SITE DEVELOPMENT PLAN
COLUMBIA MARKET
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SHEET INDEX

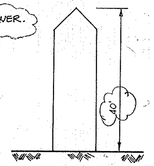
NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	STORM DRAIN, WATER AND SEWER PROFILES AND DETAILS
4	DRAINAGE AREA MAP AND SEDIMENT CONTROL PLAN
5	SEDIMENT CONTROL NOTES AND DETAILS
6	STORMWATER MANAGEMENT PROFILES AND DETAILS.
7	PLANTING PLAN

GENERAL NOTES

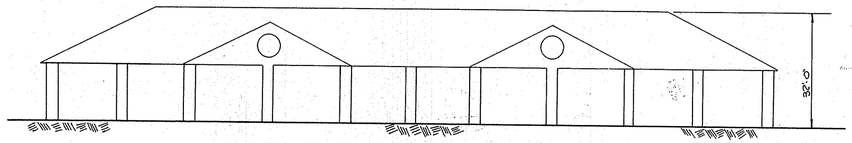
1. ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM OF 42" COVER BELOW FINISHED GRADE.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
3. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. 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.
4. THE CONTRACTOR SHALL TEST PIT 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 AND/OR ELEVATION OF UTILITIES ARE OTHER THAN SHOWN.
5. 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
C & P TELEPHONE COMPANY	725-9976
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVERSION	393-3553
BALTIMORE GAS & ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	792-7272

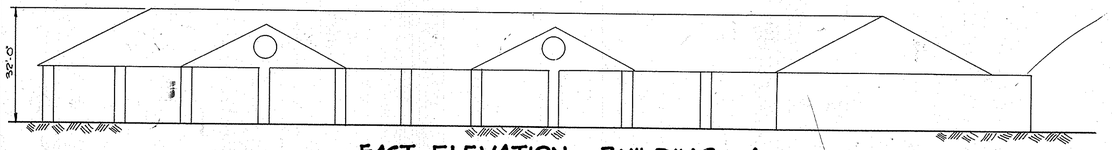
6. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
7. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
8. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
9. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
10. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SUBGRADE.
11. TOPO TAKEN FROM FIELD RUN SURVEY DATED MARCH 1986 BY THE RIEMER GROUP INC.
12. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE FROM OUTSIDE TO OUTSIDE OF THE WALLS.
13. ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN DETAIL G2.01 (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.
14. THE DEVELOPER IS RESPONSIBLE FOR THE AQUISITION 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 ONTO OR ACCROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE AQUISITION OF ALL EASEMENTS, RIGHTS AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
15. 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-DOMESTIC 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 WASTE PRETREATMENT DEVICES AS REQUIRED AND APPROVED BY HOWARD COUNTY. WASTE LINES ON THE INTERIOR OF THE BUILDING SHALL BE DESIGNED, CONSTRUCTED OR MODIFIED SUCH THAT NON-DOMESTIC WASTE WILL BE DISCHARGED TO THE SEPARATE AND INDEPENDENT SEWER CONNECTION. NO TENANT OR OCCUPANT OF ANY BUILDING SHOWN ON THIS SITE DEVELOPMENT PLAN SHALL DISCHARGE REGULATED NON-DOMESTIC 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.
16. FOR THE UTILITY WORK UNDER EXISTING PAVING OF SNOWDEN RIVER PARKWAY SPECIAL TRAFFIC CONTROL DEVICES WILL BE REQUIRED. CONTRACTOR SHALL ENSURE AT LEAST ONE LANE OPEN FOR TRAFFIC AT ALL TIMES.
17. NO SIGNAGE WILL BE PLACED ON THE PROPOSED CLOCK TOWER.



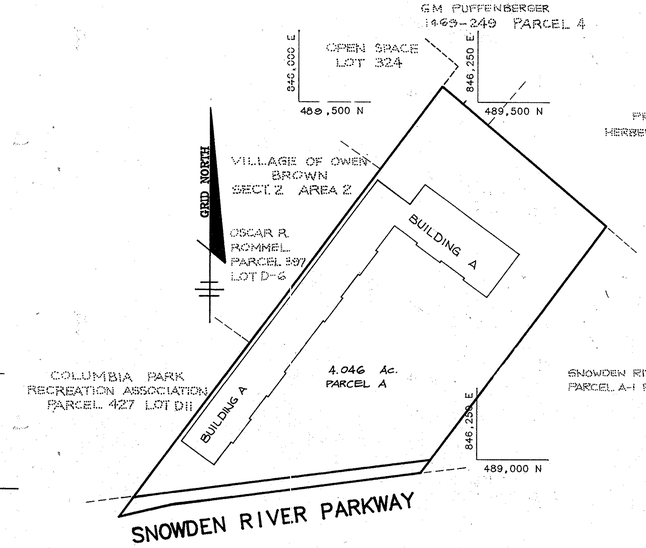
CLOCK TOWER
NO SCALE



EAST ELEVATION BUILDING A
SCALE: 1"=20'



EAST ELEVATION BUILDING A
SCALE: 1"=20'



PLAN
SCALE : 1"=100'

FOR REVISION #9 ONLY

STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER
IWONA ROSTEK-ZARSKA
21245
3/24/16

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, IWONA ROSTEK-ZARSKA, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21245, EXPIRATION DATES JUNE 9, 2016.

BALTIMORE LAND DESIGN GROUP, INC.
230 SCHILLING CIRCLE, SUITE 364
HUNT VALLEY, MARYLAND 21031
PHONE: 410-229-9051

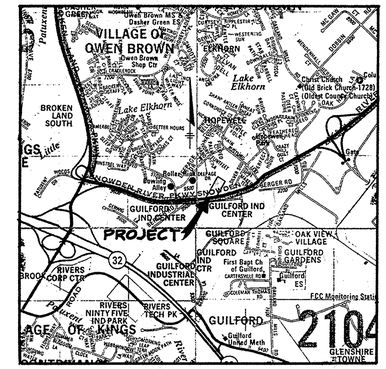
SITE TABULATION

Total Area of Property:	4.046 Ac.	176,244 S.F.
Area of Submission:	4.046 Ac.	
Present Zoning:	B-1	
Proposed Use:	Commercial Building	
Floor Space of One Story Building : Building A:	38,304 S.F.	
Building Coverage Permitted (B-1):	50% (88,122 S.F.)	
Building Coverage Proposed:	21.7% (38,304 S.F.)	
Open Space Required:	20% (35,249 S.F.)	
Open Space Proposed:	26% (45,738 S.F.)	
Parking Required: One space per 200 S.F. of Commercial Bldg.	192 Spaces	
Parking Proposed: (Including 7 handicapped spaces)	4 208 Spaces	
Area of Parking:	77,196 S.F.	
Landscaped Islands Required:	5% (3,860 S.F.)	
Landscaped Islands Provided:	21% (16,272 S.F.)	

ADDRESS CHART	
BUILDING NO.	STREET ADDRESS
BLDG. A	9450 SNOWDEN RIVER PARKWAY

SUBDIVISION NAME COLUMBIA MARKET			SECT./AREA	LOT/PARCEL # PARCEL A	
PLAT # 7008	BLOCK # 4	ZONE B-1	TAX/ZONE MAP 42	ELEC. DIST. 6TH	CENSUS TR 6001.08
WATER CODE E 12			SEWER CODE 5330300		

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 3-30-88



VICINITY MAP
SCALE: 1"=2000'

DATE	NO.	REVISION
2-24-16	9	REVISED SITE TABULATION
6-11-91	3	REVISED HEIGHT OF CLOCK TOWER

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

COUNTY HEALTH OFFICER	9-12-88 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING DIRECTOR	9.22.88 DATE
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	9-21-88 DATE

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR	9/1/88 DATE
CHIEF, BUREAU OF ENGINEERING	9-9-88 DATE

DATE	NO.	REVISION
2-20-90	4	REVISED SITE TABULATION
2-15-89	4	REVISED BUILDING FOOTPRINT.

OWNER/DEVELOPER
COLUMBIA MARKET GROUP LIMITED PARTNERSHIP
PO BOX 416
ELLICOTT CITY, MARYLAND 21043

PROJECT: COLUMBIA MARKET (COMMERCIAL BUILDING)

AREA TAX MAP NO. 42 PLAT NO. PARCEL A
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: TITLE SHEET

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

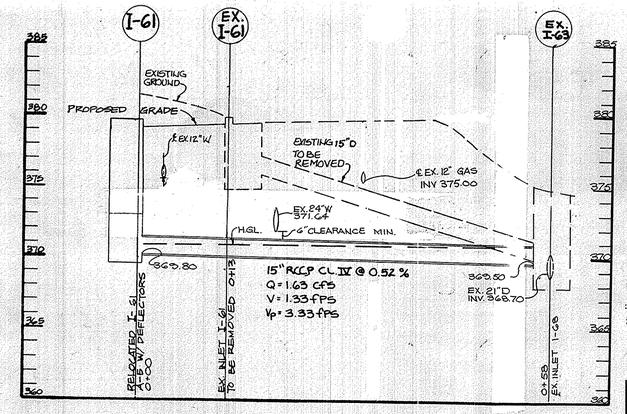
8-22-88
DATE

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

S-87-54, VP-87-84, VP-87-54	
DESIGNED BY: J.D.P	
DRAWN BY: M.A.D.	
PROJECT NO: 28400	
DATE: 2-23-88	
SCALE: AS SHOWN	
DRAWING NO. 1 OF 7	

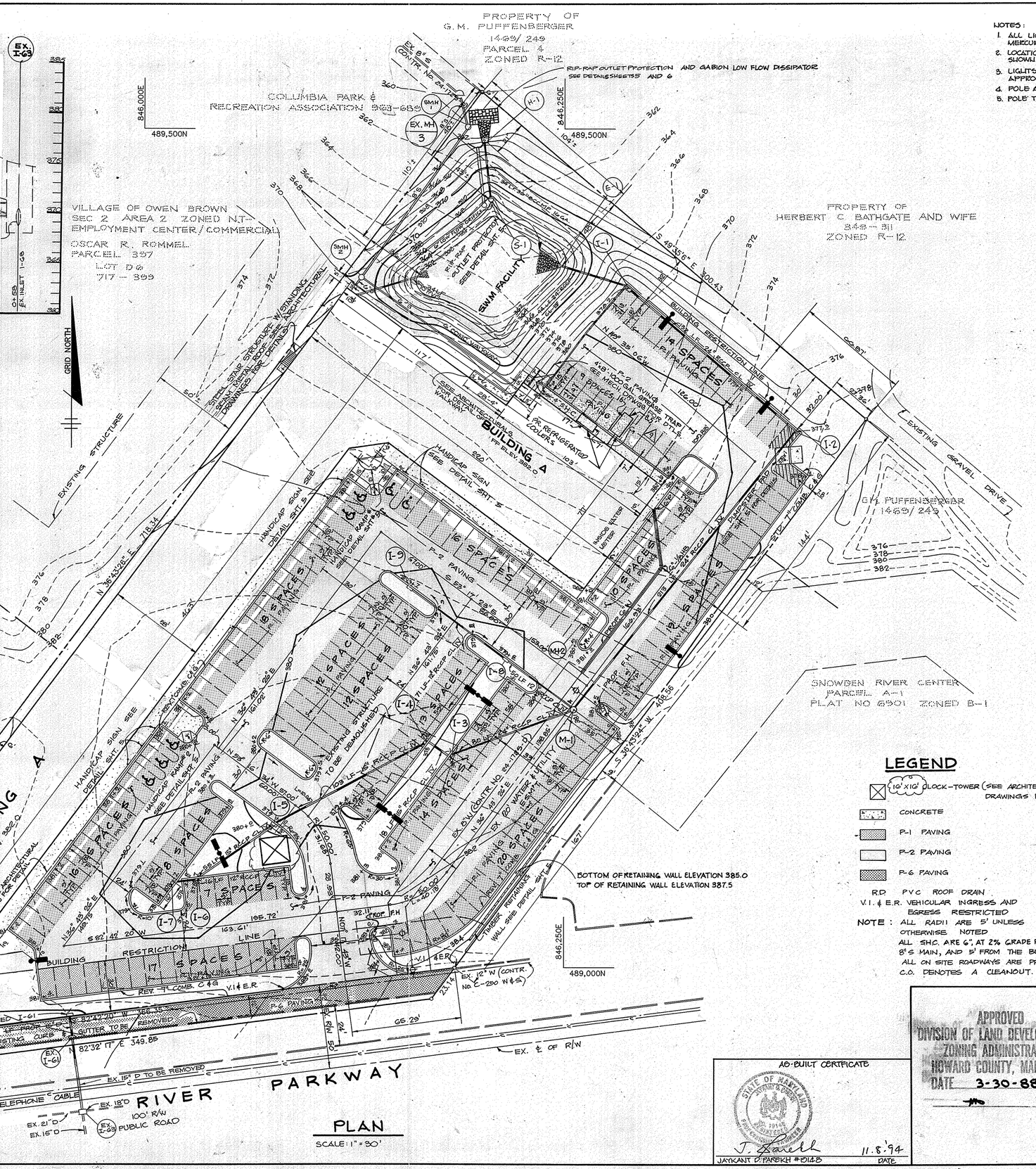
SDP-88-18

MARYLAND BLUEPRINT CO., INC. 563893



PROFILE

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

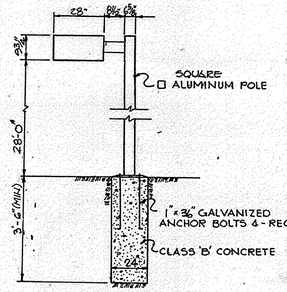


PLAN

SCALE: 1" = 30'

NOTES:

1. ALL LIGHT FIXTURES TO BE SINGLE LUMINAIRE 400 WATT MERCURY TYPE 28' HIGH WITH METAL POLES AND DIRECTED DOWNWARD.
2. LOCATIONS OF LIGHT FIXTURES ARE ON THE PLAN AND ARE SHOWN THUS
3. LIGHTS TO BE MODULE II TYPE AS MANUFACTURED BY MOLDCAST OR APPROVED EQUAL.
4. POLE AND FIXTURE TO HAVE BLACK POLYESTER ENAMEL FINISH
5. POLE TO BE LOCATED 3' BACK FROM BACK OF CURB.



LIGHT DETAIL

No Scale

LEGEND

- 10'x10' CLOCK-TOWER (SEE ARCHITECTURAL DRAWINGS FOR DETAILS)
- CONCRETE
- P-1 PAVING
- P-2 PAVING
- P-6 PAVING
- RD PVC ROOF DRAIN
- V.I. & E.R. VEHICULAR INGRESS AND EGRESS RESTRICTED

NOTE: ALL RADII ARE 5' UNLESS OTHERWISE NOTED
ALL SHC. ARE 6", AT 2% GRADE FROM THE 8" S MAIN, AND 5' FROM THE BUILDING
ALL ON SITE ROADWAYS ARE PRIVATE.
C.O. DENOTES A CLEANOUT.

DATE	NO	REVISION
3-24-16	9	ADDED REFRIGERATED COOLERS
6-11-91	8	REVISED CLOCK TOWER
6-10-90	7	ADDED AWNING TO CANOPY ON BUILDING A
2-20-90	6	REVISED BLDG. FOOTPRINT & CANOPY. ADDED STAIRS @ REAR OF BLDG.
11-8-89	5	ADDED GREASE TRAP
8-15-88	4	REVISE STORM DRAIN & ROOF DRAIN AND ADD CONCRETE SIDEWALK

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

COUNTY HEALTH OFFICER — DATE 9-12-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING DIRECTOR — DATE 9.22.88

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 9-21-88

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR — DATE 9/9/8

CHIEF, BUREAU OF ENGINEERING — DATE 9-8-88

DATE	NO	REVISION
4-6-89	3	REVISED BLDG., ADDED CANOPY
FEB. 14, 89	2	REMOVED SEWER & REVISED BUILDING FOOTPRINT

OWNER/DEVELOPER
COLUMBIA MARKET GROUP LIMITED PARTNERSHIP
P.O. BOX 416
ELLICOTT CITY, MARYLAND 21043

PROJECT: **COLUMBIA MARKET** (COMMERCIAL BUILDINGS)

AREA TAX MAP NO. 42 PLAT No. PARCEL A
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **SITE DEVELOPMENT PLAN**

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 North Ridge Road, Ellicott City, Maryland 21043 (301) 461-2690

8-22-88 DATE
ARTHUR E. MUEGGE #8707

	S-87-54 VP-87-84, VP-87-54
DESIGNED BY:	J.D.P.
DRAWN BY:	D.B.S.
PROJECT NO:	28400
DATE:	2-23-88
SCALE:	AS SHOWN
DRAWING NO.	2 OF 7

FOR REVISION #9 ONLY

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, I WANA ROSTEK-ZARSKA, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE No. 21245, EXPIRATION DATE: JUNE 9, 2016.

BALTIMORE LAND DESIGN GROUP, INC.
230 SCHILLING CIRCLE, SUITE 364
HUNT VALLEY, MARYLAND 21031
PHONE: 410-229-9851

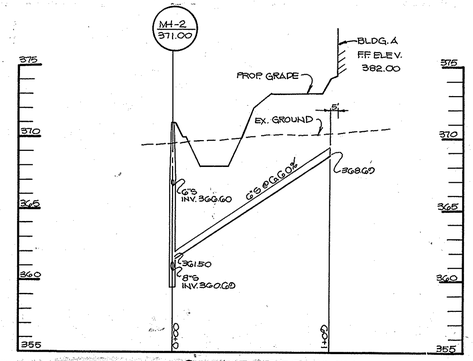
AS-BUILT CERTIFICATE
JAYKANT D. PAREKH #10148 — DATE 11-8-94

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 3-30-88

SDP-88-18

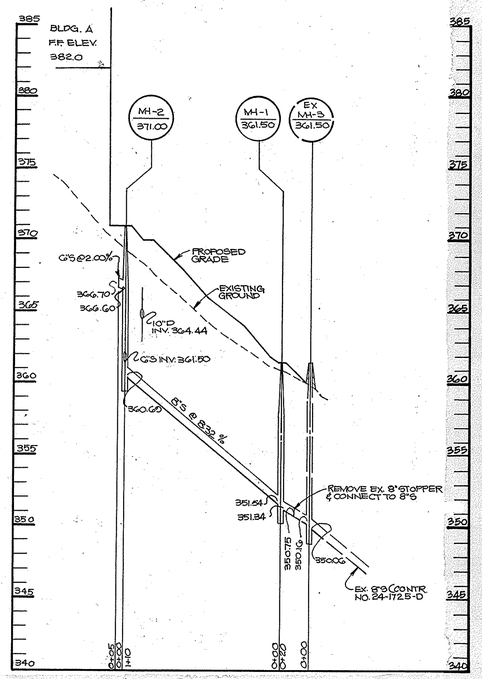
AS-BUILT 11-8-94

MARYLAND BLUEPRINT CO., INC. 16262



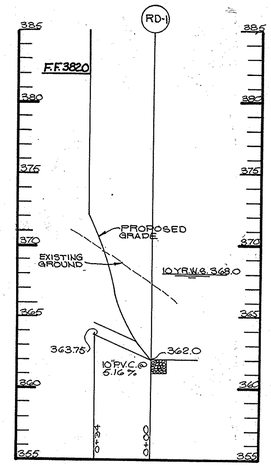
SEWER PROFILE

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



SEWER PROFILE

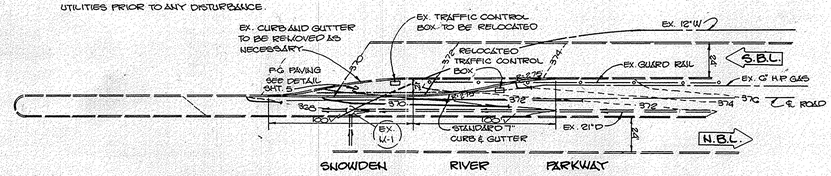
SCALE: HOR: 1"=50'
VERT. 1"=5'



ROOF DRAIN PROFILE

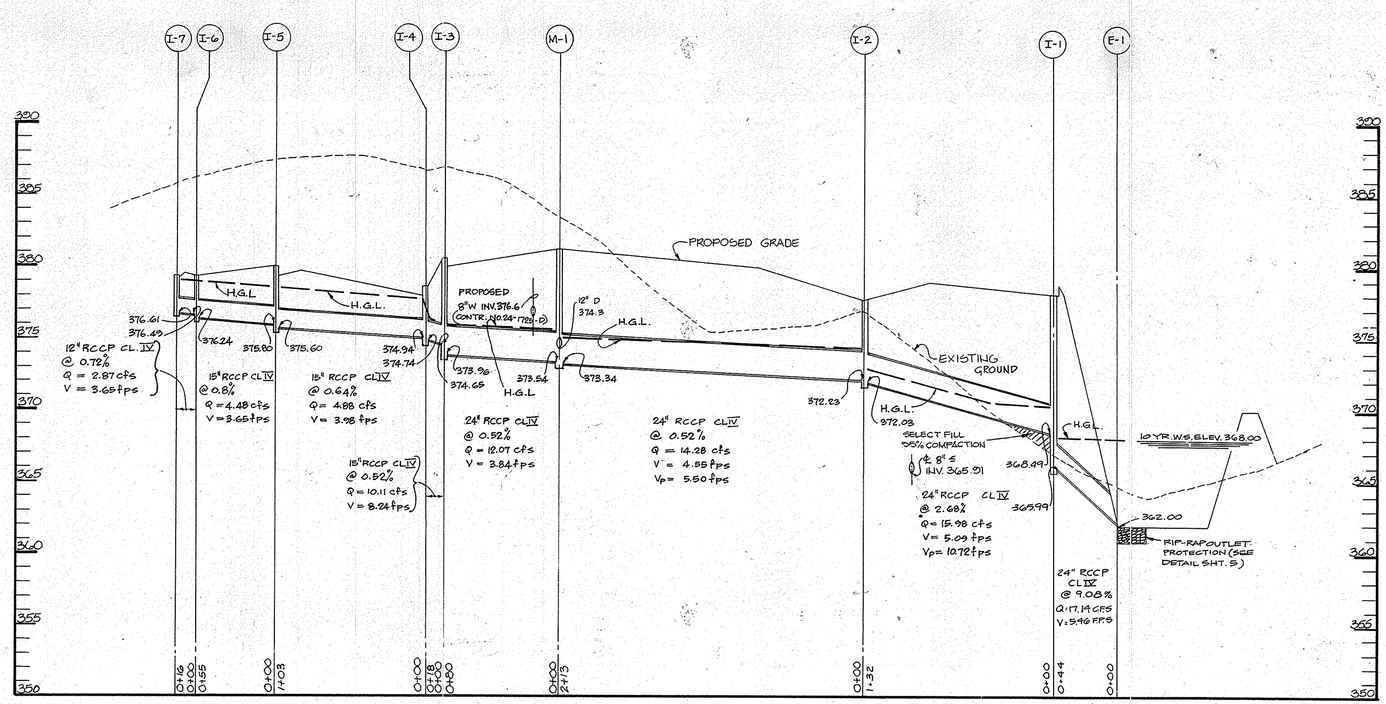
SCALE: HOR. 1" = 100'
VERT. 1" = 5'

NOTE: CONTRACTOR TO TEST PIT EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO ANY DISTURBANCE.



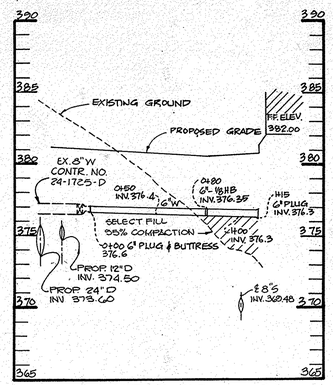
LEFT TURN LANE EXTENSION DETAIL

SCALE: 1"=50'



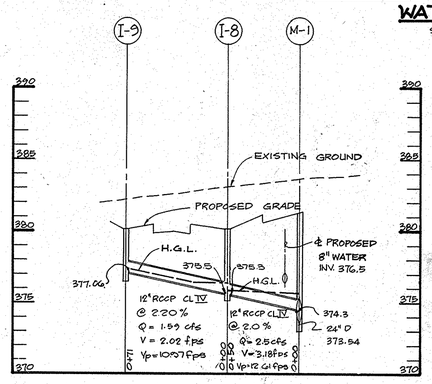
PROFILE

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



WATER PROFILE

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



PROFILE

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

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 3-30-88

AS-BUILT CERTIFICATE

STATE OF MARYLAND — JAYKANT D. PARIKH — No. 19148 — PROFESSIONAL ENGINEER

J. Parikh — 11-8-94
JAYKANT D. PARIKH #19148 — DATE

DATE	NO	REVISION
8-15-88	4	REVISE ROOF DRAIN

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

COUNTY HEALTH OFFICER — DATE 9-12-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING DIRECTOR — DATE 9.22.88

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 9-21-88

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR — DATE

CHIEF, BUREAU OF ENGINEERING — DATE 9-9-88

DATE	NO.	REVISION
11-22-88		REVISE ROOF DRAIN PROFILE & SEWER PROFILES

OWNER/DEVELOPER
COLUMBIA MARKET GROUP, LIMITED PARTNERSHIP
PO BOX 416
ELLICOTT CITY, MARYLAND 21043

PROJECT:
COLUMBIA MARKET
(COMMERCIAL BUILDINGS)

AREA TAX MAP NO. 42 PLAT NO. PARCEL A
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: STORMDRAIN, WATER AND SEWER PROFILES AND DETAILS

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

8-22-88
DATE

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

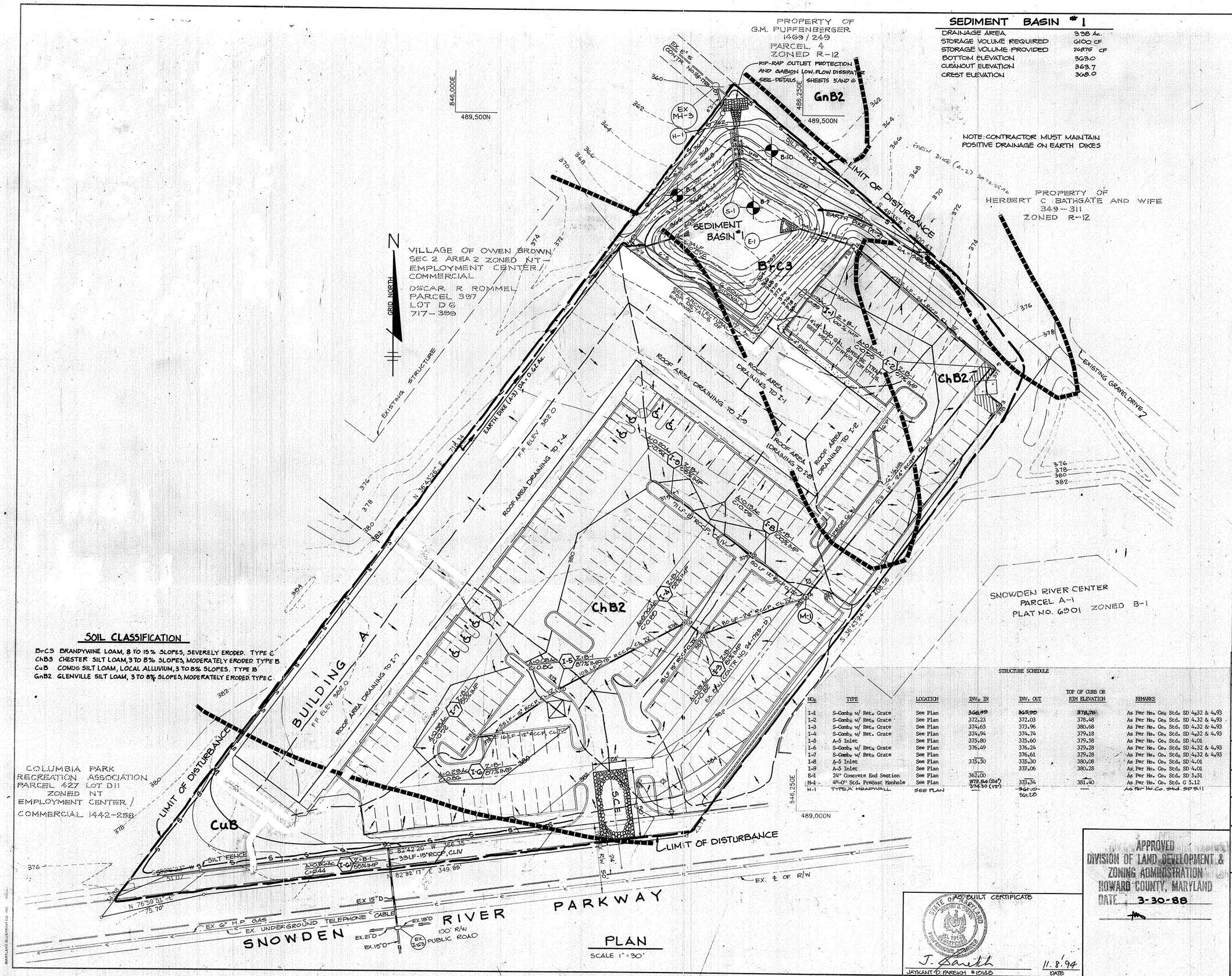
ARTHUR E. MUEGGE #8707

S-87-54, VP-87-84, VP-87-54	
DESIGNED BY:	C.J.R.
DRAWN BY:	D.B.S.
PROJECT NO:	28400
DATE:	2-23-88
SCALE:	AS SHOWN
DRAWING NO.	3 OF 7

SDP-88-18

AS-BUILT 11-8-94

MARYLAND BLUEPRINT CO. INC 563293



SOIL CLASSIFICATION

BrC3 BRANDYWINE LOAM, 8 TO 15% SLOPES, SEVERELY ERODED. TYPE C
ChB3 CHESTER SILT LOAM, 3 TO 8% SLOPES, MODERATELY ERODED. TYPE B
CuB COMUS SILT LOAM, LOCAL ALLUVIUM, 3 TO 8% SLOPES. TYPE B
GnB2 GLENVILLE SILT LOAM, 3 TO 8% SLOPES, MODERATELY ERODED. TYPE C

SEDIMENT BASIN #1

DRAINAGE AREA	3.38 Ac.
STORAGE VOLUME REQUIRED	6100 CF
STORAGE VOLUME PROVIDED	26875 CF
BOTTOM ELEVATION	363.0
CLEANOUT ELEVATION	363.7
CREST ELEVATION	368.0

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INV. IN	INV. OUT	TOP OF CURB OR RIM ELEVATION	REMARKS
I-1	S-Comb. w/ Ret. Grate	See Plan	368.99	368.90	378.79	As Per Ho. Co. Std. SD 4.32 & 4.93
I-2	S-Comb. w/ Ret. Grate	See Plan	372.23	372.03	378.48	As Per Ho. Co. Std. SD 4.32 & 4.93
I-3	S-Comb. w/ Ret. Grate	See Plan	374.65	373.96	380.68	As Per Ho. Co. Std. SD 4.32 & 4.93
I-4	S-Comb. w/ Ret. Grate	See Plan	374.94	374.74	379.18	As Per Ho. Co. Std. SD 4.32 & 4.93
I-5	A-5 Inlet	See Plan	375.80	375.60	379.58	As Per Ho. Co. Std. SD 4.01
I-6	S-Comb. w/ Ret. Grate	See Plan	376.49	376.24	379.28	As Per Ho. Co. Std. SD 4.32 & 4.93
I-7	S-Comb. w/ Ret. Grate	See Plan		376.61	379.28	As Per Ho. Co. Std. SD 4.32 & 4.93
I-8	A-5 Inlet	See Plan	375.50	375.30	380.08	As Per Ho. Co. Std. SD 4.01
I-9	A-5 Inlet	See Plan		377.06	380.28	As Per Ho. Co. Std. SD 4.01
E-1	24" Concrete End Section	See Plan	362.00			As Per Ho. Co. Std. SD 5.51
M-1	4'-0" Std. Precast Manhole	See Plan	372.54 (24") 374.30 (12")	373.34	381.40	As Per Ho. Co. Std. G 5.12
H-1	TYPE 'A' HEADWALL	SEE PLAN	—	361.0 20.28	—	AS PER HO. CO. STD. SD 5.11

DATE	NO.	REVISION
11-8-89	5	ADDED GREASE TRAP
8-16-88	4	REVISE STORM DRAIN, ROOF DRAIN, AND ADD CONCRETE WALKWAY

BY THE DEVELOPER:

"I 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 NATURAL RESOURCES 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER — DATE 8-22-88
REPUBLIC NATIONAL CORPORATION, PRESIDENT

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."

ENGINEER — DATE 8-22-88

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.

U.S. SOIL CONSERVATION SERVICE — DATE 9/2/88

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

APPROVED — HOWARD S.C.D. — DATE 9/2/88

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

COUNTY HEALTH OFFICER — DATE 7-12-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING DIRECTOR — DATE 9.22.88

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 9-21-88

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR — DATE 1/9/89

CHIEF, BUREAU OF ENGINEERING — DATE 9-9-88

DATE	NO.	REVISION
4-6-89	3	REVISED BLDG., ADDED CANOPY
11-22-88	2	REMOVED SEWER & REVISED BUILDING FOOTPRINT

OWNER/DEVELOPER
COLUMBIA MARKET GROUP LIMITED PARTNERSHIP
P.O. BOX 416
ELLICOTT CITY, MARYLAND 21043

PROJECT
COLUMBIA MARKET
COMMERCIAL BUILDINGS

AREA TAX MAP NO. 42 PLAT No. PARCEL A
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE DRAINAGE AREA MAP AND SEDIMENT CONTROL PLAN

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 North Ridge Road, Ellicott City, Maryland 21043 (301) 461-2690

8-22-88 DATE

ARTHUR E. MUEGGE #6707

S-87-54	VP-87-84, VP-87-54
DESIGNED BY	J.O.P.
DRAWN BY	DAM
PROJECT NO	88400
DATE	2-23-88
SCALE	AS SHOWN
DRAWING NO	4 OF 7

PLAN
SCALE 1" = 30'

AS-BUILT CERTIFICATE

J. Gareth — 11.8.94
JAYKANT D. PAREKH #10148 — DATE

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 3-30-88

SDP-88-18

AS-BUILT 11-8-94

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437)

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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.

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	4.05	acres
Area Disturbed	3.97	acres
Area to be roofed or paved	2.92	acres
Area to be vegetatively stabilized	1.05	acres
Total Cut	14000	Cu. yds.
total Fill	18350	Cu. yds.

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of distrubance.

9. Additional sediment controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.

10. Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.

11. Sediment will be removed from traps when its depth reaches the clean out elevation shown on the plans.

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.

Soil Amendments: Apply 0-20-20 fertilizer at the rate of 600 lbs. per acre. Harrow or disc lime and 0-20-20 fertilizer into the soil to a minimum depth of 3". Lawns or high maintenance areas will be dragged and leveled with a York rake. At the time of seeding, apply 400 lbs. of 30-0-0 ureaform fertilizer and 500 lbs. of 10-20-20 or equivalent fertilizer per acre.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 40 lbs. per acre (1 lb/1000 sq.ft.) of a mixture of certified 'Merion' Kentucky bluegrass; common Ketucky bluegrass @ 40 lbs. per acre (1 lb./1000 sq.ft.) and Red Fescue, Pennlawn or Jamestown @ 20 lbs. per acre (0.5 lb./1000 sq.ft.) for the period May 1 thru July 31, seed with 40-40-20 mix as specified above and 2 lbs. per acre (0.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: (Option 1) 2 tons per acre of well-anchored straw mulch and seed as soon as possible in the spring. (Option 2) Use sod. (Option 3) Seed with 40-40-20 mix specified above and mulch with 2 tons/acre well-anchored straw.

Mulching: Apply 1½ to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal./1000 sq.ft.) for anchoring.

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

TEMPORARY SEEDING NOTES

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

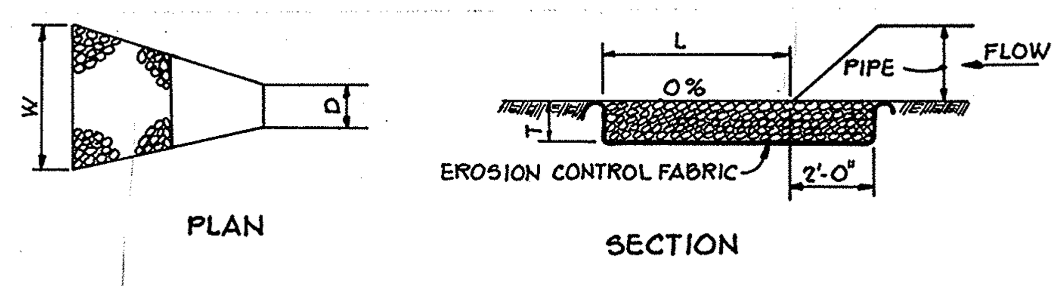
Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.) Where soil is highly acidic, apply dolomitic limestone at the rate of 1 ton per acre.

Seeding: For periods March 1 thru April 30 and from Agust 15 thru November 15, seed with 140 lbs. per acre of annual rye (3.2 lbs./1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./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 1½ to 2 tons per acre (70 to 90 lbs./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./1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 348 gal. per acre (8 gal./1000 sq.ft.) for anchoring.

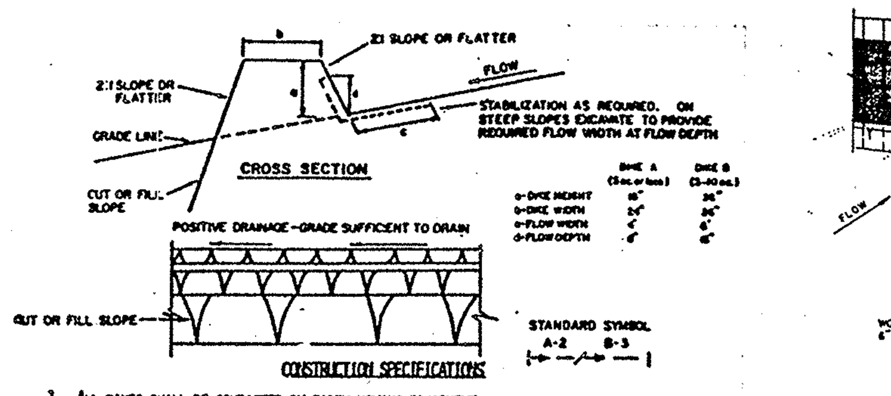
Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



STRUCTURE	MEDIUM STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	0.5'	12'	14'	14"
ROOF DRAIN OUTLET	0.5'	8'	9'	14"
H-1	0.5'	18'	15'	14"

OUTLET PROTECTION DETAIL

No Scale



CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

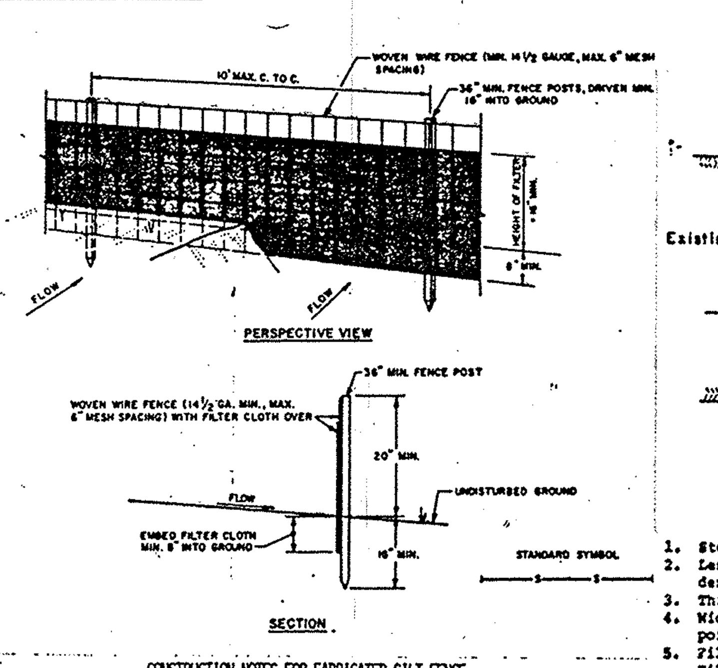
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

EARTH DIKE

NO SCALE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

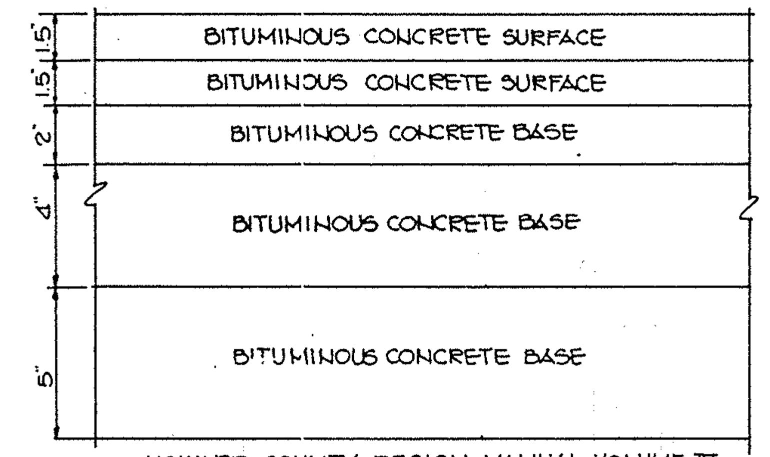
FENCE: WOVEN WIRE, 14½ GA. 6" MAX. MESH OPENING

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

SILT FENCE

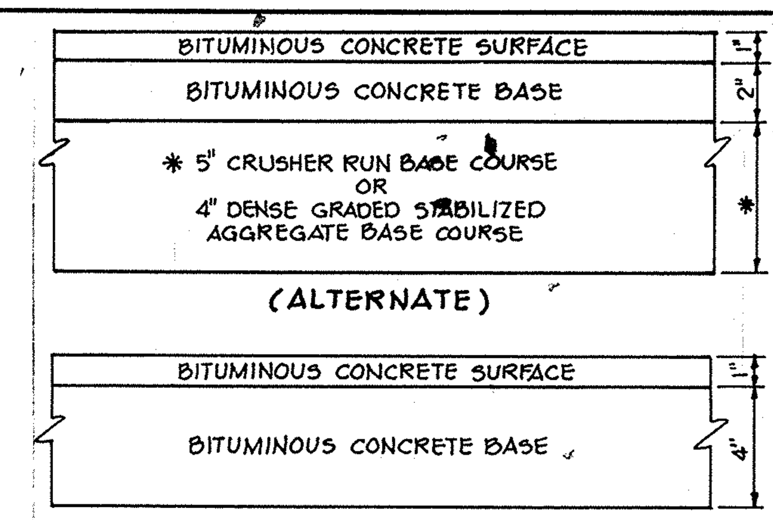
NO SCALE



HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.02)

(14" PAVING, P-6)

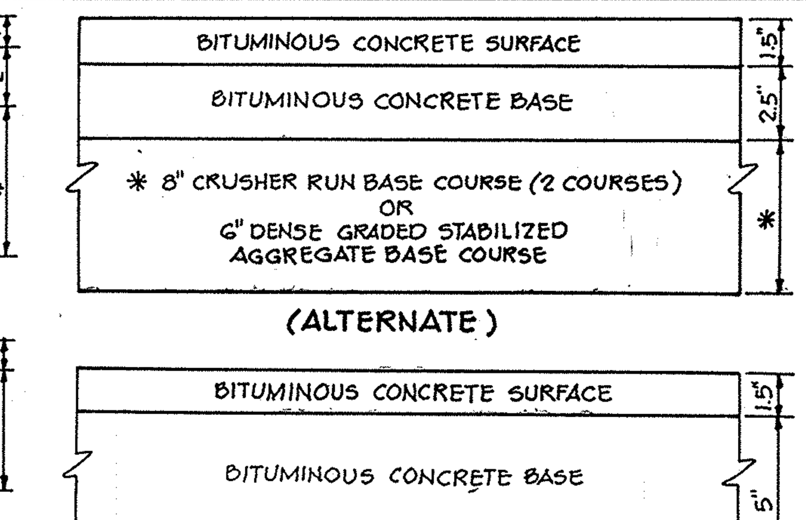
NO SCALE



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

(5" PAVING, P-1)

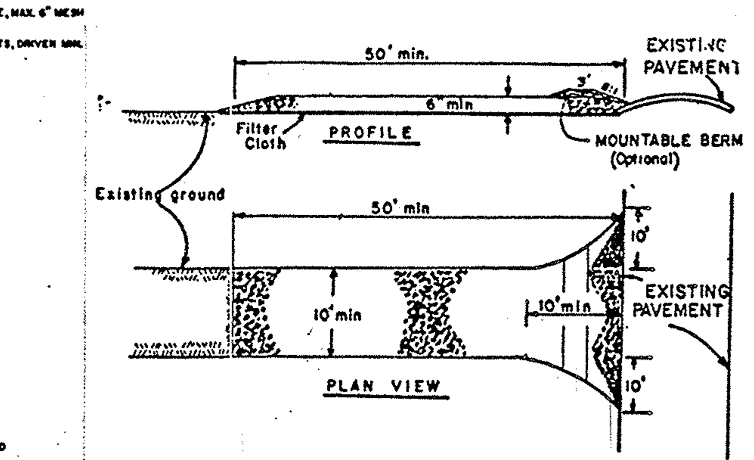
NO SCALE



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

(6½" PAVING, P-2)

NO SCALE

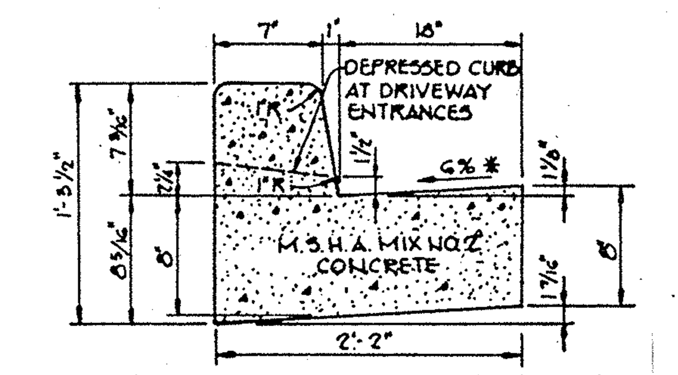


CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone Filter will not be required on a single family residence lot.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE

NO SCALE

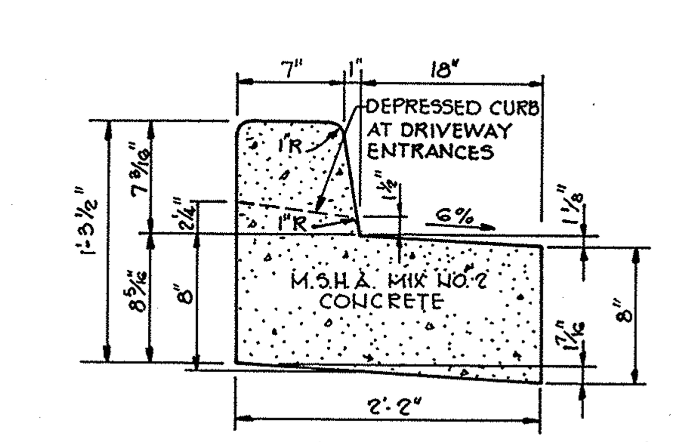


HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01)

✱ 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



REVERSE 7" COMBINATION CURB AND GUTTER

No Scale

BY THE DEVELOPER:

"I 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 NATURAL RESOURCES 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER — 8.22.88 DATE

REPUBLIC NATIONAL CORPORATION, PRESIDENT

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."

ENGINEER — 8.22.88 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.

U.S. SOIL CONSERVATION SERVICE — 9/2/88 DATE

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

APPROVED — HOWARD S.C.D. — 9/2/88 DATE

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

COUNTY HEALTH OFFICER — 9-12-88 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING DIRECTOR — 9.22.88 DATE

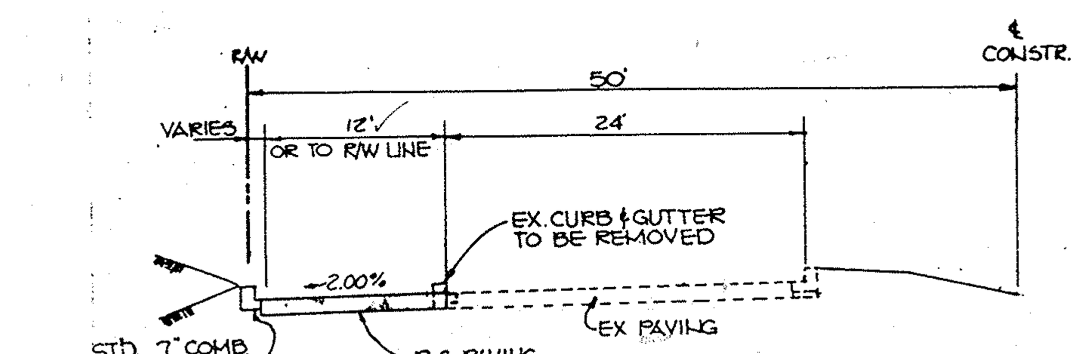
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 9-21-88 DATE

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR — 9/9/88 DATE

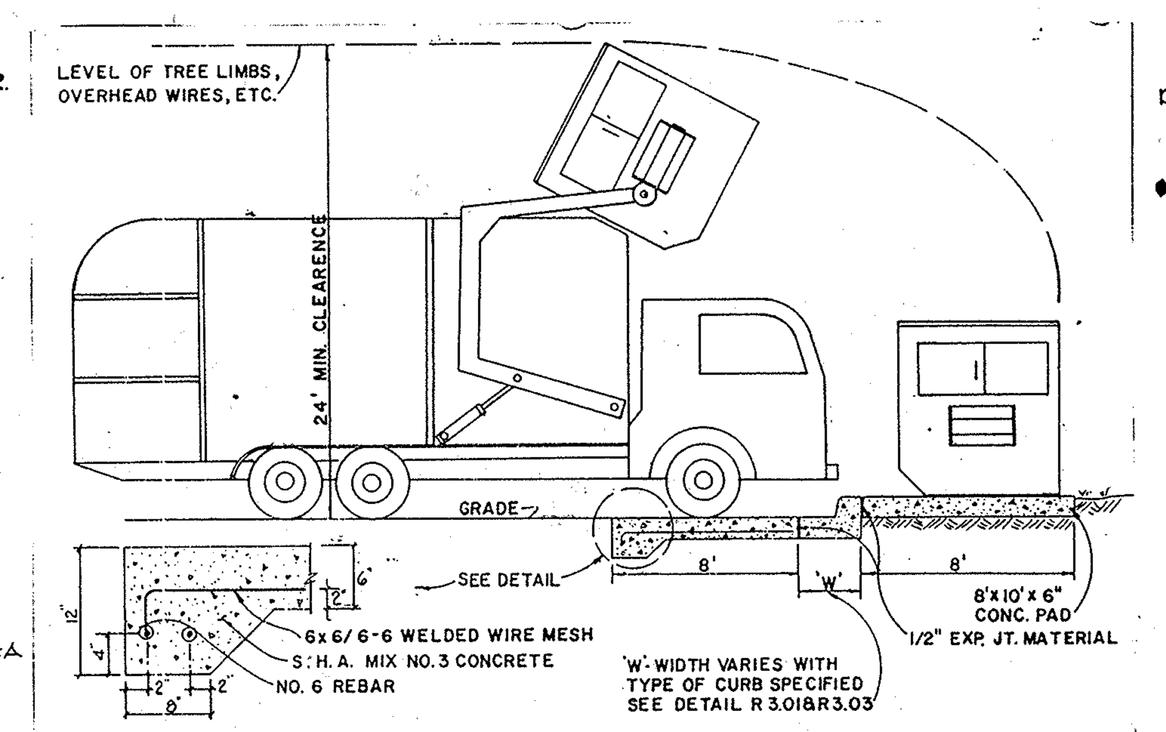
CHIEF, BUREAU OF ENGINEERING — 9-9-88 DATE



SNOWDEN RIVER PARKWAY

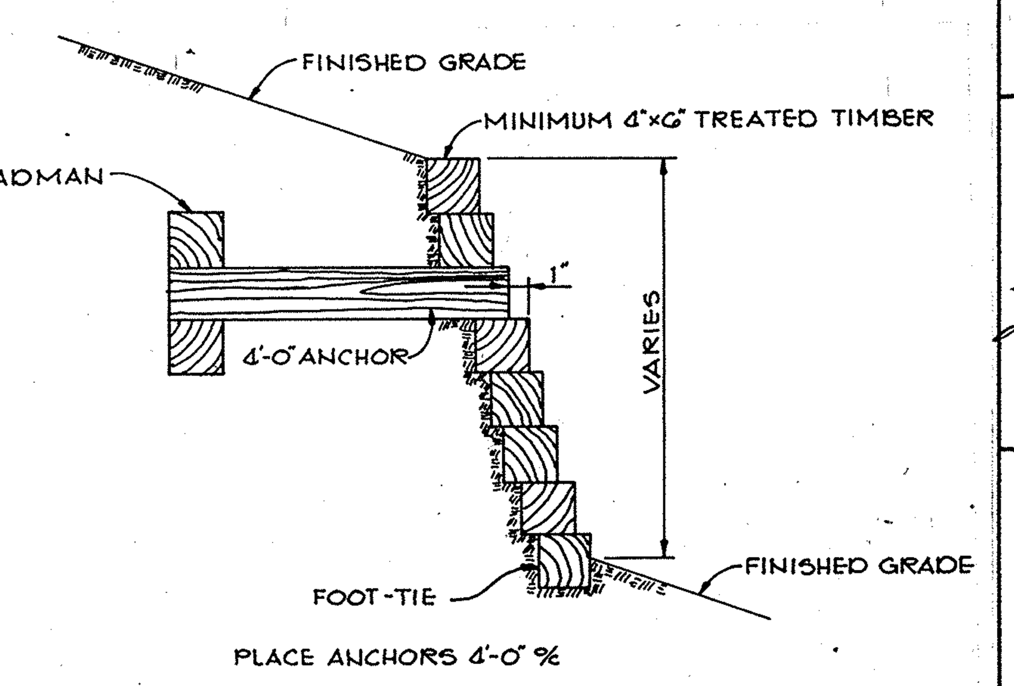
ROAD WIDENING

NO SCALE



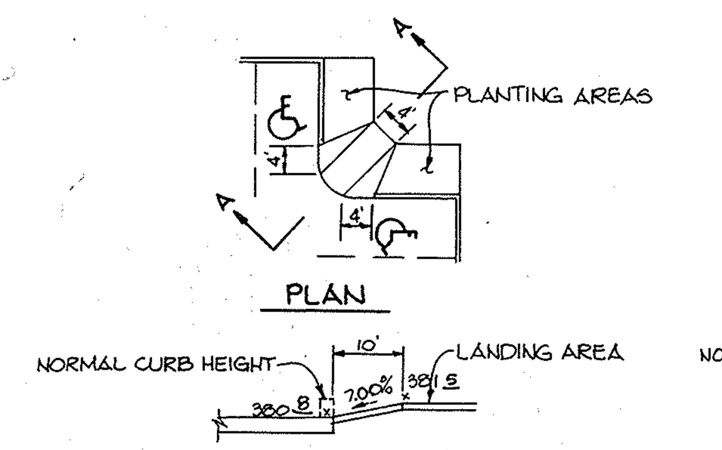
DUMPSTER PAD DETAIL

NO SCALE



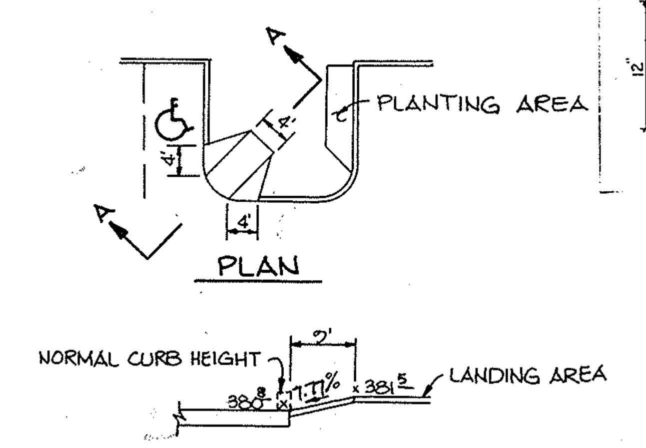
TIMBER RETAINING WALL

No Scale



HANDICAP RAMP #1

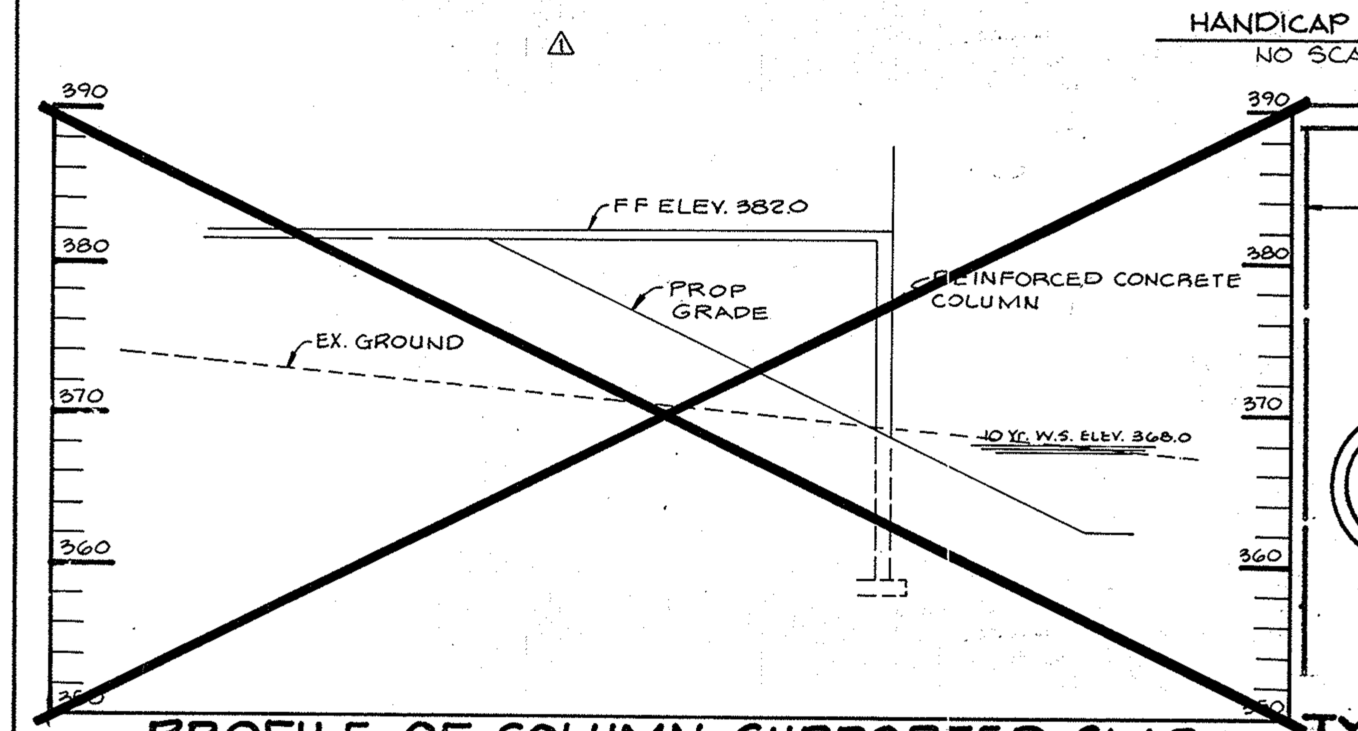
NO SCALE



HANDICAP RAMP #2

NO SCALE

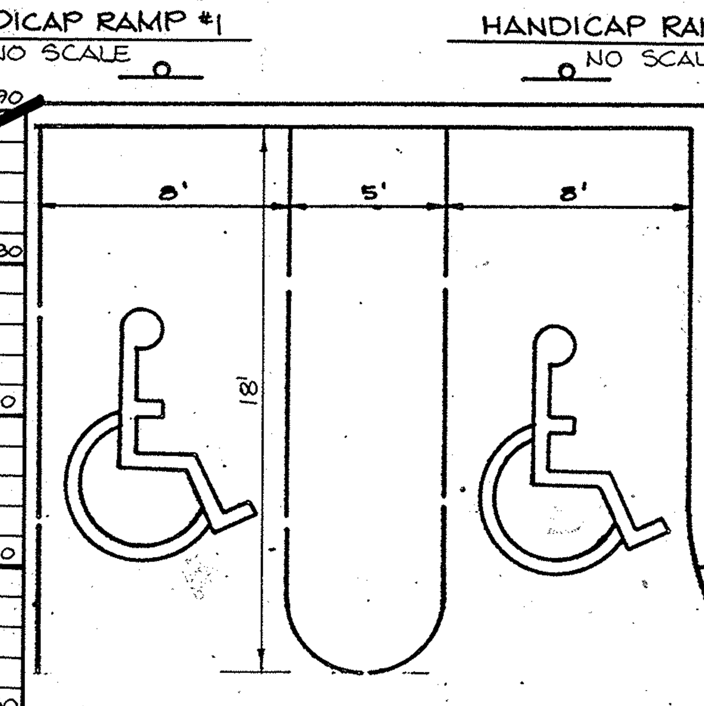
⚠



PROFILE OF COLUMN SUPPORTED SLAB

SECTION 'A-A'

SCALE: HOR 1"=10' VERT 1"=10'



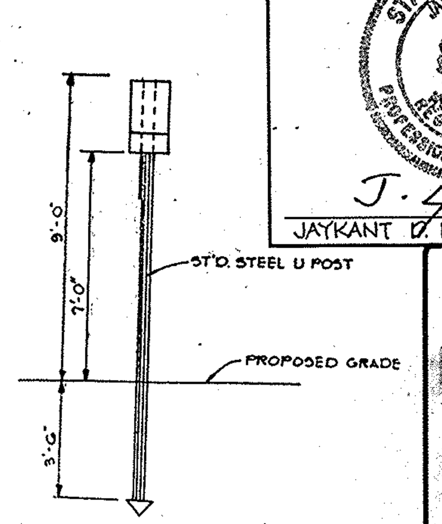
TYP. HANDICAP PARKING DETAIL

SCALE: 1"=5'

SEQUENCE OF CONSTRUCTION

1. Obtain a grading permit.
2. Install stabilized construction entrance, silt fence, earth dike, and the sediment basin as shown on drainage area map and sediment control plan sheet 4 of 7. Do not install low flow orifice on riser structure. (3days)
3. Demolish existing structure. (2 days)
4. Rough grade the site without disturbing sediment control measures. (10 days)
5. Install storm drains and utilities. (20 days)
6. Install all curb and gutter and paving. (5 days)
7. Complete all construction and stabilize all disturbed areas in accordance with permanent seeding notes.
8. Upon approval of the Department of Public Works Sediment Control Inspector, remove all sediment control devices and convert sediment trap to storm water management facility as follows:
   (A) Pump out impounded water.
   (B) Remove sediment and place as directed by the Department of Public Works Sediment Control Inspector.
   (C) Install 6" lowflow orifice on riser structure.
   (D) Excavate as necessary and bring the storm water management facility to the dimensions shown on the site development plan (sheet 2 of 7)
   (E) Stabilize all disturbed areas in accordance with the permanent seeding notes.

TO BE MOUNTED BELOW RESERVED PARKING SIGN ON THE ST'D STEEL U POST



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

COLORS

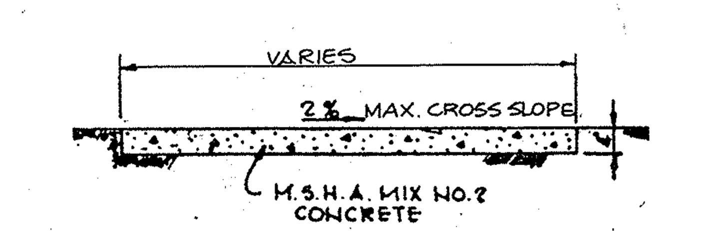
LEGEND AND BORDER - GREEN

WHITE SYMBOLS ON BLUE BACKGROUND

BACKGROUND - WHITE

HANDICAP SIGN DETAIL

NO SCALE



SIDEWALK DETAIL

No Scale

AS-BUILT CERTIFICATE

JAYKANT D. PAREKH #10148 — 11-8-94 DATE

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 3-30-88

DATE	NO.	REVISION
11-22-88	⚠	REMOVE PROFILE OF COLUMN SUPPORTED SLAB

OWNER/DEVELOPER

COLUMBIA MARKET GROUP LIMITED PARTNERSHIP
P.O. BOX 416
ELLICOTT CITY, MARYLAND 21043

PROJECT: COLUMBIA MARKET (COMMERCIAL BUILDINGS)

AREA TAX MAP NO. 42 PLAT NO. PARCEL A
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL NOTES AND DETAILS

THE RIEMER GROUP, INC.

The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

8-22-88 DATE

ARTHUR E. MUEGGE #8707

S-87-54, VP-87-84, VP-87-54

DESIGNED BY: J.D.P.

DRAWN BY: D.B.S.

PROJECT NO: 28400

DATE: 2-23-88

SCALE: AS SHOWN

DRAWING NO. 5 OF 7

AS-BUILT 11-8-94

SDP-88-18

MARYLAND BLUEPRINT CO., INC. N63893

MARYLAND 378 - CONSTRUCTION SPECIFICATIONS FOR PONDS

I. **SITE PREPARATION**

Areas under the borrow areas, embankment, and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas covered by the pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

II. **EARTH FILL**

Material:

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, oversize stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipatd settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

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 tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Cutoff Trench:

Where specified, a cutoff trench shall be excavated along 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 excavation, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability. Use only ML, CL, CH or MH material which will be borrowed from off site.

III. **STRUCTURAL BACKFILL**

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

IV. **CORRUGATED METAL PIPE**

Material:

(Steel Pipe)-This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Forms:

The forms shall have sufficient strength and rigidity to hold the concrete and to with stand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed.

Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

Reinforcing Steel:

All reinforcing material shall be free of dirt, rust, scale, oil, paint or other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

Consolidating:

Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be suplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.

Finishing:

Defective concrete, honeycombed areas, voids left by the removal of tie rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.

Protection and Curing:

Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also by used.

Placing Temperature:

Concrete may not be placed at temperatures below 37° F with the temperature falling, or 34° with the temperature rising.

VI **STABILIZATION**

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications shown on or accompanying the drawings.

Connections:

All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands shall be used at all joints. Antiseep collars shall be connected to the pipe in such a manner as to be completely watertight.

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.

V. **CONCRETE**

Material:

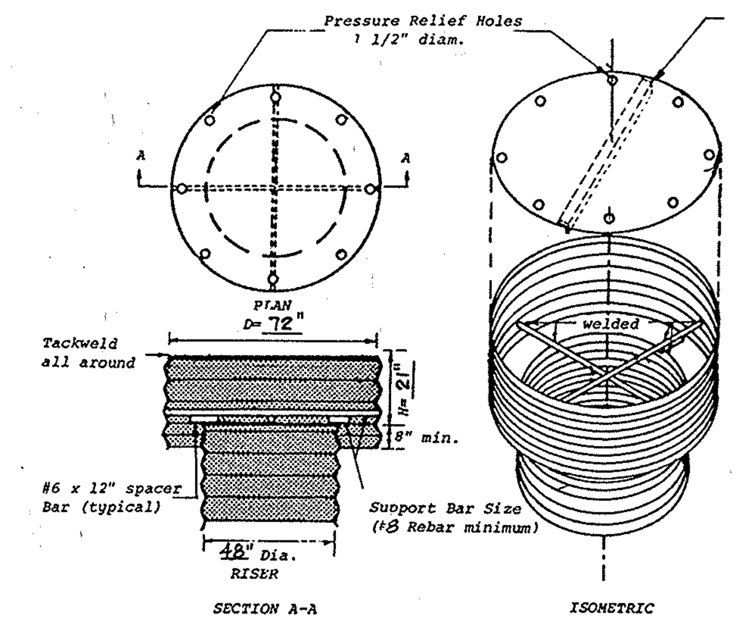
1. Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.
2. Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.
3. Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.
4. Course Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-½) inches.
5. Renforcing Steel - The reinforcing steel shall be be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

Design Mix:

The concrete shall be mixed in the following proportions, measured by weight. The water-cement ration shall be 5-½ to 6 U.S. gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-½. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

Mixing:

The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixer and of the introduction of the material, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overmixing requiring the additions of water to perserve the required concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.



Top stiffener (if required) is ___x___x N/A angle welded to top and oriented perpendicular to corrugations.

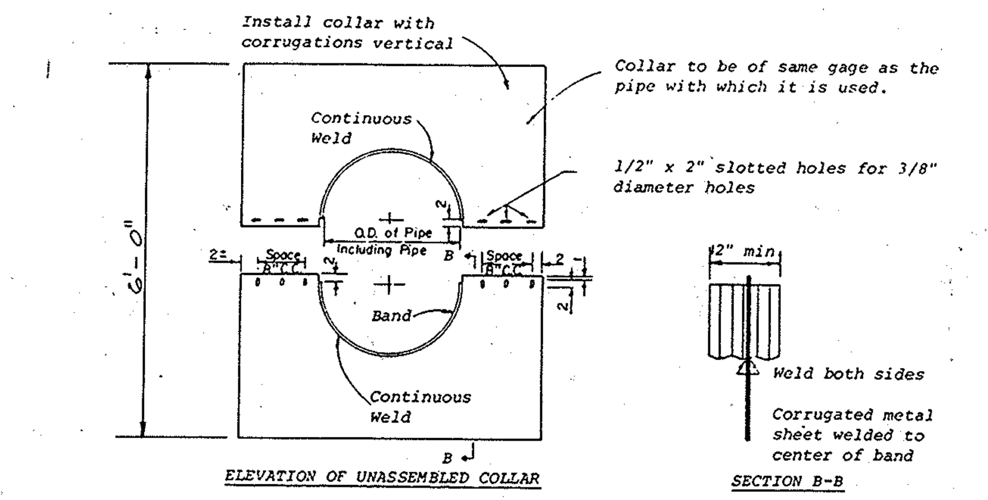
Top is 10 gage corrugated metal or 1/8" steel plate. Pressure relief holes may be ommitted, if ends of corrugations are left fully open when corrugated top is welded to cylinder.

Cylinder is 12 gage corrugated metal pipe or fabricated from 1/8" steel plate.

Notes:
1) The cylinder must be firmly fastened to the top of the riser.
2) Support bars are welded to the top of the riser or attached by straps bolted to top of riser.

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

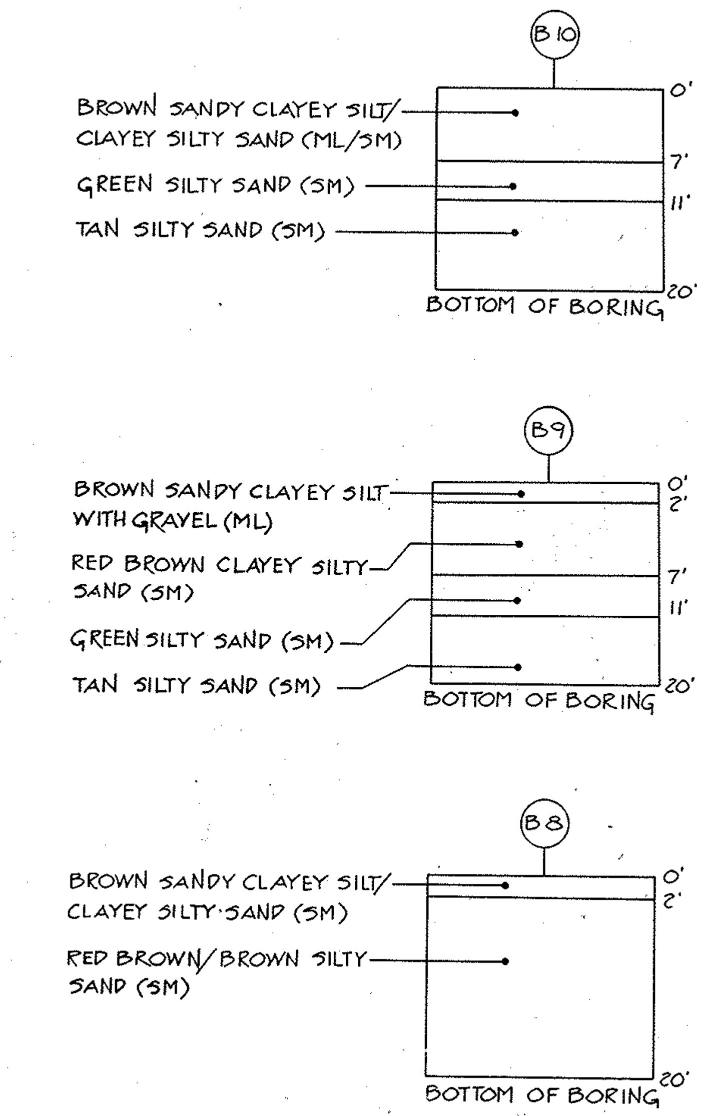
No Scale



NOTES FOR COLLARS:
1. All materials to be in accordance with construction and construction material specifications.
2. When specified on the plans, coating of collars shall be in accordance with construction and construction material specifications.
3. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
4. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at time of installation.
5. Each collar shall be furnished with two 1/2" diameter rods with standard tank lugs for connecting collars to pipe.

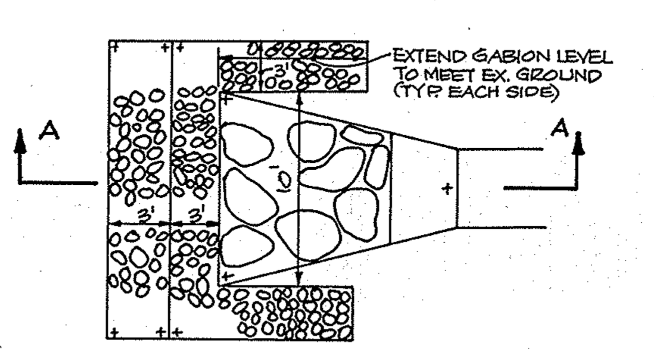
ANTI-SEEP COLLAR DETAIL

NOT TO SCALE

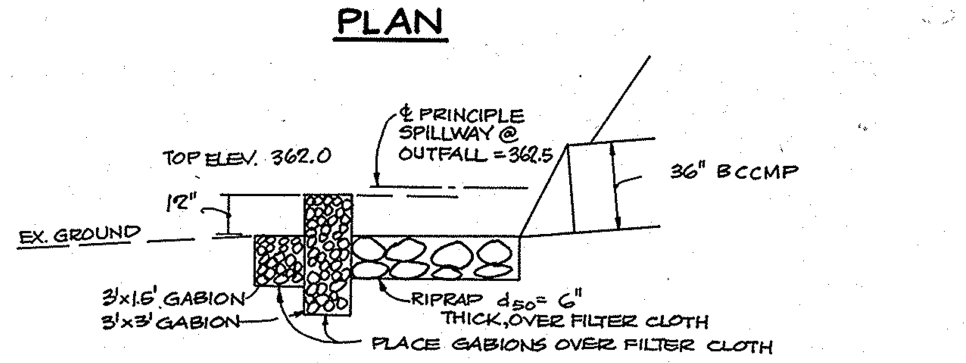


BORING LOGS

NOT TO SCALE



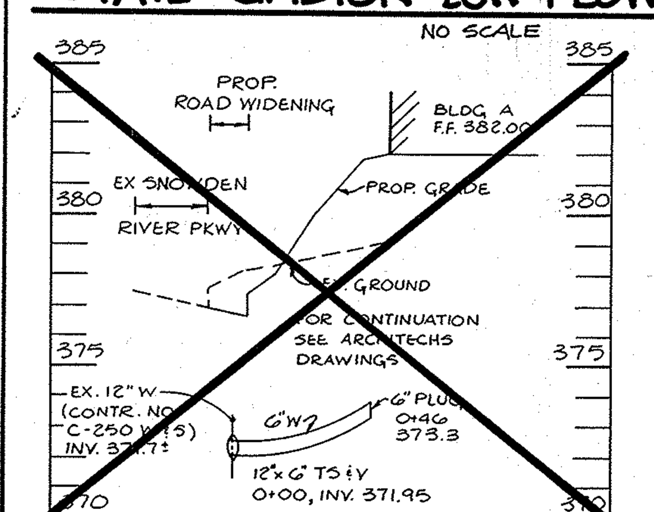
PLAN



SECTION A-A

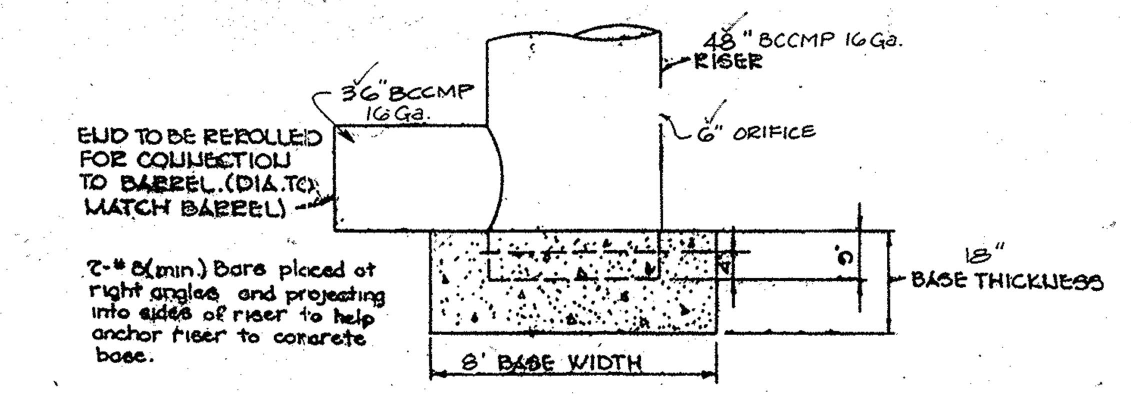
DETAIL GABION LOW FLOW ENERGY DISSIPATOR

NO SCALE



WATER PROFILE

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



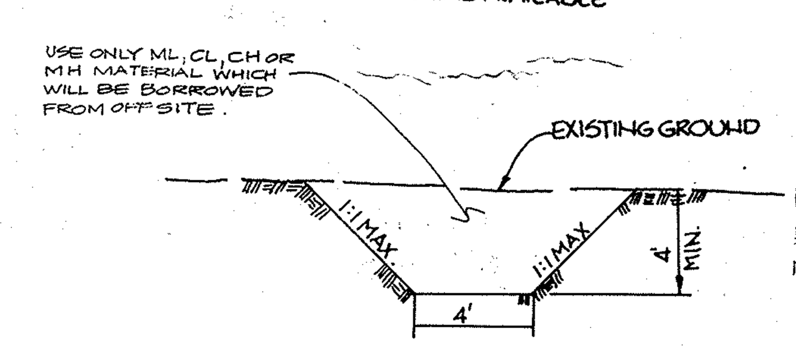
RISER BASE DETAIL

NOT TO SCALE

NOTE:

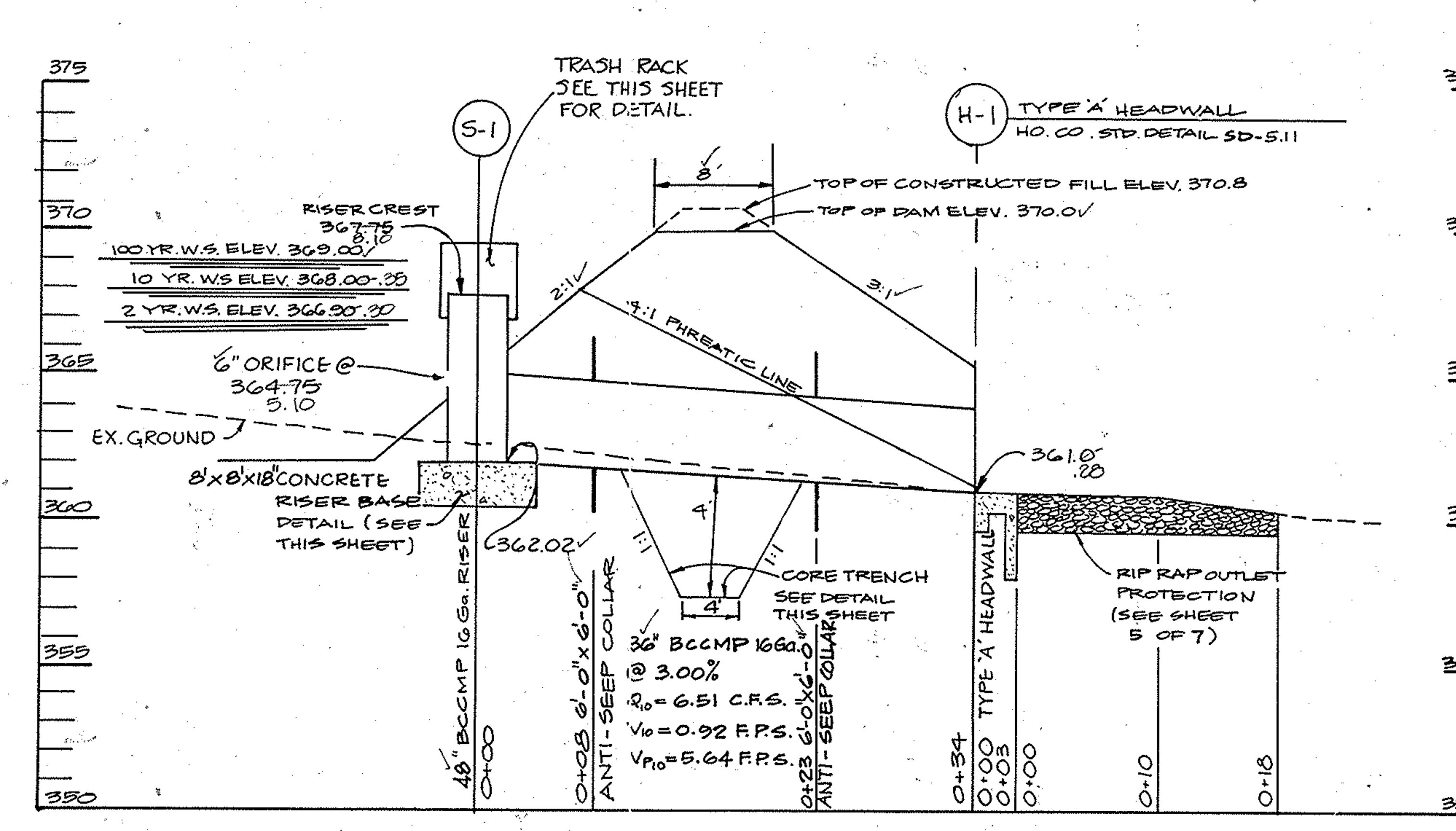
THE CONCRETE BASE SHALL BE POURED IN SUCH A MANNER TO INSURE THAT CONCRETE FILLS THE BOTTOM OF THE RISER TO THE INVERT OF THE OUTLET PIPE TO PREVENT THE RISER FROM BREAKING AWAY FROM THE BASE.

FILL MATERIAL SHALL BE MOST IMPERVIOUS MATERIAL AVAILABLE



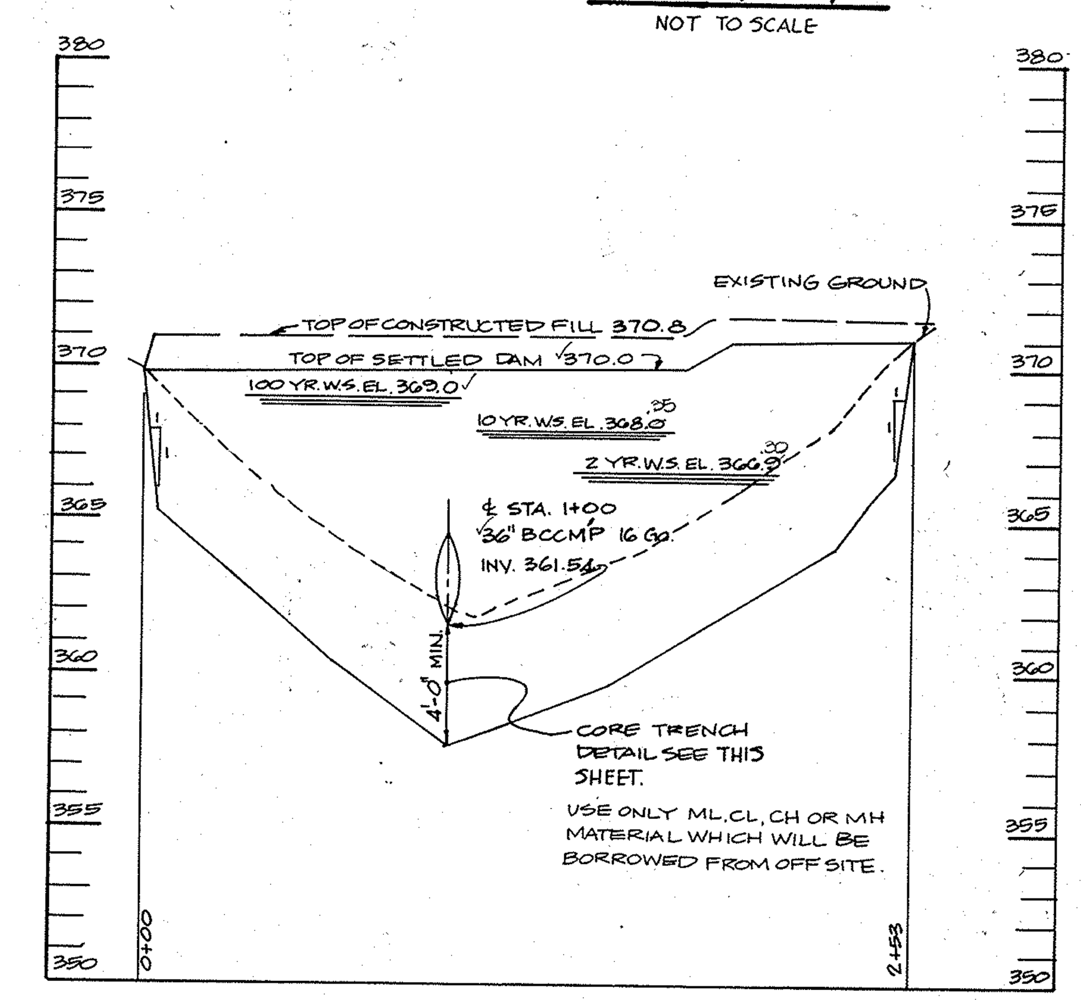
CORE TRENCH DETAIL

NOT TO SCALE



PROFILE THROUGH PRINCIPAL SPILLWAY

SCALE: HORIZ. 1"= 10'
VERT. 1"= 5'



PROFILE ALONG ℄ OF EMBANKMENT

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

BY THE DEVELOPER:

"I 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 NATURAL RESOURCES 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER — DATE 8·22·88

REPUBLIC NATIONAL CORPORATION, PRESIDENT

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."

ENGINEER — DATE 8·22·88

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.

U.S. SOIL CONSERVATION SERVICE — DATE 9/2/88

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

APPROVED — HOWARD S.C.D. — DATE 9/2/88

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

COUNTY HEALTH OFFICER — DATE 9·12·88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING DIRECTOR — DATE 9.22.88

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 9·21·88

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR — DATE 9/9/88

CHIEF, BUREAU OF ENGINEERING — DATE 9·9·88

DATE	NO	REVISION
11-22-88	1	REMOVE WATER PROFILE

OWNER/DEVELOPER

COLUMBIA MARKET GROUP LIMITED PARTNERSHIP
P.O. BOX 416
ELLICOTT CITY MARYLAND 21043

PROJECT: **COLUMBIA MARKET**
COMMERCIAL BUILDINGS

AREA: TAX MAP NO. 42 — PLAT NO. — PARCEL A
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **STORMWATER MANAGEMENT PROFILES & DETAILS**

THE RIEMER GROUP, INC.

The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 North Ridge Road, Ellicott City, Maryland 21043 (301) 461-2690

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 3-30-88

AS-BUILT CERTIFICATE

STATE OF MARYLAND — JAYKANT D. PAREKH — NO. 10148 REGISTERED PROFESSIONAL ENGINEER

JAYKANT D. PAREKH #10148 — DATE 11·8·94

8·22·88
DATE

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

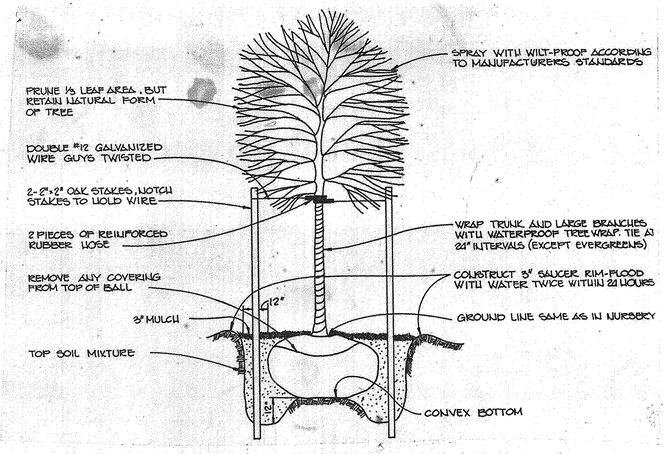
ARTHUR E. MUEGGE #8707

S-87-54	VP-87-84, VP-87-54
DESIGNED BY:	C.J.R
DRAWN BY:	J.L.B.
PROJECT NO:	28400
DATE:	2-23-88
SCALE:	AS SHOWN
DRAWING NO.	6 OF 7

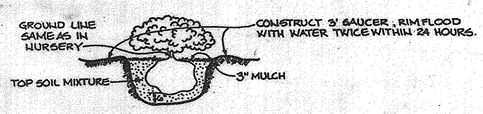
AS-BUILT 11-8-94

SDP-88-18

MARYLAND BLUEPRINT CO., INC. N85062



TREE PLANTING DETAIL
NO SCALE



SHRUB PLANTING DETAIL
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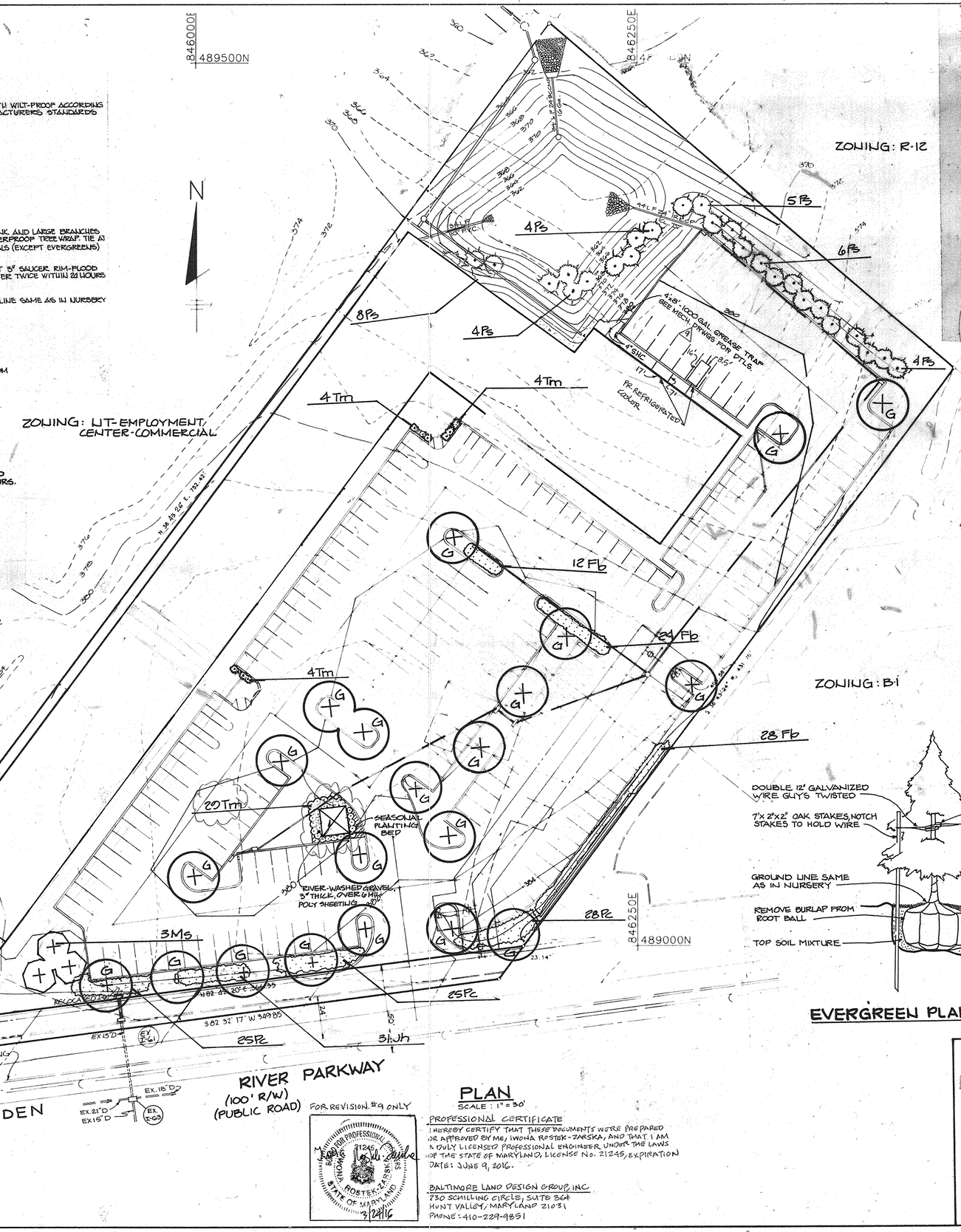
846000E
489500N
846250E
489000N
N
ZONING: R-12
ZONING: LIT-EMPLOYMENT CENTER-COMMERCIAL
ZONING: B-1
4:1 R
18" PVC
4:1 R
24" PVC
4:1 R
18" PVC
4:1 R
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4:1 R
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