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 10/25/82

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

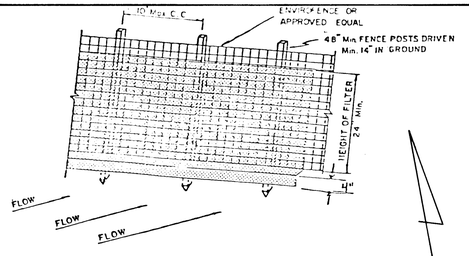
HOWARD SOIL CONSERVATION DISTRICT — DATE 10/21/82

APPROVED:
DEPARTMENT OF PUBLIC WORKS

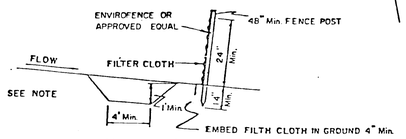
CHIEF, BUREAU OF ENGINEERING — DATE 3/4/83

APPROVED:
OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 3-7-83



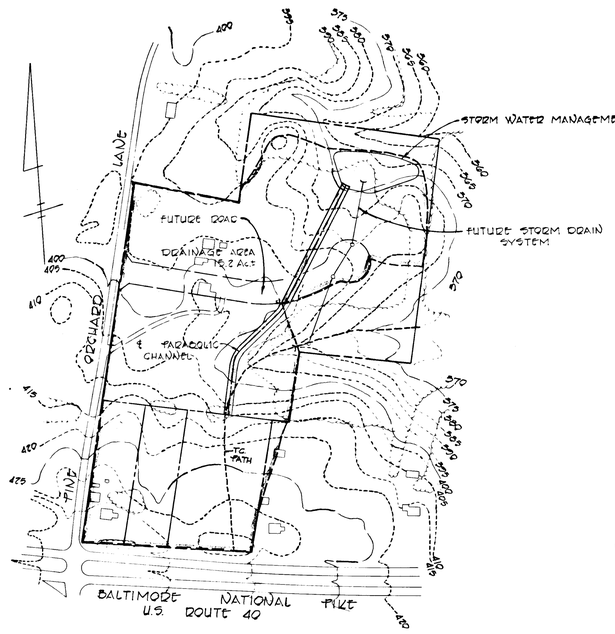
PERSPECTIVE VIEW



SECTION

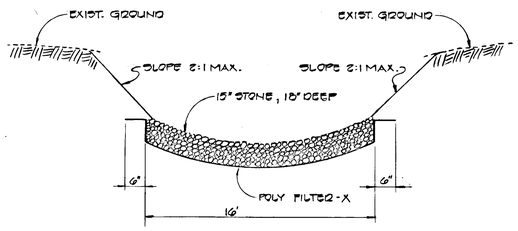
SILT FENCE DETAIL

NOT TO SCALE



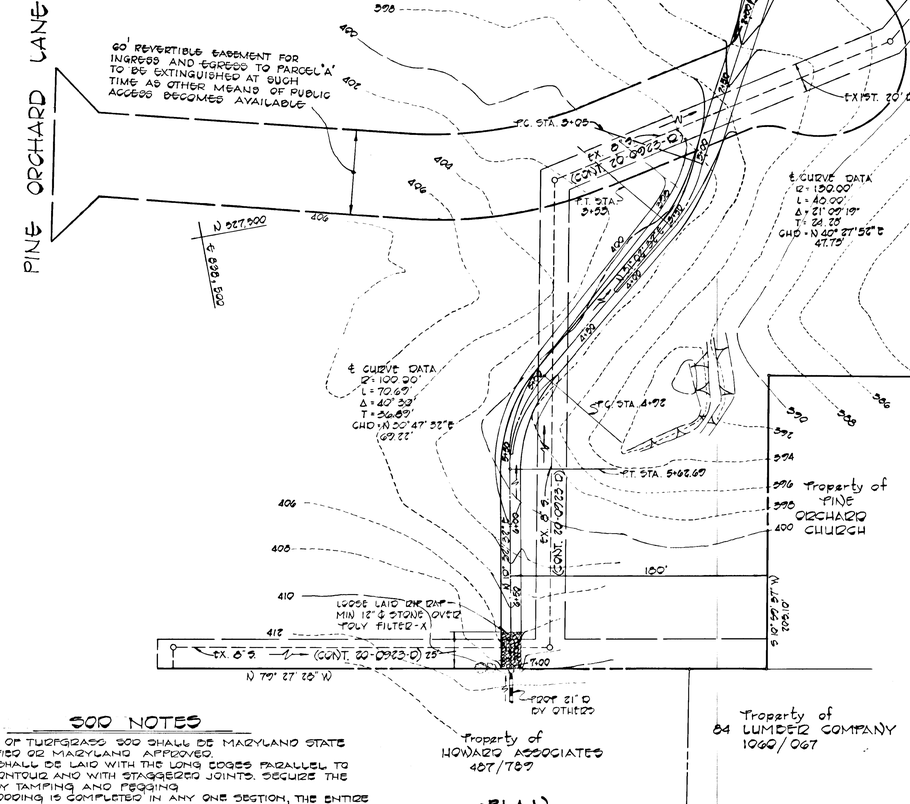
DRAINAGE AREA MAP

SCALE : 1" = 200'



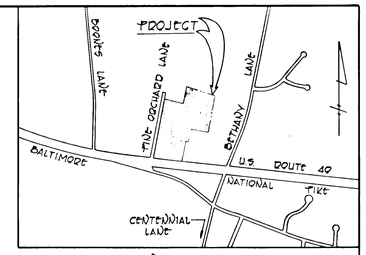
RIP RAP APRON DETAIL

NO SCALE



PLAN

SCALE : 1" = 50'



VICINITY MAP

SCALE : 1" = 1,200'

Property of C. E. MANN 256/401

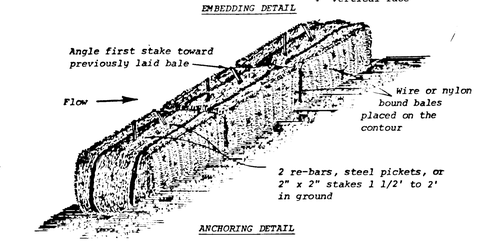
SEDIMENT CONTROL NOTES

1. Specifications for the Sediment Control Details shown hereon are included in the U.S.D.A. Soil Conservation Service "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas".
2. The developer shall notify the Howard County Office of Inspection and Permits at least 24 hours prior to beginning any construction shown hereon (992-2433).
3. Sediment control structures to be constructed prior to any on-site grading or disturbance to any existing surface material, and are to be stabilized as soon as constructed.
4. All sediment control structures to remain in place until permission for their removal has been obtained from the Howard County Office of Inspection and Permits (992-2433).
5. All graded areas not to be sodded shall be stabilized by seeding and mulching in accordance with the following:
   1. Site Preparation
      A. Harrow or disc in areas proposed to be seeded the following materials
         1). Pulverized limestone at 2 tons/acre.
         2). Commercial fertilizer 10-10-10 at 3/4 tons/acre.
         3). Super phosphate at 600 lbs./acre.
   2. Seeding
      A. Sow the following seed mixture at the rate of 200 lbs./acre with a mechanical spreader:
         1). Temporary: Italian or Perennial Rye Grass
         2). Permanent: 40% Merion Blue Grass, 40% South Dakota Blue Grass and 20% Penn Lawn Creeping Fescue.
      B. The seeded area shall then be raked with a York Rake (a minimum of 2 passes) covered and compacted with Cultipacker or other approved method.
   3. Mulching
      A. Seeded areas shall be uniformly mulched immediately after seeding with unweathered small grain straw at the rate of 1-1/2 - 2 tons/acre.
      B. Tie mulch down with liquid asphalt at 0.1 gal./s.y. or emulsified asphalt at 0.04 gal./s.y. or mulch neeting.

CONSTRUCTION SEQUENCE

1) OBTAIN GRADING PERMIT.
2) INSTALL STRAW BALE DIKES AND/OR SILT FENCE. SEE DETAIL THIS SHEET.
3) CONSTRUCT STORM WATER MANAGEMENT POND AND STABILIZE USING TEMPORARY SEEDING.
4) THE ORIFICE AT THE 15" C.A.P. SHALL BE BLOCKED IN ACCORDANCE WITH THE DETAIL ON SHEET 2. THE ORIFICE SHALL REMAIN BLOCKED UNTIL SUCH TIME WHEN THE SEDIMENT BASIN TRANSITIONS TO FUNCTION AS A STORM WATER MANAGEMENT POND.
5) CONSTRUCT PARABOLIC CHANNEL AND APRONS, STABILIZE WITH PERMANENT SEEDING.
6) DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE CLEANOUT ELEVATION 364.75 HAS BEEN REACHED.
7) AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON.
8) THE SEDIMENT BASIN SHALL REMAIN IN PLACE UNTIL THE UPSTREAM AREA HAS BEEN STABILIZED.
9) THE SEDIMENT BASIN SHALL BE DEWATERED BY PUMPING.
10) THE SEDIMENT FROM THE BASIN SHALL BE SPREAD UPSTREAM OF THE POND AND STABILIZED WITH PERMANENT SEEDING.
11) THE STORM WATER MANAGEMENT POND SHALL BE GRADED IN ACCORDANCE WITH THIS SHEET AND STABILIZED WITH PERMANENT SEEDING.

AS CONSTRUCTED MEETS SCS STANDARDS AND SPECIFICATIONS



SOD NOTES

1) CLASS OF TURFGRASS SOD SHALL BE MARYLAND STATE CERTIFIED OR MARYLAND APPROVED.
2) SOD SHALL BE LAID WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERED JOINTS. SECURE THE SOD BY TAMPING AND PEGGING.
3) AS SODDING IS COMPLETED IN ANY ONE SECTION, THE ENTIRE AREA SHALL BE ROLLED OR TAMPED TO INSURE SOLID CONTACT OF ROOTS WITH THE SOIL SURFACE.

OWNER AND DEVELOPER

ROUTE 40 MANAGEMENT
LOUIS J. NICHOLAS
GEORGE STIEGEL
MANAGING PARTNERS
℅ DWETT REALTY
10194 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043

THIS IS TO CERTIFY THAT THIS AS-BUILT IS ACCURATE AND THAT THE POND AS CONSTRUCTED MEETS THE REQUIREMENTS OF THAT STANDARDS AND SPECIFICATIONS FOR PONDS.

CHARLES J. CROOD, JR. — DATE MAY 4, 1983

EARL COLLINS — DATE 8/10/82

#921

FISHER, COLLINS AND CARTER
CONSULTING ENGINEERS AND LAND SURVEYORS
8388 COURT AVENUE
ELLICOTT CITY, MARYLAND 21043
301-461-2855

STORM WATER MANAGEMENT POND
PINE ORCHARD PARK

2ND ELECTION DISTRICT — HOWARD COUNTY, MARYLAND
MARCH 15, 1982 — SCALE : AS SHOWN
SHEET 1 OF 2

AS-BUILT MAY 4, 1983

F 83-65

STORM WATER MANAGEMENT POND CERTIFICATION AND APPROVAL

DEVELOPER'S CERTIFICATE

"I HEREBY 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."

SIGNATURE OF DEVELOPER _____ DATE _____

ENGINEER'S CERTIFICATE

"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."

SIGNATURE OF ENGINEER 8/19/82 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.C. SOIL CONSERVATION SERVICE 10/25/82 DATE

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

HOWARD SOIL CONSERVATION DISTRICT 10/21/82 DATE

APPROVED:
DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING 3.4.83 DATE

APPROVED:
OFFICE OF PLANNING AND ZONING

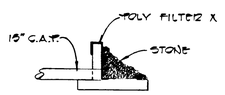
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION 3-7-83 DATE

S.W.M. POND SPECIFICATIONS

I. SITE PREPARATION
Areas under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. To facilitate clean out and restoration, it is recommended that the permanent pool area be cleared of all brush and trees.

II. EARTH FILL
Material
The fill material shall be taken from approved designated borrow area or areas. It shall be free from roots, stumps, wood, rubbish, oversize stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least 5 percent above the design elevation (including freeboard) unless otherwise 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
95% of Standard Proctor by A.S.T.M. 698
Core Trench
Where specified, a core 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 core trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

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.



BLOCKING DETAIL FOR 15" C.A.P.

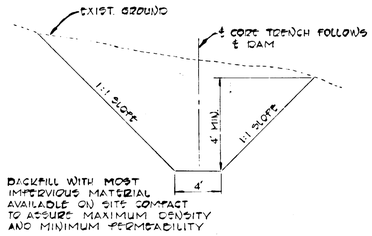
IV. PIPE CONDUITS
A. CORRUGATED METAL PIPE
1. Materials - Aluminum Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211, with watertight coupling bands.
2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the control structure shall be mortared all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.
5. Backfilling shall conform to structural backfill as shown above.
6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

V. CONCRETE
Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications for Materials, Highways, Bridges, and Incidental Structures, Article 20.07 (Portland Cement Concrete Mixtures), Mix No. 3.

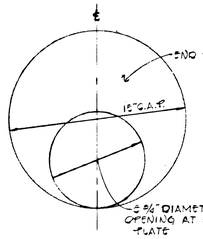
VI. STABILIZATION
All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by seeding and applying straw mulch in accordance with Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas immediately after finish grading.

All exposed areas of the embankment and pond shall be stabilized by:

a. Spreading 4" topsoil
b. Working in 1 ton of ground limestone and 1,000 pounds of 10-10-10 fertilizer per acre.
c. Seed with 40 lbs./acre of "Kentucky 31" tall fescue, and 15 lbs./acre of Crownvetch inoculated.
d. Mulch with 1-1/2 tons straw per acre.
e. Tie down mulch with emulsified asphalt @ 348 gallons/acre.



CORE TRENCH DETAIL
NO SCALE



ORIFICE DETAIL
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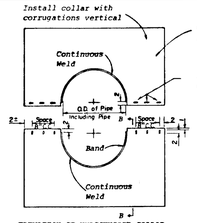
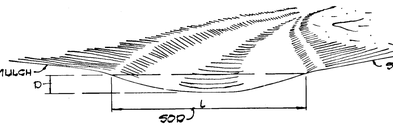


NOTES FOR COLLARS:
1. All materials to be in accordance with construction and construction material specifications.
2. When specified on the plans, coating of collars shall be in accordance with construction and construction material specifications.
3. Unassembled collars shall be marked by painting or ragging 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.

DETAILS OF CORRUGATED METAL ANTI-SEEP COLLAR

ASSEMBLED COLLARS TO BE 7'-6" SQUARE

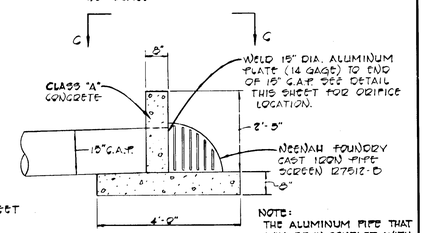
NOTE: FOR CONSTRUCTION DETAIL AND SPECIFICATIONS SEE STANDARD DRAWING SW-1, U.S DEPARTMENT OF AGRICULTURE STANDARDS AND SPECIFICATIONS FOR SOIL AND SEDIMENT CONTROL.



PARABOLIC CHANNEL DESIGN DATA

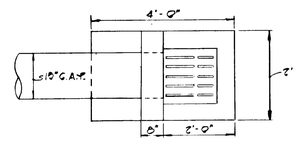
STATION	SLOPE	L	D	V
2+30 TO 3+87	1.20 %	14'	1.5	5.5 fps
0+00 TO 2+30	8.00%	16'	0.7	4.8 fps
3+87 TO 6+76	6.00 %	15.75'	0.7	4.5 fps

PARABOLIC CHANNEL DETAIL
NO SCALE



SECTION A-A
NO SCALE

NOTE:
THE ALUMINUM PIPE THAT WILL BE IN CONTACT WITH THE CONCRETE BASE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER.



SECTION C-C
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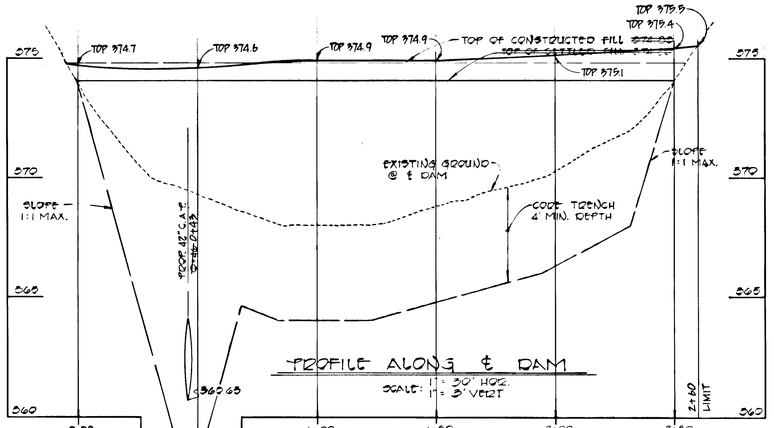

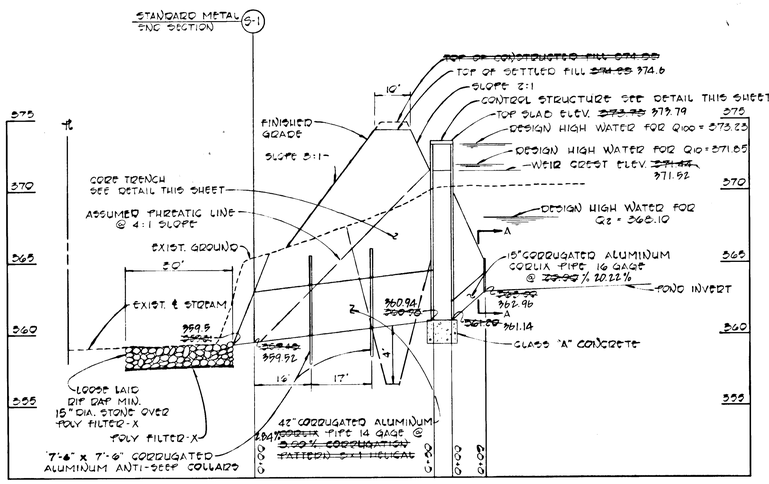

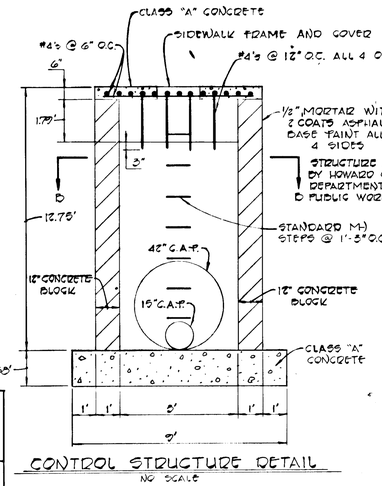

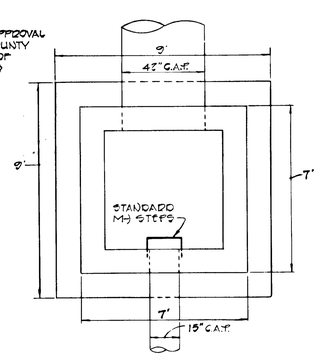

FISHER, COLLINS AND CARTER
CONSULTING ENGINEERS AND LAND SURVEYORS
8360 COURT AVENUE
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301-461-2855

EARL COLLINS 8/19/82 DATE

STORM WATER MANAGEMENT POND
DETAIL SHEET
PINE ORCHARD PARK
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
MARCH 15, 1982 SCALE: AS SHOWN
SHEET 2 OF 2

#92

MAY 4, 1983

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