

#### 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 11.

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 anticipated 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.

#### Placemen

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

Control the movement of the hauling equipment over the fill so that the entire surface of each lift is compacted to 95% of AASHTO Specification T-99 (or equivalent ASTM Specifications). Fill material must contain enough moisture to yield the required degree of compaction 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

# TIT 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. PIPE CONDUITS

## A. Corrugated Metal Pipe

- 1 Materials (Steel Pipe) This pipe and its appurtenances shall be palvanized 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.
- 2. Connections All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be relded all around when the pipe and riser are metal. 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 through tits 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.
- 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
- 6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

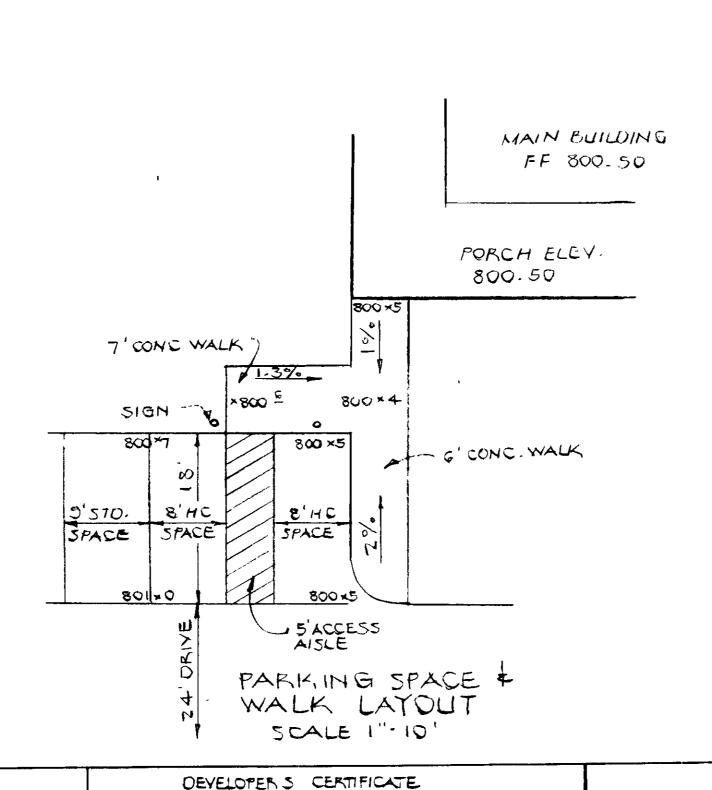
## (V) CONCRETE

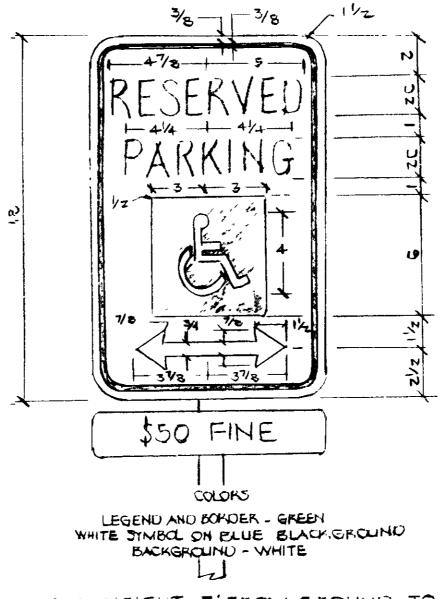
Concrete must meet minimum requirements set forth in Maryland State Highway Administration Standard Specifications for Construction & Materials, Section 918 (Portland Cement Concrete Mixtures), Mix NO 3 Reinforcing steel must be ASTM A615 Grade 60 Steel angles and anchor bars must be ASTM A26

## 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 herms shall be stabilized by seeding, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications shown on or accompanying the drawings.

Construct Fencing in accordance with the State Highway Administration Standard Details 690 01 and 690 02. Use ministrations for a 6-Moot fence, substituting 42" fabric specifications for a 6-Moot fence, substituting 42" fabric and 6'8' line posts. Construct the date in accordance with SHA Standard Detail 692 01 with 42" fabric. The Fabric used for the fence and date must conform to aashto Designation M181-74.





MIN. HEIGHT 7'FROM GROUND TO BOTTOM OF SIGN

HANDICAPPED SIGN DETAIL

HARFORD DRAFTING \$
DESIGN, INC.
GOI CHARWOOD COURT
EDGEWOOD, MD. 21040
3:01-679-8713

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 motified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the point within 30 days of completion."

HICKER VE. 11/190 June OF DEVELOPER

also authorize periodic on-site inspections by the Howard Soil Conservation District "

"I/We certify that all development and/or construction will be done according to these plans, and that any

responsible personnel involved in the construction

project will have a Certificate of Attendance at a

Department of Natural Resources Approved Training

Program for the Control of Sediment and Erosion

before beginning the project. I will provide the

plan of the pond within 30 days of completion. I

Howard Soil Conservation District with an "as-built"

10-14-88

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

S Soil Conservation Service

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

Report Soil Conservation District

Description

PLANNING DIRECTOR DATE

PLANNING DIRECTOR DATE

CHIEF, DIVISION OF COMMUNITY PLANNING DATE

AND LAND DEVELOTMENT

APPROVED: HOWARD COUNTY HEALTH DETARTMENT
FOR PRIVATE WATER AND SEWERAGE SYSTEMS

WENTH OFFICER 14. DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

FOR PUBLIC ROADS AND STORM

DRAINAGE SYSTEMS

4 4 91

DIRECTOR. PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING

DR SNELL HURSERY

PLATING / L.F. BLOCK NO ZONE TOW/ZONE ELECT DIST CENSUS TR.

1530-325 | R 6 4 6040

WATER SODE

SEWER CODE

SITE DEVELOPMENT
PLAN

D.R. SNELL NURSERY

RIDGE ROAD, MO. RTE. 27

FOURTH ELECT. DISTRICT

HOWARD CO., MARYLAND

AUGUST 11, 1985

SCALE: AS SHOWN

SHEET 5 OF 5

50P 89-77