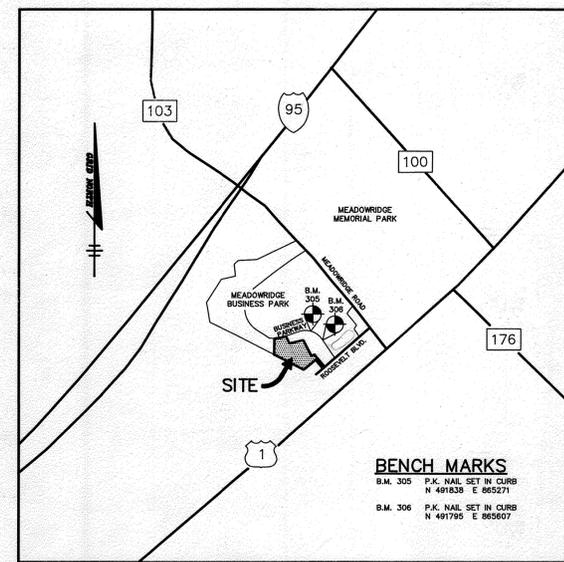


SITE DEVELOPMENT PLAN

MEADOWRIDGE BUSINESS PARK PARCEL E-1

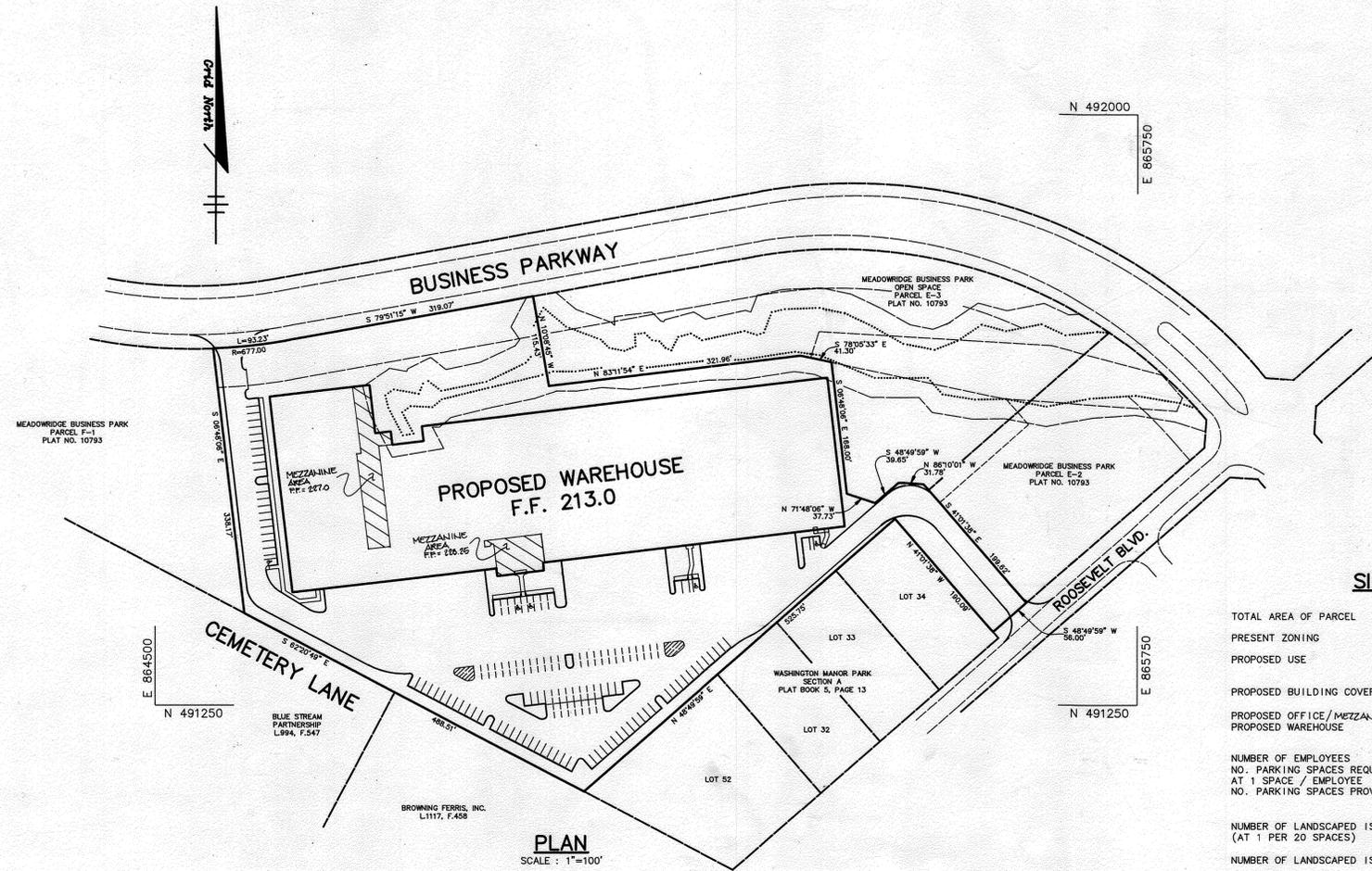
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND



SHEET INDEX	
SHT. NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	GRADING AND SEDIMENT CONTROL PLAN
4	DRAINAGE AREA & SOILS MAP
5	PROFILES AND DETAIL SHEET
6	PROFILES AND DETAIL SHEET
7	DETAIL SHEET
8	LANDSCAPE AND ENVIRONMENTAL ANALYSIS PLAN
9	STORMWATER MANAGEMENT POND RISER AND OUTFALL PIPE REBUILD

GENERAL NOTES

- ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM OF 42" COVER BELOW FINISHED GRADE.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.P., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1990 AMENDMENTS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:
 MISS UTILITY 1-800-257-7777
 CMP TELEPHONE COMPANY 725-9978
 HOWARD COUNTY BUREAU OF UTILITIES 313-4800
 AT&T CABLE LOCATION DIVISION 385-3553
 BALTIMORE GAS & ELECTRIC COMPANY 685-0123
 STATE HIGHWAY ADMINISTRATION 531-5533
 HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY 313-1890
 DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE \ominus INVERT.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SUBGRADE.
- TOPO TAKEN FROM FIELD RUN SURVEY DATED AUGUST, 1990 BY RIEMER MUEGGE & ASSOCIATES, INC. AND FROM MEADOWRIDGE BUSINESS PARK PLANS, F-89-163.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN DETAIL C2.01 (TRENCH IN ROCK OR TRENCH IN EARTH AS DETERMINED BY FIELD CONDITIONS) IN VOL. IV OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER INTO OR ACROSS ADJACENT OR DOMESTIC WASTEWATER INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- THE OWNER SHALL PROVIDE A SEPARATE AND INDEPENDENT SEWER CONNECTION FOR EACH TENANT OR OCCUPANT OF ANY BUILDING SHOWN ON THIS SITE DEVELOPMENT PLAN. WHO WILL DISCHARGE NON-HOMESTIC WASTE TO THE PUBLIC SEWERAGE SYSTEM IF THIS WASTE IS REGULATED UNDER SECTION 18.122A OF THE HOWARD COUNTY CODE. EACH SEPARATE AND INDEPENDENT SEWER CONNECTION SHALL INCLUDE A STANDARD MANHOLE AND OTHER WATER PRETREATMENT DEVICES AS REQUIRED AND APPROVED BY HOWARD COUNTY. WASTE LINES IN THE INTERIOR OF THE BUILDING SHALL BE DESIGNED, CONSTRUCTED OR MODIFIED SUCH THAT NON-HOMESTIC WASTE WILL BE DISCHARGED TO THE SEPARATE AND INDEPENDENT SEWER CONNECTION. NO PLAN SHALL DISCHARGE REGULATED NON-HOMESTIC WASTE TO THE PUBLIC SEWERAGE SYSTEM PRIOR TO INSTALLATION OF THE SEPARATE AND INDEPENDENT SEWER CONNECTION AND RELATED INTERIOR WASTE LINES. THE ABOVE REQUIREMENTS SHALL APPLY TO ALL INITIAL AND FUTURE OCCUPANTS OR TENANTS.
- AS PER PLAT 9047:
 THE WETLANDS BUFFER INDICATED ON THIS PLAT DOES NOT AFFECT THE INITIAL CONSTRUCTION OF THE GRADING, BUILDING, PARKING, AND UTILITIES ON A LOT OR PARCEL. IT DOES PROHIBIT SUBSEQUENT CLEARING, GRADING, OR CONSTRUCTION IN BUFFER AREA, MAINTENANCE OF BUILDINGS, PARKING, LANDSCAPING, AND UTILITIES IS PERMITTED.
- THE PAYMENT DETAILS SHOWN ON SHEET 8 OF 8 OF THIS PLAN REFLECT THE HOWARD COUNTY MINIMUM STANDARD PAYMENT SECTIONS AND ARE NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING, THE FINAL PAYMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE.
- WP-91-100, A REQUEST TO WAIVE SECTION 18.116(c)(6) WHICH PROHIBITS GRADING OR REMOVAL OF VEGETATION WITHIN 25 FEET OF A WETLAND, AND ALLOW BUFFER DISTURBANCE ON ALL PARCELS FOR WHICH THERE IS NO APPROVED SITE DEVELOPMENT PLAN. WP-91-100 WAS GRANTED APPROVAL ON MARCH 1, 1991. AS PER APPROVAL CONDITION #4, WE HAVE PROVIDED A SNOW FENCE ALONG THE LIMIT OF DISTURBANCE IN THE 25' BUFFER AREA (SEE SHEET 3 OF 8). AS PER APPROVAL CONDITION #6 WE HAVE PROVIDED ADDITIONAL LANDSCAPING IN THE BUFFER AREAS ON SHEET 8 OF 8.
- ALL TENANCIES SHALL BE ACCESSIBLE TO AND USABLE BY HANDICAPPED INDIVIDUALS IN ACCORDANCE WITH THE MARYLAND BUILDING CODE FOR THE HANDICAPPED.
- SITE LIGHTING TO BE PROVIDED BY BALTIMORE GAS AND ELECTRIC. CONTRACTOR TO PROVIDE COORDINATION FOR THE INSTALLATION.
- WP-25-85, A REQUEST TO WAIVE SECTIONS 16.103(C), 16.121(A)(6) AND 16.147(C) WAS APPROVED ON DECEMBER 9, 1991 TO ALLOW 6-MONTH TIME EXTENSIONS FOR PLAT, SDP, WP-91-100 AND WP-91-82.
- WP-91-205, A REQUEST TO WAIVE SECTION 16.147(S) TO PERMIT 6-MONTH EXTENSION OF SDP WAS APPROVED ON JULY 15, 1992.
- WP-93-36, A REQUEST TO WAIVE SECTION 16.118(P) TO PERMIT 6-MONTH EXTENSION OF FINAL PLAT WAS APPROVED ON NOVEMBER 12, 1992.
- WP-93-74, A REQUEST TO WAIVE SECTION 16.147(S) TO PERMIT 6-MONTH EXTENSION OF SDP RESUBMISSION WAS APPROVED ON FEBRUARY 26, 1993.

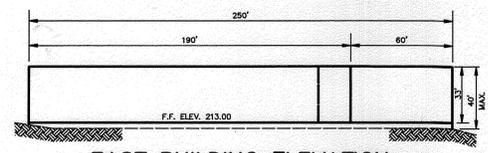


SITE TABULATION

TOTAL AREA OF PARCEL	8.18 Ac.
PRESENT ZONING	M-1
PROPOSED USE	WAREHOUSE/DISTRIBUTION BUILDING - ONE STORY
PROPOSED BUILDING COVERAGE	142,040 S.F. (3.26 Ac.) (39.1% OF TOTAL ACREAGE)
PROPOSED OFFICE/MEZZANINE AREA	7,500 S.F.
PROPOSED WAREHOUSE	134,540 S.F.
NUMBER OF EMPLOYEES	90
NO. PARKING SPACES REQUIRED AT 1 SPACE / EMPLOYEE	90
NO. PARKING SPACES PROVIDED	124 (INCLUDES 5 HANDICAPPED) WITH ADDITIONAL 8 COMPACT SPACES
NUMBER OF LANDSCAPED ISLANDS REQUIRED (AT 1 PER 20 SPACES)	8 ISLANDS
NUMBER OF LANDSCAPED ISLANDS PROVIDED	8 ISLANDS
NUMBER OF SHADE TREES REQUIRED (AT 1 PER 20 SPACES)	8 SHADE TREES
NUMBER OF SHADE TREES PROVIDED	8 SHADE TREES
GREEN SPACE PROVIDED	2.02 Ac. (24.7% OF TOTAL AC.)

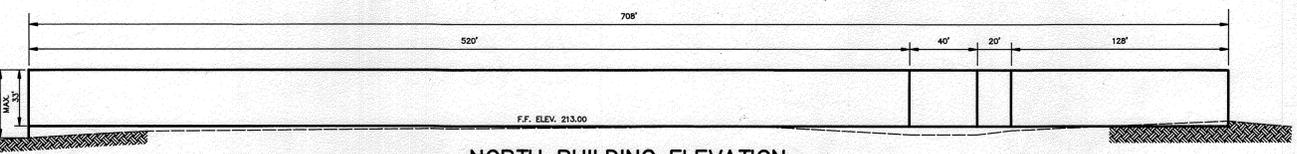


AS BUILT CERTIFICATE	
ARTHUR E. MUEGGE #8707	DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.	
<i>John Beden</i>	7-13-93
COUNTY HEALTH OFFICER	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>James J. Shum</i>	7/16/93
DIRECTOR	DATE
<i>Armeda H. H. H.</i>	7/16/93
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	DATE
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.	
<i>James J. Shum</i>	7/16/93
DIRECTOR	DATE
<i>Armeda H. H. H.</i>	7/16/93
CHIEF, BUREAU OF ENGINEERING	DATE



EAST BUILDING ELEVATION
NO SCALE

NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE BUILDING DETAILS AND ELEVATIONS.



NORTH BUILDING ELEVATION
NO SCALE

01-10-23 REVISE TO REPLACE EXISTING POND RISER STRUCTURE AND OUTFALL AND TO SHOW RECONSTRUCTION OF POND EMBANKMENT

DATE	NO.	REVISION

ADDRESS CHART

PARCEL	STREET ADDRESS
E-1	6740 BUSINESS PARKWAY

SUBDIVISION NAME	SECT./AREA -	PARCEL -
MEADOWRIDGE BUSINESS PARK		PARCEL E-1
PLAT # -	BLOCK # -	ZONING -
10703	22 & 5	M-1
TAX MAP NO. -	ELECT. DIST. -	CENSUS TRACT -
37 & 43	1st	6012
WATER CODE -	SEWER CODE -	
B01	2153000	

DATE	NO.	REVISION
11-9-03	1	ADD MEZZANINE AREAS

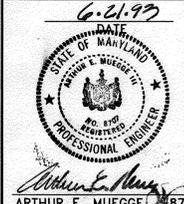
OWNER / DEVELOPER
 MEADOWRIDGE INDUSTRIAL PARTNERSHIP
 4041 POWDER MILL ROAD, SUITE 205
 CALVERTON, MARYLAND 20705
 (301) 937-3111

PROJECT **MEADOWRIDGE BUSINESS PARK
PARCEL E-1**
A WAREHOUSE BUILDING

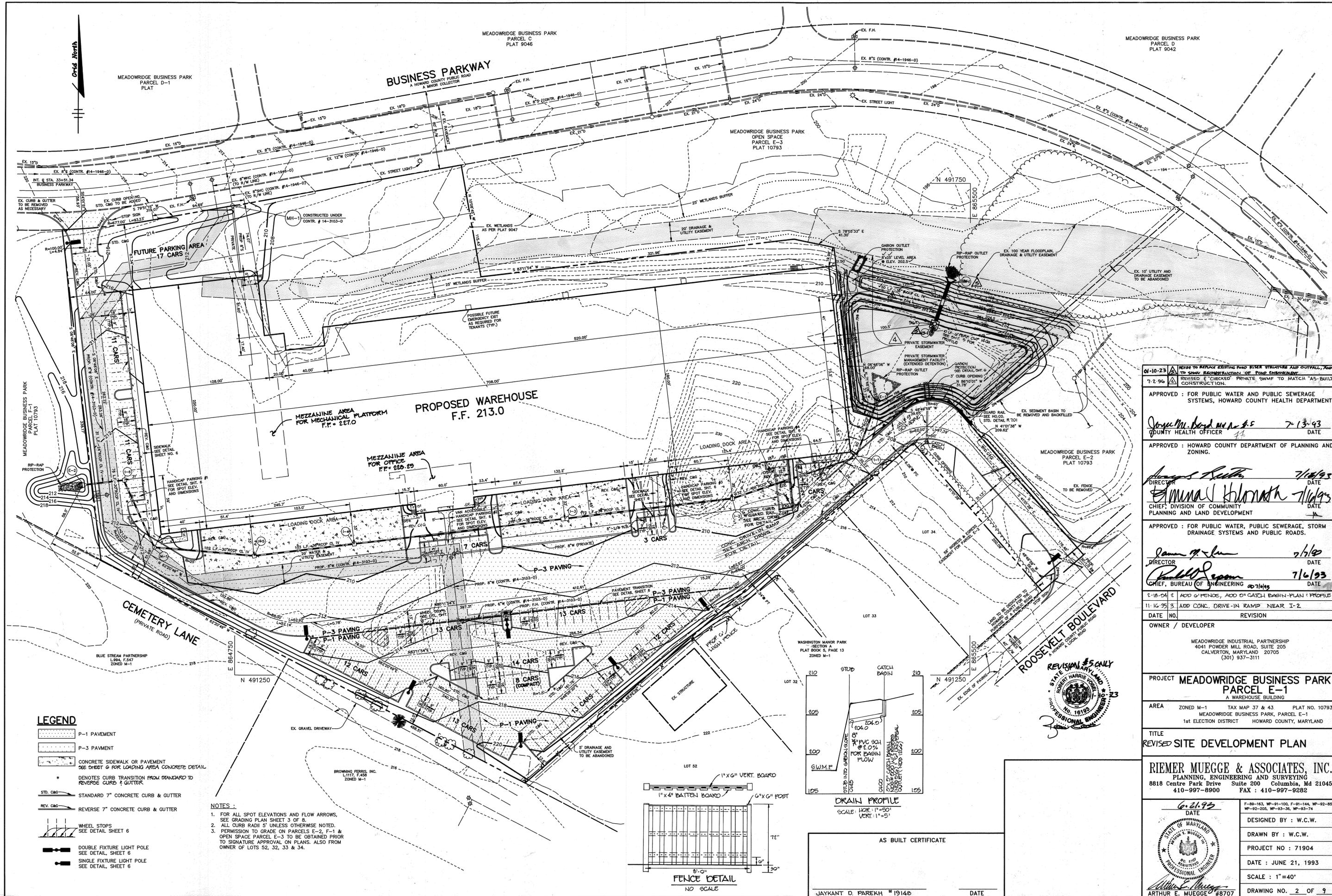
AREA ZONED M-1 TAX MAP 37 & 43 PLAT NO. 10793
 MEADOWRIDGE BUSINESS PARK, PARCEL E-1
 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
REVISED TITLE SHEET

RIEMER MUEGGE & ASSOCIATES, INC.
 PLANNING, ENGINEERING AND SURVEYING
 8818 Centre Park Drive Suite 200 Columbia, Md 21045
 410-997-8900 FAX: 410-997-9282



DESIGNED BY: W.C.W.
 DRAWN BY: W.C.W.
 PROJECT NO: 71904
 DATE: JUNE 21, 1993
 SCALE: AS SHOWN
 DRAWING NO. 1 OF 9



01-10-23	REVISE TO REPLACE EXISTING POND RIVER STRUCTURE AND OUTFALL, AND TO SIMPLY RECONSTRUCTION OF POND FURNISHING.
7-2-96	REVISED & CHECKED PRIVATE SWMF TO MATCH "AS-BUILT" CONSTRUCTION.
APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.	
<i>Joseph M. Bond</i>	7-13-93
COUNTY HEALTH OFFICER	DATE
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>James R. Smith</i>	7/13/93
DIRECTOR	DATE
<i>Samuel Blomach</i>	7/16/93
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	DATE
APPROVED : FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.	
<i>James R. Smith</i>	7/16/93
DIRECTOR	DATE
<i>Paul J. Sporn</i>	7/16/93
CHIEF, BUREAU OF ENGINEERING	DATE
1-18-94	ADD 6" FENCE, ADD 0" CATCH BASIN-PLAN & PROFILE
11-16-95	ADD CONC. DRIVE-IN RAMP NEAR I-2
DATE NO.	REVISION
OWNER / DEVELOPER	
MEADOWRIDGE INDUSTRIAL PARTNERSHIP 4041 POWDER MILL ROAD, SUITE 205 CALVERTON, MARYLAND 20705 (301) 937-3111	
PROJECT MEADOWRIDGE BUSINESS PARK PARCEL E-1 A WAREHOUSE BUILDING	
AREA	ZONED M-1 TAX MAP 37 & 43 PLAT NO. 10793 MEADOWRIDGE BUSINESS PARK, PARCEL E-1 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE REVISED SITE DEVELOPMENT PLAN	
RIEMER MUEGGE & ASSOCIATES, INC. PLANNING, ENGINEERING AND SURVEYING 8818 Centre Park Drive Suite 200 Columbia, Md 21045 410-997-8900 FAX : 410-997-9282	
<i>Arthur E. Muegge</i>	DATE
DESIGNED BY : W.C.W.	
DRAWN BY : W.C.W.	
PROJECT NO : 71904	
DATE : JUNE 21, 1993	
SCALE : 1"=40'	
DRAWING NO. 2 OF 9	

STONE OUTLET SEDIMENT TRAP #1
 DRAINAGE AREA 2.90 AC.
 STORAGE VOLUME REQUIRED 5220 C.F.
 STORAGE VOLUME PROVIDED 5312 C.F.
 CREST ELEVATION 205.0
 BOTTOM ELEVATION 200.0
 BOTTOM DIMENSION 64' x 10'
 CLEANOUT ELEVATION 202.5
 DEPTH 4.0'

MEADOWRIDGE BUSINESS PARK
 PARCEL C
 PLAT 9046

MEADOWRIDGE BUSINESS PARK
 PARCEL D
 PLAT 9042

BUSINESS PARKWAY
 A HOWARD COUNTY PUBLIC ROAD
 A MINOR COLLECTOR

MEADOWRIDGE BUSINESS PARK
 OPEN SPACE
 PARCEL E-3
 PLAT 10793

01-10-23 REVISE TO REPLACE EXISTING POND RISER STRUCTURE AND OUTFALL AND TO SHOW RECONSTRUCTION OF POND PERMANENCE

DATE NO. REVISION
 BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 David E. Muegge 6-18-93
 DEVELOPER DATE

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 Arthur E. Muegge 6-21-93
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 James M. Helms 6/24/93
 U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Robert J. Zielhuis 6/24/93
 HOWARD SOIL CONSERVATION DISTRICT DATE

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

James R. Boyden 7-13-93
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James S. Smith 7/16/93
 DIRECTOR DATE

Amnah H. Blomach 7/16/93
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

James J. Shaw 7/17/93
 DIRECTOR DATE

Paul D. Egan 7/16/93
 CHIEF, BUREAU OF ENGINEERING DATE

7-2-96 MODIFIED PRIVATE SWAMP TO CONFORM WITH "AS-BUILT" CONSTRUCTION

OWNER / DEVELOPER
 MEADOWRIDGE INDUSTRIAL PARTNERSHIP
 4041 POWDER MILL ROAD, SUITE 2005
 CALVERTON, MARYLAND 20705
 (301) 937-3111

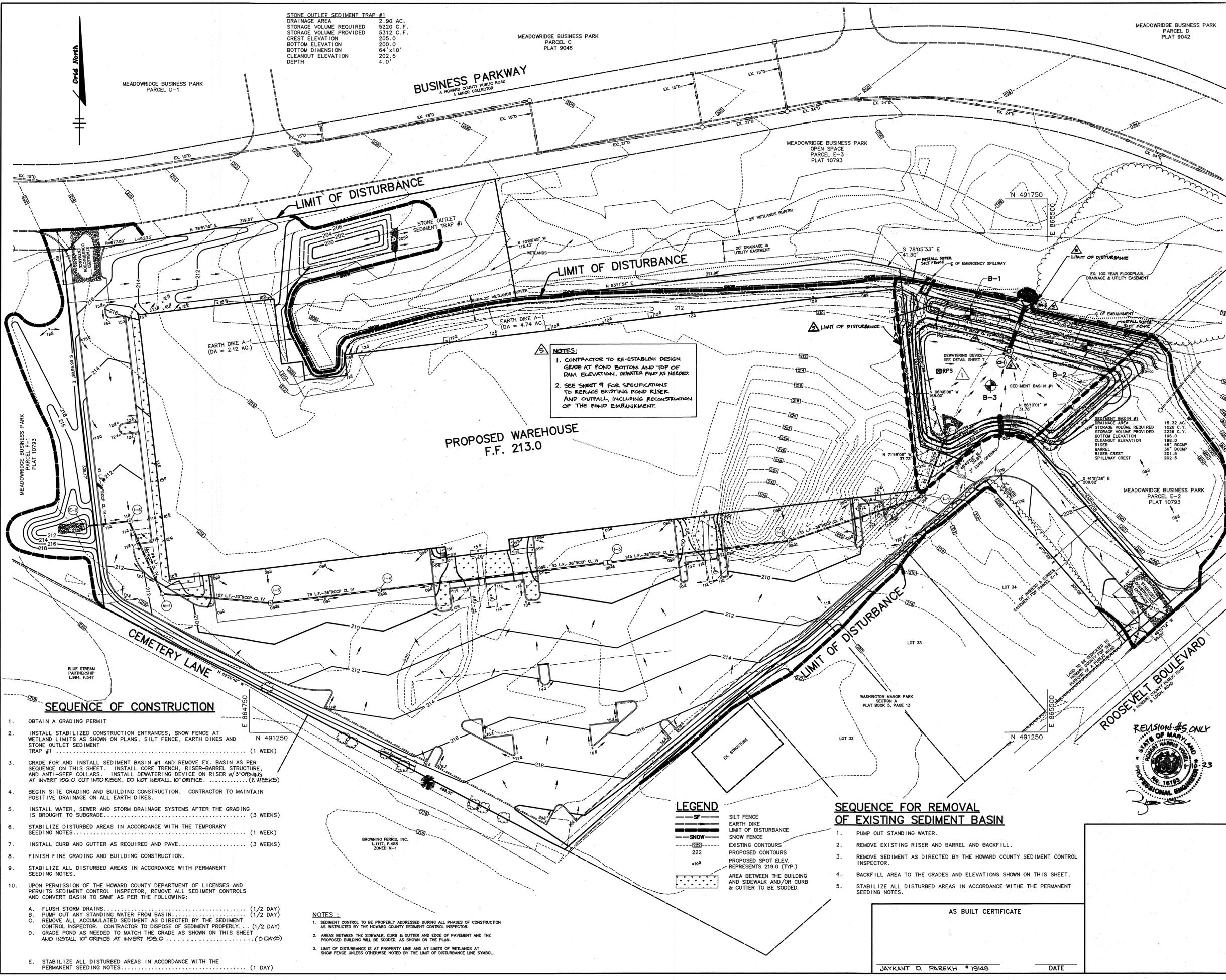
PROJECT MEADOWRIDGE BUSINESS PARK
 PARCEL E-1
 A WAREHOUSE BUILDING

AREA ZONED M-1 TAX MAP 37 & 43 PLAT NO. 10793
 MEADOWRIDGE BUSINESS PARK, PARCEL E-1
 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE REVISED GRADING AND
 SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
 PLANNING, ENGINEERING AND SURVEYING
 8818 Centre Park Drive Suite 200 Columbia, MD 21045
 410-997-8900 FAX: 410-997-9282

DATE 6-21-93
 DESIGNED BY: W.C.W.
 DRAWN BY: W.C.W.
 PROJECT NO: 71904
 DATE: JUNE 21, 1993
 SCALE: 1"=40'
 DRAWING NO. 3 OF 9
 ARTHUR E. MUEGGE #8707



NOTES:
 1. CONTRACTOR TO RE-ESTABLISH DESIGN GRADE AT POND BOTTOM AND TOP OF DAM ELEVATION. DEWATER PUMP AS NEEDED.
 2. SEE SHEET 9 FOR SPECIFICATIONS TO REPLACE EXISTING POND RISER AND OUTFALL, INCLUDING RECONSTRUCTION OF THE POND EMBANKMENT.

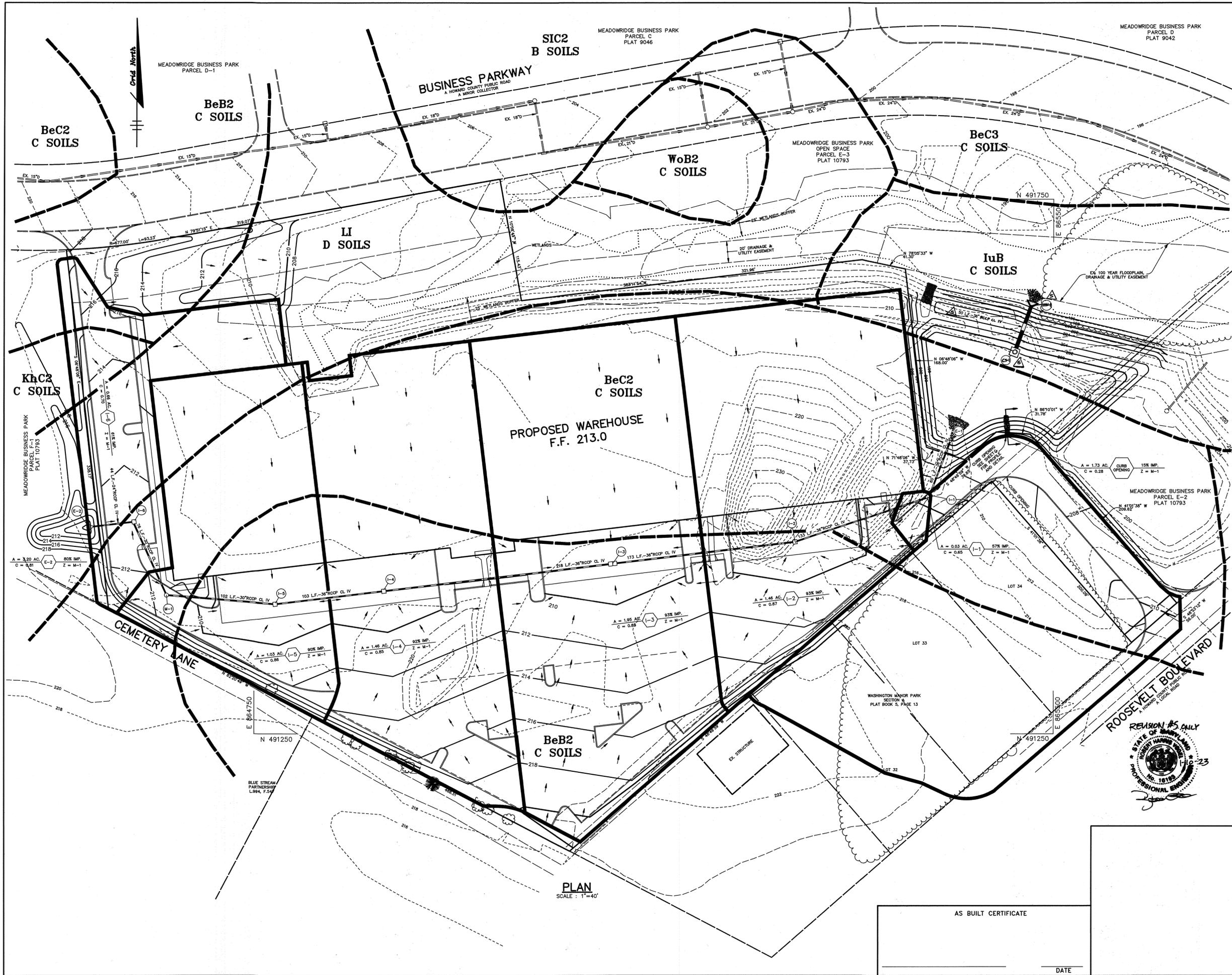
- SEQUENCE OF CONSTRUCTION**
- OBTAIN A GRADING PERMIT
 - INSTALL STABILIZED CONSTRUCTION ENTRANCES, SNOW FENCE AT WETLAND LIMITS AS SHOWN ON PLANS, SILT FENCE, EARTH DIKES AND STONE OUTLET SEDIMENT TRAP #1 (1 WEEK)
 - GRADE FOR AND INSTALL SEDIMENT BASIN #1 AND REMOVE EX. BASIN AS PER SEQUENCE ON THIS SHEET. INSTALL CORE TRENCH, RISER-BARREL STRUCTURE, AND ANTI-SLEEP COLLARS. INSTALL DEWATERING DEVICE ON RISER W/ 2" OPENING AT INVERT 106.0 CUT INTO RISER. DO NOT INSTALL 10" ORIFICE. (6 WEEKS)
 - BEGIN SITE GRADING AND BUILDING CONSTRUCTION. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE ON ALL EARTH DIKES.
 - INSTALL WATER, SEWER AND STORM DRAINAGE SYSTEMS AFTER THE GRADING IS BROUGHT TO SUBGRADE (3 WEEKS)
 - STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THE TEMPORARY SEEDING NOTES. (1 WEEK)
 - INSTALL CURB AND GUTTER AS REQUIRED AND PAVE. (3 WEEKS)
 - FINISH FINE GRADING AND BUILDING CONSTRUCTION.
 - STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
 - UPON PERMISSION OF THE HOWARD COUNTY DEPARTMENT OF LICENSES AND PERMITS SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROLS AND CONVERT BASIN TO SWMF AS PER THE FOLLOWING:
 - FLUSH STORM DRAINS (1/2 DAY)
 - PUMP OUT ANY STANDING WATER FROM BASIN (1/2 DAY)
 - REMOVE ALL ACCUMULATED SEDIMENT AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. CONTRACTOR TO DISPOSE OF SEDIMENT PROPERLY. (1/2 DAY)
 - GRADE POND AS NEEDED TO MATCH THE GRADE AS SHOWN ON THIS SHEET AND INSTALL 10" ORIFICE AT INVERT 106.0 (5 WEEKS)
 - STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES. (1 DAY)

- LEGEND**
- SILT FENCE
 - EARTH DIKE
 - LIMIT OF DISTURBANCE
 - SNOW FENCE
 - EXISTING CONTOURS
 - PROPOSED CONTOURS
 - PROPOSED SPOT ELEV. REPRESENTS 219.0 (TYP.)
 - AREA BETWEEN THE BUILDING AND SIDEWALK AND/OR CURB & GUTTER TO BE SODDED.

- SEQUENCE FOR REMOVAL OF EXISTING SEDIMENT BASIN**
- PUMP OUT STANDING WATER.
 - REMOVE EXISTING RISER AND BARREL AND BACKFILL.
 - REMOVE SEDIMENT AS DIRECTED BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 - BACKFILL AREA TO THE GRADES AND ELEVATIONS SHOWN ON THIS SHEET.
 - STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.

AS BUILT CERTIFICATE
 JAYKANT D. PAREKH #19148 DATE





LEGEND

BeB2	BELTSVILLE SILT LOAM, 1-5% SLOPES, MOD. ERODED
BeC2	BELTSVILLE SILT LOAM, 5-10% SLOPES, MOD. ERODED
BeC3	BELTSVILLE SILT LOAM, 5-10% SLOPES, SEV. ERODED
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1-5% SLOPES
KhC2	KEYPORT SILT LOAM, 3-10% SLOPES, MOD. ERODED
LI	LEONARDTOWN SILT LOAM
SIC2	SASSAFRAS LOAM, 5-10% SLOPES, MOD. ERODED
WoB2	WOODSTOWN SANDY LOAM, 1-5% SLOPES, MOD. ERODED
SOILS TAKEN FROM HOWARD COUNTY SOILS MAP #30	
	DRAINAGE AREA
	SOILS TYPE DELINEATION

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

James B. Bader 7-17-93
 COUNTY HEALTH OFFICER DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James B. Bader 7/16/93
 DIRECTOR DATE

Arnold Blomath 7/16/93
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED : FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

James B. Bader 7/16/93
 DIRECTOR DATE

Paul D. Seaman 7/16/93
 CHIEF, BUREAU OF ENGINEERING DATE

01-10-23 REVISE TO REPLACE EXISTING POND RISER STRUCTURE AND OUTFALL AND TO SHOW RECONSTRUCTION OF POND EMBANKMENT

DATE NO. REVISION
 OWNER / DEVELOPER
 MEADOWRIDGE INDUSTRIAL PARTNERSHIP
 4041 POWDER MILL ROAD, SUITE 205
 CALVERTON, MARYLAND 20705
 (301) 937-3111

PROJECT MEADOWRIDGE BUSINESS PARK
 PARCEL E-1
 A WAREHOUSE BUILDING

AREA ZONED M-1 TAX MAP 37 & 43 PLAT NO. 10793
 MEADOWRIDGE BUSINESS PARK, PARCEL E-1
 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE REVISED DRAINAGE AREA
 & SOILS MAP

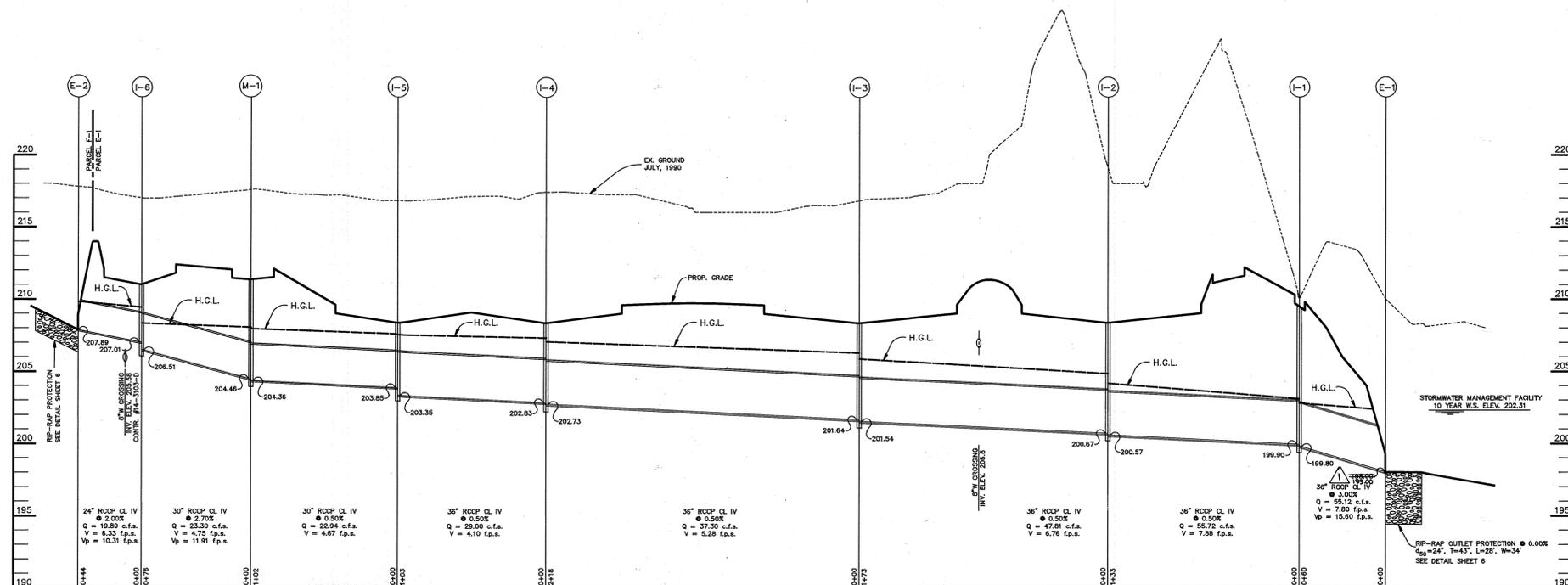
RIEMER MUEGGE & ASSOCIATES, INC.
 PLANNING, ENGINEERING AND SURVEYING
 8818 Centre Park Drive Suite 200 Columbia, Md 21045
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6-21-93

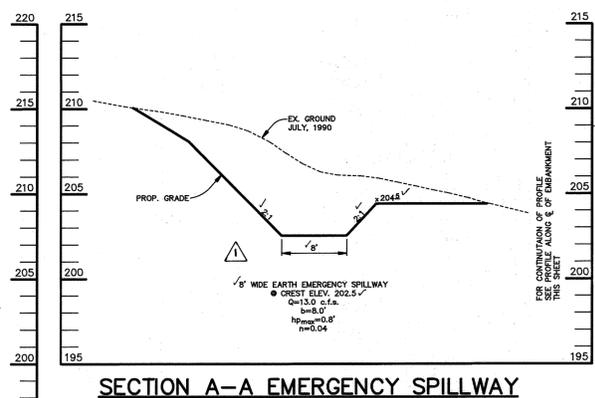
 DESIGNED BY : W.C.W.
 DRAWN BY : W.C.W.
 PROJECT NO : 71904
 DATE : JUNE 21, 1993
 SCALE : AS SHOWN
 DRAWING NO. 4 OF 9
 ARTHUR E. MUEGGE #8707

AS BUILT CERTIFICATE
 DATE

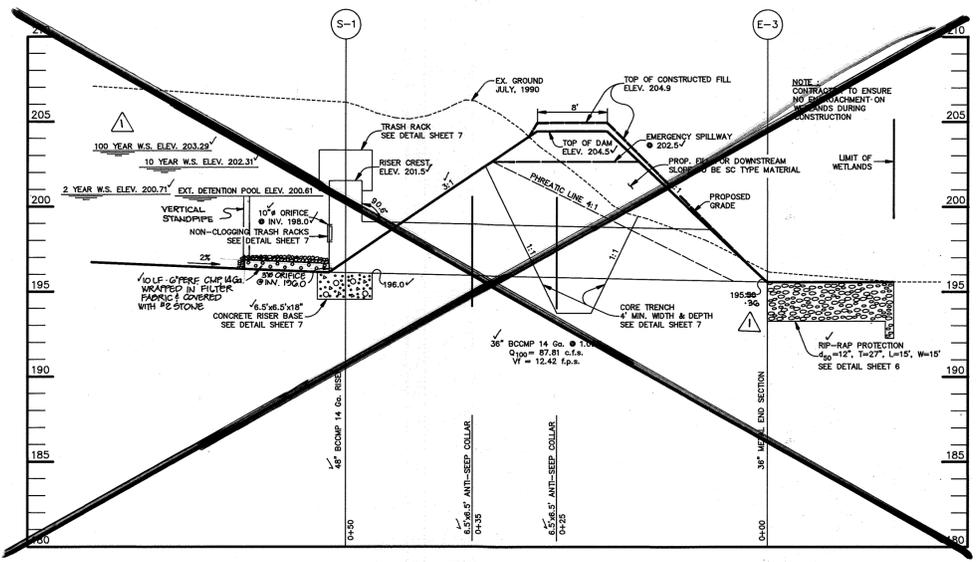
PLAN
 SCALE : 1"=40'



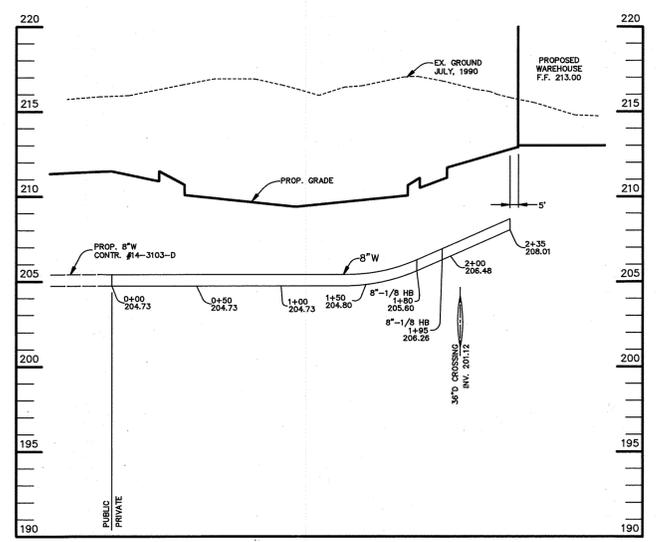
STORM DRAIN PROFILE
SCALE: HOR.-1"=50' VERT.-1"=5'



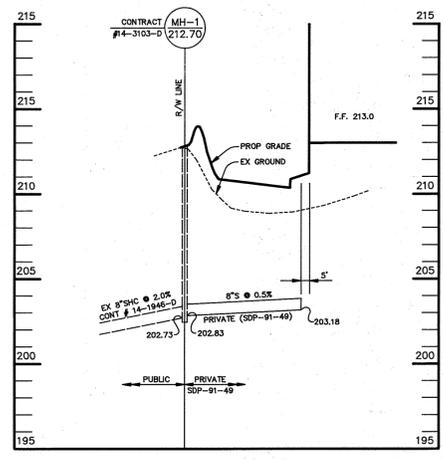
SECTION A-A EMERGENCY SPILLWAY
SCALE: HOR.-1"=10' VERT.-1"=5'



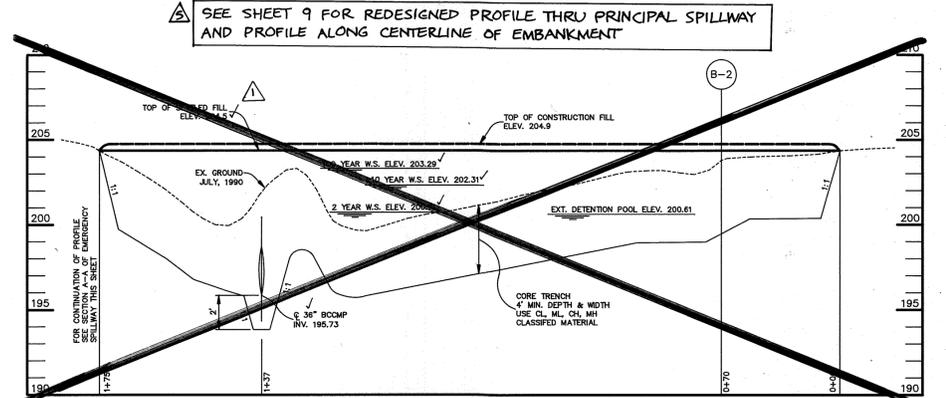
PROFILE THRU PRINCIPAL SPILLWAY
SCALE: HOR.-1"=10' VERT.-1"=5'



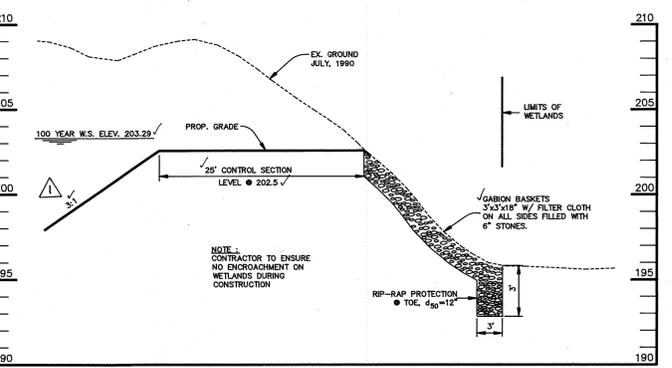
WATER PROFILE
SCALE: HOR.-1"=50' VERT.-1"=5'



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



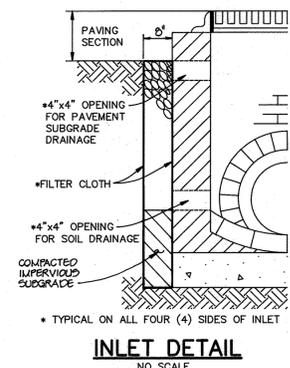
PROFILE ALONG CENTERLINE OF EMBANKMENT
SCALE: HOR.-1"=20' VERT.-1"=5'



PROFILE THRU CENTERLINE OF EMERGENCY SPILLWAY
SCALE: HOR.-1"=50' VERT.-1"=5'

STRUCTURE SCHEDULE

NO.	TYPE	T.C. ELEV.	INV. IN	INV. OUT	REMARKS
I-1	S COMB	209.60	199.90	199.80	HO. CO. STD. DTL. SD-4.32
I-2	S TYPE	208.34	200.67	200.57	HO. CO. STD. DTL. SD-4.22
I-3	DOUBLE S TYPE	208.34	201.64	201.54	HO. CO. STD. DTL. SD-4.23
I-4	S TYPE	208.34	202.83	202.73	HO. CO. STD. DTL. SD-4.22
I-5	S TYPE	208.34	203.85	203.35	HO. CO. STD. DTL. SD-4.22
I-6	S TYPE	208.34	207.01	206.51	HO. CO. STD. DTL. SD-4.22
M-1	STD. 5' MANHOLE	211.40	204.46	204.36	HO. CO. STD. DTL. 0-5.13
E-1	24" CONC. END SECT.	196.00			HO. CO. STD. DTL. SD-5.51
E-2	24" CONC. END SECT.	196.00			HO. CO. STD. DTL. SD-5.51
MH-1	TYPE 'A' MANHOLE	195.50			HO. CO. STD. DTL. 0-5.11
CS-1	CONCRETE STRUCTURE	196.10	196.00		SEE DETAIL SHEET 9



INLET DETAIL
NO SCALE

AS BUILT CERTIFICATE
ARTHUR E. MUEGGE #8707 DATE



DATE	NO.	REVISION
01-10-23	1	REVISE TO REPLACE EXISTING POND RISER STRUCTURE AND OUTFALL AND TO SHOW RECONSTRUCTION OF POND EMBANKMENT

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

David E. M... 6-18-93
DEVELOPER DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Arthur E. Muegge 6-21-93
ENGINEER DATE

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

James W. Ziehm 6/24/93
U.S. SOIL CONSERVATION SERVICE DATE

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

Robert W. Ziehm 6/24/93
HOWARD SOIL CONSERVATION DISTRICT DATE

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

Joseph B... 7-13-93
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James R... 7/16/93
DIRECTOR DATE

Samuel H... 7/16/93
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

James R... 7/17/93
DIRECTOR DATE

Paul W. G... 7/16/93
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION
7-2-96	1	REV. S.D. PROFILE, PRINCIPAL SPILLWAY PROF. & OF EMBANKMENT PROF. & EMERGENCY SPILL. PROF. FOR "AS-BUILT" CONFORMANCE.

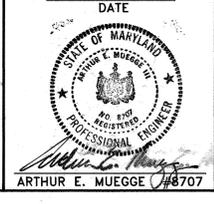
OWNER / DEVELOPER
MEADOWRIDGE INDUSTRIAL PARTNERSHIP
4041 POWDER MILL ROAD, SUITE 205
COLUMBIA, MARYLAND 21045
(301) 937-3111

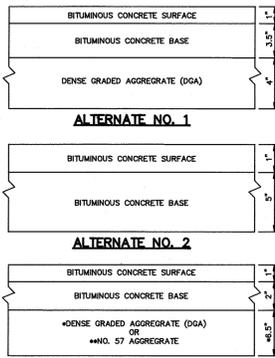
PROJECT: MEADOWRIDGE BUSINESS PARK PARCEL E-1
A WAREHOUSE BUILDING
AREA: ZONED M-1 TAX MAP 37 & 43 PLAT NO. 10793
MEADOWRIDGE BUSINESS PARK, PARCEL E-1
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: REVISED PROFILES AND DETAIL SHEET

RIEMER MUEGGE & ASSOCIATES, INC.
PLANNING, ENGINEERING AND SURVEYING
8818 Centre Park Drive Suite 200 Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

DATE: 6-21-93
DESIGNED BY: W.C.W.
DRAWN BY: W.C.W.
PROJECT NO: 71904
DATE: JUNE 21, 1993
SCALE: AS SHOWN
DRAWING NO. 5 OF 9

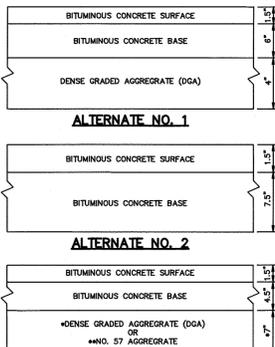




BASE BID

NOTES:
 1. THE PAVEMENT SPECIFICATIONS SHOWN ARE BASED ON CBR VALUE OF 4 AS PER HOWARD COUNTY DESIGN MANUAL, VOLUME IV.
 2. BITUMINOUS CONCRETE TO BE PLACED AND COMPACTED IN 5 INCH MAXIMUM LOOSE THICKNESS LAYERS.
 3. DENSE GRADED AGGREGATE (DGA) AND NO. 57 STONE TO BE PLACED AND COMPACTED IN 6 INCH MAXIMUM COMPACTED THICKNESS LAYERS.

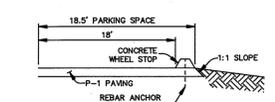
P-1 PAVING
NO SCALE



BASE BID

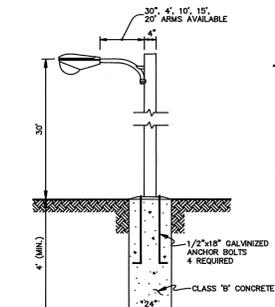
NOTES:
 1. THE PAVEMENT SPECIFICATIONS SHOWN ARE BASED ON CBR VALUE OF 4 AS PER HOWARD COUNTY DESIGN MANUAL, VOLUME IV.
 2. BITUMINOUS CONCRETE TO BE PLACED AND COMPACTED IN 5 INCH MAXIMUM LOOSE THICKNESS LAYERS.
 3. DENSE GRADED AGGREGATE (DGA) AND NO. 57 STONE TO BE PLACED AND COMPACTED IN 6 INCH MAXIMUM COMPACTED THICKNESS LAYERS.

P-3 PAVING
NO SCALE

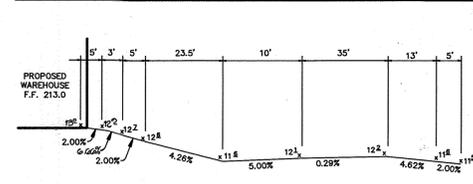
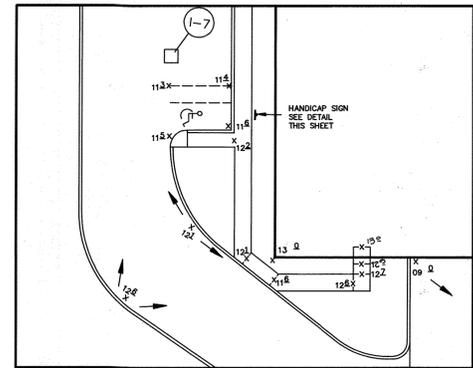


CONCRETE WHEEL STOP LOCATION PLAN
NO SCALE

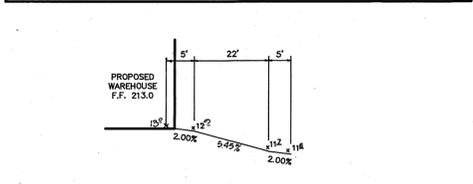
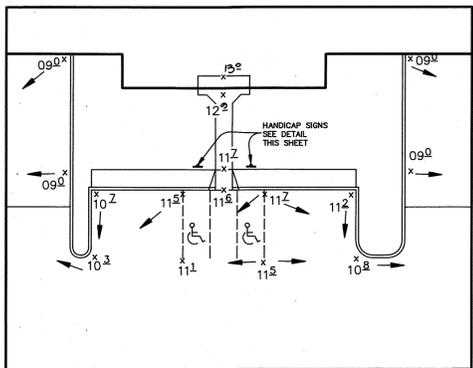
- ALL LIGHT FIXTURES TO BE SINGLE LUMINAIRE 400 WATT SODIUM VAPOR TYPE WITH METAL POLES AND DIRECTED DOWNWARD.
- LOCATIONS OF LIGHT FIXTURES ARE ON THE PLAN AND ARE SHOWN THIS WAY: [Symbol]
- LIGHTS TO BE MODULE II TYPE AS MANUFACTURED BY MOLDCAST OR APPROVED EQUAL.
- POLE AND FIXTURE TO BE PROVIDED BY BOME.
- POLE TO BE LOCATED 3' BACK FROM BACK OF CURB.



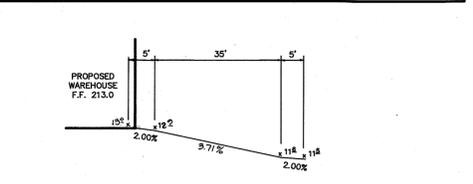
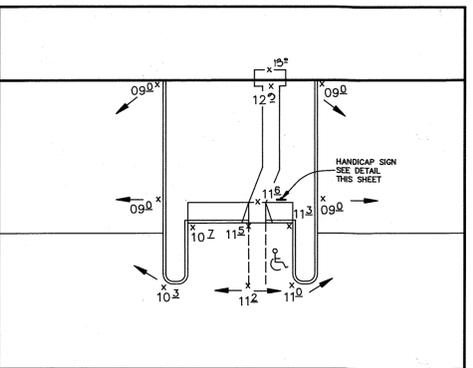
LIGHT POLE DETAIL
NO SCALE



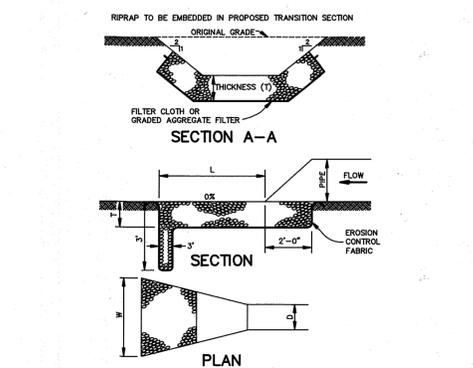
PLAN AND PROFILE HANDICAP RAMP # 1
NO SCALE



PLAN AND PROFILE HANDICAP RAMP # 2
NO SCALE

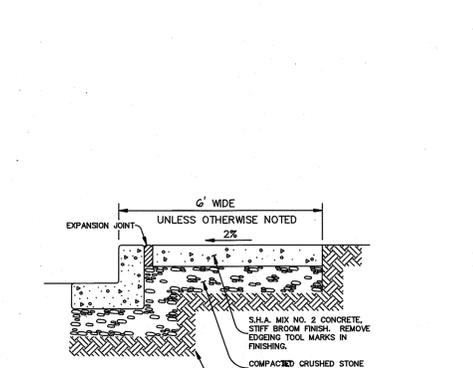


PLAN AND PROFILE HANDICAP RAMP # 3
NO SCALE



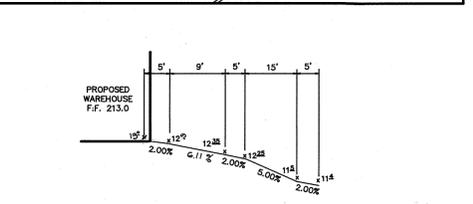
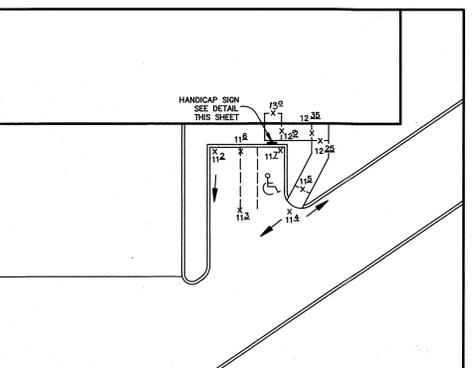
STRUCTURE	MEDIUM STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	24"	28'	34'	43"
E-2	6"	25'	8'	14"
HW-1	12"	15'	15'	27"

RIPRAP OUTLET PROTECTION DETAIL
NO SCALE

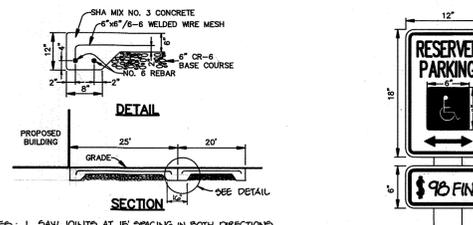


NOTES:
 1. PROVIDE LATERAL EXPANSION JOINTS AT 15' O.C. (MAX.) PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES.

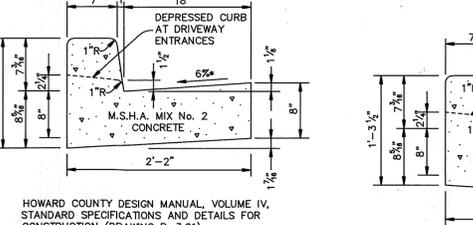
SIDEWALK DETAIL ADJACENT TO CURB
NO SCALE



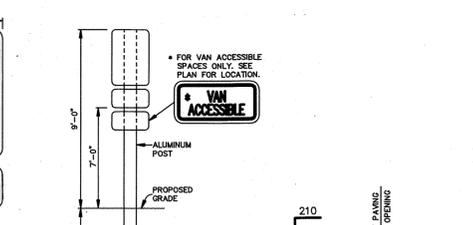
PLAN AND PROFILE HANDICAP RAMP # 4
NO SCALE



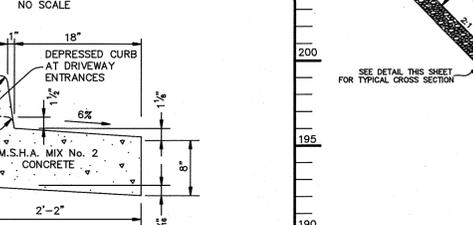
NOTES:
 1. SAW JOINTED AT 15' SPACING IN BOTH DIRECTIONS WITH DEPTH OF JOINT EQUAL TO 1/3 DEPTH OF THE SLAB.
 2. CONSTRUCTION JOINTS: AS NEEDED USING 3/8\"/>



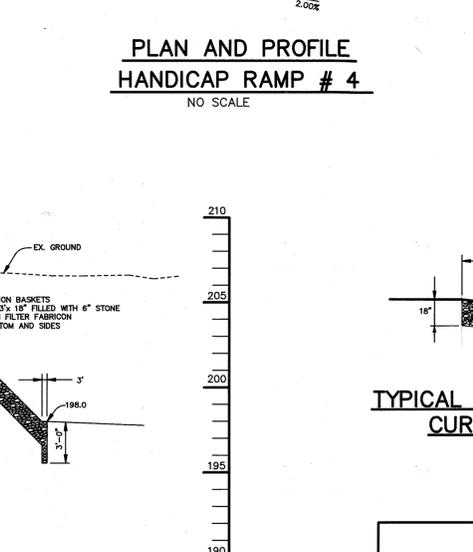
STANDARD 7" COMBINATION CURB AND GUTTER
NO SCALE



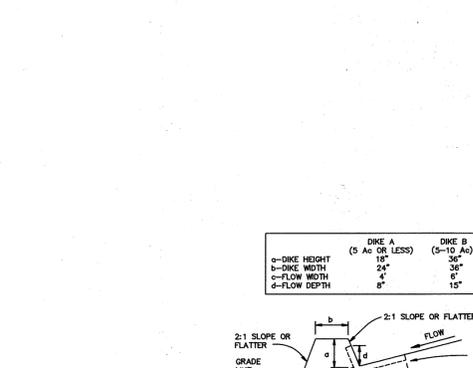
NOTE: DISTANCE FROM GROUND TO BOTTOM OF SIGN TO BE 2'.



HANDICAP SIGN DETAIL
NO SCALE



PROFILE THRU CENTERLINE CURB OPENING
SCALE: HOR. - 1" = 10' VERT. - 1" = 5'



SCALE: HOR. - 1" = 10' VERT. - 1" = 5'

TYPICAL CROSS SECTION CURB OPENING

AS BUILT CERTIFICATE

DATE

ARTHUR E. MUEGGE #8707

JAYKANT D. PAREKH #19148

01-10-23 REVISION TO REFLECT EXISTING POND RISE, STRUCTURE AND DETAIL, AND TO SHOW RECONSTRUCTION OF POND ENHANCEMENT REVISION

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

David E. Muegge 6-18-93
 DEVELOPER DATE

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Arthur E. Muegge 6-21-93
 ENGINEER DATE

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

James M. Hela 6/29/93
 U.S. SOIL CONSERVATION SERVICE DATE

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

Robert J. Ziehm 6/24/93
 HOWARD SOIL CONSERVATION DISTRICT DATE

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

James Byler 7-13-93
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James Byler 7/6/93
 DIRECTOR DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

James Byler 7/6/93
 DIRECTOR DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

James Byler 7/6/93
 CHIEF, BUREAU OF ENGINEERING DATE

7-2-93 CHECKED RIPRAP OUTLET PROTECTION DETAIL FOR "AS-BUILT" PERFORMANCE.

DATE NO. REVISION

OWNER / DEVELOPER

MEADOWRIDGE INDUSTRIAL PARTNERSHIP
 4041 POWDER MILL ROAD, SUITE 205
 CALVERTON, MARYLAND 20705
 (301) 937-3111

PROJECT MEADOWRIDGE BUSINESS PARK PARCEL E-1
 A WAREHOUSE BUILDING

AREA ZONED M-1 TAX MAP 37 & 43 PLAT NO. 10793
 MEADOWRIDGE BUSINESS PARK, PARCEL E-1
 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE REVISED PROFILES AND DETAIL SHEET

RIEMER MUEGGE & ASSOCIATES, INC.
 PLANNING, ENGINEERING AND SURVEYING
 8818 Centre Park Drive Suite 200 Columbia, MD 21045
 410-997-8900 FAX: 410-997-9282

6-21-93

DESIGNED BY: W.C.W.
 DRAWN BY: W.C.W.
 PROJECT NO: 71904
 DATE: JUNE 21, 1993
 SCALE: AS SHOWN
 DRAWING NO. 6 OF 9

SDP-91-49

SOIL CONSERVATION SERVICE
MARYLAND
CONSTRUCTION SPECIFICATIONS
FOR PONDS

SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-376. All references to ASTM and AASHTO specifications apply to the most recent version.

SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared of all trees, brush, logs, stumps, and other obstructions. All trees, brush, logs, stumps, and other obstructions shall be removed. Channel banks and brush breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, stumps, and other obstructions. All trees, brush, logs, stumps, and other obstructions shall be removed. Channel banks and brush breaks shall be sloped to no steeper than 1:1.

EARTH FILL
Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6" frozen or other objectionable material. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification CC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-inch thick lifts. The bottom width of the trench shall be governed by the equipment used for the trench, with the minimum width being four feet. The depth shall be at least 18 inches greater than the depth of the trench. The side slopes of the trench shall be 1 to 1 or flatter.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one track of the equipment or composed of passes achieved by a minimum of four complete passes of a sheepsfoot, rubber tire or vibratory roller. The required degree of compaction shall be determined by the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture to be compacted to a ball it will not crumble and not so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each lift shall be compacted to the required density. The required density shall be determined by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Outfall Trench - The outfall trench shall be excavated into impervious material or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for the trench, with the minimum width being four feet. The depth shall be at least 18 inches greater than the depth of the trench. The side slopes of the trench shall be 1 to 1 or flatter.

The back fill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

STRUCTURE BACKFILL
Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The material shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampering or other manual directed compaction equipment. The material shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampering or other manual directed compaction equipment. The material shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampering or other manual directed compaction equipment.

PIPE CONDUITS
All pipes shall be circular in cross section.
Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

- Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and full thickness coated and shall conform to the requirements of AASHTO Specification M-190 Type A with water tight coupling bands. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied aluminum coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or on approved equal may be used: Nepon, Plast-Cote, Bloc-Klad, and Block-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.
- Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.
- Connections - All connections with pipes must be completely watertight. The drain pipe barrel connection to the riser shall be welded all around with the pipe and riser or metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Simple bands are not acceptable.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled on an adequate number of corrugations to accommodate the band width. The following pipe connections are acceptable for pipes less than 48" in diameter: flanges on both ends of the pipe, a 12" wide standard type band with 3/8" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hanger type band with 2-1/2" gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Flanges 48" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and nuts. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24". Helically corrugated pipe shall have either continuously welded seams or hose lock seams.

4. 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 soil material shall be removed and replaced with suitable sand compacted to provide adequate support.

5. Backfilling shall conform to "Structure Backfill".
6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:
1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and not exceed ASTM Specification C-391. An approved equivalent is AWWA Specification C-302.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. The bedding shall consist of high strength concrete placed under the pipe and up the side of the pipe at least 10% of the outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell and upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are made for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the start of the pipe.

4. Backfilling shall conform to Structure Backfill.
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:
1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.

2. Joints and connections to anti-seep collars shall be completely watertight.
3. 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 sand compacted to provide adequate support.

4. Backfilling shall conform to Structure Backfill.
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

CONCRETE
Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 100, Min. No. 3.

ROCK RIPRAP
All rock shall be broken, sound, and free from cracks, seams, and other defects conducive to accelerated weathering. The rock fragments shall be angular to sub-angular in shape. The least dimension of an individual rock fragment shall be not less than one-third the greatest dimension of the fragment.

The rock shall have the following properties:
1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.
2. Absorption not more than three percent.
3. Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.
The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact with one another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

CARE OF WATER DURING CONSTRUCTION

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage ditches and stream diversions necessary to protect the area to be occupied by the permanent works. The contractor shall also furnish, install, operate and maintain all necessary pumps and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leased or directed by the engineer to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of the excavation. During the piling and compaction of material in required excavations, the water level of the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to surges from which the water shall be pumped.

STABILIZATION
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spot and borrow areas, and batters shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

EROSION AND SEDIMENT CONTROL
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Department of Public Works Permits prior to the start of any construction (892-2437).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL.
- Following initial soil disturbance or redistribution, permanent or temporary siltation structures shall be installed within 7 calendar days for all perimeter sediment control structures, dikes, and other sediment control structures. Temporary structures shall be installed within 14 days of all other disturbed or graded areas on the project site.
- All sediment traps/showers must be fenced and warning signs posted around the 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulch (Sec. 53). Treatments with mulch alone can only be done when recommended seeding does not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in an operable condition for their entire life span. Removal has been obtained from the Howard County Sediment Control Unit.
- Site Analysis:
Total Area of Parcel E-1: 7.70 acres
Area to be seeded or paved: 6.56 acres
Area to be vegetatively stabilized: 2.38 acres
Total Cut: 48300 cu. yds.
Total Fill: 8300 cu. yds.

EXCESS TO BE HAULED TO AVAILABLE PARELS IN BUS PARK (SP-0014)

- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- After the first week, sod shall be watered as necessary to maintain adequate moisture and insure establishment, and as directed by the owner.
- First mowing should not be attempted until sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent mowing. Grass height should be maintained between 2 and 3 inches unless otherwise specified.
- Maintenance of established sod should follow specifications outlined in table.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed under a short-term vegetative cover is needed.
Seeding Preparation - Loosen upper three inches of soil by raking, digging 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 period March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual ryegrass (3.2 lbs. per 1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (3.07 lbs. per 1000 sq. ft.) or the period November 16 thru February 28, protect site by applying 2 tons per acre of well-anchored 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. Another mulch immediately after application using mulch anchoring tool or 216 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.
Seeding Preparation - Loosen upper three inches of soil by raking, digging or other acceptable means before seeding, if not previously loosened.
Soil Amendments - In lieu of soil test recommendations, use one of the following options:
1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq. ft.) and 800 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 800 lbs. per acre 10-10-10 fertilizer (14 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 15 thru October 15, seed with 2 tons per acre (14 lbs. per 1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 80 lbs. Kentucky 31 Tall Fescue per acre and 2 tons (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 80 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well-anchored mulch straw and seed as soon as possible in the spring.

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. Another mulch immediately after application using mulch anchoring tool or 216 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 - Instead of seeded areas and make needed repairs, replacements and reseedings.

STANDARD AND SPECIFICATIONS
FOR
VEGETATIVE STABILIZATION
WITH SOD

Stabilizing sediment producing areas by establishing long-term stands of grass with sod.
Purpose
To stabilize the soil, reduce damage from sediment and runoff to downstream areas; enhance natural beauty.
Conditions Where Practice Applies
On exposed soils where a quick vegetative cover is desired; on sites which can be maintained with ground equipment (2:1 or flatter slopes).

SPECIFICATIONS
1. Grass of turf grass sod shall be Maryland or Virginia State Certified, or Maryland or Virginia State approved sod.
2. Sod shall be machine cut to a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch, at the time of cutting. Measurements for thickness shall exclude top growth and thatch.
3. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
4. Individual pieces of sod shall be cut to the specified width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads or torn or uneven ends will not be acceptable.
5. Sod shall not be harvested or transported when moisture content (excessively dry or wet) may adversely affect its survival.
6. Sod shall be harvested, delivered and installed within a period of 36 hours. Sod not transported within this period shall be rejected and approved prior to its installation.

Site Preparation
Fertilizer and lime application rates shall be determined by soil tests performed by the contractor. Under unusual circumstances where there are insufficient time for a complete soil test, fertilizer and lime materials may be applied in amounts shown under B, below.

- Prior to sodding, the surface shall be cleared of all trash, debris, and refuse of roots, brush, logs, stumps, and other obstructions. The surface would interfere with planting, fertilizing or maintenance operations.
- Where the soil is acid or composed of heavy clay, ground limestone shall be spread at the rate of 2 tons/acre or 100 pounds per 1,000 square feet. In all soils 1,000 pounds per acre or 25 pounds per 1,000 square feet of 10-10-10 fertilizer or equivalent shall be uniformly applied and mixed into the top 3 inches of soil with the required time.
- All areas receiving sod shall be uniformly fine graded. Hard-packed earth shall be scarified prior to placement of sod.

Sod Installation
A. During periods of excessively high temperature the soil shall be lightly irrigated immediately prior to laying the sod.
B. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Adjacent joints shall be staggered to promote uniform growth and strength. Insure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause drying of the roots.
C. On sloping areas where erosion may be a problem, sod shall be laid with the long edge parallel to the slope and with staggered joints. Secure the sod by tamping and pegging or other approved methods.
D. As sodding is completed in any one section, the entire area shall be rolled or tamped to insure solid contact of roots with the soil surface. Sod shall be watered immediately after rolling or tamping until the underside of the new sod and soil surface below the sod are thoroughly wet. The operations of rolling, tamping and irrigating for any piece of sod shall be completed within eight hours.

Sod Maintenance
A. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain most soil to a depth of 4 inches. Watering should be done during the heat of the day to prevent wilting.
B. After the first week, sod shall be watered as necessary to maintain adequate moisture and insure establishment, and as directed by the owner.
C. First mowing should not be attempted until sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent mowing. Grass height should be maintained between 2 and 3 inches unless otherwise specified.
D. Maintenance of established sod should follow specifications outlined in table.

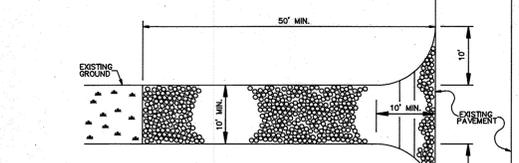
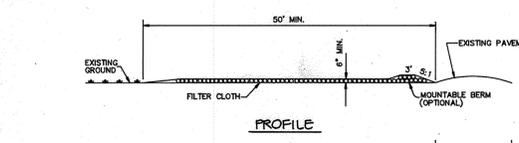
Annual Maintenance Fertilization for Permanent Sod Use Soil Test Recommendations or Rates Shown Below

Seeding Mixtures	Formulation	Lbs./Ac./Yr.	Lbs./1000 S.F.	Time	Mowing
*Ky-31 tall fescue Kentucky Bluegrass Red Fescue	20-10-10	220	5	Sept. 1 Oct. 1 Mar. 1	Mow no closer than 2 inches for 4 weeks for fescue.
Bermudagrass Zoysia	10-10-10	440	10	May 1 July 1 Aug. 1	Mow no closer than 1-1/2 inches

Slowly Available Nitrogen
Seeding Mixtures Formulation Lbs./Ac./Yr. Lbs./1000 S.F. Time Mowing
Kentucky Bluegrass 20-10-10 440 10 Sept. 1 Mar. 1
Red Fescue

Equivalent amounts of fertilizer may be applied with other formulations.

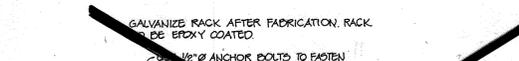
Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



CONSTRUCTION SPECIFICATIONS

- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
- Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).
- Thickness - Not less than 24" (18" for 2:1 slopes).
- Width - Not less than 10' feet minimum, but not less than the full width of points where ingress and egress occurs.
- Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter cloth will not be required on a single family residence lot.
- Surface Finish - All surface water flowing or diverted toward construction entrance shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent flooding or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone on conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment applied, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Warning - Signs shall be placed to warn removal of sediment from entrance onto public rights-of-way. When warning is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE



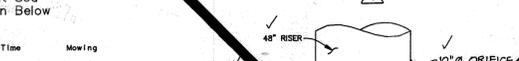
TRASH RACK DETAIL



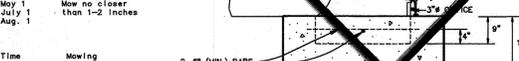
SEDIMENT BASIN DEWATERING DEVICE I WITH 6" PERFORATED RISER



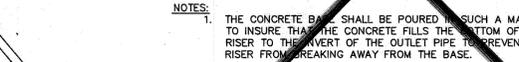
TRASH RACK AFTER FABRICATION, RACK TO BE BODY COATED



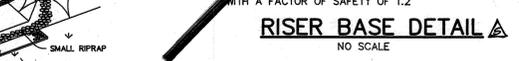
RISER BASE DETAIL



COLLAR WELDED IN PLACE ON BARREL SECTION



ANTI-SEEP COLLAR



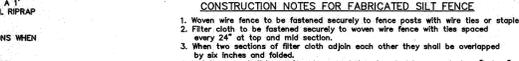
COLLAR FOR FLANGE JOINT PIPE



ANTI-SEEP COLLAR

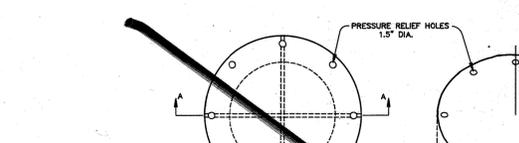


CORE TRENCH DETAIL



AS BUILT CERTIFICATE

ARTHUR E. MUEGGE #8707 DATE
JAYKANT D. PAREKH #19148

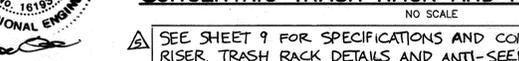


CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

1. THE CYLINDER MUST BE FASTENED TO THE TOP OF THE RISER.
2. SUPPORT BARS ARE WELDED TO THE TOP OF THE RISER AND ATTACHED BY STRAPS TO THE TOP OF THE RISER.

SEE SHEET 9 FOR SPECIFICATIONS AND CONSTRUCTION DETAILS FOR RISER, TRASH RACK DETAILS AND ANTI-SEEP COLLAR.

SEDIMENT BASIN DEWATERING DEVICE I WITH 6" PERFORATED RISER



TRASH RACK DETAIL



COLLAR WELDED IN PLACE ON BARREL SECTION



ANTI-SEEP COLLAR



COLLAR FOR FLANGE JOINT PIPE



ANTI-SEEP COLLAR



CORE TRENCH DETAIL



AS BUILT CERTIFICATE

ARTHUR E. MUEGGE #8707 DATE
JAYKANT D. PAREKH #19148

01-10-23
DATE NO. REVISION
REVISION TO REPLACE EXISTING POND RISER STRUCTURE AND CUTTALL, AND TO SHOW RECONSTRUCTION OF POND EMBANKMENT

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AND "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

David E. Mauer 6-18-93
DEVELOPER DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Arthur E. Muegge 6-21-93
ENGINEER DATE

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

James W. Stala 6/24/93
U.S. SOIL CONSERVATION SERVICE DATE

Robert Ziehn 6/24/93
HOWARD SOIL CONSERVATION DISTRICT DATE

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

James Bell 7-13-93
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James Bell 7/6/93
DIRECTOR DATE

