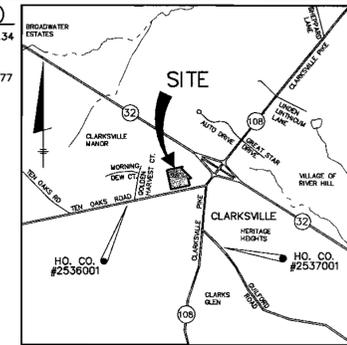


SITE DEVELOPMENT PLAN CLARKSVILLE CENTER SHOPPING CENTER ADDITION BUILDINGS 3 AND 4

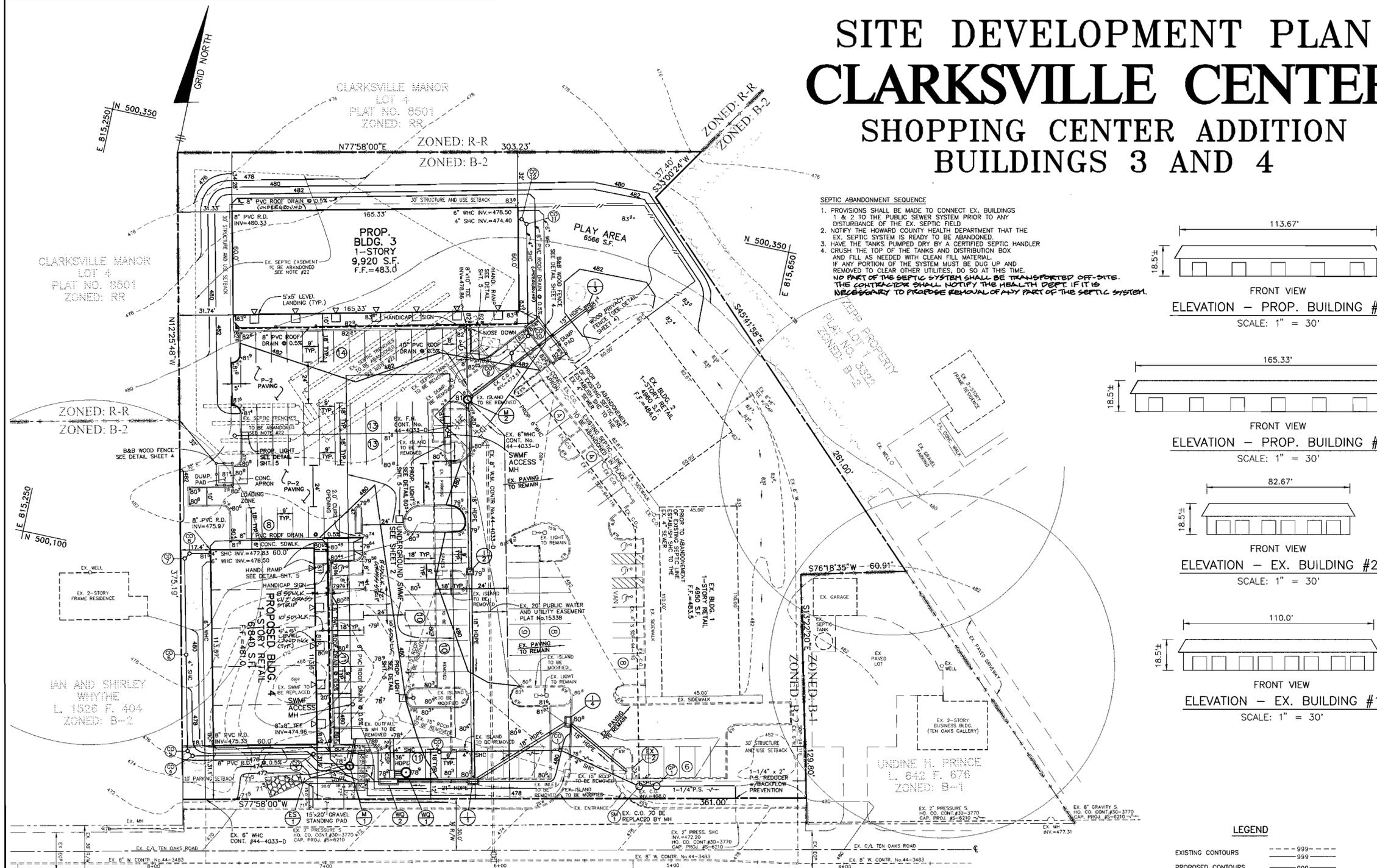
BENCH MARKS (NAD '27)

HO. CO. No. 2536001 ELEV. 469.34
3.4± SOUTH OF TEN OAKS ROAD
0.5± MILES WEST OF MD RTE. 108

HO. CO. No. 2537001 ELEV. 471.77
20.8± EAST OF MD RTE. 32
0.1± MILES SOUTH OF MD RTE. 108

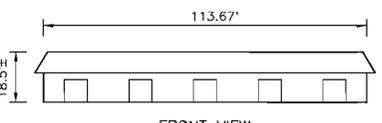


VICINITY MAP
SCALE: 1" = 2000'

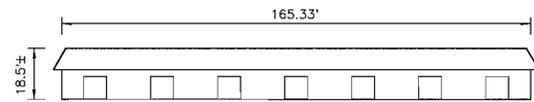


SEPTIC ABANDONMENT SEQUENCE

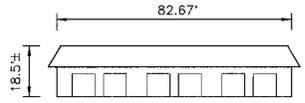
- PROVISIONS SHALL BE MADE TO CONNECT EX. BUILDINGS 1 & 2 TO THE PUBLIC SEWER SYSTEM PRIOR TO ANY DISTURBANCE OF THE EX. SEPTIC FIELD
- NOTIFY THE HOWARD COUNTY HEALTH DEPARTMENT THAT THE EX. SEPTIC SYSTEM IS READY TO BE ABANDONED
- HAVE THE TANKS PUMPED DRY BY A CERTIFIED SEPTIC HANDLER
- CRUSH THE TOP OF THE TANKS AND DISTRIBUTION BOX AND FILL AS NEEDED WITH CLEAN FILL MATERIAL. IF ANY PORTION OF THE SYSTEM MUST BE DUG UP AND REMOVED TO CLEAR OTHER UTILITIES, DO SO AT THIS TIME. NO PART OF THE SEPTIC SYSTEM SHALL BE TRANSPORTED OFF-SITE. THE CONTRACTOR SHALL NOTIFY THE HEALTH DEPT. IF IT IS NECESSARY TO PROPOSE REMOVAL OF ANY PART OF THE SEPTIC SYSTEM.



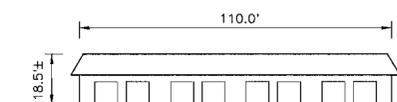
FRONT VIEW
ELEVATION - PROP. BUILDING #4
SCALE: 1" = 30'



FRONT VIEW
ELEVATION - PROP. BUILDING #3
SCALE: 1" = 30'



FRONT VIEW
ELEVATION - EX. BUILDING #2
SCALE: 1" = 30'



FRONT VIEW
ELEVATION - EX. BUILDING #1
SCALE: 1" = 30'

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 410-313-1880 AT LEAST FIVE(5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT 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 DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- THE CONTOURS SHOWN HEREON HAVE BEEN TAKEN FROM FIELD-RUN AND AS-BUILT TOPOGRAPHIC SURVEYS PREPARED BY TSA GROUP, INC., ON OR ABOUT NOV., 1993 & NOV., 1995 RESPECTIVELY AS SHOWN ON PREVIOUS SITE PLAN SDP-94-116.
- HORIZONTAL AND VERTICAL CONTROL BASED UPON NAD '27 HOWARD COUNTY CONTROL STATIONS #2536001 AND #2537001.
- WATER FOR THIS PROJECT IS PUBLIC, CONTRACT NO. 34-3771-D; SEWER FOR THIS PROJECT IS PUBLIC, HO. CO. CONT. NO. 30-3770/CAPITAL PROJECT #5-6210. DRAINAGE AREA IS IN THE PATENT WATERSHED.
- STORMWATER MANAGEMENT WILL BE PROVIDED BY AN UNDERGROUND FACILITY FOR WATER QUANTITY CONTROL TO BE CONSTRUCTED UNDER THIS SDP. QUALITY CONTROL WILL BE PROVIDED BY BAYSVER STORMWATER TREATMENT FACILITIES. THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
- THERE ARE NO WETLANDS OR FLOODPLAIN WITHIN THE AREA OF THIS SUBMISSION.
- THE GEOTECHNICAL REPORT WAS PREPARED BY HILLIS-CARNES ASSOC., INC., DATED FEBRUARY, 1993.
- THE TRAFFIC STUDY WAS PREPARED BY LEE CUNNINGHAM & ASSOC. DATED APRIL, 1994 FOR THE EX. BUILDINGS AND UPDATED FOR THE PROP. BUILDINGS IN MARCH, 2000.
- EXISTING UTILITIES SHOWN WERE LOCATED BY RECORD DRAWINGS AND FIELD LOCATIONS.
- UNLESS NOTED AS "PRIVATE", ALL EASEMENTS ARE PUBLIC.
- PREVIOUS DEPARTMENT OF PLANNING AND ZONING REFERENCE NUMBERS INCLUDE: SDP-94-116, F-87-87, F-94-123, SDP-94-116, PLAT #11285, PLAT #15338, FOA-180-Plat #15546.
- CONTRACTOR SHALL ADJUST ALL UTILITIES AND RIM ELEVATIONS AS NEEDED TO MATCH THIS PLAN.
- ALL LANDSCAPING REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL SECTION 16.124(d)(3)(ii) AND SHALL BE MADE A PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$720.00.
- IN ACCORDANCE WITH SECTION 16.1202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL, THIS SITE HAS FULFILLED FOREST CONSERVATION OBLIGATIONS BY THE FILING OF A DECLARATION OF INTENT FOR THE CLEARING OF LESS THAN 40,000 S.F. OF EX. FOREST ON A SINGLE PARCEL.
- ALL LIGHTING MUST BE IN ACCORDANCE WITH SECTION 134 OF THE ZONING REGULATIONS.
- THE SUBJECT PROPERTY IS ZONED B-2 PER THE 1993 COMPREHENSIVE ZONING PLAN.
- THIS SITE PLAN CONFORMS WITH THE 4th EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- THE EXISTING SEPTIC EASEMENT AND SYSTEM WILL BE ABANDONED UPON CONNECTION TO THE PUBLIC SEWER PRIOR TO ANY DISTURBANCE IN THE SEPTIC EASEMENT.

SHEET INDEX

NO.	DESCRIPTION
1	SITE DEVELOPMENT PLAN
2	UNDERGROUND SWM NOTES AND DETAILS
3	STORM DRAIN PROFILES & WATER QUALITY DETAILS
4	STORM DRAINAGE AREA MAP AND DETAILS
5	WATER & SEWER PROFILES AND DETAILS
6	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
7	LANDSCAPING PLAN AND STRIPING PLAN

LEGEND

- EXISTING CONTOURS: --- 999 ---
- PROPOSED CONTOURS: --- 999 ---
- EXISTING WOODS LINE: [Symbol]
- PROPOSED WOODS LINE: [Symbol]
- PROPOSED PAVING: [Symbol]
- MAIN ENTRANCE TO BLDGS.: [Symbol]
- PROPOSED STORM DRAIN: [Symbol]

ADDRESS CHART

BLDG.	STREET ADDRESS
EX. 1	6363 TEN OAKS ROAD
EX. 2	6355 TEN OAKS ROAD
3	6347 TEN OAKS ROAD
4	6343 TEN OAKS ROAD

SITE DATA TABULATION

- GENERAL SITE DATA
- PRESENT ZONING: B-2
 - APPLICABLE DPZ FILE REFERENCES: F-87-87, F-94-123, SDP-94-116, PLAT #15338, FOA-180
 - PROPOSED USE OF SITE: RETAIL BLDGS. & DAY CARE FACILITY.
 - PROPOSED WATER: PUBLIC
 - PROPOSED SEWER: PUBLIC
- AREA TABULATION
- | | |
|--|-------------|
| 1. TOTAL PROJECT AREA | 3.0± Ac. |
| 2. AREA OF 100 YR. FLOODPLAIN | N/A |
| 3. NET AREA OF SITE | 3.0± Ac. |
| 4. AREA OF THIS PLAN SUBMISSION | 3.0± Ac. |
| 5. APPROXIMATE LIMIT OF DISTURBANCE | 2.0± Ac. |
| 6. BUILDING COVERAGE OF SITE (PERMITTED) | N/A |
| 7. BUILDING COVERAGE OF SITE (PROPOSED) | 26,670 s.f. |
- OPEN SPACE DATA
- | | |
|---|-----|
| 1. OPEN SPACE ON SITE(0.0%) | N/A |
| 2. AREA OF RECREATION OPEN SPACE REQUIRED BY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS | N/A |
| ACRES REQUIRED | N/A |
| ACRES PROVIDED | N/A |

TEN OAKS ROAD MAJOR COLLECTOR PUBLIC ROAD - 60' ULTIMATE R/W

PLAN
SCALE: 1" = 30'

- NOTES:
- CONTRACTOR SHALL UTILIZE APPROPRIATE CONSTRUCTION METHODS TO MAINTAIN ACCESS TO THIS SITE DURING REMOVAL AND INSTALLATION OF THE STORM DRAIN SYSTEM CROSSING THE ENTRANCE.
 - ALL PROPOSED CURB SHALL BE BARRIER CURB HOWARD COUNTY STD. R-3.03
 - THE EXISTING SEPTIC EASEMENT WILL BECOME NULL AND VOID UPON CONNECTION TO THE PUBLIC SEWER SYSTEM.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 8/1/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 8/20/02
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 8/30/02
DIRECTOR

OVERALL PARKING TABULATION

BLDG. NO.	USE	BUILDING AREA	PARKING REQUIRED	PARKING PROVIDED	HANDICAP SPACES REQUIRED	HANDICAP SPACES PROVIDED
EX-1	RETAIL	4,950 s.f. x 5/1000	25	25	1	3
EX-2	RETAIL	4,960 s.f. x 5/1000	25	25	1	0
3	DAY-CARE	9,920 s.f. x 3/1000	30	42	1	1
4	RETAIL	6,840 s.f. x 5/1000	35	37	1	1
			115	129	4	5

NO.	DATE	REVISION
		ADDED PARKING LOT LIGHTING INFO. TO PLAN

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
email: Benchmark@cois.com

7/10/02

OWNER/DEVELOPER: **LEWIS FAMILY, LLC**

PROJECT: **CLARKSVILLE CENTER SHOPPING CENTER ADDITION BUILDINGS 3 AND 4**

LOCATION: 6005 TEN OAKS ROAD, CLARKSVILLE, MARYLAND 21029, 410-531-3813

TITLE: **SITE DEVELOPMENT PLAN**

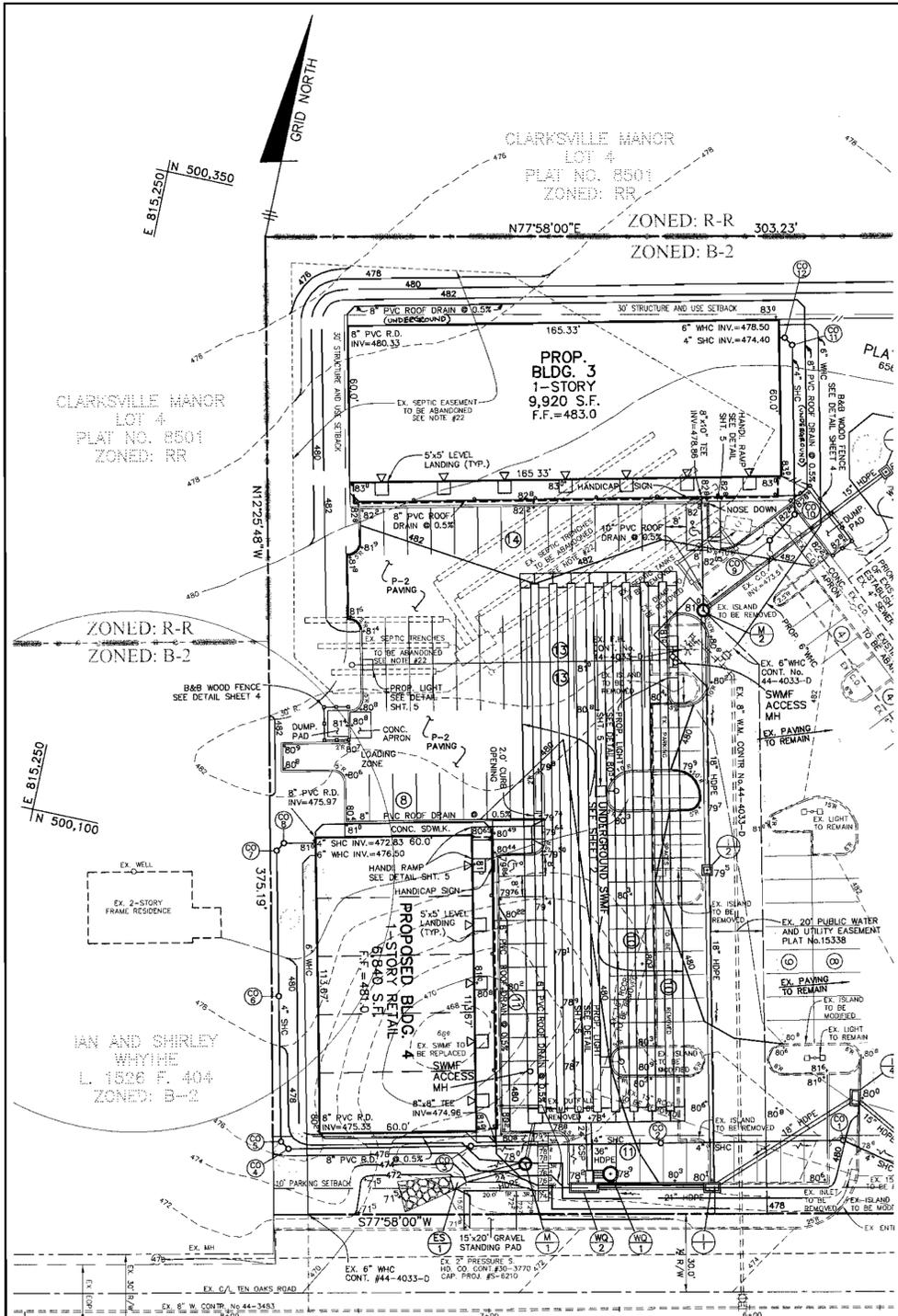
DATE: JUNE, 2000 / JULY, 2002

PROJECT NO. 1327

SCALE: AS SHOWN

DESIGN: DAM / DRAFT: MCR/DBT / CHECK: DAM

SHEET 1 OF 7



TEN OAKS ROAD
 MAJOR COLLECTOR
 PUBLIC ROAD - 60' ULTIMATE R/W

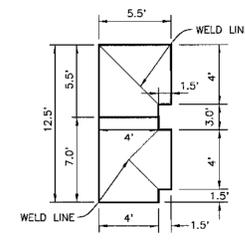
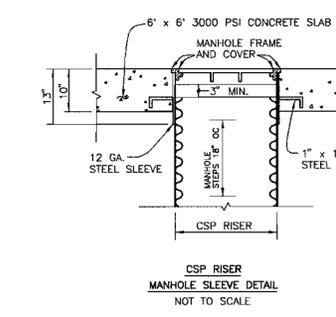
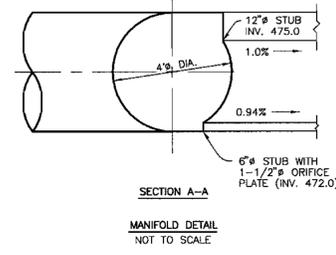
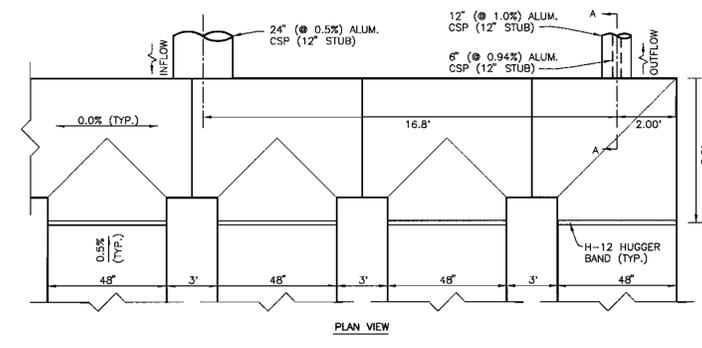
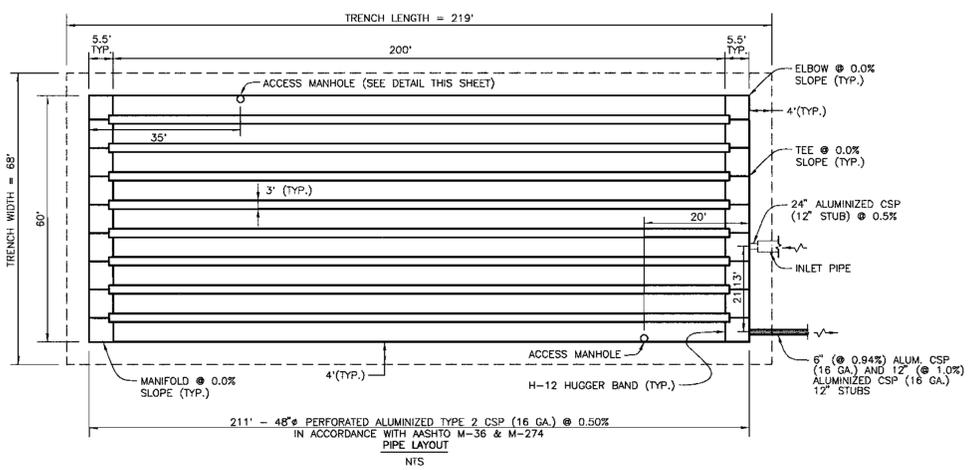
PLAN
 SCALE: 1" = 30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard County Department of Planning and Zoning
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 8/1/02

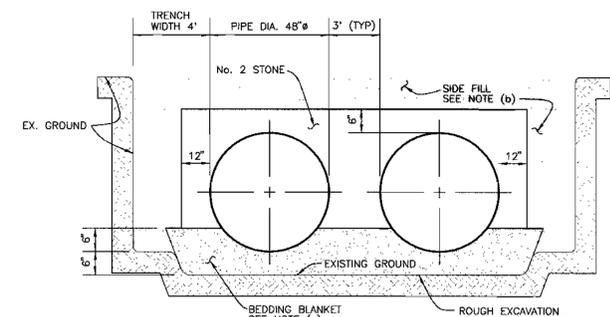
Howard County Department of Planning and Zoning
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 8/20/02

Howard County Department of Planning and Zoning
 DIRECTOR
 DATE: 8/20/02



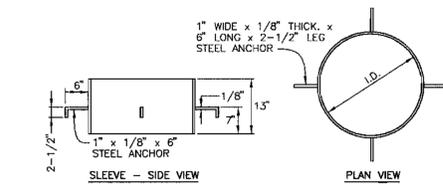
NOTE:
 ALL ADJOINING PIPES AND ELBOWS TO BE COUPLED USING THE H-12 HUGGER BAND, BY CONTECH CONSTRUCTION PRODUCTS, INC., OR EQUIVALENT

ELBOW/TEE DETAIL
 NOT TO SCALE

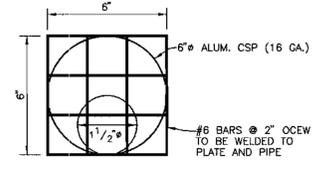


NOTES
 (a) BEDDING BLANKET OF LOOSE GRANULAR FILL ROUGHLY SHAPED TO FIT BOTTOM OF PIPE. MINIMUM THICKNESS BEFORE PLACING PIPE SHALL BE SIX INCHES.
 (b) SIDE FILL TO BE COMPACTED IN 6 TO 8 INCHES OF COMPACTED LAYERS. COMPACTION SHALL NOT BE LESS THAN 90% STANDARD PROCTOR DENSITY (AASHTO 199).

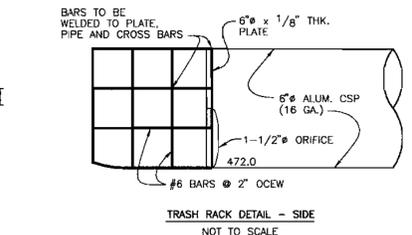
BEDDING AND BACKFILL DETAIL
 N.T.S.



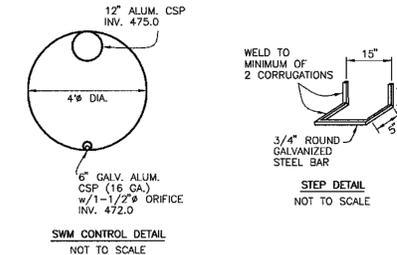
MANHOLE SLEEVE DETAIL
 NOT TO SCALE



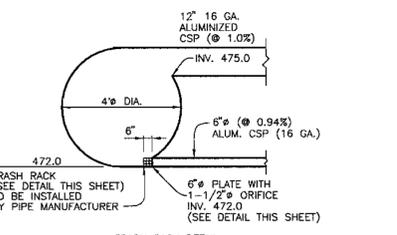
TRASH RACK DETAIL - FRONT
 NOT TO SCALE



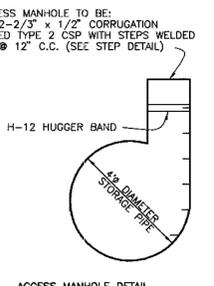
TRASH RACK DETAIL - SIDE
 NOT TO SCALE



SWM CONTROL DETAIL
 NOT TO SCALE



TRASH RACK DETAIL
 NOT TO SCALE



ACCESS MANHOLE DETAIL
 NOT TO SCALE

SWM SUMMARY TABLE - D.A.=2.47 AC±

STORM FREQUENCY (YRS.)	EX. RUNOFF (cfs)	DEVELOPED RUNOFF AND DISCHARGE (cfs)	WSEL (FT.)	STORAGE (AC.-FT.)
2	0.84	0.10	474.97	0.376
10	2.93	2.30	475.93	0.495
100	5.77	8.59	477.16	0.519

OPERATION AND MAINTENANCE SCHEDULE FOR UNDERGROUND SWM FACILITIES

- THE UNDERGROUND STORM WATER MANAGEMENT FACILITY IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN ITS OPERATION AND FUNCTION.
- THE UNDERGROUND STORM WATER MANAGEMENT FACILITY SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER ESPECIALLY SEVERE STORM EVENTS.
- WHEN SEDIMENT ACCUMULATION OF MORE THAN 2" IS OBSERVED OR ANY DEBRIS THAT MIGHT OBSTRUCT THE OUTFALL IS OBSERVED, THE FACILITY SHALL BE CLEANED.
- THE FACILITY SHALL BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER AT SUCH CONTACT THE APPROPRIATE REGULATORY AGENCIES NOTIFYING THEM OF THE SPILL AND CLEAN-UP OPERATION.
- THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND STORM WATER MANAGEMENT FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID.
- THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX(6) MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.

CONSTRUCTION SPECIFICATIONS

A. **BEDDING**

- THE BED SHALL BE PLACED TO UNIFORM GRADE AND LINE TO ENSURE GOOD VERTICAL ALIGNMENT AND TO AVOID EXCESSIVE STRESSES AT PIPE JOINTS. THE BEDDING SHALL BE FREE OF ROCK FORMATIONS, PROTRUDING STONES, FROZEN LUMPS, ROOTS, AND FOREIGN MATERIAL. THE BEDDING FOUNDATION MUST BE A STABLE, WELL GRADED GRANULAR MATERIAL. ANY MATERIAL THAT HAS INADEQUATE BEARING CAPACITY MUST BE REMOVED AND REPLACED WITH A COMPACTED SELECT FILL APPROVED BY THE GEOTECHNICAL ENGINEER.

B. **BACKFILL**

- THE FILL MATERIAL SHALL BE FREE OF ROCKS, FROZEN LUMPS, AND FOREIGN MATTER THAT COULD CAUSE HARD SPOTS IN BACKFILL OR THAT COULD DECOMPOSE AND CREATE VOIDS.
- BACKFILL MATERIAL SHALL BE A WELL GRADED GRANULAR MATERIAL.
- HIGHLY PLASTIC SILTS, HIGHLY PLASTIC CLAYS, ORGANIC SILTS, ORGANIC CLAYS AND PEATS SHALL NOT BE USED AS BACKFILL MATERIAL.
- BACKFILL SHALL BE PLACED SYMMETRICALLY ON EACH SIDE OF THE STRUCTURE IN SIX-INCH TO EIGHT-INCH LOOSE LAYERS TO ONE FOOT ABOVE THE TOP OF THE PIPE. EACH LAYER IS TO BE COMPACTED TO THE SPECIFIED DENSITY (MINIMUM 90%) BEFORE PLACING THE NEXT LAYER. REFERENCE ASTM A796.

C. **PIPE**

- THE PIPE FABRICATOR SHALL PROVIDE SPECIFICATIONS OF ALL MATERIALS (BASED ON HS25 LOADING).
- SHOP DRAWINGS ARE TO BE PROVIDED BY FABRICATOR. APPROVAL BY ENGINEER IS REQUIRED PRIOR TO CONSTRUCTION.
- CONTRACTOR IS REQUIRED TO COORDINATE APPROVAL OF SHOP DRAWINGS AND SPECIFICATIONS AND SHALL BE OBLIGATED FOR ANY COST THEREOF.

D. **GENERAL**

- DEBRIS IS TO BE KEPT OUT OF THE FACILITY DURING AND AFTER CONSTRUCTION.

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
 email: Benchmark@cais.com

7/18/02

OWNER/DEVELOPER: **LEWIS FAMILY, LLC**
 6005 TEN OAKS ROAD
 CLARKSVILLE, MARYLAND 21029
 410-531-3813

PROJECT: **CLARKSVILLE CENTER SHOPPING CENTER ADDITION BUILDINGS 3 AND 4**

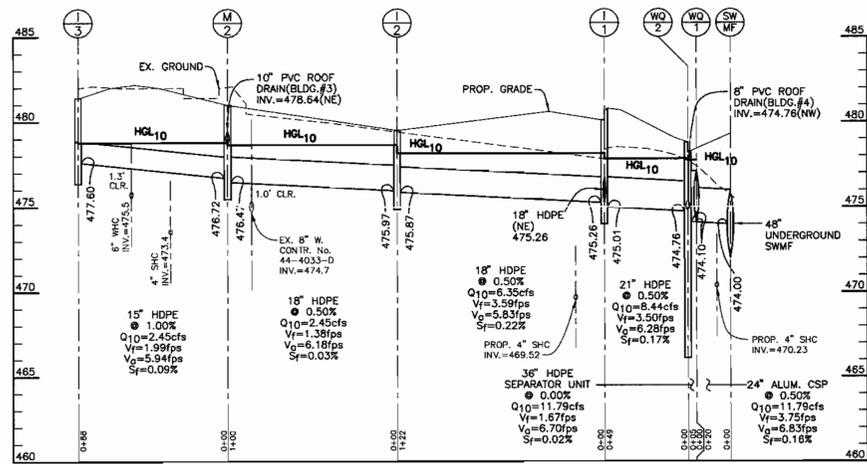
LOCATION: TAX MAP 34 - GRID 12
 PARCEL 398 - 5th ELECTION DISTRICT
 CLARKSVILLE MANOR LOT 2 (PLAT #15338)
 HOWARD COUNTY, MARYLAND

TITLE: **UNDERGROUND SWMF NOTES AND DETAILS**

DATE: JUNE, 2000
 JULY, 2002

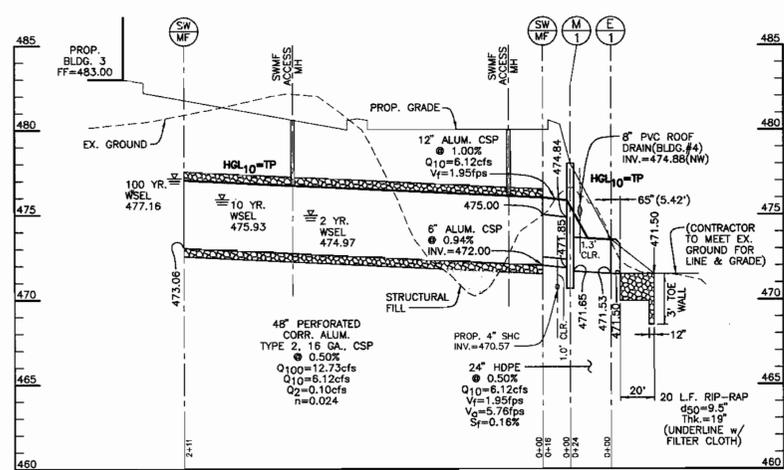
PROJECT NO. 1327

DESIGN: DAM DRAFT: MCR/DBT CHECK: DAM SCALE: AS SHOWN SHEET 2 OF 7



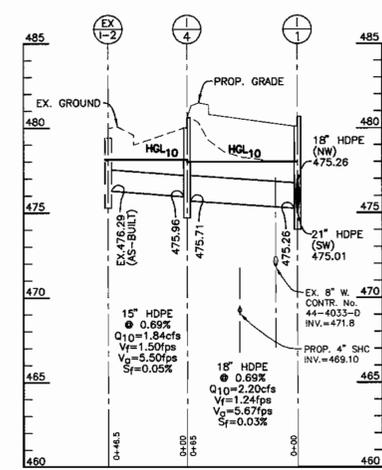
**STORM DRAIN PROFILE
ALONG PARKING LOT**

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



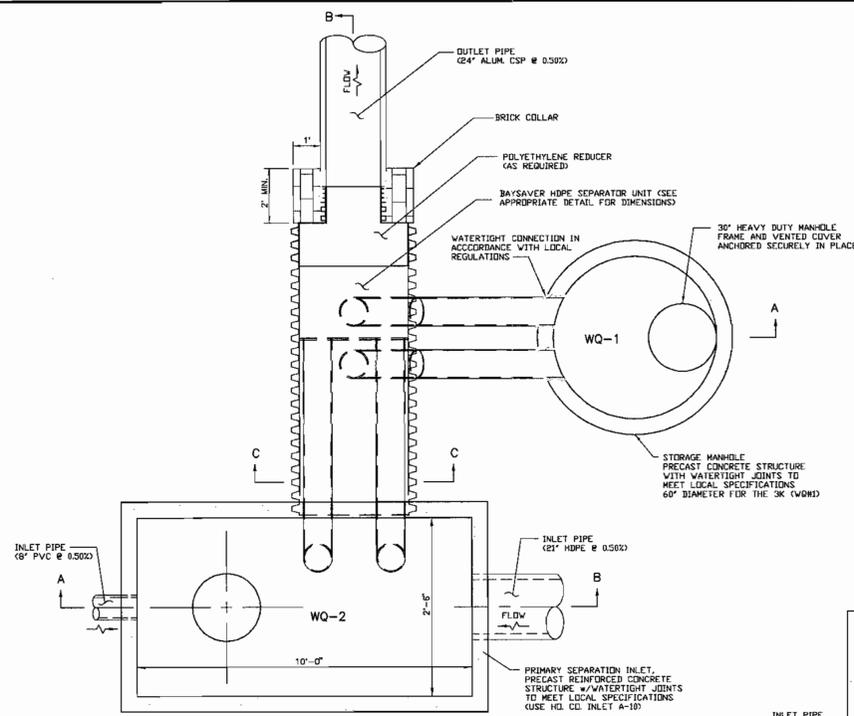
**STORM DRAIN PROFILE
UNDERGROUND SWM**

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



**STORM DRAIN PROFILE
ALONG SITE ENTRANCE**

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

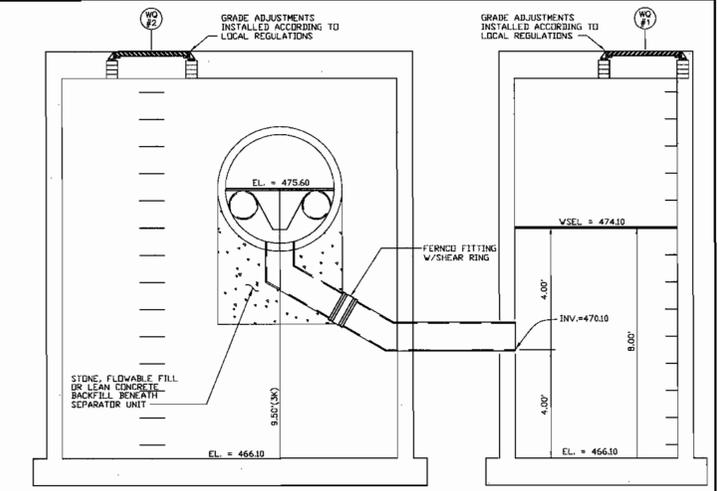


PLAN VIEW - WQ#1 AND WQ#2

WQ-1 AND 2 (3K BAYSAYER UNIT)
PRIVATELY OWNED AND MAINTAINED

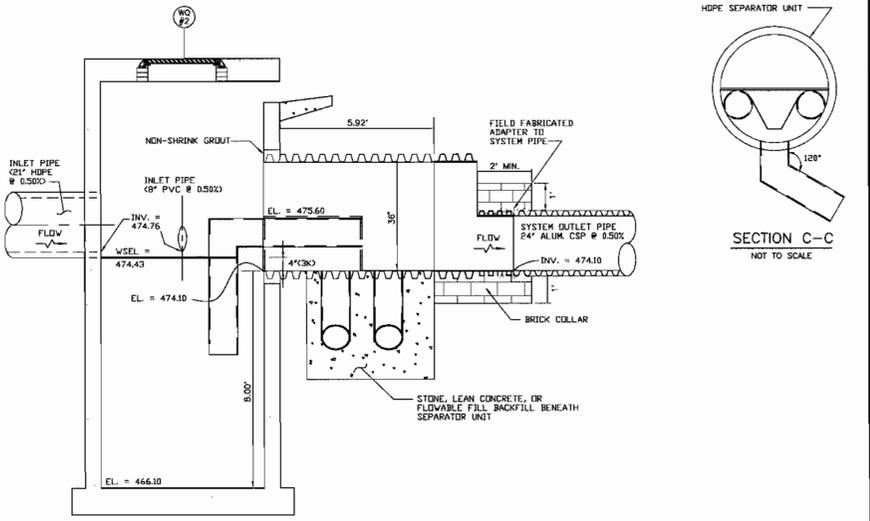
BAYSAYER, INC.
1010 DEER HOLLOW DR.
MOUNT AIRY, MD 21771
(PH) 301-829-6470
(TOLL) 1-800-BAYSAYER
(FAX) 301-829-3747
WWW.BAYSAYER.COM

- BAYSAYER INSTALLATION INSTRUCTIONS**
- EXCAVATION MUST PROVIDE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO SEPARATOR MANHOLE AND BAYSAYER UNIT. INSTALL PRECAST DROP STRUCTURES ON SOLID GROUND AS VERIFIED BY A GEOTECHNICAL ENGINEER.
 - VERIFY THE SURFACE ELEVATION AGAINST THE MANHOLE DIMENSIONS AND CONNECTING STORM DRAIN INVERTS.
 - MAKING SURE THE BASES ARE LEVEL AND THE STORAGE MANHOLE OPENINGS ARE ALIGNED WITH THE SEPARATOR UNIT, INSTALL PRIMARY AND STORAGE MANHOLES. INSTALL RUBBER GASKETS ON BASE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTION AS REQUIRED.
 - BACKFILL BASE SECTIONS OF MANHOLES TO INVERT OF STORAGE MANHOLE. CONNECTING PIPES, USING APPROVED BACKFILL MATERIAL, BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL AND COMPACTION SHOULD BE MONITORED BY A GEOTECHNICAL ENGINEER.
 - INSTALL BAYSAYER SEPARATOR UNIT AND CONNECTING PIPES. SEAL ALL CONNECTING JOINTS AND INSTALL SEPARATOR UNIT/STORM DRAIN JOINT COLLAR. CUT EXCESS LENGTH OF CONNECTING PIPES INSIDE STORAGE MANHOLE.
 - BACKFILL SEPARATOR UNIT AND MANHOLE AREAS NOT ACCESSIBLE TO COMPACTION EQUIPMENT MUST BE BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL.
 - INSTALL AND SET MANHOLE COVER GRADE ADJUSTMENTS AS NECESSARY.
 - INSTALL AND SET MANHOLE FRAME AND COVER UNITS.
- GENERAL CONSTRUCTION NOTES**
- ALL WORK MUST BE DONE WITH REGARD FOR THE SAFETY OF THE CONSTRUCTION CREW.
 - ALL WORK AND MATERIALS MUST COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS.
 - CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION BEGINS.
- BAYSAYER MAINTENANCE**
- BAYSAYER 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**
- 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.
 - REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
 - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
- B. STORAGE MANHOLE**
- REMOVE THE TOP 12 INCHES OF OIL, DEBRIS, AND WATER BY VACUUM TRUCK.
 - 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.
 - REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
 - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
- CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.



SECTION A-A

NOT TO SCALE



SECTION B-B

NOT TO SCALE

HILLIS-CARNES ENGINEERING ASSOCIATES, INC.

PROJECT NAME: CLARKVILLE CENTER
LOCATION: HOWARD COUNTY, MARYLAND
JOB # 8303A

ELEV.	SOIL DESCRIPTION	STR. DEPTH	SAMPLE	REMARKS
4.5
7.5
10.0
12.5
15.0
17.5
20.0

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 4" INTERVALS

HILLIS-CARNES ENGINEERING ASSOCIATES, INC.

PROJECT NAME: CLARKVILLE CENTER
LOCATION: HOWARD COUNTY, MARYLAND
JOB # 8303A

ELEV.	SOIL DESCRIPTION	STR. DEPTH	SAMPLE	REMARKS
4.5
7.5
10.0
12.5
15.0
17.5
20.0

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 4" INTERVALS

HILLIS-CARNES ENGINEERING ASSOCIATES, INC.

PROJECT NAME: CLARKVILLE CENTER
LOCATION: HOWARD COUNTY, MARYLAND
JOB # 8303A

ELEV.	SOIL DESCRIPTION	STR. DEPTH	SAMPLE	REMARKS
4.5
7.5
10.0
12.5
15.0
17.5
20.0

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 4" INTERVALS

HILLIS-CARNES ENGINEERING ASSOCIATES, INC.

PROJECT NAME: CLARKVILLE CENTER
LOCATION: HOWARD COUNTY, MARYLAND
JOB # 8303A

ELEV.	SOIL DESCRIPTION	STR. DEPTH	SAMPLE	REMARKS
4.5
7.5
10.0
12.5
15.0
17.5
20.0

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 4" INTERVALS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: MK
DATE: 8/1/02

CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature]
DATE: 8/20/02

DIRECTOR: [Signature]
DATE: 8/20/02

ADDED INSIDE LENGTH AND WIDTH TO WQ#1 & WQ#2 PLAN DETAIL

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE A SUITE 418
ELLCOTT CITY, MARYLAND 21043
phone: 410-465-6105 fax: 410-465-6644
email: Benchmark@cois.com

OWNER/DEVELOPER: LEWIS FAMILY, LLC
6005 TEN OAKS ROAD
CLARKVILLE, MARYLAND 21029
410-531-3813

PROJECT: CLARKVILLE CENTER SHOPPING CENTER ADDITION BUILDINGS 3 AND 4

LOCATION: PARCELS 39B, 5th ELECTION DISTRICT, CLARKVILLE MANOR LOT 2 (PLAT #15338) HOWARD COUNTY, MARYLAND

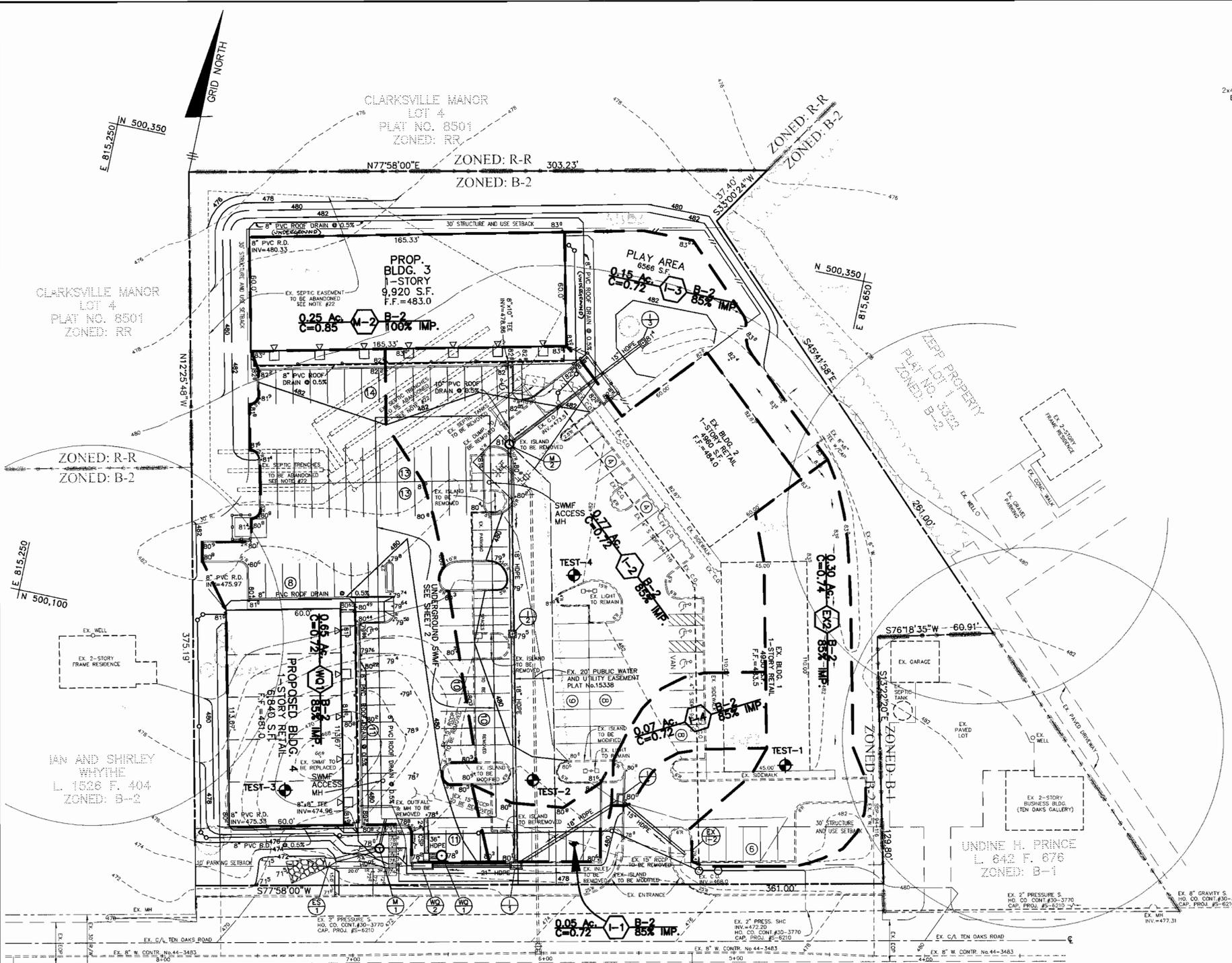
TITLE: STORM DRAIN PROFILES AND WATER QUALITY NOTES AND DETAILS

DATE: JUNE, 2000
JULY, 2002

PROJECT NO. 1327

SCALE: AS SHOWN SHEET 3 OF 7

DESIGN: DAM DRAFT: MCR/DBT CHECK: DAM



TEN OAKS ROAD
 MAJOR COLLECTOR
 PUBLIC ROAD - 60' ULTIMATE R/W

PLAN
 SCALE: 1" = 30'

SOILS LEGEND

MAP SYMBOL	SOIL TYPE	MAPPING UNIT
CH2	B	CHESTER SILT LOAM - 3 TO 8 PERCENT SLOPES - MODERATELY ERODED
EM	D	ELKTON SILT LOAM - 0 TO 3 PERCENT SLOPES
EM2	D	ELKTON SILT LOAM - 3 TO 8 PERCENT SLOPES - MODERATELY ERODED
M2	B	MANOR LOAM - 3 TO 8 PERCENT SLOPES - MODERATELY ERODED

SOILS MAP No. 23

PIPE SCHEDULE

RUN	SIZE	LENGTH	TYPE & CLASS
I-3 to M-2	15"	88.00'	HDPE
M-2 to I-2	18"	100.00'	HDPE
I-2 to I-1	18"	122.00'	HDPE
I-1 to WQ-2	21"	49.00'	HDPE
WQ-2 to WQ-1	24"	20.00'	ALUM. CSP
WQ-1 to SWMF	12"	16.00'	ALUM. CSP
SWMF to M-1	6"	16.00'	ALUM. CSP
M-1 to E-1	24"	24.00'	HDPE
EX. I-2 to I-4	15"	46.50'	HDPE
I-4 to I-1	18"	65.00'	HDPE
BLDG. ROOF DRAIN	8"	557.2' TOTAL	PVC SCH.40
BLDG. ROOF DRAIN	10"	43.6' TOTAL	PVC SCH.40

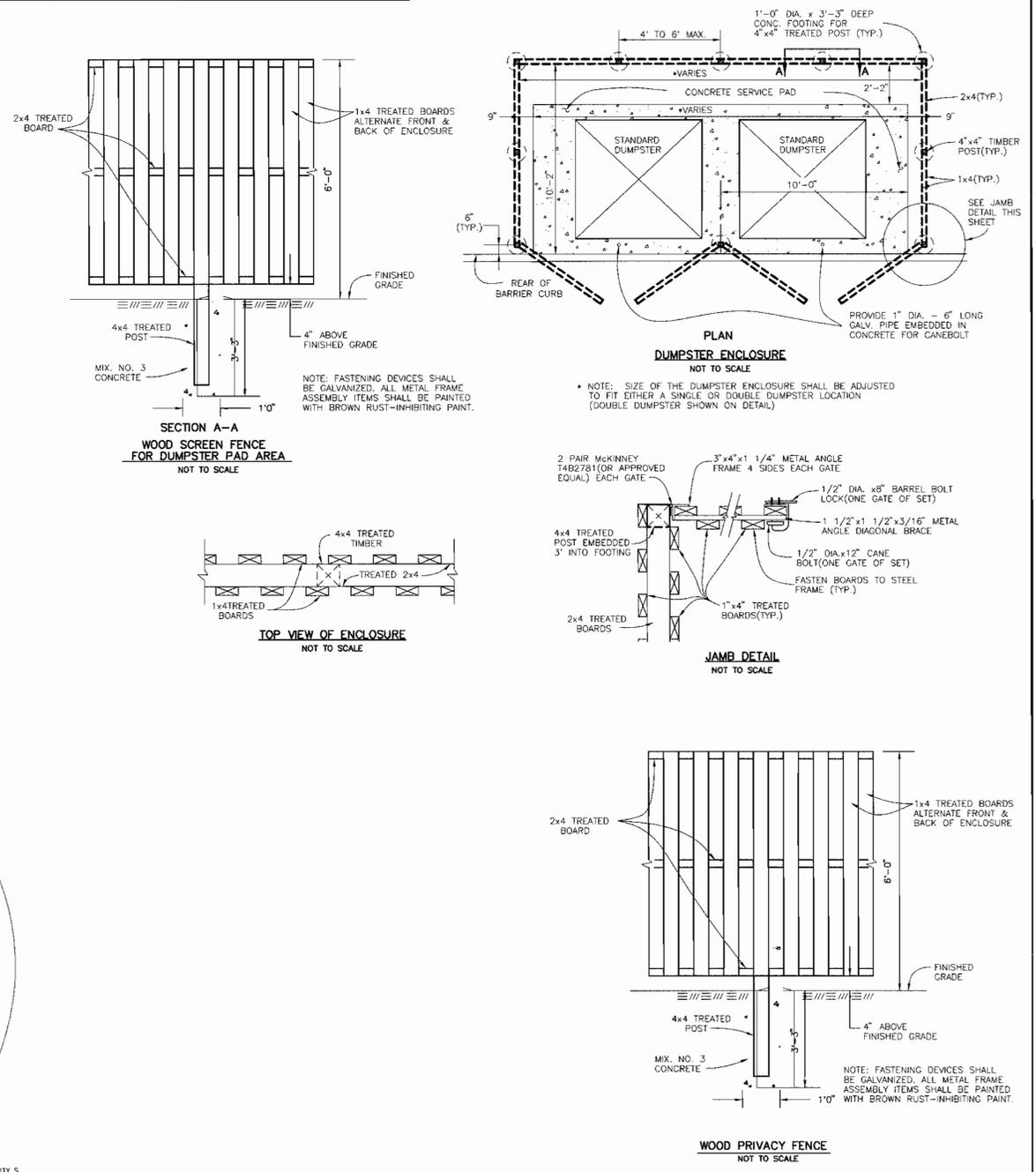
STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INVERT IN	INVERT OUT	TOP ELEV.	HO. CO. STD.	REMARKS	FRONT TO BACK INSIDE DIM. OF INLET
I-1	"A-5"	N 500,011.79 E 815,535.08	475.26	475.26	475.01	SD-4.01 or SD-4.40	-	-
I-2	TYPE "5"	N 500,138.53 E 815,508.08	475.97	-	475.5	SD-4.22	-	-
I-3	TYPE "5"	N 500,294.41 E 815,543.48	-	-	477.60	SD-4.22	-	-
I-4	"A-5"	N 500,056.92 E 815,581.67	475.96	-	475.71	SD-4.01 or SD-4.40	-	-
EX. I-2	"A-5"	N 500,034.95 E 815,622.54	-	-	476.29	SD-4.01 or SD-4.40	AS-BUILT SDP-84-116	-
M-1	STD. PRE-CAST	N 500,005.78 E 815,463.20	474.84	471.85	478.0	G-5.12	-	-
M-2	STD. PRE-CAST	N 500,227.82 E 815,485.95	476.72	476.64	481.0	G-5.12	-	-
WO-1	BAYSAVER "3K"	N 500,008.80 E 815,495.95	470.10	-	478.9	-	SEE MANUFACT. SPECS.	-
WO-2	"A-10"	N 500,001.56 E 815,487.12	474.76	474.76	474.10	SD-4.02 or SD-4.41	-	-
ES-1	HDPE END-SECTION	N 499,995.14 E 815,442.00	471.53	-	471.50	-	-	-

* AS-BUILT ELEVATION
 ** CENTER OF STRUCTURE AT THE TOP OF CURB
 *** APPROX. CENTER OF EX. STRUCTURE AT THE TOP OF CURB

LEGEND

SOILS CLASSIFICATION	---
EXISTING CONTOURS	---
PROPOSED CONTOURS	---
EXISTING WOODS LINE	---
PROPOSED WOODS LINE	---
PROP. DRAINAGE AREA	---



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard County Department of Planning and Zoning
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT

8/1/02
 8/24/02
 8/20/02

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
 email: Benchmark@cois.com

STATE OF MARYLAND PROFESSIONAL ENGINEER

7/18/02

OWNER/DEVELOPER: **LEWIS FAMILY, LLC**
 6005 TEN OAKS ROAD
 CLARKSVILLE, MARYLAND 21029
 410-531-3813

PROJECT: **CLARKSVILLE CENTER SHOPPING CENTER ADDITION BUILDINGS 3 AND 4**

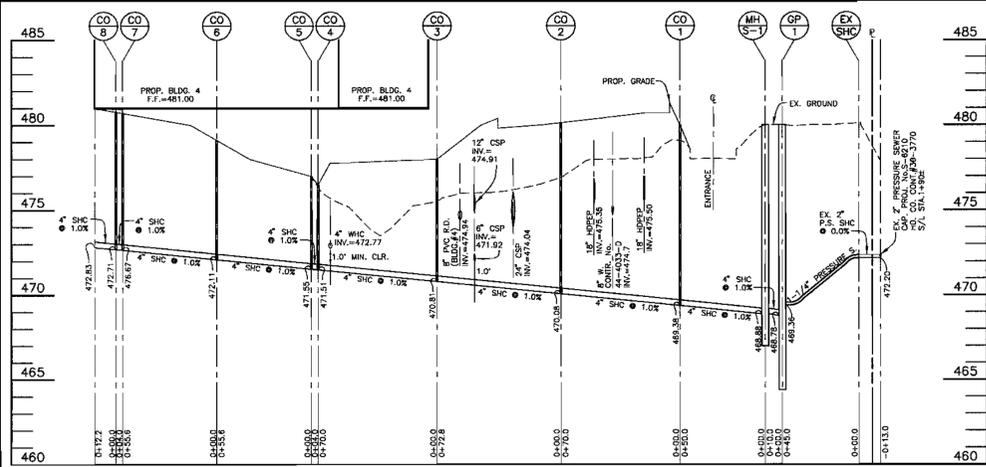
LOCATION: TAX MAP 34 - GRID 12
 PARCEL 398 - 5th ELECTION DISTRICT
 CLARKSVILLE MANOR LOT 2 (PLAT #15338)
 HOWARD COUNTY, MARYLAND

TITLE: **STORM DRAINAGE AREA MAP AND DETAILS**

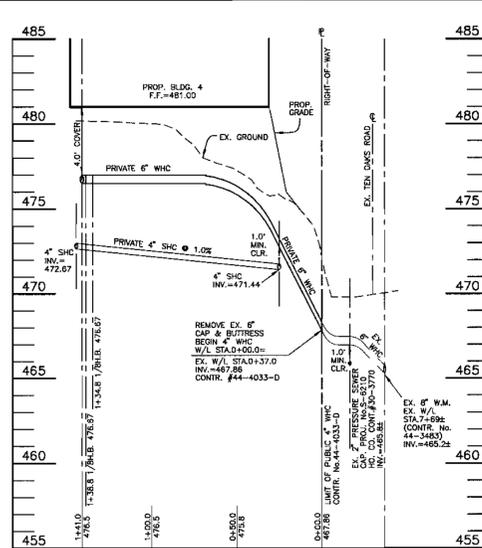
DATE: JUNE, 2000
 JULY, 2002

PROJECT NO. 1327

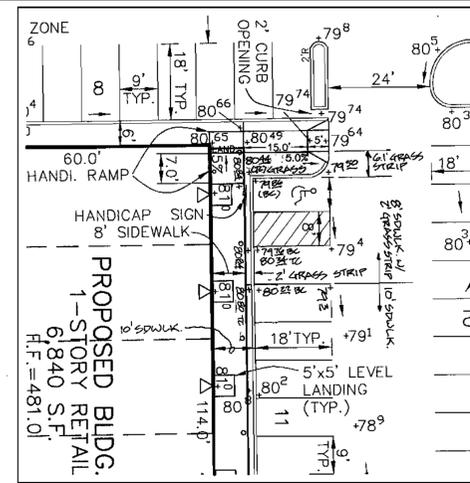
DESIGN: DAM DRAFT: MCR/DBT CHECK: DAM SCALE: AS SHOWN SHEET 4 OF 7



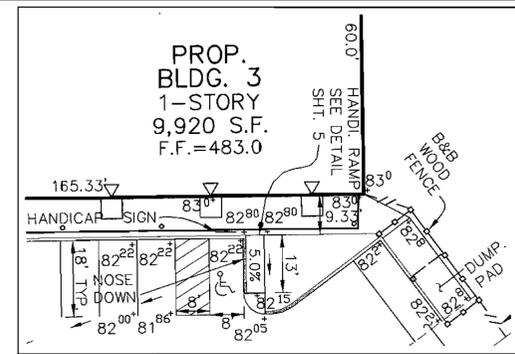
**SEWER PROFILE
ALONG SITE ENTRANCE**
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



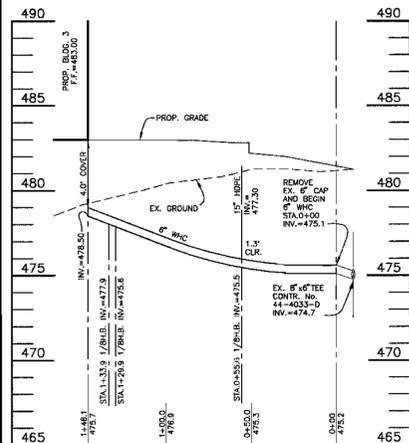
**WATER PROFILE
BUILDING 4**
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



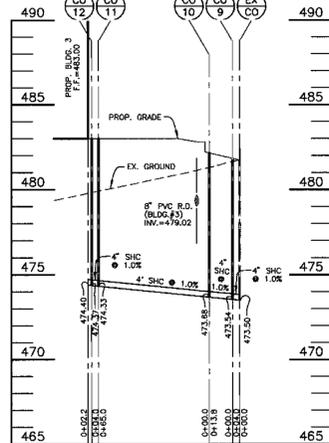
**HANDICAP ACCESS
DETAIL - BUILDING 4**
SCALE: 1"=20'



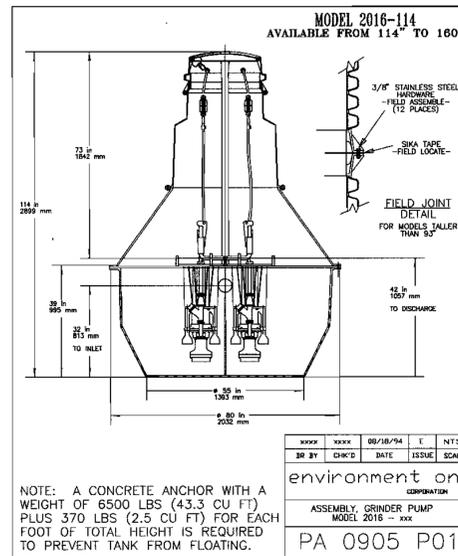
**HANDICAP ACCESS
DETAIL - BUILDING 3**
SCALE: 1"=20'



**WATER PROFILE
BUILDING 3**
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

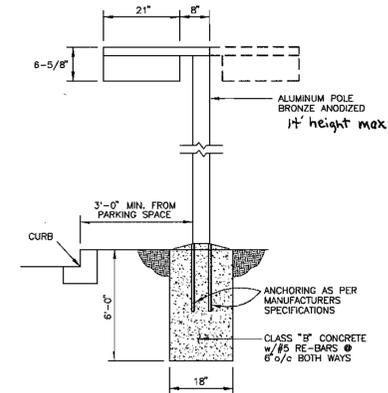


**SEWER PROFILE
BUILDING 3**
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



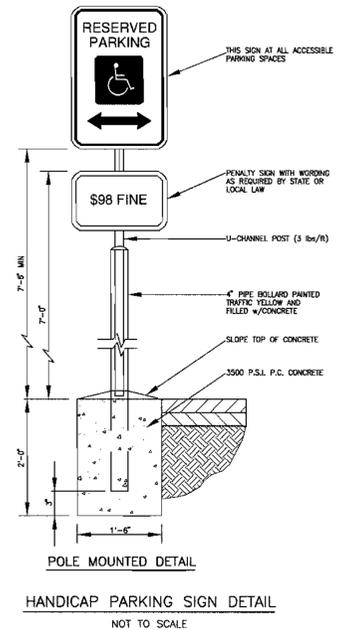
NOTE: A CONCRETE ANCHOR WITH A WEIGHT OF 6500 LBS (43.3 CU FT) PLUS 370 LBS (2.5 CU FT) FOR EACH FOOT OF TOTAL HEIGHT IS REQUIRED TO PREVENT TANK FROM FLOATING.

XXXX	XXXX	08/18/04	I	NTS
30	BY	CHK'D	DATE	ISSUE
environment one				
CORPORATION				
ASSEMBLY, GRINDER PUMP				
MODEL 2016 - xxx				
PA 0905 P01				

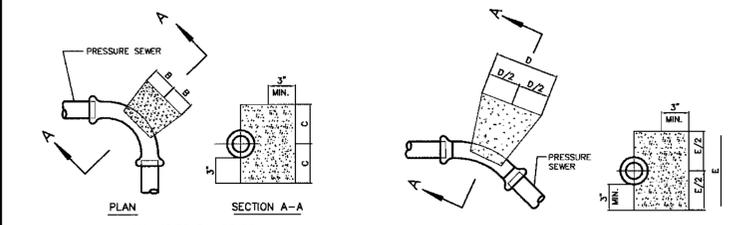


PARKING LOT LIGHTING DETAIL
NOT TO SCALE

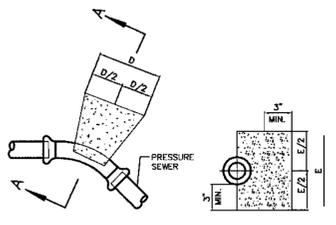
- NOTES:
- 1) ALL LIGHT FIXTURES TO BE 150 WATT HIGH PRESSURE SODIUM VAPOR TYPE WITH METAL POLES AND DIRECTED DOWNWARD.
 - 2) LOCATION OF LIGHT FIXTURES ARE ON THE PLAN AND SHOWN AS ■■■



HANDICAP PARKING SIGN DETAIL
NOT TO SCALE



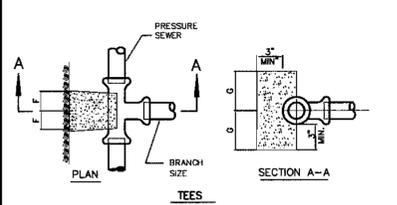
90° HORIZONTAL BENDS



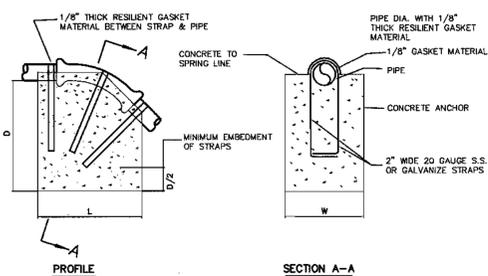
11-1/4, 22-1/2, 45° HORIZONTAL & LOWER VERTICAL BENDS

PIPE SIZE	B	C	D	E	F	G
1-1/4" & 1-1/2"	4"	4"	5"	5"	3"	3"
2"	5"	5"	7"	7"	5"	5"

- NOTES:
1. f'c = 3000 psi @ 28 DAYS.
 2. CARRY ALL BEARING SURFACE TO UNDISTURBED GROUND OR FIRM SUBGRADE.
 3. BUTTRESS SIZED FOR 150 PSI.
 4. DO NOT ENCASE JOINTS.



PRESSURE SEWER BLOCKING DETAILS
NOT TO SCALE



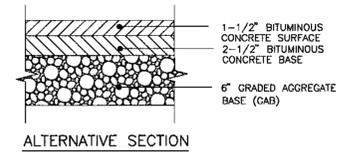
**ANCHORING PRESSURE SEWERS
(UPPER VERTICAL BENDS)**
NOT TO SCALE

BEND	L	W	D
1-1/4" - 1-1/2"	12"	12"	12"
11-1/4"	10"	10"	10"
22-1/2"	15"	15"	15"
45°	20"	20"	20"
	12"	12"	12"

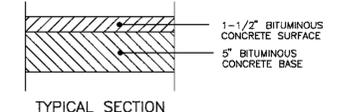
- NOTES:
1. PAINT EXPOSED GALVANIZE STRAPS WITH TWO(2) COATS OF BITUMINOUS PAINT.
 2. f'c = 3000 psi AT 28 DAYS.
 3. CARRY ALL BEARING SURFACE TO UNDISTURBED EARTH OR FIRM SUBGRADE.
 4. CONCRETE ANCHORAGE DIMENSIONS ARE BASED ON TOTAL PRESSURE OF 150 PSI.

BLOG. NO.	TOP ELEVATION	BOTTOM ELEVATION	TOTAL LENGTH	INLET ELEVATION	DISCHARGE ELEVATION	VOLUME OF CONCRETE FOR CONCRETE ANCHOR	REMARK
1	479.74	466.11	13.33'	468.78	469.36	76.6 CF.	MODEL NO. 2016 (DUPEX)

NOTE: SEE MANUFACTURER'S MANUAL FOR GRINDER PUMP INSTALLATION REQUIREMENT, PROCEDURE, AND ELECTRICAL CONNECTION.



ALTERNATIVE SECTION



TYPICAL SECTION

P-2 PAVEMENT DETAIL
NOT TO SCALE

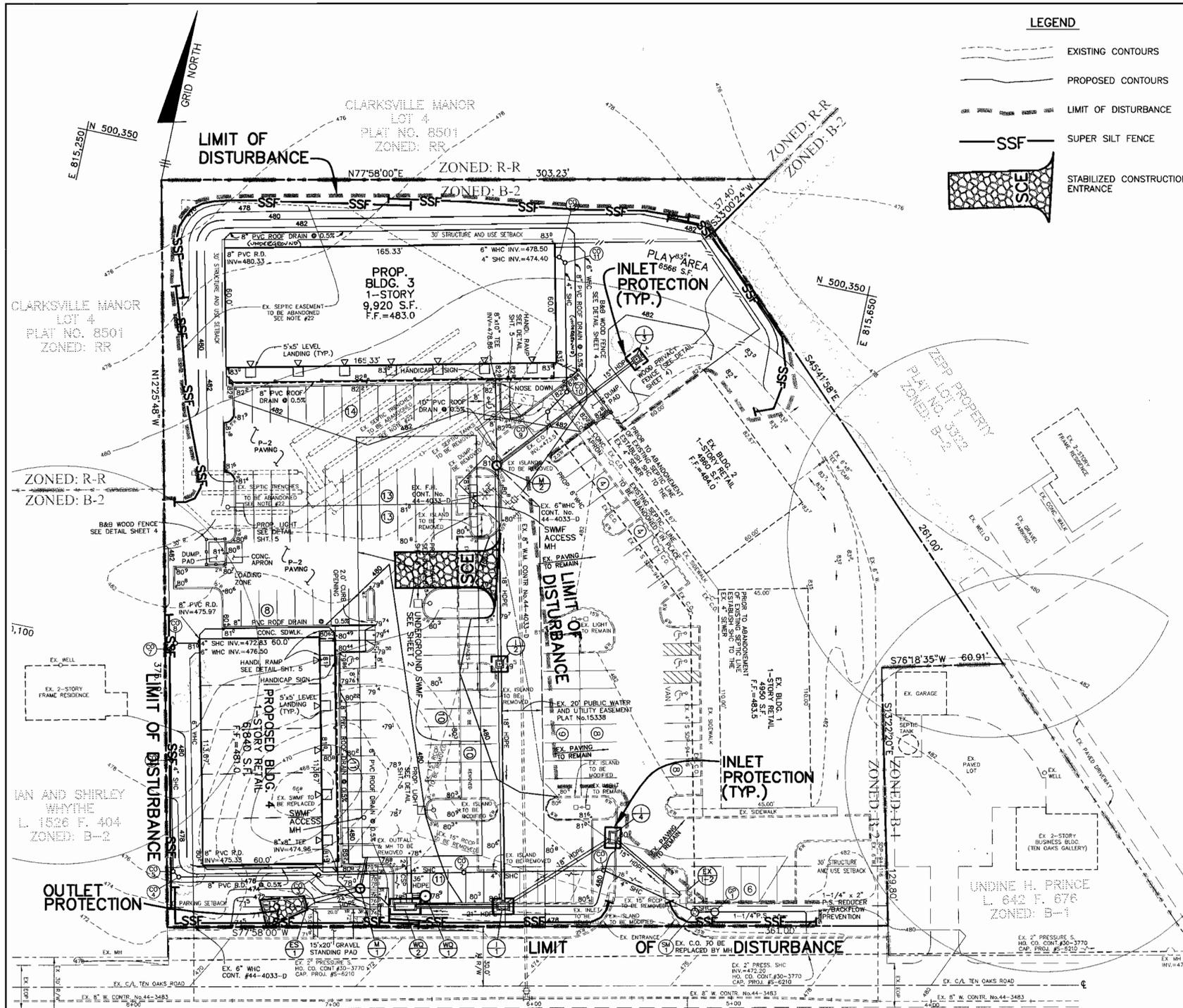
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 8/1/02 DATE

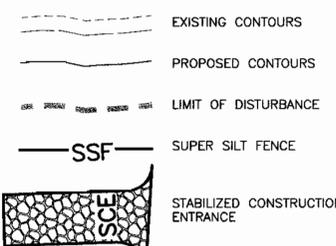
[Signature] 8/20/02 DATE

[Signature] 8/20/02 DATE

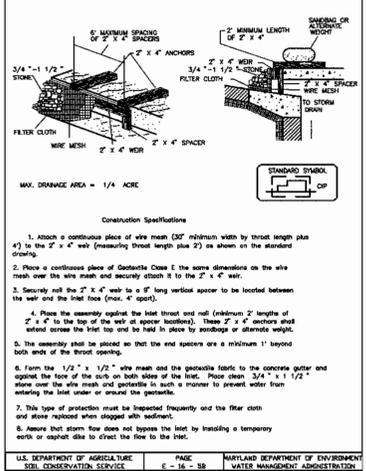
NO.		DATE		REVISION	
BENCHMARK ENGINEERS • LAND SURVEYORS • PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE • SUITE 418 ELLICOTT CITY, MARYLAND 21043 phone: 410-465-6105 • fax: 410-465-6644 email: Benchmark@cois.com					
OWNER/DEVELOPER:			PROJECT:		
LEWIS FAMILY, LLC			CLARKVILLE CENTER SHOPPING CENTER ADDITION BUILDINGS 3 AND 4		
LOCATION:			TAX MAP 34 - GRID 12 PARCEL 398 - 5th ELECTION DISTRICT CLARKVILLE MANOR LOT 2 (PLAT #15338) HOWARD COUNTY, MARYLAND		
TITLE:			WATER AND SEWER PROFILES & DETAILS		
DATE:		PROJECT NO.		SHEET	
JUNE, 2000		1327		5 OF 7	
JULY, 2002					
DESIGN: DAM			DRAFT: MCR/DBT		
CHECK: DAM			SCALE: AS SHOWN		



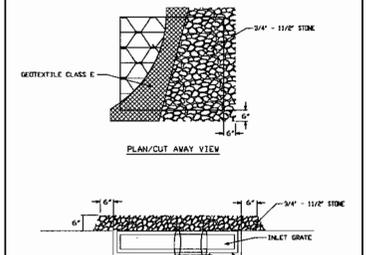
LEGEND



DETAIL 23C - CURB INLET PROTECTION (CDS OR CDS INLETS)



DETAIL 23B - AT GRADE INLET PROTECTION



TEMPORARY SEEDBED PREPARATION

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

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, 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 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (2.2 LBS/1000 SQ FT) FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQ FT) FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (9 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (9 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDBED PREPARATION

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 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. HARBOR OR DISC 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. HARBOR OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30, HARBOR OR DISC INTO UPPER THREE INCHES OF SOIL. SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (2.2 LBS/1000 SQ FT) FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQ FT) FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (9 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (9 GAL/1000 SQ FT) FOR ANCHORING.

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

STRUCTURE	D-50	LENGTH (L)	WIDTH (W)	THICKNESS (T)	SHA CLASS
ES-1	9.5'	20'	0' 0"	19"	I

OUTLET PROTECTION DETAIL

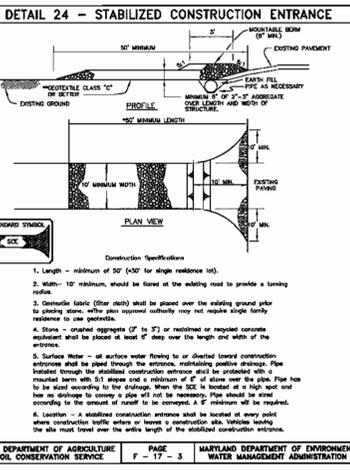
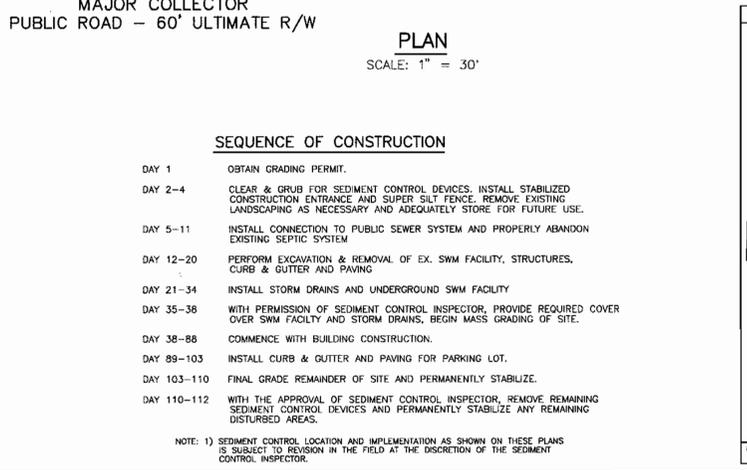
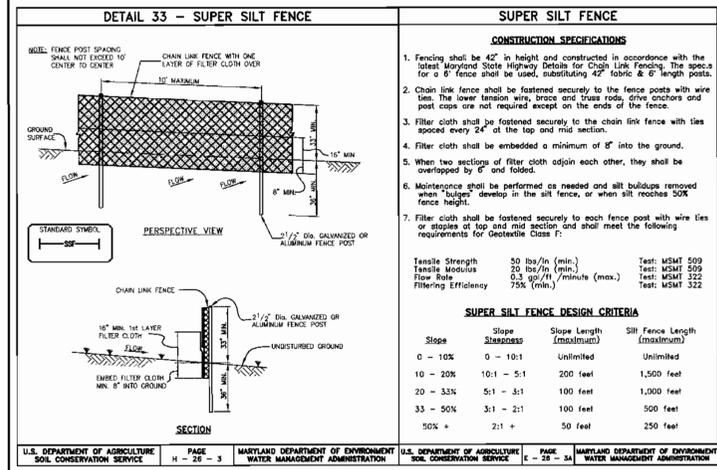


SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS SEDIMENT CONTROL DIVISION (410-333-1800) PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 17 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, Dikes, PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1. 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEDIMENTS (SEC. 21) SOO (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 - TOTAL AREA OF SITE: 3.00 ACRES
 - TOTAL AREA DISTURBED: 1.90 ACRES
 - AREA TO BE PROTECTED OR PAVED: 1.10 ACRES
 - AREA TO BE VEGETATIVELY STABILIZED: 0.95 ACRES
 - TOTAL CUT: 4200.00 CU. YDS.
 - TOTAL FILL: 7295.00 CU. YDS.
 - OFF-SITE BORROW: 32182.00
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MEASURES 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 REQUIRED UPON COMPLETION OF INSTALLATION OF PERMITTED EROSION AND SEDIMENT CONTROL MEASURES, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE APPLIED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILL AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY AN OFF-SITE BORROW AREA WITH AN APPROVED SEDIMENT CONTROL PLAN.

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

- Fillation
- Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.
- Grasses
- To provide a suitable medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil structure.
- 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. If for the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for concrete stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.
 - Topsoil salvaged from the existing site may be 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 Experiment Station.
 - Topsoil Specifications - Soil to be used as topsoil must include the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silty loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of children, stones, logs, coarse fragments, 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, quack grass, Johnson grass, nutgrass, pokeweed, ivy, tobacco, 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 over 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - 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 topsoil 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 soil 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 phytotoxic materials.
 - 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 1 - Vegetative Stabilization Methods and Materials.
 - Topsoil Application
 - When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
 - Grasses on the grass to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.
 - Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional 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 seeded preparation. G-21-2
 - 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 prescribed amendments and for sites having disturbed areas over 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of collection of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.



BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY POSSIBLE PERSONS INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY 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 AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE

APPROVED: MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT

NO. DATE REVISION

BENCHMARK ENGINEERS, LAND SURVEYORS & PLANNERS, INC.

8480 BALTIMORE NATIONAL PIKE SUITE 418
ELLCOTT CITY, MARYLAND 21043
phone: 410-465-8105 A fax: 410-465-6644
email: Benchmark@eais.com

OWNER/DEVELOPER: LEWIS FAMILY, LLC

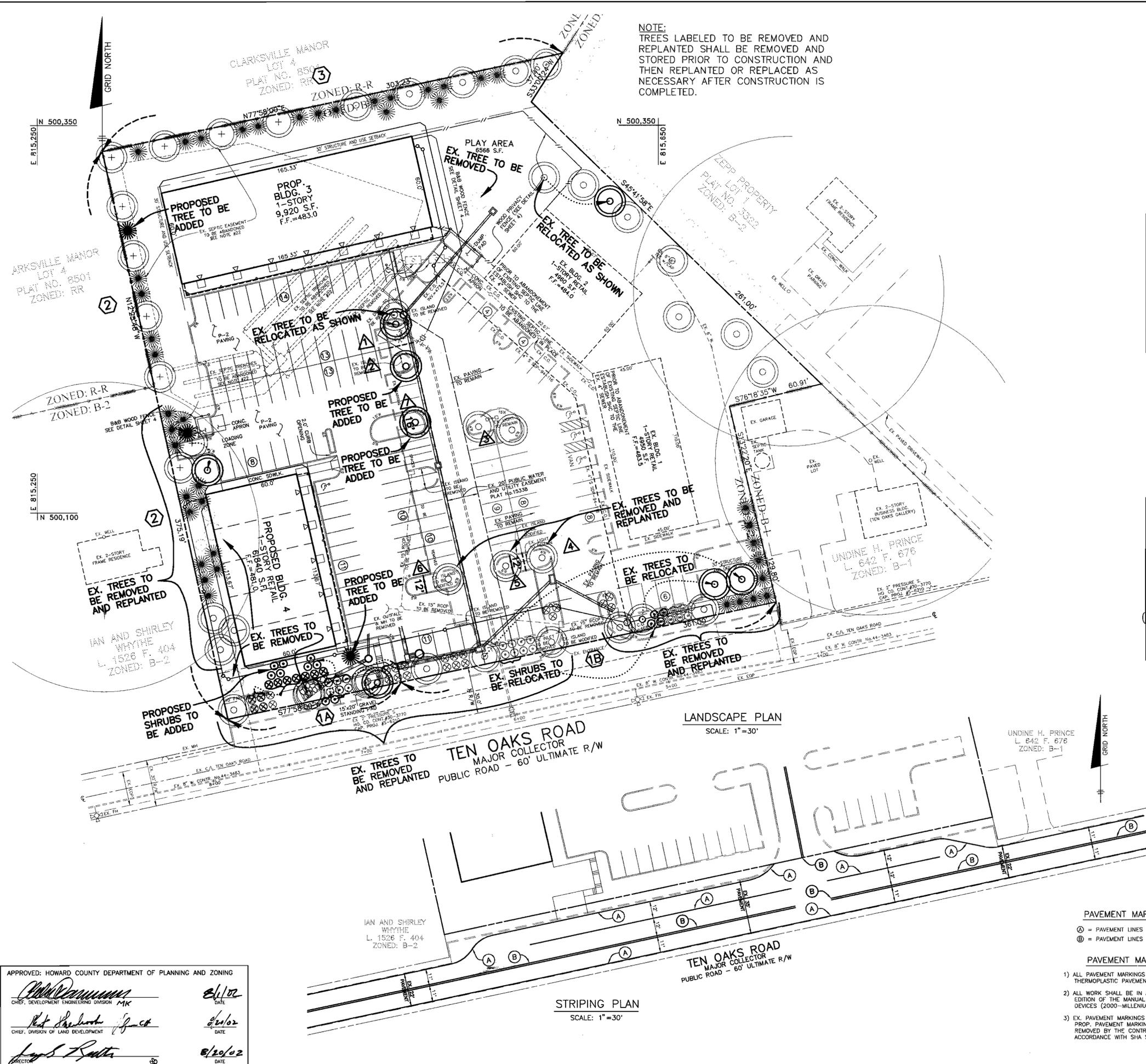
PROJECT: CLARKSVILLE CENTER SHOPPING CENTER ADDITION BUILDINGS 3 AND 4

LOCATION: TAX MAP 34 - GRID 12 PARCEL 398 - 5th ELECTION DISTRICT CLARKSVILLE MANOR LOT 2 (PLAT #15338) HOWARD COUNTY, MARYLAND

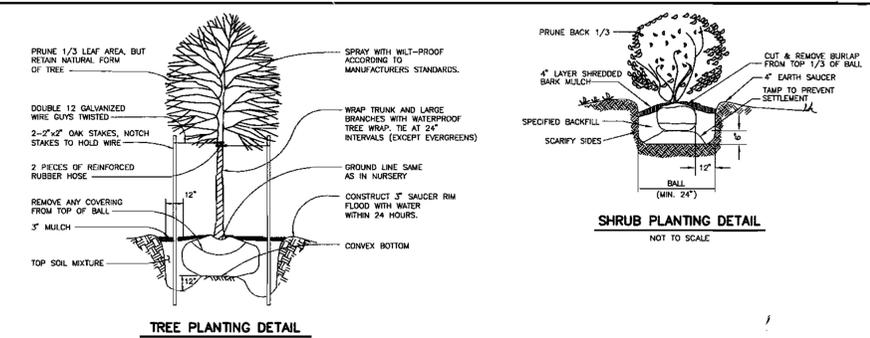
TITLE: SEDIMENT AND EROSION CONTROL NOTES & DETAILS

DATE: JUNE 2000 PROJECT NO. 1327
JULY 2002 SHEET 6 OF 7

DESIGN: DAM DRAFT: MCR/DBT CHECK: DAM SCALE: AS SHOWN



NOTE:
TREES LABELED TO BE REMOVED AND REPLANTED SHALL BE REMOVED AND STORED PRIOR TO CONSTRUCTION AND THEN REPLANTED OR REPLACED AS NECESSARY AFTER CONSTRUCTION IS COMPLETED.



SYMBOL	QUANTITY	NAME	REMARKS
(+)	10 EX. 0 PROP.	TILIA TOMENTOSA "SILVER LINDEN"	2 1/2" - 3" CAL. B&B FULL HEAD
(o)	30 EX. 1 PROP.	ACER RUBRUM "RED SUNSET"	2 1/2" - 3" CAL. B&B FULL HEAD
(*)	41 EX. 2 PROP.	PINUS STROBUS "EASTERN WHITE PINE"	6' TO 8' HT. UNSHAPE
(o)	20 EX. 4 PROP.	JUNIPERUS CHINENSIS FITZGERALDIANA COMPACTA "COMPACT PUTZER JUNIPER"	2' TO 2-1/2' HT.
(x)	24 EX. 0 PROP.	EUONYMUS ALTA COMPACTA "DWARF WINGED EUONYMUS"	2-1/2" - 3" HT.

CATEGORY	SCHEDULE A PERIMETER LANDSCAPE EDGE			
	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES	YES	NO
PERIMETER NO. / LANDSCAPE TYPE	(1A) B	(1B) E	(2) C	(3) C
LINEAR FEET OF PERIMETER (EVENING/PERIMETER)	114	247	375.19	303.22
CREDIT FOR EXISTING VEGETATION: (NO OR YES W/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 2 SHADE 4 EVER. 12 SHRUBS	YES 6 SHADE 4 EVER. 18 SHRUBS	YES	YES
CREDIT FOR WALL, FENCE OR BERM: (NO OR YES W/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED: SHADE TREES	2	6	10	8
EVERGREEN TREES	3	-	18	15
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-
SHRUBS	62	-	-	-
NUMBER OF PLANTS PROVIDED: SHADE TREES	2 EX.	6 EX.	10 EX.	8 EX.
EVERGREEN TREES	1 PROP.	4 EX.	18 EX.	16 EX.
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	16 EX.	22 EX.	-	-
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	4 PROP.	-	-	-

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF ISLANDS REQUIRED:	129
NUMBER OF ISLANDS REQUIRED: 1 PER 20 SPACES	7
NUMBER OF TREES REQUIRED: 1 PER 20 SPACES	7
NUMBER OF TREES PROVIDED: SHADE TREES	7
OTHER TREES (2:1 SUBSTITUTION)	0
SHRUBS (10:1 SUBSTITUTION)	0

DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE IN ACCORDANCE WITH THE PLAN, SECTION 16.12A OF THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATE OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

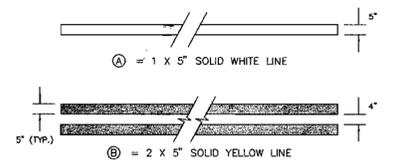
Timothy Lewis 7/19/02
DEVELOPER/BUILDER
TIMOTHY LEWIS
LEWIS FAMILY LLC
MANAGING MEMBER
DATE

NOTES:
1. FINANCIAL SURETY FOR THE LANDSCAPING IN THE AMOUNT OF \$720.00 HAS BEEN MADE A PART OF THE DEVELOPER AGREEMENT.
SUBSTITUTIONS: PERIMETER 1A-20 SHRUBS IN LIEU OF 2 EVERGREENS
PERIMETER 1B-4 EVERGREENS IN LIEU OF 40 SHRUBS

SURETY ESTIMATE
1 SHADE TREE @ \$300/EA. = \$300
2 EVERGREEN @ \$150/EA. = \$300
4 SHRUBS @ \$30/EA. = \$120
TOTAL = \$720

2. EXISTING TREES PLANTED AS PART OF SDP-84-116 SHALL BE REMOVED AND REPLANTED WHERE REQUIRED OR NECESSARY

3. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT, REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF THE LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.



LANDSCAPE PLAN
SCALE: 1" = 30'

STRIPING PLAN
SCALE: 1" = 30'

PAVEMENT MARKING LEGEND
ⓐ = PAVEMENT LINES - 5" WHITE SOLID
ⓑ = PAVEMENT LINES - 5" DOUBLE YELLOW SOLID

PAVEMENT MARKING NOTES
1) ALL PAVEMENT MARKINGS TO BE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS.
2) ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (2000-MILLENNIUM EDITION)
3) EX. PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH THE PROP. PAVEMENT MARKINGS FOR THIS CONTRACT WILL BE REMOVED BY THE CONTRACTOR BY SLURRY SEAL IN ACCORDANCE WITH SHA STANDARD SPECIFICATIONS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chad Williams 8/1/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Rob Sheehy 8/2/02
CHIEF, DIVISION OF LAND DEVELOPMENT
Joseph Sutter 8/20/02
DIRECTOR

REVISED "GREENSPIRE" TO "DWARF WINGED EUONYMUS"	
NO.	DATE
BENCHMARK ENGINEERING, INC.	
ENGINEERS • LAND SURVEYORS • PLANNERS	
8480 BALTIMORE NATIONAL PIKE • SUITE 418 ELLCOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 • FAX: 410-465-6644 EMAIL: Benchmark@ccis.com	
OWNER/DEVELOPER: LEWIS FAMILY, LLC	PROJECT: CLARKSVILLE CENTER SHOPPING CENTER ADDITION BUILDINGS 3 AND 4
LOCATION: 6005 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029 410-531-3813	TAX MAP 34 - GRID 12 PARCEL 398 - 5th ELECTION DISTRICT CLARKSVILLE MANOR LOT 2 (PLAT #15338) HOWARD COUNTY, MARYLAND
TITLE: LANDSCAPING PLAN AND STRIPING PLAN	
DATE: JUNE, 2000 JULY, 2002	PROJECT NO. 1327
DESIGN: DAM DRAFT: MCR/DBT CHECK: DAM	SCALE: AS SHOWN SHEET 7 OF 7