

SHEET INDEX	
NO.	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT AND LANDSCAPE PLAN
3	ROAD PROFILES, DETAILS, STRIPING AND TRAFFIC CONTROL PLAN
4	DRAINAGE AREA MAP
5	WATER QUALITY NOTES & DETAILS AND STORM DRAIN PROFILES & DETAILS
6	SEDIMENT AND EROSION CONTROL PLAN, NOTES AND DETAILS

SITE DEVELOPMENT PLAN

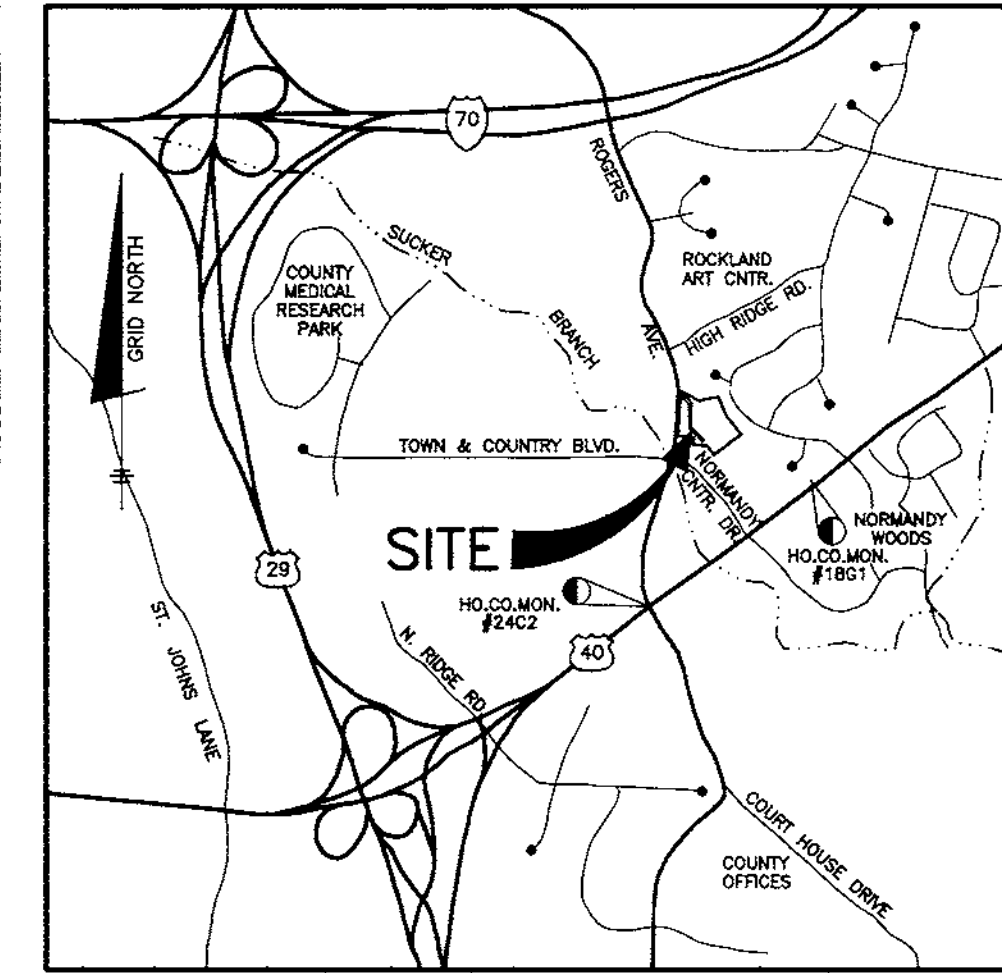
NORMANDY SHOPPING CENTER

PRIVATE DRIVE

2nd ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

BENCH MARKS NAD'83	
HO. CO. #1801	
CONC. MON. @ SURFACE 4' NORTH OF MACADAM SHOULDER OF ROUTE 40 WEST, 18' WEST OF YELLOW BLINKING SIGNAL.	N 589984.958 E 1367750.237
HO. CO. #24C2	
CONC. MON. @ SURFACE 5.5' SOUTH OF LEFT TURN LANE OF ROUTE 40 WEST, 14' EAST OF EDGE OF CROSSOVER TO ROUTE 99 SOUTH.	N 588648.318 E 1366038.135
HO. CO. BM#2745004	ELEV. 364.78'
USED FOR VERTICAL CONTROL.	



VICINITY MAP
SCALE: 1"=2000'

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 DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION AT 410-313-1883 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- 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.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY BENCHMARK ENGINEERING, INC. IN SEPTEMBER, 1998. CONTOUR INTERVAL IS 2 FEET.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 24C2 AND 18G1 WERE USED FOR THIS PROJECT.
- WATER AND SEWER SHOWN ON THIS SITE IS EXISTING.
- THERE IS NO FLOODPLAIN WITHIN THE LIMIT OF THIS SUBMISSION.
- STORMWATER MANAGEMENT QUANTITY CONTROL IS PRIVATE AND HAS BEEN PROVIDED UNDER SDP-84-297. WATER QUALITY CONTROL SHALL BE PROVIDED BY THE BAYSAYER UNIT AND SHALL BE PRIVATELY OWNED AND MAINTAINED.
- THERE ARE NO FEDERALLY REGULATED WATERS OF THE U.S. INCLUDING JURISDICTIONAL WETLANDS ON THE SUBJECT PARCEL 'C' AS STATED BY THE ARMY CORP. OF ENGINEERS' LETTER DATED JANUARY 4, 2000. MDE HAS ALSO INDICATED IN THEIR LETTER DATED FEBRUARY 9, 2000, THAT ACTIVITIES ON NORMANDY SHOPPING CENTER PARCEL 'C' ARE EXEMPT FROM THE STATE NONTIDAL WETLAND AND WATERWAY AUTHORIZATION.
- TRAFFIC STUDY IS NOT REQUIRED FOR THIS SDP. THIS SITE IS EXEMPT BASED UPON SECTION 4.7.2.B OF THE HOWARD COUNTY DESIGN MANUAL VOLUME II.
- EXISTING UTILITIES SHOWN HAVE BEEN TAKEN FROM ALL AVAILABLE CONTRACT DRAWINGS AND ROAD CONSTRUCTION PLANS. IF NECESSARY, CONTRACTOR SHALL ADJUST ALL TOP ELEVATIONS TO MATCH SDP GRADES AND VERIFY EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES.
- FOR EASEMENT, LOT SIZE AND OTHER RELATED INFORMATION REFER TO PLAT NO. 13068 (F-98-33).
- ANY DAMAGE TO THE COUNTY'S RIGHT OF WAY SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- ALL POWER POLE RELOCATIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE PROPOSED PRIVATE STORM DRAIN PIPES AND PRIVATE WATER QUALITY UNIT HAVE BEEN SIZED TO ACCOMMODATE FUTURE BUILDOUT OF PARCEL 'C'.
- WP-94-19 REQUESTED TO WAIVE SECTION 16.156(a)(1) TO PERMIT NON-RESIDENTIAL DEVELOPMENT WITHOUT A SITE DEVELOPMENT PLAN WAS APPROVED ON DEC. 3, 1993. THIS WAIVER PERTAINS TO THE EXISTING CAR STORAGE AREA AS SHOWN ON THIS PLAN.
- WP-97-26 REQUESTED TO WAIVE SECTION 16.144.A TO PERMIT NON-RESIDENTIAL SUBDIVISION WITHOUT SUBMISSION OF A PRELIMINARY EQUIVALENT SKETCH PLAN AND TO PROCEED TO FINAL PLAT SUBMISSION WAS APPROVED ON OCT. 25, 1996.
- WP-98-55 REQUESTED TO WAIVE SECTION 16.147(c)(17) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS WHICH REQUIRE THE LOCATION OF THE FLOODPLAINS, WETLANDS, WETLAND BUFFERS, STREAM BUFFERS AND PROPOSED WETLANDS ON THE FINAL PLAT WAS APPROVED ON OCT. 23, 1997.
- STREET LIGHT PLACEMENT AND TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III (1993). A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- ALL LIGHTING WITHIN THE B-2 ZONE, NOT INCLUDING LIGHTING OF PUBLIC STREETS, SHALL BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
- WP-99-71 WAS REQUESTED AND APPROVED ON JULY 27, 1999. THIS REQUEST WAS TO WAIVE SECTION 16.116(a)(1) TO PERMIT GRADING AND/OR THE REMOVAL OF VEGETATIVE COVER WITHIN 25 FEET OF A WETLAND FOR THE CONSTRUCTION OF A PRIVATE COMMERCIAL DRIVEWAY.
- BA-194-D WAS AN APPEAL TO THE DECISION OF THE DEPARTMENT OF PLANNING AND ZONING GIVEN ON 7-27-99, WHICH APPROVED A REQUEST TO WAIVE SECTION 16.116(a)(1) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, TO PERMIT GRADING AND/OR REMOVAL OF VEGETATIVE COVER WITHIN 25 FEET OF A WETLAND FOR THE CONSTRUCTION OF A PRIVATE COMMERCIAL DRIVEWAY. THIS CASE WAS DISMISSED ON JANUARY 12, 2000 BY THE BOARD OF APPEALS.
- The Forest Conservation obligations associated with this project were addressed through the submission of a Declaration of Intent, clearing less than 40000 sq. feet of forest.

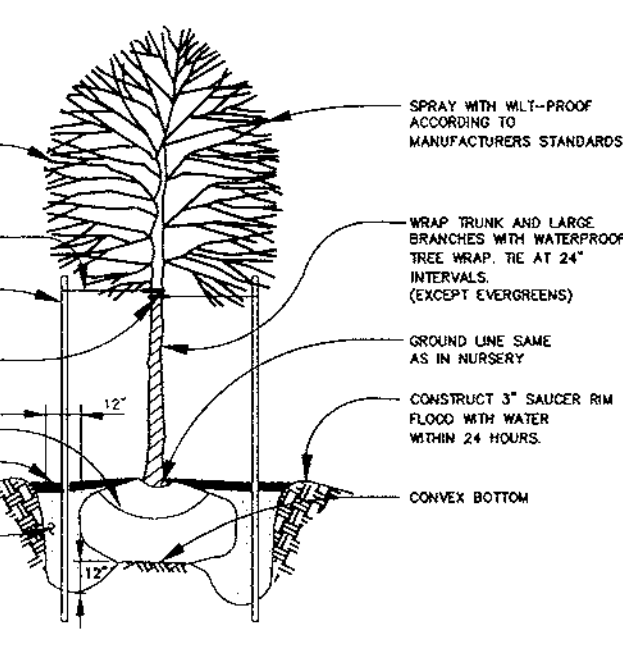
SCHEDULE A PERIMETER LANDSCAPE EDGE		
CATEGORY (ADJACENT TO)	ROADWAYS	RESIDENTIAL
LANDSCAPE TYPE	① B	② C
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	468'	221'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 200'	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO
NUMBER OF PLANTS REQUIRED	209 L.F.	221 L.F.
SHADE TREES (1:40)	4	5
EVERGREEN TREES (1:40)	5	11
OTHER TREES (2:1 SUBSTITUTE) SHRUBS	—	—
NUMBER OF PLANTS PROVIDED	4	6
SHADE TREES	—	—
EVERGREEN TREES	5	11
OTHER TREES (2:1 SUBSTITUTE) SHRUBS (10:1 SUBSTITUTE)	—	—
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)		

LANDSCAPE PLANTING LIST			
SYMBOL	QUANTITY	NAME	REMARKS
⊙	10	PLANTANUS ACERIFOLIA BLOODGOOD (Bloodgood London Plane)	2 1/2" MIN. CAL. B&B FULL HEAD
☀	16	PINUS STROBUS (Eastern White Pine)	6'-8' ht. UNSHARED

STREET TREE PLANTING SCHEDULE			
SYMBOL	QUANTITY	NAME	REMARKS
⊙	5	ACER RUBRUM (RED SUNSET RED MAPLE)	2 1/2" MIN. CAL. B & B FULL HEAD

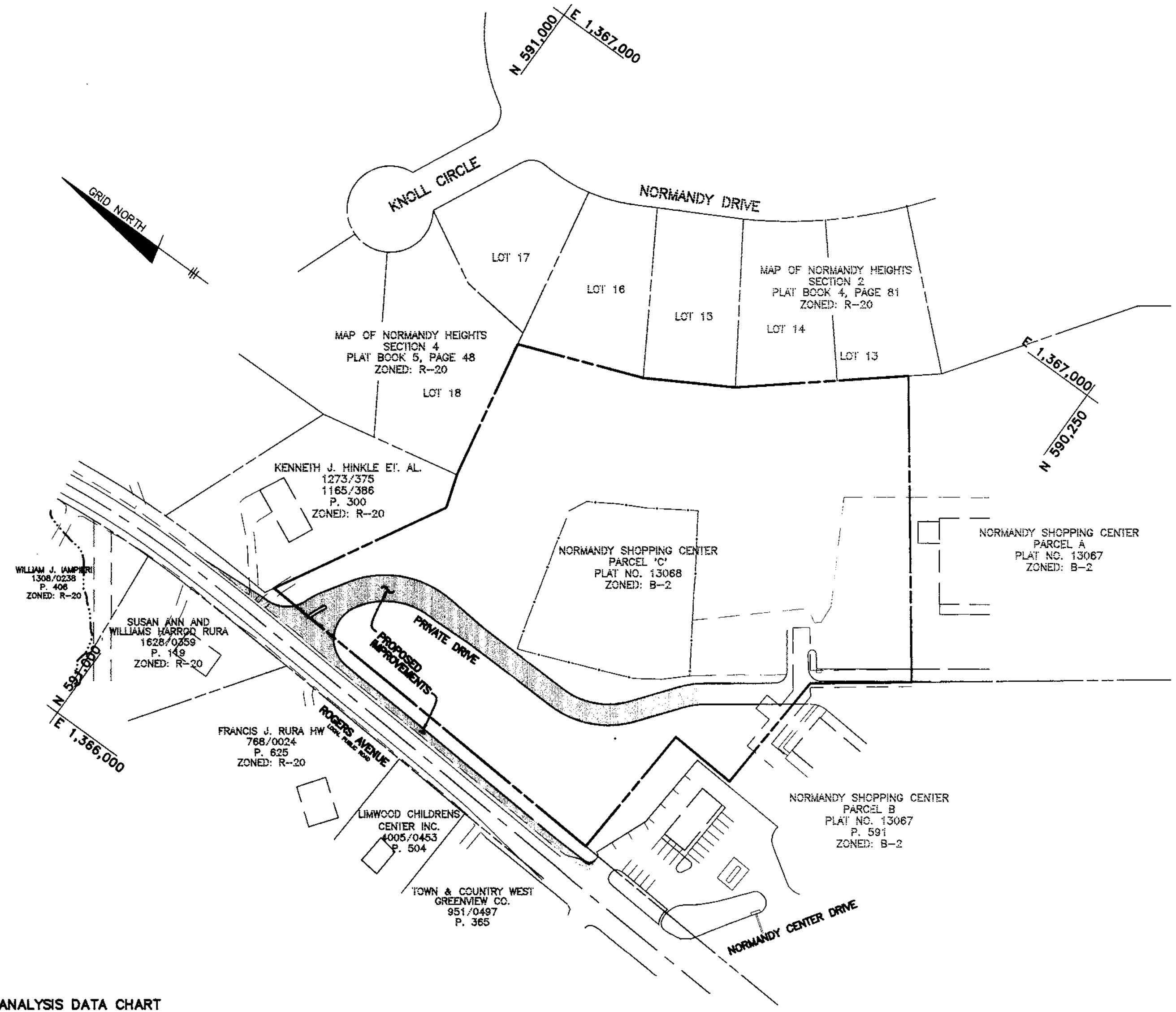
STREET TREE SCHEDULE			
LF OF R/W	LF OF WOODS TO BE RETAINED	LF OF PLANTING REQ.	No. OF STREET TREES
470	260	210	5

② EXISTING WOODS 20' IN WIDTH OR GREATER.



TREE PLANTING DETAIL
NOT TO SCALE

- NOTE:
- TREES SHOULD BE PLANTED A MINIMUM OF 6 FEET FROM THE EDGE OF PAVING AND MUST BE A MINIMUM OF 5 FEET FROM ANY STORM DRAIN.
 - TREES MUST BE PLANTED A MINIMUM OF 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.
 - SEE TREE PLANTING DETAIL - THIS SHEET.



PLAN VIEW
SCALE: 1" = 100'

SITE ANALYSIS DATA CHART

1.) TOTAL PROJECT AREA (PARCEL C)	5.90 AC.
2.) AREA OF THIS PLAN SUBMISSION	1.36 AC.
3.) APPROXIMATE LIMIT OF DISTURBANCE	1.36 AC.
4.) PRESENT ZONING	B-2
5.) PROPOSED USES FOR SITE	COMMERCIAL
6.) AREA OF FUTURE BUILDING	N/A
7.) NUMBER OF FUTURE PARKING SPACES	N/A
8.) NUMBER OF UNITS ALLOWED AS SHOWN ON PLAT	N/A
9.) NUMBER OF UNITS PROPOSED	N/A
10.) MAXIMUM NUMBER OF EMPLOYEES/TENANTS	N/A
11.) BUILDING COVERAGE OF SITE	N/A
12.) APPLICABLE DPZ FILE REFERENCES	SOP-84-297 F-98-33
13.) OTHER INFORMATION WHICH MAY BE RELEVANT	N/A

PERMIT INFORMATION CHART					
SUBDIVISION NAME		SECTION/AREA		LOT/PARCEL#	
NORMANDY SHOPPING CENTER		SECTION 2		PARCEL "C"	
PLAT No.	BLOCK No.	ZONE	TAX MAP	ELEC. DIST.	CENSUS
13068-13068	24	B-2	17	2ND	6026.00
WATER CODE			SEWER CODE		
N/A			N/A		

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cheryl D. ... 3/16/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Cindy ... 3/9/00
CHIEF, DIVISION OF LAND DEVELOPMENT

... 3/10/00
DIRECTOR

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

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

PROFESSIONAL ENGINEER
STATE OF MARYLAND
2-23-00

OWNER/DEVELOPER: NORMANDY VENTURE LIMITED PARTNERSHIP
P.O. BOX 609
ELLICOTT CITY, MARYLAND 21041-0609
410-461-6301

PROJECT: NORMANDY SHOPPING CENTER
PARCEL "C"
PRIVATE DRIVE

LOCATION: TAX MAP 17 - GRID 24 - PARCEL 155
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: COVER SHEET

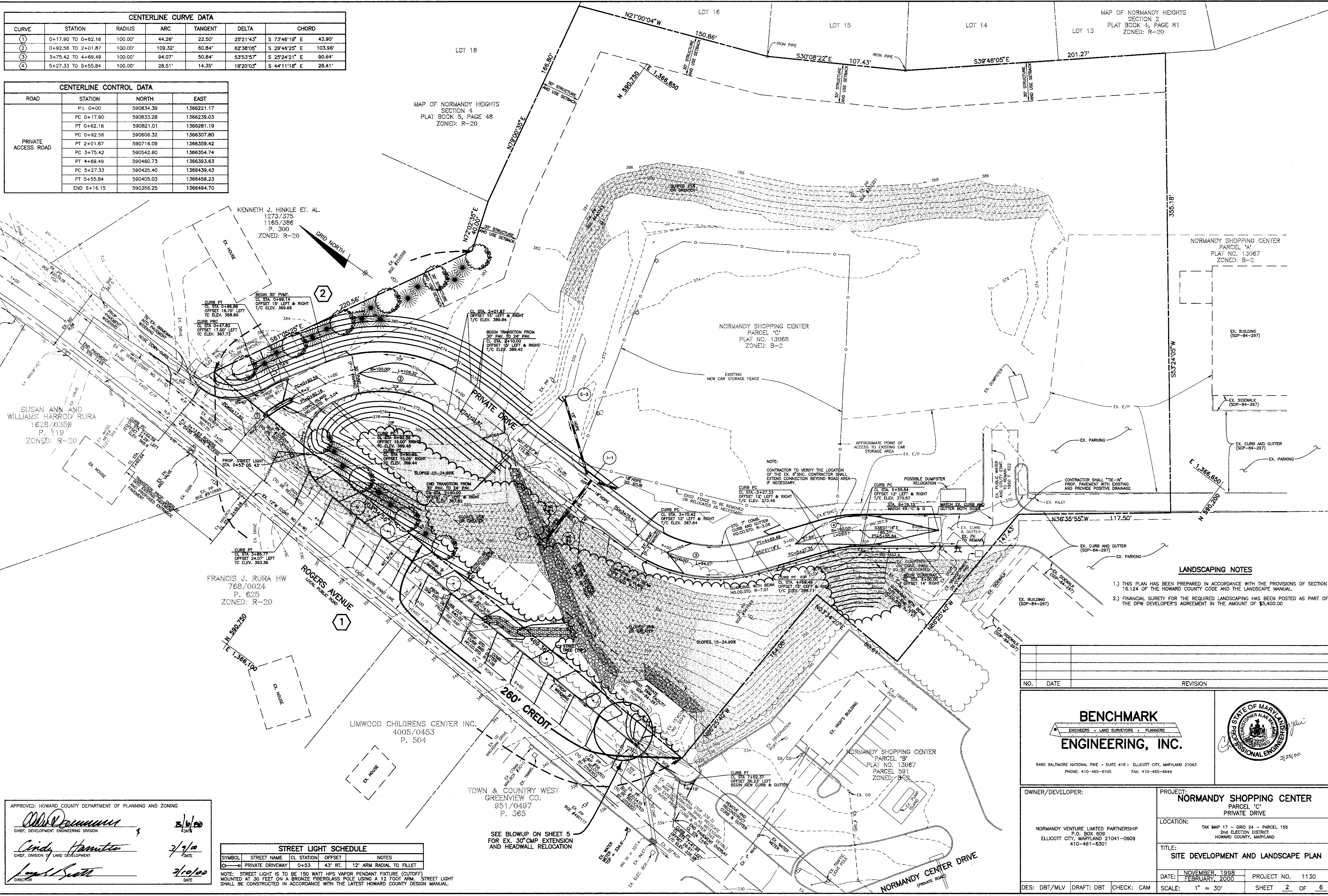
DATE: NOVEMBER, 1998
FEBRUARY, 2000

PROJECT NO. 1130

DES: DBT/MLV DRAFT: DBT CHECK: CAM SCALE: AS SHOWN SHEET 1 OF 6

CENTERLINE CURVE DATA						
CURVE	STATION	RADIUS	ARC	TANGENT	DELTA	CHORD
1	0+17.90 TO 0+62.16	100.00'	44.26'	22.50'	25°21'43"	S 73°46'19" E 43.90'
2	0+92.56 TO 2+01.87	100.00'	109.32'	60.84'	62°38'05"	S 29°46'25" E 103.86'
3	3+75.42 TO 4+69.49	100.00'	94.07'	50.84'	53°53'57"	S 25°24'21" E 90.64'
4	5+27.33 TO 5+55.84	100.00'	28.51'	14.35'	16°20'03"	S 44°11'18" E 28.41'

CENTERLINE CONTROL DATA			
ROAD	STATION	NORTH	EAST
PRIVATE ACCESS ROAD	P.I. 0+00	590834.39	1366221.17
	PC 0+17.90	590833.28	1366239.03
	PT 0+62.16	590821.01	1366281.19
	PC 0+92.56	590806.32	1366307.80
	PT 2+01.87	590716.09	1366359.42
	PC 3+75.42	590542.60	1366354.74
	PT 4+69.49	590460.73	1366393.63
	PC 5+27.33	590425.40	1366439.43
	PT 5+55.84	590405.03	1366459.23
	END 6+16.15	590356.25	1366494.70



SUSAN ANN AND WILLIAMS HARROD RURA
1628/035#
P. 119
ZONED: R-20

KENNETH J. HINKLE ET. AL.
1273/375
1165/386
P. 300
ZONED: R-20

FRANCIS J. RURA MW
768/0024
P. 625
ZONED: R-20

LIMWOOD CHILDRENS CENTER INC.
4005/0453
P. 504

TOWN & COUNTRY WEST
GREENVIEW CO.
951/0487
P. 365

NORMANDY SHOPPING CENTER
PARCEL 'C'
PLAT NO. 13068
ZONED: B-2

NORMANDY SHOPPING CENTER
PARCEL 'A'
PLAT NO. 13067
ZONED: B-2

NORMANDY SHOPPING CENTER
PARCEL 'B'
PLAT NO. 13067
PARCEL 591
ZONED: B-2

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
DATE: 2/16/00

Chief, Division Land Development
DATE: 2/7/00

Director
DATE: 2/10/00

STREET LIGHT SCHEDULE				
SYMBOL	STREET NAME	CL STATION	OFFSET	NOTES
○	PRIVATE DRIVEWAY	0+53	43' RT.	12' ARM RADIAL TO FILLET

NOTE: STREET LIGHT IS TO BE 150 WATT HPS VAPOR PENDANT FIXTURE (CUTOFF) MOUNTED AT 30 FEET ON A BRONZE FIBERGLASS POLE USING A 12 FOOT ARM. STREET LIGHT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL.

SEE BLOWUP ON SHEET 5
FOR EX. 30' CMP EXTENSION
AND HEADWALL RELOCATION

- LANDSCAPING 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 DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$5,400.00

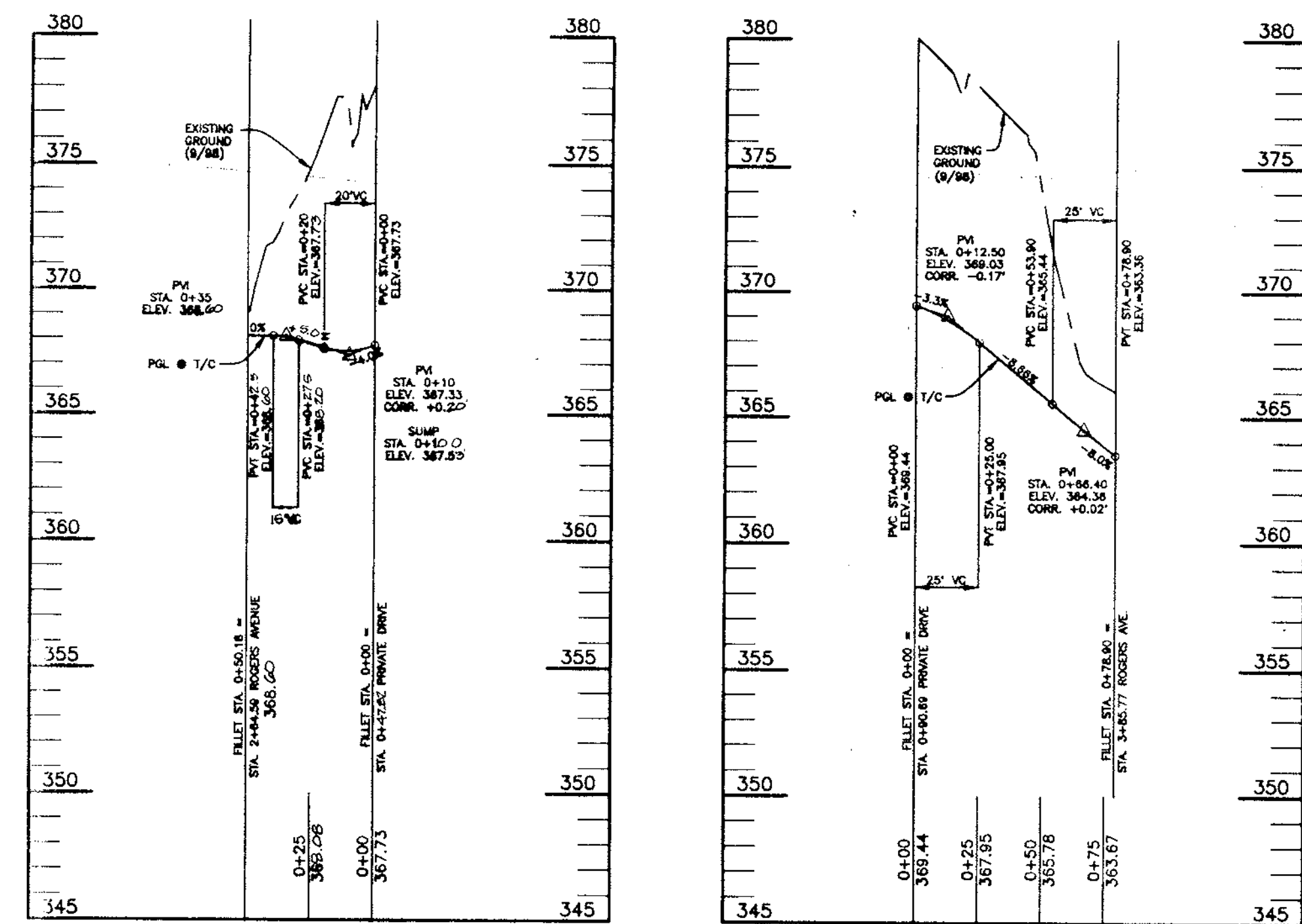
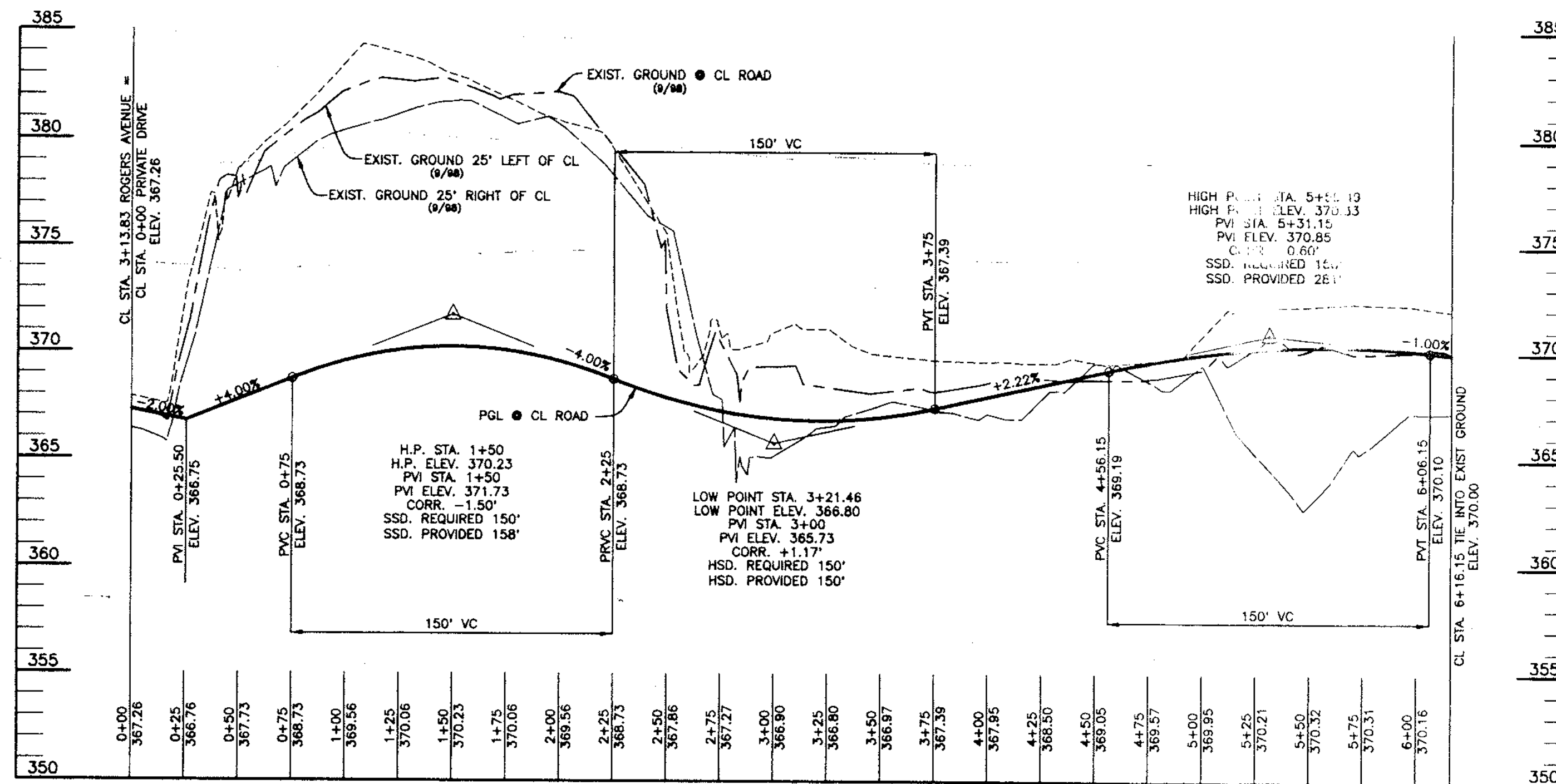
NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

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

STATE OF MARYLAND PROFESSIONAL ENGINEER

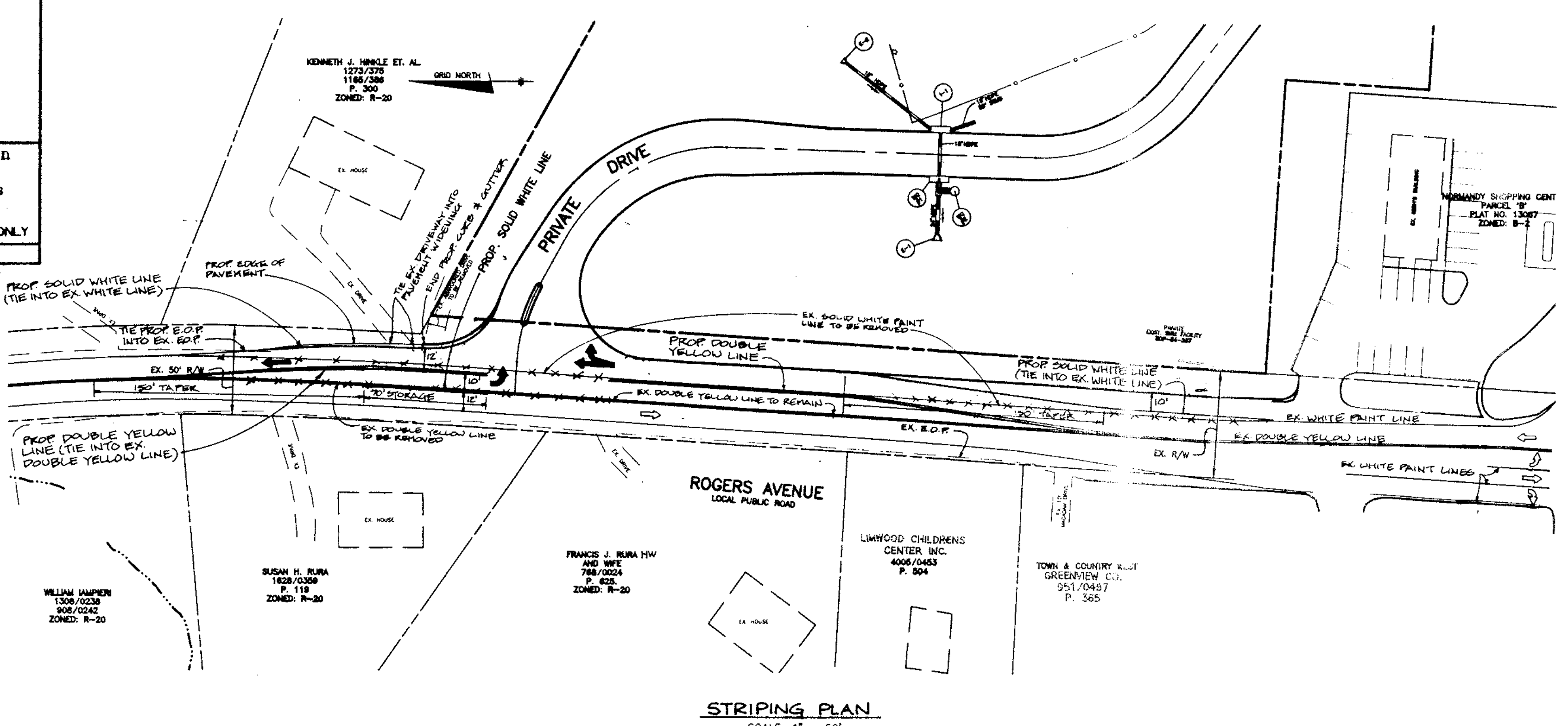
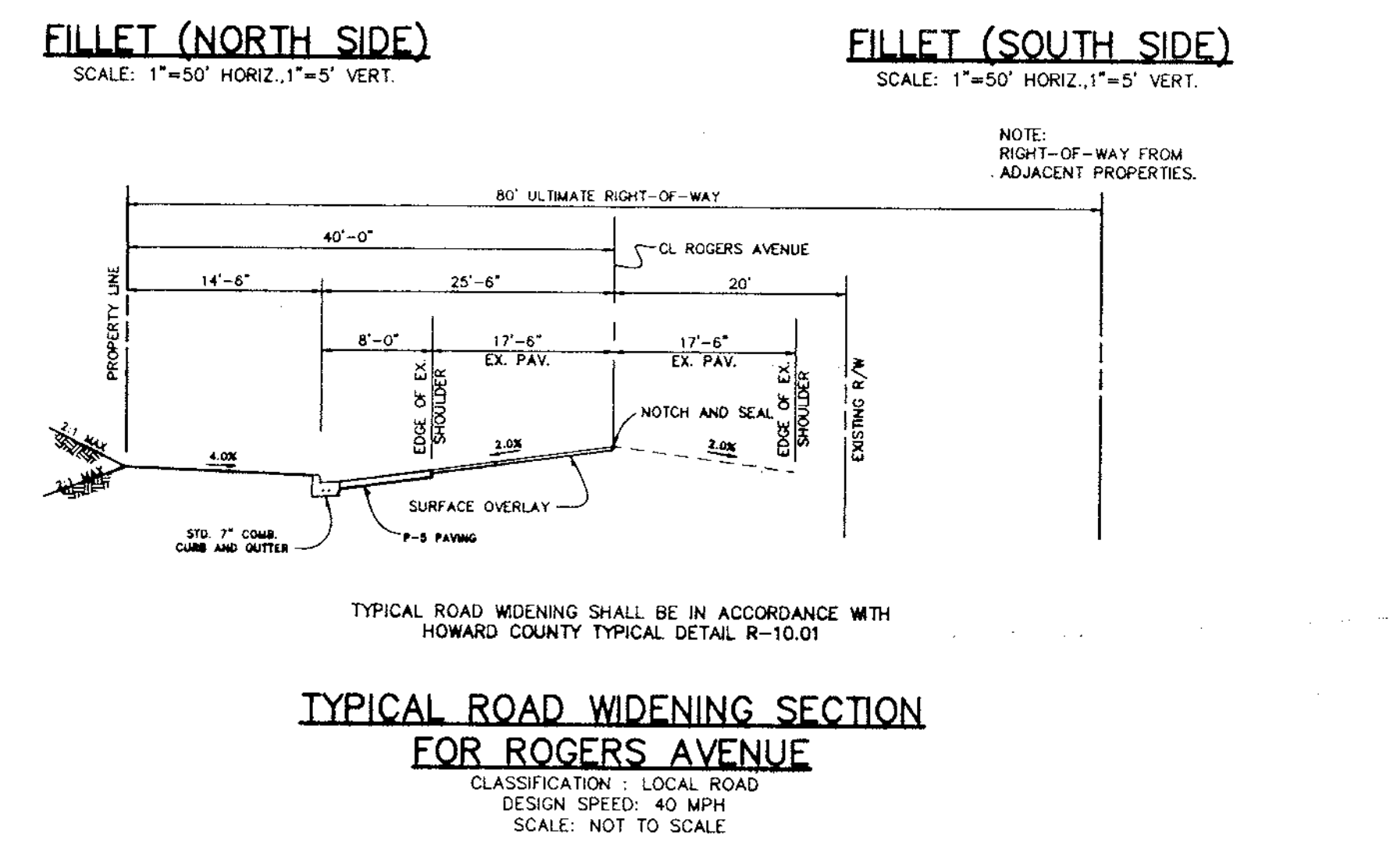
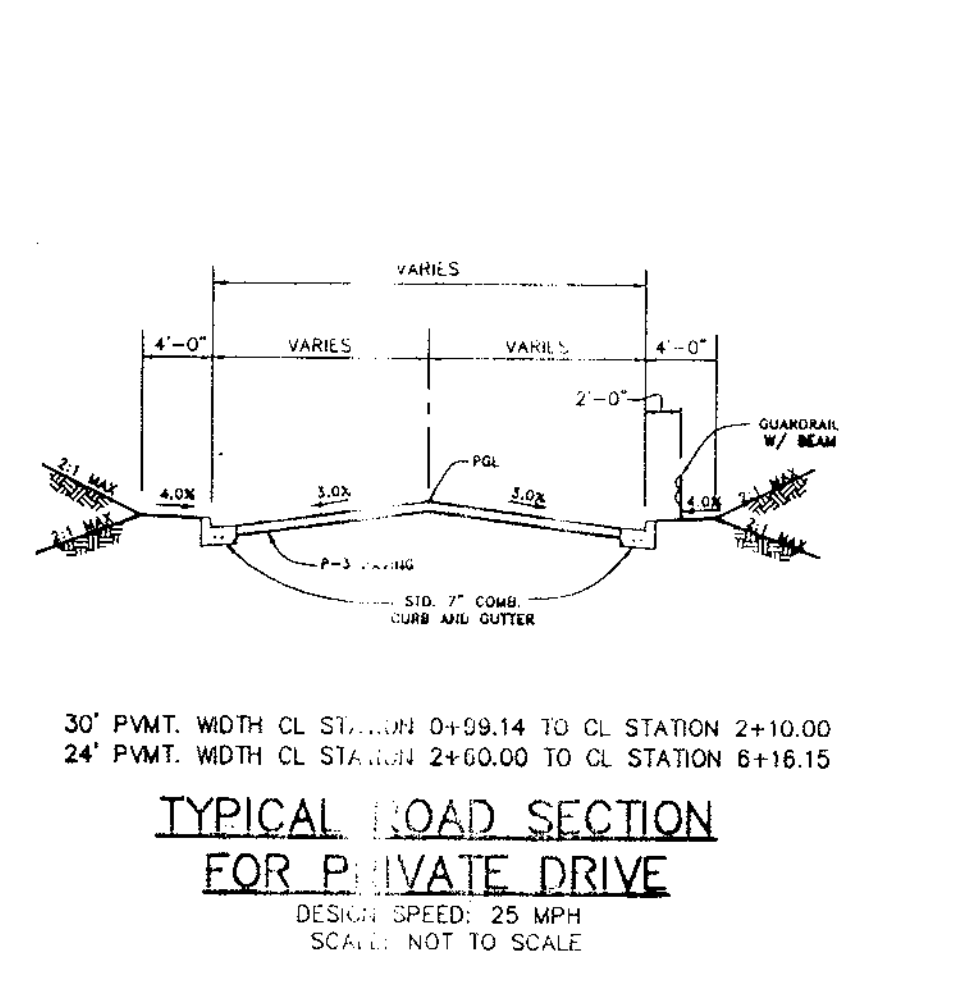
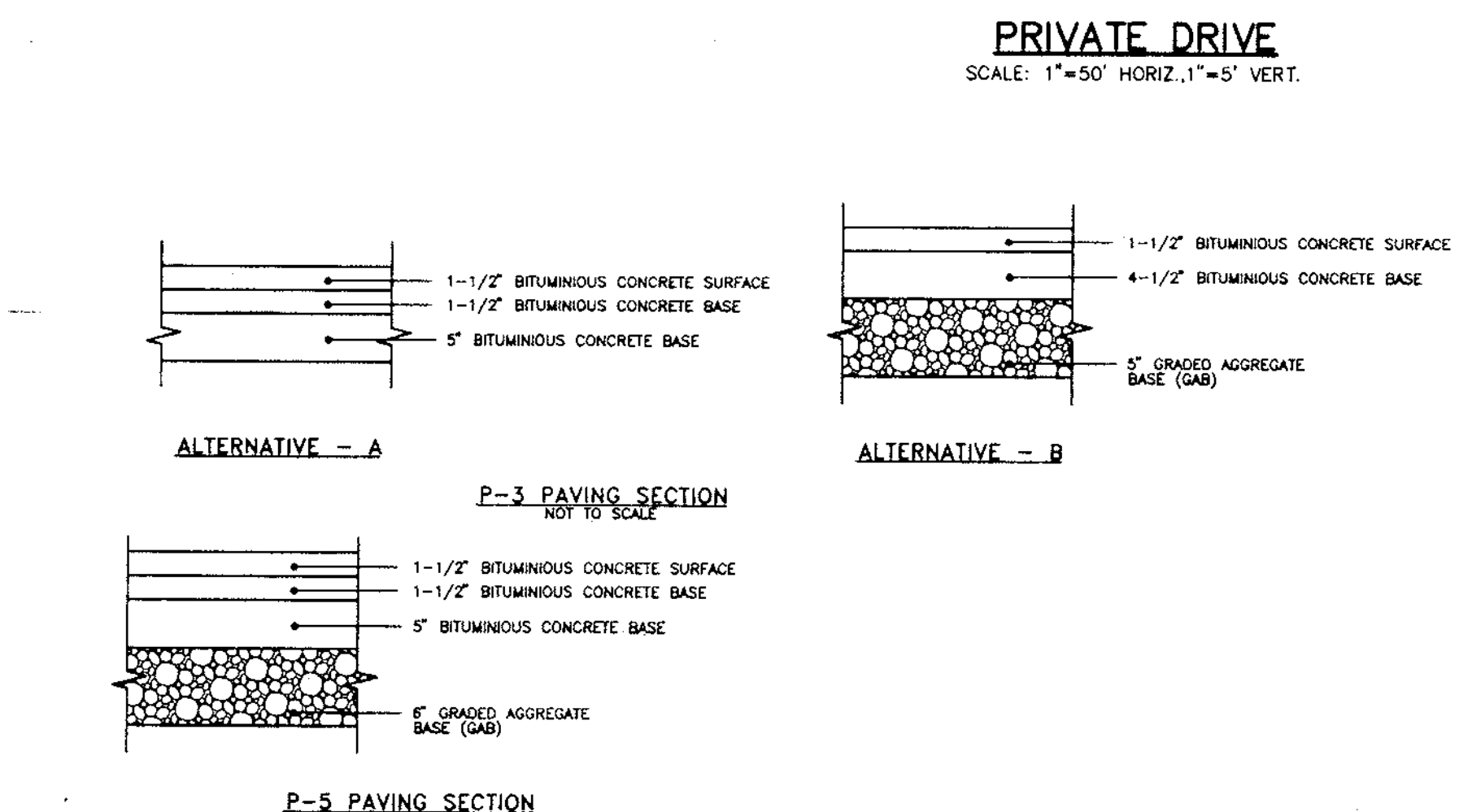
OWNER/DEVELOPER: NORMANDY VENTURE LIMITED PARTNERSHIP P.O. BOX 638 ELLICOTT CITY, MARYLAND 21041-0609 410-461-6301	PROJECT: NORMANDY SHOPPING CENTER PARCEL 'C' PRIVATE DRIVE
LOCATION: TAX MAP 17 - GRID 24 - PARCEL 155 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: SITE DEVELOPMENT AND LANDSCAPE PLAN
DATE: NOVEMBER, 1998 FEBRUARY, 2000	PROJECT NO. 1130
DES: DBT/MLV DRAFT: DBT CHECK: CAM	SCALE: 1" = 30' SHEET 2 OF 6



TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION

NOTES:
 1. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE GENERAL NOTES AT THE BEGINNING OF STANDARD NO. MD 104.30.
 2. LEADER SHALL NEVER BE STATIONED MORE THAN 100' AWAY FROM THE ADVANCE LEADER SIGN.

KEY:
 - CHANGING SERVICES
 - ROAD SUPPORT SIGN
 - DIVISION OF TRAFFIC
 - WORK AREA
 - LEADER
 - END ROAD WORK (OPTIONAL)
 - ONE LANE ROAD (500 FT.)



Maryland Department of Transportation
 STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
 FLAGGING OPERATION/2-LANE, 2-WAY
 E.O.P./LESS THAN 40 MPH/15 MIN-12 HRS. OR DAYTIME ONLY
 STANDARD NO. MD 104.31-02

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

WILLIAM HAMPHRIS
 1306/0238
 806/0242
 ZONED: R-20
 DATE: 3/6/00

CINDY HAMMILL
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3/9/00

FRANCIS J. BURR HW
 788/0224
 4006/0483
 P. 504
 ZONED: R-20

SUSAN H. BURR
 1628/0389
 P. 112
 ZONED: R-20

KENNETH J. WHOLE ET. AL
 1273/376
 1186/038
 P. 302
 ZONED: R-20

LIMWOOD CHILDRENS CENTER INC.
 4006/0483
 P. 504

TOWN & COUNTRY REALTY
 GREENVIEW, CT.
 951/0487
 P. 585

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.

ENGINEERS • LAND SURVEYORS • PLANNERS

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

OWNER/DEVELOPER: NORMANDY VENTURE LIMITED PARTNERSHIP P.O. BOX 608 ELLICOTT CITY, MARYLAND 21041-0609 410-461-6301	PROJECT: NORMANDY SHOPPING CENTER PARCEL 'C' PRIVATE DRIVE
LOCATION: TAX MAP 17 - GRID 24 - PARCEL 155 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: ROAD PROFILES, DETAILS, STRIPING AND TRAFFIC CONTROL PLAN
DATE: NOVEMBER, 1998 FEBRUARY, 2000	PROJECT NO.: 1130
DESIGN: DBT DRAFT: DBT CHECK: CAM	SCALE: AS SHOWN SHEET 3 OF 6

SOILS LEGEND		
MAP SYMBOL	SOIL TYPE	MAPPING UNIT
Co	C	CODORUS SILT LOAM
Md	C	MADE LAND
MIC2	B	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
MIC3	B	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
MID2	B	MANOR LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED
MdD	B	MONTALTO AND RELAY VERY STONY SILT LOAMS, 3 TO 25 PERCENT SLOPES

* INDICATES HYDRIC SOILS
SOILS MAP NO. 16

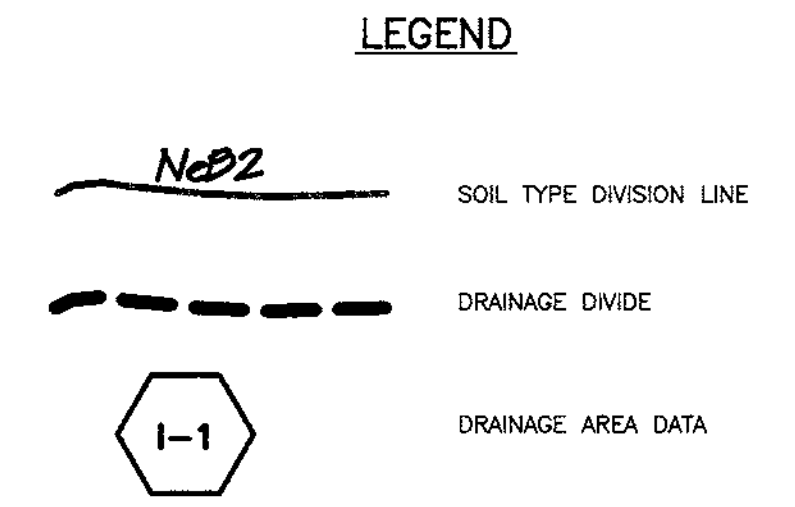
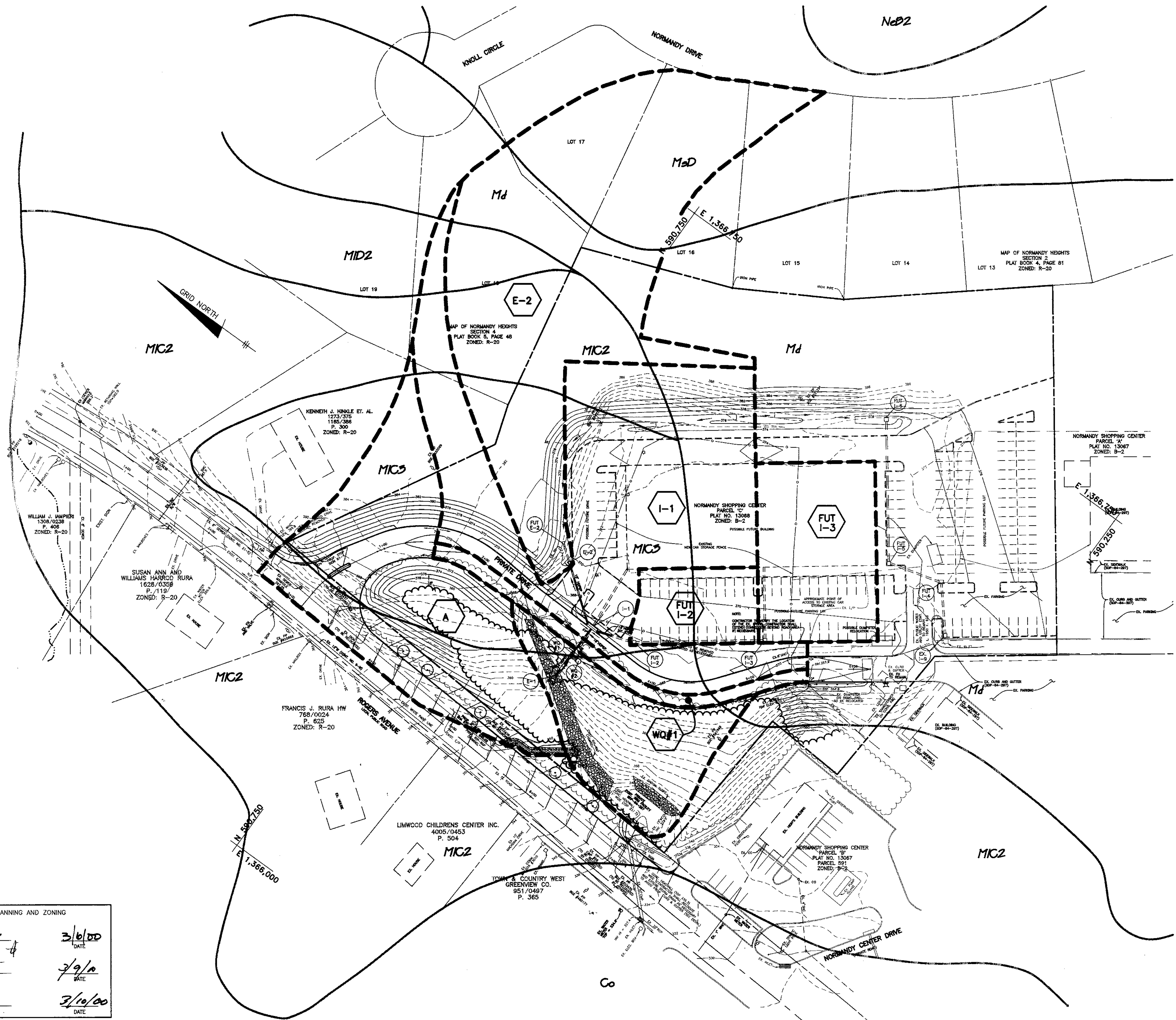
STRUCTURE SCHEDULE							
NO.	TYPE	LOCATION	INV. IN	INV. OUT	TOP ELEV.	HO. CO. STD.	
E-1	24" HDPE END SECTION	N 590597.67 E 1366311.46	356.35	356.00	---	SD - 5.61	
E-2	15" HDPE END SECTION	N 590648.63 E 1366406.86	369.00	368.71	---	SD - 5.61	
I-1	A-10	CL STA 3+21.46 O/S 12.00' LEFT ACCESS ROAD	360.00	359.75	367.02	SD - 4.02 OR 4.41	
WG#1	A-10	CL STA 3+21.46 O/S 12.00' RIGHT ACCESS ROAD	359.00	358.81	367.02	SD - 4.02 OR 4.41	
W#2	5'-0" MANHOLE	N 590588.01 E 1366335.96	---	---	368.00	G - 5.13	

1) STRUCTURE ELEVATION AND LOCATION FOR MANHOLES IS AT THE TOP AND CENTER OF RIM.
2) STRUCTURE ELEVATION AND LOCATION FOR INLETS IS AT THE TOP OF CURB AT MIDPOINT OF THE INLET.
3) STRUCTURE ELEVATION AND LOCATION FOR ENDSECTIONS IS AT THE CONNECTION OF PIPE AND END SECTION.

PIPE SCHEDULE				
RUN	SIZE	LENGTH	TYPE & CLASS	
E-1 TO BAY	24"	22'	HDPE	
BAY TO WG#1	36"	9'	HDPE	
WG#1 TO I-1	18"	27'	HDPE	
I-1 TO E-2	15"	66'	HDPE	

DRAINAGE AREA DATA					
DA NO.	DRAINAGE AREA (AC)	% IMPERVIOUS	SOIL CLASS	ZONING	C FACTOR
WG#1	0.12	100	B,C	B-2	0.72/0.89
I-1	1.16	90	B,C	B-2	0.66/0.81
FUT. I-2	0.21	100	B,C	B-2	0.72/0.89
FUT. I-3	0.47	100	C	B-2	0.72/0.89
E-2	1.68	60	B,C	B-2	0.46/0.58
A	0.88	86	B	B-2	0.63/0.79

NOTE: FUTURE I-3 DRAINS TO EXISTING STORM DRAIN AND EXISTING UNDERGROUND SWM FACILITY.



NO.	DATE	REVISION
BENCHMARK ENGINEERING, INC. ENGINEERS • LAND SURVEYORS • PLANNERS 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644		
OWNER/DEVELOPER: NORMANDY VENTURE LIMITED PARTNERSHIP P.O. BOX 609 ELLICOTT CITY, MARYLAND 21041-0609 410-461-6301		PROJECT: NORMANDY SHOPPING CENTER PARCEL 'C' PRIVATE DRIVE LOCATION: TAX MAP 17 - GRID 24 - PARCEL 155 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND TITLE: DRAINAGE AREA MAP DATE: NOVEMBER, 1998 FEBRUARY, 2000 PROJECT NO. 1130
DES: DBT/MLV	DRAFT: DBT	CHECK: CAM
SCALE: 1" = 50'	SHEET 4 OF 6	SDP-99-47

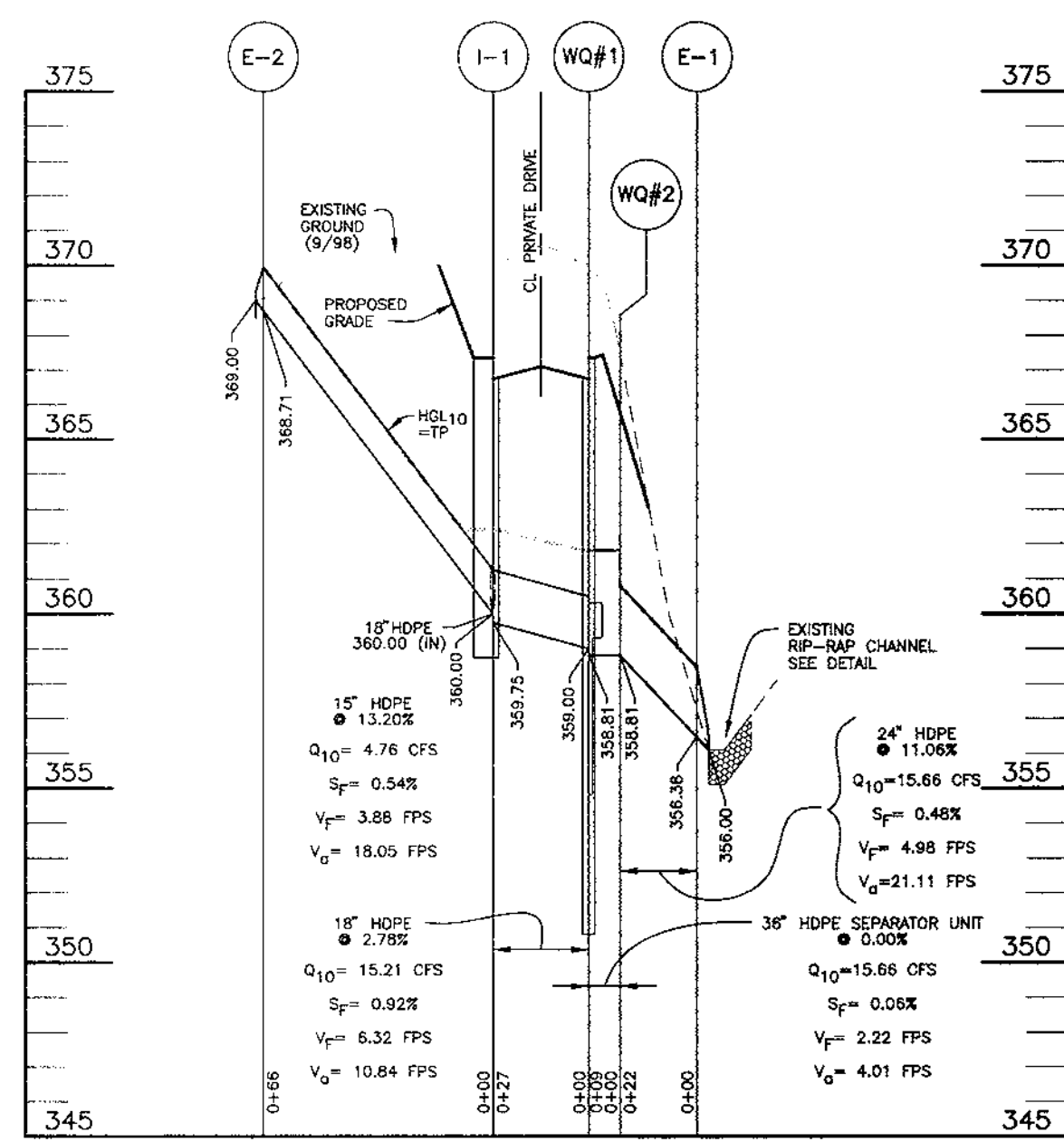
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad DeMunn 3/6/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

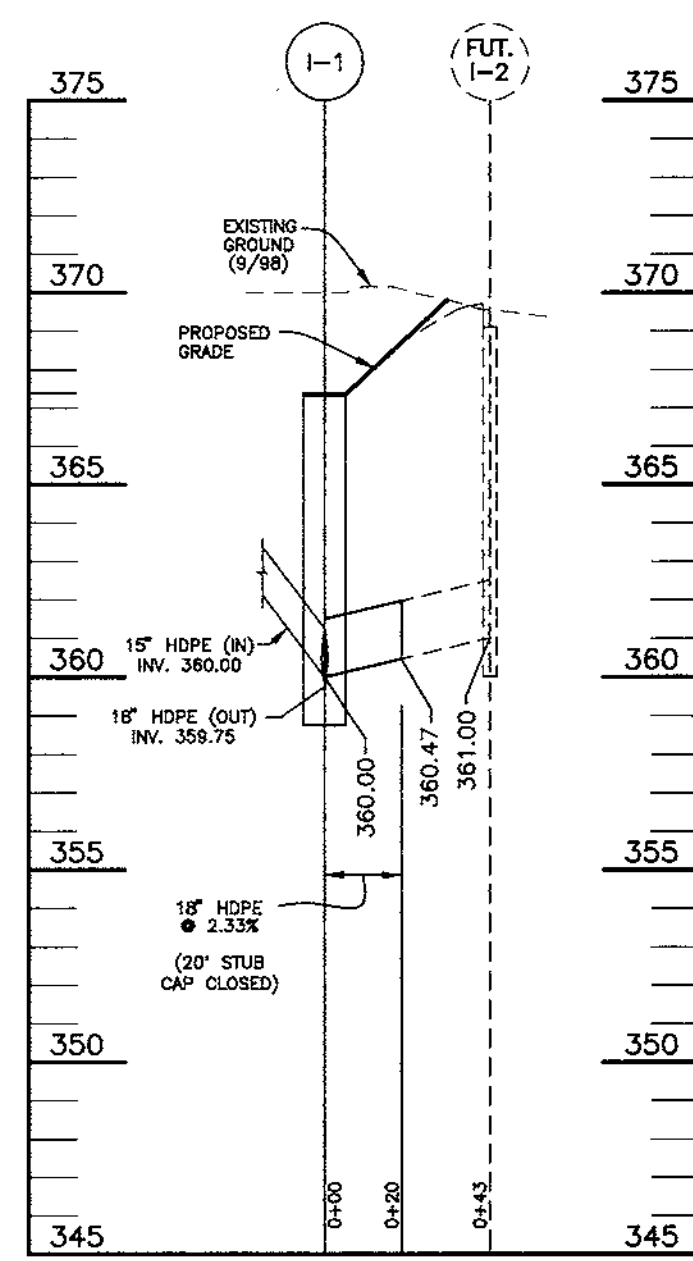
Andy Hamilton 2/9/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Frank R. Butt 3/10/00
 DIRECTOR DATE

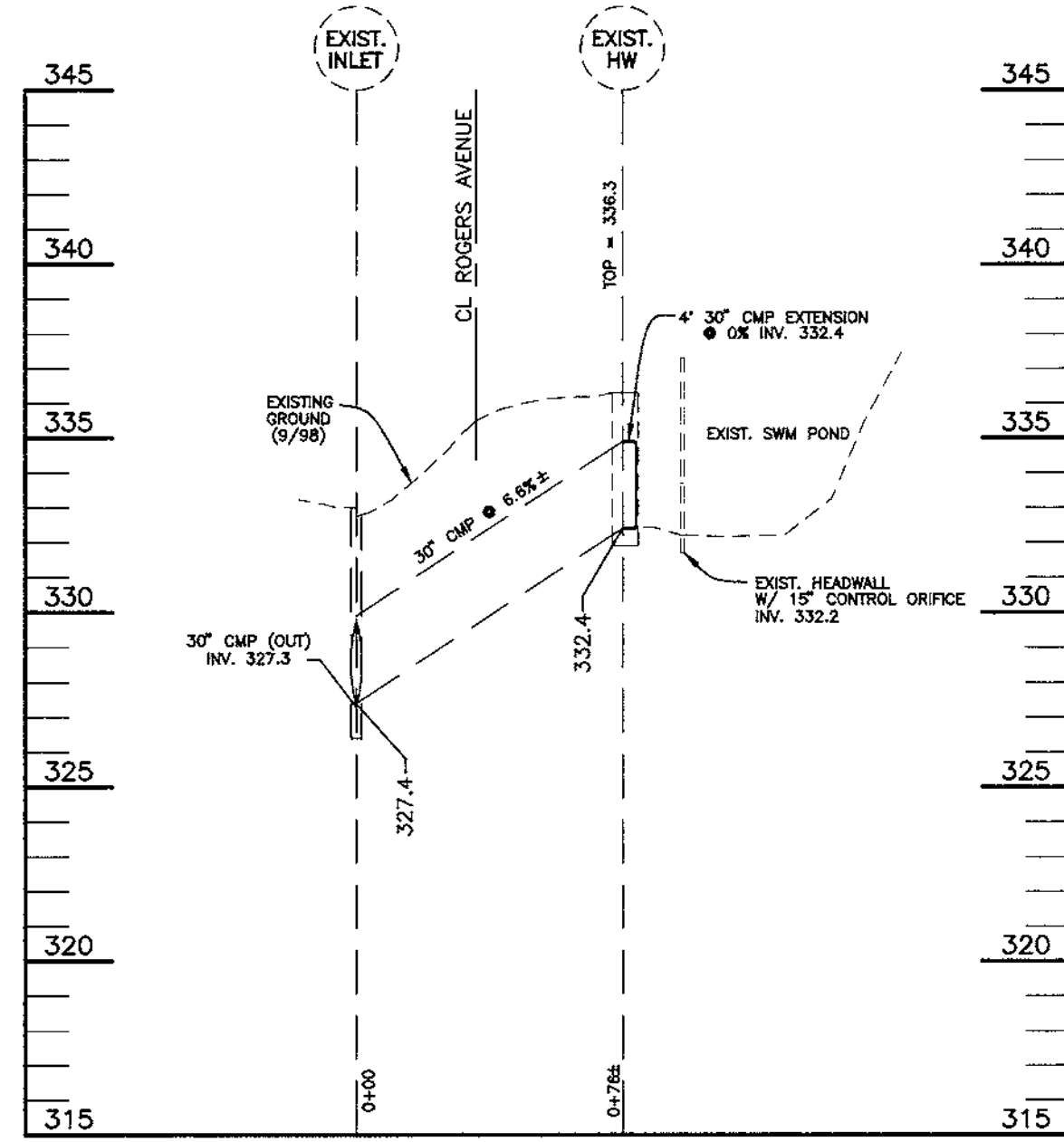
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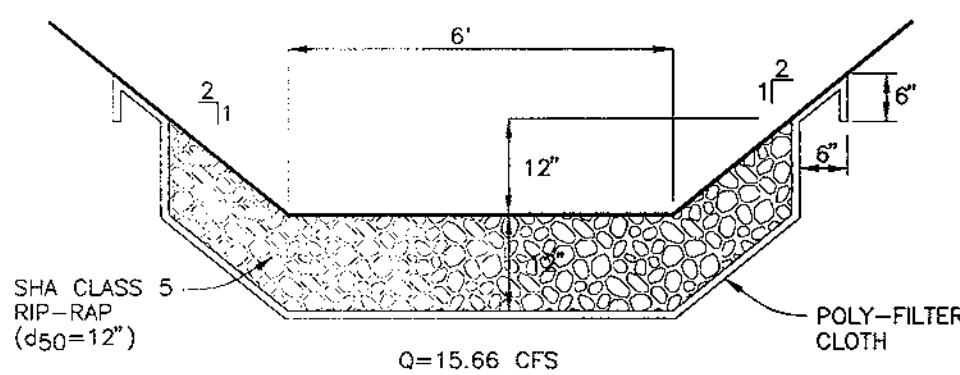
STORM DRAIN PROFILE
SCALE: 1"=50'HORIZ., 1"=5'VERT.



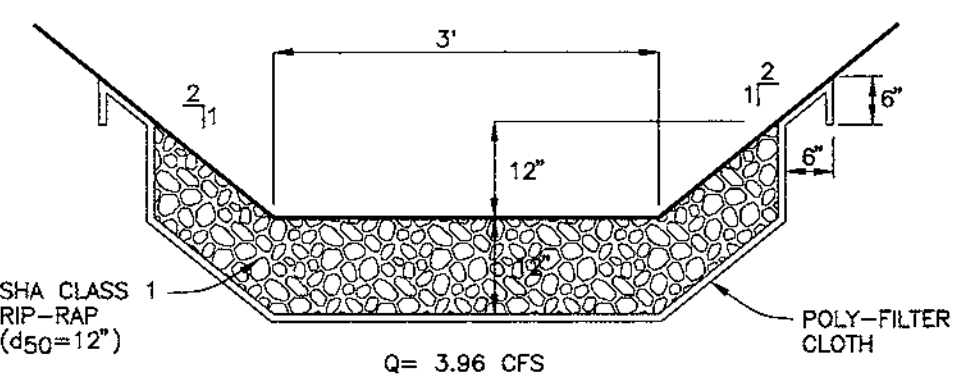
STORM DRAIN PROFILE
SCALE: 1"=50'HORIZ., 1"=5'VERT.



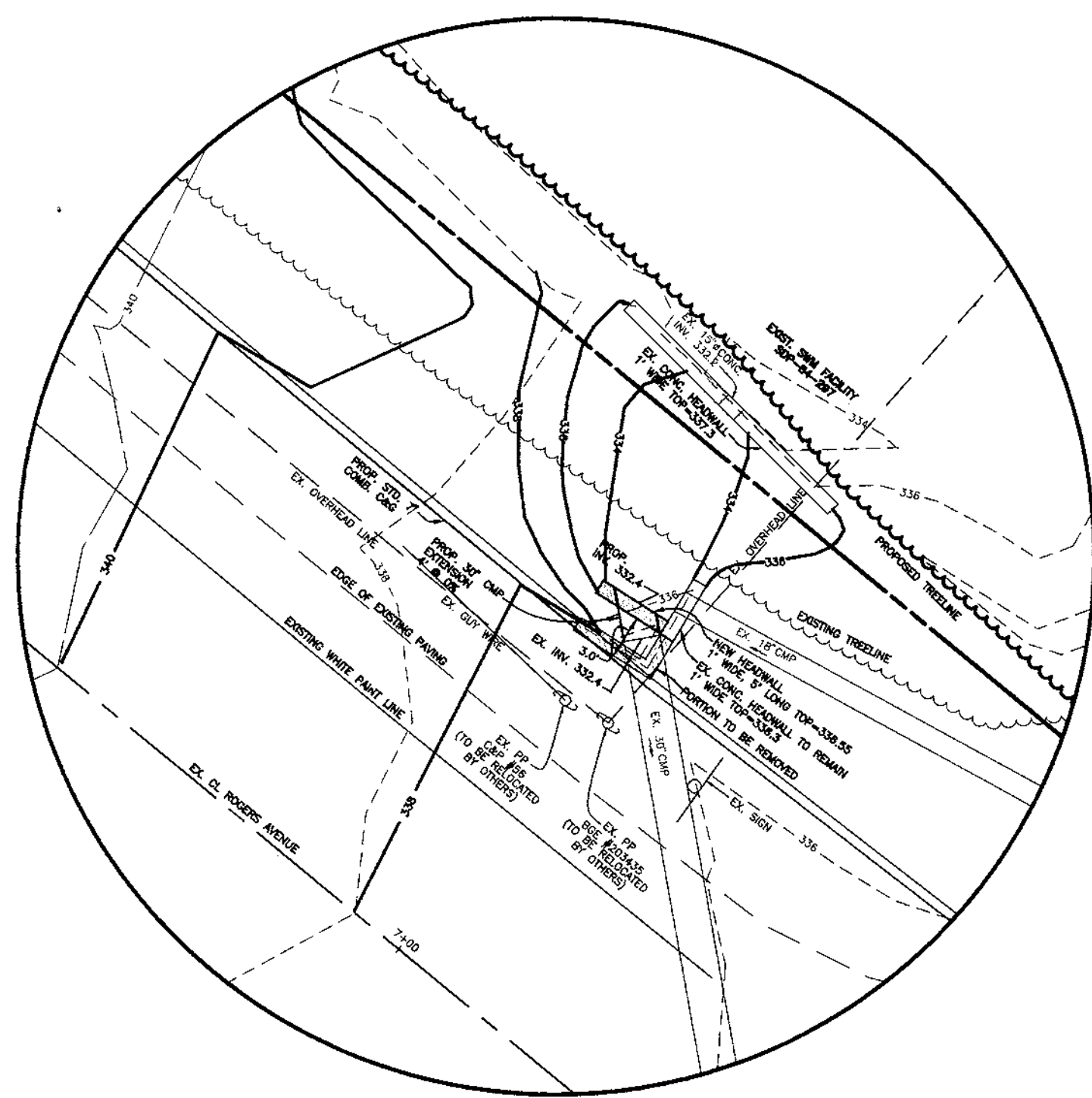
EXISTING STORM DRAIN PROFILE ACROSS ROGERS AVE. BELOW EXIST. SWMF
SCALE: 1"=50'HORIZ., 1"=5'VERT.



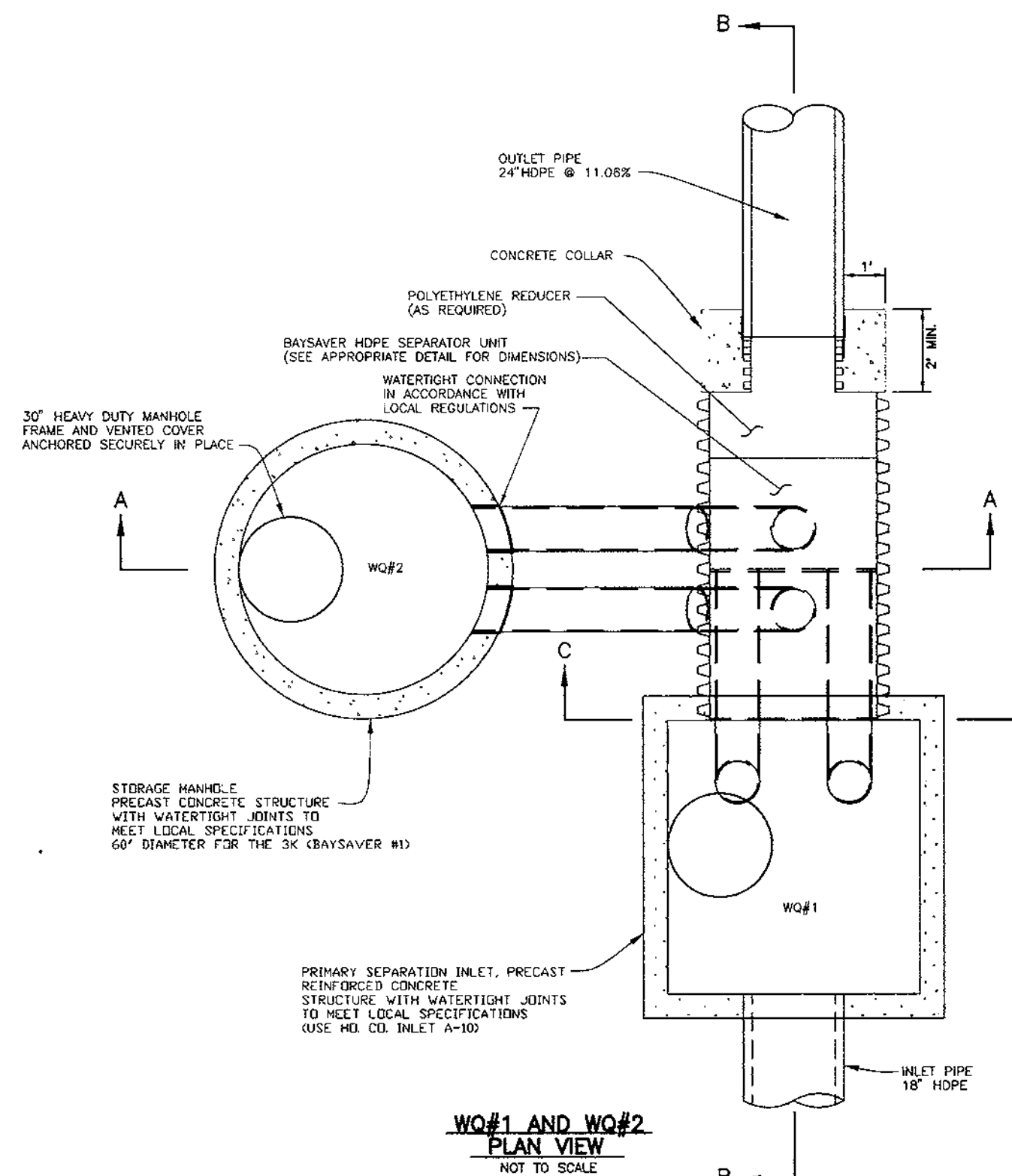
EXIST. RIP-RAP DITCH
NOT TO SCALE



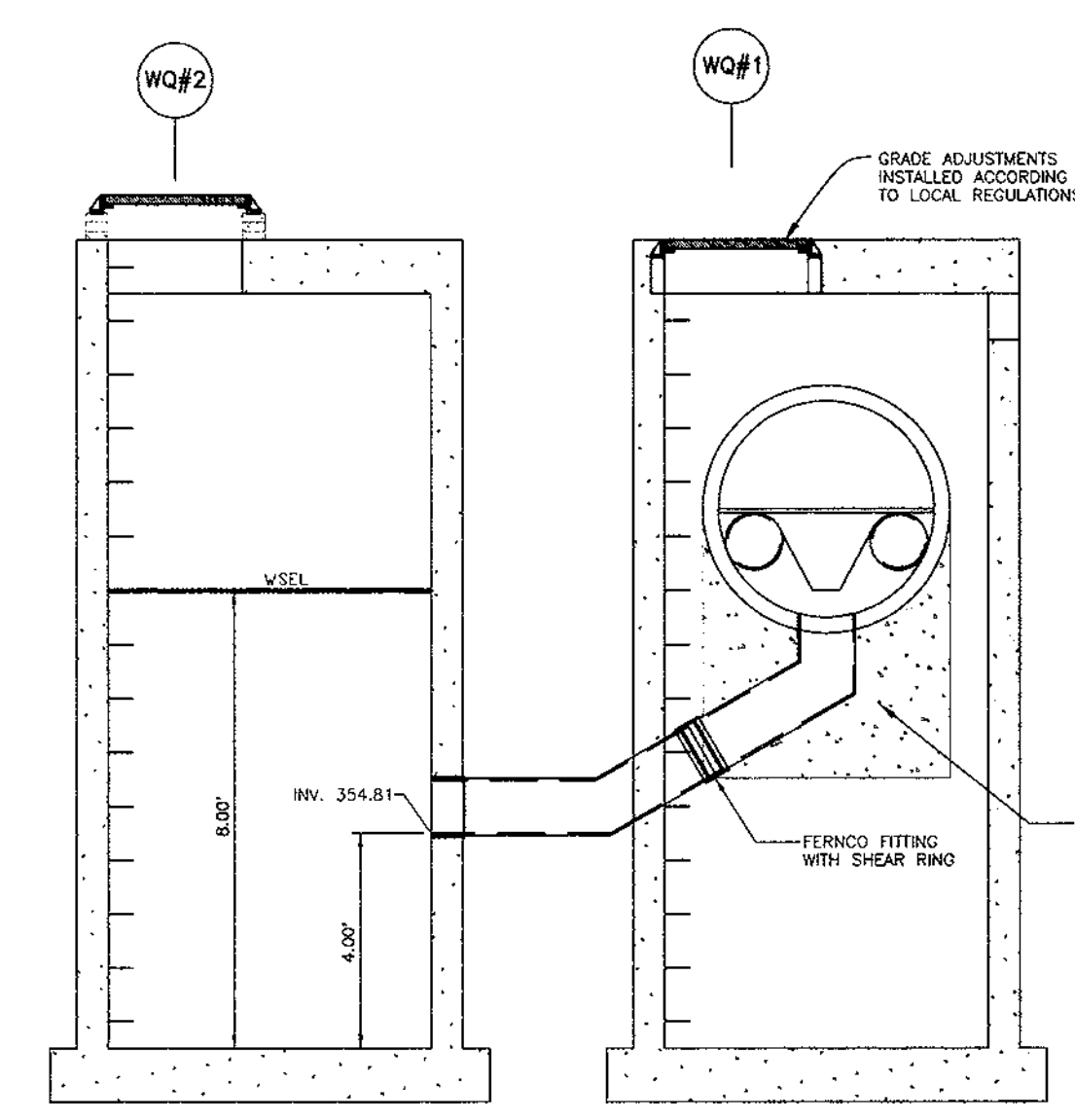
PROP. RIP-RAP CHANNEL AT ROGERS AVENUE (CL. STA. 5+50)
NOT TO SCALE



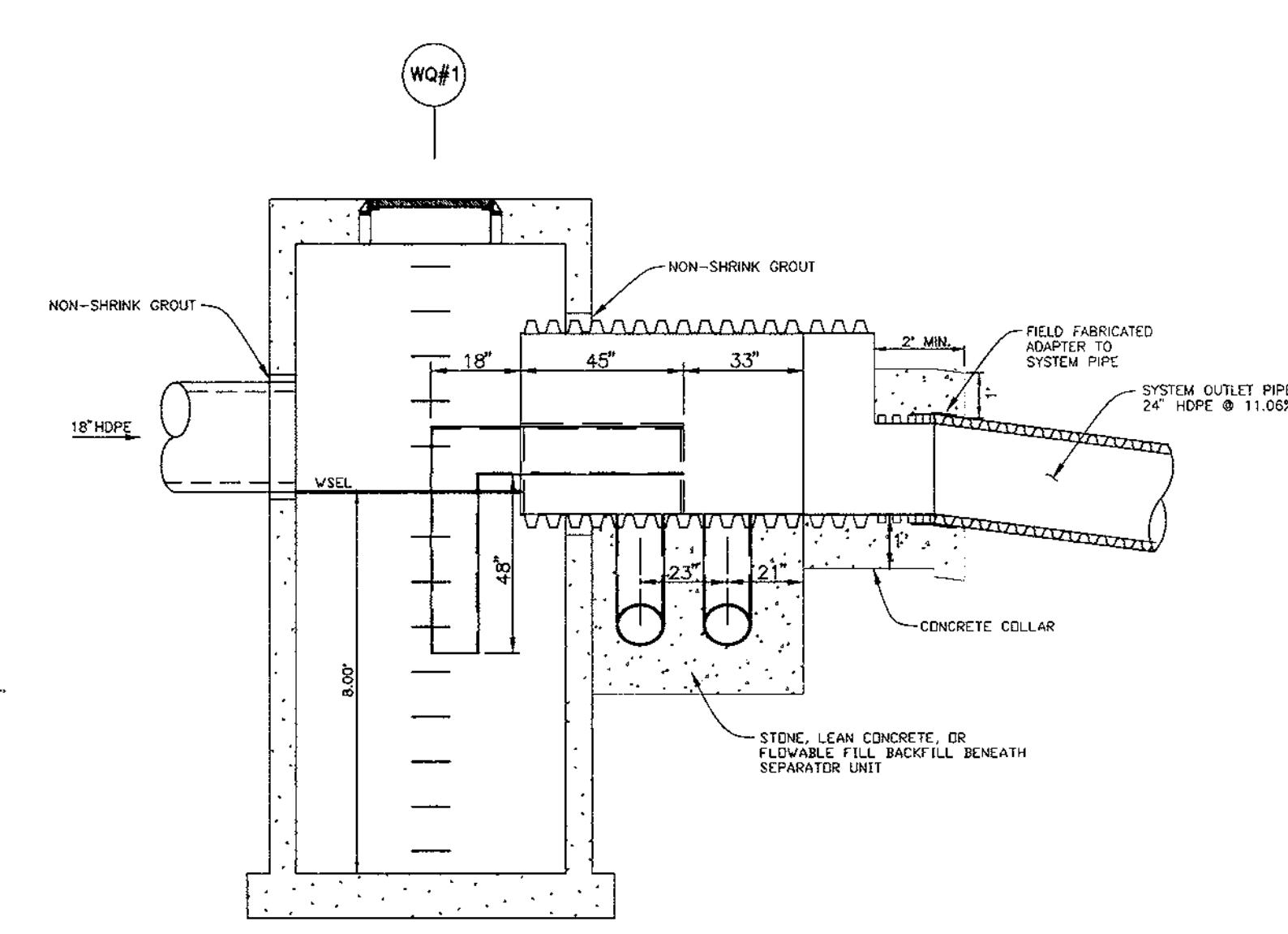
BLOWUP FOR HEADWALL RELOCATION
SCALE: 1" = 10'



WO#1 AND WO#2 PLAN VIEW
NOT TO SCALE



WO#1 AND WO#2 SECTION A-A
NOT TO SCALE



WO#1 AND WO#2 SECTION B-B
NOT TO SCALE

- BAYSAVER INSTALLATION INSTRUCTIONS**
1. 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.
 2. VERIFY THE SUBGRADE ELEVATION AGAINST THE MANHOLE DIMENSIONS AND CONNECTING STORM DRAIN INVERTS.
 3. 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 IN BASE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTIONS AS REQUIRED.
 4. 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.
 5. 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.
 6. BACKFILL SEPARATOR UNIT AND MANHOLES. AREAS NOT ACCESSIBLE TO COMPACTION EQUIPMENT MUST BE BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL.
 7. INSTALL AND SET MANHOLE COVER GRADE ADJUSTMENTS AS NECESSARY.
 8. INSTALL AND SET MANHOLE FRAME AND COVER UNITS.

- GENERAL CONSTRUCTION NOTES**
1. ALL WORK MUST BE DONE WITH REGARD FOR THE SAFETY OF THE CONSTRUCTION CREW.
 2. ALL WORK AND MATERIALS MUST COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS.
 3. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION BEGINS.

- BAYSAVER MAINTENANCE**
- BAYSAVER SYSTEMS MUST BE INSPECTED ANNUALLY AND MAINTAINED AS NEEDED. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE EXCEEDS 2 FEET.
- MAINTENANCE CONSISTS OF THE FOLLOWING:
- A. PRIMARY MANHOLE**
1. PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY TO THE SYSTEM OUTFALL UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
 2. REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
 3. 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. STORAGE MANHOLE**
1. REMOVE THE TOP 12 INCHES OF OIL, DEBRIS, AND WATER BY VACUUM TRUCK.
 2. PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY TO THE SYSTEM OUTFALL UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
 3. REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
 4. 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.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard County Department of Planning and Zoning
2/6/00
DATE

Candy Hamilton
2/7/00
DATE

John W. Scott
3/10/00
DATE

BAYSAVER, INC.
1010 DEER HOLLOW DR.
MOUNT AIRY, MD 21771
(PHONE) 301-829-6119
(FAX) 301-829-3747

NO.	DATE	REVISION

BENCHMARK
ENGINEERS, INC.

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

<p>OWNER/DEVELOPER: NORMANDY VENTURE LIMITED PARTNERSHIP ELLICOTT CITY, MARYLAND 21041-0609 410-461-6301</p>	<p>PROJECT: NORMANDY SHOPPING CENTER PARCEL 'C' PRIVATE DRIVE</p> <p>LOCATION: TAX MAP 17 - GRID 24 - PARCEL 155 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND</p> <p>TITLE: WATER QUALITY NOTES & DETAILS AND STORM DRAIN PROFILES AND DETAILS</p> <p>DATE: NOVEMBER, 1998 FEBRUARY, 2000</p> <p>PROJECT NO. 1130</p>			
DES: DBT/MLV	DRAFT: DBT	CHECK: CAM	SCALE: AS SHOWN	SHEET 5 OF 6

SEDIMENT CONTROL NOTES

TOPSOIL SPECIFICATIONS

- 1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION...
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL...
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 14 DAY PERIOD...
4. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE...
5. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL DIVISION...
6. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMANENT EROSION AND SEDIMENT CONTROL MEASURES...
7. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITH ONE WORKING DAY, WHICHEVER IS SHORTER...
8. DISPOSAL OF EXCESS SOIL SHALL BE DETERMINED BY THE CONTRACTOR AND SHALL BE AN APPROVED SITE LOCATION.

- 1. Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications...
2. Topsoil Specifications - Soil to be used on topsoil must meet the following:
a. Topsoil must be a minimum of 18" deep and free from large stones, roots, etc.
b. Topsoil must be either highly acidic or composed of heavy clay, ground limestone shall be applied to the rate of 4-6 lbs/1000 sq ft...
c. pH for topsoil shall be between 5.0 and 7.5...
d. Topsoil having soluble salt content greater than 500 parts per million shall not be used...
e. No soil or seed shall be placed on soil which has been treated with soil sterilants...
3. Alternative to Permanent Seeding - Instead of seeding the full grounds of tree and commercial fertilizer, composted sludge and amendments may be applied on specified areas...
4. Construction Specifications - Key-in the matting by placing the top ends of the matting in a narrow trench...
5. Seeding - For the periods MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE...
6. Mulching - Apply 1 1/2 to 2 tons per acre...
7. Maintenance - Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDBED PREPARATIONS

- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RESTORED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISING 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 PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 1 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSSELS PER ACRE ANNUAL RYE GRASS...
MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE...
REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDBED PREPARATIONS

- SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEMES:
1. PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE...
2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE...
SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE...
MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE...
MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

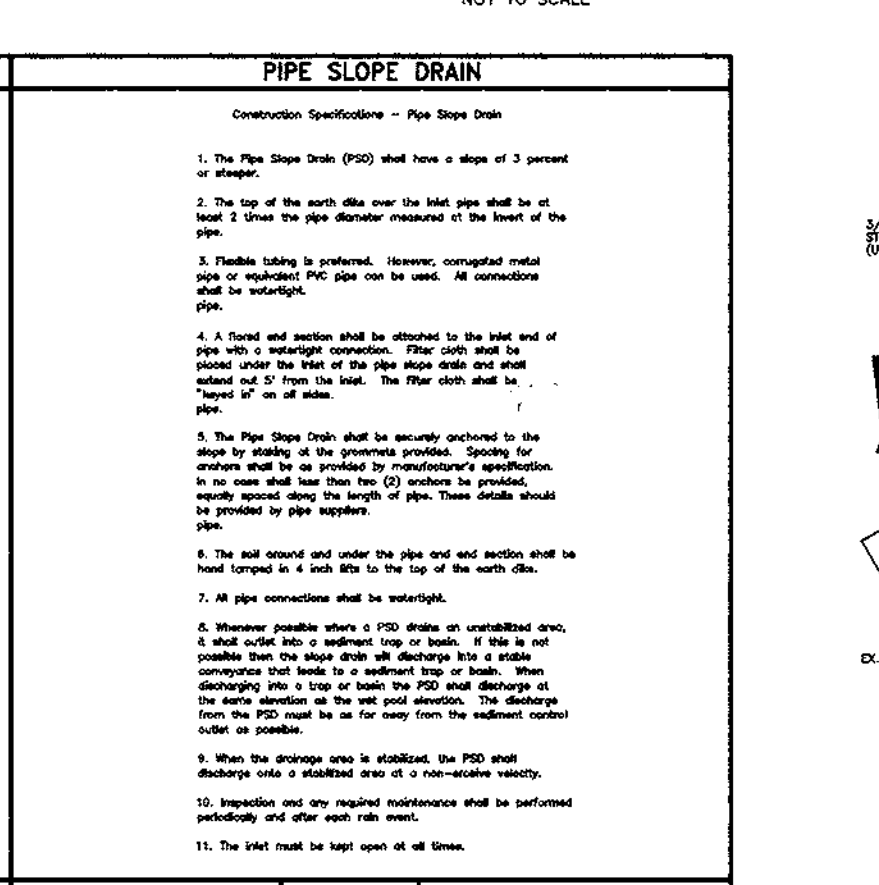
SEQUENCE OF CONSTRUCTION

- NOTIFY SEDIMENT CONTROL 48 HOURS PRIOR TO START OF CONSTRUCTION
DAY 1 OBTAIN GRADING PERMIT.
DAY 2-5 CLEAR AND GRUB FOR SEDIMENT CONTROL DEVICES, INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCES, CLEANWATER DIVERSIONS, PIPE SLOPE DIKE, EX. 30" CMP BLOCKING...
DAY 6-8 CLEAR AND GRUB REMAINDER OF SITE.
DAY 9-11 MASS GRADE SITE AND COMPACT AS NECESSARY.
DAY 12-13 COMMENCE WITH CONSTRUCTION OF UTILITIES.
DAY 14-16 COMMENCE WITH PRIVATE DRIVE CONSTRUCTION AND GRADING.
DAY 17-20 INSTALL TEMPORARY TRAFFIC CONTROL DEVICES PER MSHA STD. # 104.31-02...
DAY 21-23 COMMENCE WITH ROGGERS AVENUE GRADING...
DAY 24-26 INSTALL CURB AND GUTTER.
DAY 27-29 INSTALL PAVING FOR ACCESS DRIVE AND ROGERS AVENUE.
DAY 30-32 FINAL GRADE REMAINDER OF SITE.
DAY 33-34 UPON APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE PERMANENT SEDIMENT CONTROL DEVICES AND PERMANENTLY STABILIZE CLEANWATER EX. 30" FACILITY AND REMOVE STONE BLOCKING ADJACENT TO ROGERS AVE.

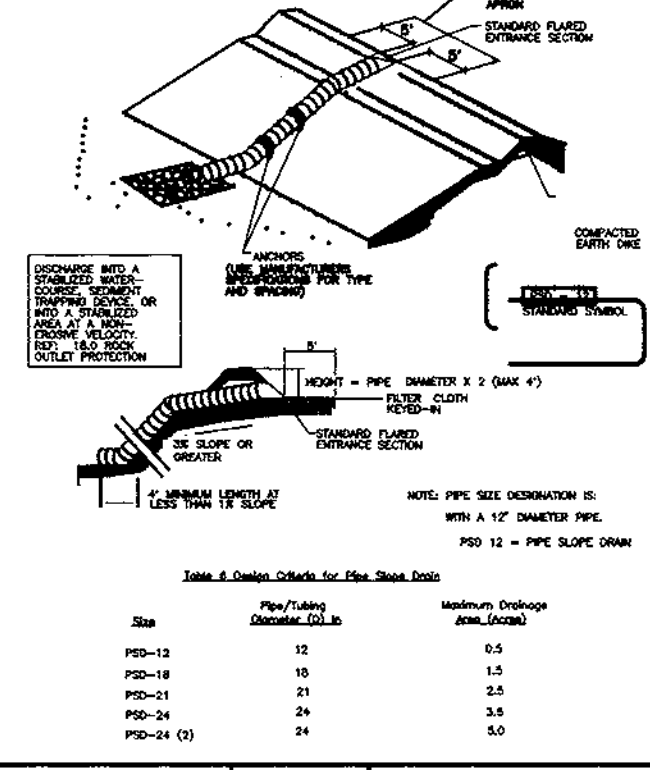
CONSTRUCTION SPECIFICATIONS

- 1. KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH...
2. STAPLE THE MATTING TO THE CHANGING CURVES...
3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS STAPLED TO THE MATTING...
4. STAPLES SHALL BE PLACED AT 4" SPACING...
5. WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 6" OVERLAP...
6. THE DISCHARGE END OF THE MATTING LAYER SHOULD BE SIMILARLY SECURED WITH 2" DOUBLE ROWS OF STAPLES...
NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA ERECTED BY THE FLOW MUST BE KEYED-IN.

SOIL STABILIZATION MATTING



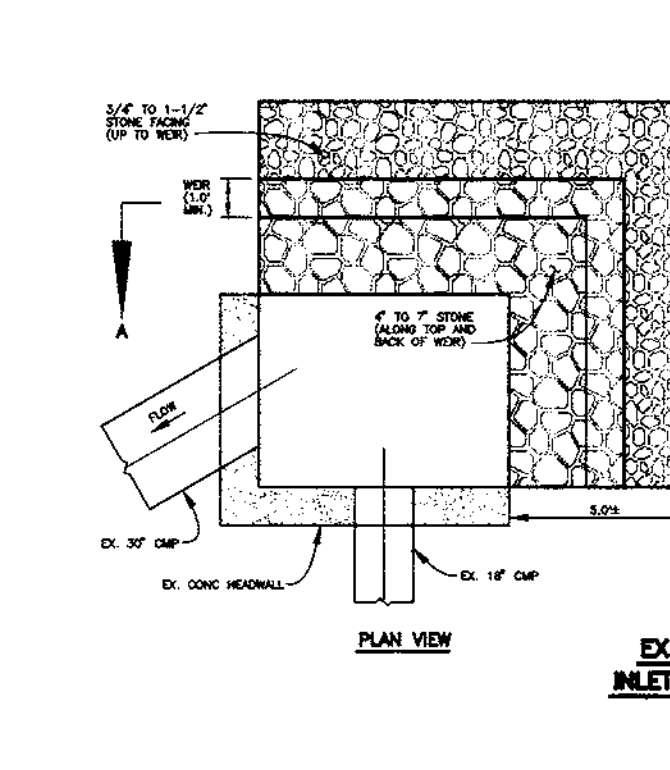
DETAIL 4 - PIPE SLOPE DRAIN



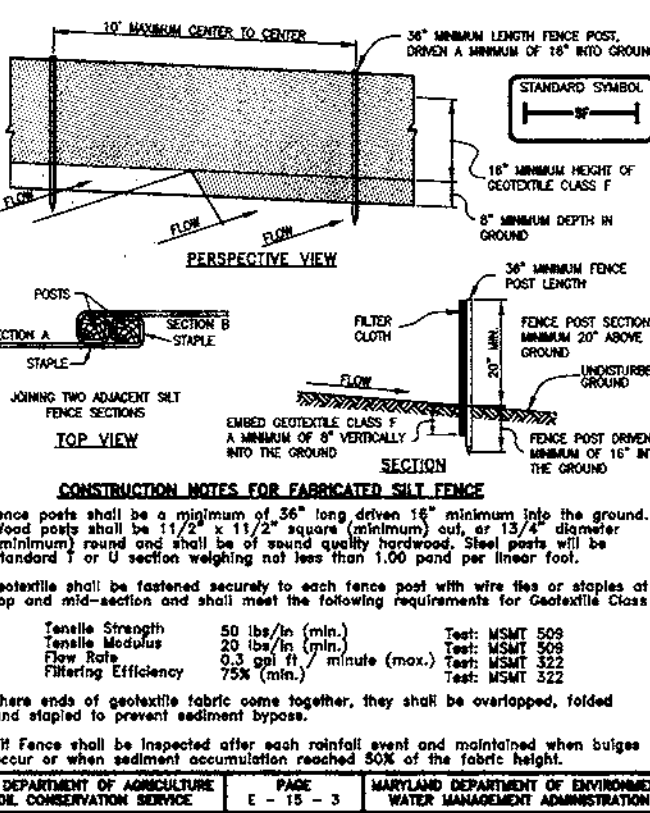
PIPE SLOPE DRAIN

- 1. The Pipe Slope Drain (PSD) shall have a slope of 2 percent or greater.
2. The top of the PSD shall be at least 6" above the top of the pipe.
3. The PSD shall be constructed of 12" diameter pipe with 1/2" thick walls.
4. The PSD shall be installed in a trench with a minimum depth of 18" below the subgrade.
5. The PSD shall be surrounded by a 6" layer of 1/2" clean washed sand.
6. The PSD shall be surrounded by a 6" layer of 1/2" clean washed sand.
7. The PSD shall be surrounded by a 6" layer of 1/2" clean washed sand.

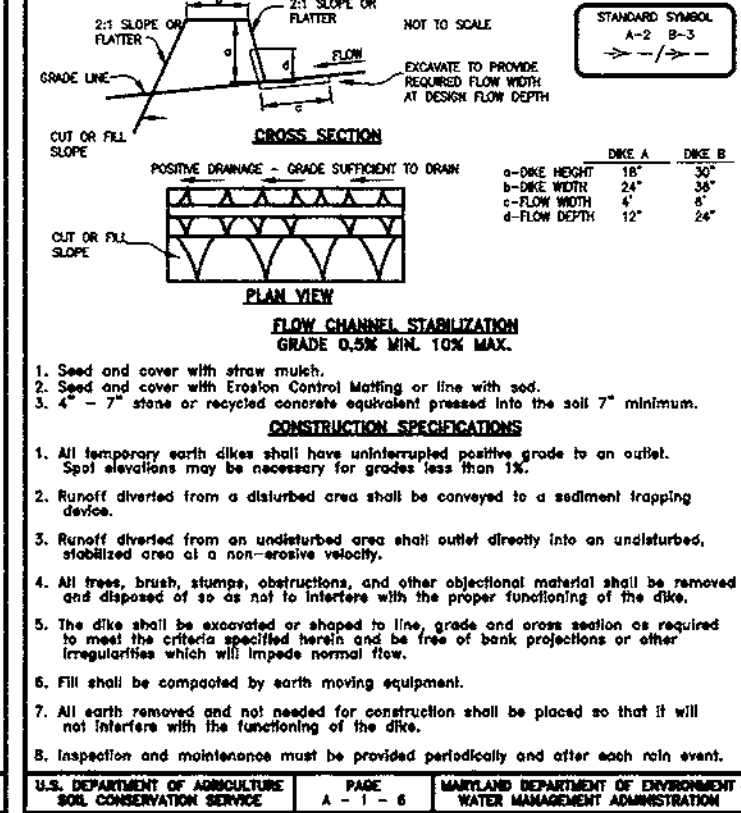
EX. 30" CMP INLET BLOCKING DETAIL



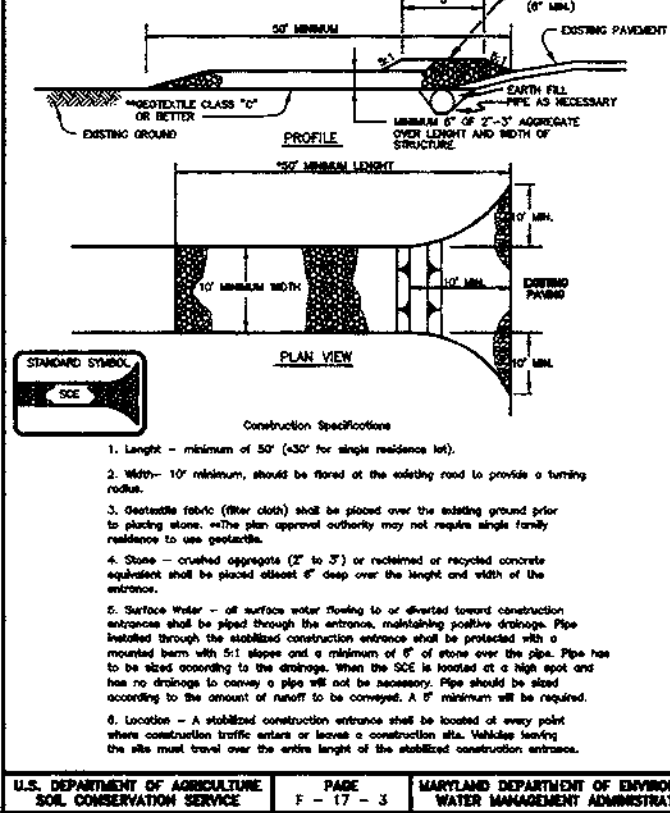
DETAIL 22 - SILT FENCE



DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



DETAIL 33 - SUPER SILT FENCE



SUPER SILT FENCE

- 1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Safety for Clean Line (FHWA) specification for 42" fence shall be used...
2. Chain link fence shall be fastened securely to the fence posts with wire ties...
3. Filter cloth shall be fastened securely to the chain link fence with the spaced every 24" at the top and mid section...
4. Filter cloth shall be embedded a minimum of 4" into the ground...
5. When two sections of filter cloth abut each other, they shall be overlapped by 6" and folded...
6. Maintenance shall be performed as needed and all buildup removed when "topped" buildup in the filter fabric, or when it reaches 50% of fence height...
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples of top and mid section and shall meet the following requirements for Geotextile Class 1:

SUPER SILT FENCE DESIGN CRITERIA

Table with columns: Slope, Slope Length (ft), Slope Length (m), Silt Fence Length (ft), Silt Fence Length (m). Rows include 10:1, 20:1, 30:1, 33:1, 50:1, 50:1, 21:1, 50:1.

BY THE DEVELOPER: James R. Markey, 2/23/00
BY THE ENGINEER: Christopher A. Malagari, P.E., 2/27/00
THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING...
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING, 2/16/00
DATE: 3/10/00