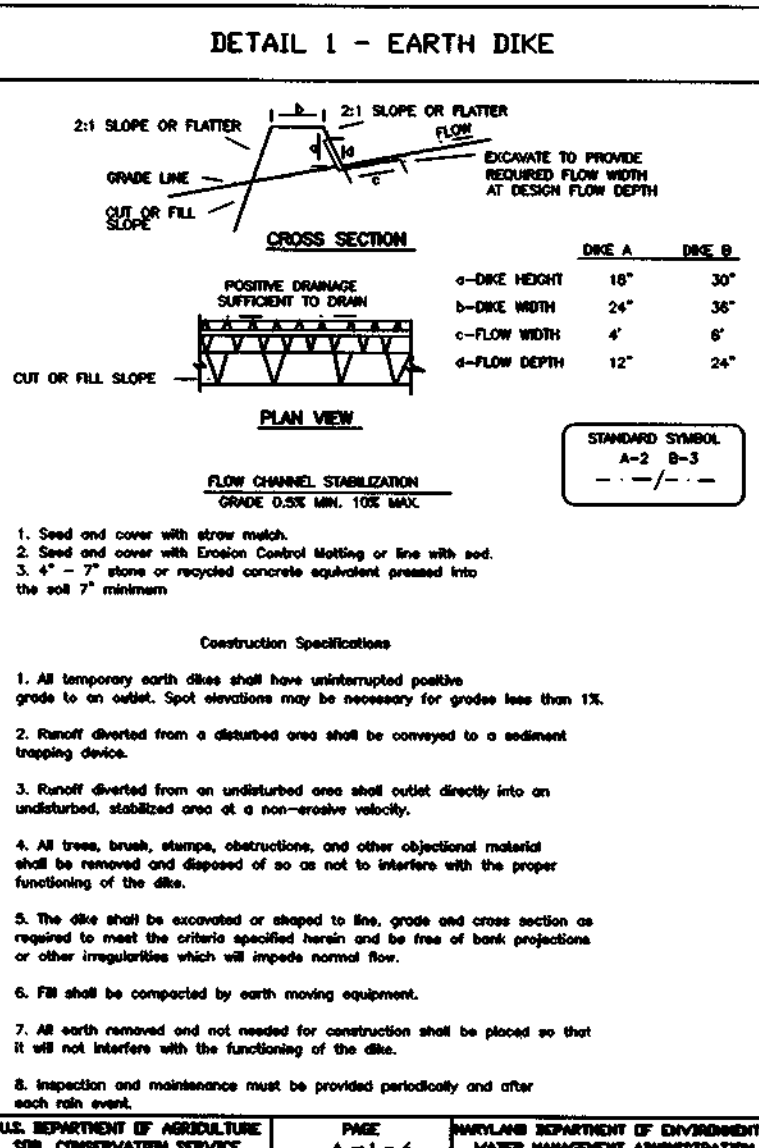
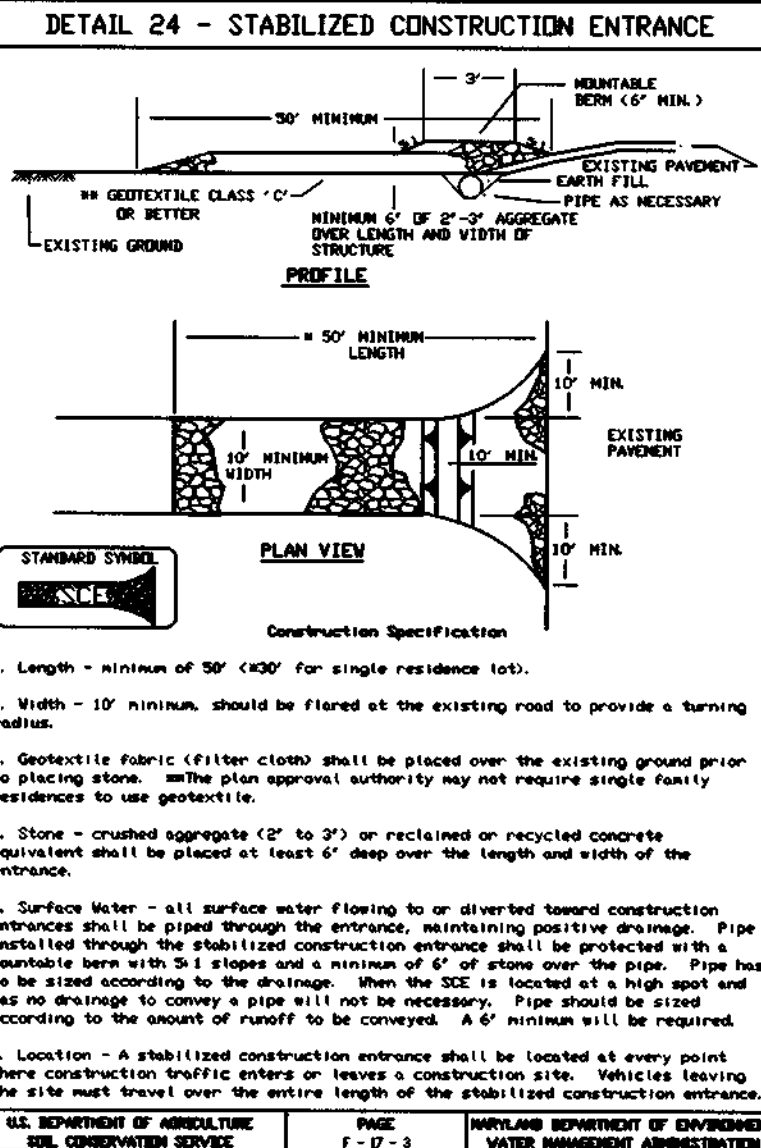
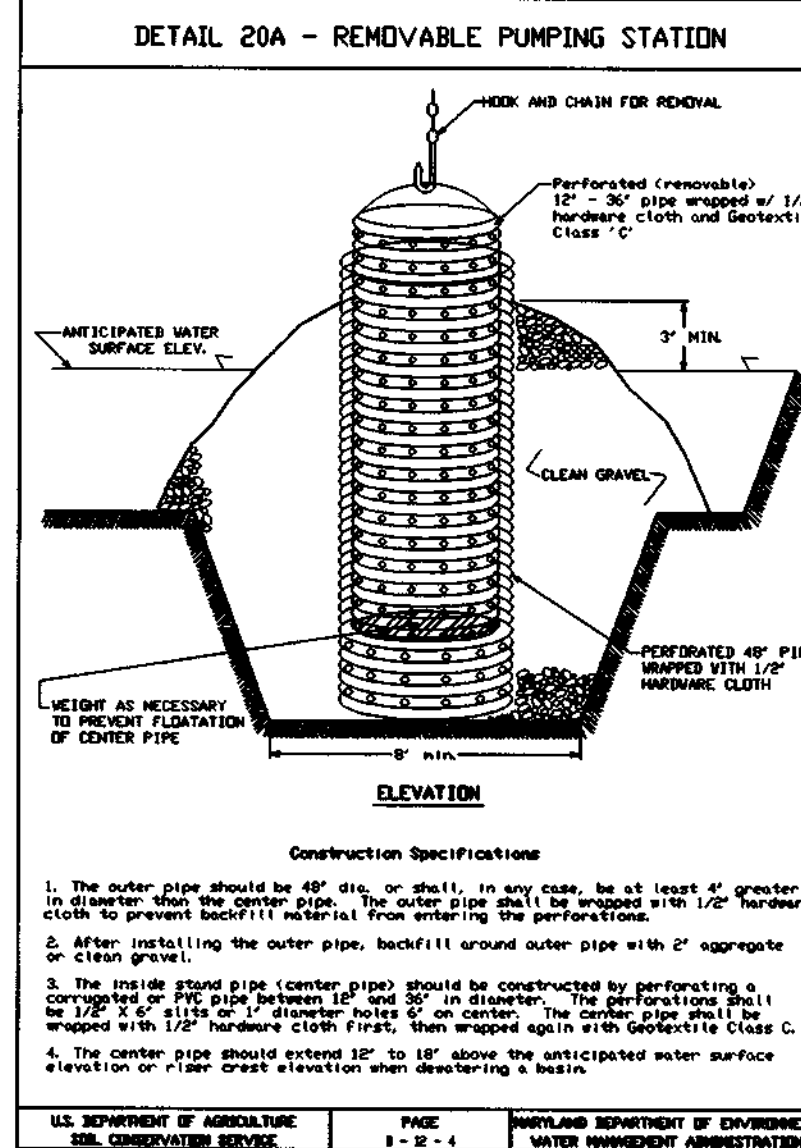
**HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES**

- 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 ANY 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, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- 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.3), SOO (SEC. 5A), TEMPORARY SEEDING (SEC. 5B) AND MULCHING (SEC.5C). 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:	5.89 ACRES
AREA TO BE ROOFED OR PAVED:	0.55% ACRES
AREA TO BE VEGETATIVELY STABILIZED:	3.72% ACRES
TOTAL CUT:	12,000 CU. YDS.
TOTAL FILL:	12,000 CU. YDS.
TOTAL WASTE/BORROW AREA LOCATION:	
- 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 CONTROL, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 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.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT. (1 DAY)
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM. (1 DAY)
- CONSTRUCT SUPER SILT FENCE, SILT FENCE, TREE PROTECTIVE FENCES, EARTH DIKES(SEE SHEET 3 OF 13 FOR TREE PROTECTIVE FENCES)
- GRADE PATH OF FLEXIBLE PIPE ACCORDING TO GRADING PLAN AND THE PROFILE OF THE PIPE (SHEET 4)
- CONSTRUCT THE FLEXIBLE PIPE (3 DAYS), CONSTRUCT BERM ON PIPE AS SHOWN ON SECTION ON SHEET 4 TO MAINTAIN FREE CONSTRUCTION TRAFFIC.
- CONSTRUCT PROPOSED STORM WATER MANAGEMENT POND AND SEDIMENT BASIN (8 DAYS)
- AFTER PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR BRING SITE TO PROPOSED GRADE. (15 DAYS)
- CONSTRUCT UTILITIES
- ANY SEDIMENT CONTROL DEVICES DISTURBED BY THE INSTALLATION OF UTILITIES ARE TO BE REPAIRED IMMEDIATELY.
- CONSTRUCT THE ROAD (5 DAYS)
- UPON STABILIZATION OF THE SITE AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES, THE FLEXIBLE PIPE BERM AND RESTORE CURB AT CURB CUTS AND STABILIZE REMAINING DISTURBED AREAS. (5 DAYS)



BY THE DEVELOPER:

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

7-21-01
DATE

Don R. Rower
PRINTED NAME OF DEVELOPER

BY THE ENGINEER:

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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

7/3/01
DATE

R. JACOB HIKMAT
PRINTED NAME OF ENGINEER

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

7/27/01
DATE

USDA - NATURAL RESOURCE CONSERVATION SERVICE

7/27/01
DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

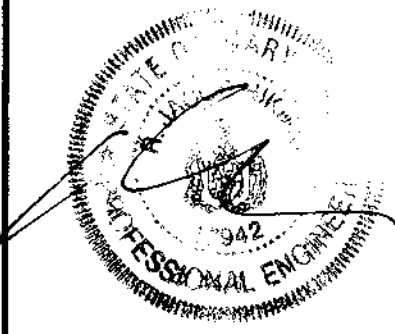
8/1/01
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

8/12/01
DATE

APPROVED: DEPARTMENT OF ENVIRONMENTAL ENGINEERING DIVISION

8/16/01
DATE



99026 (ONG) FINAL LOGS - SEDIMENT CONTROL

PROJECT: 99026
DATE: JULY 2001
ILLUSTRATION: SAA
SCALE: NTS
APPROVAL: RJH

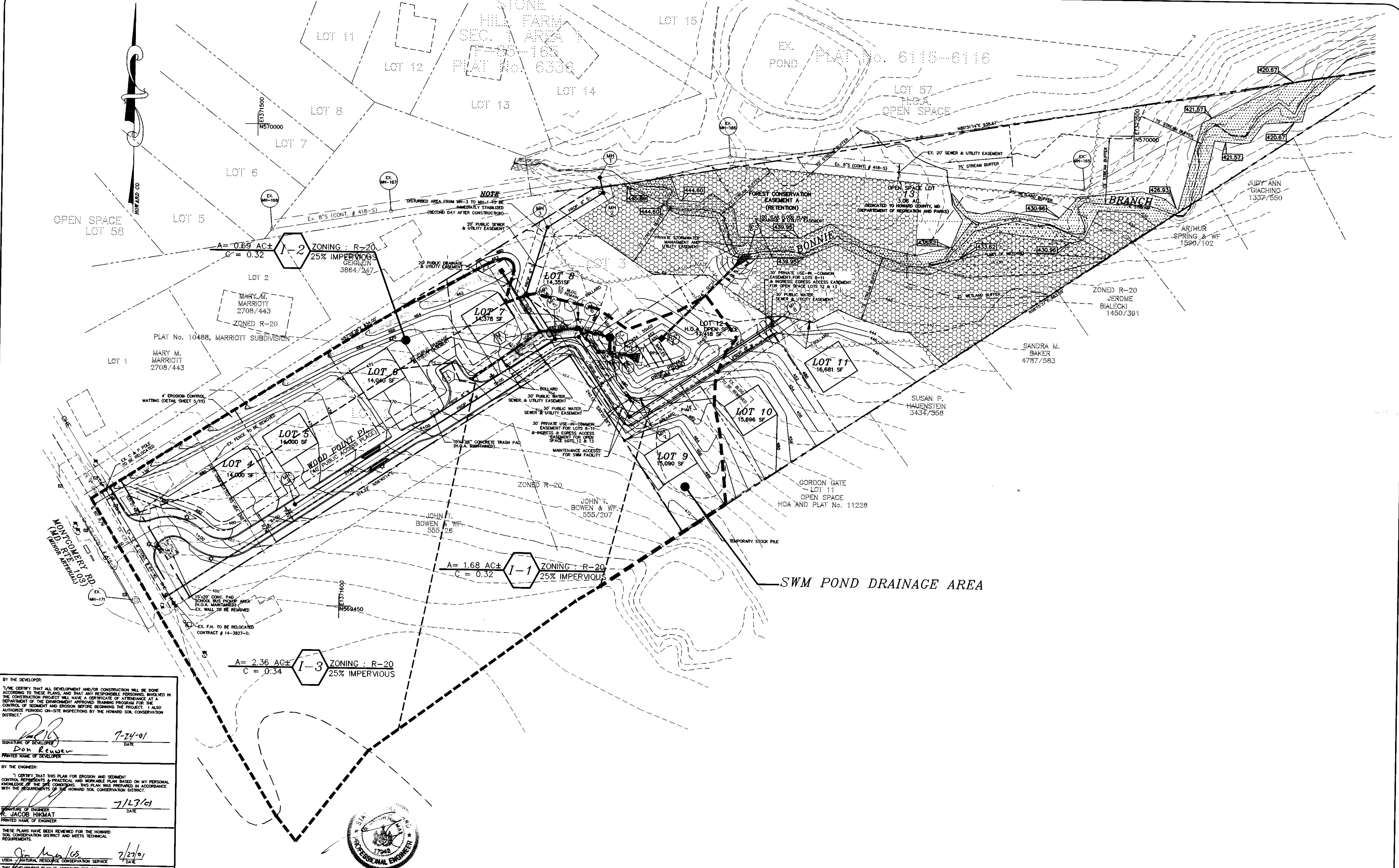
description: EROSION & SEDIMENT CONTROL NOTES AND DETAILS

no.:

ZANTI PROPERTY
LOTS 4-11 AND OPEN SPACE LOTS 12 & 13
GRID 14
PARCEL 106 - HOWARD COUNTY, MARYLAND
SECOND ELECTION DISTRICT

MILDENBERG, BOENDER & ASSOC., INC.
Planners
5072 Drossel Hill Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 987-0296 Fax: (301) 621-5521

5 OF 13
F-01-98



THIS PLAN IS FOR THE PURPOSE OF
INLET DRAINAGE AREA MAP ONLY

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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: Don R. R...
Date: 7-24-01
Printed Name: Don R. R...

BY THE ENGINEER:
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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: R. JACOB HIKMAT
Date: 7/27/01
Printed Name: R. JACOB HIKMAT

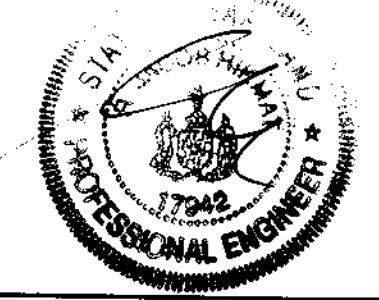
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Date: 7/27/01
Printed Name: Jim...

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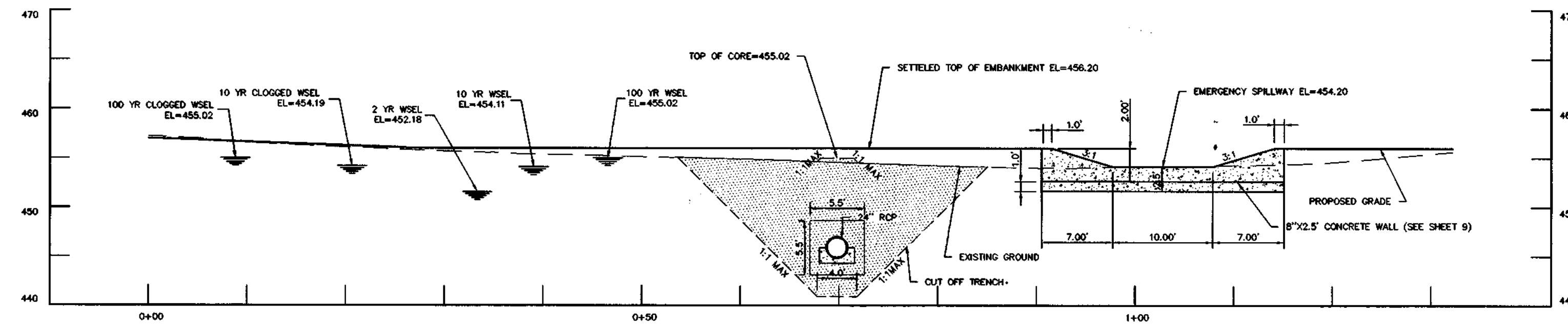
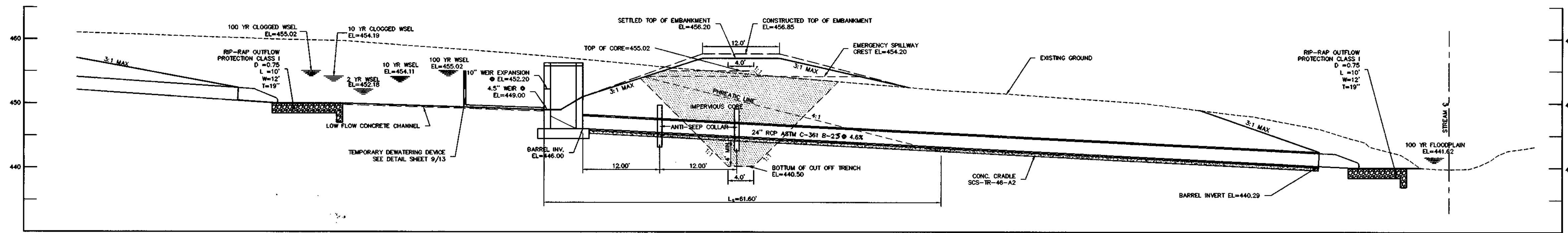


Project	99026	Date	JULY 2001
Illustration	SA	Engineering	SA
Scale	1" = 50'	Approval	RJH

No.	description	date

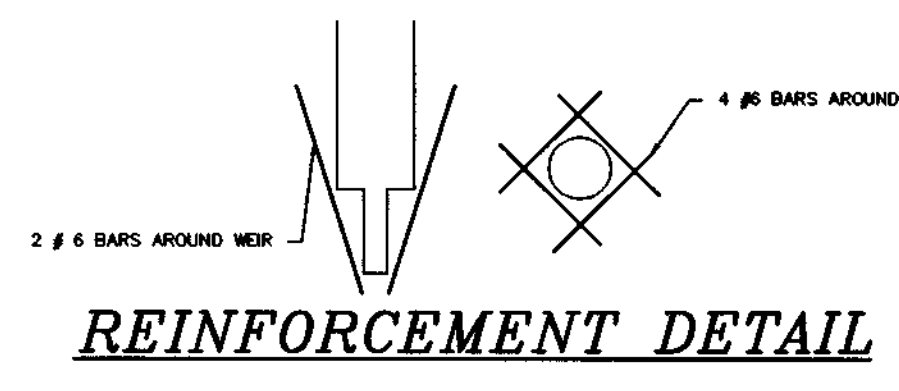
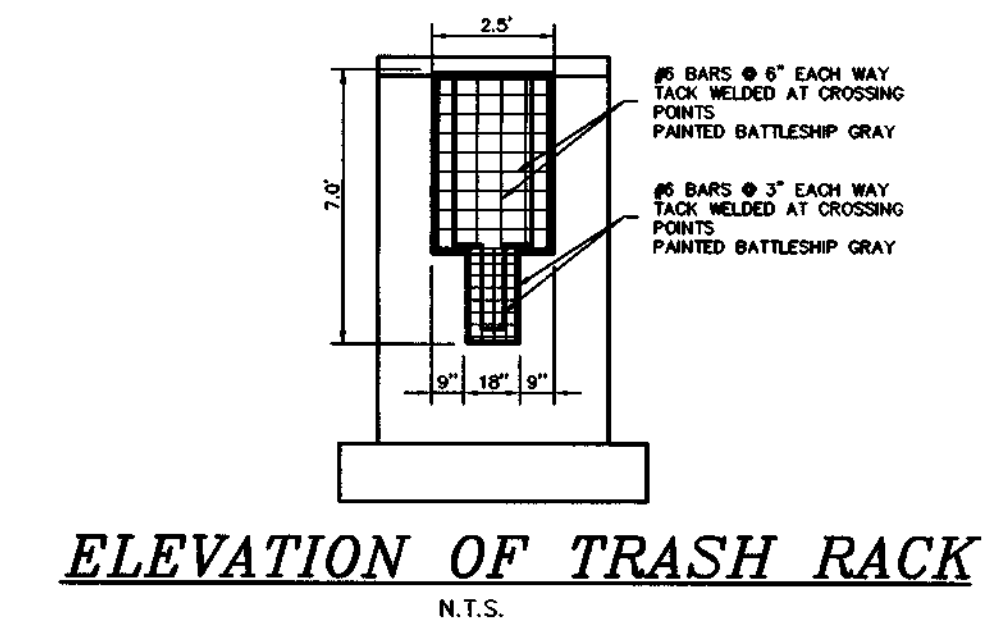
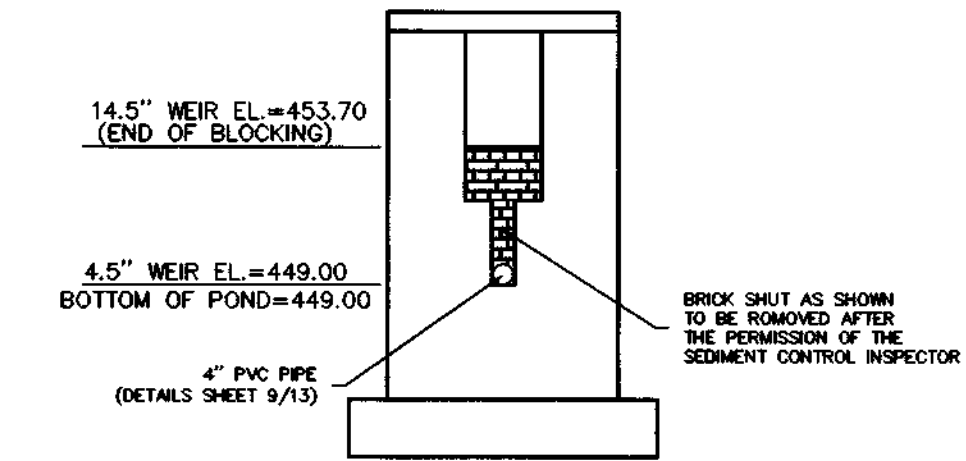
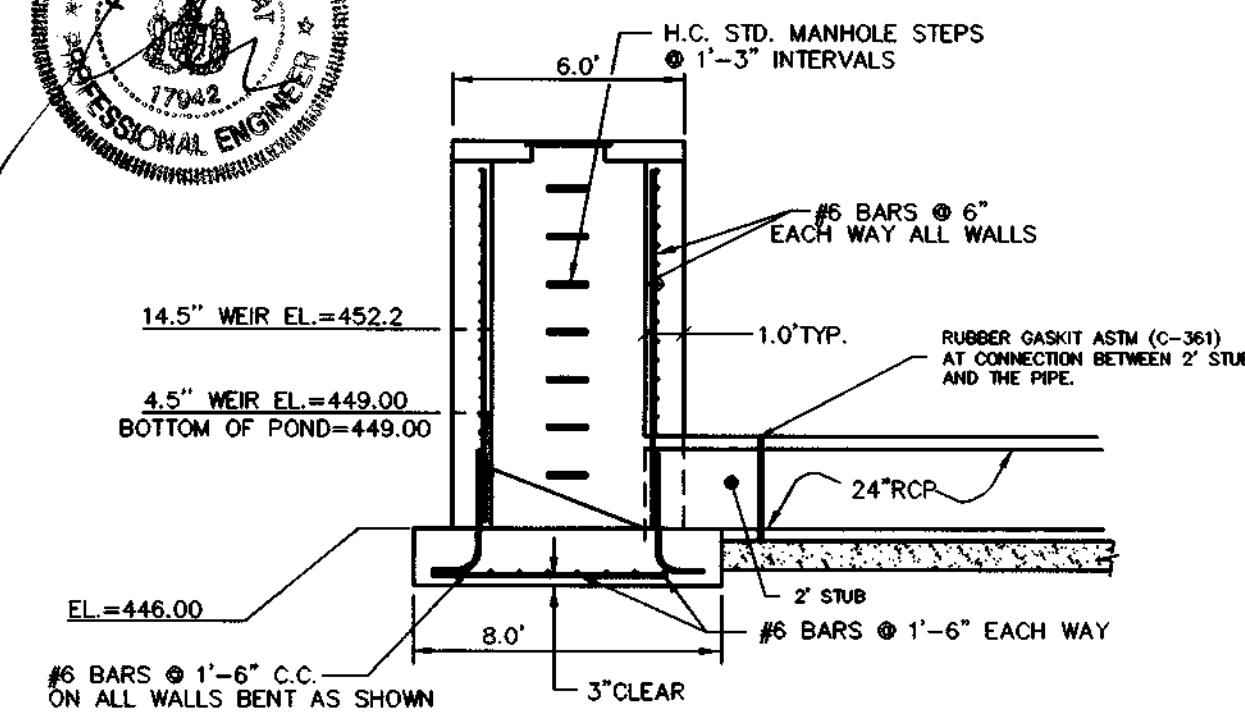
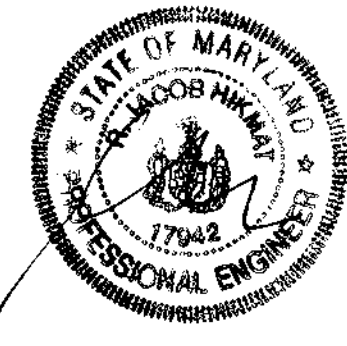
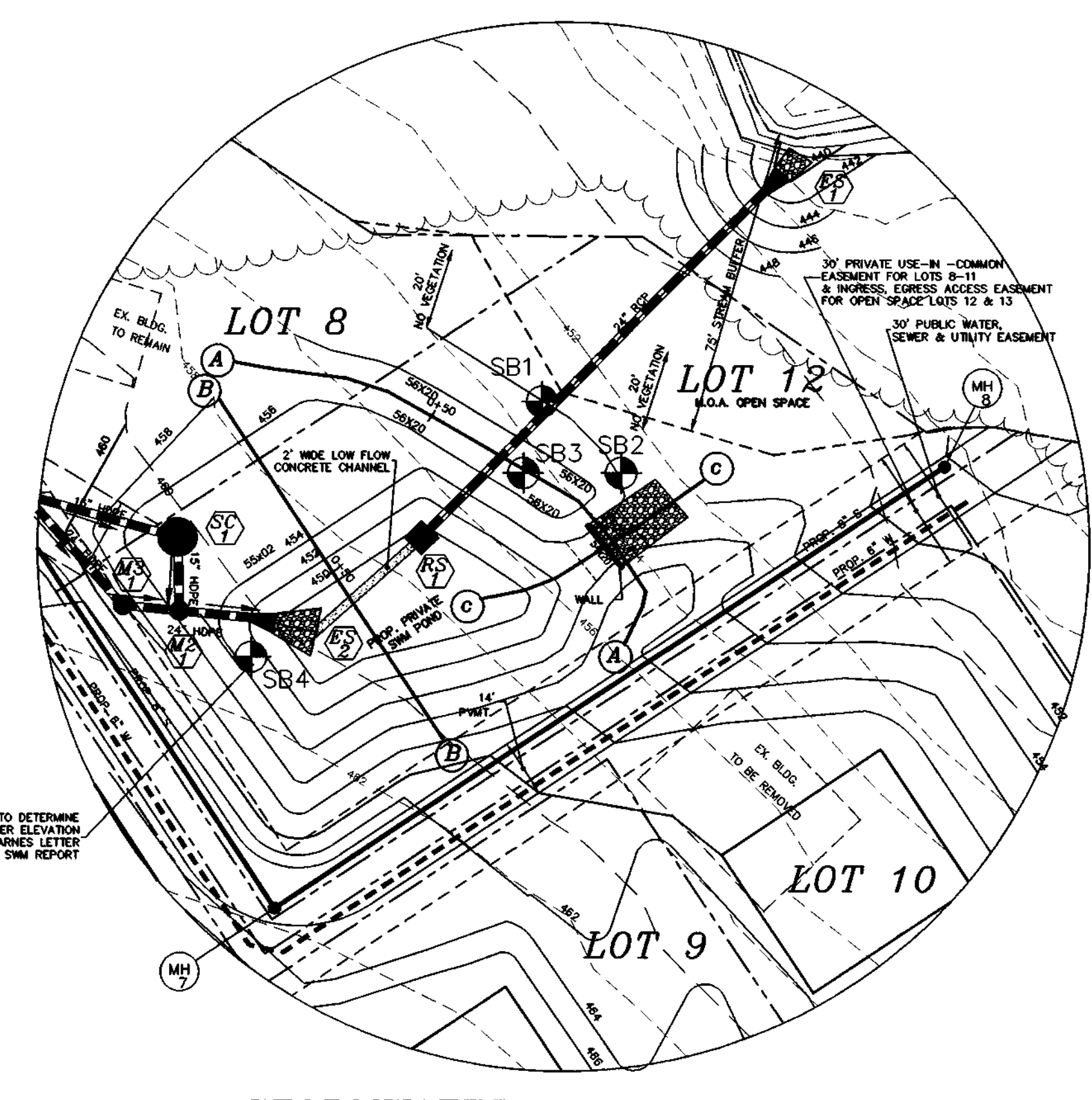
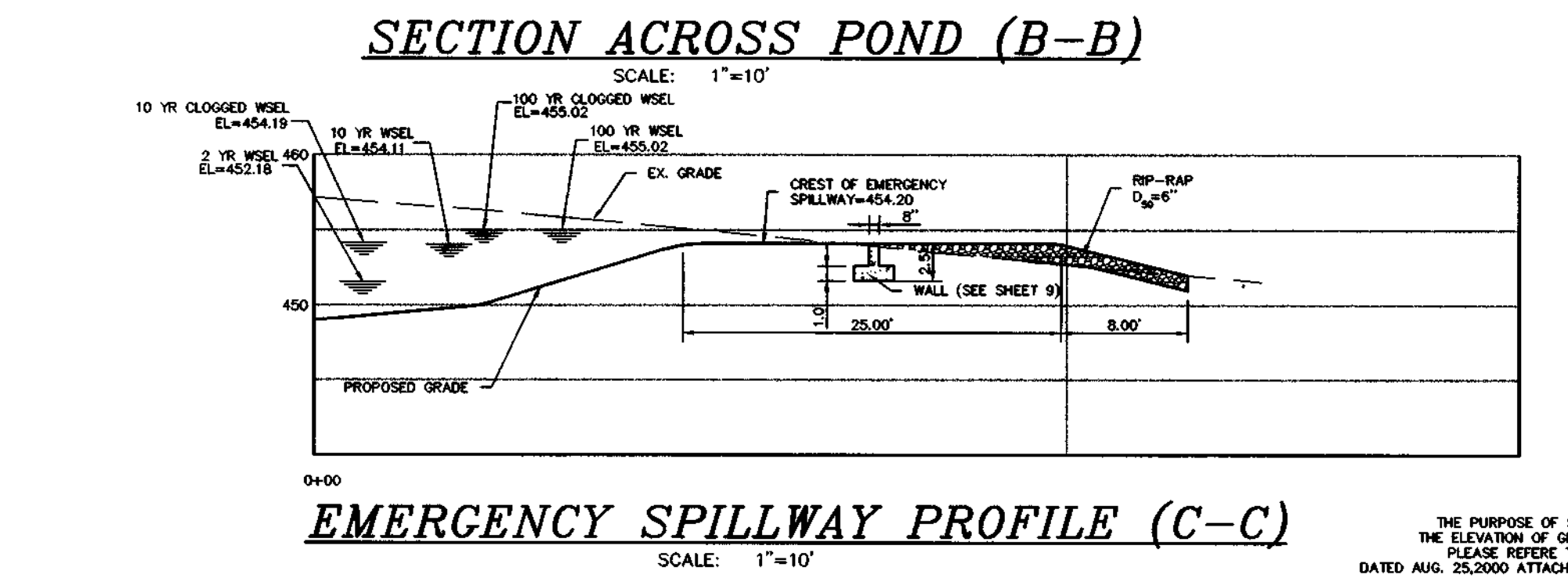
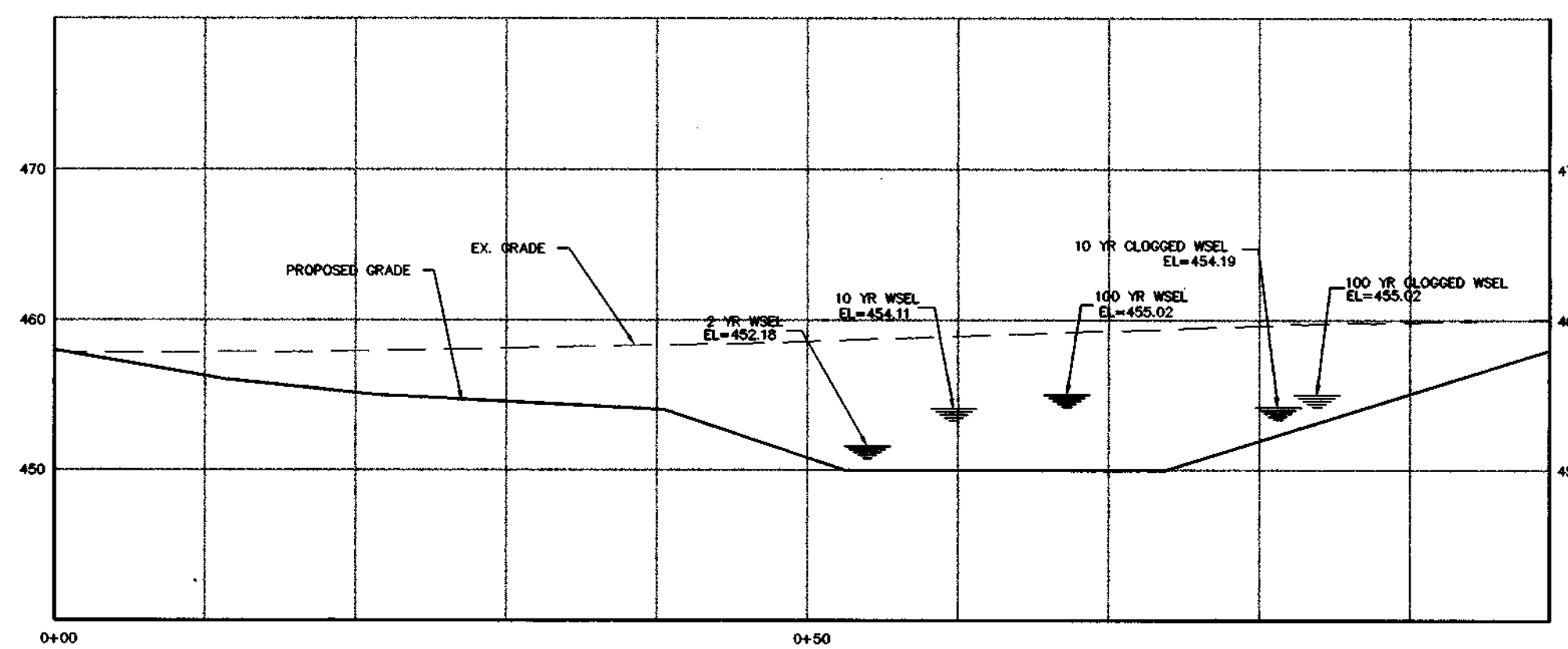
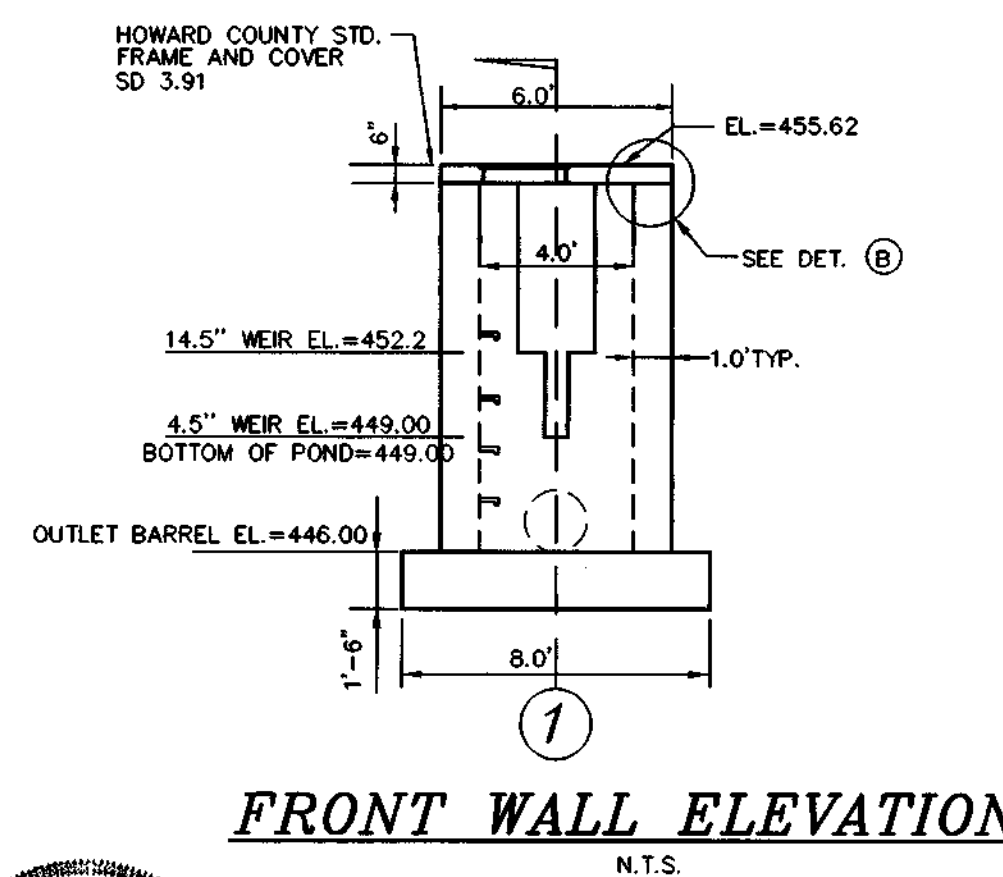
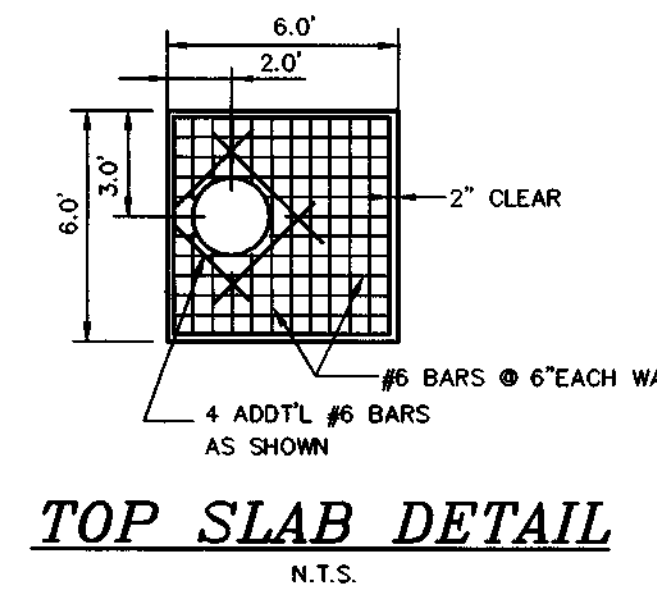
ZANTI PROPERTY
LOTS 4-11 AND OPEN SPACE LOTS 12 & 13
TAX MAP 31 - PARCEL 106 - GRID 14
SECOND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
DRAINAGE AREA MAP

MILDENBERG,
BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 987-0296 Fax (301) 521-5521 Wash. (410) 987-0298 Fax



SWM POND SUMMARY			
	2 YR.	10 YR.	100 YR.
Q DEVELOPED	7.0	27.0	N/A
WSEL	452.18	454.11	455.02

- PRIVATE STORMWATER MANAGEMENT FACILITY
- MD378 DETENTION POND
 BOTTOM EL. 449.00
 TOP EMBANKMENT EL. 456.20
 4.5" WEIR CREST EL. 449.00
 10" WEIR EXPANSION CREST EL. 452.20
 10.0' EMERGENCY SPILLWAY CREST EL. 454.20
 - STORMCEPTOR STA 2400
 IMPERVIOUS DRAINAGE AREA TO STORM CEPTOR=1.75 AC±
 - THE SWM FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED
 - HAZARD CLASSIFICATION IS "a"



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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

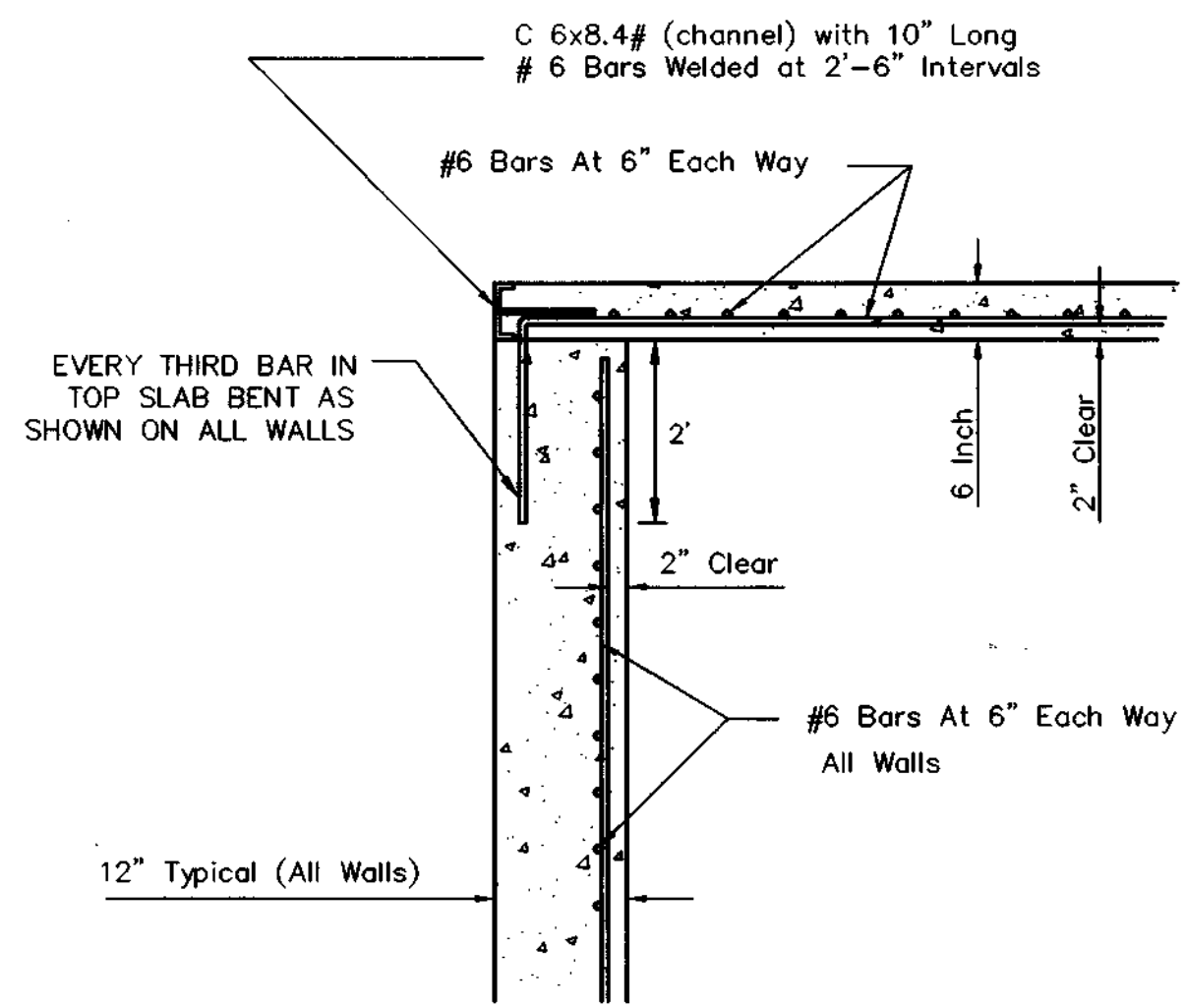
BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

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

APPROVED: DEPARTMENT OF PUBLIC WORKS
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

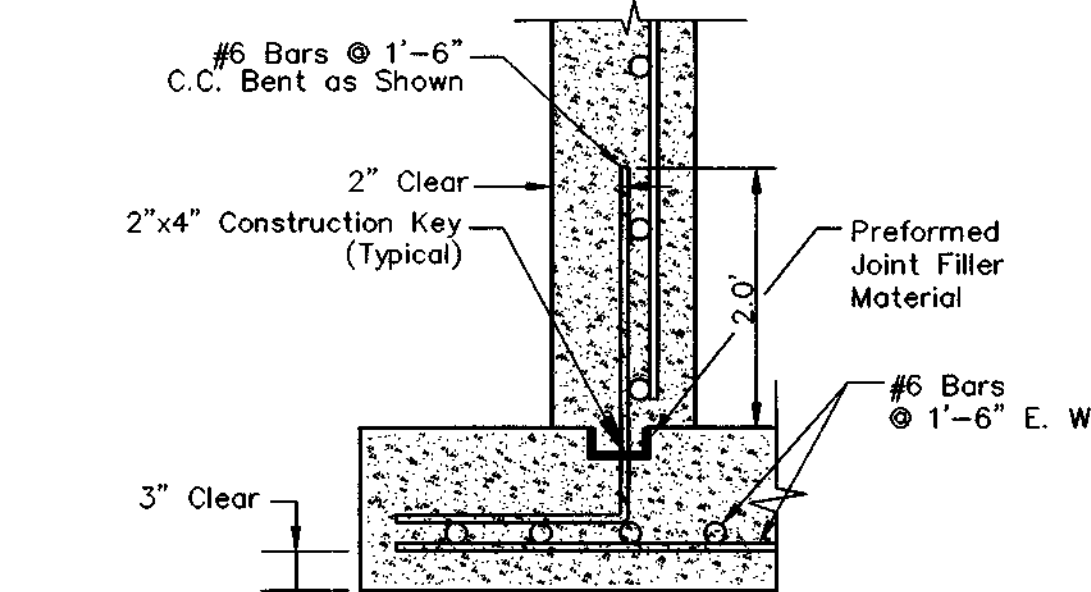
ZANTI PROPERTY
 LOTS 4-11 AND OPEN SPACE LOTS 12 & 13
 TAX MAP 31 - GRID 14
 PARCEL 106 - HOWARD COUNTY, MARYLAND
 SECOND ELECTION DISTRICT
 STORMWATER MANAGEMENT POND PROFILES & DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0286 Fax: (301) 621-5821 Wash. (410) 997-0298 Fax.



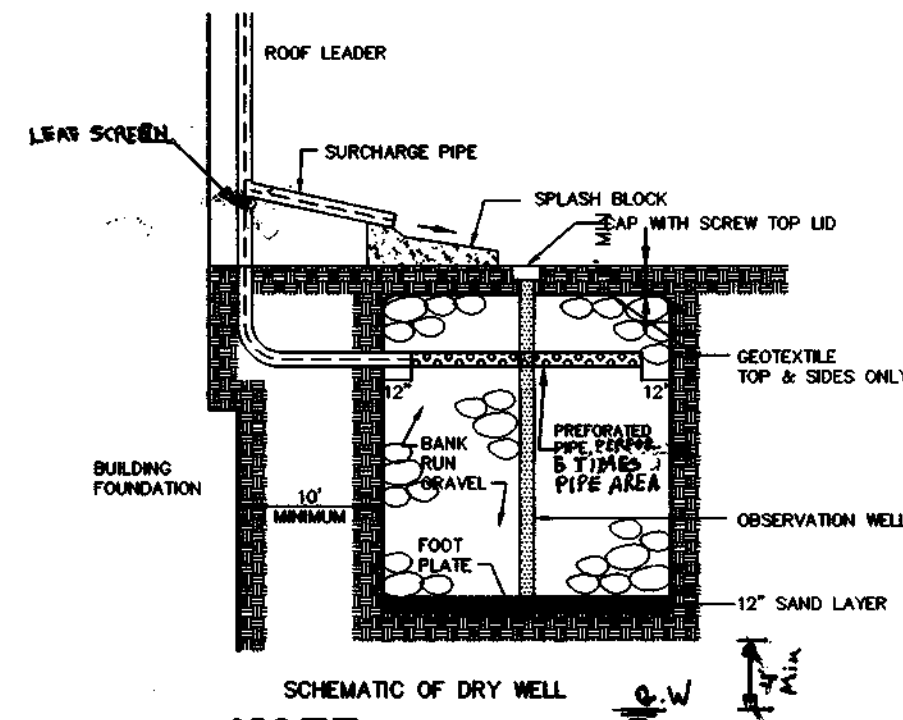
DETAIL OF CONCRETE CRADLE

N.T.S.

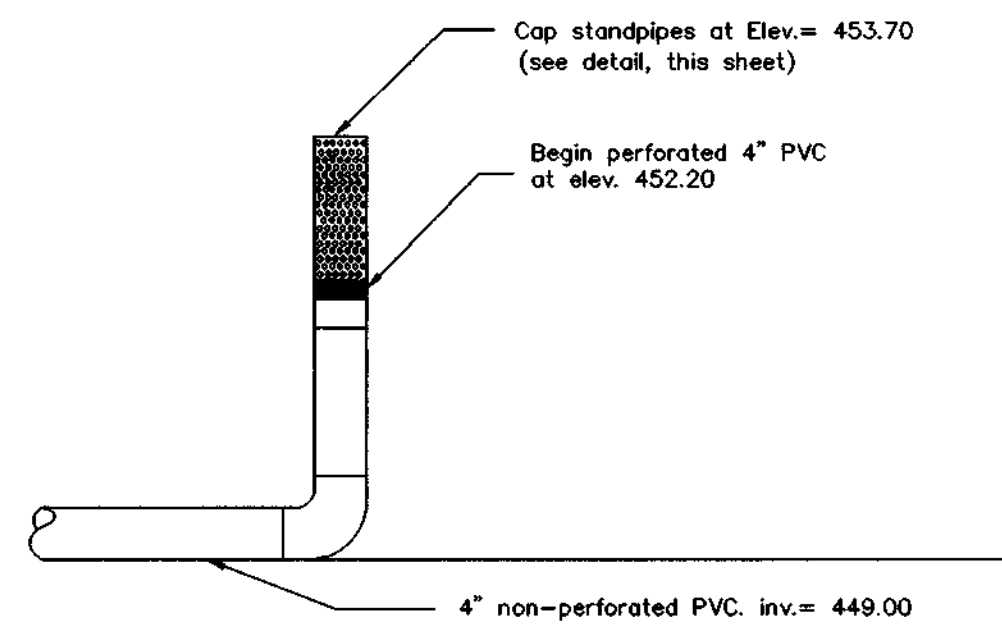


WALL TO BOTTOM SLAB CONNECTION DETAIL

N.T.S.



SCHEMATIC OF DRY WELL
NOTE: PROVIDE DRYWELLS FOR LOTS 9 THRU 11

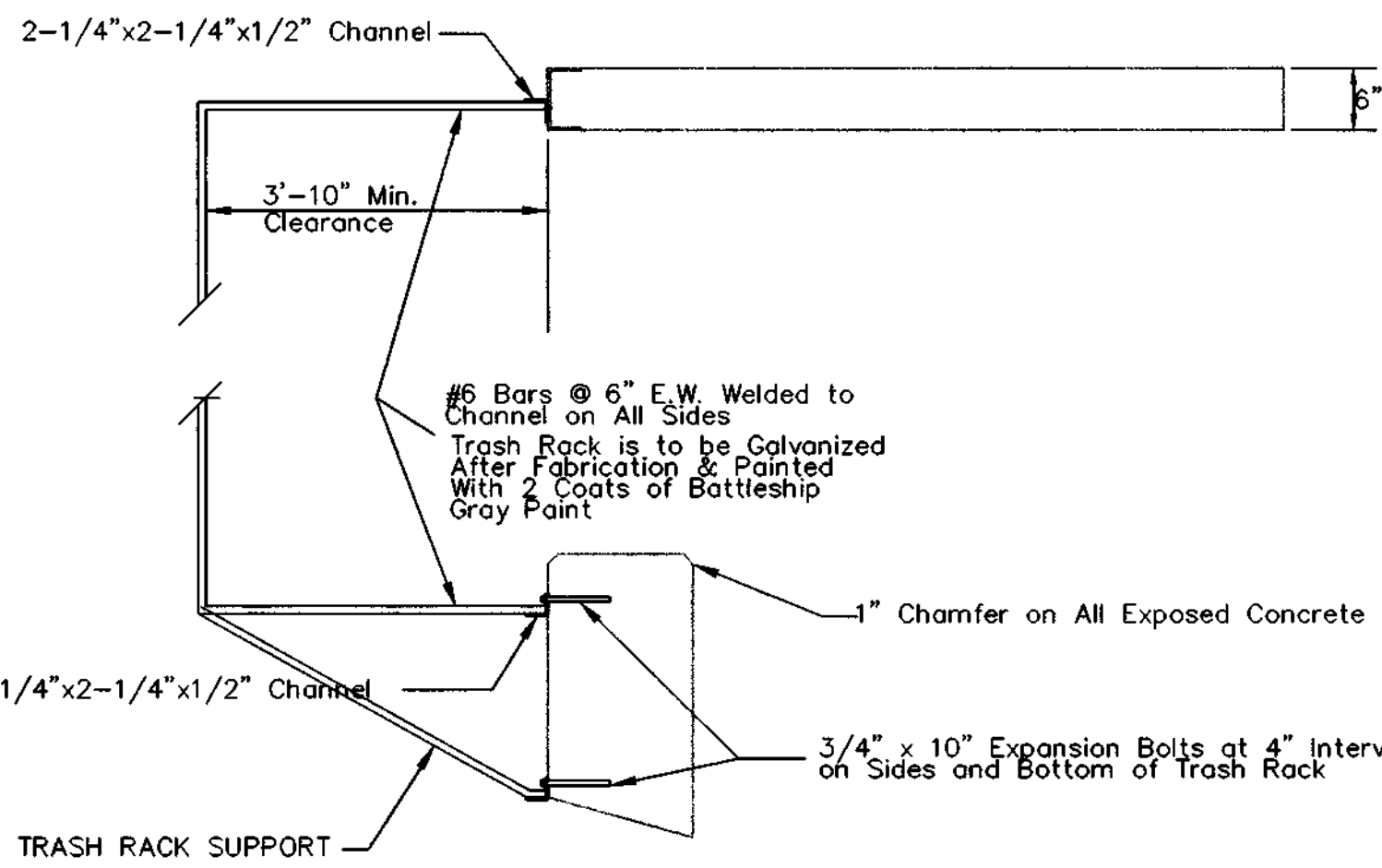


TEMPORARY DEWATERING STANDPIPES

NOTE: FOR NOTES AND SPECIFICATIONS SEE DETAIL C-10-30 SHEET 5

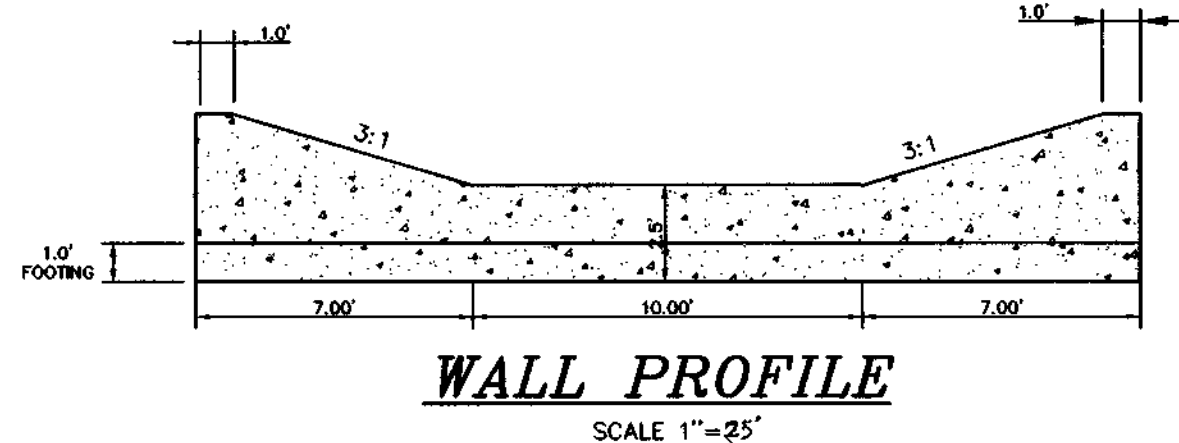
WALL TO TOP SLAB CONNECTION DETAIL

N.T.S.



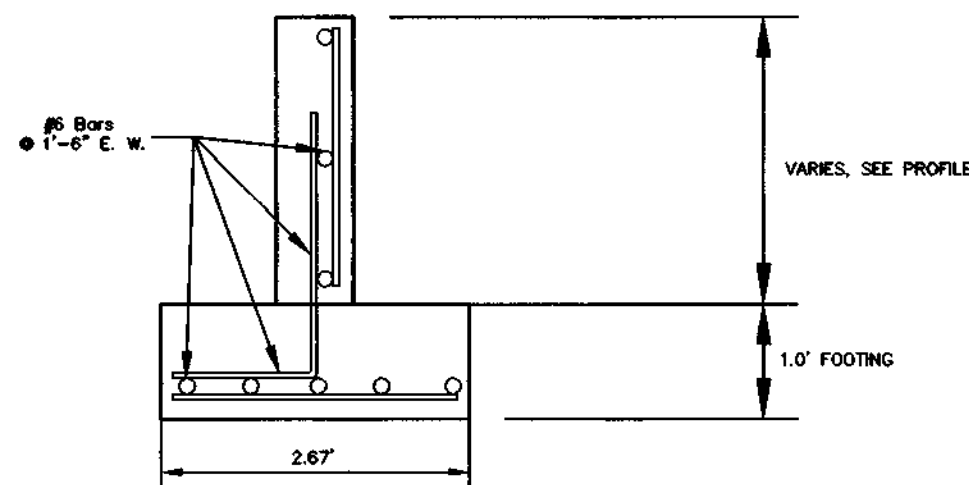
TRASH RACK CONNECTION DETAIL

N.T.S.



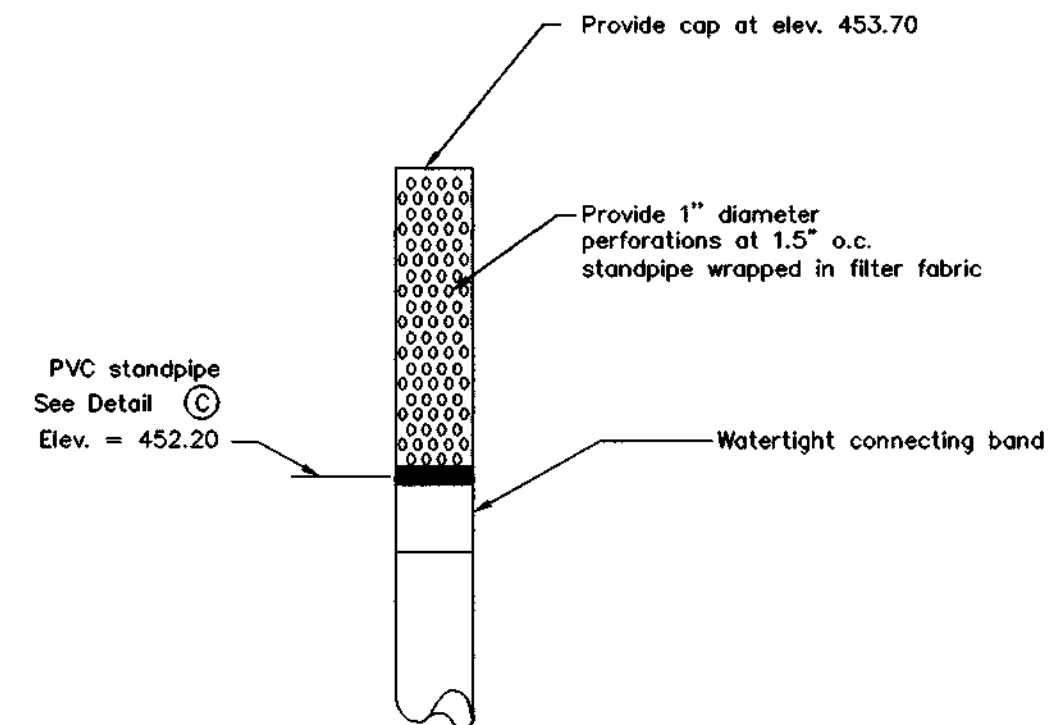
WALL PROFILE

SCALE 1"=25"



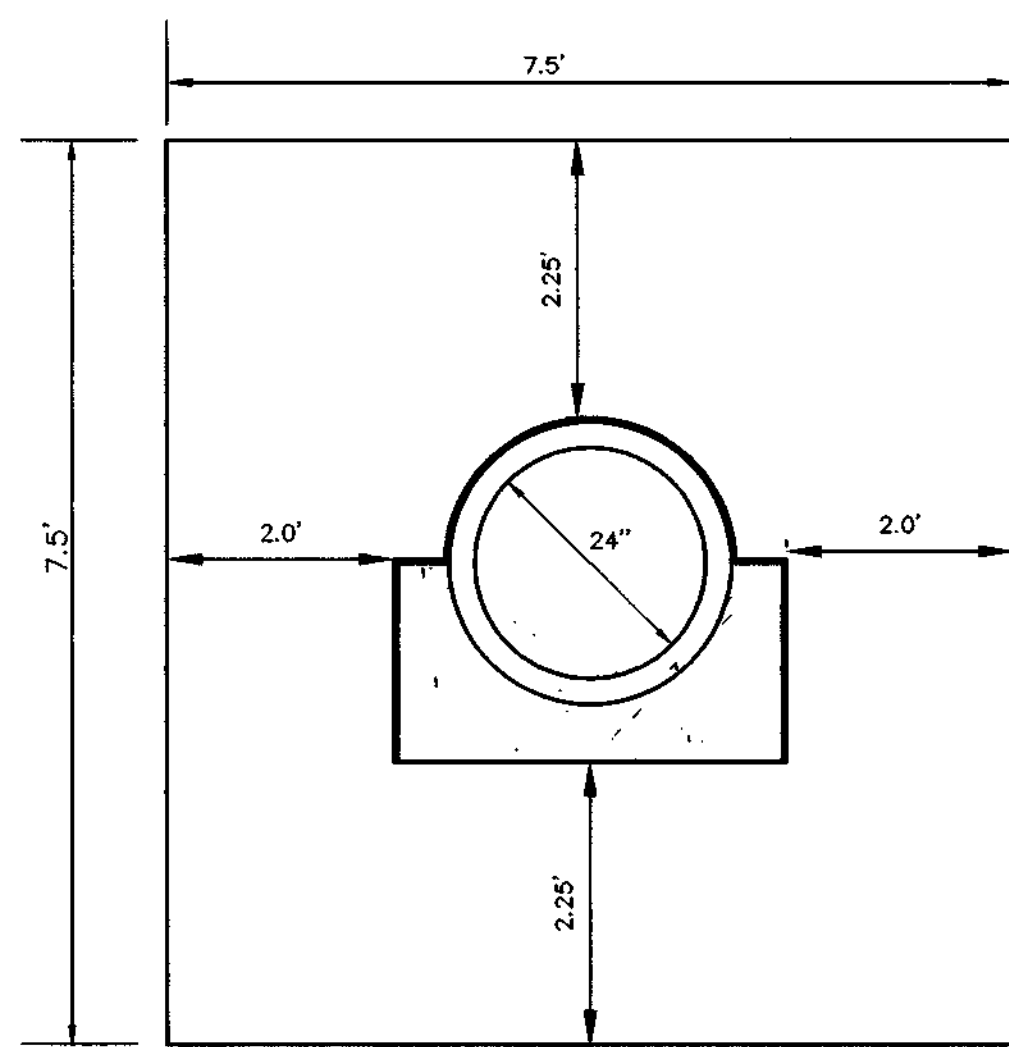
WALL SECTION

SCALE 1"=1'



TEMPORARY STANDPIPE DETAIL

NOTE: FOR NOTES AND SPECIFICATIONS SEE DETAIL C-10-30 SHEET 5



ANTI-SEEP COLLAR DETAIL

N.T.S.

Precast Concrete

Order Request Form

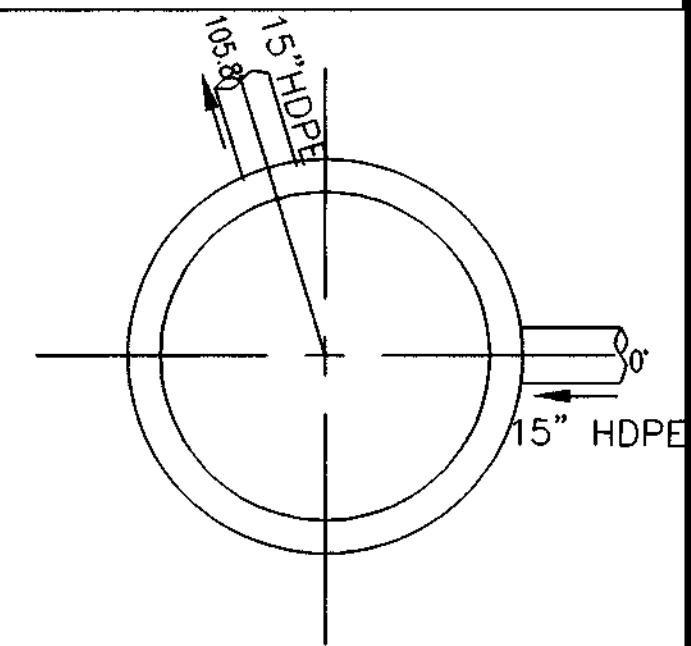
* TO BE INCLUDED ON SHM PLAN BY DESIGNER

CONTRACTOR INFORMATION

Name _____
Address _____
City _____
State _____
Zip Code _____
Contact _____
Phone _____
Fax _____

OWNER INFORMATION

Name Zanti LLC
Phone (410) 480-9105
Fax _____



Please draw orientation of inlet and outlet pipes on diagram along with the pipe inside diameter (in.) and invert elevation (ft). Clearly mark inlet pipes with an "I" and outlet pipes with an "O". Please provide the inlet/outlet pipe angle in degrees.

IMPERVIOUS DRAINAGE AREA FOR THIS UNIT 1.75 AC.

STC	Model
900	<input type="checkbox"/> 3600
1200	<input type="checkbox"/> 4800
1800	<input type="checkbox"/> 6000
2400	<input checked="" type="checkbox"/> 7200

Insert Size	DISC
22"	<input type="checkbox"/>
32"	<input type="checkbox"/>
44"	<input type="checkbox"/>
CUSTOM	<input type="checkbox"/>

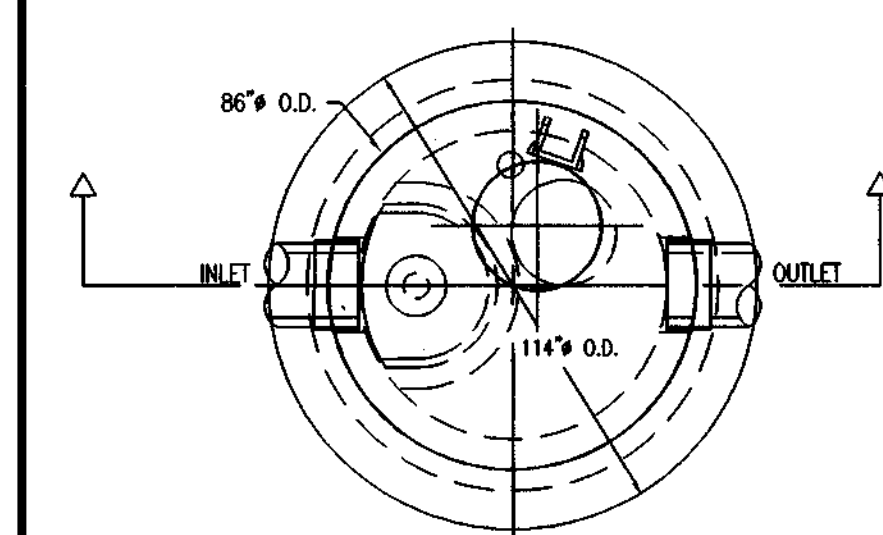
Manhole Number	SC-1
Top Elevation (ft)	455.60
Inlet Pipe Invert (ft)	452.08
Outlet Pipe Invert (ft)	452.01
Pipe Type	HDPE
Inlet Pipe Inside Diameter (ID)	15"
Inlet Pipe Outside Diameter (OD)	-
Outlet Pipe Inside Diameter (ID)	15"
Outlet Pipe Outside Diameter (OD)	-

Project Name Zanti Property
Approximate time frame of delivery (weeks) _____
Delivery Address: Street _____
City _____ State _____ Zip Code _____
Designer Company MILDENBERG, BOENDER & ASSOC., INC.
Designer Contact SAMER ALOMAR Phone 410-997-0296 Fax 410-997-0298

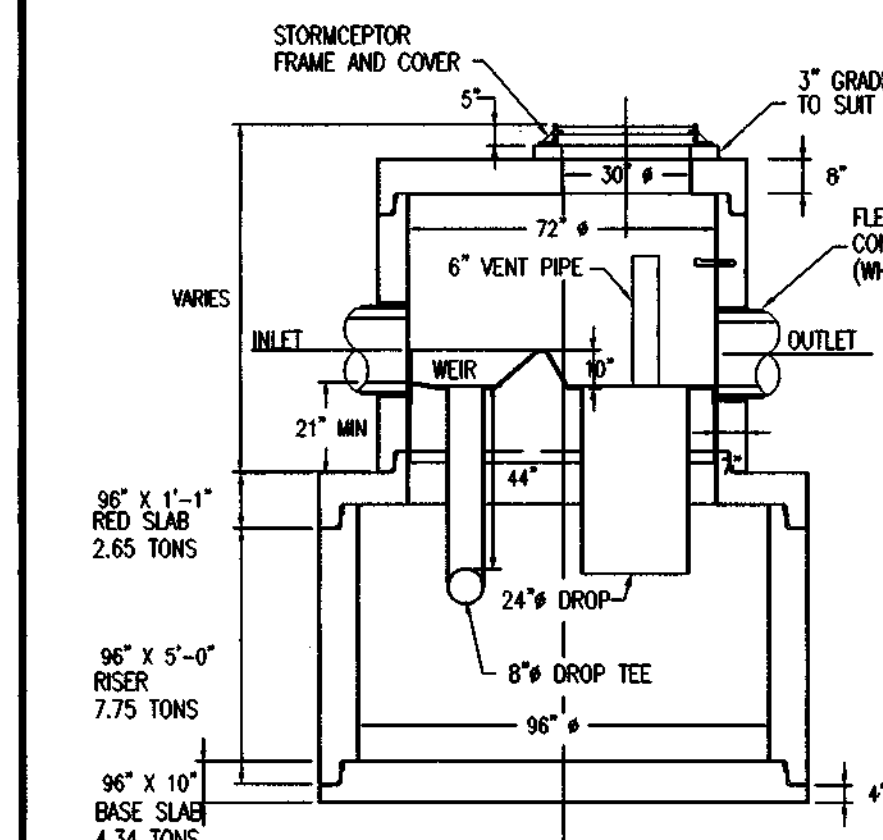
PLEASE FILL OUT COMPLETELY AND FAX TO:

ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)971-1900
FOR TECHNICAL ASSISTANCE PLEASE CALL MIKE BARG, PHONE (703)971-1900

Hydro Conduit		DR. BY: EPOM
6800 Loisdale Road, Springfield, VA 22150 (703) 971-1900		CK. BY: RCH
STC 2400		DATE: 12-17-96
PRECAST CONCRETE STORMCEPTOR		SCALE: NTS
		DWG.# CA-0225-05



PLAN
(FRAME AND COVER NOT SHOWN FOR CLARITY)



SECTION

GENERAL NOTES

- STORMCEPTOR SECTIONS SHALL CONFORM TO ASTM C 478, PROFILE GASKETED JOINTS CONFORMING TO ASTM C 443.
- MANHOLE STEPS PROVIDED ABOVE INSERT @ 16" O.C. AND SHALL BE COPOLYMER POLYPROPYLENE PLASTIC ENCAPSULATED GR. 60 STEEL.
- MINIMUM CONCRETE STRENGTH $f'_c = 4,000$ PSI
MINIMUM STEEL STRENGTH $f_y = 60,000$ PSI
- REINFORCEMENT DESIGN SHALL MEET ASTM C 478.
- FLEXIBLE PIPE CONNECTORS SHALL MEET ASTM C 923.
- HANDLING:
A. ALL RISERS SHALL HAVE 2 EA. 1 1/2" HOLES FOR LIFTING @ 1/3 WAY DOWN FROM SPIGOT.
B. ALL LG. DIAM. BASE SECTIONS FLATTOPS, AND REDUCERS TO HAVE LIFT HOOPS.
- DESIGNED FOR AASHTO H-20 LOADING.
- FIBERGLASS STORMCEPTOR INSERT REFERENCE DRAWING # CA-0225-01

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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: Don Rowner
Date: 7-24-01

BY THE ENGINEER:
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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: R. JACOB HIKMAT
Date: 7/23/01

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

Signature: [Signature]
Date: 7/23/01

APPROVED: DEPARTMENT OF PUBLIC WORKS
Signature: [Signature]
Date: 8/1/01

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Signature: [Signature]
Date: 8/1/01

CHIEF, DEVELOPMENT ENGINEERING DIVISION [Signature]
Date: 8/1/01

OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE

- THE STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE PERIODICALLY INSPECTED AND CLEANED TO MAINTAIN OPERATION AND FUNCTION. THE OWNER SHALL INSPECT THE STORMCEPTOR UNIT YEARLY AT A MINIMUM, UTILIZING THE STORMCEPTOR INSPECTION/MONITORING FORM. INSPECTIONS SHALL BE DONE BY USING A CLEAR PLEXIGLASS TUBE ("SLUDGE JUDGE") TO EXTRACT A WATER COLUMN SAMPLE. WHEN THE SEDIMENT DEPTHS EXCEED THE LEVEL SPECIFIED IN TABLE 6 OF THE STORMCEPTOR TECHNICAL MANUAL, THE UNIT MUST BE CLEANED.
- THE STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE CHECKED AND CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES.
- THE MAINTENANCE OF THE STORMCEPTOR UNIT SHALL BE DONE USING A VACUUM TRUCK WHICH WILL REMOVE THE WATER, SEDIMENT, DEBRIS, FLOATING HYDROCARBONS AND OTHER MATERIALS IN THE UNIT. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.
- THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX MONTHS. IF OBSTRUCTIONS ARE FOUND THE OWNER SHALL HAVE THEM REMOVED. STRUCTURAL PARTS OF THE STORMCEPTOR UNIT SHALL BE REPAIRED AS NEEDED.
- THE OWNER SHALL RETAIN AND MAKE THE STORMCEPTOR INSPECTION/MONITORING FORMS AVAILABLE TO THE HOWARD COUNTY OFFICIALS UPON THEIR REQUEST.

date	project	scale	approval
JULY 2001	99026	NTS	RH

date	description	revisions

ZANTI PROPERTY
LOTS 4-11 AND OPEN SPACE LOTS 12 & 13
TAX MAP 31 - PARCEL 106 - GRID 14
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
STORMWATER MANAGEMENT POND DETAILS & NOTES

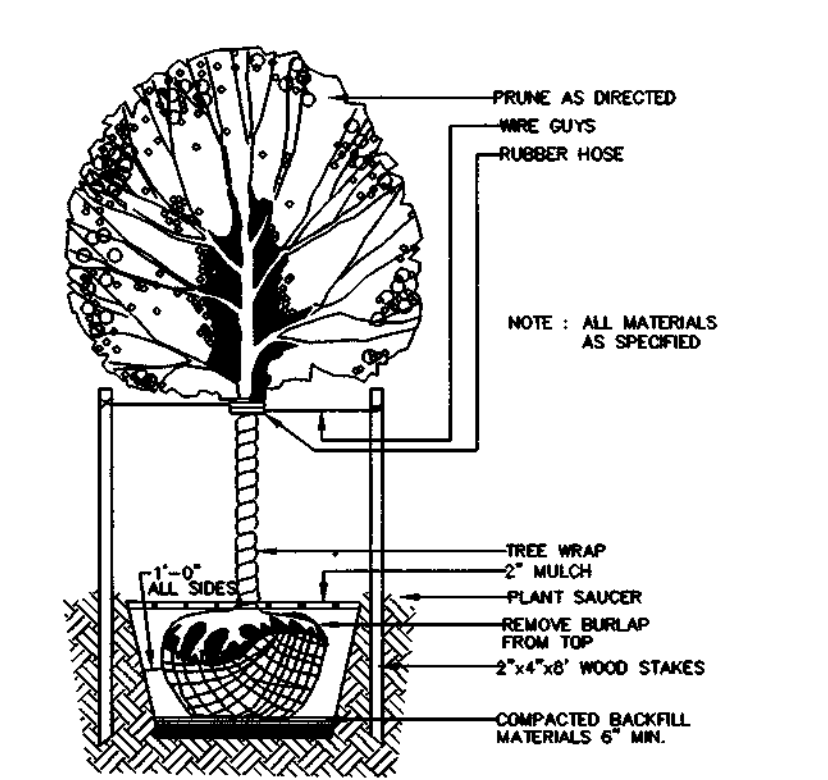
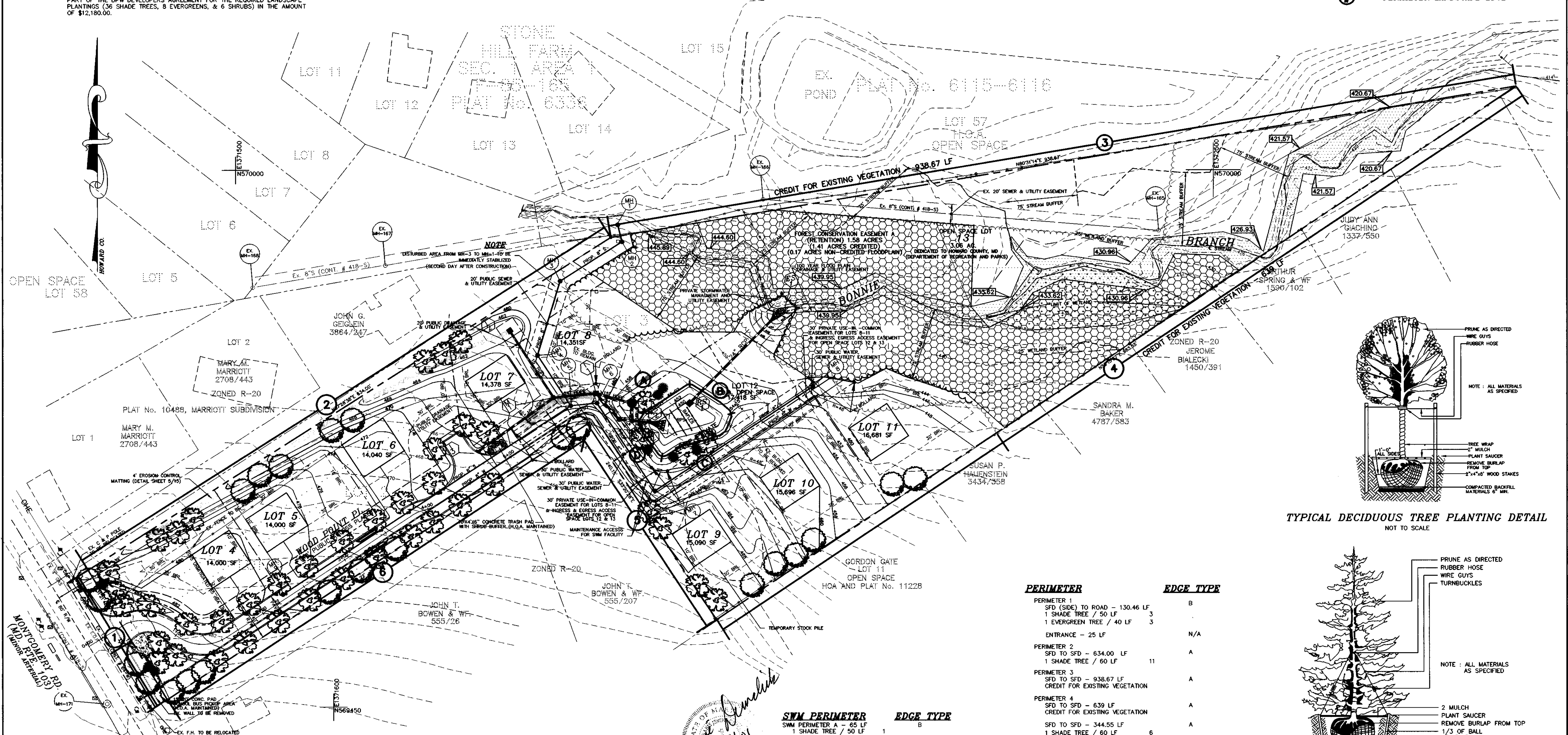
MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0286 Fax: (301) 621-5821 Wash. (410) 997-0288 Fax.

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

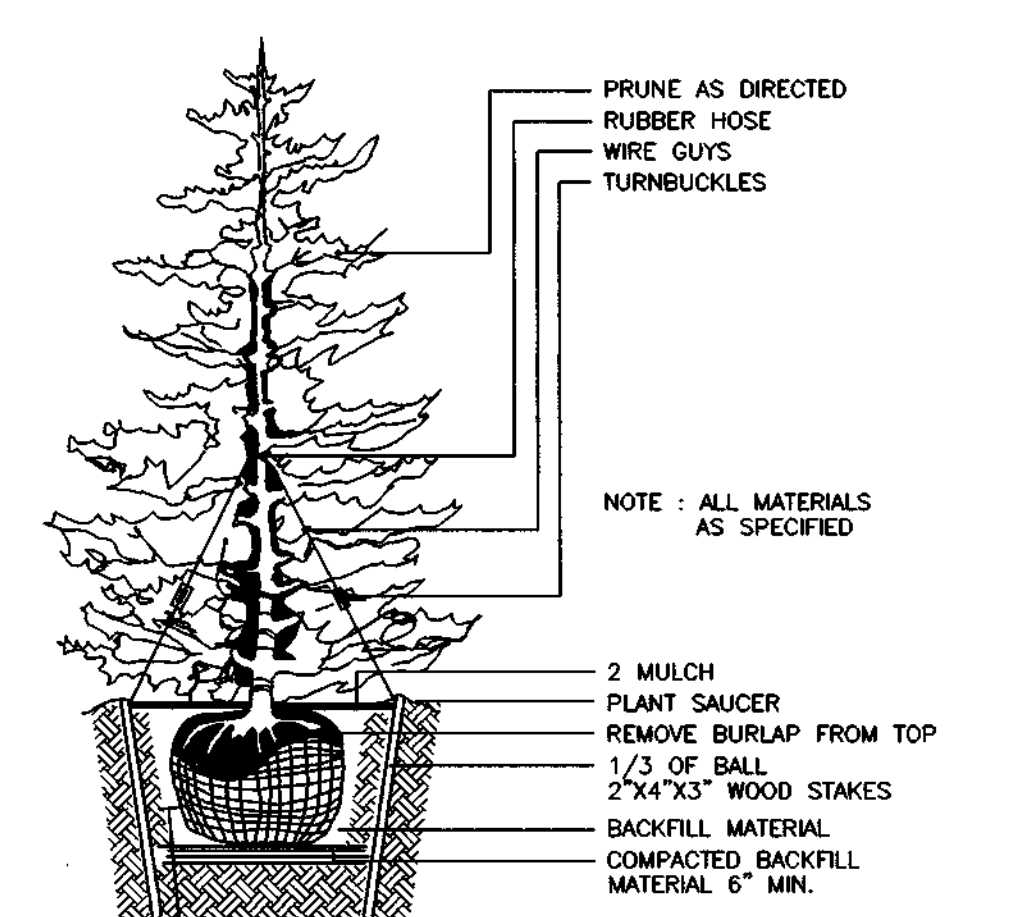
- NOTES:**
1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
 2. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT FOR THE REQUIRED LANDSCAPE PLANTINGS (36 SHADE TREES, 8 EVERGREENS, & 6 SHRUBS) IN THE AMOUNT OF \$12,180.00.

LEGEND:

- WETLANDS
- FLOODPLAIN
- FOREST CONSERVATION EASEMENT
- PERIMETER LANDSCAPE EDGE



TYPICAL DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

PERIMETER	EDGE TYPE
PERIMETER 1 SFD (SIDE) TO ROAD - 130.46 LF 1 SHADE TREE / 50 LF 1 EVERGREEN TREE / 40 LF	B
ENTRANCE - 25 LF	N/A
PERIMETER 2 SFD TO SFD - 634.00 LF 1 SHADE TREE / 60 LF	A
PERIMETER 3 SFD TO SFD - 938.67 LF CREDIT FOR EXISTING VEGETATION	A
PERIMETER 4 SFD TO SFD - 639 LF CREDIT FOR EXISTING VEGETATION	A
SFD TO SFD - 344.55 LF 1 SHADE TREE / 60 LF	A
PERIMETER 5 SFD TO SFD - 240.15 LF 1 SHADE TREE / 60 LF	A
PERIMETER 6 SFD TO SFD - 514.22 LF 1 SHADE TREE / 60 LF	A
TOTAL PLANTING OBLIGATION	
SHADE TREES	32
EVERGREEN TREES	3

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJ. TO PERIMETER PROPERTIES	A (PERIMETERS 2 THRU 6)
LANDSCAPE TYPE	B (PERIMETER 1)	3,310.59 LF
LINEAR FEET OF PERIMETER	130.46 LF	YES, 1,577.67 LF (1,732.92 LF REMAINING TO BE LANDSCAPED)
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO
NUMBER OF PLANTS REQUIRED		
SHADE TREES	3 SHADE TREES	29 SHADE TREES
EVERGREEN TREES	3 EVERGREEN TREES	0 EVERGREEN TREES
SHRUBS	0 SHRUBS	0 SHRUBS
NUMBER OF PLANTS PROVIDED		
SHADE TREES	3 SHADE TREES	29 SHADE TREES
EVERGREEN TREES	3 EVERGREEN TREES	0 EVERGREEN TREES
SHRUBS	0 SHRUBS	0 SHRUBS

OWNER
ELLCOTT CITY LAND HOLDING CO.
8000 MAIN STREET
ELLCOTT CITY MARYLAND 21043
PHONE No. (410) 740-2100

DEVELOPER
LAND DESIGN AND DEVELOPMENT, INC.
8000 MAIN STREET
ELLCOTT CITY MARYLAND 21043
PHONE No. (410) 740-2100

STREET TREE CALCULATIONS

STREET NAME	LENGTH OF ROADSIDE	TREE SPACING	NUMBER OF TREES
PUBLIC ACCESS PLACE	1,028 LF	40 LF	26
MONTGOMERY ROAD	130 LF	40 LF	4
TOTAL			30 STREET TREES

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
17		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
19		ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN SUGAR MAPLE	2 1/2" - 3" CAL.
8		PINUS STROBUS	WHITE PINE	6' - 8' HT.
6		TAXUS MEDIA 'HICKSI'	HICKS YEW	2 1/2" - 3" HT.
TOTAL				50 TREES & SHRUBS (36 SHADE TREES, 8 EVERGREENS, 6 SHRUBS)

STREET TREE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
26		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
4		ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN SUGAR MAPLE	2 1/2" - 3" CAL.
TOTAL				30 SHADE TREES

SWM PERIMETER EDGE TYPE

SWM PERIMETER A - 65 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER B - 60 LF EXISTING TREES TO REMAIN	B
SWM PERIMETER C - 80 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER D - 50 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
TOTAL PLANTING OBLIGATION	
SHADE TREES	4
EVERGREEN TREES	5
SHRUBS	0

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	255 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	YES, 60 LF
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	N/A
NUMBER OF TREES REQUIRED	
SHADE TREES	4 SHADE TREES
EVERGREEN TREES	5 EVERGREEN TREES
NUMBER OF TREES PROVIDED	
SHADE TREES	4 SHADE TREES
EVERGREEN TREES	5 EVERGREEN TREES

DEVELOPER'S/OWNER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE IN 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.

NAME: Paul R. Zanti DATE: 7-24-01

APPROVED: DEPARTMENT OF PUBLIC WORKS
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 APPROVED: DEPARTMENT OF LAND DEVELOPMENT
 APPROVED: DEVELOPMENT ENGINEERING DIVISION

Project	date	description	scale	revision
99026	JULY 2001	engineering	SJD	approval
		illustration	SJD	approval

no.	description	date

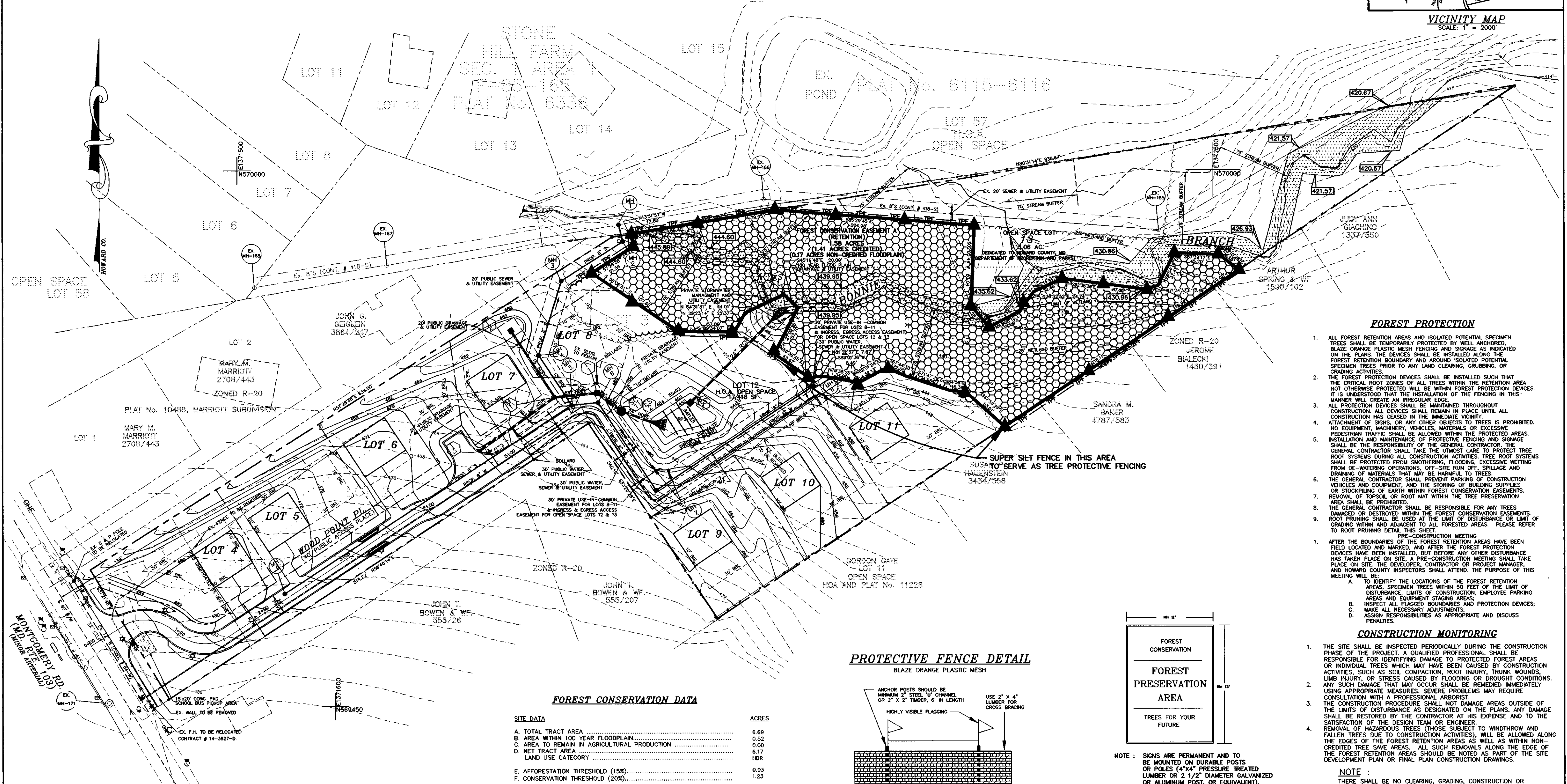
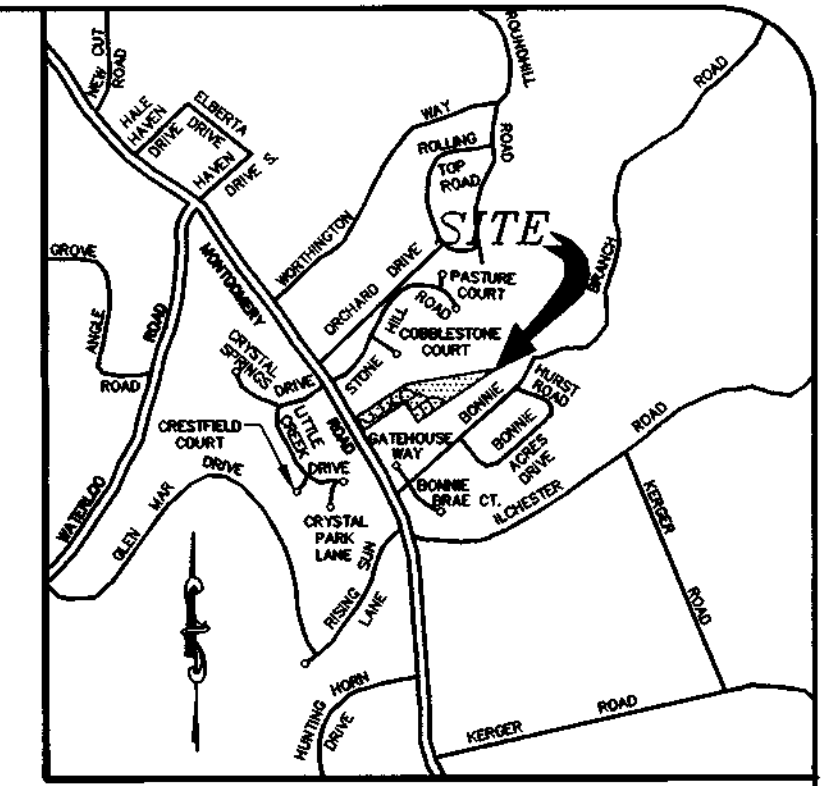
ZANTI PROPERTY
 LOTS 4-11 AND OPEN SPACE LOTS 12 & 13
 TAX MAP 31 - PARCEL 106 - GRID 14
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 LANDSCAPE PLAN

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

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

NOTES:

1. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY RETENTION OF EXISTING FOREST IN THE AMOUNT OF 1.41 ACRES REQUIRED WITH 1.41 ACRES OF CREDITED EASEMENT AND 0.17 ACRES OF NON-CREDITED (FLOODPLAIN) EASEMENT FOR A TOTAL FOREST CONSERVATION EASEMENT AREA OF 1.58 ACRES.
2. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT NO. CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.



FOREST PROTECTION

1. 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.
2. 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 IRREVERSIBLE EDGE.
3. ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
4. 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.
5. 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.
6. 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.
7. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
8. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
9. 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.

1. 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:
 - A. 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;
 - B. INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
 - C. MAKE ALL NECESSARY ADJUSTMENTS;
 - D. ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

CONSTRUCTION MONITORING

1. 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.
2. THE CONSTRUCTION PROCEDURES 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.
3. REMOVAL OF HAZARDOUS TREES (THOSE SUBJECT TO WINDTHROW AND FALLEN TREES DUE TO CONSTRUCTION ACTIVITIES), WILL BE ALLOWED ALONG THE EDGES OF THE FOREST RETENTION AREAS AS WELL AS WITHIN NON-CREDITED TREE SAVE AREAS. ALL SUCH REMOVALS ALONG THE EDGE OF THE FOREST RETENTION AREAS SHOULD BE NOTED AS PART OF THE SITE DEVELOPMENT PLAN OR FINAL PLAN CONSTRUCTION DRAWINGS.

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.

OWNER

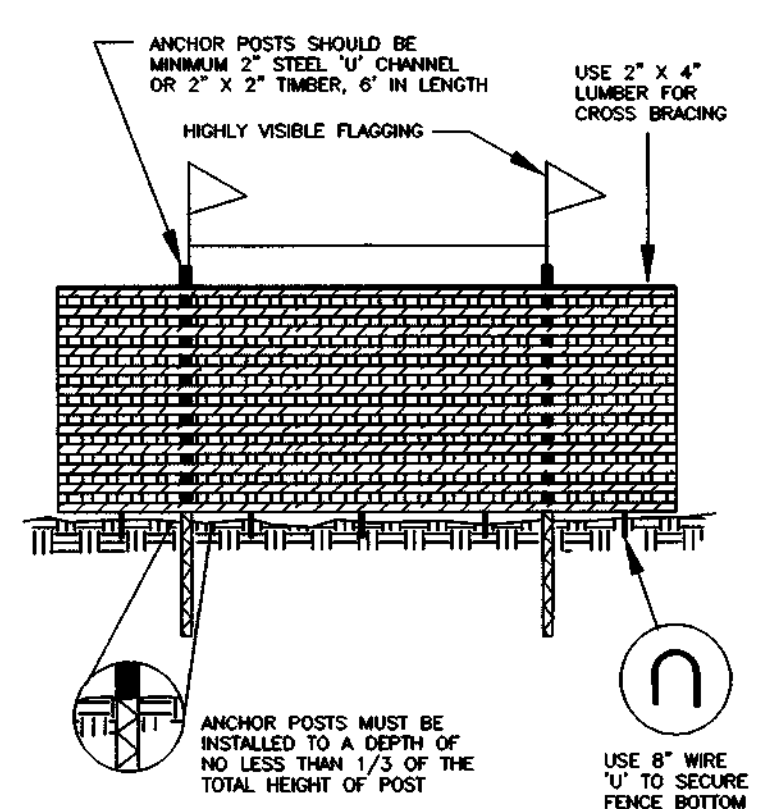
ELLICOTT CITY LAND HOLDING CO.
8000 MAIN STREET
ELLICOTT CITY MARYLAND 21043
PHONE NO. (410) 740-2100

DEVELOPER

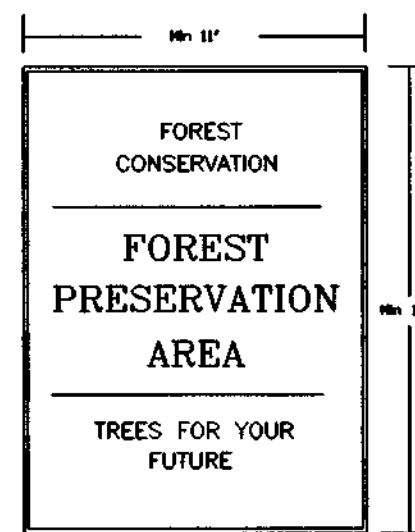
LAND DESIGN AND DEVELOPMENT, INC.
8000 MAIN STREET
ELLICOTT CITY MARYLAND 21043
PHONE NO. (410) 740-2100

PROTECTIVE FENCE DETAIL

BLAZE ORANGE PLASTIC MESH



- NOTES:
1. FOREST PROTECTION DEVICE ONLY.
 2. RETENTION AREAS SHALL BE SET AS PART OF THE DESIGN PROCESS.
 3. BOUNDARIES OF FOREST RETENTION AREAS SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING.
 4. ROOT DAMAGE SHOULD BE AVOIDED.
 5. PROTECTIVE FENCING WILL ALSO BE USED.
 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.



NOTE: SIGNS ARE PERMANENT AND TO BE MOUNTED ON DURABLE POSTS OR POLES (4"x4" PRESSURE TREATED LUMBER OR 2 1/2" DIAMETER GALVANIZED OR ALUMINUM POST, OR EQUIVALENT).

SIGNAGE DETAIL

NOT TO SCALE

FOREST CONSERVATION DATA

SITE DATA	ACRES
A. TOTAL TRACT AREA	6.69
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.52
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.00
D. NET TRACT AREA	6.17
LAND USE CATEGORY	HDR
E. AFFORESTATION THRESHOLD (15%)	0.93
F. CONSERVATION THRESHOLD (20%)	1.23
EXISTING FOREST COVER	2.10
G. EXISTING FOREST COVER	1.17
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD	0.87
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	0.87
BREAK EVEN POINT	1.41
J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION	0.69
K. CLEARING PERMITTED WITHOUT MITIGATION	0.69
PROPOSED FOREST CLEARING	0.68
L. TOTAL AREA OF FOREST TO BE CLEARED	1.41
M. TOTAL AREA OF FOREST TO BE RETAINED	0.00
PLANTING REQUIREMENTS	0.17
N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD	0.00
P. REFORESTATION FOR CLEARING BELOW THRESHOLD	0.18
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD	0.00
R. TOTAL REFORESTATION REQUIRED	0.00
S. TOTAL AFFORESTATION REQUIRED	0.00
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED	0.00

LEGEND

- 100 YEAR FLOOD PLAIN
- FOREST CONSERVATION EASEMENT (RETENTION)
- WETLANDS
- FOREST PROTECTION FENCE
- FOREST CONSERVATION SIGNAGE

APPROVED: DEPARTMENT OF PUBLIC WORKS
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, BUREAU OF HIGHWAYS
 CHIEF, DIVISION OF LAND DEVELOPMENT
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 8/10/01
 DATE: 8/10/01
 DATE: 8/10/01

date	JULY 2001
project	99026
illustration	engineering
scale	1" = 50'
approval	SID
no.	

date	
description	
revisions	

ZANTI PROPERTY
 LOTS 4-11 AND OPEN SPACE LOTS 12 & 13
 TAX MAP 31 - PARCEL 106 - GRID 14
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 FOREST CONSERVATION PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsy Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0596 Fax (301) 821-5527