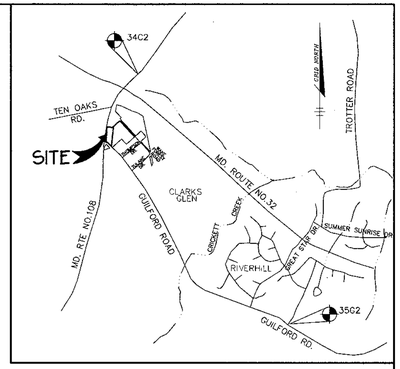
	SHEET INDEX
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	GRADING, SEDIMENT CONTROL & DRAINAGE AREA PLAN
4	PROFILES AND DETAILS
5	DETAILS & NOTES
6	BAYSAVER, DETAILS & NOTES
7	STORMWATER MANAGEMENT NOTES & DETAILS
8	LANDSCAPING PLAN, NOTES AND DETAILS

SITE DEVELOPMENT PLAN
CLARKS GLEN NORTH
PARCEL B-1
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE : 1" = 2000'

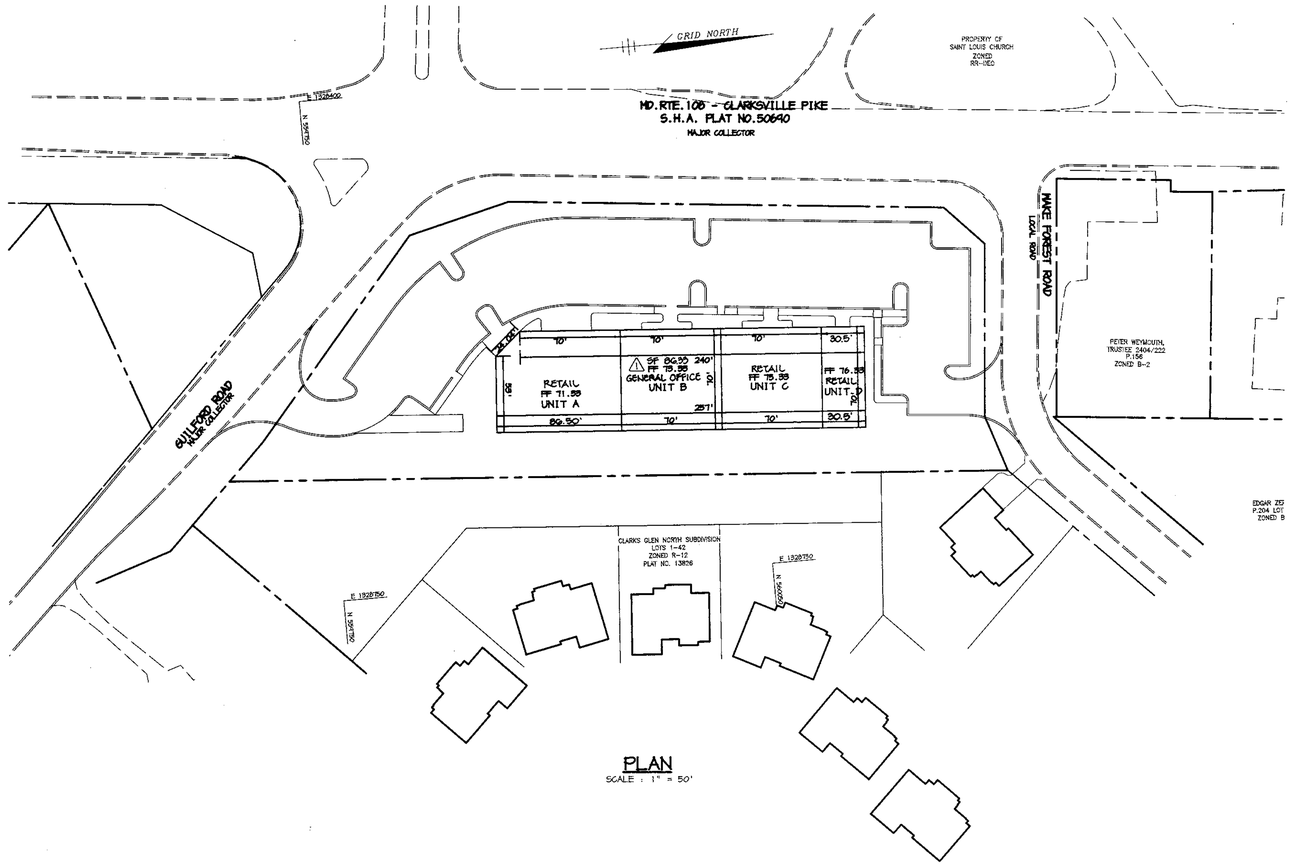
BENCHMARKS

BMR1
HOWARD COUNTY SURVEY CONTROL STATION: 34C2
N 562,322.972 E 1,324,753.353
ELEV. 475.76 FT.

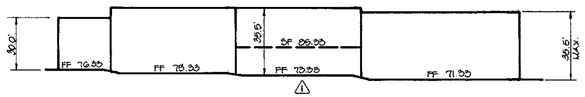
BMR2
HOWARD COUNTY SURVEY CONTROL STATION: 35G2
N 554,966.770 E 1,332,937.606
ELEV. 371.60 FT.

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AY LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. 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.
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY WINGS MAPPING, INC. DATED JANUARY, 1997 IN ADDITION TO THE FINAL ROAD CONSTRUCTION PLANS.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 41GC AND 41GA WERE USED FOR THIS PROJECT.
8. WATER IS PUBLIC. CONTRACT NO. 34-3669-D .
9. SEWER IS PUBLIC. SEWER DRAINAGE AREA: MIDDLE PATUXENT CONTRACT NO. 30-3690-D .
10. THE STORMWATER MANAGEMENT QUANTITY AND WATER QUALITY PROPOSED FOR THIS SITE WILL BE ACHIEVED VIA AN UNDERGROUND DETENTION FACILITY AND BAYSAVERS AND WILL BE PRIVATELY MAINTAINED.
11. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
12. A 100-YEAR FLOODPLAIN STUDY IS NOT REQUIRED FOR THIS PROJECT.
13. THERE ARE NO WETLANDS ON THIS SITE.
14. A CHAPTER 5 TRAFFIC STUDY HAS BEEN PREPARED BY THE LEE CUNNINGHAM & ASSOCIATES, INC. DATED APRIL 1999.
15. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
16. A GEOTECHNICAL STUDY HAS BEEN PREPARED BY ECS INC., APRIL 1999.
17. THE BOUNDARY SURVEY FOR THIS PROJECT HAS BEEN PREPARED BY RIEMER MUEGGE & ASSOC., JULY 1997.
18. SUBJECT PROPERTY ZONED B-2 PER 10-18-93 COMPREHENSIVE ZONING PLAN.
19. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
20. SEE DEPARTMENT OF PLANNING AND ZONING FILE NOs F-99-52, P-98-20, S-97-15, F-00-121
21. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
22. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
23. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
24. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
25. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
26. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
27. ALL PIPE ELEVATIONS SHOWN ARE INVERT ⌀ ELEVATIONS.
28. PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
29. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.
30. THE PAVEMENT DETAILS SHOWN FOR THIS SITE REFLECT THE HOWARD COUNTY STANDARD PAVEMENT SECTIONS AND ARE NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE.
31. FOREST CONSERVATION REQUIREMENTS FOR THIS PARCEL WERE MET UNDER F-99-52.
32. ALL OUTDOOR LIGHTING SHALL COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.



PLAN
SCALE : 1" = 50'



BUILDING ELEVATION
(NOT TO SCALE)

⚠ SITE TABULATION

BUILDING AREA/USE	FIRST FLOOR: 12,946 SF/RETAIL 4,900 SF/ GENERAL OFFICE TOTAL: 17,846 SF SECOND FLOOR: 4,000 SF/GENERAL OFFICE TOTAL RETAIL: 12,946 SF TOTAL GENERAL OFFICE: 8900 SF
TOTAL AREA	1.954 AC. (85,131 SF)
CURRENT ZONING	B-2
PROPOSED USE	RETAIL / GENERAL OFFICE
BUILDING COVERAGE	17,846 SQ.FT. (21% OF SITE)
REQUIRED PARKING	
RETAIL	5 SPACES PER/1000 SF* = 65 SPACES
GENERAL OFFICE	3.3 SPACES PER/1000 SF* = 30 SPACES
	TOTAL 95 SPACES
PROPOSED PARKING	96 SPACES (INCLUDES 5 HC SPACES)
PAVED AREA	16,702 SF (19.6%OF SITE)

* PER HOWARD COUNTY ZONING REGULATIONS SECTION 133

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE 3/13/00

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 3/24/00

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3/16/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/22/00

DATE	NO.	REVISION
6-12-00	⚠	REVISED ELEVATION & SITE TABULATION & ADDRESS

OWNER / DEVELOPER

WILBEN L.L.L.P
c/o ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

PROJECT
CLARKS GLEN NORTH
PARCEL B-1

AREA
PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE
TITLE SHEET

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING ● ENVIRONMENTAL SERVICES ● PLANNING ● SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

ADDRESS CHART

PARCEL	STREET ADDRESS
B-1	⚠ 12345 WAKE FOREST ROAD

SUBDIVISION NAME:			SECT./AREA:	PARCEL:	
CLARKS GLEN NORTH				B-1	
PLAT #:	BLOCK #:	ZONE:	TAX MAP NO.:	ELECT. DIST.	CENSUS TRACT:
14145	12	B-2	34	5 TH	6055
WATER CODE:			SEWER CODE:		
I-11			6650000		

DATE

STATE OF MARYLAND — ARTHUR E. MUEGGE — NO. 8707 — REGISTERED PROFESSIONAL ENGINEER

ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY:	D.R.D.
PROJECT NO :	99032 SDP1.DWG
DATE :	FEBRUARY 18, 2000
SCALE :	AS SHOWN
DRAWING NO.	1 OF 8

SDP-99-125

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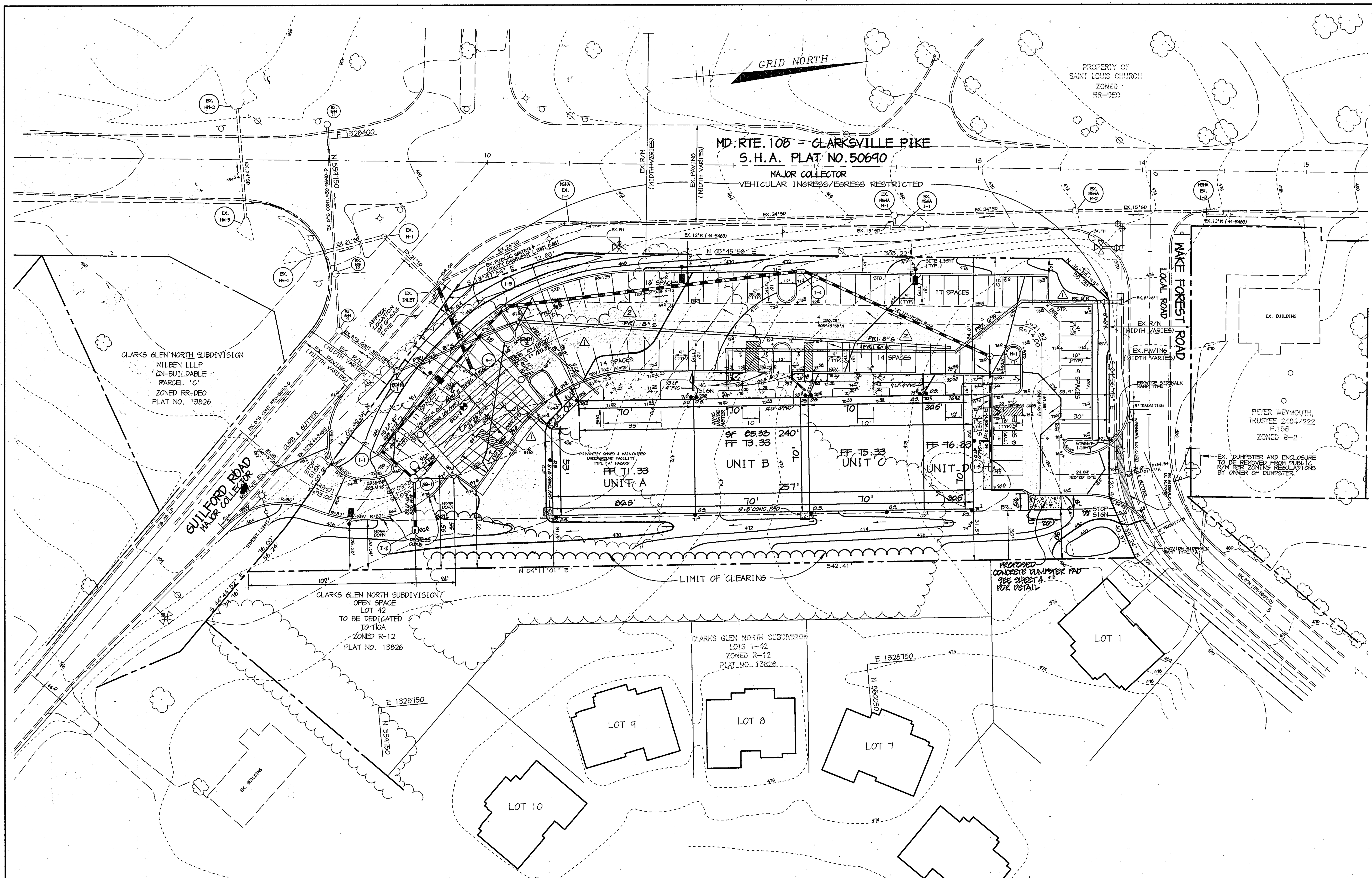

LEGEND

- P-1 PAVING
- P-2 PAVING
- STREET LIGHT-SEE NOTE
- SITE LIGHT (SINGLE)-SEE NOTE

NOTES:

1. 250-WATT HPS VAPOR PENDANT FIXTURE(CUTOFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM POINTED TOWARDS CENTER OF INTERSECTION AT BOTH ENTRANCES. AT THE GUILFORD ROAD ENTRANCE FROM GUILFORD ROAD, DRIVEWAY STATION 0=35, 28 FT. RT., AND FROM WAKE FOREST ROAD, DRIVEWAY STATION 0=25, 20FT. RT.
2. ALL LIGHTING SHALL COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.
3. ALL CURB RADII ARE 5' UNLESS OTHERWISE LABELED.
4. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE LABELED.
5. * INDICATES TRANSITION FROM STANDARD 7" CURB & GUTTER TO REVERSE 7" CURB & GUTTER AND VICE-VERSA.
6. UNDERGROUND STORMWATER MANAGEMENT PIPES TO BE ALUMINIZED CORRUGATED METAL PIPE TYPE II 12 GA.

OPERATION AND MAINTENANCE SCHEDULE FOR BAYSAVER UNITS

1. Baysaver structures will require periodic inspection and cleaning to maintain operation and function. Owners will have the Baysaver unit inspected yearly or as required by Howard County, utilizing the Baysaver units Inspection/Monitoring Form. Inspections can be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When sediment depths exceed the specified level (Table 6 of Technical Manual) then cleaning of the unit is required.
2. Baysaver structures must be checked and cleaned immediately after petroleum spills. Contact appropriate regulatory agencies.
3. Maintenance of Baysaver units should be done by a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons, and other materials in the unit. The proper cleaning and disposal of the removed materials and liquid must be followed.
4. Inlet and outlet pipes must be checked for any obstructions and if any obstructions are found they must be removed. Structural parts of the Baysaver will be repaired as needed.
5. Owner shall retain and make Baysaver units Inspection/Monitoring Forms available to Howard County officials upon their request.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND STORMWATER MANAGEMENT FACILITY

1. Underground structures will require periodic inspection and cleaning to maintain operation and function. Owners will have the underground structures inspected yearly or as required by Howard County, utilizing the underground units Inspection/Monitoring Form. Inspections can be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When sediment depths exceed 5"then cleaning of the structures is required.
2. Underground facility structures must be checked and cleaned immediately after petroleum spills. Contact appropriate regulatory agencies.
3. Maintenance of undeground structures should be done by a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons, and other materials in the unit. The proper cleaning and disposal of the removed materials and liquid must be followed.
4. Inlet and outlet pipes must be checked for any obstructions and if any obstructions are found they must be removed. Structural parts of the underground facility will be repaired as needed.
5. Owner shall retain and make underground facility Inspection/Monitoring Forms available to Howard County officials upon their request.

UNDERGROUND SWMF DESIGN SUMMARY: 2.27 AC.

DESIGN STORM (YR.)	*ALLOWABLE RELEASE (C.F.S.)	FACILITY INFLOW (C.F.S.)	FACILITY DISCHARGE (C.F.S.)	WATER SURFACE ELEVATION (FT.)	STORAGE VOLUME (C.F)	REMARKS
2	4.53	6.90	△1 2.43	462.11	4,050	
10	10.78	13.12	△1 8.77	464.31	7,480	

*ALLOWABLE RELEASE IS EQUAL TO THE EXISTING DISCHARGE AT DESIGN POINT MINUS THE UNROUTED DISCHARGE.

NO.	REVISION	DATE
3	RELOCATE DUMPSTER PAD FROM AREA BY UNIT 'A' TO AREA ADJACENT UNIT 'D'	3/31/11

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE 3/13/00

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 3/24/00

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3/6/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/22/00

DATE	NO.	REVISION
3·30·01	△2	MODIFIED PRIVATE WATER & SEWER LAYOUT
6·18·00	△1	REV. STORM DRAIN, SWM, SHC, WHC & SWM DESIGN SUMMARY CHART

OWNER / DEVELOPER

WILBEN LLLP
c/o ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

PROJECT **CLARKS GLEN NORTH**
PARCEL B-1

AREA
PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE
SITE DEVELOPMENT PLAN

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE

STATE OF MARYLAND — ARTHUR E. MUEGGE III — NO. 8707 REGISTERED PROFESSIONAL ENGINEER

ARTHUR E. MUEGGE #8707

DESIGNED BY : C.J.R.
DRAWN BY: D.R.D.
PROJECT NO : 99032 SDP2.DWG
DATE : FEBRUARY 18, 2000
SCALE : 1" = 30'
DRAWING NO. 2 OF 8

SDP-99-125

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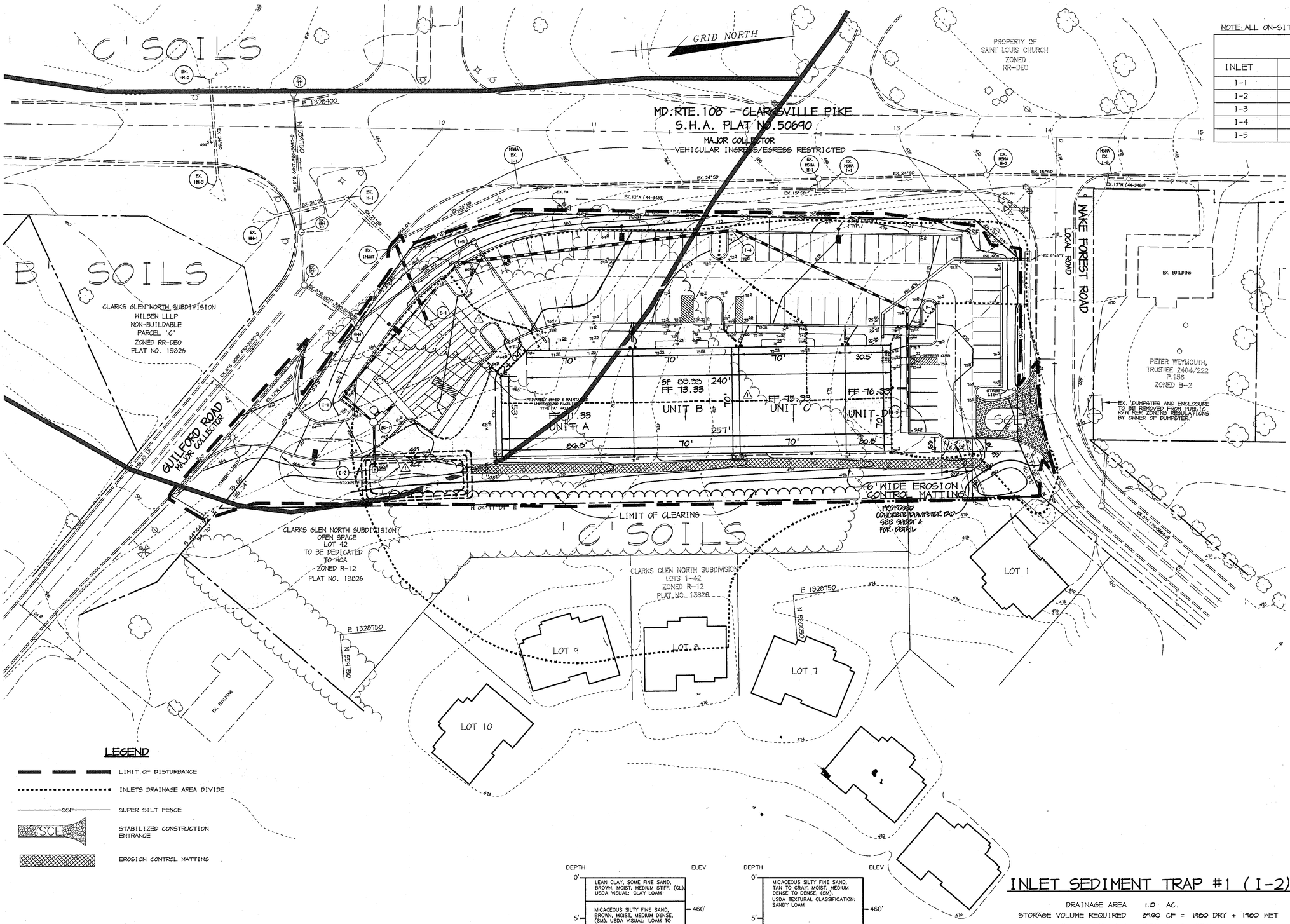
NOTE: ALL ON-SITE SOILS ARE ASSUMED TYPE "C" DUE TO MASS GRADING.

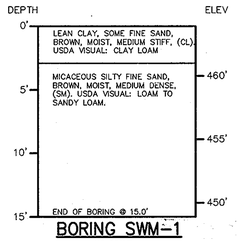
DRAINAGE CHART

INLET	DRAINAGE AREA (AC)	%IMP	'C'
I-1	0.13	92%	0.85
I-2	1.10	17%	0.81
I-3	0.43	90%	0.85
I-4	0.35	94%	0.84
I-5	0.24	58%	0.50

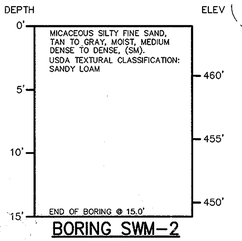


LEGEND

- LIMIT OF DISTURBANCE
- INLETS DRAINAGE AREA DIVIDE
- SSF — SUPER SILT FENCE
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL MATTING



BORING SWM-1
NO SCALE



BORING SWM-2
NO SCALE

INLET SEDIMENT TRAP #1 (I-2)

DRAINAGE AREA	1.10 AC.
STORAGE VOLUME REQUIRED	3960 CF = 1980 DRY + 1980 WET
WET STORAGE PROVIDED	1980 CF @ 466.2
DRY STORAGE PROVIDED	1980 CF @ 466.3
TOP OF WEIR	466.8
BOTTOM ELEVATION	464.0
BOTTOM DIMENSION	60'x20'
CLEANOUT ELEVATION	465.0
SIDE SLOPES	2:1
DEWATERING PIPE DRAWDOWN ELEVATION	465.2

NO.	REVISION	DATE
3	RELOCATE DUMPSTER PAD FROM AREA BY UNIT 'A' TO AREA ADJACENT UNIT 'D'	3/21/11

BY THE DEVELOPER :

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

DEVELOPER — DATE 2.18.00

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 SOIL CONSERVATION DISTRICT.

ENGINEER — DATE 2.18.00

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

NATURAL RESOURCES CONSERVATION SERVICE — DATE 3-2-00

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 3/2/00

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE 3/13/00

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 3/24/00

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3/16/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/22/00

DATE	NO.	REVISION
6.16.00	1	REV. UTILITIES, TRAP #1 & DRAINAGE AREAS

OWNER / DEVELOPER

WILBEN LLLP
c/o ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

PROJECT: CLARKS GLEN NORTH
PARCEL B-1

AREA: PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: GRADING, SEDIMENT CONTROL & DRAINAGE AREA PLAN

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE

STATE OF MARYLAND — ARTHUR E. MUEGGE — NO. 8707 — REGISTERED PROFESSIONAL ENGINEER

ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY:	D.R.D.
PROJECT NO :	99032 SDP3.DWG
DATE :	FEBRUARY 18, 2000
SCALE :	1" = 30'
DRAWING NO.	3 OF 8

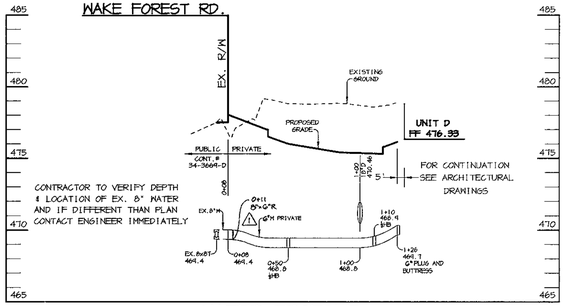
SDP-99-125

F:\PROJECT\99032\SDP3.DWG Tue Feb 15 13:54:51 2000 RMA

STRUCTURE SCHEDULE

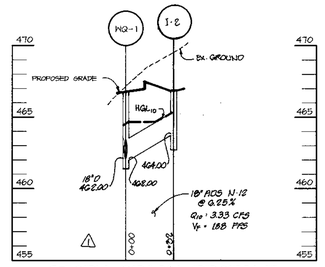
STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	INSIDE DIMENSION	REMARKS
I-1	A-5	✳ N 559,766.18 E 1,328,543.35	462.05	462.15	465.8	3'-5"x2'-7"	HOCO STD. DETAIL SD 4.01
I-2	⚠1 K	SEE PLAN	-	464.00	466.8	3'-0" x 3'-0"	HOCO STD. DETAIL SD 4.12
I-3	A-5	✳ N 559,849.39 E 1,328,514.15	464.27	464.17	467.6	2'-6"x5'-0"	HOCO STD. DETAIL SD 4.01
I-4	A-5	✳ N 560,030.77 E 1,328,507.85	468.14	467.84	471.7	2'-6"x5'-0"	HOCO STD. DETAIL SD 4.01
I-5	A-5	✳ N 560,137.42 E 1,328,636.42	-	471.25	475.08	2'-6"x5'-0"	HOCO STD. DETAIL SD 4.01
M-1	4' MH	✳ N 560,141.32 E 1,328,568.51	470.91	470.66	475.8	-	HOCO STD. DETAIL SD 5.12
WQ-1	BAYSAVER	SEE PLAN ⚠	-	-	466.8	-	SEE DETAIL SHEET 6
S-1	CONTROL STRUCTURE	✳ N 559,825.67 E 1,328,549.82	-	-	467.5	-	SEE DETAIL SHEET 7

NOTES: ✳ LOCATION OF "S" AND MANHOLES IS AT CENTER OF TOP COVER; FOR "A" INLETS LOCATION IS GIVEN FOR CENTER OF THROAT OPENING AT FACE OF CURB. TOP ELEVATION IS TOP OF CURB/GRATE/RIM.



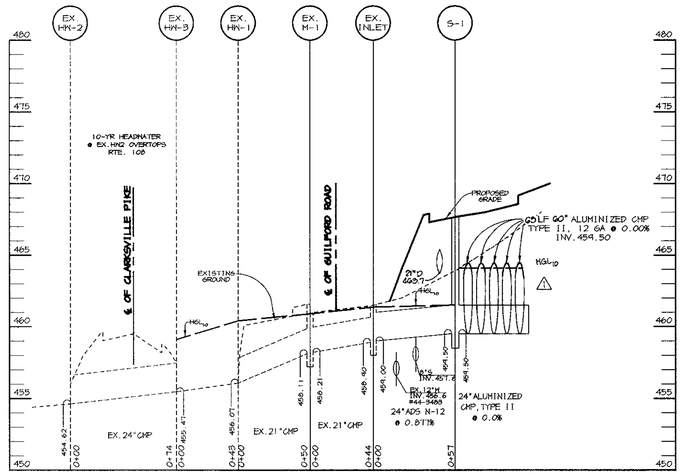
WATER PROFILE

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



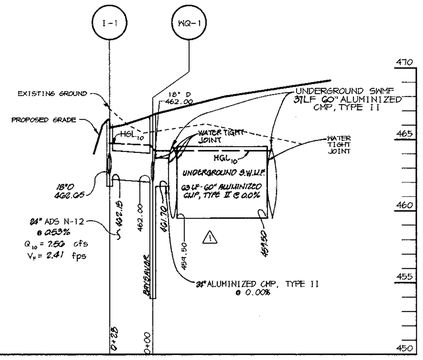
STORM DRAIN PROFILE

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



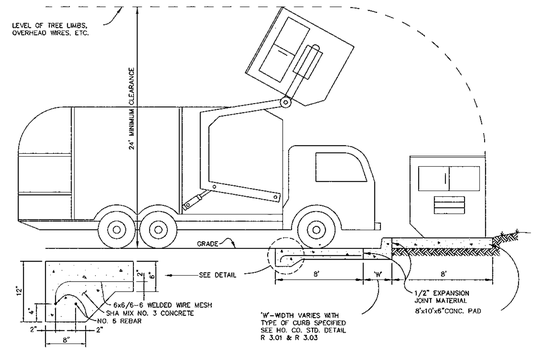
STORM DRAIN PROFILE

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



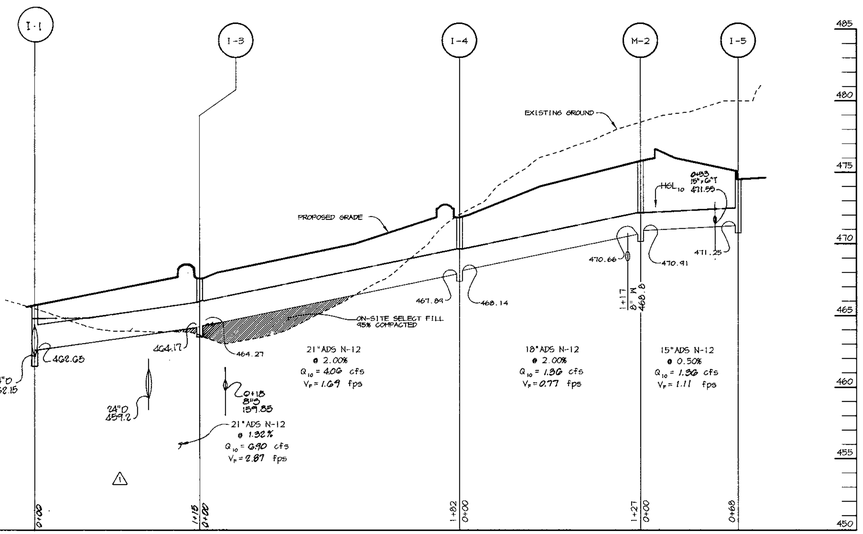
STORM DRAIN PROFILE

1"=50' HOR.
1"=5' VERT.



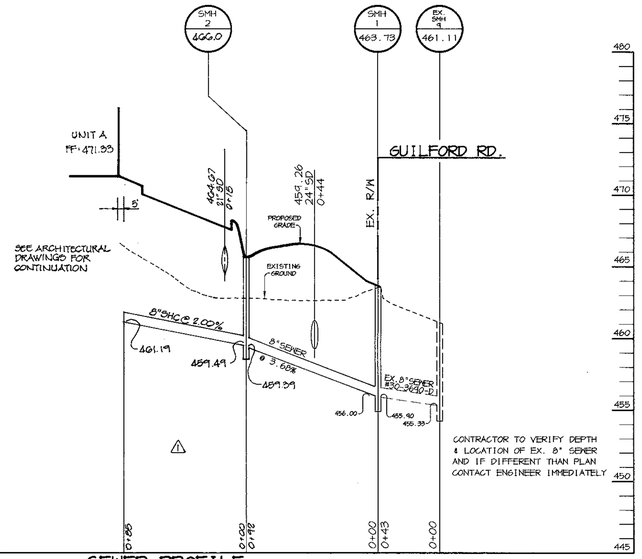
DUMPSTER PAD

NO SCALE



STORM DRAIN PROFILE

1"=50' HOR.
1"=5' VERT.



SEWER PROFILE

1"=50' HOR.
1"=5' VERT.

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE 3/13/00

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 3/24/00

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3/6/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/24/00

DATE	NO.	REVISION
6-18-00	⚠	REV. PROFILES & SCHEDULE

OWNER / DEVELOPER

MILBEN LLLP
c/o ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

PROJECT
CLARKS GLEN NORTH
PARCEL B-1

AREA
PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE
PROFILES & DETAILS SHEET

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE

STATE OF MARYLAND — ARTHUR E. MUEGGE — NO. 8707 REGISTERED PROFESSIONAL ENGINEER

ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY:	D.R.D.
PROJECT NO :	99032 SDP4.DNG
DATE :	FEBRUARY 18, 2000
SCALE :	AS SHOWN
DRAWING NO.	4 OF 8

SDP-99-125

F:\PROJECT\99032\SDP4.DWG Tue Feb 15 13:56:07 2000 RMA

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed Preparation : Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

Soil Amendments : Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.).

Seeding : For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation : Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

Soil Amendments : In lieu of soil test recommendations, use one of the following schedules :

1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).

2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding : For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options :

1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.

2) Use sod.

3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Maintenance : Inspect all seeded areas and make needed repairs, replacements and reseedings.

STANDARD SEDIMENT CONTROL NOTES

1. 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).
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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. I, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. 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 SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHED OF GRASSES.
6. 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.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	1.954 ACRES
AREA DISTURBED	1.99 ACRES
AREA TO BE ROOFED OR PAVED	1.2 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.79 ACRES
TOTAL CUT	11000 CU. YARDS
TOTAL FILL	11000 CU. YARDS
OFFSITE WASTE/BORROW AREA LOCATION	

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
12. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
13. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
14. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SUPER SILT FENCE. (2 DAYS)
3. WITH PERMISSION OF HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR, PERFORM ROUGH GRADING. (3 WEEKS)
4. INSTALL BAYSAVERS AND UNDERGROUND STORMWATER MANAGEMENT SYSTEM. (3 WEEKS)
5. BEGIN BUILDING CONSTRUCTION.
6. AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL UTILITIES, SEWER, WATER AND STORM DRAINS. INSTALL INLET TRAP AT INLET 2. (3 WEEKS)
7. INSTALL CURB AND GUTTER, LIGHT POLES, THEN PAVE. (2 WEEKS)
8. APPLY TOPSOIL AND STABILIZE DISTURBED AREAS AS NECESSARY IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (3 DAYS)
9. UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR REMOVE TRAP AT INLET 2. COMPLETE DUMPSTER ENCLOSURE, ANY PIPING, PAVING AND CURB AND GUTTER AFFECTED. (1 WEEK)
10. INSTALL LANDSCAPING AND SIDEWALKS. (3 WEEKS)
9. UPON APPROVAL OF HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 DAYS)

21.0 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

I. This practice is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. 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.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.

II. 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

I. 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 Experimentation Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. Topsol shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½" in diameter.

ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

iii. Where 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:

i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:

i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

a. 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.
b. Organic content of topsoil shall be not less than 1.5 percent by weight.
c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes to 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.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. 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.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

iii. 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 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.

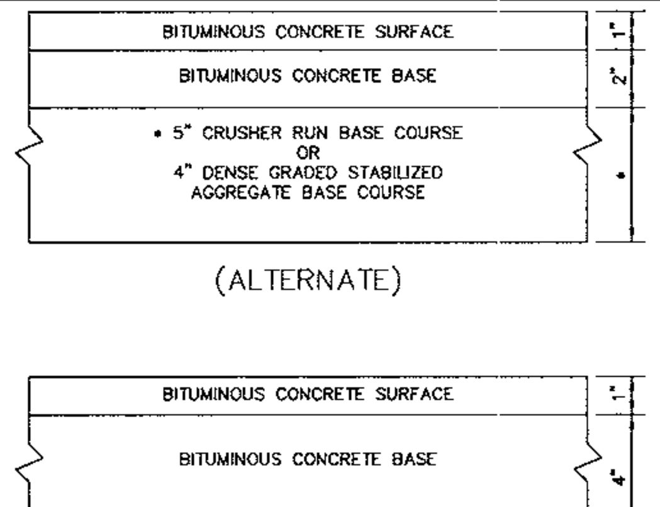
iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. 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:

i. 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 site having disturbed areas under 5 acres shall conform to the following requirements:

a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
b. 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.
c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
d. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

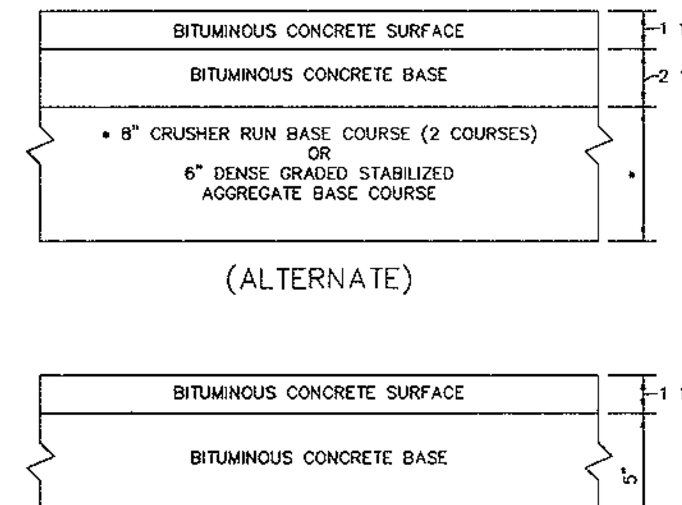
References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.



HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTUCTION (DRAWING R-2.01)

P-1 PAVING

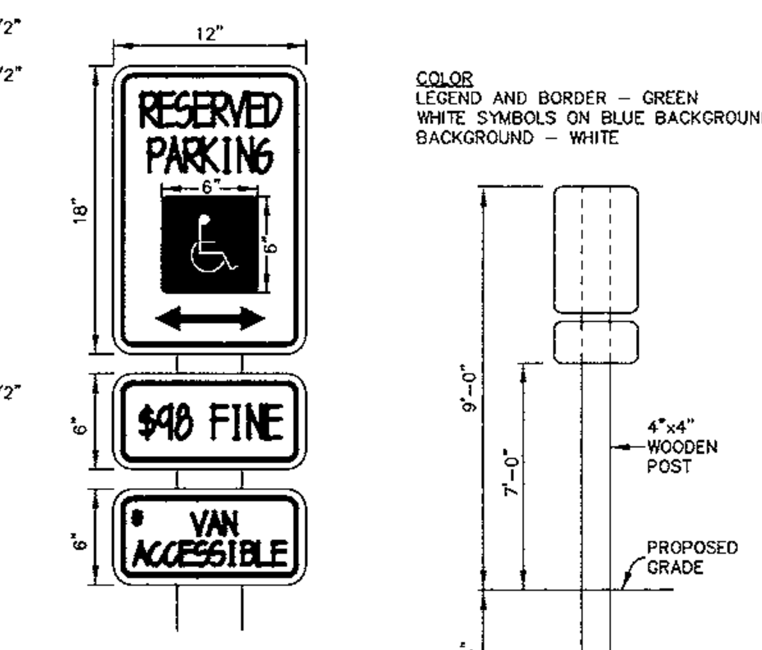
NO SCALE



HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-2 PAVING

NO SCALE



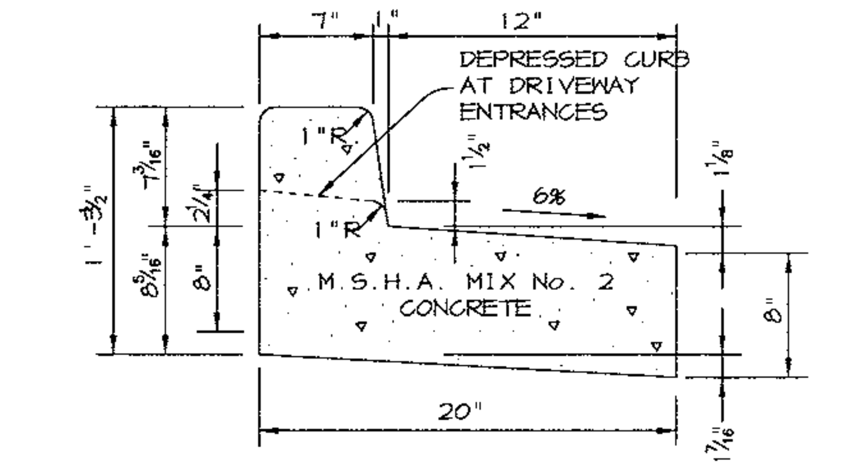
COLOR
LEGEND AND BORDER – GREEN
WHITE SYMBOLS ON BLUE BACKGROUND
BACKGROUND – WHITE

* FOR VAN ACCESSIBLE SPACES ONLY. SEE PLAN FOR LOCATION.

NOTE
DISTANCE FROM GROUND TO BOTTOM OF SIGN TO BE 7'.

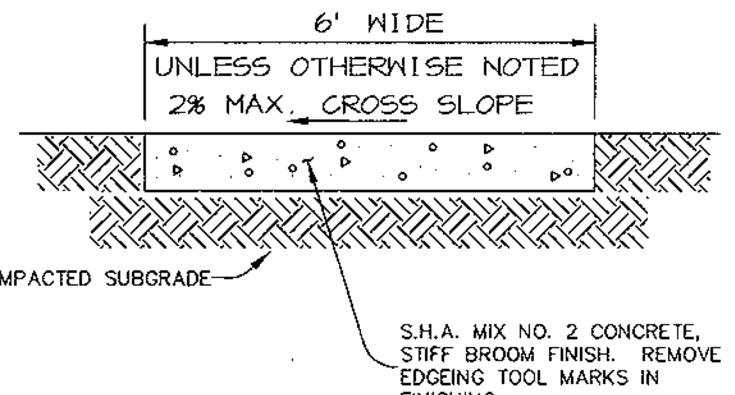
HANDICAP SIGN DETAIL

NO SCALE



REVERSE 7" COMBINATION CURB AND GUTTER

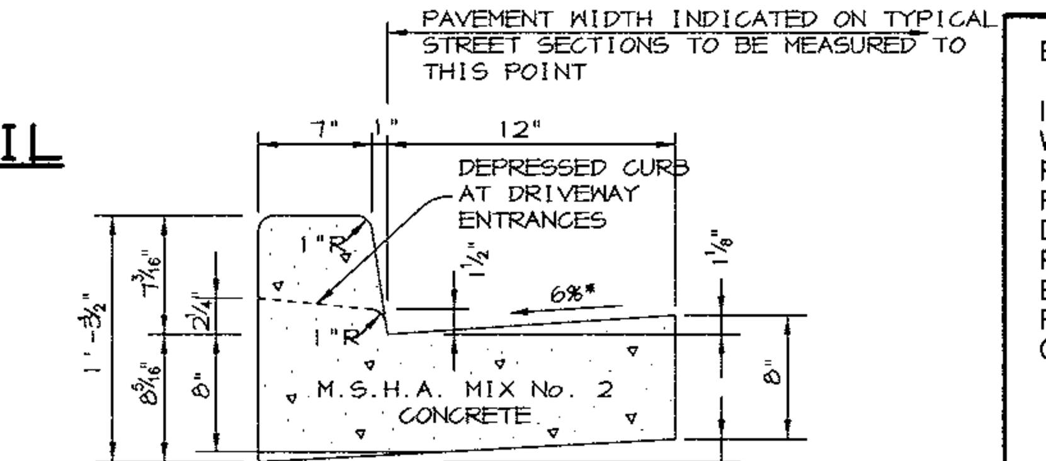
NO SCALE



NOTES :
PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.)
PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES.

SIDEWALK DETAIL

NO SCALE



HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01).

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

STANDARD 7" COMBINATION CURB AND GUTTER

NO SCALE

EROSION CONTROL MATTING

Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
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 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

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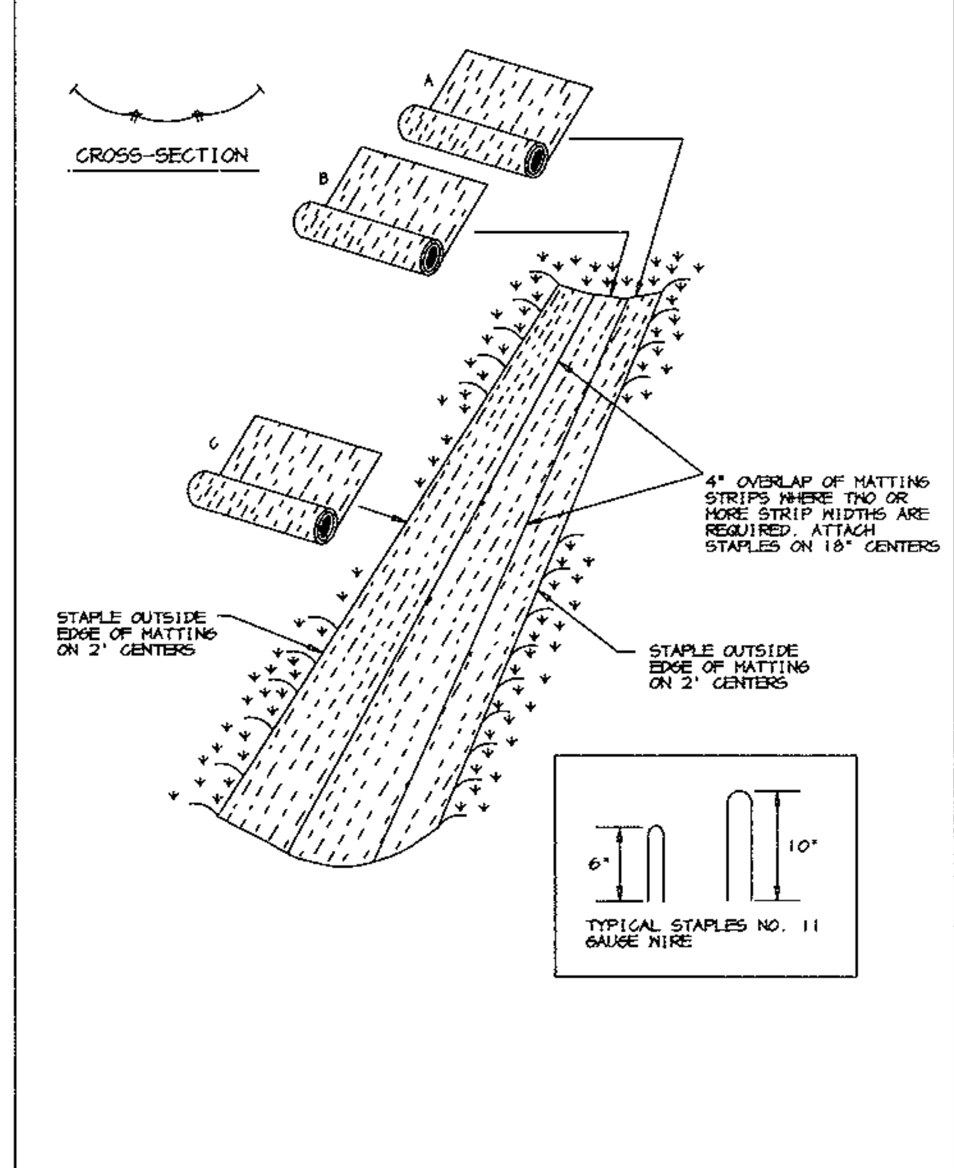
DETAIL 30 – EROSION CONTROL MATTING



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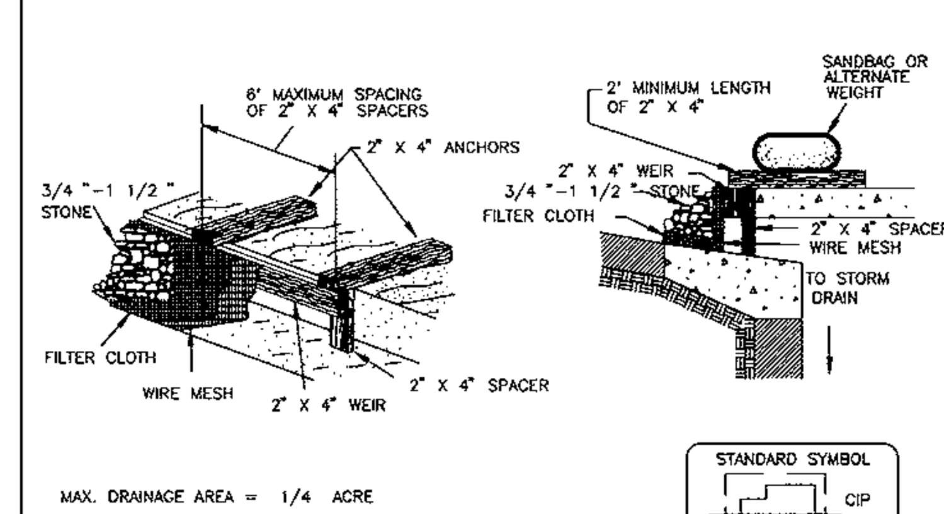
DETAIL 23C - CURB INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

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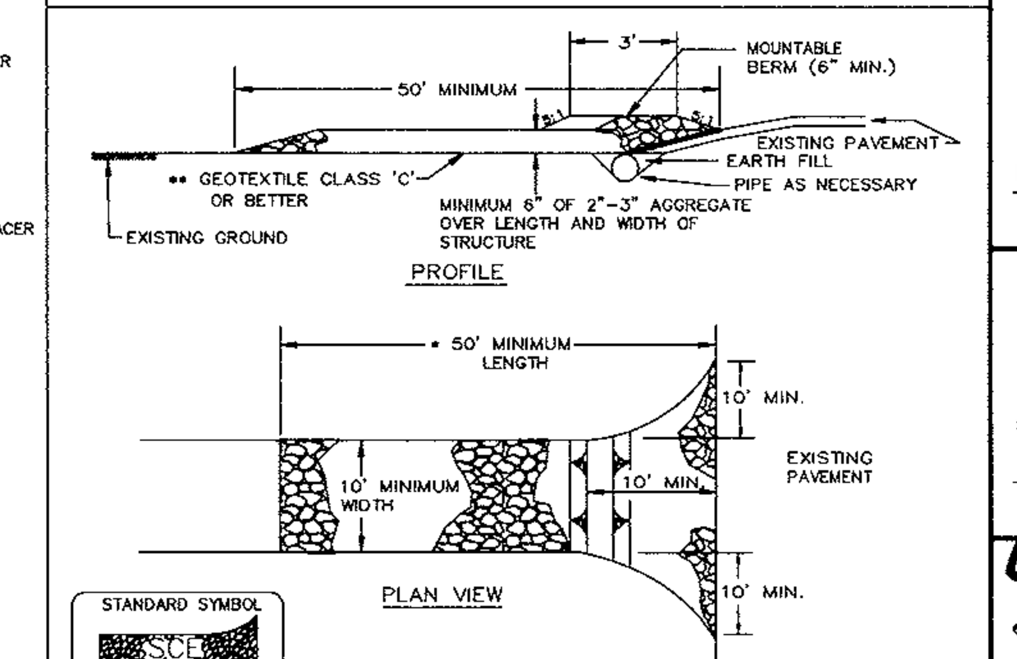
DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length – minimum of 50' (*30' for single residence lot).
2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

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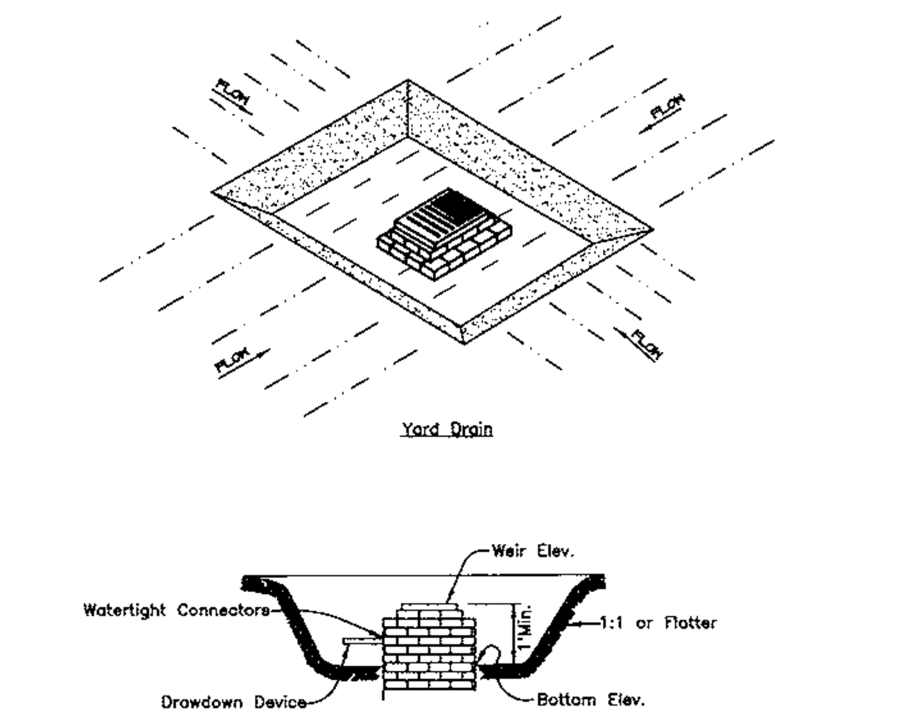
STORM INLET SEDIMENT TRAP ST-III



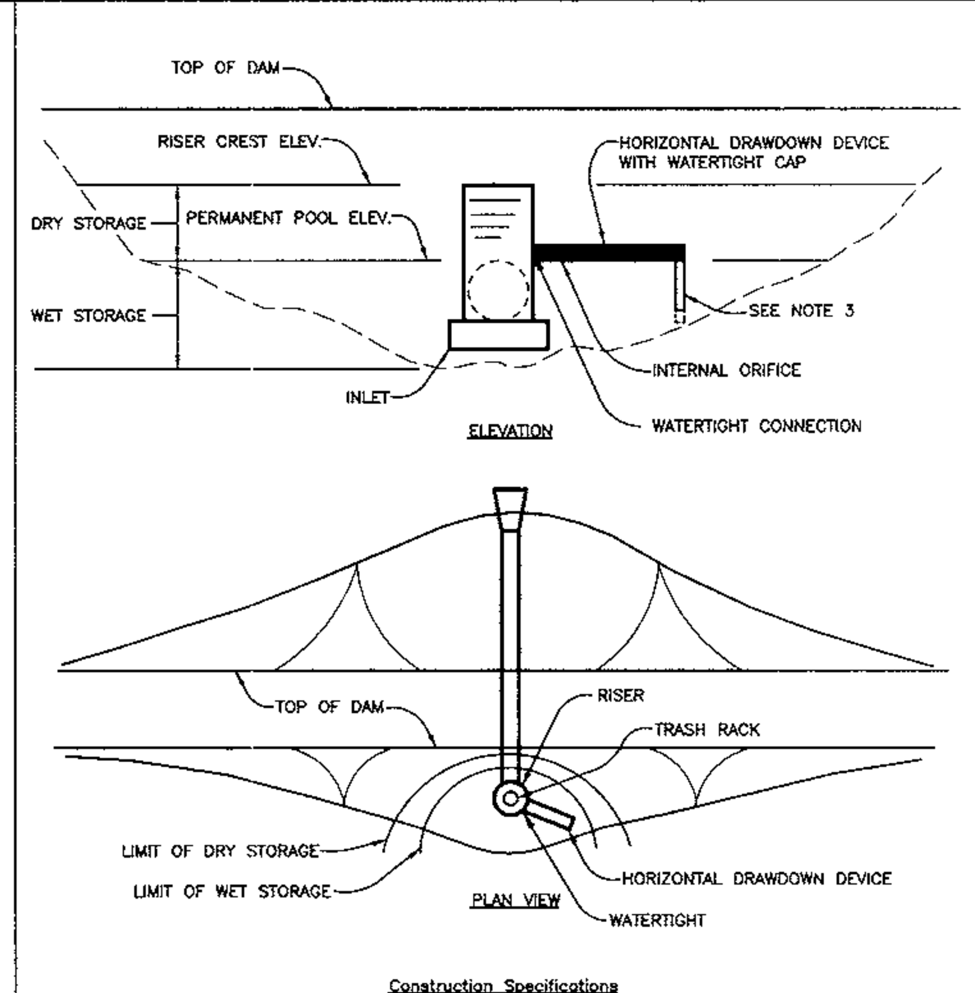
Construction Specifications For ST-III

1. Sediment shall be removed and the restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
2. The volume of sediment storage shall be 3600 cubic feet per acre of contributory drainage.
3. The structure shall be inspected after each rain and repairs made as needed.
4. Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.
5. The sediment trap shall be removed and the area stabilized when the construction drainage area has been properly stabilized.
6. All cut slopes shall be 1:1 or flatter.

MAXIMUM DRAINAGE AREA: 3 ACRES

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE		MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEDIMENT TRAP AND BASIN DRAWDOWN SCHEMATIC HORIZONTAL DRAW DOWN DEVICE



Construction Specifications

1. The total area of the perforation must be greater than 2 times the area of the internal orifice.
2. The perforated portion of the drawdown device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class E.
3. Provide support of drawdown device to prevent sagging and floatation. An acceptable preventative measure is to stake both sides of drawdown device with 1" steel angle, or 1" by 4" square or 2" round wooden posts set 3' minimum into the ground then joining them to the device by wrapping with 12 gauge minimum wire.

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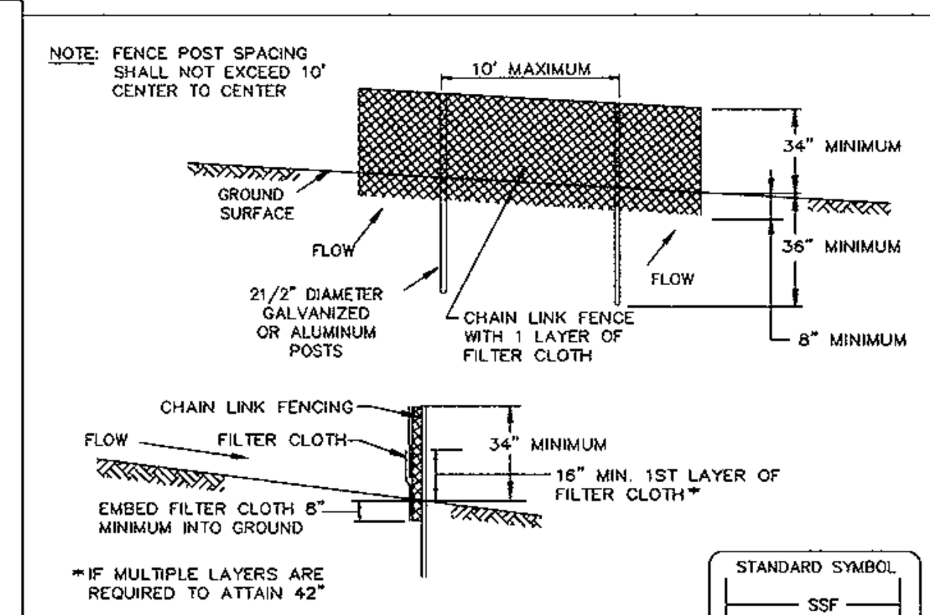
DETAIL 33 - SUPER SILT FENCE



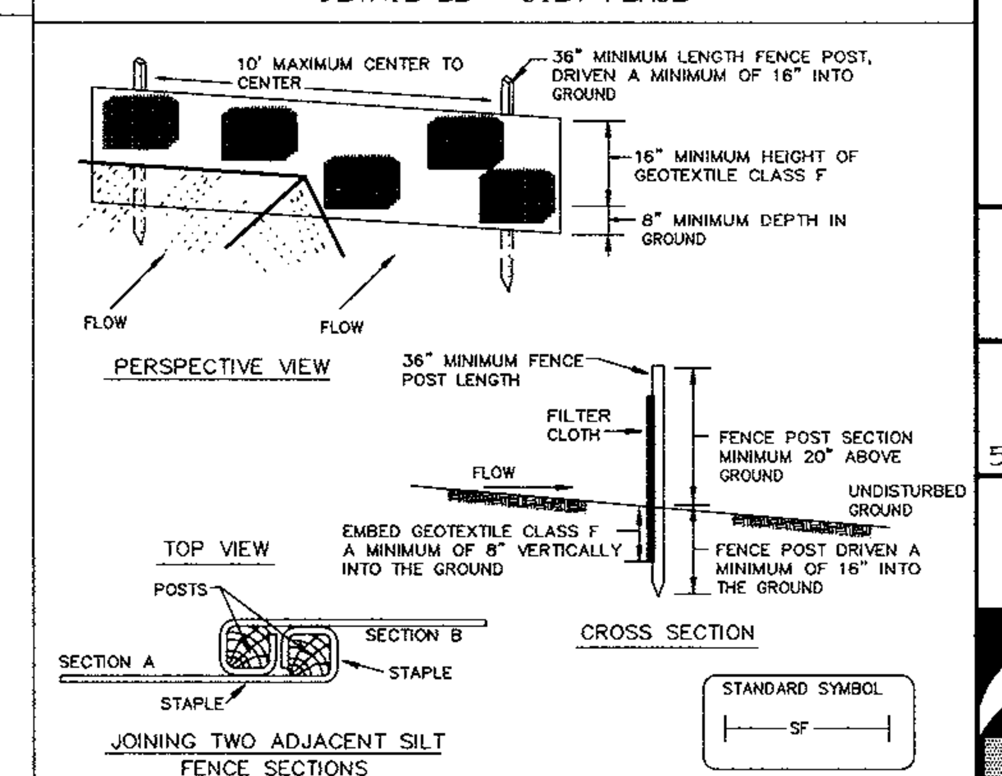
Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft ²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H - 26 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

BY THE DEVELOPER :

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

Andrew L. Isaacson 2-18-00
DEVELOPER DATE

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 SOIL CONSERVATION DISTRICT.

Arthur E. Muegge 2-18-00
ENGINEER DATE

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

Cheryl Simmons 3/2/00
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Robertson 3/2/00
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

3/13/00
COUNTY HEALTH OFFICER DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

3/24/00
DIRECTOR DATE

3/6/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamilton 3/22/0
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WILBEN LLLP
c/o ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

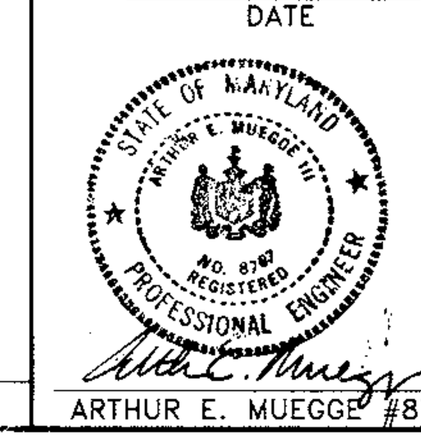
PROJECT **CLARKS GLEN NORTH**
PARCEL B-1

AREA PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE **SEDIMENT CONTROL NOTES AND DETAILS**

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE

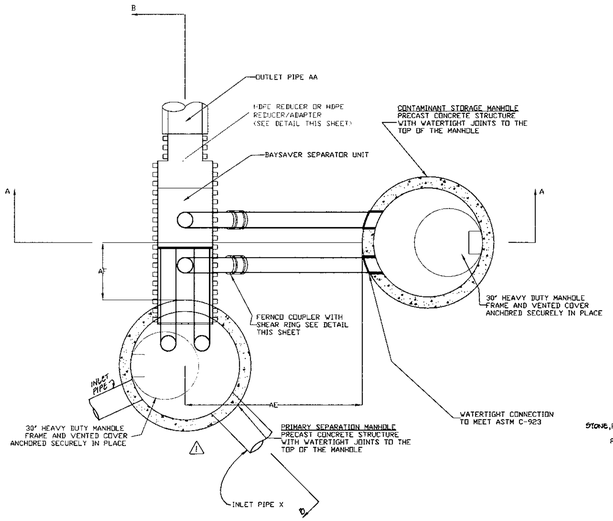


ARTHUR E. MUEGGE #8707

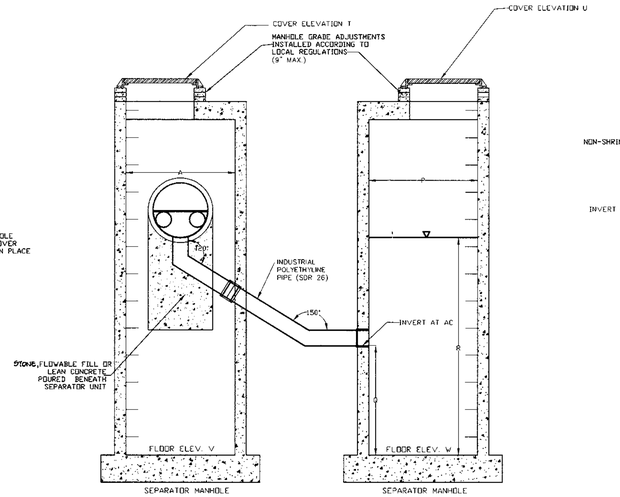
DESIGNED BY :	C.J.R.
DRAWN BY:	D.R.D.
PROJECT NO :	99032 SDP5.DWG
DATE : FEBRUARY 18, 2000	
SCALE : AS SHOWN	
DRAWING NO. 5 OF 8	

SDP-99-125

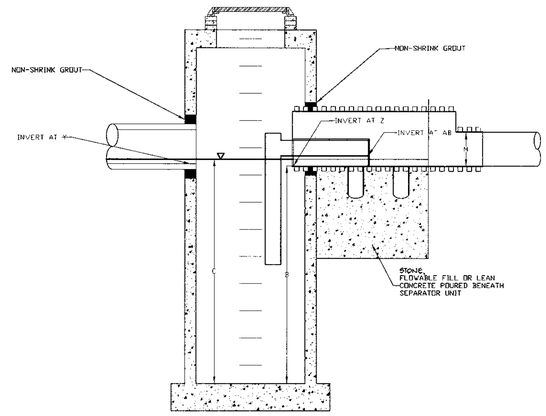
F:\PROJECT\99032\SDP5.DWG Tue Feb 15 13:58:03 2000 RMA



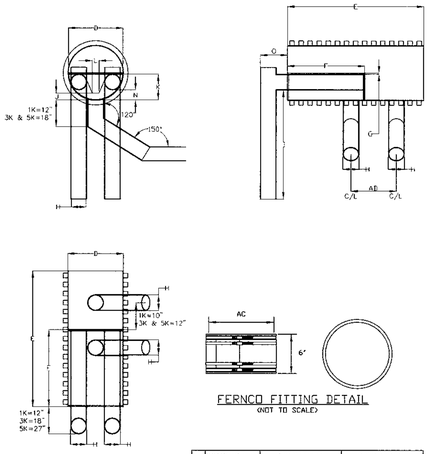
PLAN VIEW



SECTION AA



SECTION BB

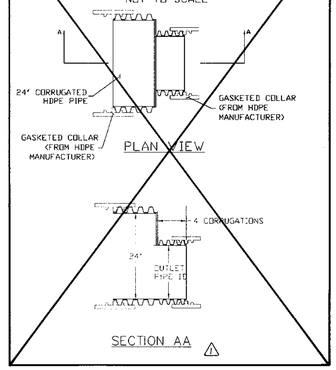


FERNCO FITTING DETAIL
(NOT TO SCALE)

	DISTANCE AC	FERNCO NO.	SHEAR RING
1K	7.10"	1055-66	SR-27
3K	10.60"	1056-1010	SR-39
5K	12.73"	1004-1010	SR-44

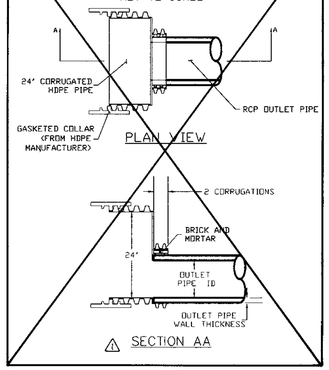
HDPE-HDPE REDUCER DETAIL

FOR USE WITH HDPE OUTLET PIPES
NOT TO SCALE



REDUCER/ADAPTER DETAIL

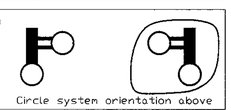
FOR USE WITH OUTLET PIPES OTHER THAN HDPE
NOT TO SCALE



Project: GLARKS GLEN NORTH PARCEL B
Address:
Delivery Date:
Owner: MILBEN LLLP
Contact: ANDREW L. ISAACSON
Address: 5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MD 20814

Designer: RMA, INC.
Contact: CHRIS REID
Phone: (410) 997-8900
Fax: (410) 997-9282
Contractor:
Address:
Contact:
Phone:
Fax:

Separator Unit Model:
1K ■
3K □
5K □

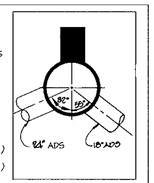


Circle system orientation above

Manhole Specifications:
Primary Manhole Diameter: 48 inches
Storage Manhole Diameter: 48 inches

Floor Elevations:
Primary Manhole 453.90
Storage Manhole 451.90

Primary Manhole Inverts:
Separator Unit 461.90
Inlet Pipe(s) 462.00 (24")
462.00 (18")



Please show orientation (incliding angle), size and material of inlet pipes above.

Cover Elevations:
Primary Manhole 466.6
Storage Manhole 466.7

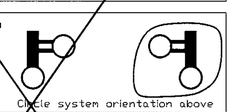
WQ-1/WQ-1A

This order can be faxed to Bay Saver, Inc. at (301) 829-3747

Project: GLARKS GLEN NORTH PARCEL B
Address:
Delivery Date:
Owner: MILBEN LLLP
Contact: ANDREW L. ISAACSON
Address: 5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MD 20814

Designer: RMA, INC.
Contact: CHRIS REID
Phone: (410) 997-8900
Fax: (410) 997-9282
Contractor:
Address:
Contact:
Phone:
Fax:

Separator Unit Model:
1K ■
3K □
5K □

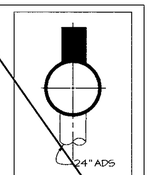


Circle system orientation above

Manhole Specifications:
Primary Manhole Diameter: 48 inches
Storage Manhole Diameter: 48 inches

Floor Elevations:
Primary Manhole 455.90
Storage Manhole 454.90

Primary Manhole Inverts:
Separator Unit 463.90
Inlet Pipe(s) 464.00



Please show orientation (incliding angle), size and material of inlet pipes above.

Cover Elevations:
Primary Manhole 467.8
Storage Manhole 468.1

WQ-2/WQ-2A

This order can be faxed to Bay Saver, Inc. at (301) 829-3747

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. KNOW THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION BEGINS.

BAYSAVER MAINTENANCE

BAYSAVER SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE EXCEEDS 2 FEET. MINIMUM INSPECTION IS REQUIRED TWICE A YEAR TO MAINTAIN OPERATION AND FUNCTION OF BAYSAVER.

MAINTENANCE CONSISTS OF THE FOLLOWING:

A. CONTAMINANT STORAGE MANHOLE

1. REMOVE THE ENTIRE VOLUME OF THE CONTAMINATED WATER BY VACUUM TRUCK.
2. CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.

B. PRIMARY SEPARATION MANHOLE

1. USING A SUBMERSIBLE PUMP, PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY INTO THE EMPTY STORAGE MANHOLE UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
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.
4. CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.

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 ON BASE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTIONS AS REQUIRED. SEAL LIFT HOLES WITH NON-SHRINK GROUT.
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 ADJUSTMENT RINGS AS NECESSARY.
8. INSTALL AND SET MANHOLE FRAME AND COVER UNITS.

SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECK-OFF LIST FOR DUAL MANHOLE SEPARATORS

Stage (X = Approval Required)	Developer's/Engineer Approval		Inspector		Geotechnical Engineer	
	Initials	Date	Initials	Date	Initials	Date
1. Pre-Construction Meeting.	X		X		X	
2. Install Manholes and associated storm drainage:						
a. Obtain approval of subgrade from Geotechnical Engineer. (Subgrade to have a minimum of 95% compaction)					X	
b. Installation of precast base, lower tank and lower piping.	X		X			
c. Backfill and min. 95% compaction around lower tank and lower piping.					X	
d. Installation of precast middle seation(s) with separator unit and remaining piping.	X		X			
e. Installation of precast top slab.	X		X			
f. Installation of adjustment rings and frame and cover.	X		X			
g. Installation of flowable fill or concrete backfill.					X	
3. Backfilling operation and compaction.					X	
4. Site is permanently stabilized. Sediment control measures removed and all sediment and debris removed from dual manhole separators.			X			
5. Final inspection.			X			

Baysaver Separator Unit	Baysaver Manhole Sizes (prim. x stor.)	Maximum Treatment (cfs)*1	Maximum Treatment (gpm)*1	Impervious Area (acres)
1K Baysaver Separator	48x48	2.4	1076	1.2
	48x50	2.4	1076	1.4
	48x72	2.4	1076	1.6
	60x60	2.4	1076	1.5
3K Baysaver Separator	60x60	7.2	3231	3.6
	60x72	7.2	3231	4.1
	60x84	7.2	3231	4.6
	72x72	7.2	3231	4.4
5K Baysaver Separator	72x72	11.1	4981	5.5
	72x84	11.1	4981	6.5
	72x96	11.1	4981	7.5
	96x96	11.1	4981	8.0

NOTE:

BAYSAVERS ARE TO BE INSTALLED WITH THE STORM DRAIN SYSTEM AND WILL FUNCTION AS SECONDARY SEDIMENT CONTROL DEVICES.

UPON COMPLETION OF SITE STABILIZATION, EACH BAYSAVER SYSTEM SHALL BE FLUSHED CLEAN & THE MANHOLES CLEANED OUT AND REFILLED WITH CLEAN WATER.

NOTE: DIMENSIONAL SHOP DRAWINGS ARE TO BE APPROVED BY THE DESIGN ENGINEER

BAYSAVER SYSTEM DIMENSIONS

	DESCRIPTION	1K SYSTEM	3K SYSTEM	5K SYSTEM
	SEPARATOR MANHOLE DIMENSIONS			
A	PRIMARY MANHOLE DIAMETER	48"	60"	72"
B	MANHOLE DEPTH BELOW OUTLET	8' - 0"	8' - 0"	8' - 0"
C	MINIMUM FLUID DEPTH	8' - 3"	8' - 4 1/2"	8' - 6"
	STANDARD SEPARATOR UNIT DIMENSIONS			
D	SEPARATOR UNIT ID	24"	36"	48"
E	SEPARATOR UNIT LENGTH	60"	78.2"	75.4"
F	BYPASS PLATE LENGTH	34"	45"	45"
G	WEIR/BYPASS PLATE THICKNESS	3/4"	3/4"	3/4"
H	ELBOW AND CONNECTING PIPE OD	7.125"	10.75"	12.75"
I	ELBOW LENGTH	48"	48"	48"
J	WEIR HEIGHT ABOVE INVERT	3"	4"	6"
K	BYPASS PLATE HEIGHT ABOVE INVERT	12"	18"	24"
L	WIDTH OF WEIR AT BASE	3"	4 1/2"	6"
M	OUTLET PIPE DIAMETER	M	M	M
N	ELBOW INVERT HEIGHT ABOVE UNIT INVERT	4 1/2"	7 1/2"	11"
O	ELBOW PIPE OVERHANG	12"	18"	24"
	STORAGE MANHOLE DIMENSIONS			
P	STORAGE MANHOLE DIAMETER	48"	60"	72"
Q	MANHOLE DEPTH BELOW INLET/OUTLET	48"	48"	48"
R	FLUID DEPTH	8' - 0"	8' - 0"	8' - 0"
S	TOTAL STORAGE VOLUME	200 CF	300 CF	450 CF
	SYSTEM DIMENSIONS AND ELEVATIONS			
T	SEPARATOR MANHOLE COVER ELEVATION	T	T	T
U	STORAGE MANHOLE COVER ELEVATION	U	U	U
V	SEPARATOR MANHOLE FLOOR ELEVATION	V	V	V
W	STORAGE MANHOLE FLOOR ELEVATION	W	W	W
X	INLET PIPE ID AND MATERIAL	X1 X2	X1 X2	X1 X2
Y	INLET PIPE INVERT	Y1 Y2	Y1 Y2	Y1 Y2
Z	SEPARATOR UNIT INVERT	Z	Z	Z
AA	OUTLET PIPE ID AND MATERIAL	AA	AA	AA
AB	ELBOW INVERT ELEVATION	AB	AB	AB
AC	CONNECTING PIPE INVERT ELEVATION	AC	AC	AC
AD	CONNECTION PIPE SPACING	20"	24"	24"
AE	STORAGE MANHOLE SIDE OFFSET	72 ± 6"	72 ± 6"	72 ± 6"
AF	STORAGE MANHOLE DOWNSTREAM OFFSET	23"	31"	25"

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 3/13/00

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 3/14/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3/6/00
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/22/0

DATE	NO.	REVISION
6-12-00	1	MODIFIED WQ-1 & DELETED WQ-2

OWNER / DEVELOPER

WILBEN LLLP
c/o ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

PROJECT: CLARKS GLEN NORTH
PARCEL B-1

AREA: PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: BAYSAVER DETAILS AND NOTES

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE

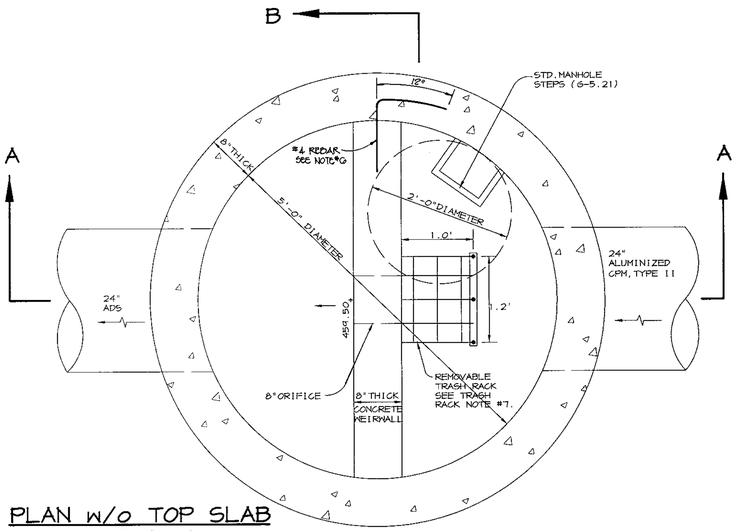
STATE OF MARYLAND — ARTHUR E. MUEGGE — NO. 8707 — REGISTERED PROFESSIONAL ENGINEER

ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY:	D.R.D.
PROJECT NO :	99032 SDP6.DWG
DATE :	FEBRUARY 18, 2000
SCALE :	AS SHOWN
DRAWING NO.	6 OF 8

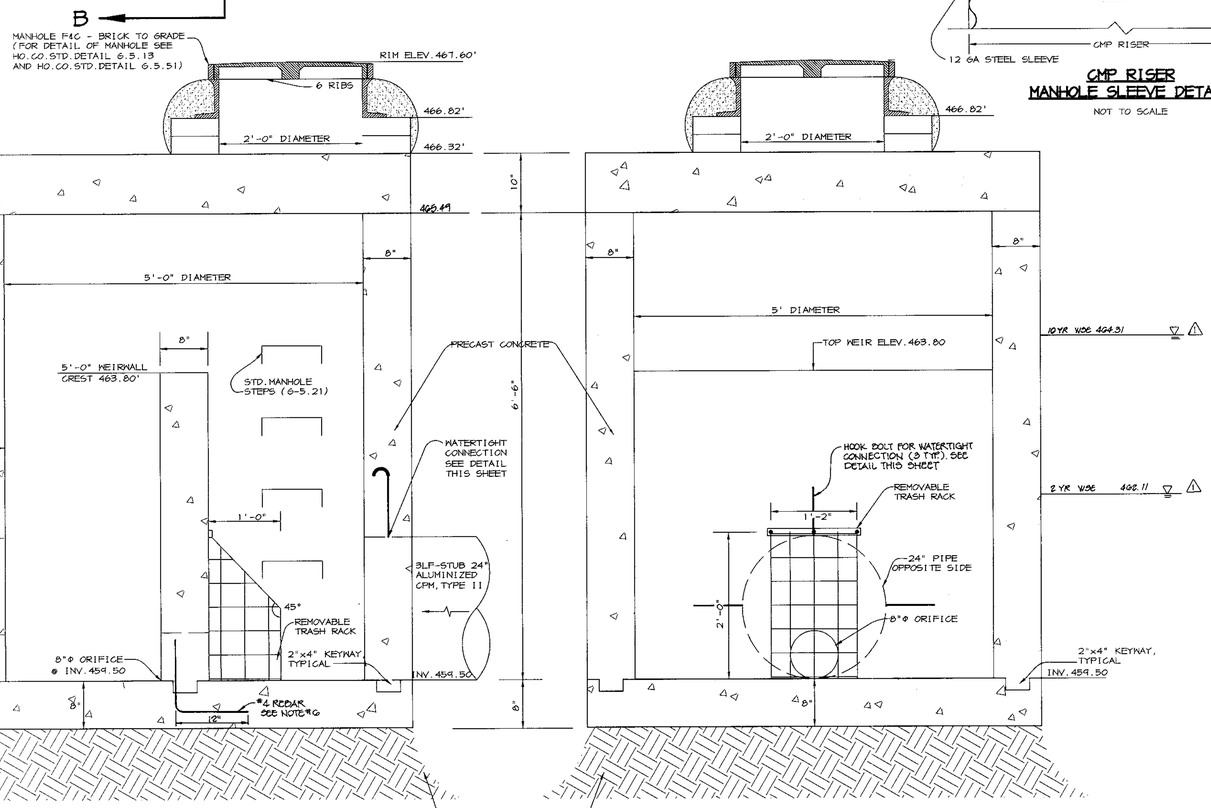
SDP-99-125

F:\PROJECT\99032\SDP6.DWG Tue Feb 15 13:59:30 2000 RMA



PLAN w/o TOP SLAB

SCALE: 1" = 1'



SECTION A-A

SCALE: 1"= 1'

SECTION B-B

SCALE: 1"= 1'

CONTROL STRUCTURE 1

STRUCTURE S-1 NOTES

1. STRUCTURE S-1 TO BE DESIGNED TO MEET ROADWAY LOAD STANDARDS. STRUCTURE TO BE DESIGNED PER HO.CO.STD.DETAIL S.5.13.
2. ALL CONSTRUCTION SHALL MEET THE HOWARD CO. STANDARDS AND SPECIFICATIONS.
3. CONCRETE STRENGTH TO BE 4,000 psi MIN. AT 28 DAYS.
4. REINFORCEMENT SHALL BE CLEAN AND FREE OF RUST AND MEET ASTM-615 GRADE 60.
5. ALL REINFORCEMENT SHALL HAVE 2" MINIMUM COVER.
6. REINFORCING FOR WEIR SHALL BE #4 REBAR @ 10" c/c, e/w. #4 REBAR SHALL EXTEND A MINIMUM OF 12 INCHES INTO WALLS AND FLOOR OF MANHOLE . ALL OTHER REINFORCING AS PER STANDARD DETAIL S.5.13
7. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
8. THE STRUCTURE FOUNDATION SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER.
9. ALL DEBRIS IS TO BE KEPT OUT OF THE FACILITY DURING AND AFTER CONSTRUCTION.

CORRUGATED METAL PIPE BACKFILL AND BEDDING SPECIFICATIONS

1. BACKFILL

1.1 BACKFILL MATERIAL SHALL BE A WELL GRADED GRANULAR MATERIAL AND SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS FOR FILL UNDER ROADS.

1.2 HIGHLY PLASTIC SILTS, HIGHLY PLASTIC CLAYS, ORGANIC SILTS, ORGANIC CLAYS, AND PEATS SHALL NOT BE USED AS BACKFILL MATERIALS.

1.3 BACKFILL SHALL BE PLACED SYMMETRICALLY ON EACH SIDE OF THE STRUCTURE IN 6" TO 8" LOOSE LAYERS TO 1 FOOT ABOVE THE TOP OF THE PIPE. EACH LAYER IS TO BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY. ALL COMPACTION SHALL BE AASHTO T-99-C.

2. BEDDING

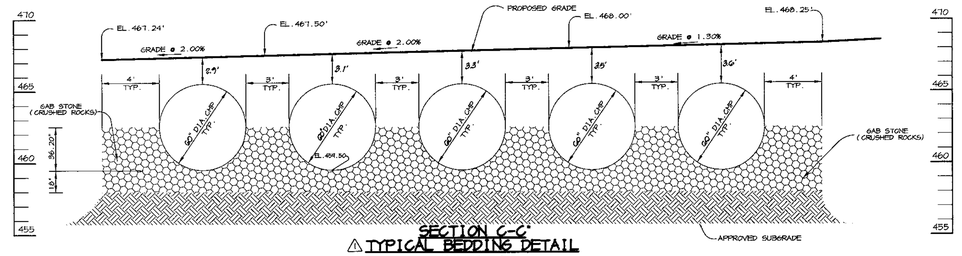
2.1 BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.
THE FILL MATERIAL SHALL BE FREE OF ROCKS, FROZEN LUMPS, AND FOREIGN MATTER THAT COULD CAUSE HARD SPOTS IN BACKFILL OR THAT COULD DECOMPOSE AND CREATE VOIDS.

2.2 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 OTHER FOREIGN MATERIAL. THE BEDDING FOUNDATION MUST BE A STABLE, WELL GRADED GRANULAR MATERIAL. ANY MATERIAL THAT HAS INADEQUATE BEARING CAPABILITY MUST BE REMOVED AND REPLACED WITH A COMPACTED SELECT FILL APPROVED BY THE ENGINEER.

2.3 BEDDING MATERIALS SHALL BE 6AB STONE PER MSHA SPECIFICATIONS OR AN APPROVED EQUAL. SEE BEDDING DETAIL THIS SHEET.

3. MATERIALS

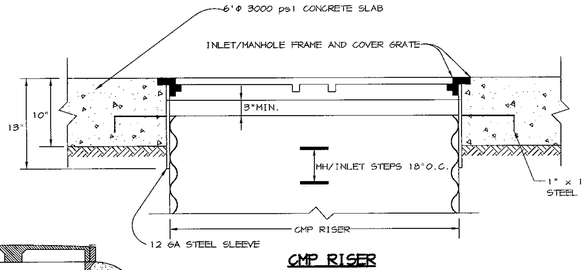
3.0 PIPE - ALUMINIZED STEEL PIPE, TYPE II.
THIS PIPE AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO 3.1 SPECIFICATIONS M-274 WITH WATERTIGHT COUPLING BANDS OR FLANGES. ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND.



SECTION C-C
⚠ TYPICAL BEDDING DETAIL

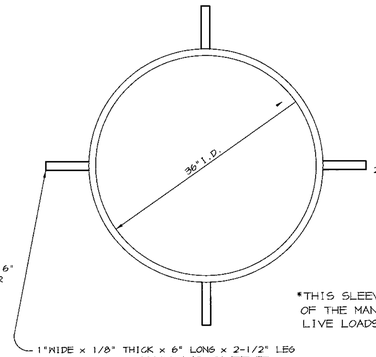
SCALE: 1" = 5'

*FOR LOCATION OF CROSS SECTION SEE SHEET 2 OF 8



CMP RISER MANHOLE SLEEVE DETAIL

NOT TO SCALE



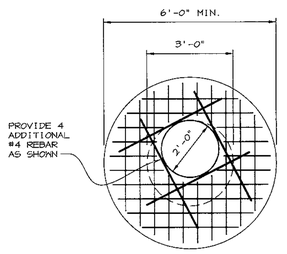
MANHOLE SLEEVE PLAN VIEW

NOT TO SCALE

MANHOLE SLEEVE* SIDE VIEW

NOT TO SCALE

*THIS SLEEVE SLIDES OVER THE OUTSIDE OF THE MANHOLE RISER AND REMOVES THE LIVE LOADS FROM THE PIPE ITSELF.

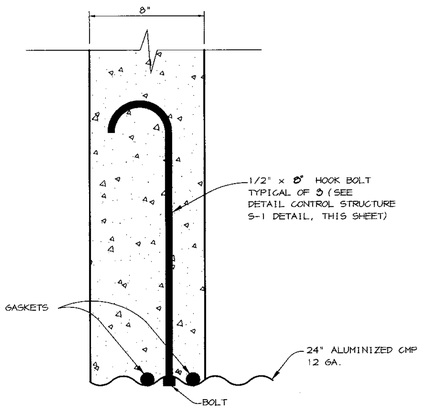


MANHOLE CONCRETE CAP

NOT TO SCALE

MANHOLE NOTES

1. CONCRETE TO BE MIX No.3
2. MANHOLE RISER TO BE SAME 6A. AS MAINLINE PIPE.
3. STEPS TO BE INSTALLED BELOW MANHOLE PER MANUFACTURER SPECIFICATIONS.
4. COMPACT TOP 1' OF SUBGRADE TO 100% OF MAXIMUM DRY DENSITY. (PER AASHTO T-99-C) UNDER CONCRETE CAP.
5. CONCRETE CAP SHALL BE REINFORCED WITH #4 REBAR @ 6" c/c.
6. SEE GEOMETRY PLAN FOR MANHOLE LOCATIONS AND RIM ELEVATIONS.



NOTE: INSTALL RUBBER GASKETS PRIOR TO POURING CONCRETE.

WATERTIGHT CONNECTION FOR S-1

NOT TO SCALE

TRASH RACK NOTES:

1. STEEL TO CONFORM TO ASTM A-36. BARS TO BE SMOOTH.
2. #5 REBARS @ 4" o/c HORIZONTALLY AND 4" o/c VERTICALLY.
3. ALL REBAR TO BE WELDED AT ALL INTERSECTIONS.
4. ALL BENDS TO BE 2" RADIUS.
5. WELD BARS TO 4" x 1/8" STEEL PLATE AND BOLT STEEL PLATE TO STRUCTURE WITH 1/2" ANCHOR BOLTS.
6. GALVANIZE TRASH RACK AFTER FABRICATION.
7. PAINTED WITH 2 COATS OF BATTLESHIP GRAY AFTER FABRICATION.

AS BUILT CERTIFICATE

DATE

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE 3/13/00

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 3/24/00

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3/6/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/22/00

DATE	NO.	REVISION
6-12-00	⚠	REV. WSE ON S-1 & REV. SECTION C-C

OWNER / DEVELOPER

WILBEN LLLP
c/o ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

PROJECT
CLARKS GLEN NORTH
PARCEL B-1

AREA
PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE
STORMWATER MANAGEMENT DETAILS & NOTES

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE

STATE OF MARYLAND — ARTHUR E. MUEGGE — No. 8707 — REGISTERED PROFESSIONAL ENGINEER

ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY:	K.E.V.
PROJECT NO :	99032 SDP1.DWG
DATE :	FEBRUARY 18, 2000
SCALE :	AS SHOWN
DRAWING NO.	7 OF 8

SDP-99-125

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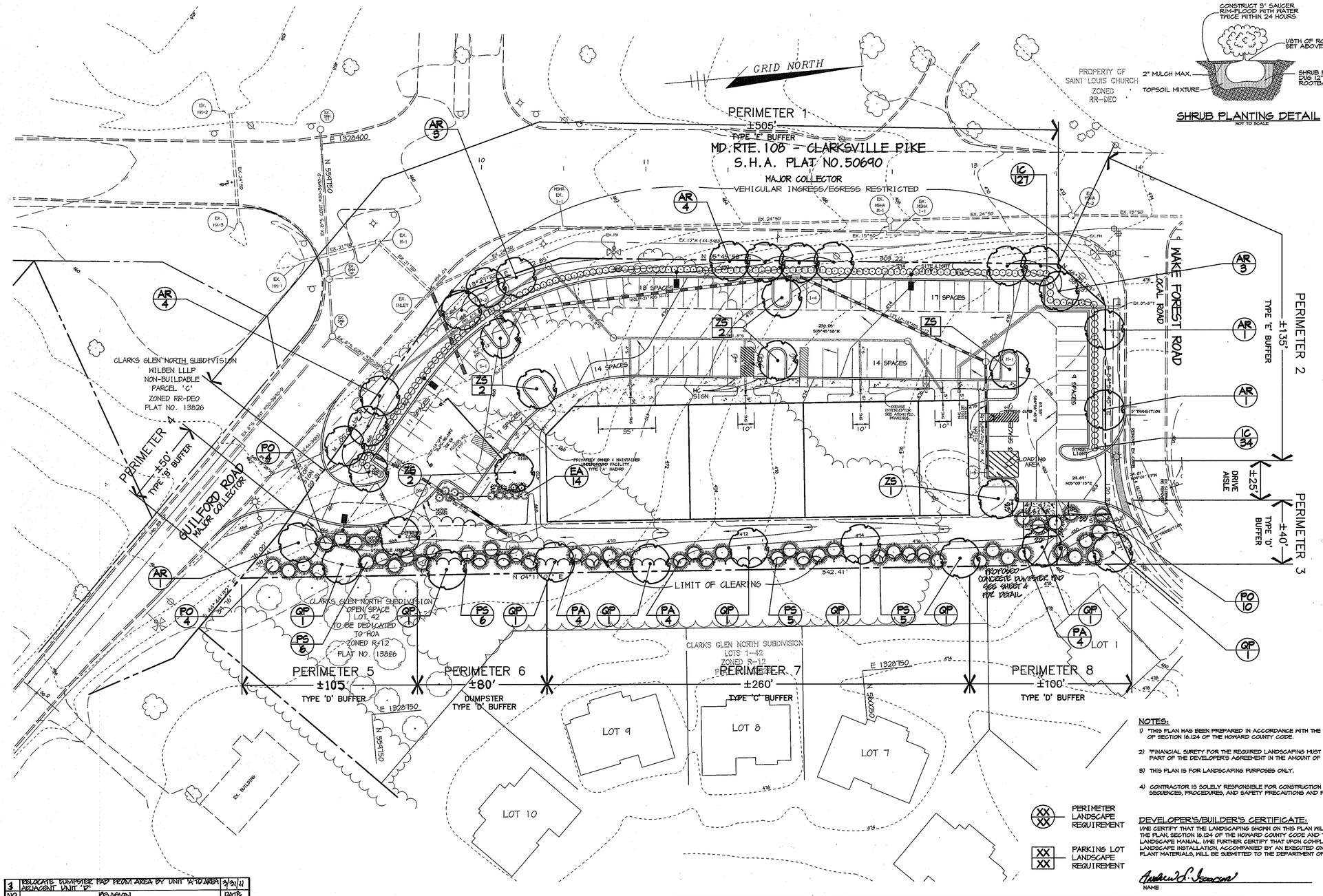
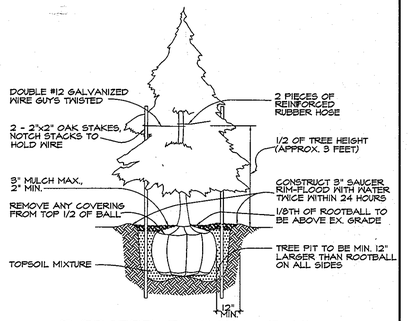
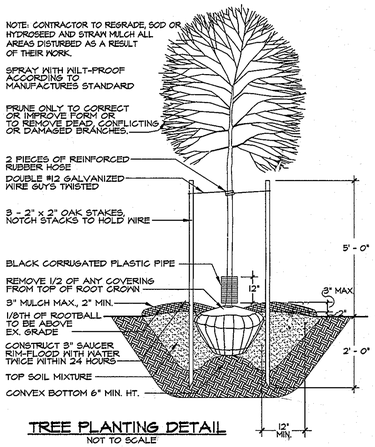


SHRUB PLANTING DETAIL
NOT TO SCALE



EVERGREEN PLANTING DETAIL
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE 3/13/00

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 3/24/00

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3/6/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/22/00

DATE	NO.	REVISION

OWNER / DEVELOPER

WILBEN LLLP
c/o ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

PROJECT
CLARKS GLEN NORTH
PARCEL B-1

AREA
PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE
LANDSCAPE PLAN

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

2.18.00
DATE

DAVID T. DOWS #830

DESIGNED BY :	D.T.D.
DRAWN BY:	A.J.L.
PROJECT NO :	99032 LSCP.DWG
DATE :	FEBRUARY 18, 2000
SCALE :	1" = 30'
DRAWING NO.	8 OF 8

NOTES:
1) THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE.
2) FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $ 22680.
3) THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.
4) CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

XX/XX PERIMETER LANDSCAPE REQUIREMENT

XX/XX PARKING LOT LANDSCAPE REQUIREMENT

DEVELOPER'S/BUILDER'S CERTIFICATE:
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Andrew L. Isaacson — NAME
2.18.00 — DATE

NO.	REVISION	DATE
3	RELOCATE DUMPSTER PAD FROM AREA BY UNIT 'A' TO AREA ADJACENT UNIT 'D'	3/20/00

SCHEDULE A — PERIMETER LANDSCAPE EDGE

	ADJACENT TO ROADWAYS				ADJACENT TO PERIMETER PROPERTIES			
PERIMETER	1	2	3	4	5	6	7	8
LANDSCAPE TYPE	E	E	D	B	D	D	C	D
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	±505'	±135'	±40'	±50'	±105'	±80'	±260'	±100'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED								
SHADE TREES	@1/40'=13	@1/40'=3	@1/50'=1	@1/50'=1	@1/50'=2	@1/50'=2	@1/40'=7	@1/50'=2
EVERGREEN TREES	–	–	@1/10'=4	@1/40'=1	@1/10'=11	@1/10'=8	@1/20'=13	@1/10'=10
SHRUBS	@1/4'=127	@1/4'=34	–	–	–	–	–	–
NUMBER OF PLANTS PROVIDED								
SHADE TREES	13	3	1	1	2	2	5	2
EVERGREEN TREES	–	–	4	1	11	8	18	10
SMALL FLOWERING TREES	–	–	–	–	–	–	–	–
SHRUBS	127	34	–	–	–	14	–	–

SCHEDULE B — PARKING LOT INTERNAL LANDSCAPING

PARKING LOT	1
NUMBER OF PARKING SPACES	92
NUMBER OF SHADE TREES REQUIRED (1/20 SPACES)	5
NUMBER OF TREES PROVIDED	
SHADE TREES	5
OTHER TREES (2:1 SUBSTITUTION)	–
NUMBER OF ISLANDS REQUIRED	5
NUMBER OF ISLANDS PROVIDED	5

* 200 SF PLANTING AREA / ISLAND

SUBSTITUTION NOTES:

PERIMETER 7:
(4) EVERGREEN TREES WERE SUBSTITUTED FOR 2 SHADE TREES

PLANT LIST

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AR	17	ACER RUBRUM 'OCTOBER GLORY'/ OCTOBER GLORY RED MAPLE	2½"-3" CAL	B & B	CENTRAL LEADER
QP	9	QUERCUS PALUSTRIS / PIN OAK	2½"-3" CAL	B & B	CENTRAL LEADER
ZS	8	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE ZELKOVA	2½"-3" CAL	B & B	CENTRAL LEADER
PS	22	PINUS STROBUS / WHITE PINE	6'-8' HT	B & B	SHEARED
PA	12	PICEA ABIES / NORWAY SPRUCE	6'-8' HT	B & B	STRAIGHT LEADER
PO	18	PICEA OMORIKA / SERBIAN SPRUCE	6'-8' HT	B & B	STRAIGHT LEADER
EA	14	EUONYMUS ALATUS 'COMPACTA' / COMPACT BURNING BUSH	24"-30" HT	B & B	NONE
IC	161	ILEX CRENATA 'COMPACTA' COMPACT JAPANESE HOLLY	24"-30" HT	CONT	NONE

PLANTING LEGEND

PROP. SHADE TREE	
PROP. ORNAMENTAL TREE	
PROP. EVERGREEN TREE	
PROP. EVERGREEN SHRUB	
PROP. DECIDUOUS SHRUB	
EXISTING SHADE TREE	
EXISTING PLANTS	

SDP-99-125

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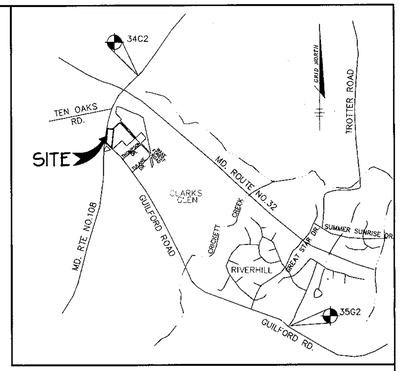
	SHEET INDEX
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	GRADING, SEDIMENT CONTROL & DRAINAGE AREA PLAN
4	PROFILES AND DETAILS
5	DETAILS & NOTES
6	BAYSAVER, DETAILS & NOTES
7	STORMWATER MANAGEMENT NOTES & DETAILS
8	LANDSCAPING PLAN, NOTES AND DETAILS

SITE DEVELOPMENT PLAN
CLARKS GLEN NORTH
PARCEL B-1
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE : 1" = 2000'

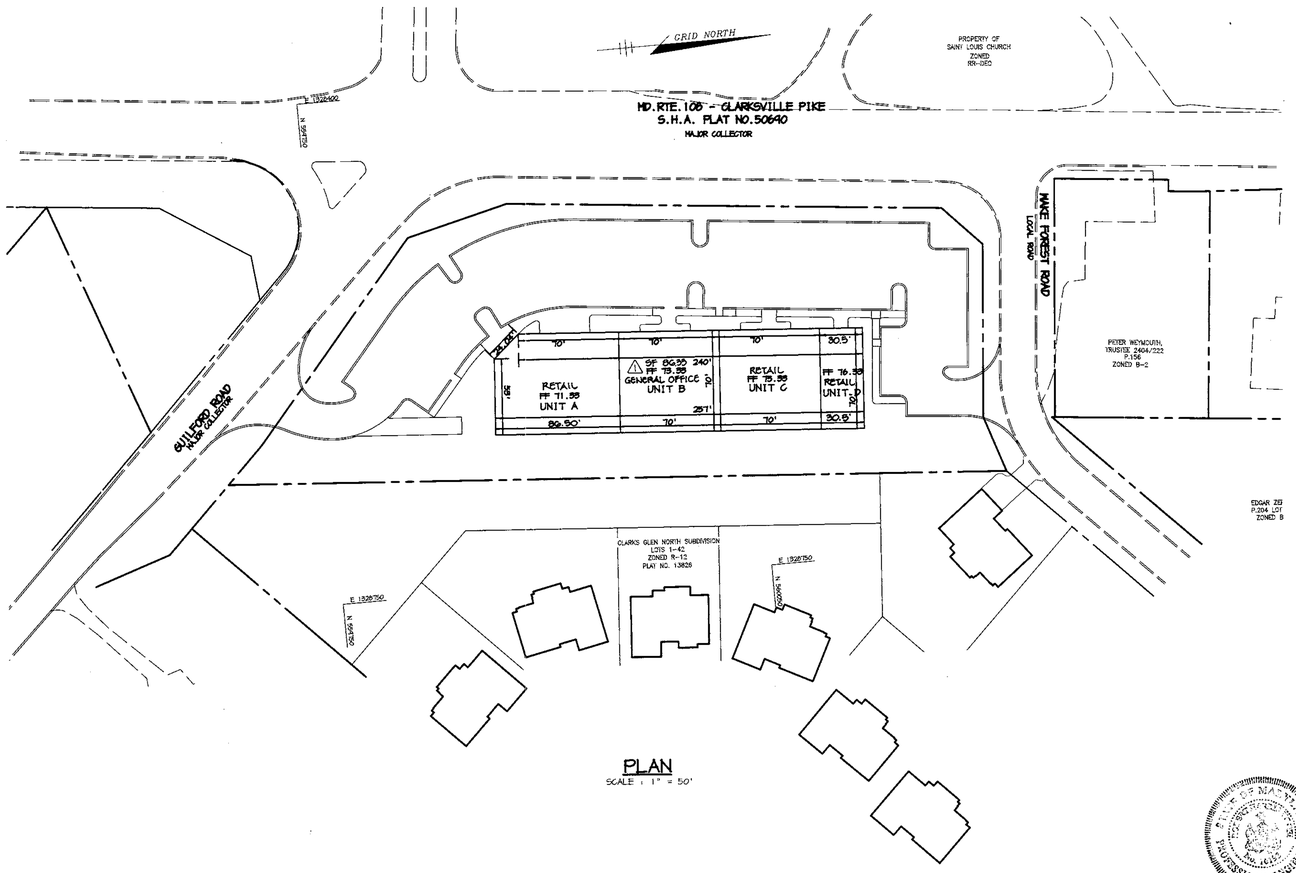
BENCHMARKS

BM#1
HOWARD COUNTY SURVEY CONTROL STATION: 34C2
N 562,322.972 E 1,324,753.353
ELEV. 475.76 FT.

BM#2
HOWARD COUNTY SURVEY CONTROL STATION: 35G2
N 554,966.770 E 1,332,937.606
ELEV. 371.60 FT.

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AY LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. 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.
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY WINGS MAPPING, INC. DATED JANUARY, 1997 IN ADDITION TO THE FINAL ROAD CONSTRUCTION PLANS.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 41GC AND 41GA WERE USED FOR THIS PROJECT.
8. WATER IS PUBLIC. CONTRACT NO. 34-3669-D.
9. SEWER IS PUBLIC. SEWER DRAINAGE AREA: MIDDLE PATUXENT CONTRACT NO. 30-3690-D.
10. THE STORMWATER MANAGEMENT QUANTITY AND WATER QUALITY PROPOSED FOR THIS SITE WILL BE ACHIEVED VIA AN UNDERGROUND DETENTION FACILITY AND BAYSAVERS AND WILL BE PRIVATELY MAINTAINED.
11. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
12. A 100-YEAR FLOODPLAIN STUDY IS NOT REQUIRED FOR THIS PROJECT.
13. THERE ARE NO WETLANDS ON THIS SITE.
14. A CHAPTER 5 TRAFFIC STUDY HAS BEEN PREPARED BY THE LEE CUNNINGHAM & ASSOCIATES, INC. DATED APRIL 1999.
15. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
16. A GEOTECHNICAL STUDY HAS BEEN PREPARED BY ECS INC., APRIL 1999.
17. THE BOUNDARY SURVEY FOR THIS PROJECT HAS BEEN PREPARED BY RIEMER MUEGGE & ASSOC., JULY 1997.
18. SUBJECT PROPERTY ZONED B-2 PER 10-18-93 COMPREHENSIVE ZONING PLAN.
19. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
20. SEE DEPARTMENT OF PLANNING AND ZONING FILE NOs F-99-52, P-98-20, S-97-15, F-00-121
21. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
22. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
23. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
24. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
25. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
26. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
27. ALL PIPE ELEVATIONS SHOWN ARE INVERT (INV.) ELEVATIONS.
28. PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
29. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.
30. THE PAVEMENT DETAILS SHOWN FOR THIS SITE REFLECT THE HOWARD COUNTY STANDARD PAVEMENT SECTIONS AND ARE NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE.
31. FOREST CONSERVATION REQUIREMENTS FOR THIS PARCEL WERE MET UNDER F-99-52.
32. ALL OUTDOOR LIGHTING SHALL COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.

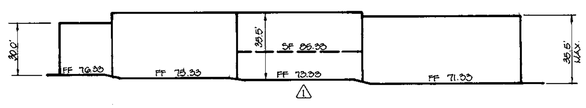


PLAN
SCALE : 1" = 50'

SITE TABULATION

BUILDING AREA / USE	FIRST FLOOR:	1,633 SF CARRY OUT (2) 6,856 SF RETAIL 9,357 SF / GENERAL OFFICE TOTAL: 17,846 SF
	SECOND FLOOR:	3,995 SF / GENERAL OFFICE
	TOTAL RETAIL:	6,856 SF
	TOTAL GENERAL OFFICE:	13,352 SF
TOTAL AREA		1.954 AC. (85,131 SF)
CURRENT ZONING		B-2
PROPOSED USE		RETAIL / GENERAL OFFICE
BUILDING COVERAGE		17,846 SQ.FT. (21% OF SITE)
CARRY OUT		6 SPACES PER / 1000 SF* = 10 SPACES
RETAIL		5 SPACES PER/1000 SF* = 35 SPACES
GENERAL OFFICE		33 SPACES PER/1000 SF* = 44 SPACES
		TOTAL 89 SPACES
PROPOSED PARKING		96 SPACES (INCLUDES 5 HC SPACES)
PAVED AREA		16,702 SF (19.6% OF SITE)

* PER HOWARD COUNTY ZONING REGULATIONS SECTION 133



BUILDING ELEVATION
(NOT TO SCALE)

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.	
COUNTY HEALTH OFFICER MD	3/13/00 DATE
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
DIRECTOR	3/24/00 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	3/6/00 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	3/22/00 DATE

DATE	NO.	REVISION
11/24/01	2	REVISE SITE TABULATION
6-12-00	1	REVISED ELEVATION & SITE TABULATION & ADDRESS

OWNER / DEVELOPER

WILBEN LLLP
C/O ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

PROJECT CLARKS GLEN NORTH
PARCEL B-1

AREA PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE TITLE SHEET

STATE OF MARYLAND — ARTHUR E. MUEGGE — No. 8707 — REGISTERED PROFESSIONAL ENGINEER
12/4/01
FOR REVISION (2) ONLY.

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

ADDRESS CHART

PARCEL	STREET ADDRESS
B-1	(1) 12345 WAKE FOREST ROAD

SUBDIVISION NAME:			SECT./AREA:		PARCEL:	
CLARKS GLEN NORTH					B-1	
PLAT #:	BLOCK #:	ZONE:	TAX MAP NO.:	ELECT. DIST.	CENSUS TRACT:	
14145	12	B-2	34	5 TH	6055	
WATER CODE:			SEWER CODE:			
1-11			6650000			

DATE
STATE OF MARYLAND — ARTHUR E. MUEGGE — No. 8707 — REGISTERED PROFESSIONAL ENGINEER
ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY:	D.R.D.
PROJECT NO :	99032 SDP1.DWG
DATE :	FEBRUARY 18, 2000
SCALE :	AS SHOWN
DRAWING NO.	1 OF 8

SDP-99-125

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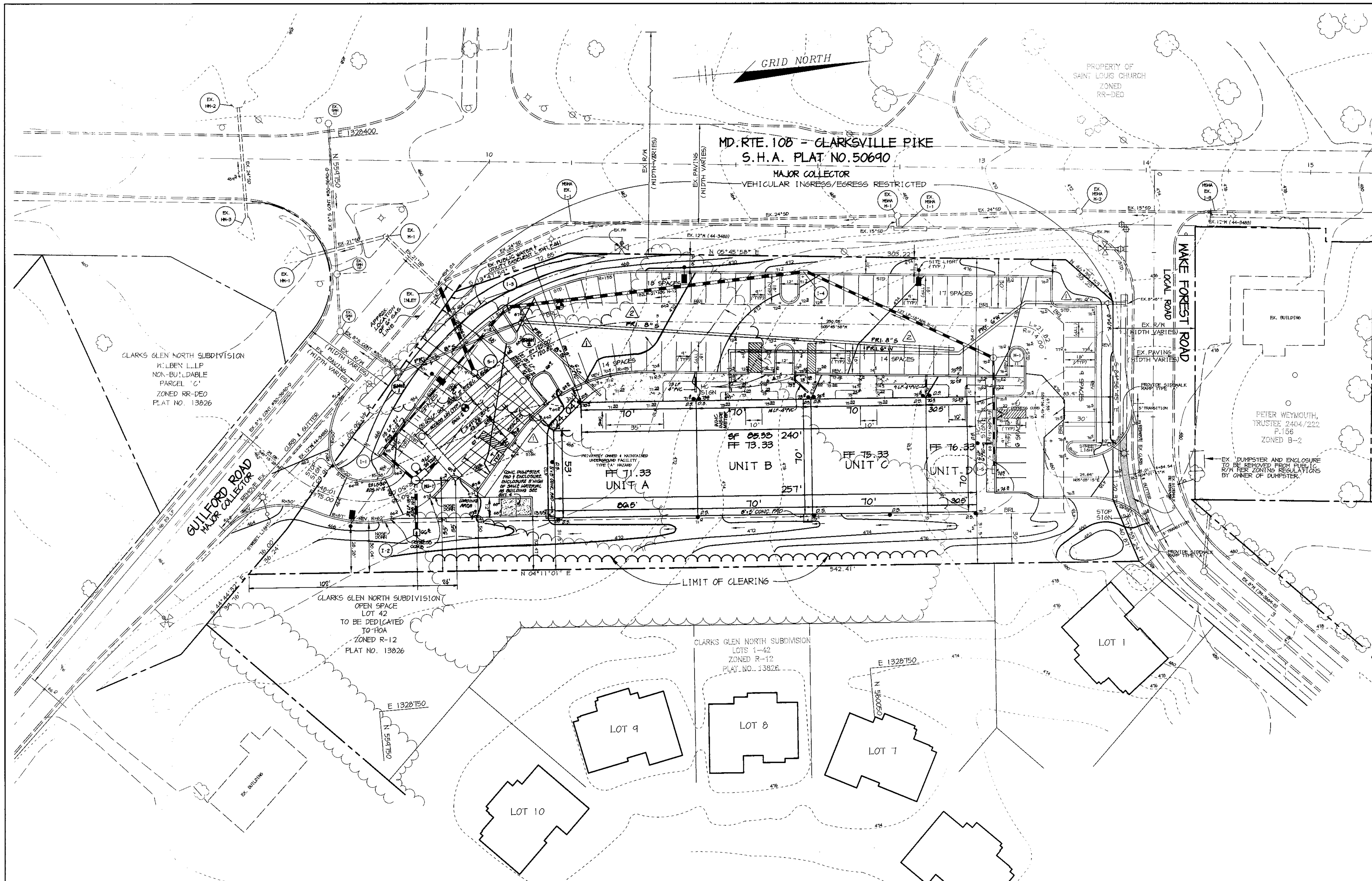


LEGEND

- P-1 PAVING
- P-2 PAVING
- STREET LIGHT-SEE NOTE
- SITE LIGHT (SINGLE)-SEE NOTE

NOTES:

1. 250-WATT HPS VAPOR PENDANT FIXTURE(CUTOFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM POINTED TOWARDS CENTER OF INTERSECTION AT BOTH ENTRANCES. AT THE GUILFORD ROAD ENTRANCE FROM GUILFORD ROAD, DRIVEWAY STATION 0=35, 28 FT. RT., AND FROM WAKE FOREST ROAD, DRIVEWAY STATION 0=25, 20FT. RT.
2. ALL LIGHTING SHALL COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.
3. ALL CURB RADII ARE 5' UNLESS OTHERWISE LABELED.
4. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE LABELED.
5. * INDICATES TRANSITION FROM STANDARD 7" CURB & GUTTER TO REVERSE 7" CURB & GUTTER AND VICE-VERSA.
6. UNDERGROUND STORMWATER MANAGEMENT PIPES TO BE ALUMINIZED CORRUGATED METAL PIPE TYPE II 12 GA.

OPERATION AND MAINTENANCE SCHEDULE FOR BAYSAVER UNITS

1. Baysaver structures will require periodic inspection and cleaning to maintain operation and function. Owners will have the Baysaver unit inspected yearly or as required by Howard County, utilizing the Baysaver units Inspection/Monitoring Form. Inspections can be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When sediment depths exceed the specified level (Table 6 of Technical Manual) then cleaning of the unit is required.
2. Baysaver structures must be checked and cleaned immediately after petroleum spills. Contact appropriate regulatory agencies.
3. Maintenance of Baysaver units should be done by a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons, and other materials in the unit. The proper cleaning and disposal of the removed materials and liquid must be followed.
4. Inlet and outlet pipes must be checked for any obstructions and if any obstructions are found they must be removed. Structural parts of the Baysaver will be repaired as needed.
5. Owner shall retain and make Baysaver units Inspection/Monitoring Forms available to Howard County officials upon their request.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND STORMWATER MANAGEMENT FACILITY

1. Underground structures will require periodic inspection and cleaning to maintain operation and function. Owners will have the underground structures inspected yearly or as required by Howard County, utilizing the underground units Inspection/Monitoring Form. Inspections can be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When sediment depths exceed 5" then cleaning of the structures is required.
2. Underground facility structures must be checked and cleaned immediately after petroleum spills. Contact appropriate regulatory agencies.
3. Maintenance of undeground structures should be done by a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons, and other materials in the unit. The proper cleaning and disposal of the removed materials and liquid must be followed.
4. Inlet and outlet pipes must be checked for any obstructions and if any obstructions are found they must be removed. Structural parts of the underground facility will be repaired as needed.
5. Owner shall retain and make underground facility Inspection/Monitoring Forms available to Howard County officials upon their request.

UNDERGROUND SWMF DESIGN SUMMARY: 2.27 AC.

DESIGN STORM (YR.)	*ALLOWABLE RELEASE (C.F.S.)	FACILITY INFLOW (C.F.S.)	FACILITY DISCHARGE (C.F.S.)	WATER SURFACE ELEVATION (FT.)	STORAGE VOLUME (C.F)	REMARKS
2	4.53	6.90	△1 2.43	462.11	4,050	
10	10.78	13.12	△1 8.77	464.31	7,480	

*ALLOWABLE RELEASE IS EQUAL TO THE EXISTING DISCHARGE AT DESIGN POINT MINUS THE UNROUTED DISCHARGE.

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — 3/13/00 — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 3/24/00 — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 3/6/00 — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 3/22/00 — DATE

DATE	NO.	REVISION
3-30-01	2	MODIFIED PRIVATE WATER & SEWER LAYOUT
6-12-00	1	REV. STORM DRAIN, SWM, SHC, WHC & SWM DESIGN SUMMARY CHART

OWNER / DEVELOPER

WILBEN LLLP
c/o ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

PROJECT CLARKS GLEN NORTH
PARCEL B-1

AREA PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE

SITE DEVELOPMENT PLAN

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE

STATE OF MARYLAND — ARTHUR E. MUEGGE III — NO. 8707 REGISTERED PROFESSIONAL ENGINEER

ARTHUR E. MUEGGE #8707

DESIGNED BY : C.J.R.
DRAWN BY: D.R.D.
PROJECT NO : 99032 SDP2.DWG
DATE : FEBRUARY 18, 2000
SCALE : 1" = 30'
DRAWING NO. 2 OF 8

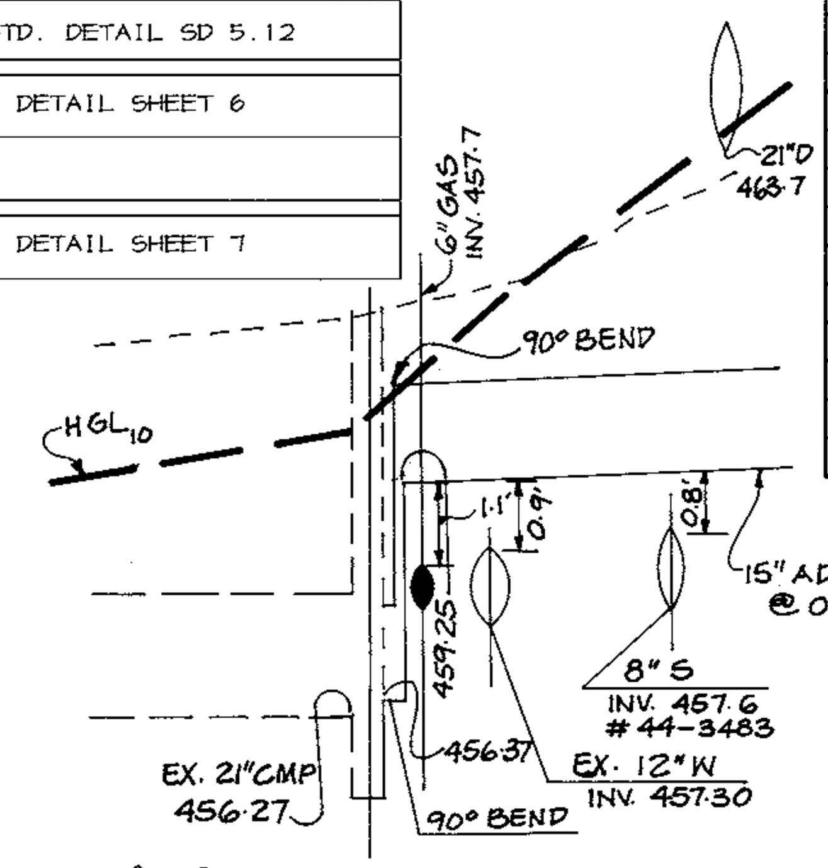
SDP-99-125

F:\PROJECT\99032\SDP2.DWG Wed Feb 16 10:33:53 2000 RMA

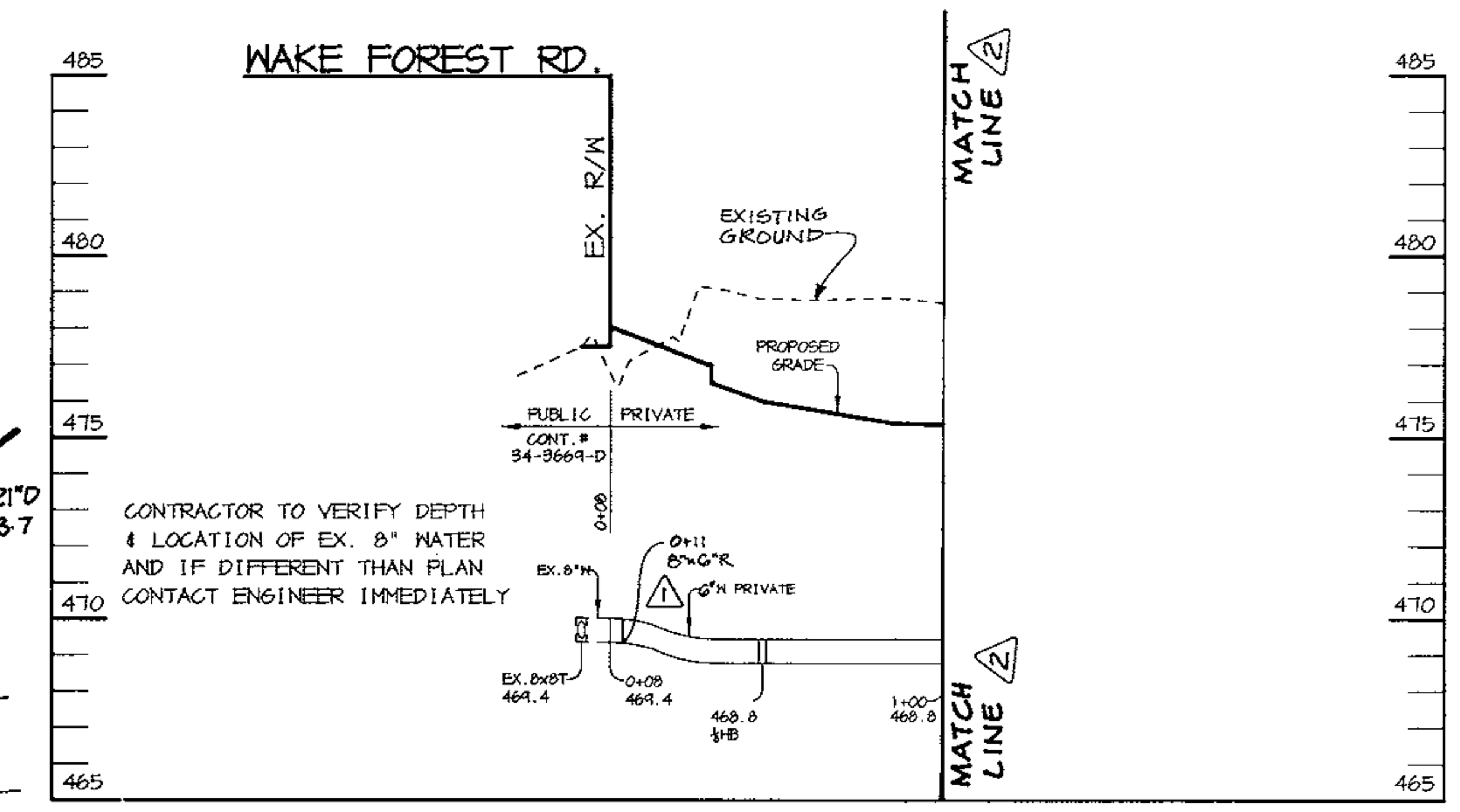
STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	INSIDE DIMENSION	REMARKS
I-1	A-5	*N 559,766.78 E 1,328,593.35	462.05	462.15	465.8	3'-5"x2'-7"	HOCO STD. DETAIL SD 4.01
I-2	⚠1 K	SEE PLAN	-	464.00	466.8	3.0' x 3'-0"	HOCO STD. DETAIL SD 4.12
I-3	A-5	*N 559,849.39 E 1,328,514.15	464.27	464.17	467.6	2'-6"x5'-0"	HOCO STD. DETAIL SD 4.01
I-4	A-5	*N 560,030.77 E 1,328,507.85	468.14	467.89	471.7	2'-6"x5'-0"	HOCO STD. DETAIL SD 4.01
I-5	A-5	*N 560,131.42 E 1,328,636.42	-	471.25	475.08	2'-6"x5'-0"	HOCO STD. DETAIL SD 4.01
M-1	4' MH	*N 560,141.32 E 1,328,568.51	470.91	470.66	475.8	-	HOCO STD. DETAIL SD 5.12
WQ-1	BAYSAVER	SEE PLAN ⚠1	-	-	466.8	-	SEE DETAIL SHEET 6
S-1	CONTROL STRUCTURE	*N 559,825.67 E 1,328,549.82	-	-	467.5	-	SEE DETAIL SHEET 7

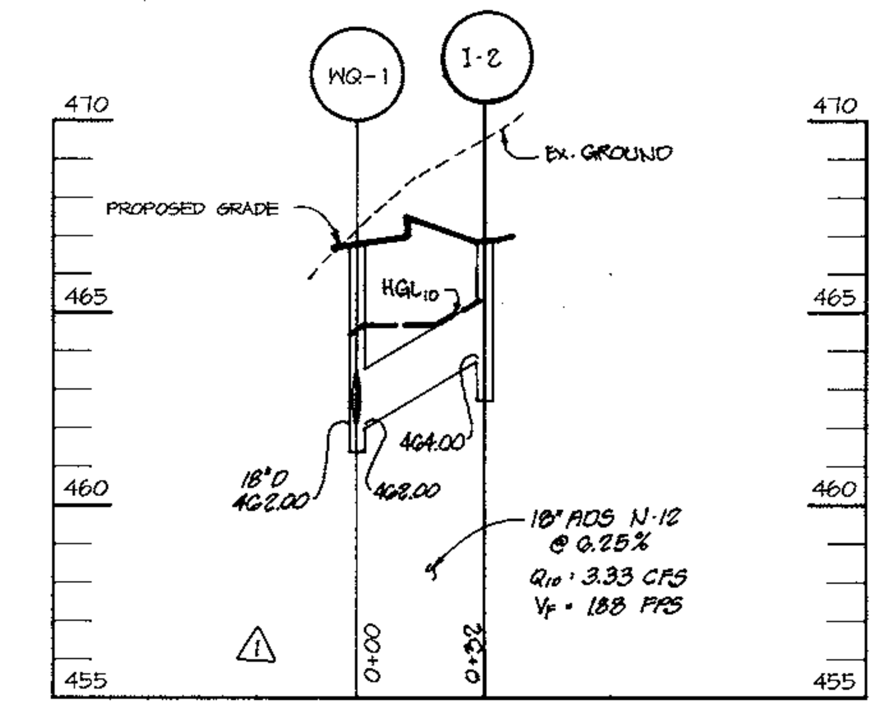
NOTES: * LOCATION OF "S" AND MANHOLES IS AT CENTER OF TOP COVER; FOR "A" INLETS LOCATION IS GIVEN FOR CENTER OF THROAT OPENING AT FACE OF CURB. TOP ELEVATION IS TOP OF CURB/GRATE/RIM.



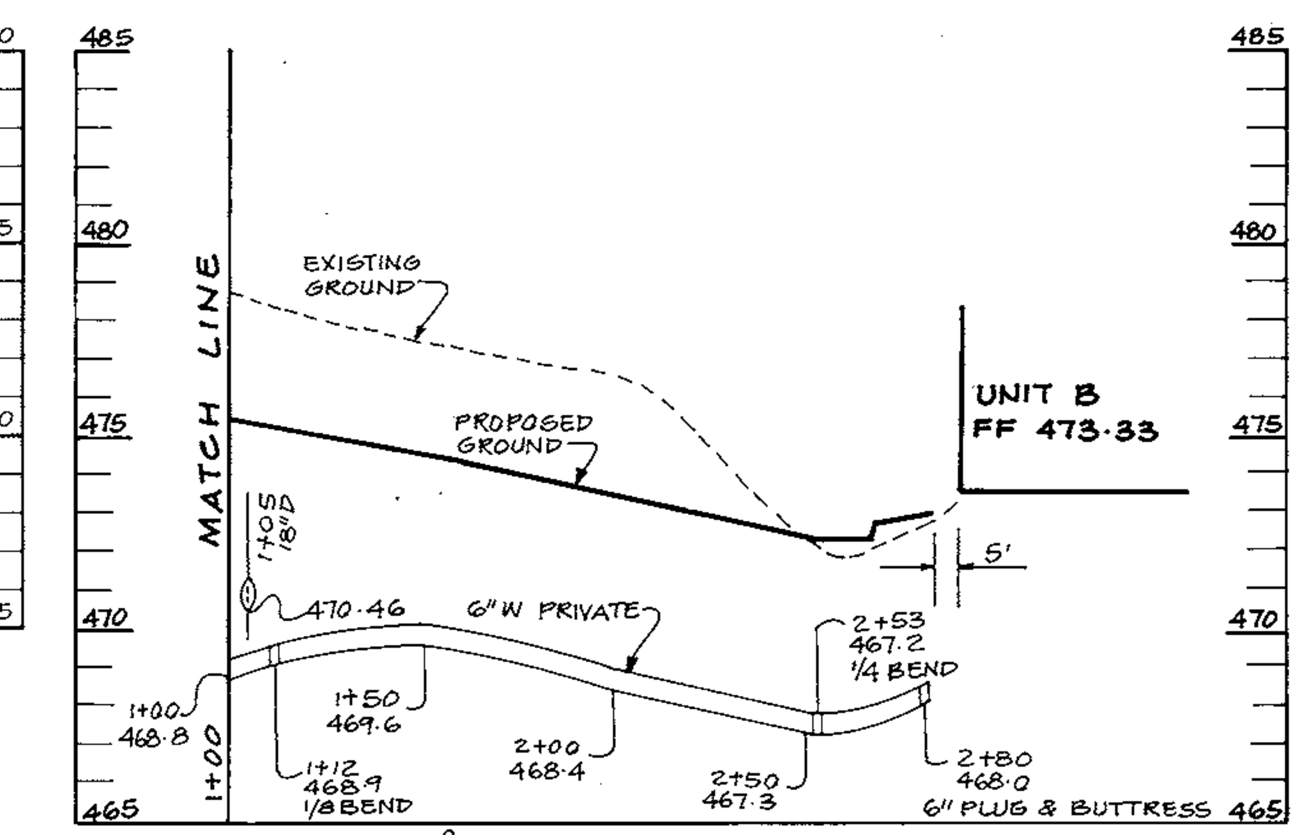
⚠2 BLOW-UP OF STORM DRAIN BEND
NO SCALE



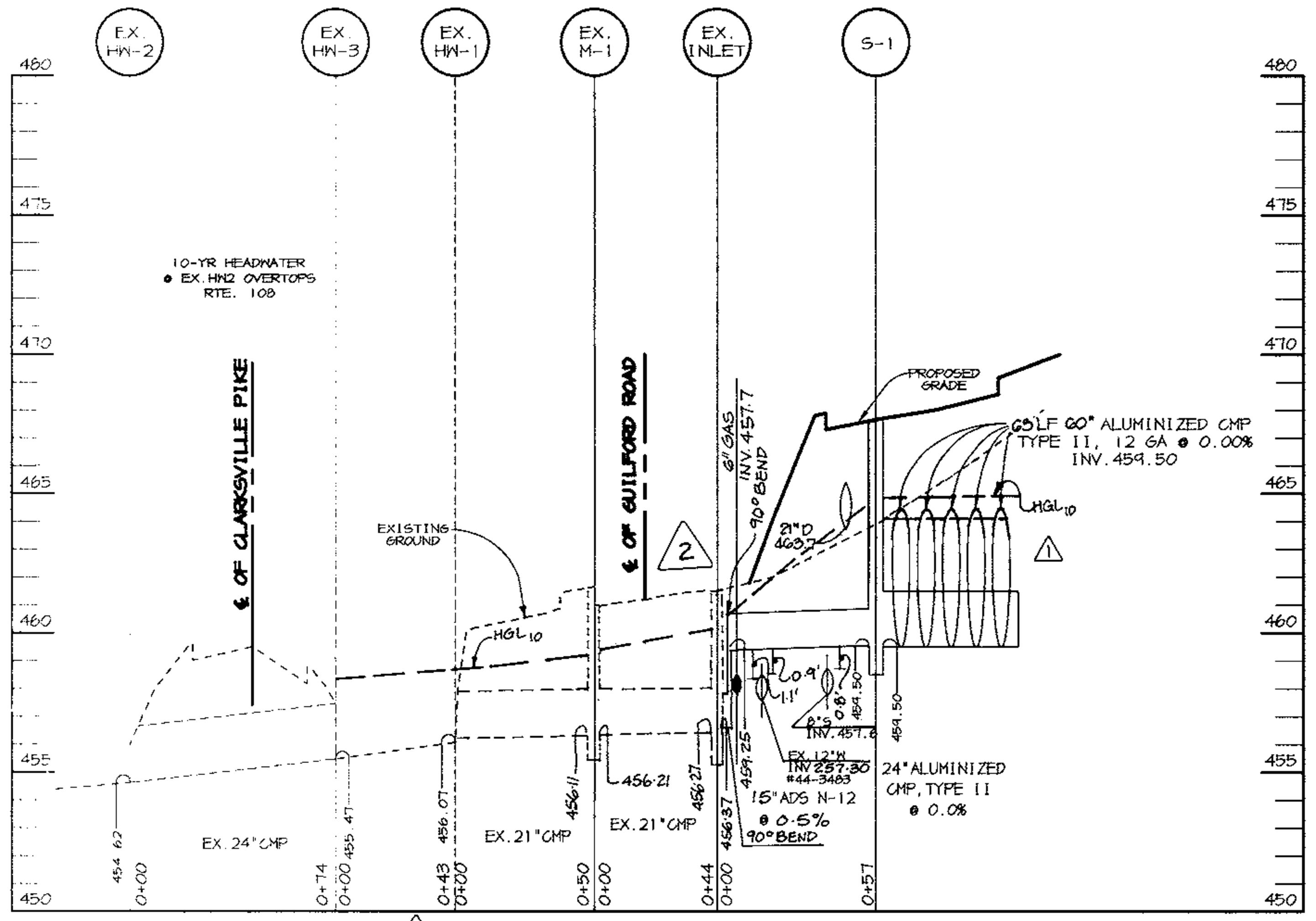
WATER PROFILE
SCALE: 1"=50' HOR. 1"=5' VERT.



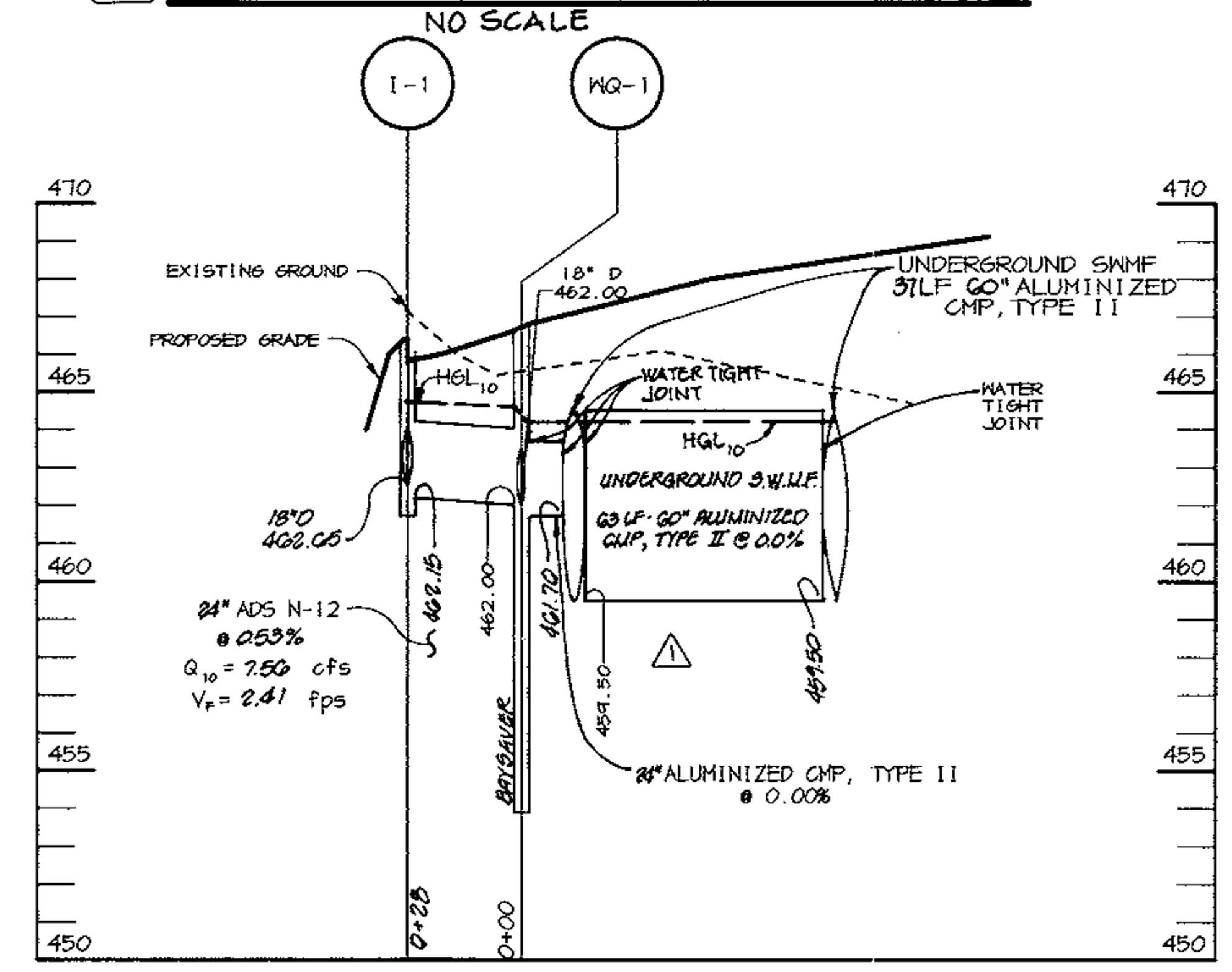
STORM DRAIN PROFILE
SCALE: 1"=50' HOR. 1"=5' VERT.



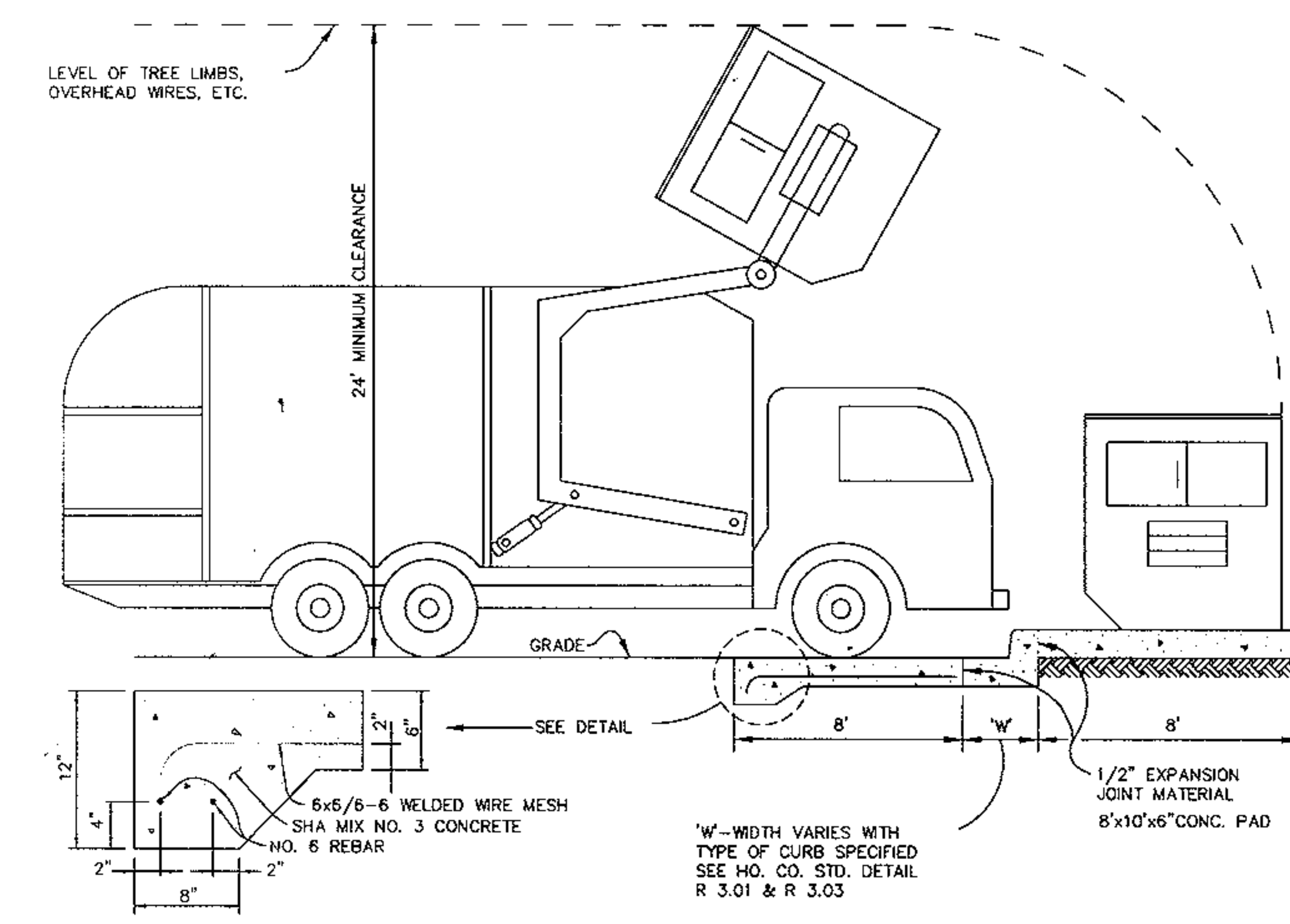
⚠2 WATER PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.



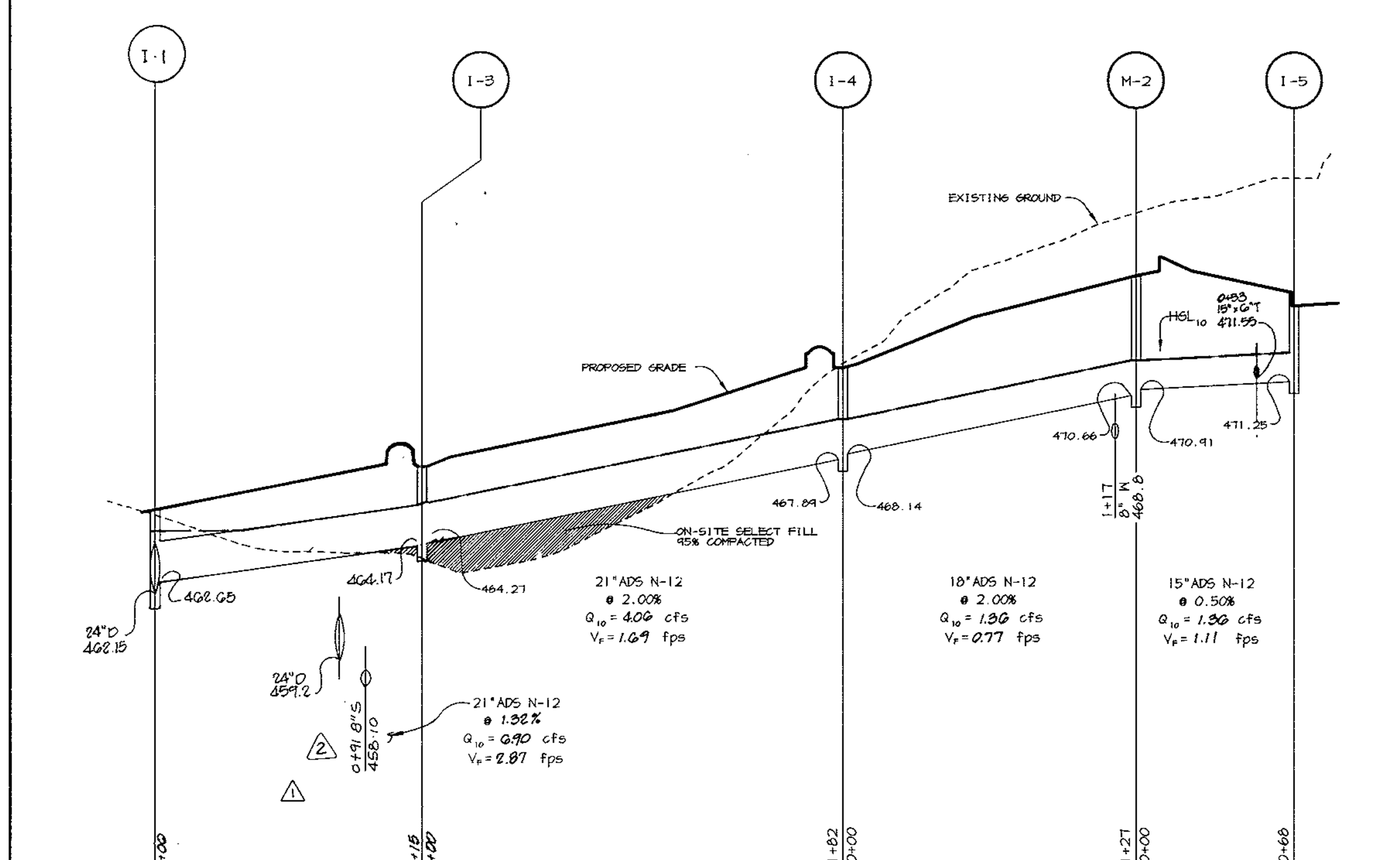
⚠2 STORM DRAIN PROFILE
SCALE: 1"=50' HOR. 1"=5' VERT.



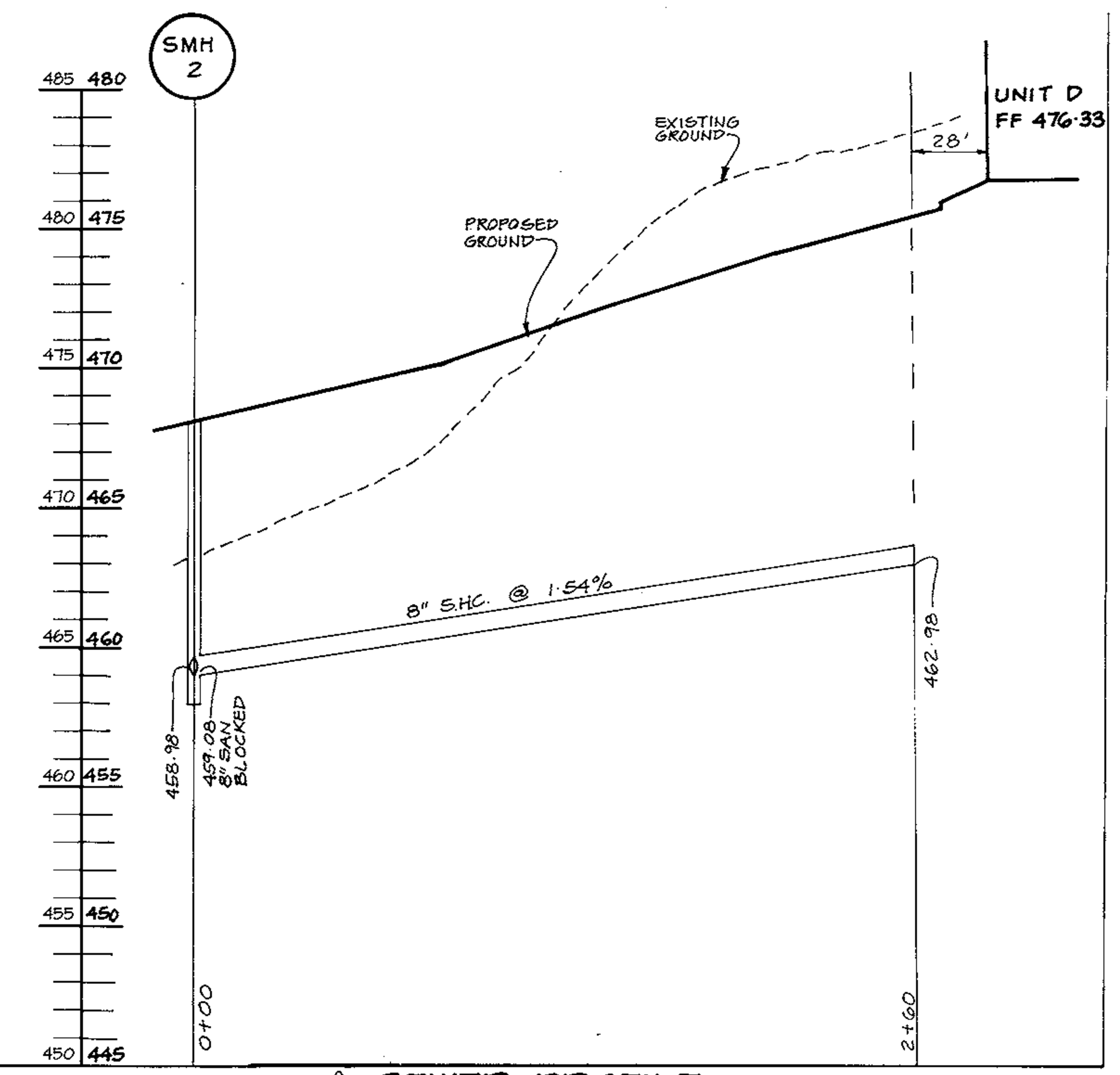
STORM DRAIN PROFILE
1"=50' HOR. 1"=5' VERT.



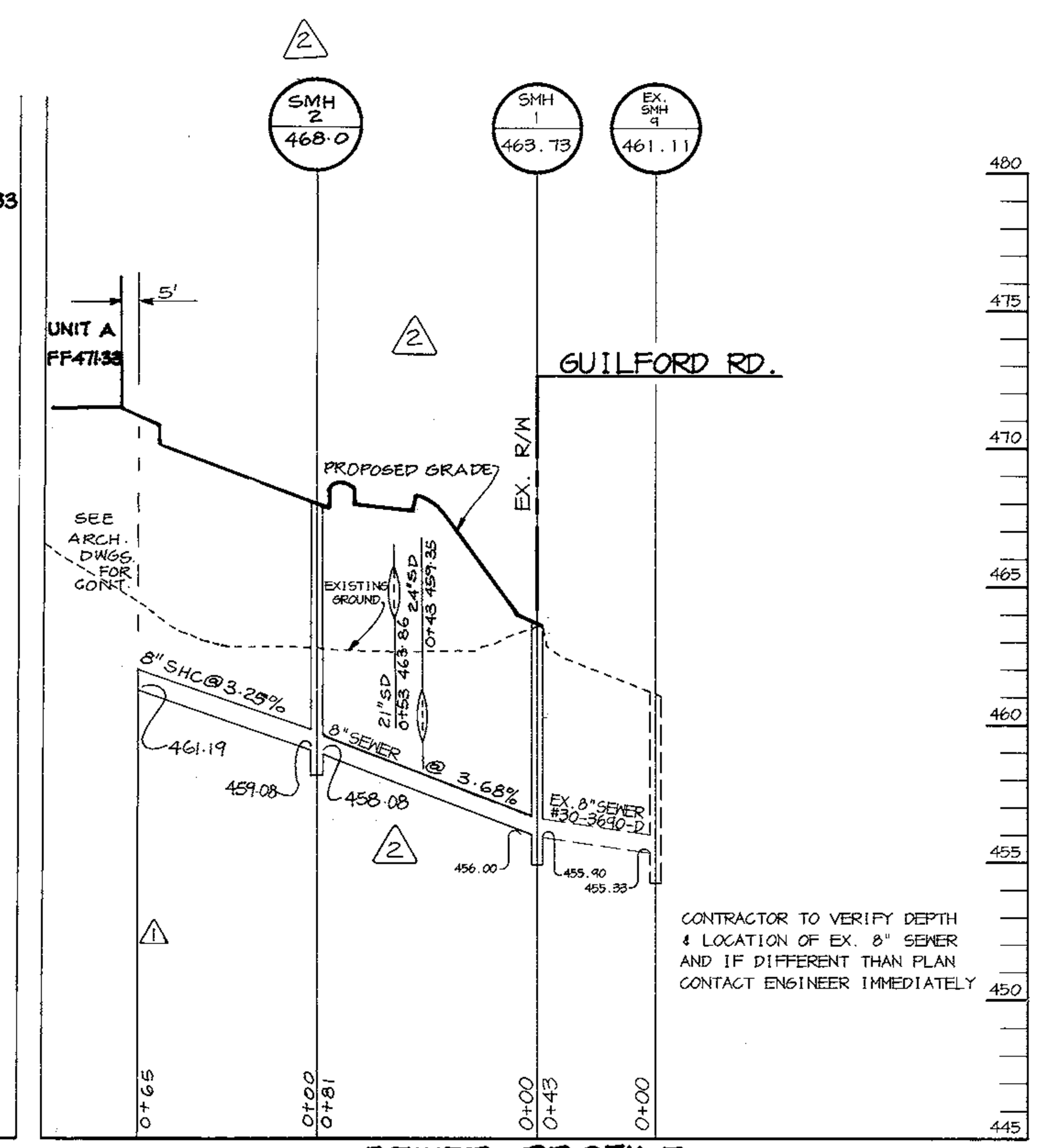
DUMPSTER PAD
NO SCALE



STORM DRAIN PROFILE
1"=50' HOR. 1"=5' VERT.



⚠2 SEWER PROFILE
1" = 50' HOR.
1" = 5' VERT.



⚠2 SEWER PROFILE
1" = 50' HOR.
1" = 5' VERT.

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 3/13/00

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 3/24/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3/6/00
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/24/00

DATE	NO.	REVISION
3.30.01	2	REV. WATER, SEWER & STORMDRAIN PROFILES.
6.12.00	1	REV. PROFILES & SCHEDULE

OWNER / DEVELOPER
WILBEN LLLP
c/o ANDREW L. ISAACSON
5450 WHITLEY PARK TERRACE SUITE 410
BETHESDA, MARYLAND 20814

PROJECT CLARKS GLEN NORTH
PARCEL B-1

AREA PARCEL 205 & P/O 204
TAX MAP 34 ZONED B-2
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE
PROFILES & DETAILS SHEET

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tel 410.997.8900 fax 410.997.9282

DATE


ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY:	D.R.D.
PROJECT NO :	99032 SDP4.DWG
DATE :	FEBRUARY 18, 2000
SCALE :	AS SHOWN
DRAWING NO.	4 OF 8

SDP-99-125

F:\PROJECT\99032\SDP4.DWG Tue Feb 15 13:56:07 2000 RMA