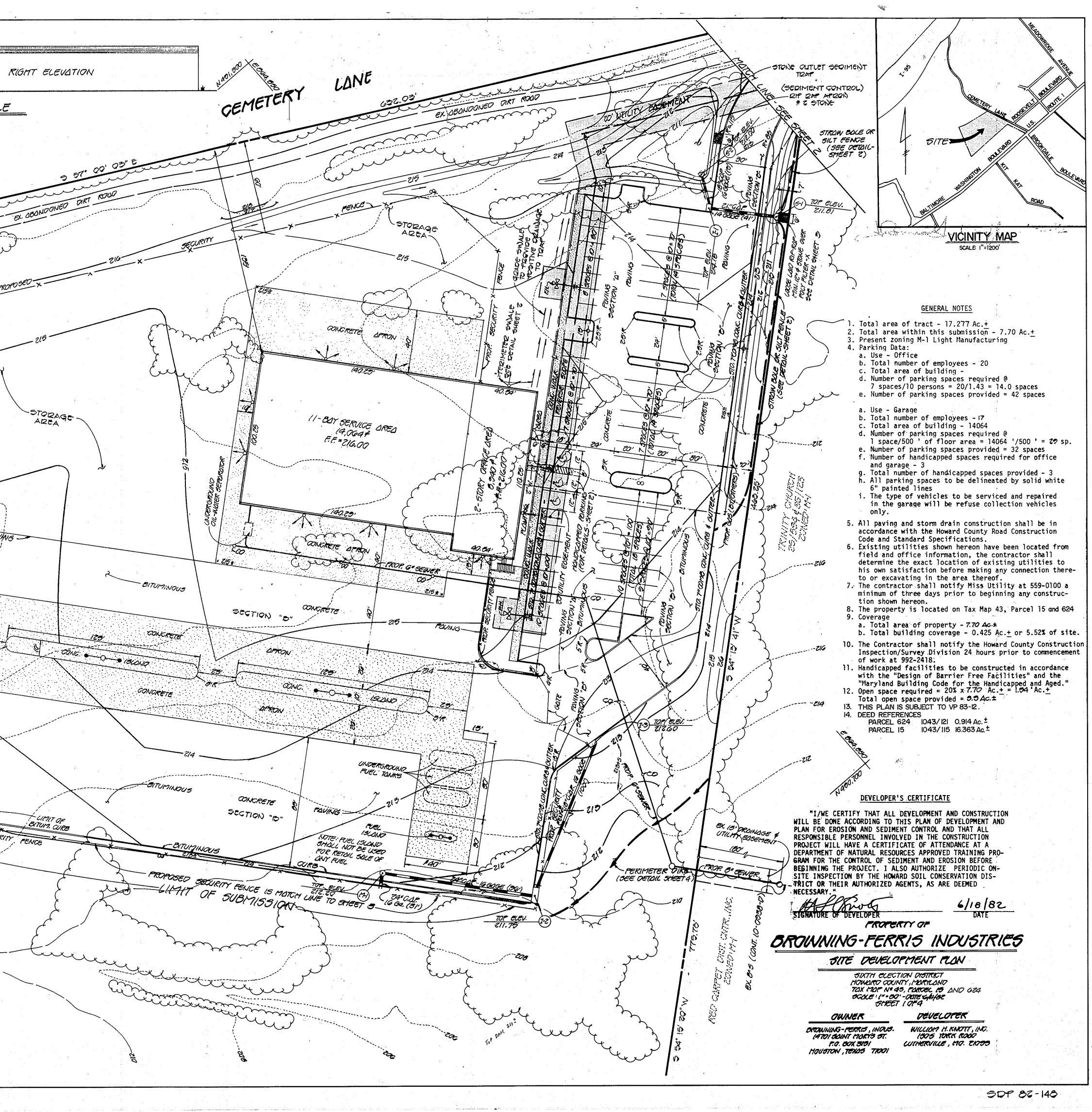
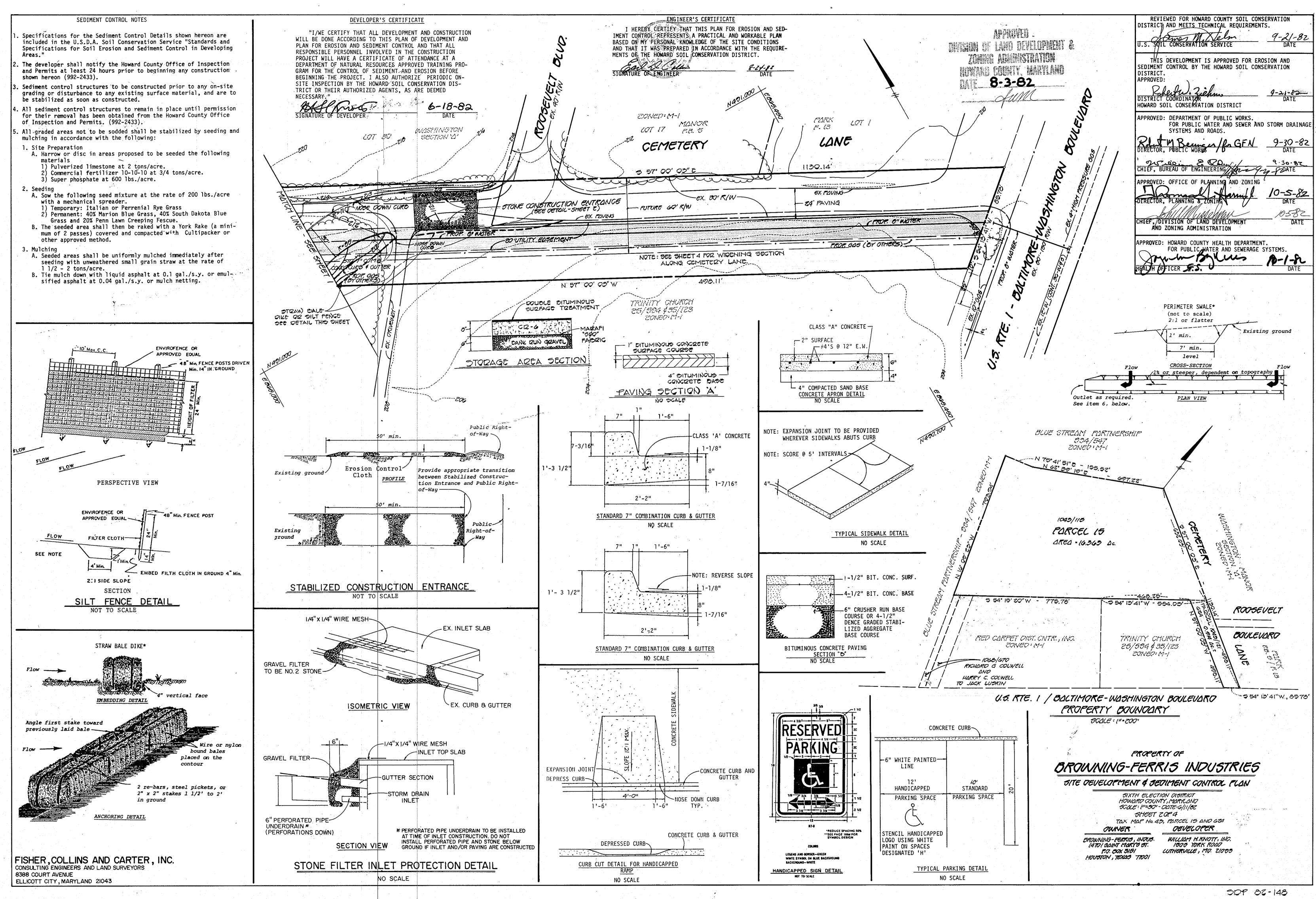
APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. , 00.755 .7 <u>445</u> COUNTY HEALTHOFFICER FRS FRONT ELEVATION 10-1-5 DATE F.F. 716.00 APPROVED: BUILDING SCHEMATIC PROFILE HOWARD COUNTY OFFICE OF PLANNING AND ZONING. SCALE : [" = 30' 1 10-5-12 Nomach Hound DIRECTOR, PLANNING AND <u>10582</u> DATE CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION APPROVED: DEPARTMENT OF PUBLIC WORKS FOR PUBLIC WATER AND SEWER AND STORM DRAINAGE SYSTEMS & ROADS. Jun grand /RnGFN The start CHIEF, BUREAU OF ENGINEERING DATE and a REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION ISTRIDT AND MEETS TECHNICAL REQUIREMENTS. -21-82 218. (THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. **APPROVED:** 9-21-82 Chefers HOWARD SOIL CONSERVATION DISTRICT BENCH MARKS ELEV. 207.76 F-16 34" IRON ROD FLUSH WITH THE OROUND ON THE SOUTH SLOE OF U.S. RTE. I, APPROXIDMATELY O.T MILE NORTHEAST OF THE INTERSECTION WITH MD. RTE. 175 ELEV. 200.30 F-17 34" IRON ROO FLUSH WITH THE GROUND ON THE NORTH SIDE OF U.S. KTE. I, APPROXIDMATELY 1.2 200/ MILES NORTHEDST OF THE INTERSECTION WITH MO. RTE. 175 LIMIT OF PAVING SITE ANALYSIS I. TOTAL DRED OF PROPERTY: 17.3 DC. ± 2. DRED TO BE DISTURBED : 7.7 DO. + 3. IMPERVIOUS DRED : 3.6 DG. t. 4. DRED TO BE VEGETATED : 4.1 DO. 1 LEGEND ---- ZIO---- EXIOTING CONTOUR 85 PROPOSED CONTOUR - 210-----PROP. SECURITY FEACE FENCE W/ 3'STRAND BARBED WIRE -ORNG-G8.01 PROPOSED LIGHTING TWO 1000 WATT HIGH PRESSURE ω SODIUM LIGHTS - TWO 400 WATT HIGH PRESSURE SODILIM LIGHTS 150 WATT HIGH PRESSURE SODIUM LIGHTS APPROVED VISUR OF LAND DEVELOPMENT TANKA ADARISTRATION PROPOSED SECURITY, FENCE HOMARD COUNTY, MARTIAN DAT. 8-3-82 219 214 -----ENGINEER'S CERTIFICATE HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SED-IMENT 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 REQUIRE-MENTS OF THE HOWARD SOLL CONSERVATION DISTRICT. SIGNATURE OF ENGINEER 8-24-82 FISHER, COLLINS AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043

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# S.W.M. POND SPECIFICATIONS

I. <u>SITE PREPARATION</u> 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 an restoration, it is recommended that the permanent pool area be cl of all brush and trees.

II. EARTH FILL Material

• • . . . . .

The fill material shall be taken from approved designated borrow or areas. It shall be free from roots, stumps, wood, rubbish, ove size stones, frozen or other objectionable materials. The embankm shall be constructed to an elevation which provides for anticipa settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least 5 percent ab the design elevation (including freeboard) unless otherwise show on the plans. Placement

Areas on which fill is to be placed shall be scarified prior to ment of fill. Fill materials shall be placed in 8-inch maximum th ness (before compaction) layers which are to be continuous over entire length of the fill. The most porous borrow material shall 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 parall to the centerline of the embankment as shown on the plans. The bo width of the trench shall be governed by the equipment used for e cavation, 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 core trench shall be the most impervious material available and s be compacted with equipment or rollers to assure maximum density 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 thicknes and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent f the pipe. At no time during the backfilling operation shall drive 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. PIPE CONDUITS

- A. <u>CORRUGATED METAL PIPE</u> 1. Materials Metal 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 cont structure shall be mortared all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall
- connected to the pipe in such a manner as to be completely w 3. Bedding The pipe shall be firmly and uniformly bedded thro out 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 longitudina laps at the sides.
- . Backfilling shall conform to structural backfill as shown al 6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

### CONCRET

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

## VI. STABILIZATION

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

All exposed areas of the embankment and pond shall be stabilized

a. Spreading 4" topsoil b. Working in 1 ton of ground limestone and 1,000 pounds of 10

<u>*F-24-82*</u> DATE

- 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.

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.

Conserva

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

rvation District

ENGINEER'S CERTIFICATE

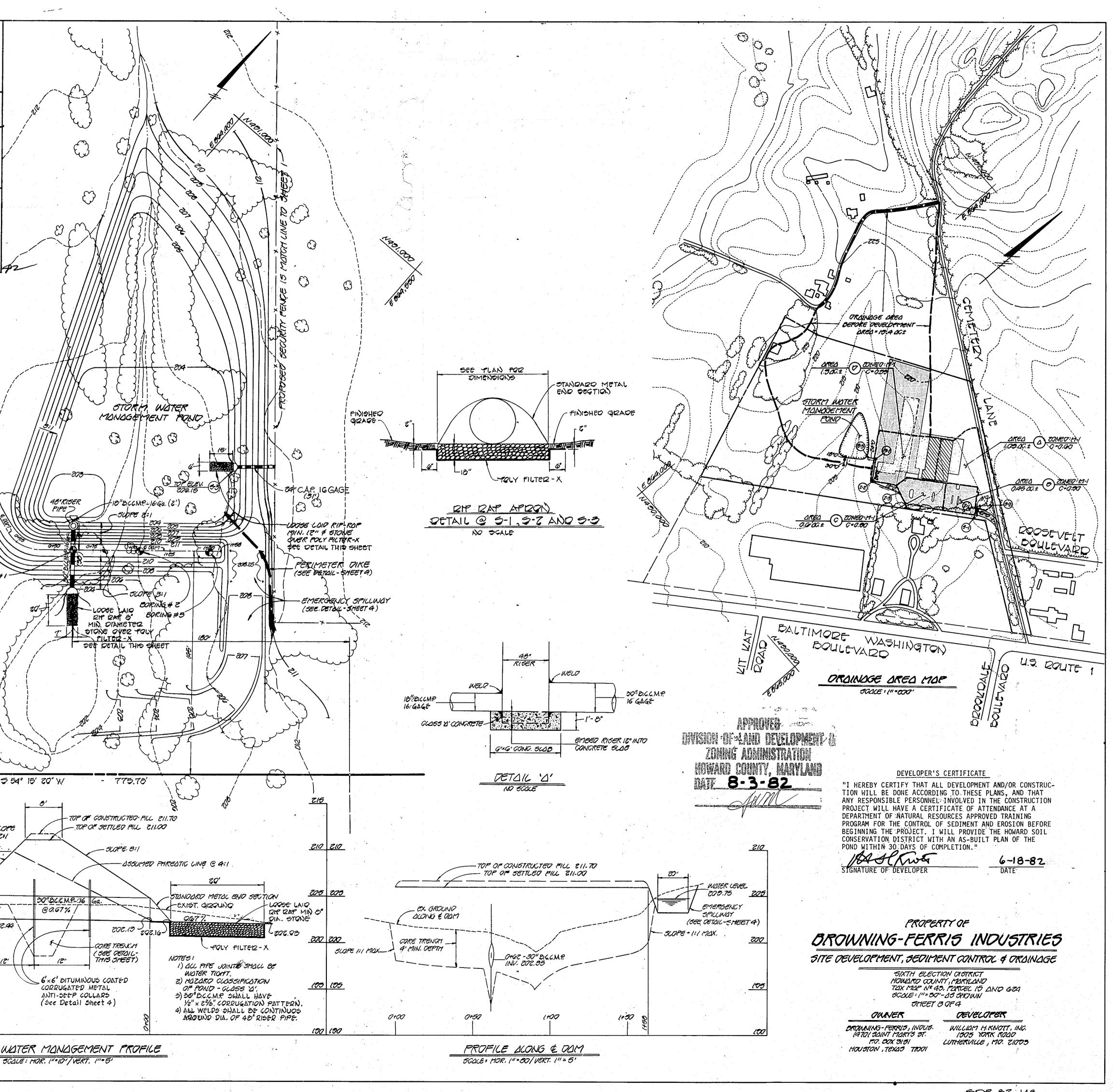
"I CERTIEY THAT THIS PLAN FOR POND CONSTRUCTION EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER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

FISHER, COLLINS AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043

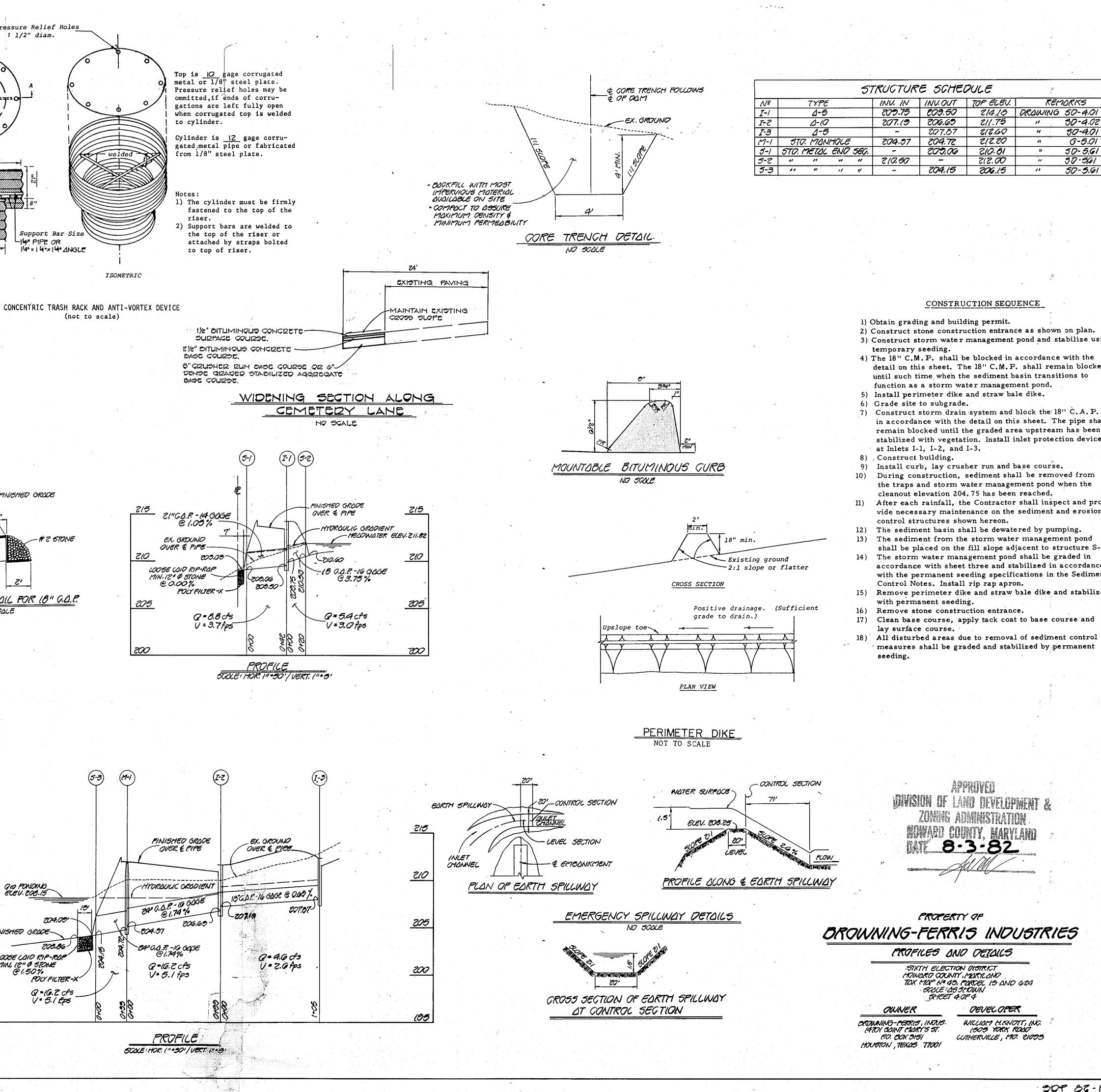
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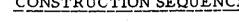


50P 82-148

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS. Pressure Relief Holes 1 1/2" diam. THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. **APPROVED:**  $\cap$ DISTRICT COORDINATO 1-21-82-HOWARD SOIL CONSERVATION DISTRICT APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PUBLIC WATER AND SEWER AND STORM DRAINAGE SYSTEMS AND ROADS. PLAN Tackweld all around #6 x 12" spacer Bar (typical) Support Bar Siz 14 PIPE OR 14" × 14"× 14" ANGLE 48" Dia. RISER AND ZONING ADMINISTRATION SECTION A-A APPROVED: HOWARD COUNTY HEALTH DEPARTMENT. FOR PUBLIC WATER AND SEWERAGE SYSTEMS. Install collar with corrugations vertical ` Collar to be of same gage as the pipe with which it is used. Continuous 1/2" x 2" slotted holes for 3/8" diameter holes ANISHED GRADE Weld both sides Corrugated metal Weld sheet welded to POLY FILTER -X\_ center of band B + J SECTION B-B -#2 5TONE ELEVATION OF UNASSEMBLED COLLAR 10" G.D.E. Unassembled collars shall be marked by NOTES FOR COLLARS: painting or tagging to identify matching 1. All materials to be in accordance with construction and construction material pairs. 4. The lap between the two half sections specifications. and between the pipe and connecting band When specified on the plans, coating 2' shall be caulked with asphalt mastic at of collars shall be in accordance with construction and construction material time of installation. 5. Each collar shall be furnished with two BLOCKING DETAIL FOR 18" G.A.P. specifications. 1/2" diameter rods with standard tank lugs for connecting collars to pipe. NO SOALE DETAILS OF CORRUGATED-METAL ANTI-SEEP COLLAR Weld 1 1/8"x1 1/8"x1/8" angles to collar or bend a 90° angle 1 1/8" wide as Size and spacing of slotted shown in drawing openings shall be the same as WE NOTE FOR BANDS AND COLLARS: shown for CM collar Modifications of the details shown may be used providing Use rods and lugs to equal watertightness is clamp bands securely maintained and detailed 12 Min. to pipe drawings are submitted and <u>\_</u>П approved by the Engineer prior to delivery. helical pipe Metal collar to be welded to center of helical pipe band NOTE: For details of fabrication dimensions, minimum gages, slotted holes, and notes, see detail above. ANTI-SEEP COLLAR DETAIL NO OGALE 215 *C*15 QLO PONIXING ECEV. 208.15 205 204.09 FINISHED GRODE 203.86 LODGE LAID RIP-RAP MINI, 12" & STONE C 1.50 % 200 FOLY FILTER-X Q=1G.2 cfs V=5.1 fps 195 Con Tri FISHER, COLLINS AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS - Earl alla 8-24-82 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043



	STRUCTURE SCHEDULE									
	Nº	TYPE				INV. IN	INV.OUT	TOP ELEV.	REMORKS	
	I-1		4-5		· · · · · · · · · · · · · · · · · · ·	209.75	809.50	214.18	DRAWING	50-4.01
	I <del>-</del> 2		D-10	)		207.19	206.69	211.75	11	30-4.02
•	I-3		1-5				207.87	212.60	"	50-4.01
	M-1	57	O. MON	HOLE	· .	204.97	204.72	212.20	11	6-5.01
	5-1	570.	METOL	END	SEC.		209,06	210.81	7/	50-5.61
	5-2	11	"	11	"	<i>710.50</i>		212.00	""	30-5.61
	5-3		11	11	"	с. <del>н</del>	204,15	206.15	11	50-5.61



- 3) Construct storm water management pond and stabilize using
- 4) The 18" C.M.P. shall be blocked in accordance with the detail on this sheet. The 18" C.M.P. shall remain blocked until such time when the sediment basin transitions to

- in accordance with the detail on this sheet. The pipe shall remain blocked until the graded area upstream has been stabilized with vegetation. Install inlet protection devices
- 10) During construction, sediment shall be removed from the traps and storm water management pond when the
- 11) After each rainfall, the Contractor shall inspect and provide necessary maintenance on the sediment and erosion
- 12) The sediment basin shall be dewatered by pumping.
- shall be placed on the fill slope adjacent to structure S-1.
- accordance with sheet three and stabilized in accordance with the permanent seeding specifications in the Sediment
- 15) Remove perimeter dike and straw bale dike and stabilize
- 17) Clean base course, apply tack coat to base course and
- 18) All disturbed areas due to removal of sediment control measures shall be graded and stabilized by permanent