

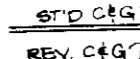


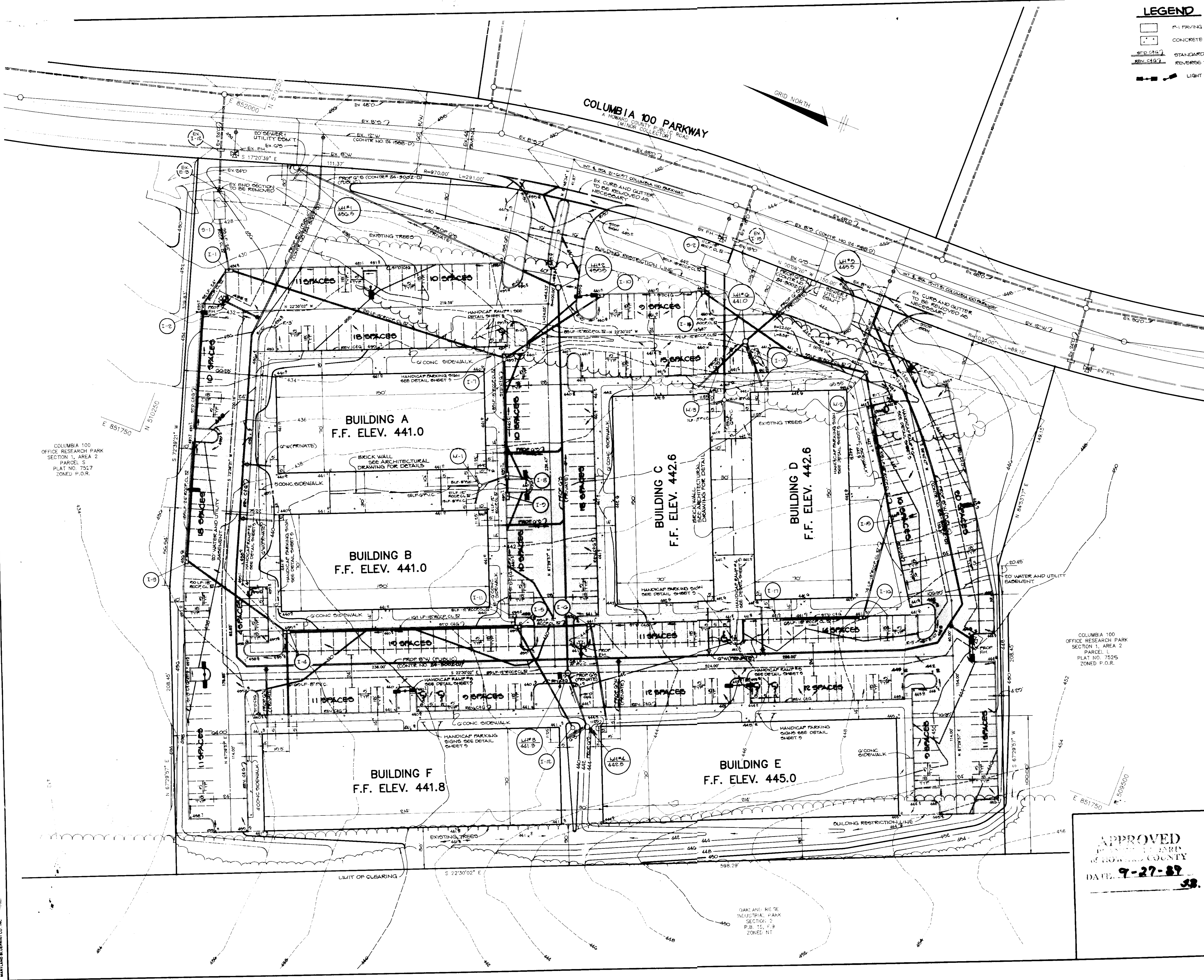




**LEGEND**

-  PAVING
-  CONCRETE SIDEWALK OR PAVING
-  STANDARD T-COMBINATION CURB AND GUTTER
-  REVERSE T-COMBINATION CURB AND GUTTER
-  LIGHT POLES

- NOTES:
1. ALL RADII 5' UNLESS OTHERWISE NOTED
  2. ALL DIMENSIONS TO FACE OF BUILDING, FACE OF CURB OR CENTERLINE
  3. LETTERS OF PERMISSION TO GRADE IN PARCELS 1 AND PARCELS 9 TO BE OBTAINED BY THE DEVELOPER
  4. ALL EXTERIOR LIGHTING SHALL BE DIRECTED/REFLECTED TOWARD THE SITE AND AWAY FROM ALL ADJOINING RESIDENTIAL AREAS AND PUBLIC RIGHT-OF-WAYS



APPROVED: FOR PUBLIC WATER, SEWERAGE, STORM DRAINAGE SYSTEMS, HOWARD COUNTY HEALTH OFFICER  
*John B. ...* 2/15/90

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING  
*Walt ...* 3.7.90  
DIRECTOR

*Mark ...* 2/20/90  
CHIEF, DIVISION OF COUNTY PLANNING AND LAND DEVELOPMENT

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*James ...* 2/8/90  
DIRECTOR

*William ...* 2-1-90  
CHIEF, BUREAU OF ENGINEERING

DATE	NO.	REVISION
OWNER/DEVELOPER		
COURTYARDS ASSOCIATES 10520 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21045		
PROJECT <b>COURTYARDS AT COLUMBIA 100</b> ONE STORY OFFICE/COMMERCIAL BUILDINGS		
AREA TAX MAP 90 ZONED P.O.R. PLAT NO. 8732 COLUMBIA 100 OFFICE RESEARCH PARK SEC. 1, AREA 2 PARCEL 1 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND		
TITLE: <b>SITE DEVELOPMENT PLAN</b>		

**APPROVED**  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE: **9-27-89**

**RIEMER MUEGGE & ASSOCIATES, INC.**  
A Land Planning, Engineering and Consulting Firm  
3105 North Ridge Road Ellicott City, Maryland 21043  
301-461-2690 FAX: 301-750-3176

DATE: 1-23-90

DESIGNED BY: W.C.W.  
DRAWN BY: M.A.D.  
PROJECT NO: G2001  
DATE: 6-20-89  
SCALE: 1" = 30'  
DRAWING NO. 2 OF 2

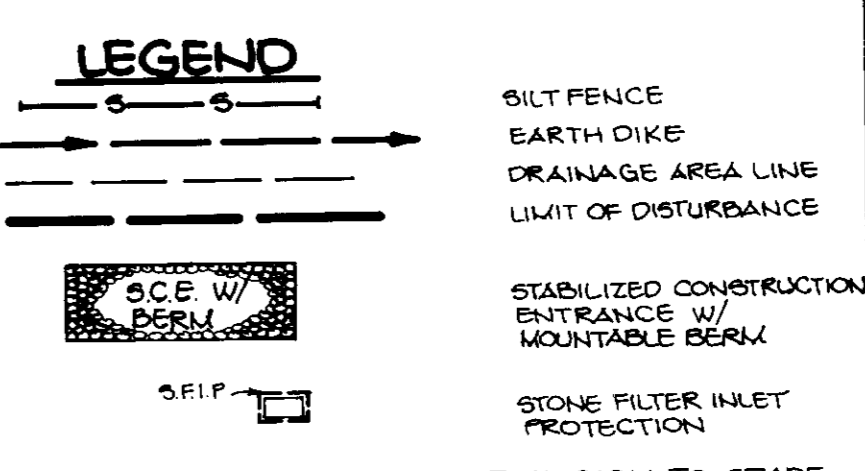
**STONE OUTLET SEDIMENT TRAP #1**

DRAINAGE AREA 5.00 AC  
 VOLUME REQUIRED 9000 CU FT  
 VOLUME PROVIDED 11800 CU FT  
 CREST ELEVATION 488.0  
 CREST WIDTH 20'  
 TOP ELEVATION 484.0  
 BOTTOM ELEVATION 428.0  
 CLEANOUT ELEVATION 481.5  
 TRAP DEPTH 5.0'

**STONE OUTLET SEDIMENT TRAP #2**

DRAINAGE AREA 2.50 AC  
 VOLUME REQUIRED 4140 CU FT  
 VOLUME PROVIDED 4200 CU FT  
 CREST ELEVATION 489.0  
 CREST WIDTH 10'  
 TOP ELEVATION 484.0  
 BOTTOM ELEVATION 429.0  
 CLEANOUT ELEVATION 481.5  
 TRAP DEPTH 5.0'

- SEQUENCE OF CONSTRUCTION**
1. OBTAIN A GRADING PERMIT. (5 DAYS)
  2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND BLOCK SOUTH ENTRANCE FROM CONSTRUCTION TRAFFIC. (1/2 DAY)
  3. INSTALL SILT FENCE AND EARTH DIKE AND THEN GRADE FOR AND INSTALL STONE OUTLET SEDIMENT TRAP #1 AND #2. FINAL GRADING FOR THE AREA NORTH OF THE OUTFALL OF STONE OUTLET SEDIMENT TRAP #1 WILL BE COMPLETED UPON THE REMOVAL OF THE TRAP. (3 DAYS)
  4. BEGIN SITE GRADING. GRADE SITE TO THE SUBGRADE FOR THE PROPOSED PAVING. STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THE TEMPORARY SEEDING NOTES. (10 DAYS)
  5. INSTALL STORM DRAINS AND STONE FILTER INLET PROTECTION. INSTALL FLEXIBLE PIPE COUPLING FOR TEMPORARY DIVERSION OF 1-1 TO STONE OUTLET SEDIMENT TRAP #1. (20 DAYS)
  6. BEGIN BUILDING CONSTRUCTION. (15 DAYS)
  7. UPON APPROVAL OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR, REMOVE STONE OUTLET SEDIMENT TRAPS #1 AND #2. (5 DAYS)
  8. INSTALL REMAINING UTILITIES. (10 DAYS)
  9. INSTALL CURB AND GUTTER AND BEGIN PAVING. (10 DAYS)
  10. FINISH CONSTRUCTION ACTIVITIES. (5 DAYS)
  11. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES. (1 DAY)
  12. UPON APPROVAL OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES AND STABILIZE ALL REMAINING DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES. (3 DAYS)



NOTE: LETTERS OF PERMISSION TO GRADE IN PARCEL L1 PARCELS TO BE OBTAINED BY THE DEVELOPER. CONTOURS FOR SEDIMENT TRAPS ARE TEMPORARY.

BY THE DEVELOPER:

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

*Arthur E. Muegge* 1/23/80  
 DEVELOPER DATE

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

*Arthur E. Muegge* 1/23/80  
 ENGINEER DATE

REVIEWED FOR **HOWARD** S.C.D. NAME  
 AND MEETS TECHNICAL REQUIREMENTS

*James M. Helms* 2/2/80  
 S.O. SOIL CONSERVATION SERVICE DATE

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

*John L. Robison* 2/2/80  
 HOWARD S.C.D. DATE

*James M. Helms* 2/13/80  
 S.O. SOIL CONSERVATION SERVICE DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

*Walter* 3.7.90  
 DIRECTOR DATE

*James M. Helms* 2/2/80  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*James M. Helms* 2/8/90  
 DIRECTOR DATE

*Arthur E. Muegge* 2.7.90  
 CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO	REVISION

OWNER/DEVELOPER

COURTYARDS ASSOCIATES  
 10820 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21045

PROJECT: **COURTYARDS AT COLUMBIA 100**  
 6 ONE STORY OFFICE/COMMERCIAL BUILDINGS

AREA TAX MAP 80 ZONED P.O.R. PLAT NO. 8732  
 COLUMBIA 100 OFFICE RESEARCH PARK SEC. 1, AREA 2 PARCEL M-1  
 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

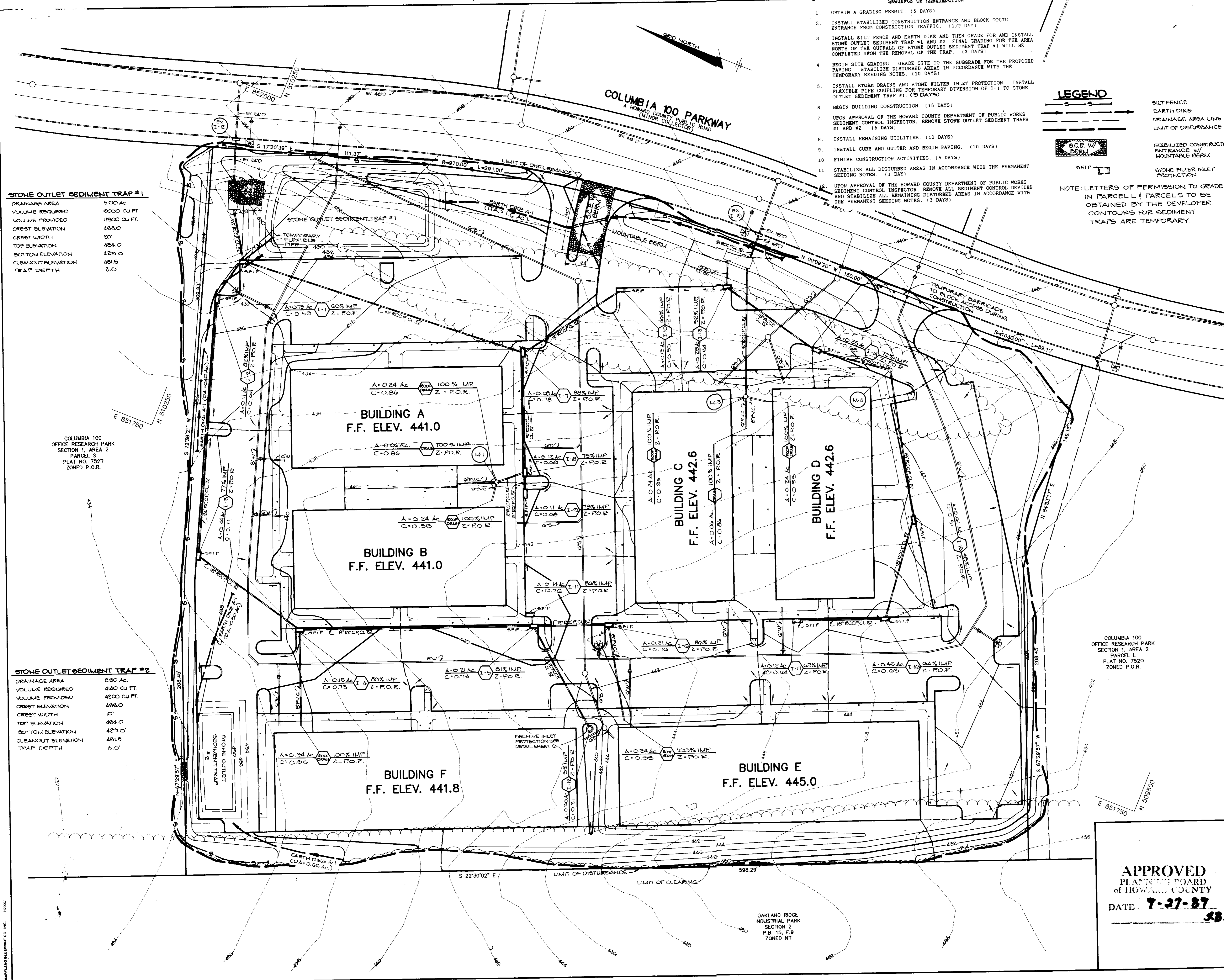
TITLE: **GRADING, SEDIMENT CONTROL PLAN & DRAINAGE AREA MAP**

RIEMER MUEGGE & ASSOCIATES, INC.  
 A Land Planning, Engineering and Consulting Firm  
 3105 North Ridge Road Ellicott City, Maryland 21043  
 301-461-2690 FAX: 301-750-3176

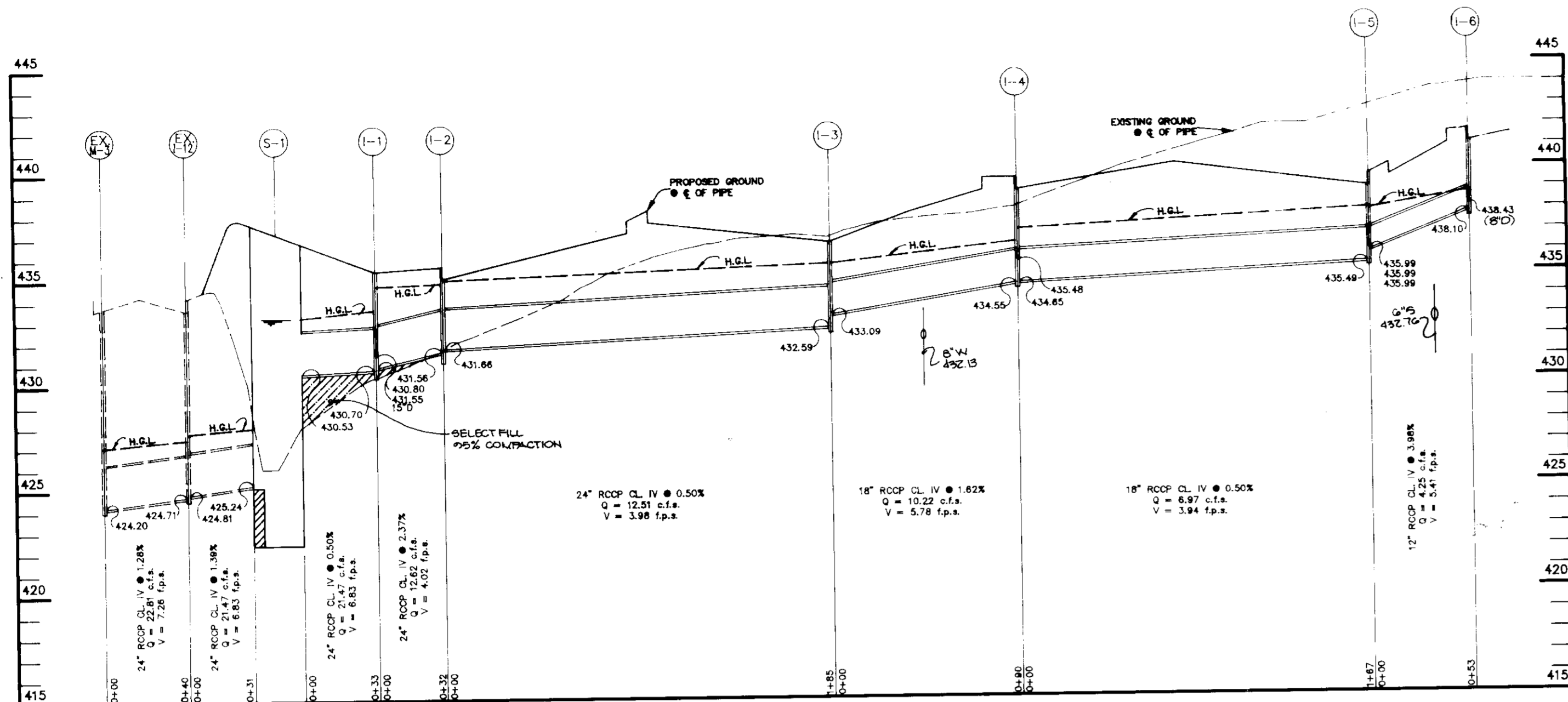
DATE 1-23-80

DESIGNED BY W.C.W.  
 DRAWN BY M.A.D.  
 PROJECT NO G-2001  
 DATE 6-20-80  
 SCALE: 1" = 30'  
 DRAWING NO. 3 OF 7

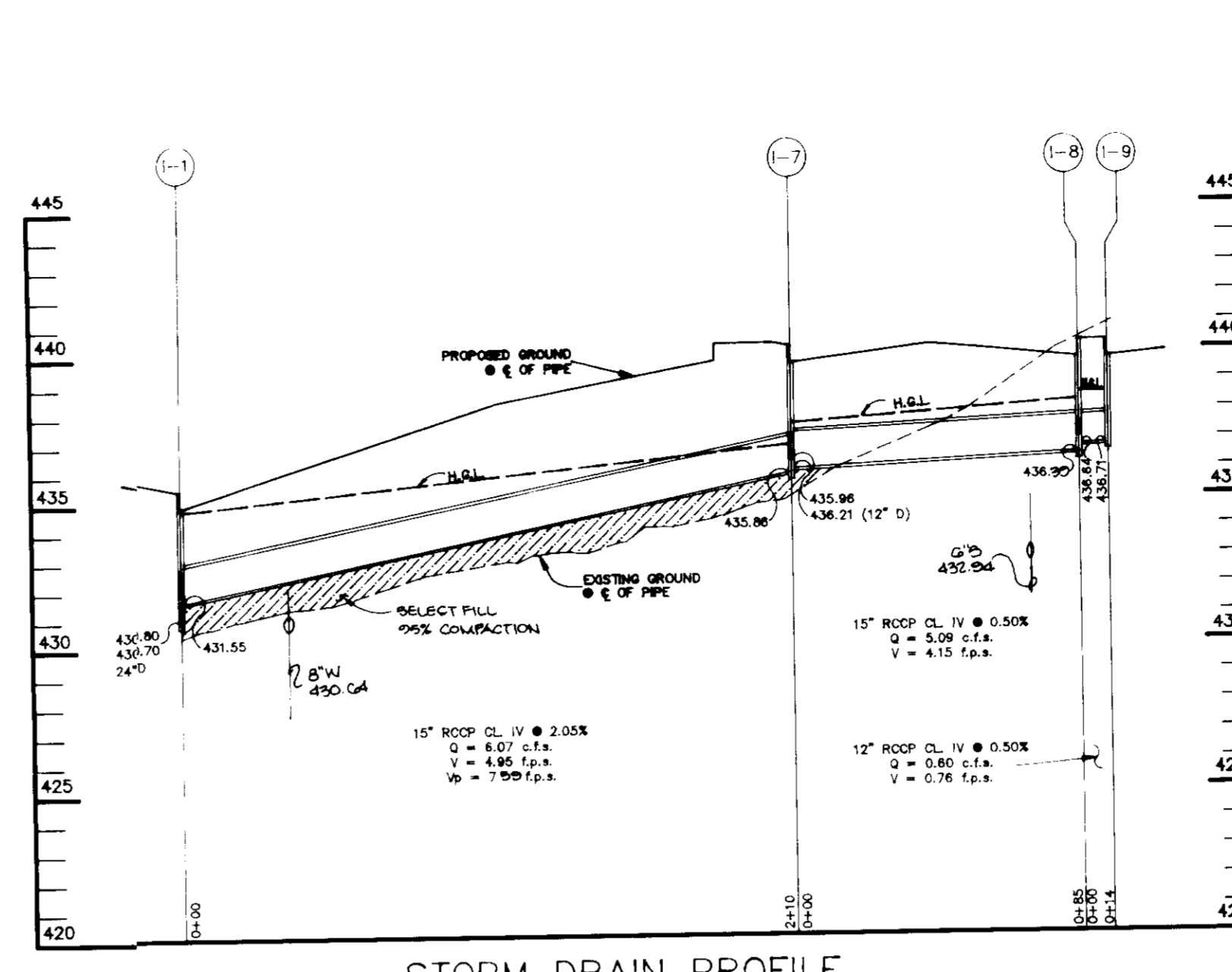
APPROVED  
 PLANNING BOARD  
 of HOWARD COUNTY  
 DATE 7-27-87



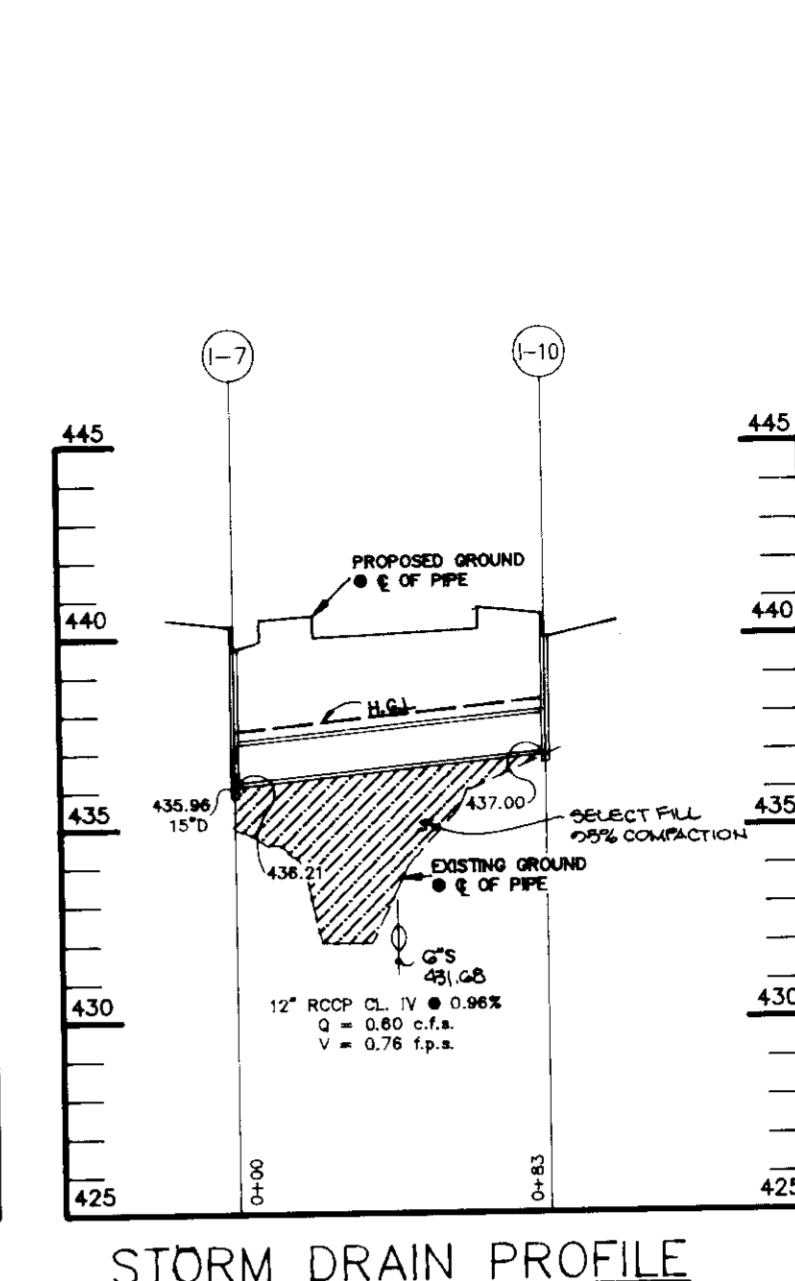
MARYLAND BLUEPRINT CO. INC.



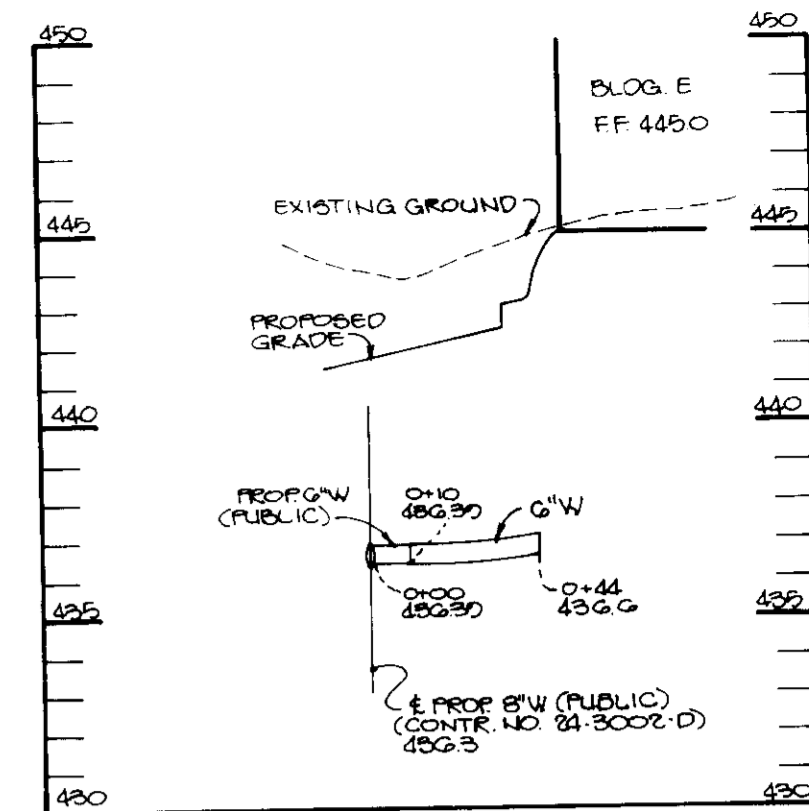
**STORM DRAIN PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



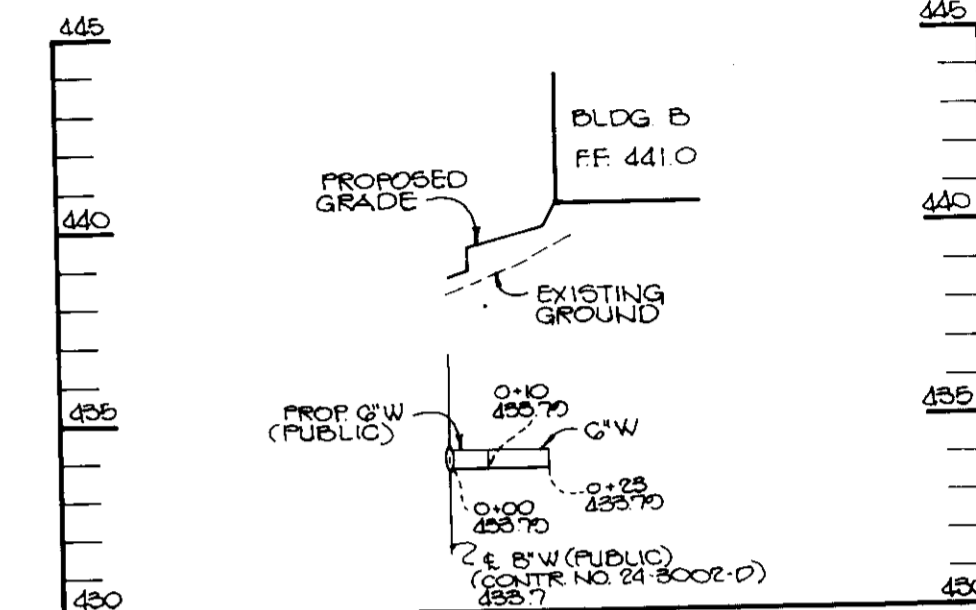
**STORM DRAIN PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



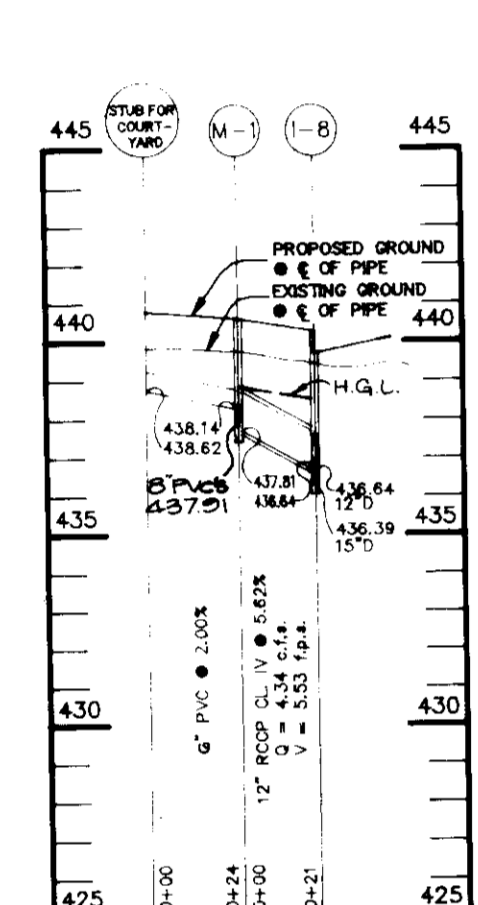
**STORM DRAIN PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



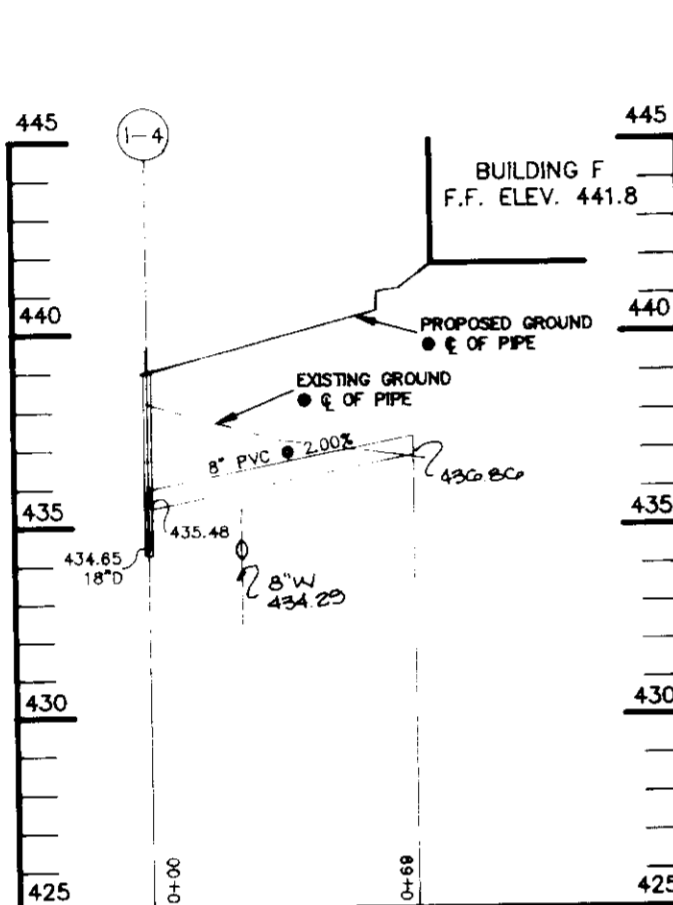
**WATER PROFILE**  
SCALE: HOR: 1"=50'  
VERT: 1"=5'



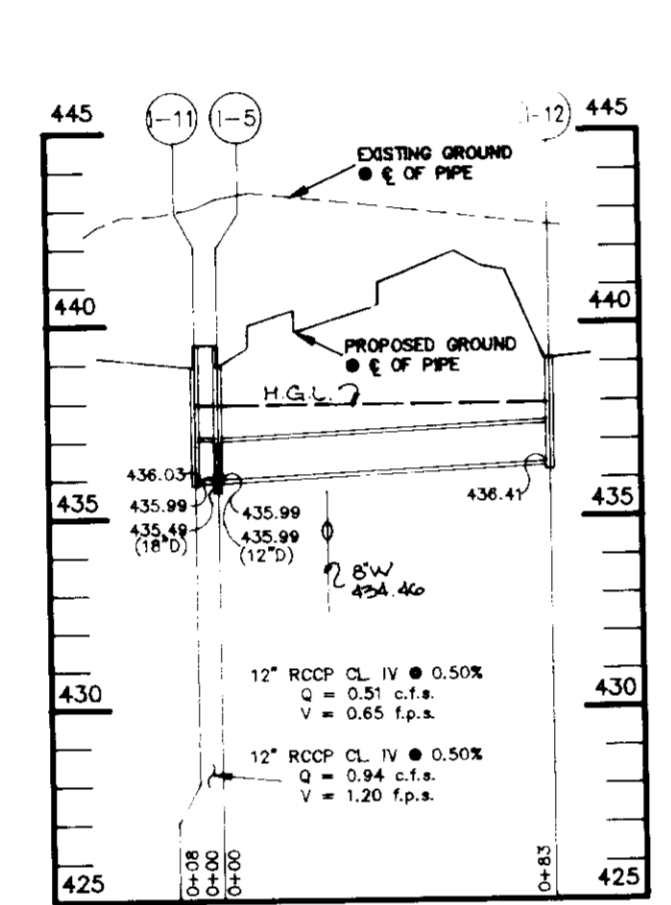
**WATER PROFILE**  
SCALE: HOR: 1"=50'  
VERT: 1"=5'



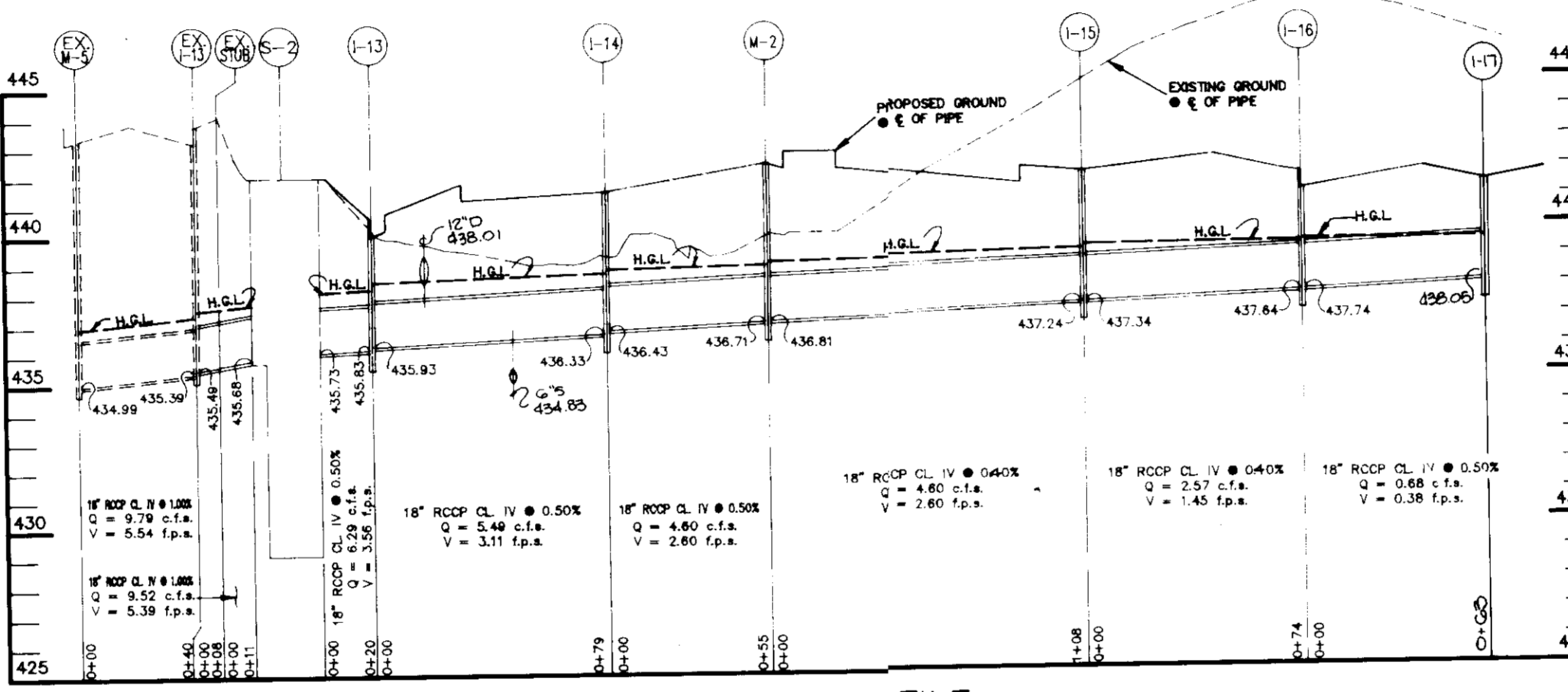
**STORM DRAIN PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



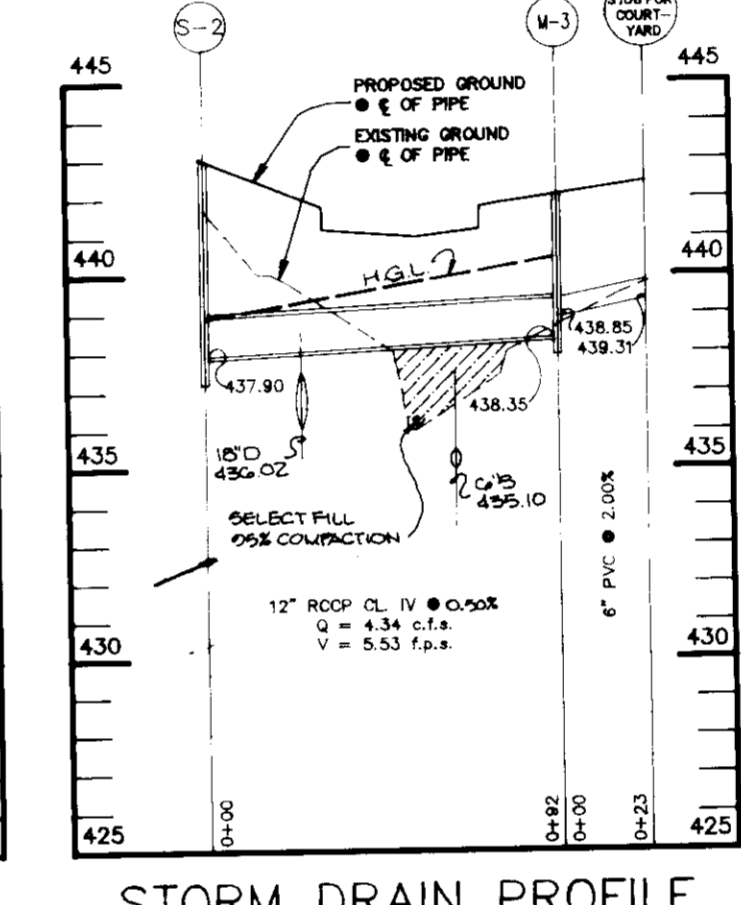
**ROOF DRAIN PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



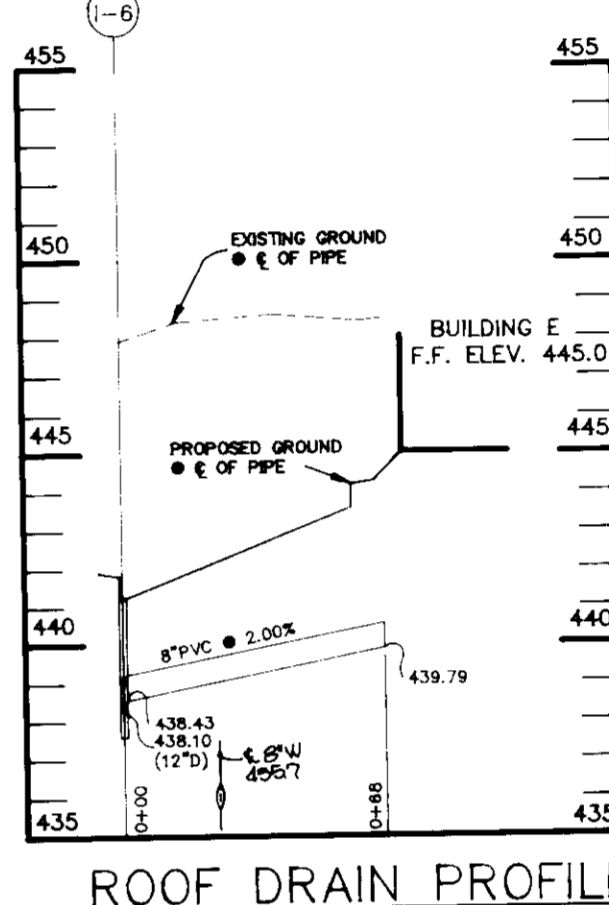
**STORM DRAIN PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



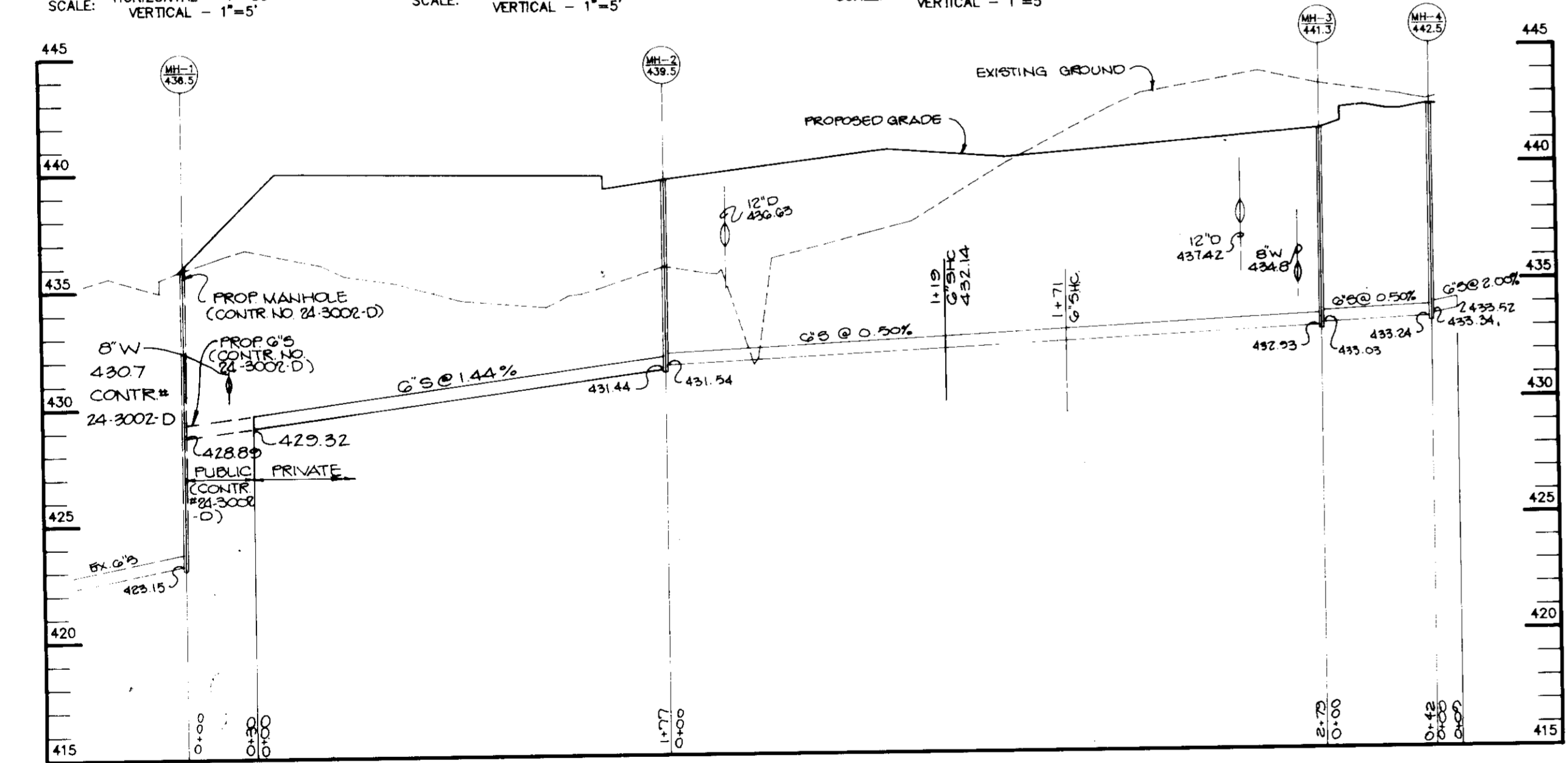
**STORM DRAIN PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



**STORM DRAIN PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'

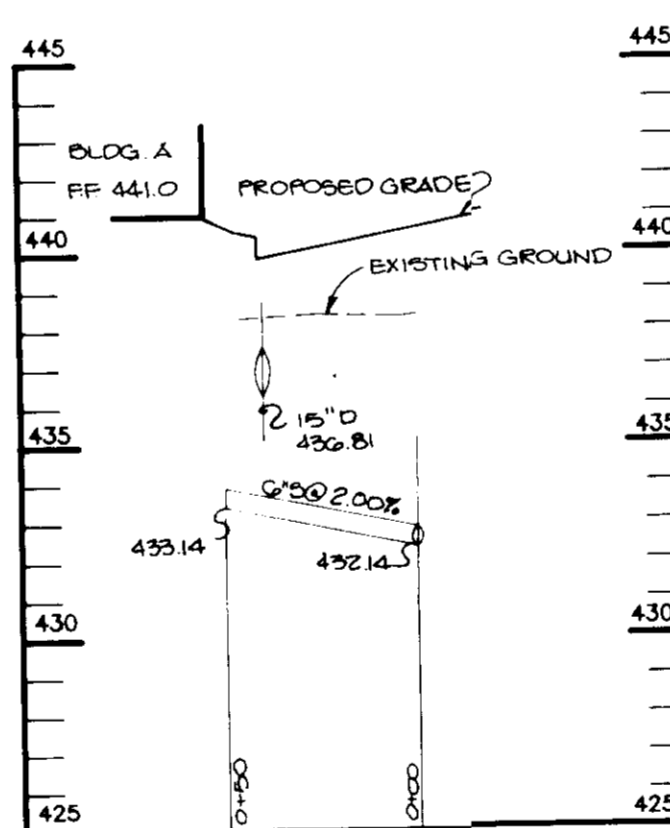


**ROOF DRAIN PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'

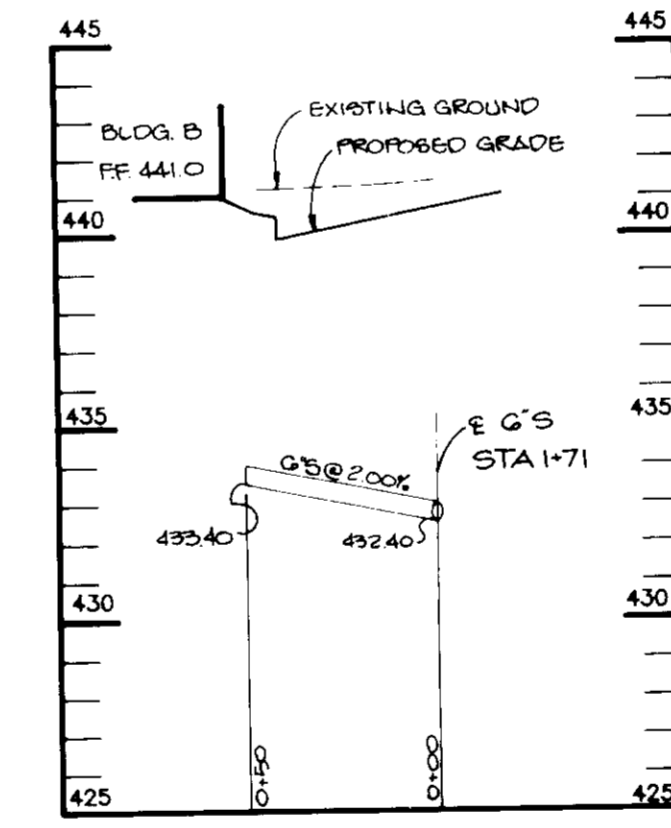


**SEWER PROFILE**  
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VERTICAL - 1"=5'

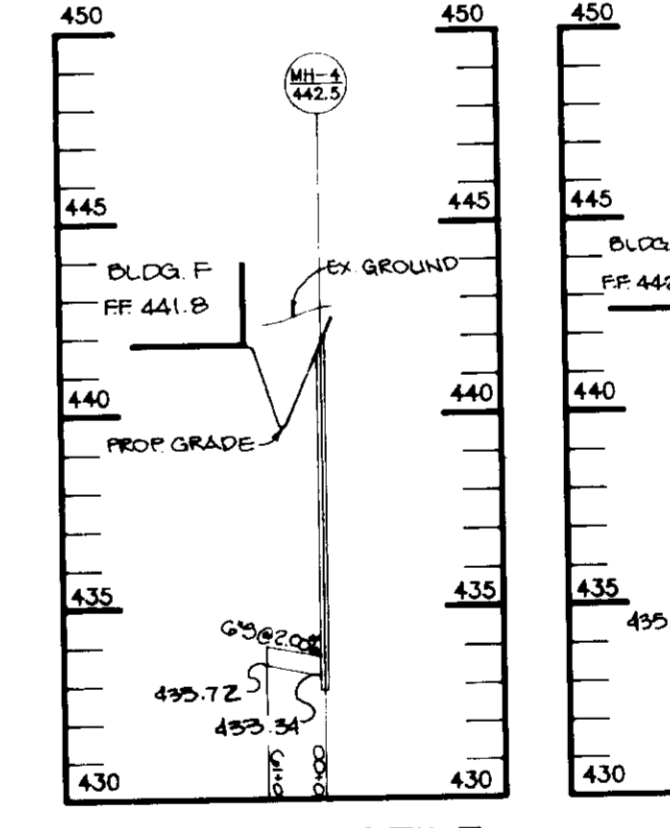
NOTE: FOR CONTINUATION OF ALL UTILITIES TO EACH BUILDING  
SEE ARCHITECTURAL DRAWINGS



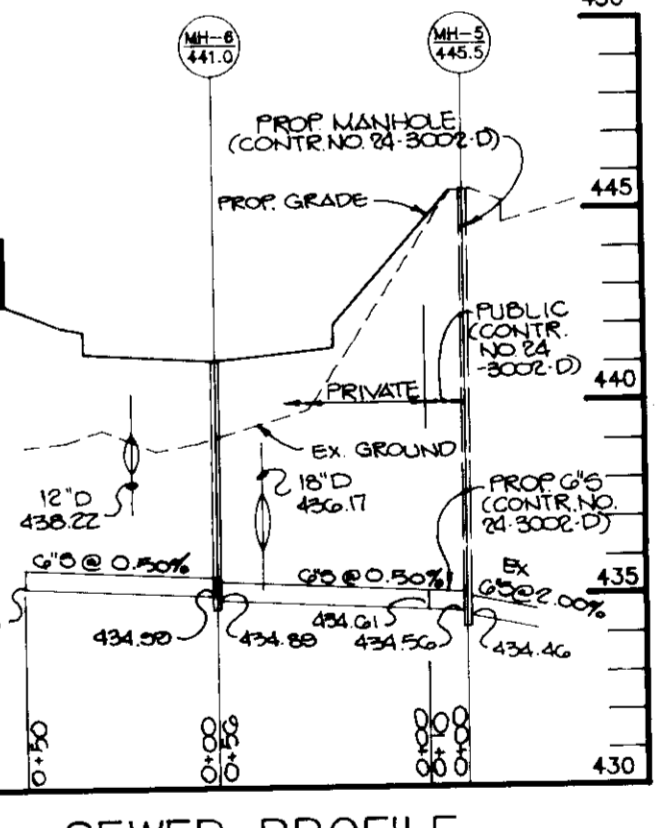
**SEWER PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



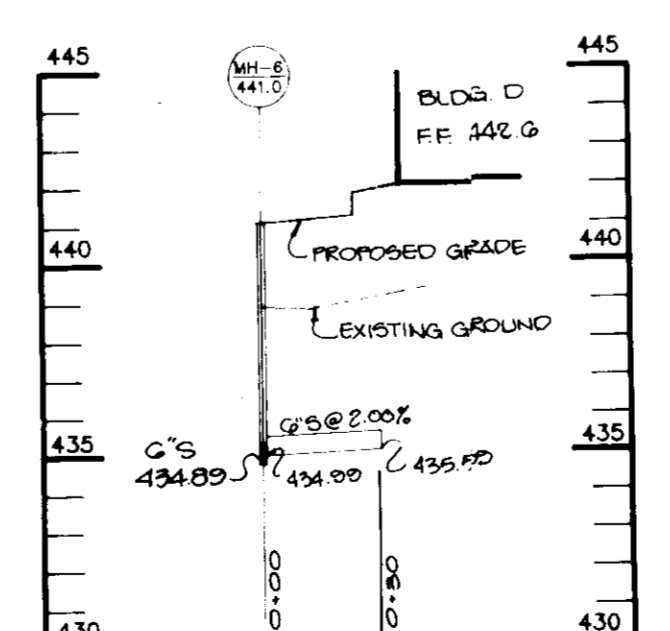
**SEWER PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



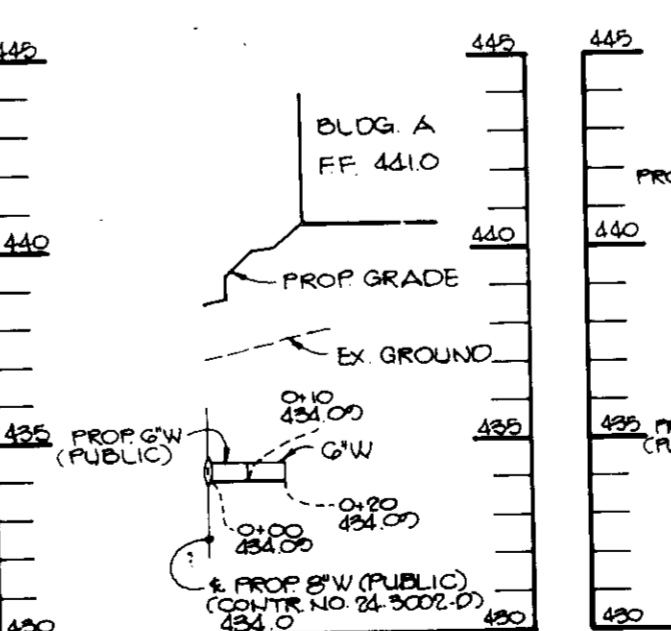
**SEWER PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



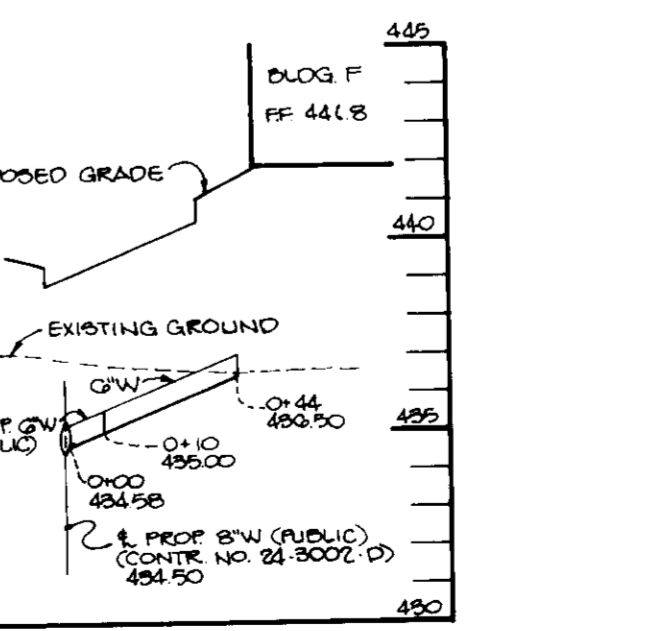
**SEWER PROFILE**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



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



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



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

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

*John Blyler* 2-15-90  
DIRECTOR

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

*William J. Taylor* 2-7-90  
DIRECTOR

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*James J. ...* 2/6/90  
DIRECTOR

*William J. Taylor* 2-7-90  
CHIEF, BUREAU OF ENGINEERING

DATE NO REVISION

OWNER/DEVELOPER  
COURTYARDS ASSOCIATES  
10820 LITTLE PATUXENT PARKWAY  
COLUMBIA, MARYLAND 21045

PROJECT: **COURTYARDS AT COLUMBIA 100**  
3 ONE STORY OFFICE/COMMERCIAL BUILDINGS

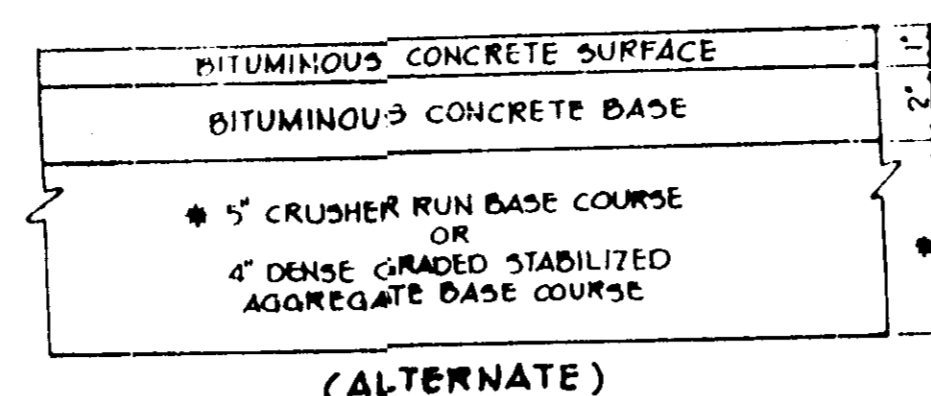
AREA TAX MAP 50 ZONED FOR PLAT NO. 8732  
COLUMBIA 100 OFFICE RESEARCH PARK SEC 1, AREA 2 PARCEL 141  
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: **STORM DRAIN, WATER AND SEWER PROFILES**

RIEMER MUEGGE & ASSOCIATES, INC.  
A Land Planning, Engineering and Consulting Firm  
3105 North Ridge Road Ellicott City, Maryland 21043  
301-461-2690 FAX: 301-750-3174

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE: 7-27-89

DATE: 1-23-90  
DESIGNED BY: W.C.W.  
DRAWN BY: C.A.D.  
PROJECT NO: 62001  
DATE: 9-20-89  
SCALE: AS SHOWN  
DRAWING NO. 4 OF 7



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

**P-1 PAVING**

- NO SCALE
1. ALL LIGHT FIXTURES TO BE SINGLE LUMINAIRE 400 WATT MERCURY TYPE WITH METAL POLES AND DIRECTED DOWNWARD.
  2. LOCATIONS OF LIGHT FIXTURES ARE ON THE PLAN AND ARE SHOWN THUS:
  3. LIGHTS TO BE MODULE X 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.

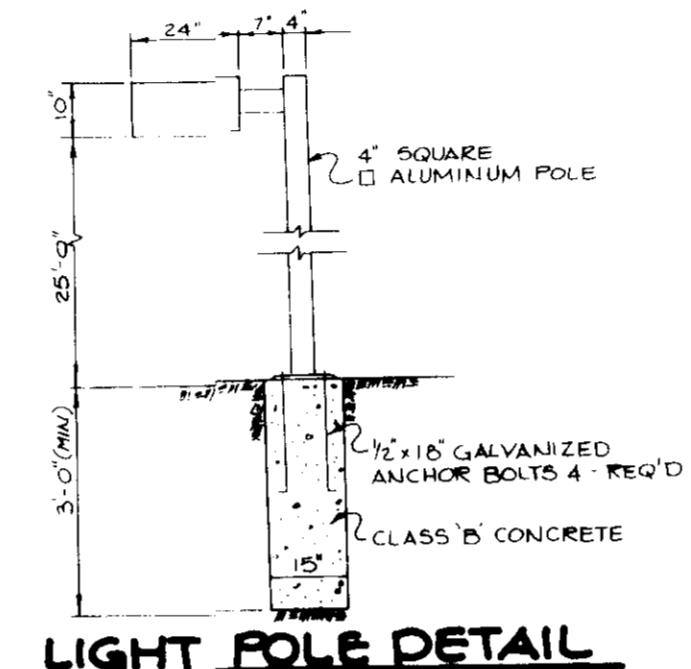


**HANDICAP SIGN DETAIL**

NO SCALE

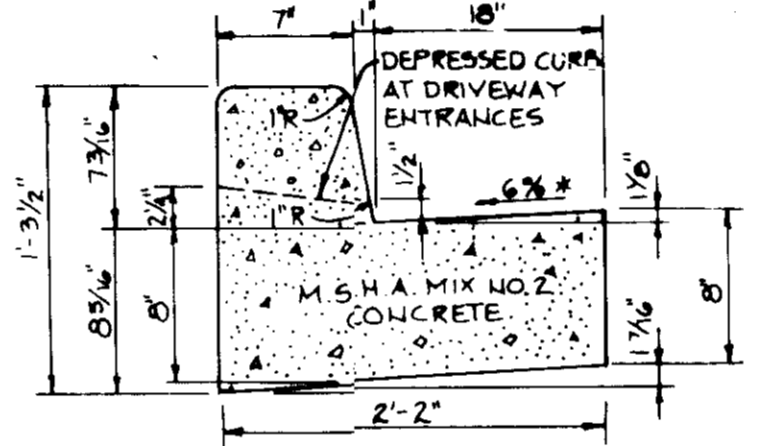
LEGEND AND BORDER - GREEN  
WHITE SYMBOLS ON BLUE BACKGROUND  
BACKGROUND - WHITE

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



**LIGHT POLE DETAIL**

NO SCALE

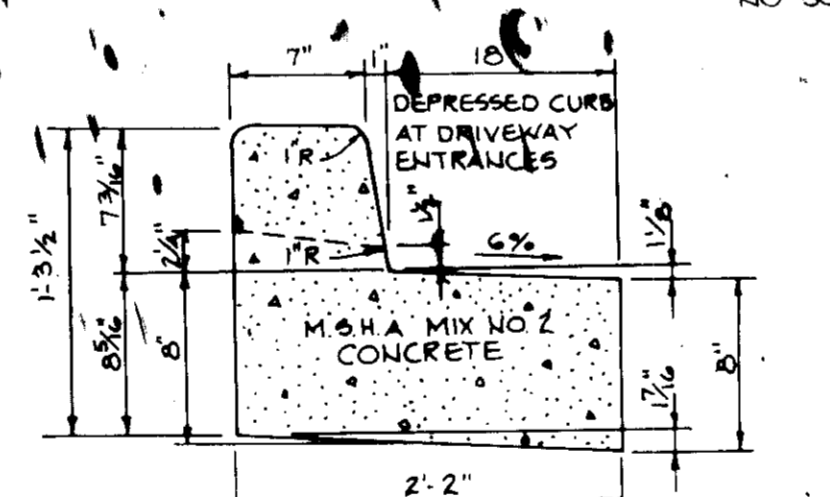


**STANDARD 7\"/>**

NO SCALE

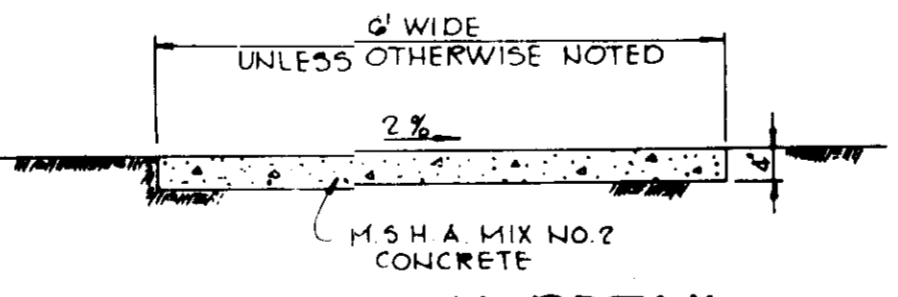
HOWARD COUNTY DESIGN MANUAL VOLUME III - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01)

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.



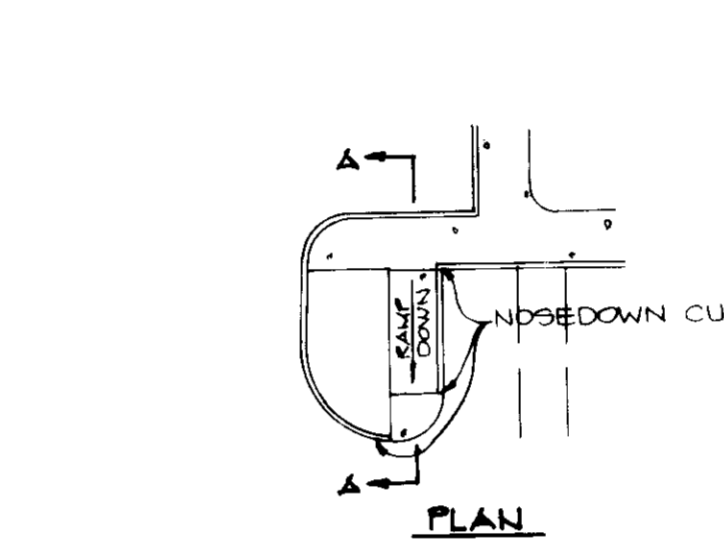
**REVERSE 7\"/>**

No Scale



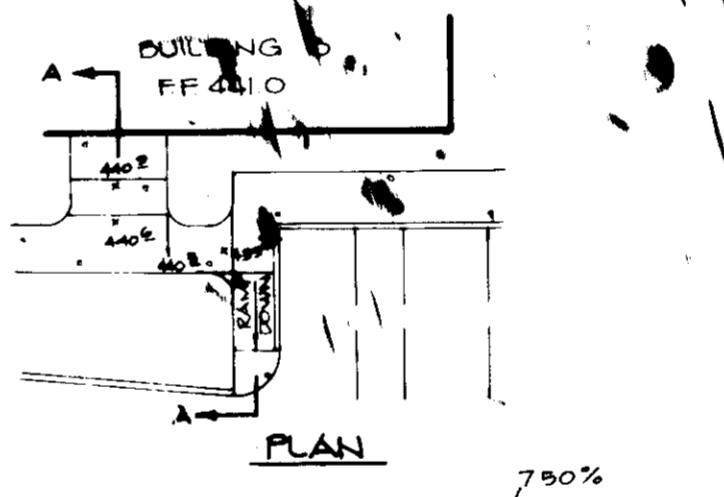
**SIDEWALK DETAIL**

No Scale



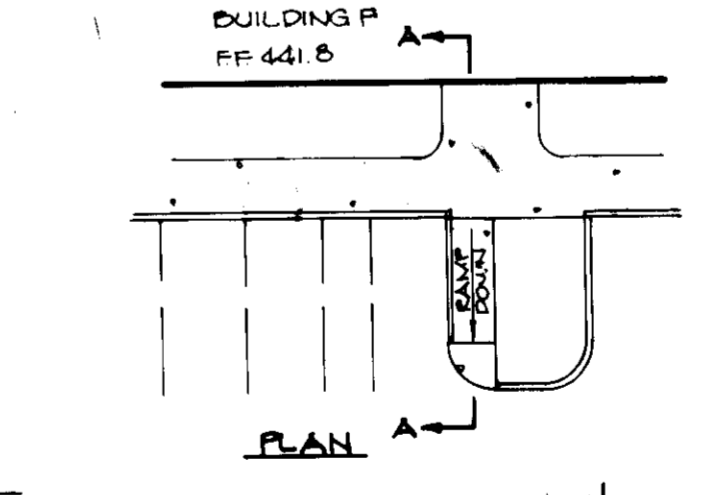
**HANDICAP RAMP #1**

NO SCALE



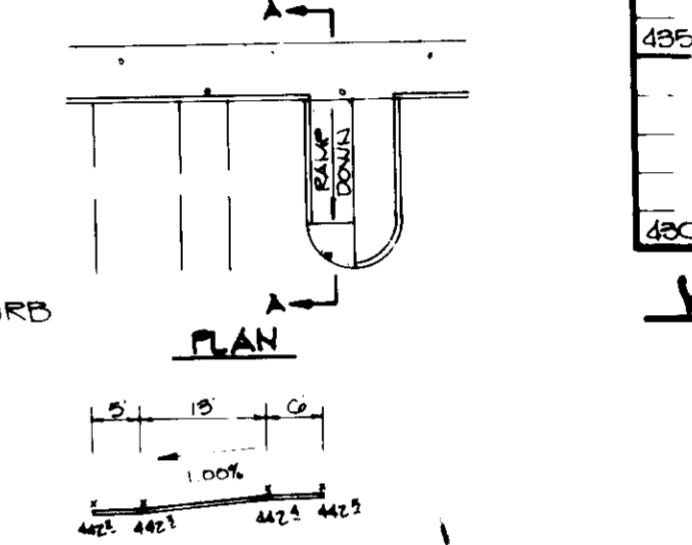
**HANDICAP RAMP #2**

NO SCALE



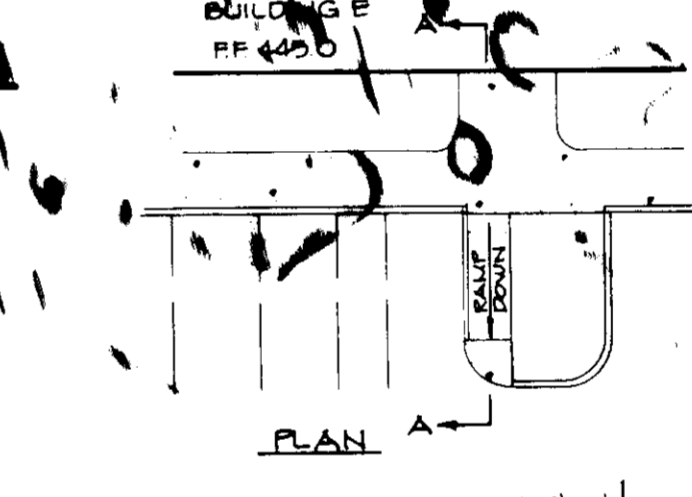
**HANDICAP RAMP #3**

NO SCALE



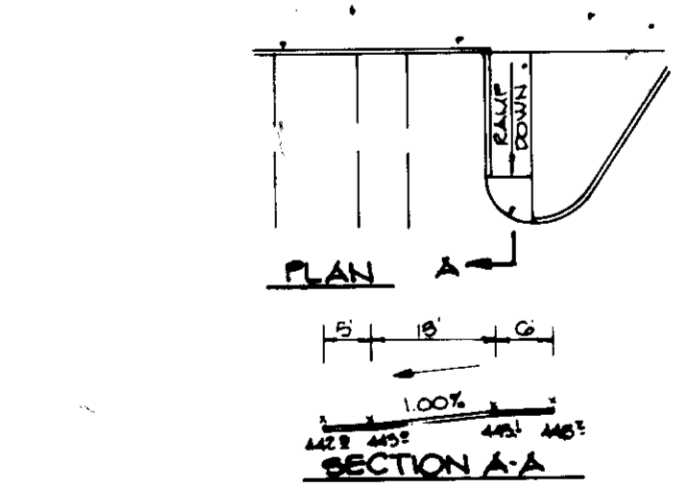
**HANDICAP RAMP #4**

NO SCALE



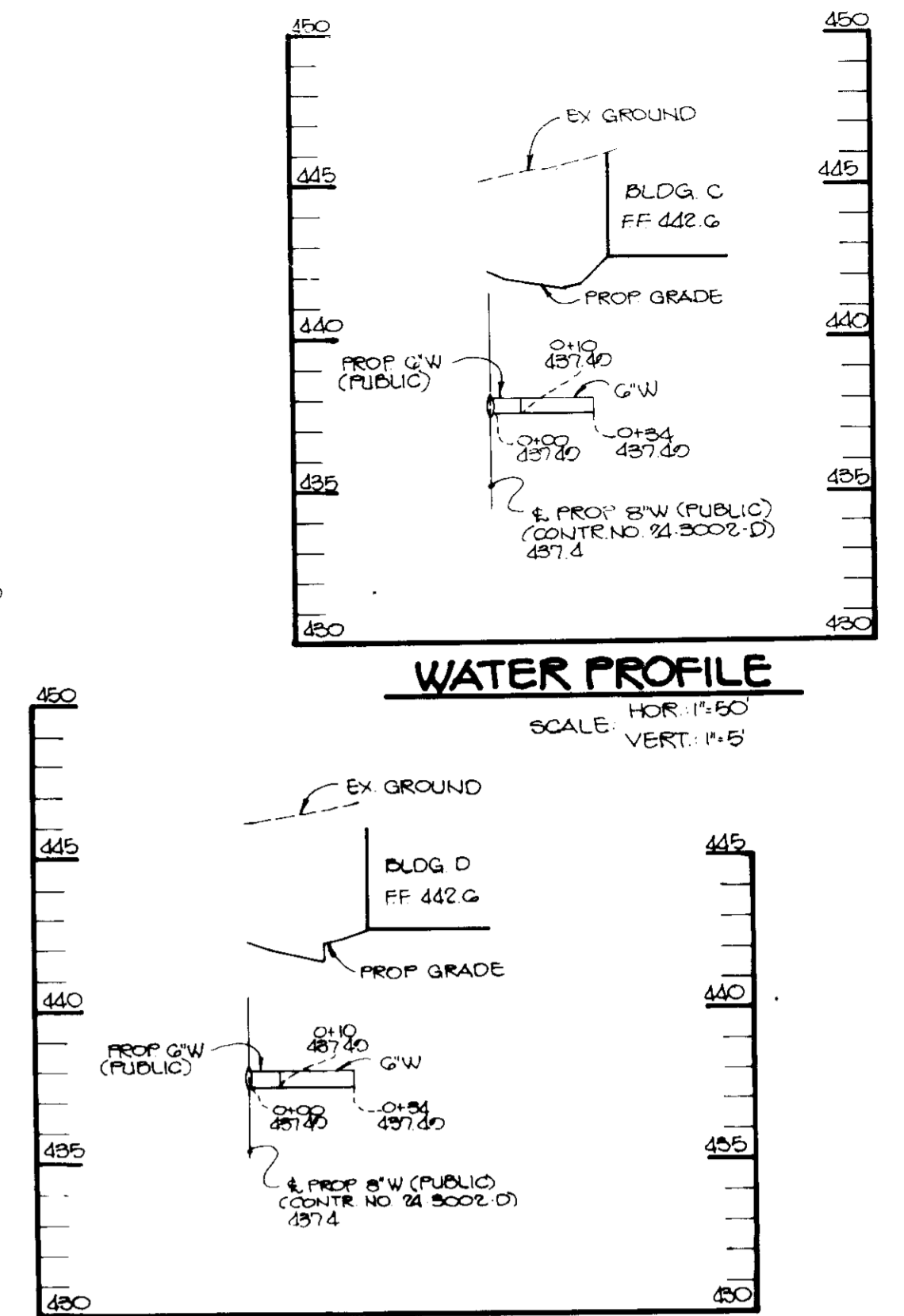
**HANDICAP RAMP #5**

NO SCALE



**HANDICAP RAMP #6**

NO SCALE



**WATER PROFILE**

SCALE: HOR 1\"/>

**WATER PROFILE**

SCALE: HOR 1\"/>

**OIL AND GRIT SEPARATOR DIMENSION CHART**

STRUCTURE	THROAT LENGTH	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	D	H	BOTTOM ELEV.	INVERT IN	INVERT OUT	INVERT OF ELBOW
S-1	N/A	11'8"	5'6"	4'0"	8'0"	11'	422.98	430.85	425.84	426.88
S-2	N/A	5'5"	4'7"	4'0"	8'0"	8'0"	431.70	435.73	435.68	432.20

NOTE: FOR WALL THICKNESS & WALL REINFORCEMENT SEE HO CO STD DETAILS W 52G, W 527 & W 52B

**WATER QUALITY STRUCTURES**

**DESIGN AND GENERAL NOTES:**

1. Use poured-in place concrete for the entire structure.
2. Refer to Maryland State Highway Administration for materials and methods of construction.
3. Wall thickness shall be as per Ho Co std details W 52G & W 527.
4. f'<sub>c</sub> = 4,000 psi at 28 days.
5. All reinforcing steel to be ASTM A615, GR-60.
6. For details concerning throat openings, refer to Howard County Standard Detail SD-4.01.
7. For details not noted in this standard, refer to Howard County Standard Detail W 52G, W 527 & W 52B.
8. The top 4 inches of walls may be brick masonry for leveling, if required. Brick masonry shall comply with the latest SHS specification.
9. When grate opening is used, refer to the appropriate SHS Standard for details. Details shall be shown on the plans.
10. When inside width of structure is greater than 4'-0", reinforcing shall be revised as needed.
11. When structure is subject to traffic loading, reinforcing shall be designed for the appropriate traffic loads. Design loads shall be indicated on the plan.
12. All inlets and incoming pipes shall be checked for possible backwater or tailwater problems.

**CONSTRUCTION NOTES:**

1. Silt and debris shall not be allowed to enter the structures until contributing drainage areas have been permanently stabilized.
  2. All openings to structures shall be protected with the appropriate sediment control measures during construction.
- INSPECTION NOTES:**
1. Prior to start of construction on water quality structures, the Howard County Department of Public Works Inspector must be called 48 hours in advance at 792-2630.
  2. The Howard County Department of Public Works Inspector must be notified (792-2630) at each of the following stages:
    - A. Approval of subgrade for footings.
    - B. Footing formed and steel set prior to pouring.
    - C. Structure sides formed and steel set prior to pouring.
    - D. Prior to top slab and manholes being set, Howard County Department of Public Works Inspector must check structure and all debris and silt in structure removed.
    - E. When site is permanently stabilized and sediment control measures to protect inlet are to be removed.

**MAINTENANCE NOTES (WATER QUALITY STRUCTURE WASTE)**

1. Water Quality Structures will require periodical cleaning. Owners of these facilities will have to clean them as needed or on a frequency that the County determines is appropriate. Owners of water quality structures will be notified by the County of the frequency of maintenance.
2. The disposal of the liquid and solid matter should be as follows:
  - A. All liquid material in the separator inlet shall be pumped into a suitable rain tank and disposed of at an approved sanitary district discharge manhole or be taken to an approved sewage treatment plant for discharge.
  - B. The solid material shall be landfilled in an approved sanitary landfill.
  - C. The inlet pipes, trash racks, grates, and structural parts shall be repaired as needed.

APPROVED FOR PUBLIC WATER SYSTEMS: *Joseph J. ...* 2-13-90

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING: *[Signature]* 3.7.90

APPROVED: CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: *[Signature]* 2/2/90

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC SWAMP: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS: *[Signature]* 2/8/90

APPROVED: CHIEF, BUREAU OF ENGINEERING: *[Signature]* 2.7.90

DATE	NO.	REVISION

OWNER/DEVELOPER: COURTYARDS ASSOCIATES, 10920 LITTLE PATUXENT PARKWAY, COLUMBIA, MARYLAND 21045

PROJECT: COURTYARDS AT COLUMBIA 100, ONE STORY OFFICE/COMMERCIAL BUILDING

AREA TAX MAP 80, ZONED FOR PLAT NO. 8732, COLUMBIA 100 OFFICE RESEARCH PARK SEC. 1, AREA 1 PARCEL MAP 87P ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: DETAIL SHEET

RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm, 3105 North Ridge Road, Ellicott City, Maryland 21043, 301-461-2690, FAX: 301-750-3176

APPROVED PLANNING BOARD OF HOWARD COUNTY, DATE: 7-27-89

DESIGNED BY: W.C.W., DRAWN BY: W.A.D., PROJECT NO: 02001, DATE: 6-20-89, SCALE: AS SHOWN, DRAWING NO: 5 OF 7

**STEPS**

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

**Seeded 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.).

**Seeding:** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel 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 1 1/2 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 feet 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.

**PERMANENT SEEDING NOTES**

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

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

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

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs./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 urea-form fertilizer (9 lbs./1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs./1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

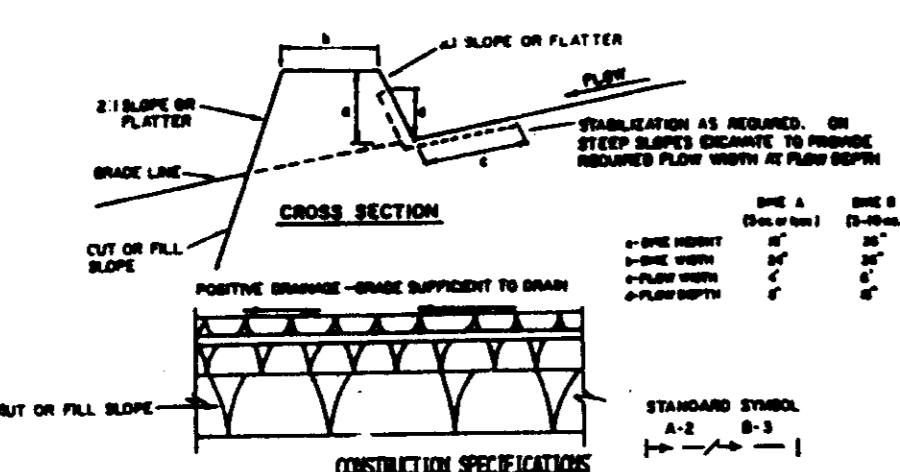
**Seeding:** For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs./1000 sq ft) of weeping lovegrass. 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 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well-anchored straw.

**Mulching:** Apply 1 1/2 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.

**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 (902-2427).
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 redistribution, 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	6.4	acres
Area to be roofed or paved	6.0	acres
Area to be vegetatively stabilized	0.4	acres
Total Cut	0.0	cu. yds.
Total Fill	0.0	cu. yds.

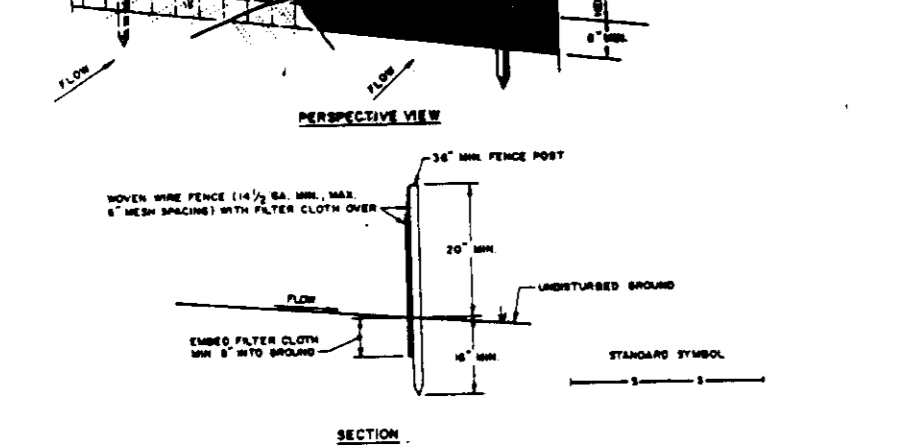
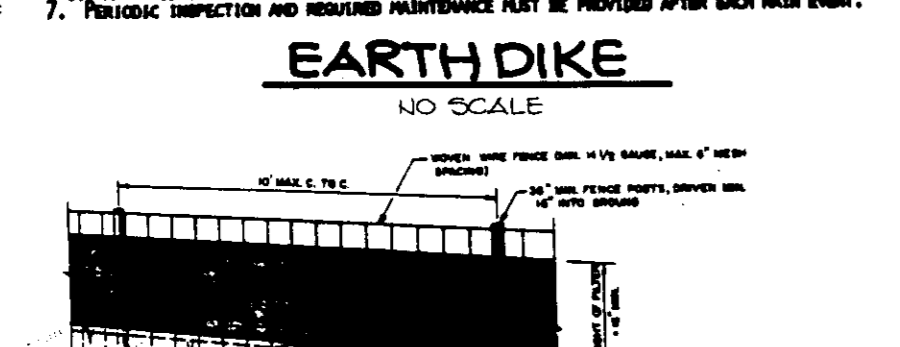


**CONSTRUCTION SPECIFICATIONS**

1. ALL DIKES SHALL BE CONSTRUCTED BY BENTONITE-POURED METHOD.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO THE OUTLET.
3. TOP SURFACE SHALL BE WEED AND SLICE SLOPES MAY BE PLATTER IF DESIRED TO FACILITATE PLANTING.
4. FIELD LOCATION SHOULD BE MAINTAINED AS NEARLY AS POSSIBLE TO THE ORIGINAL GRADE. STAKES SHALL BE CONSIDERED TO A SUFFICIENT TRAPPING DEVICE SUCH AS A BENTONITE TRAP OR SEDIMENT TRAP.
5. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.
6. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.

**FLOW CHANNEL STABILIZATION**

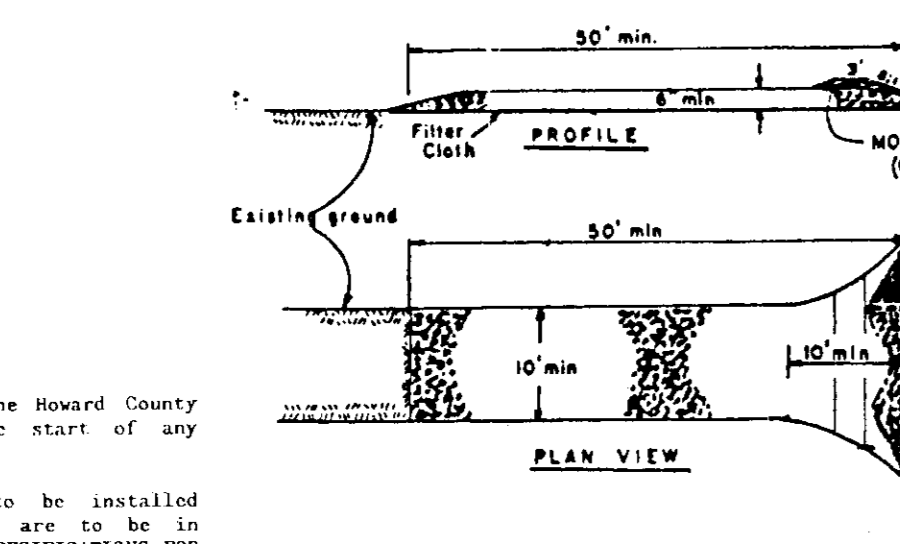
TYPE OF CHANNEL	CHANNEL SIZE	LINE A	LINE B
1	5-3.0X	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0X	SEED AND STRAW MULCH	SEED USING GUTTER, OR LOCATED IN SOIL
3	5.1-8.0X	SEED WITH MULCH, OR SOIL	LINE A - 4" STONE
4	8.1-20X	LINED RIP-RAP 4"	EMBANKMENT DESIGN



**CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**

1. WIRE MESH SHALL BE FASTENED SECURELY TO POSTS WITH WIRE TIES OR STAPLES.
2. FILTER FABRIC SHALL BE FASTENED SECURELY TO WIRE MESH WITH WIRE TIES OR STAPLES.
3. MULCH SHALL BE APPLIED TO THE TOP OF THE SILT FENCE.
4. MAINTENANCE SHALL BE PROVIDED AS NECESSARY TO KEEP THE SILT FENCE OPERATIONAL.

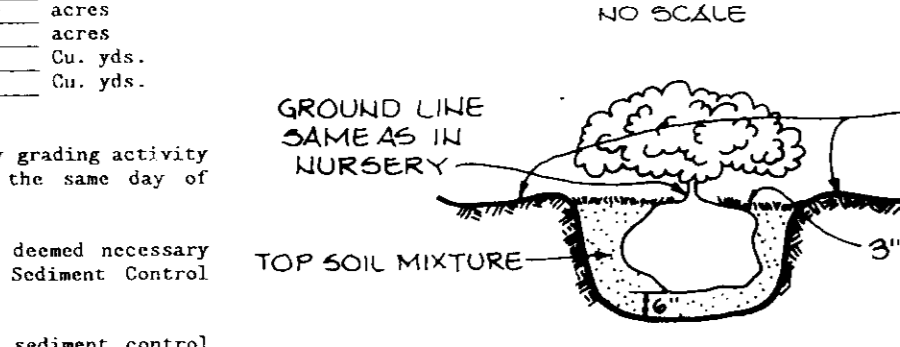
**SILT FENCE**



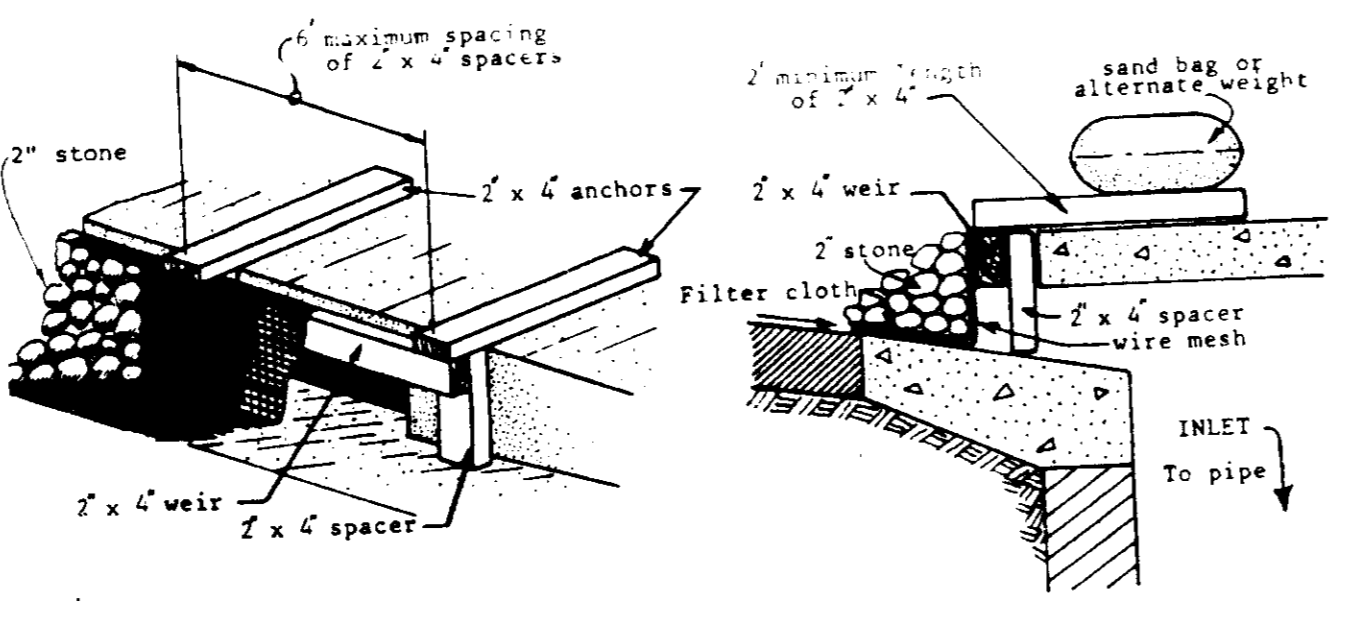
**CONSTRUCTION SPECIFICATIONS**

1. Stone Size - Use 2" stone, or recycled or reclaimed concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residential lot where a 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Two (2) 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 residential lot.
6. Surface Water - All surface water flowing or diverted toward construction entrance shall be piped across the entrance. If piping is impractical, a removable berm with 3:1 slope will be provided.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or element of any measure used to trap sediment. All sediment applied, dropped, washed or tracked onto public right-of-way must be removed immediately.
8. Washing - Trucks shall be cleaned to remove sediment prior to entrance onto public right-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**



**SHRUB PLANTING DETAIL**



**BEEHIVE INLET PROTECTION**

**CONSTRUCTION SPECIFICATIONS**

1. Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
4. Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass inlet by installing temporary storm flow asphalt dikes directing flow into inlet.

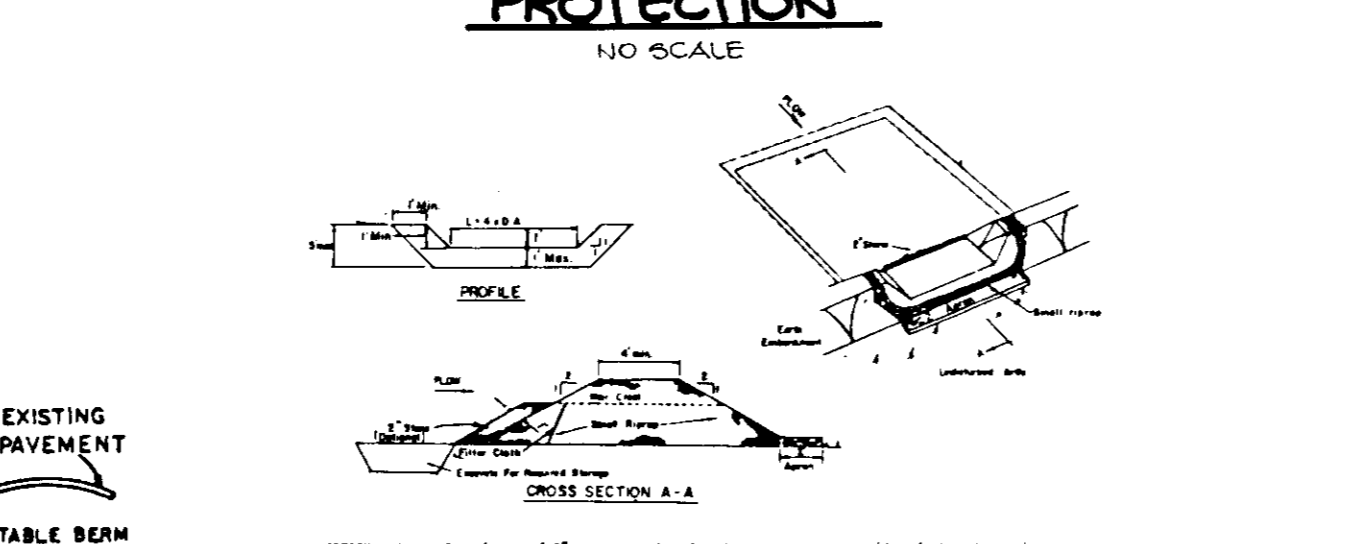
**Materials**

- A. Wooden frame is to be constructed of 2" x 4" construction grade lumber.
- B. Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inlets, with water fully impounded against it.
- C. Filter cloth must be of a type approved for this purpose resistant to sunlight with sieve size, 20#, 40-85#, to allow sufficient passage of water and removal of sediment.
- D. Stone is to be 2" in size and clean, since fines would clog the cloth.

**Curb Inlet Protection**

1. Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
4. Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass inlet by installing temporary storm flow asphalt dikes directing flow into inlet.

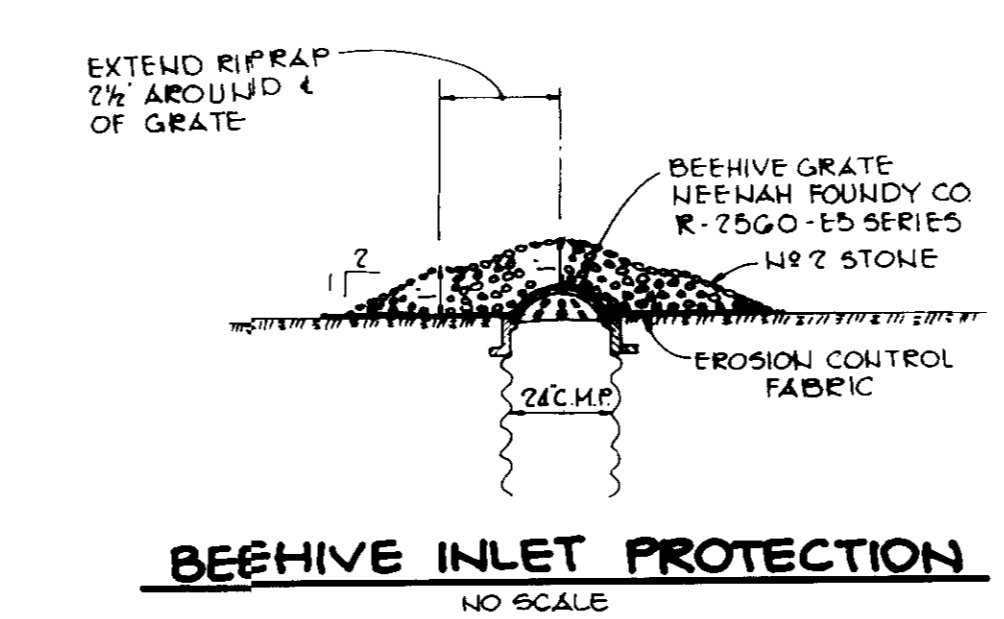
**STONE FILTER INLET PROTECTION**



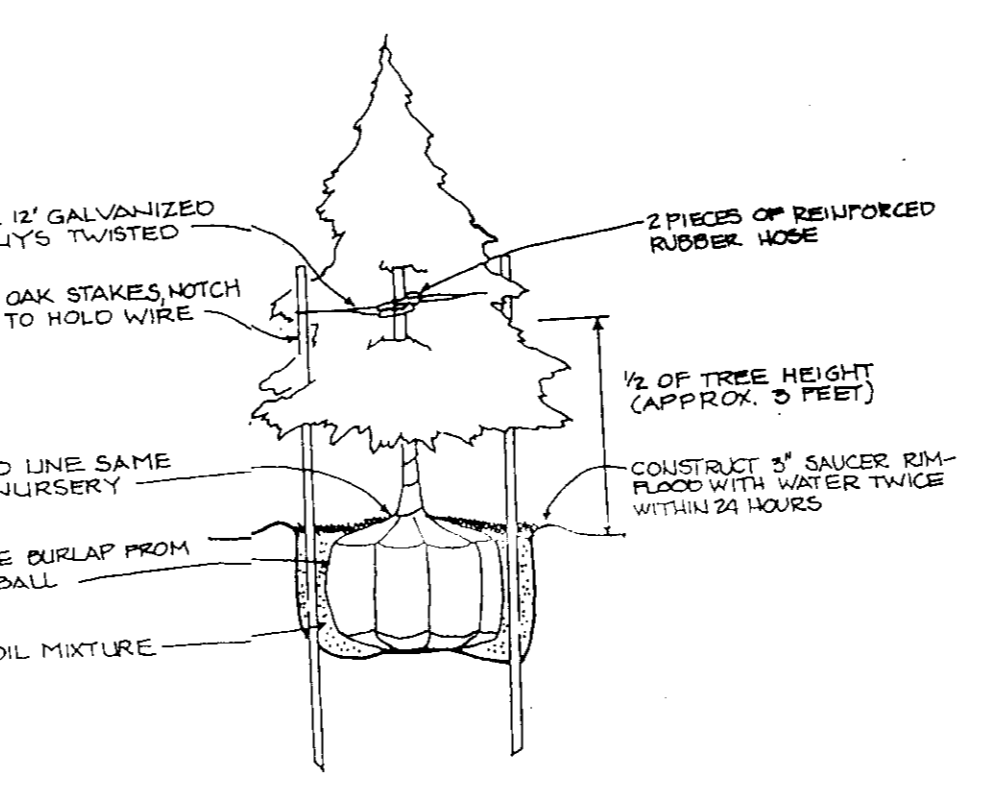
**CONSTRUCTION SPECIFICATIONS FOR ST-1**

1. Area under sediment shall be cleared, graded and stripped of any vegetation and rock soil. The soil area shall be cleared.
2. The fill material for the sediment shall be free of stone and other heavy vegetation as well as structural stone, brick, organic material or other objectionable material. The sediment shall be compacted by tamping with equipment such as a hand tamper.
3. All cut and fill slopes shall be 3:1 or flatter.
4. The stone used in the outlet shall be well-graded 3/4" to 1 1/2" diameter at 2" spacing placed on the upstream side on the small stone 2" maximum filter cloth in the center.
5. Sediment shall be removed and trap restored to its original condition when the sediment has accumulated to the design depth of the trap.
6. The structure shall be inspected after each rain and repairs made as needed.
7. Construction materials shall be recycled but in such a manner that erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

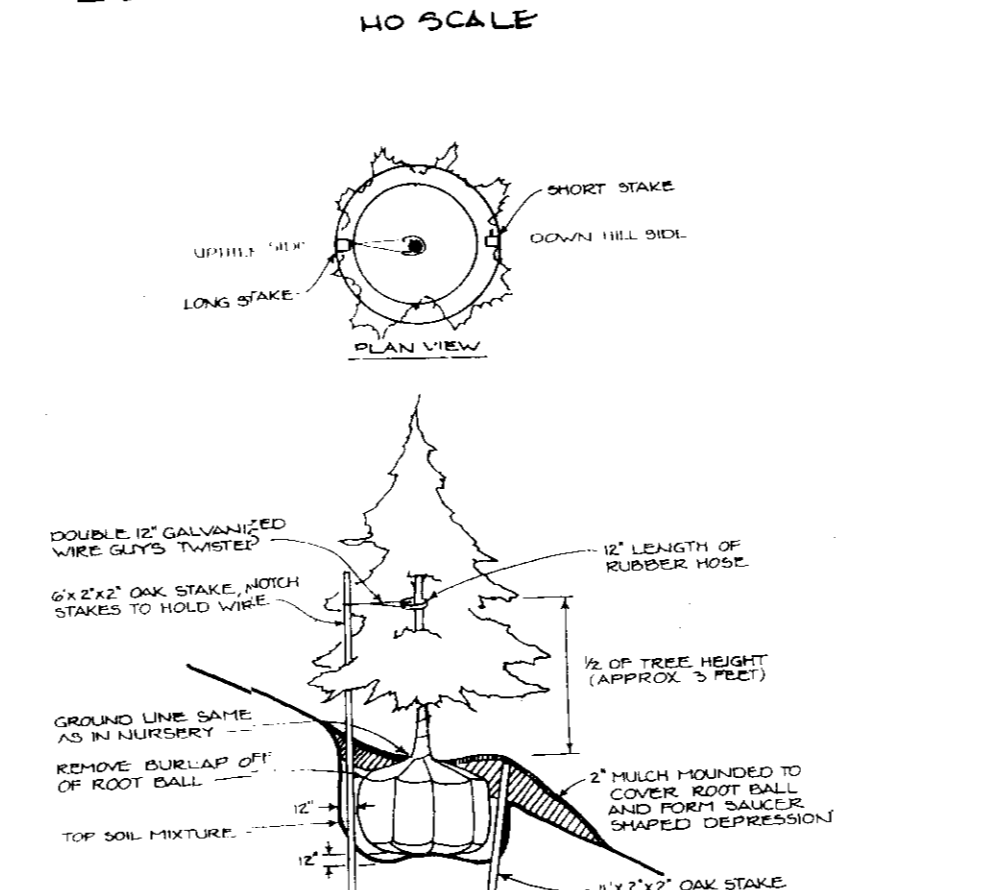
**STONE OUTLET SEDIMENT TRAP**



**BEEHIVE INLET PROTECTION**



**EVERGREEN PLANTING DETAIL**

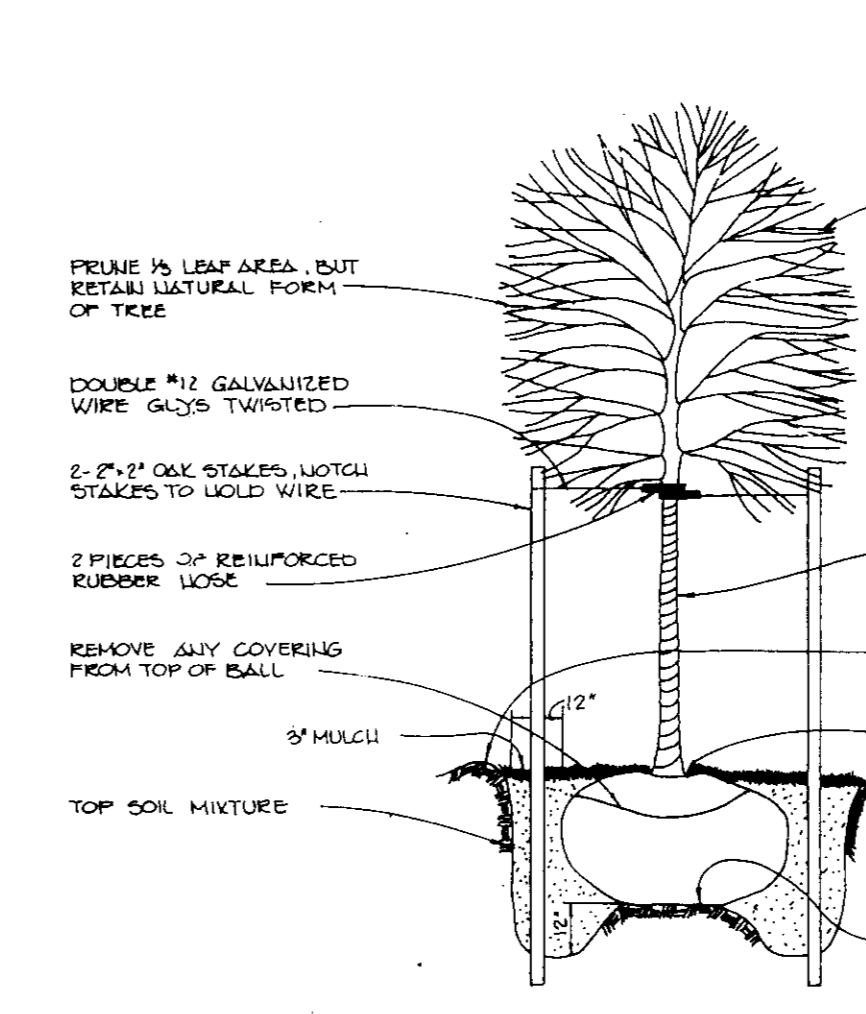


**PLANTING DETAIL FOR STEEP SLOPES**

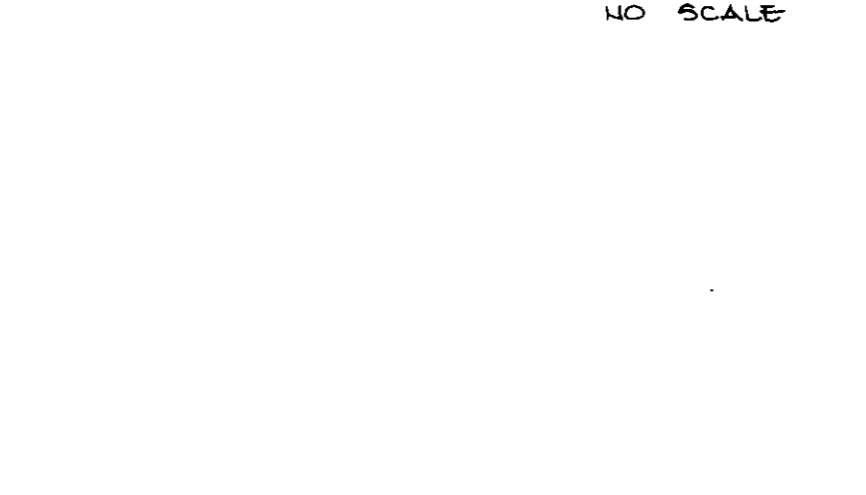


**STRUCTURE SCHEDULE**

NO.	TYPE	T.C. ELEV.	INV. IN	INV. OUT	REMARKS
1-1	"S" COMB	435.4	430.80	430.70	HO. CO. STD. DTL. SD-4 92
1-2	"S" COMB	435.6	431.55	431.56	HO. CO. STD. DTL. SD-4 92
1-3	"S" COMB	437.2	433.09	432.59	HO. CO. STD. DTL. SD-4 92
1-4	"S" COMB	439.6	434.85	434.55	HO. CO. STD. DTL. SD-4 92
1-5	"S" COMB	439.6	435.99(S)	435.49	HO. CO. STD. DTL. SD-4 92
1-6	"S" COMB	441.7	438.43	438.1	HO. CO. STD. DTL. SD-4 92
1-7	"S" COMB	440.3	435.96(W)	435.86	HO. CO. STD. DTL. SD-4 92
1-8	"S" COMB	440.3	436.21(S)	436.39	HO. CO. STD. DTL. SD-4 92
1-9	"S" COMB	440.3	436.64(W)	436.71	HO. CO. STD. DTL. SD-4 92
1-10	"S" COMB	440.6	437.00	437.00	HO. CO. STD. DTL. SD-4 92
1-11	"S" COMB	439.6	436.03	436.03	HO. CO. STD. DTL. SD-4 92
1-12	YARD INLET	439.2*	436.41	436.41	HO. CO. STD. DTL. SD-4 14
1-13	"S" COMB	440.6	435.93	435.83	HO. CO. STD. DTL. SD-4 92
1-14	A-5	441.9	436.43	436.33	HO. CO. STD. DTL. SD-4 01
1-15	A-5	441.5	437.34	437.24	HO. CO. STD. DTL. SD-4 01
1-16	"S" COMB	441.8	437.74	437.64	HO. CO. STD. DTL. SD-4 92
1-17	"S" COMB	442.1	438.05	438.05	HO. CO. STD. DTL. SD-4 92
M-1	STD. 4" MANHOLE	440.8*	438.14	437.81	HO. CO. STD. DTL. G-5 01
M-2	STD. 4" MANHOLE	442.5*	438.81	438.71	HO. CO. STD. DTL. G-5 01
M-3	STD. 4" MANHOLE	442.4*	438.85	438.35	HO. CO. STD. DTL. G-5 01
S-1	WATER QUALITY STRUCTURE				SEE DETAIL SHEET NO. 5 OF THIS PLAN
S-2	WATER QUALITY STRUCTURE				SEE DETAIL SHEET NO. 5 OF THIS PLAN



**TREE PLANTING DETAIL**



BY THE DEVELOPER:

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

*James M. Helms* 1/23/90  
DEVELOPER DATE

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

*Arthur E. Muegge* 1/23/90  
ENGINEER DATE

REVIEWED FOR HOWARD NAME S.C.D.  
AND MEETS TECHNICAL REQUIREMENTS

*James M. Helms* 2/2/90  
SOIL CONSERVATION SERVICE DATE

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

*John R. Rhenton* 2/2/90  
HOWARD S.C.D. DATE

*Jorge Zylka* 2-15-90  
DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING.

*Arthur E. Muegge* 3-7-90  
DIRECTOR DATE

*Joseph S. DeAngelis* 2/2/90  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*James M. Helms* 2-18-90  
DIRECTOR DATE

*Arthur E. Muegge* 2-7-90  
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER/DEVELOPER

COURTYARDS ASSOCIATES  
10320 LITTLE PATUXENT PARKWAY  
COLUMBIA, MARYLAND 21045

PROJECT: **COURTYARDS AT COLUMBIA 100**  
ONE STORY OFFICE/COMMERCIAL BUILDINGS

AREA: TAX MAP 30 ZONED FOR PLAT NO. 8737  
COLUMBIA 100 OFFICE RESEARCH PARK SEC. 1, AREA C PARCEL M.U. 1  
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: **DETAIL SHEET**

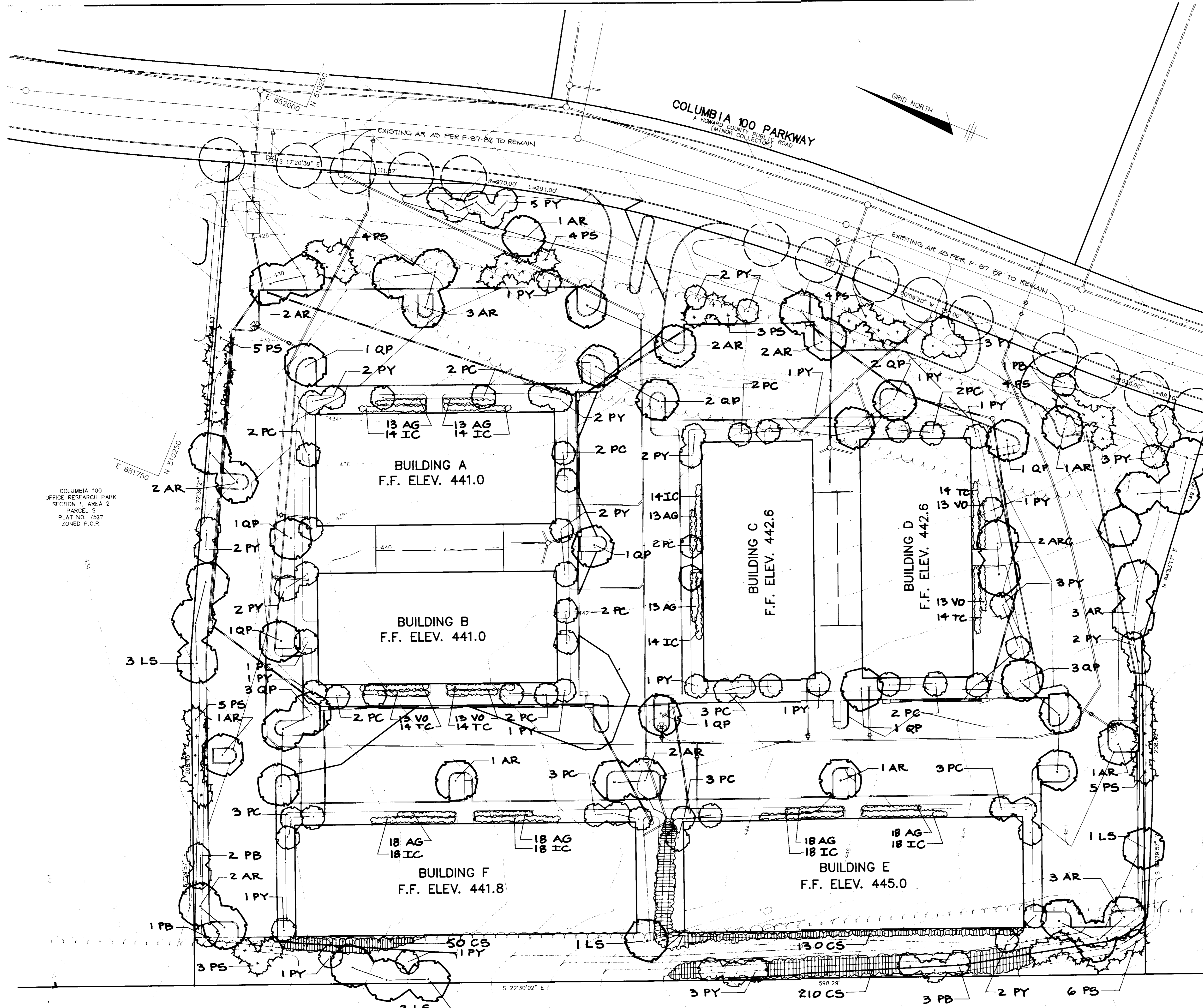
RIEMER MUEGGE & ASSOCIATES, INC.  
A Land Planning, Engineering and Consulting Firm  
3105 North Ridge Road Ellicott City, Maryland 21043  
301-461-2690 FAX: 301-750-3176

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE: **9-27-89**

DESIGNED BY: W.C.W.  
DRAWN BY: M.A.O.  
PROJECT NO: 62001  
DATE: 6-20-88  
SCALE: AS SHOWN  
DRAWING NO: 6 OF 11

SDP-89-270

QTY	KEY	NAME	SIZE	REMARKS
124	AG	Azalea spp. 'Gumpo'	3 gal.	2' O.C.
		White Gumpo Azalea	15-18"	
27	AR	Acer rubrum 'October Glory'	2 1/2-3" cal	Full head
		October Glory Red Maple	12-14"	B&B
2	ARC	Acer rubrum 'Armstrong'	2 1/2-3" cal	Full head
		Armstrong Red Maple	12-14"	B&B
390	CS	Cotoneaster salicifolia 'Bepandens'	18-24" spread	4' O.C.
		Willowleaf Cotoneaster		
128	IC	Ilex crenata 'Compacta'	24-30" spread	3' O.C.
		Compact Japanese Holly		
11	LS	Liquidambar styraciflua Sweetgum	2 1/2-3" cal	Full head
			12-14"	B&B
10	PB	Pyrus calleryana 'Bradford'	2-2 1/2" cal	B&B
		Bradford Pear	8-10"	
34	PC	Pyrus calleryana 'Aristocrat'	2-2 1/2" cal	B&B
		Aristocrat Pear	8-10"	
43	PS	Pinus strobus White Pine	2-2 1/2" cal	Natural
			6-8"	B&B
50	PY	Prunus yedoensis Yoshino Cherry	2-2 1/2" cal	B&B
			8-10"	
19	QP	Quercus palustris Pin Oak	2-2 1/2" cal	B&B
			12-14"	
56	TC	Taxus x media 'Densiformis'	24-30" spread	3' O.C.
		Dense Yew		B&B
52	VO	Viburnum opulus 'Nana'	3 gal	2' O.C.
		Dwarf Cranberry Viburnum	15-18"	



COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2 PARCEL 5 PLAT NO. 7527 ZONED P.O.R.

COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2 PARCEL 1 PLAT NO. 7525 ZONED P.O.R.

OAKLAND RIDGE INDUSTRIAL PARK SECTION 2 P.B. 15, F.9 ZONED NT

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

*[Signature]* 2-13-90  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING.

*[Signature]* 3-7-90  
DIRECTOR DATE

*[Signature]* 4/2/90  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*[Signature]* 2-8-90  
DIRECTOR DATE

*[Signature]* 2-7-90  
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO	REVISION

OWNER/DEVELOPER  
COURTYARDS ASSOCIATES  
10920 LITTLE PATUXENT PARKWAY  
COLUMBIA, MARYLAND 21045

PROJECT  
**COURTYARDS AT COLUMBIA 100**  
ONE STORY OFFICE/COMMERCIAL BUILDINGS

AREA TAX MAP 50 ZONED P.O.R. PLAT NO. 8732  
COLUMBIA 100 OFFICE RESEARCH PARK SEC. 1, AREA 2 PARCEL 1  
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE  
**LANDSCAPE PLAN**

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE 7-27-89  
*[Signature]*

RIEMER MUEGGE & ASSOCIATES, INC.  
A Land Planning, Engineering and Consulting Firm  
3105 North Ridge Road Ellicott City, Maryland 21041  
301-461-2690 FAX: 301-750-3176

DESIGNED BY Z.L.K.  
DRAWN BY Z.L.K.  
PROJECT NO G-2001  
DATE 6-20-89  
SCALE 1" = 30'  
DRAWING NO 7 OF

*[Signature]*  
MELANIE MOGER '85