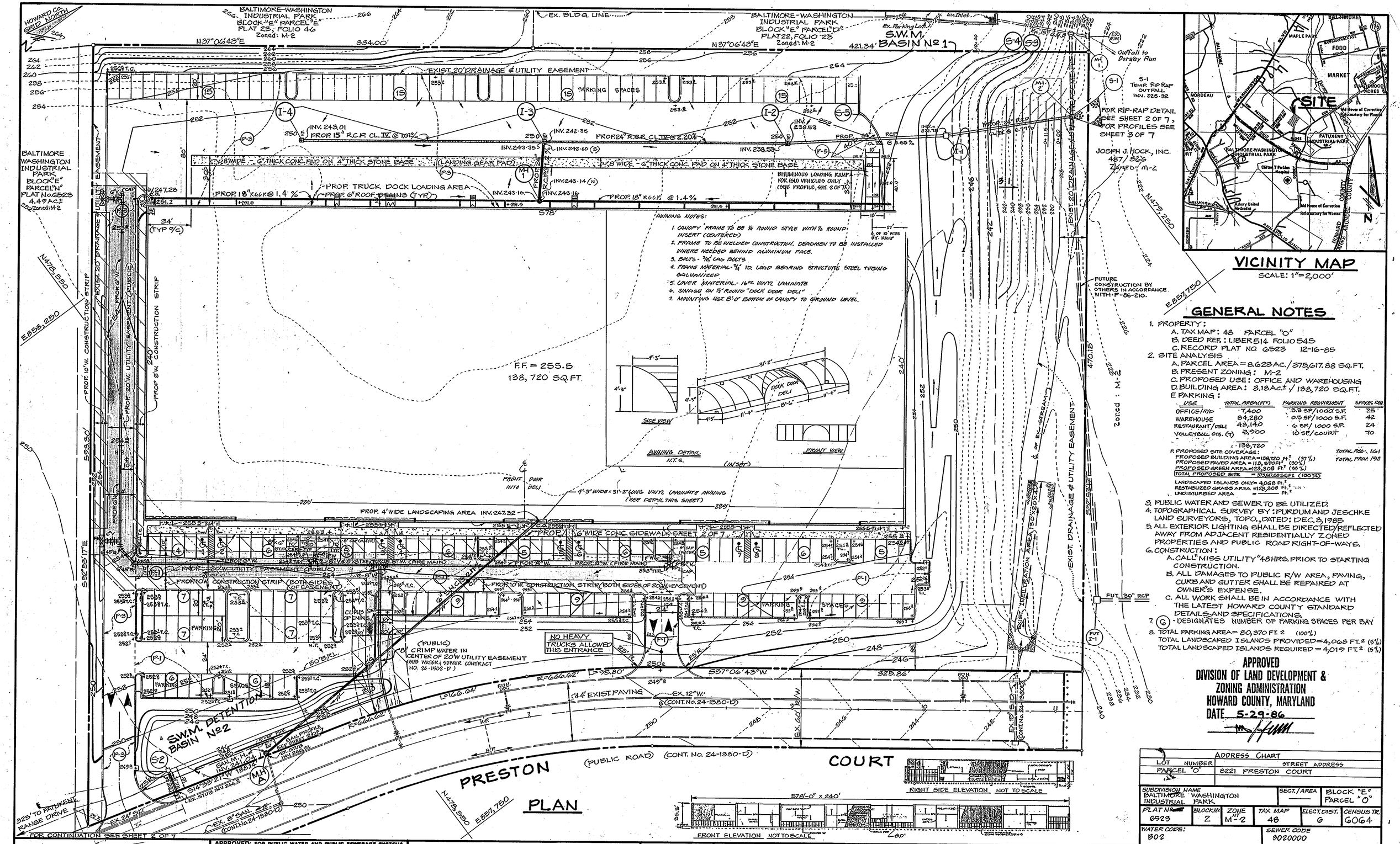


VICINITY MAP

SCALE: 1"=2,000'

GENERAL NOTES

1. PROPERTY:
   - A. TAX MAP: 48 PARCEL "O"
   - B. DEED REF.: LIBER 514 FOLIO 545
   - C. RECORD PLAT NO 6523 12-16-85
2. SITE ANALYSIS
   - A. PARCEL AREA = 8.623 AC./ 375,617.88 SQ.FT.
   - B. PRESENT ZONING: M-2
   - C. PROPOSED USE: OFFICE AND WAREHOUSING
   - D. BUILDING AREA: 3.18 Ac.± / 138,720 SQ.FT.
   - E. PARKING:

USE	TOTAL AREA (ft²)	PARKING REQUIREMENT	SPACES REQ.
OFFICE/R&D	7,400	3.3 SF/1000 S.F.	25
WAREHOUSE	84,280	0.5 SF/1000 S.F.	42
RESTAURANT/DELI	43,140	6 SF/1000 S.F.	24
VOLLEYBALL CTS. (4)	3,900	10 SF/COURT	40
	138,720		

   - F. PROPOSED SITE COVERAGE:
     - PROPOSED BUILDING AREA = 138,720 ft² (37%)
     - PROPOSED PAVED AREA = 113,539 ft² (30%)
     - PROPOSED GREEN AREA = 123,308 ft² (33%)
     - TOTAL PROPOSED SITE = 375,617.88 SQ.FT. (100%)
     - LANDSCAPED ISLANDS ONLY = 4,068 ft²
     - RESTABILIZED GRASS AREA = 123,308 ft²
     - UNDISTURBED AREA = — ft²

TOTAL REQ.: 161
TOTAL PROV.: 192

3. PUBLIC WATER AND SEWER TO BE UTILIZED.
4. TOPOGRAPHICAL SURVEY BY: PURDUM AND JESCHKE LAND SURVEYORS, TOPO., DATED: DEC. 3, 1985
5. ALL EXTERIOR LIGHTING SHALL BE DIRECTED/REFLECTED AWAY FROM ADJACENT RESIDENTIALLY ZONED PROPERTIES AND PUBLIC ROAD RIGHT-OF-WAYS.
6. CONSTRUCTION:
   - A. CALL "MISS UTILITY" 48 HRS. PRIOR TO STARTING CONSTRUCTION.
   - B. ALL DAMAGES TO PUBLIC R/W AREA, PAVING, CURB AND GUTTER SHALL BE REPAIRED AT OWNER'S EXPENSE.
   - C. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARD DETAILS AND SPECIFICATIONS.
7. (G) - DESIGNATES NUMBER OF PARKING SPACES PER BAY
8. TOTAL PARKING AREA = 80,370 FT. 2 (100%)
   - TOTAL LANDSCAPED ISLANDS PROVIDED = 4,068 FT.² (5%)
   - TOTAL LANDSCAPED ISLANDS REQUIRED = 4,019 FT.² (5%)

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 5-29-86

ADDRESS CHART	
LOT NUMBER / PARCEL "O"	STREET ADDRESS: 8221 PRESTON COURT

SUBDIVISION NAME	SECT./AREA	BLOCK
BALTIMORE WASHINGTON INDUSTRIAL PARK	—	BLOCK "E" PARCEL "O"

PLAT No.	BLOCK No.	ZONE	TAX MAP	ELECT. DIST.	CENSUS TR.
6523	2	M-2	48	6	6064

WATER CODE: B02 SEWER CODE 3020000

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR — DATE 6-25-86
CHIEF BUREAU OF ENGINEERING — DATE 6-25-86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 6-26-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
DIRECTOR — DATE 6-27-86
CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-27-86

KIDDE CONSULTANTS, INC.
ENGINEERS, LAND PLANNERS & SURVEYORS
1100 WEST STREET / LAUREL, MD. 20707
(301) 725-0665 / 792-8686
JOHN E.C. PATMORE MD. P.E. NO. 8478

STATE OF MARYLAND — JOHN E. C. PATMORE — No. 8478 — REGISTERED PROFESSIONAL ENGINEER

NO.	REVISION	DATE
	S.D. INVS.	8/21/86
	GRADING & NEW S.D.	12/27/85
3	ADDED NOTE 10	2/2/87
4	REV. PARKING CALCULATION ADD STAIRS TO ROOF OF BLDG.	2/11/10

OWNER/DEVELOPER
HOWARD DEVELOPMENT LIMITED PARTNERSHIP
(NEAL RUCHMAN — GENERAL PARTNER)
8242-D SANDY COURT
JESSUP, MD 20794
(301) 792-9431

SITE DEVELOPMENT PLAN AND GENERAL NOTES FOR JEFFERSON BUSINESS CENTER

FOR: RESEARCH ANALYSIS INSTITUTE

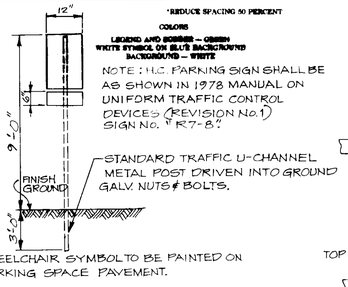
WITHIN BALTIMORE WASHINGTON INDUSTRIAL PARK

PARCEL "O" - BLOCK "E"
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP No. 48 MARCH 12, 1986

SCALE: 1" = 30'

SHEET NO. 1 OF 7

SDP-86-187

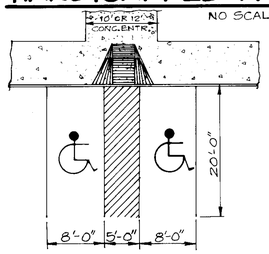


NOTE: H.C. PARKING SIGN SHALL BE AS SHOWN IN 1978 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (REVISION No.1) SIGN No. "R7-8".

NOTE: WHEELCHAIR SYMBOL TO BE PAINTED ON PARKING SPACE PAVEMENT.

HANDICAPPED PARKING SIGN

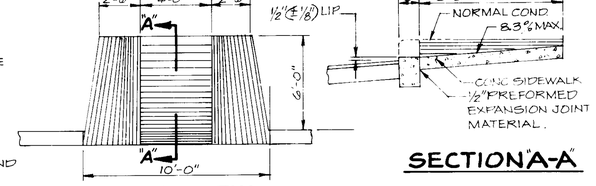
NO SCALE



NOTE: ALL HANDICAP DESIGNS SHOWN HERE IN ACCORDANCE WITH BUREAU OF INSPECTIONS, LICENSES AND PERMITS CRITERIA DATED OCT. 7, 1984.

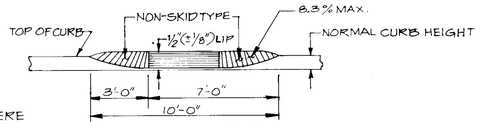
HANDICAPPED PARKING DETAIL

NO SCALE



PLAN VIEW

SECTION A-A



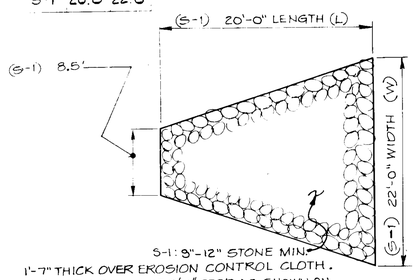
FRONT VIEW

HANDICAPPED RAMP DETAILS

NO SCALE

FOR PLAN SEE SHEET 1 OF 7

STRUCT.	LENGTH	WIDTH
S-1	20.0'	22.0'

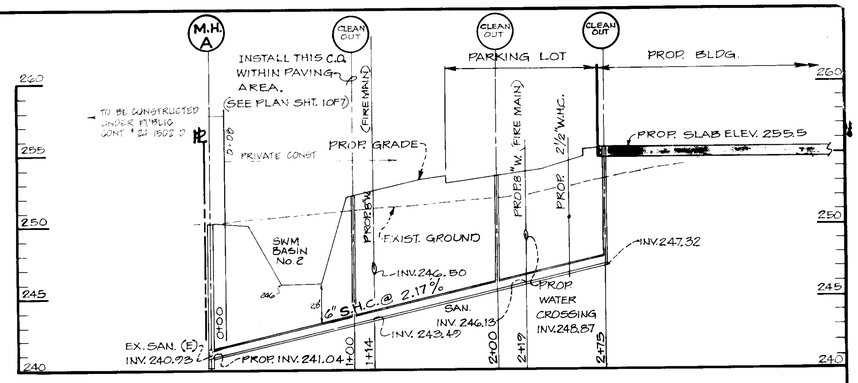


1'-7" THICK OVER EROSION CONTROL CLOTH. PROVIDE A TOE-IN OF 2'-6" DEEP AS SHOWN ON PROFILE SHEET 3 OF 7

S-1 TEMPORARY RIP-RAP & OUTFALL DETAIL

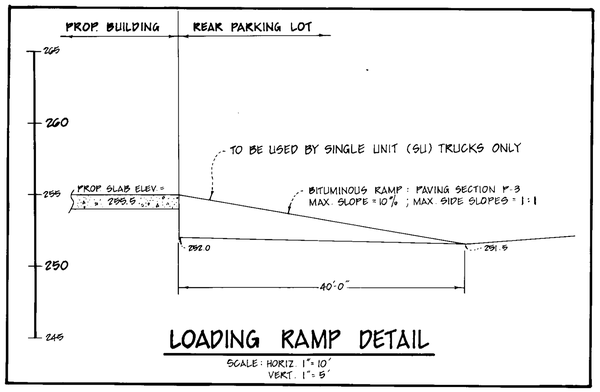
NO SCALE

FOR PLAN SEE SHEET 1 OF 7



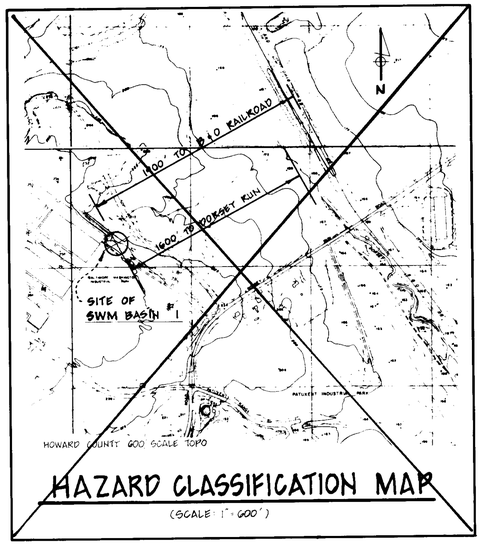
SEWER PROFILE

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



LOADING RAMP DETAIL

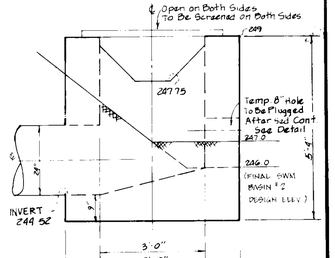
SCALE: HORIZ. 1"=10'
VERT. 1"=5'



HAZARD CLASSIFICATION MAP

(SCALE 1"=600')

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY MARYLAND
DATE 5-29-86



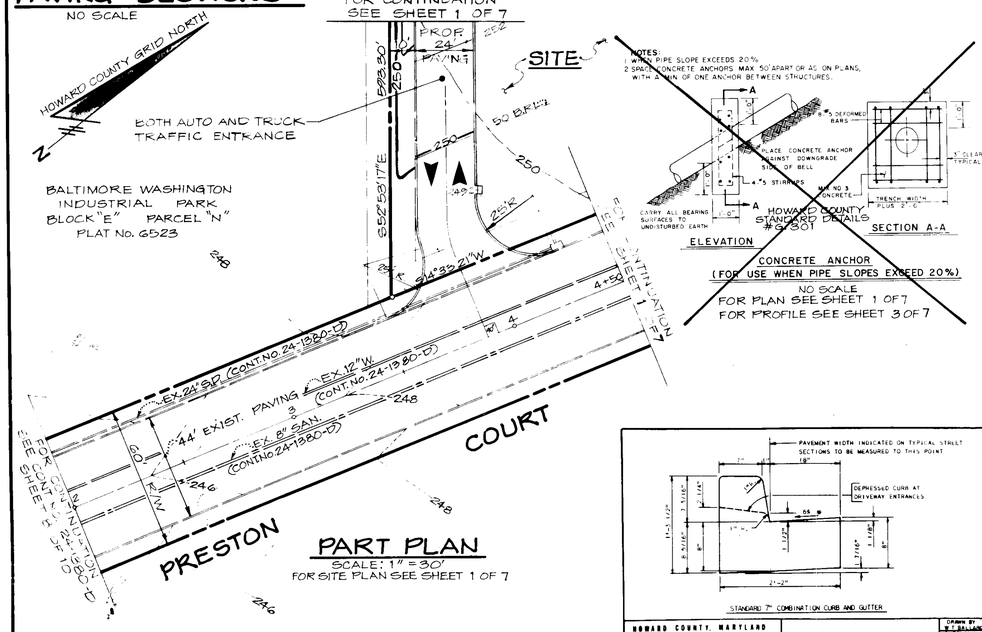
MODIFIED "K" TYPE INLET FOR S-6

NTS

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVEMENT MATERIALS: FULL DEPTH BIT. CONC. ALTERNATE	PAVEMENT MATERIALS: GRANULAR BASE ALTERNATES
P-1	PARKING AREAS AND TRAVELWAYS FOR AUTOS ONLY IN COMMERCIAL ZONES WITH NO HEAVY TRUCKS. P-1 AS SHOWN ON SHEET 1 OF 7	1" MIN. CONC. SURFACE; 4" MIN. CONC. BASE	1" BIT. CONC. SURFACE; 2" MIN. CONC. BASE; PAVING; 6" DEPTH OF SUB-BASE COURSE AGGREGATE
P-3	PARKING AREA & TRAVELWAYS IN COMMERCIAL ZONES MORE THAN 10 HEAVY TRUCKS PER DAY ALSO LOADING DOCK AREAS IN REAR OF SITE. P-3 AS SHOWN ON SHEET 1 OF 7	1 1/2" BIT. CONC. SURFACE; 3 1/2" BIT. CONC. BASE; 10" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE; 4 1/2" BIT. CONC. BASE; PAVING; 6" DEPTH OF SUB-BASE COURSE AGGREGATE

PAVING SECTIONS

NO SCALE



PART PLAN

SCALE: 1" = 30'

FOR SITE PLAN SEE SHEET 1 OF 7

NOTES:
1. WHEN PIPE SLOPE EXCEEDS 20%
2. SPACE CONCRETE ANCHORS MAX. 50' APART OR AS ON PLANS, WITH A MIN. OF ONE ANCHOR BETWEEN STRUCTURES.

ELEVATION — SECTION A-A

CONCRETE ANCHOR

(FOR USE WHEN PIPE SLOPES EXCEED 20%)

NO SCALE

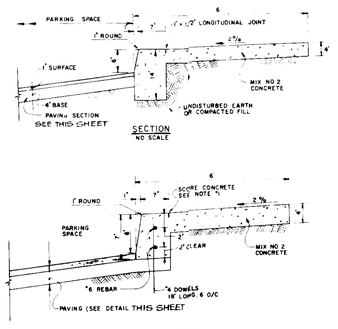
HOWARD COUNTY STANDARD DETAILS No. 301

FOR PLAN SEE SHEET 1 OF 7

FOR PROFILE SEE SHEET 3 OF 7

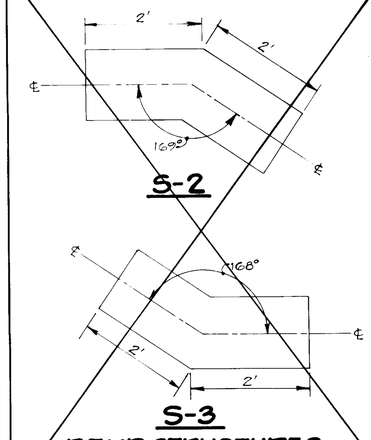
HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS	COMBINATION CURB AND GUTTER	DRAWN BY: R.C. BALLARD; CHECKED BY: J.C.; NO SCALE; R-3.01
Approved 25 — 3-82 Chief Bureau of Engineering		

NOTES
1. LONGITUDINAL JOINT BETWEEN SIDEWALK AND CURB SHALL BE CONTINUOUS AND TO A DEPTH OF 1/4 THE SIDEWALK THICKNESS OF 1 MAX. LATITUDINAL JOINTS SHALL RUN FROM BACK EDGE OF SIDEWALK, CONTINUOUS TO THE BOTTOM FACE OF CURB TO A DEPTH OF 1/4 AND SPACED 5' APART.
2. PROVIDE 1/2" EXPANSION JOINTS AT 15' INTERVALS IN LATITUDINAL JOINTS TO FULL CROSS-SECTION



HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS	MONOLITHIC CURB & SIDEWALK PRIVATE PARKING AREA	R-3.07
Approved 25 — 3-82 Chief Bureau of Engineering		

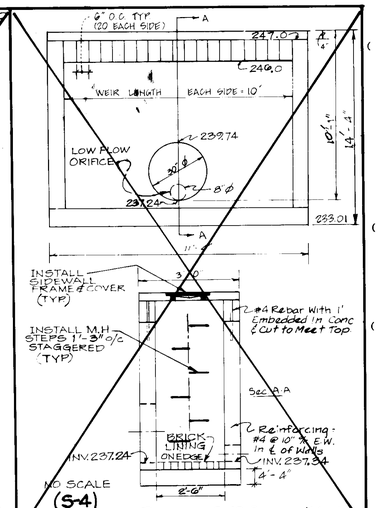
DESIGN OF BEND STRUCTURES: S-2 & S-3 FABRICATED FROM B.C.C.M.P. — 30" DIA.



BEND STRUCTURES

NO SCALE

FOR PLAN SEE SHEET 1 OF 7



NO SCALE

(S-4) STRUCTURE DETAIL A-10 INLET (Mod.)

( ) 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."

Signature of Developer NEAL KUGHMAN — Date 6/5/86

( ) 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."

JOHN E.C. PATMORE MD PE NO 8478 — DATE 6/5/86

( ) 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 6-12-86

( ) 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

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR — DATE 6-25-86

CHIEF BUREAU OF ENGINEERING — DATE 6-25-86

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

COUNTY HEALTH OFFICER — DATE 6-26-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

DIRECTOR — DATE 6-27-86

CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-27-86

KIDDE CONSULTANTS, INC.

ENGINEERS, LAND PLANNERS & SURVEYORS

1100 WEST STREET / LAUREL, MD 20707

(301) 725-0665 / 792-8086

JOHN E.C. PATMORE MD PE NO 8478

NO.	REVISION	DATE
	CROSSED OUT DETAIL & EXPANDED	6/23/86

OWNER/DEVELOPER

HOWARD DEVELOPMENT LIMITED PARTNERSHIP

(NEAL KUGHMAN - GENERAL PARTNER)

8242-D SANDY COURT

JESSUP, MD 20794

(301) 792-9431

PART PLAN, PROFILES AND DETAILS FOR JEFFERSON BUSINESS CENTER

FOR: RESEARCH ANALYSIS INSTITUTE

WITHIN BALTIMORE WASHINGTON INDUSTRIAL PARK

PARCEL "O" - BLOCK "E"

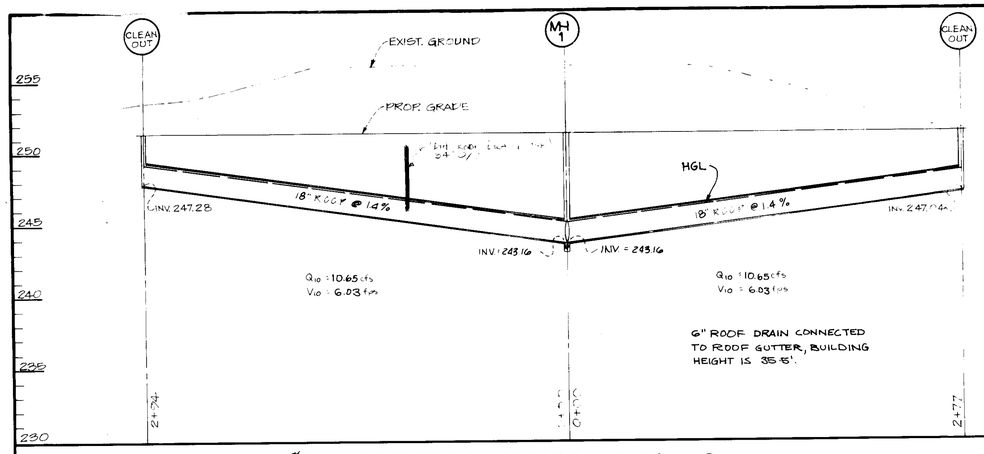
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

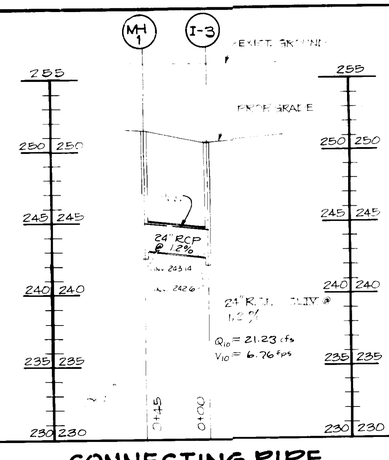
TAX MAP No. 48 — MARCH 12, 1986

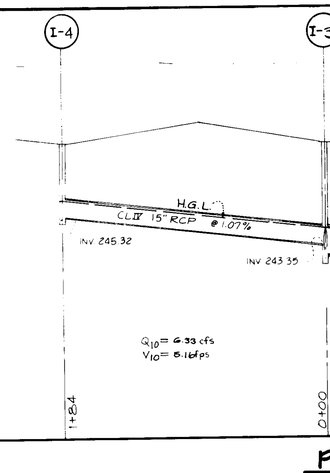
SCALE: AS SHOWN

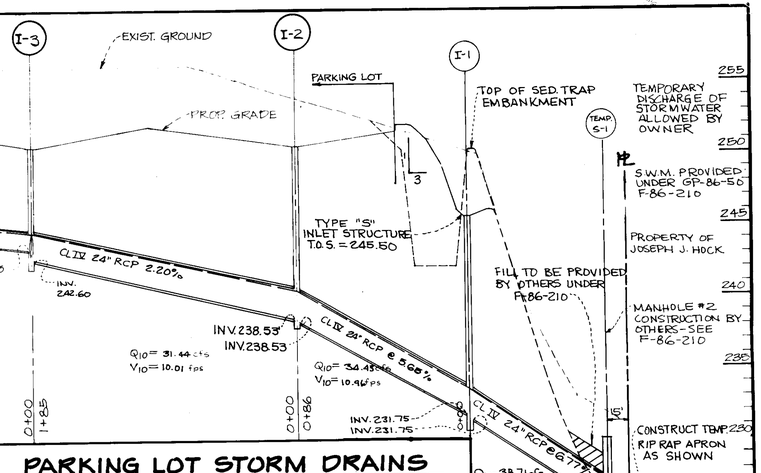
SHEET NO. 2 OF 7

SDP-86-187



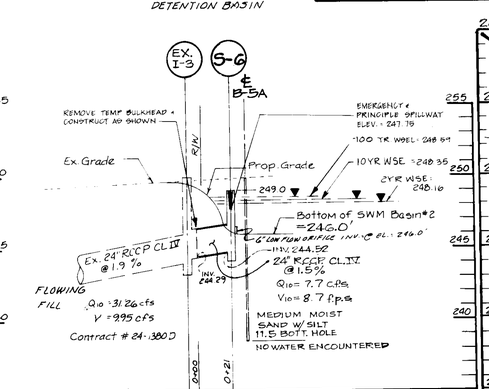




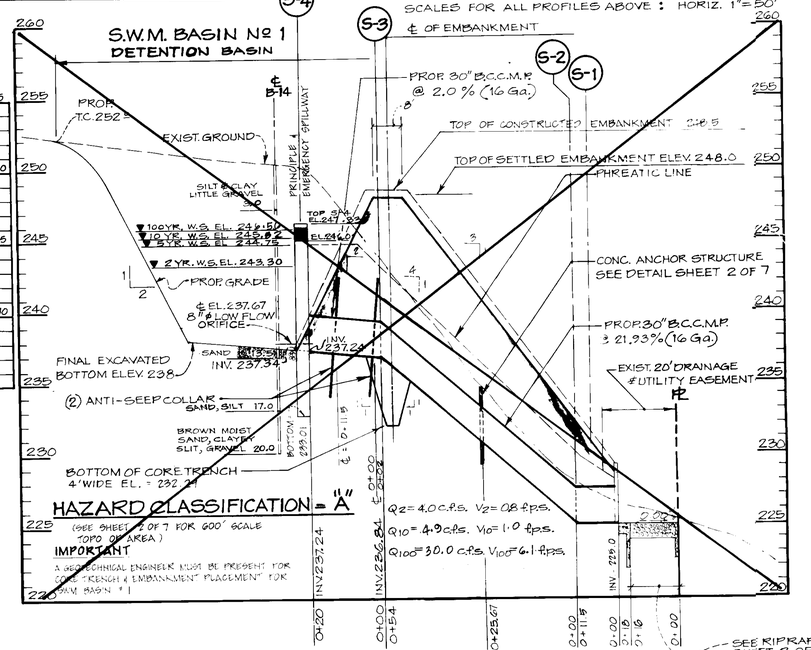


S.W.M. BASIN "2" DETENTION BASIN

BUILDING STORM DRAINS

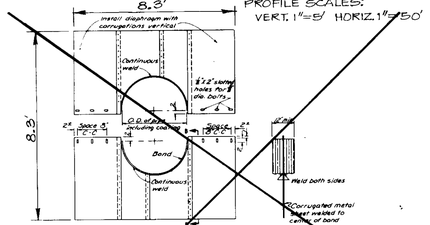


CONNECTING PIPE



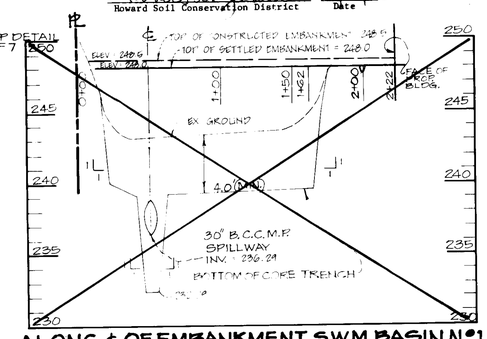
PARKING LOT STORM DRAINS

PROFILE FROM S.W.M. BASIN # 2



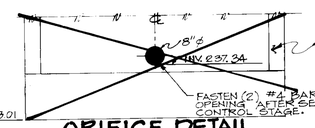
PROFILE ℄ OF DISCHARGE BARREL - S.W.M. BASIN No 1

SCALES: HORIZ. : 1"=20'
VERT. : 1"=5'



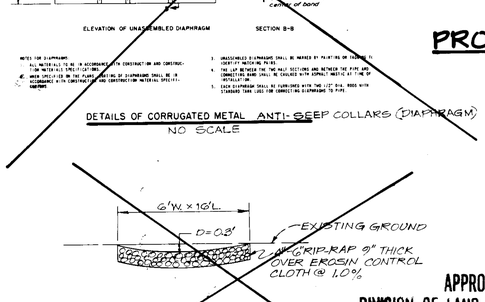
ALONG ℄ OF EMBANKMENT S.W.M. BASIN No 1

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



ORIFICE DETAIL

NOT TO SCALE



DRAINAGE STRUCTURE SCHEDULE

REVISED

NO.	TYPE	INV. IN.	INV. OUT	TOP EL.	REMARKS
I-1	HO. CO. STD. CLASS TYPE "S" INLET	231.75	231.75	245.50	SEE HO. CO. STD. DETAIL SD 4.22
I-2	HO. CO. STD. CLASS TYPE "S" INLET	238.53	238.63	250.50	"
I-3	HO. CO. STD. CLASS TYPE "S" INLET	243.35	242.60	250.50	"
I-4	HO. CO. STD. CLASS TYPE "S" INLET	—	245.32	250.50	"
S-1	TEMP. RIP-RAP OUTLET	225.32	—	227.32	SEE DET. SHT. 2 OF 7.
S-2	MODIFIED TYPE "K" INLET	247.75	244.52	249.00	"
M-1	HO. CO. STD. PRE CAST MANHOLE	243.16	243.14	251.50	SEE HO. CO. STD. DETAIL S-5.12

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 5-29-86

SEDIMENT CONTROL & POND CONSTRUCTION

"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."

Signature of Developer — Date 6/5/86
NEAL KUCHMAN - GENERAL PARTNER

"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."

John E. C. Patmore — 6/5/86
JOHN E. C. PATMORE — DATE
MD. P.E. NO 8478

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 — 6-12-86 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 — 6/11/86 Date

Storm Water Management

CONSTRUCTION SPECIFICATIONS

I. SITE PREPARATION

Areas under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all tree, 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. FILL

A. FILL MATERIAL

The fill material shall be taken from approved designated borrow areas 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 10 percent above the design elevation (including freeboard) unless otherwise shown on the plans.

B. 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 pervious borrow material shall be placed in the downstream portions of the embankment.

C. 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 so that it can be formed into a ball without crumbling. If water can be squeezed out of the ball, it is too wet to compact properly.

D. CORE TRENCH

Where specified, a core trench shall be excavated along or parallel to the center line 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.

IV. PIPE CONDUITS

A. CORRUGATED METAL PIPE

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHO 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.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHO Specification M-196 or M-211 with watertight coupling bands. Coupling bands, anti-seep collars, end sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

Helically corrugated pipe in addition to the requirements above shall have either continuously welded seams or have lock seams which are caulked with a neoprene bead.

2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded 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 irregularities at the joints. Annular corrugated pipe shall be placed with the outside end of each section of pipe projecting downstream and with the successive lengths of pipe telescoped into each other a distance equal to one half of the depth of the annular corrugations. Successive lengths of pipe shall be fully connected and the outside laps at the joints.

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.

B. REINFORCED CONCRETE PIPE

1. Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. Approved equivalents are AASHO specification M-170, 170, and 170.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 1/6 of its diameter with a minimum thickness of 3". H.S.S., low cradle bedding is an approved equivalent.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed on the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.

4. Backfilling shall conform to structural backfill as shown above.

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

C. 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), Class A-1, or P-1.

VI. STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a stable condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by seeding and mulching. Straw mulch in accordance with Standards and Specifications for Soil Erosion and Sediment Control in Urbanized Areas immediately after final grading.

EROSION CONTROL FACILITIES
All disturbed areas shall be controlled by an Erosion and Sediment Control Plan which has been approved by the Howard County Soil Conservation District (HCSCD).

SEEDING
Seeding, fertilizing and mulching shall be as follows:

Seed Mix: 90% Kentucky 31 Tall Fescue
10% Zoysia
Applied at a rate of 300 lbs. per acre.

Lime: 2 tons/acre Dolomitic Limestone.

Fertilizer: 600 lbs./acre 10-20-20 fertilizer before seeding, disc in 400 lbs./acre 38-0-0 urea form fertilizer, and 500 lbs./acre 10-20-20 fertilizer at time of seeding.

Mulch: Straw at 4,000 lbs. per acre.

Anchoring: Mulching tool or emulsified asphalt binder at a rate of 8 gal. per 1,000 square feet.

FILTER CLOTH
All filter cloth shall be Polyfilter - X or equivalent.

RIPRAP
All riprap shall conform to Howard County Specifications.

CONSTRUCTION INSPECTION BY DESIGNATED ENGINEERS
The construction of the pond and embankment, and certification that the pond and embankment have been built in accordance with the plans shall be under the supervision of a Registered Professional Engineer. The Engineer shall be notified sufficiently in advance of construction in order that arrangements can be made for 1) inspection of pipe trench and bedding, 2) inspection of riser and anti-seep collars and 3) supervision of embankment construction and compaction testing. The Engineer shall direct the handling of water during construction, minor changes not affecting the integrity of the dam in order to compensate for unusual soil conditions, and the removal and replacement of defective fill.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR — DATE 6-25-86
CHIEF BUREAU OF ENGINEERING — DATE 6-25-86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 6-26-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
DIRECTOR — DATE 6-27-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-27-86

KIDDE CONSULTANTS, INC.
ENGINEERS, LAND PLANNERS & SURVEYORS
1100 WEST STREET / LAUREL, MD. 20707
(301) 725-0665 / 792-8086
JOHN E. C. PATMORE MD. P.E. NO 8478

NO.	REVISION	DATE
	SD & STRUCT. SCHED.	8/21/86
	STRUCT. SCHED., PROFILE CHANGES TO PROFILE FROM SWM BASIN #2	12/22/86 1/27/87

OWNER/DEVELOPER
HOWARD DEVELOPMENT LIMITED PARTNERSHIP
(NEAL RUCHMAN - GENERAL PARTNER)
8242-D SANDY COURT
JESSUP, MD 20794
(301) 792-9431

STRUCTURES AND PROFILES

FOR JEFFERSON BUSINESS CENTER

FOR: RESEARCH ANALYSIS INSTITUTE

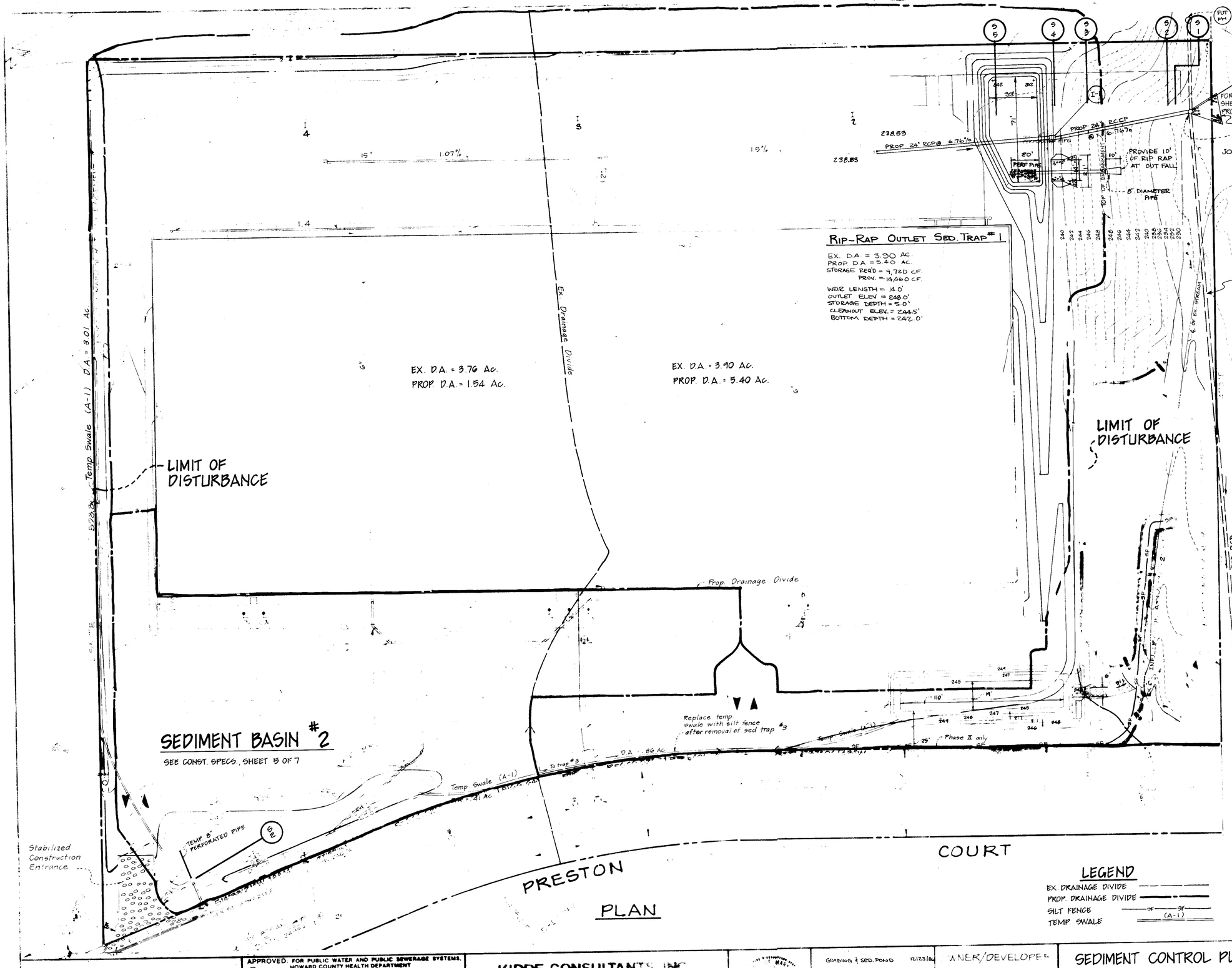
WITHIN BALTIMORE WASHINGTON INDUSTRIAL PARK

PARCEL "O" - BLOCK "E"
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP NO. 48 — MARCH 12, 1986

SCALE: AS SHOWN

SHEET NO. 3 OF 7

SDP-86-187



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE _____ DATE 6-12-86

U.S. SOIL CONSERVATION SERVICE

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

Approved Howard S.C.D. _____ DATE 6-12-86

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 5-29-86

ENGINEERS CERTIFICATE

"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".

JOHN E. C. PATMORE
MD. P.E. NO. 8978

DATE 6/5/86

OWNER'S/DEVELOPER'S CERTIFICATION

"I/We hereby certify that I have reviewed this erosion and sediment control plan and that all clearing, grading, construction and/or development will be done pursuant 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."

Signature _____ Date 6/5/86
Name NEAL KUCHMAN Title GENERAL PARTNER Phone No. 740 9481
Firm HOWARD DEVELOP. LTD PTSHP. Complete Address 8225 G GUILFORD RD. COLUMBIA MD 21046

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR _____ DATE 6-25-86

CHIEF, BUREAU OF ENGINEERING _____ DATE 6-27-86

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

COUNTY HEALTH OFFICER _____ DATE 6-26-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

DIRECTOR _____ DATE 6-27-86

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION _____ DATE 6-27-86

KIDDE CONSULTANTS, INC.
ENGINEERS AND PLANNERS & SURVEYORS
1100 WEST STREET
JOHN E. C. PATMORE MD. P.E. NO. 8978

GRADING & SED. POND 12/23/86

OWNER/DEVELOPER

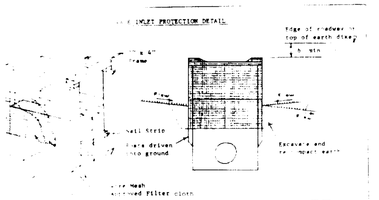
SEDIMENT CONTROL PLAN

JEFFERSON BUSINESS CENTER
FOR RESIDENTIAL [illegible]

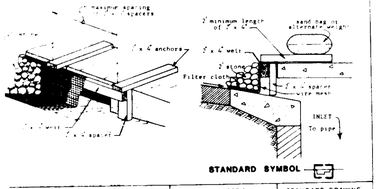
BALTIMORE WASHINGTON INDUSTRIAL PARK

SHEET NO 4 OF 7

SDP-86-187



INLET PROTECTION DETAIL



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	INLET PROTECTION DETAIL	STANDARD DRAWING IPD-1

Construction Specifications

Materials

A. Wooden frame is to be constructed of 2"x4" construction grade lumber.

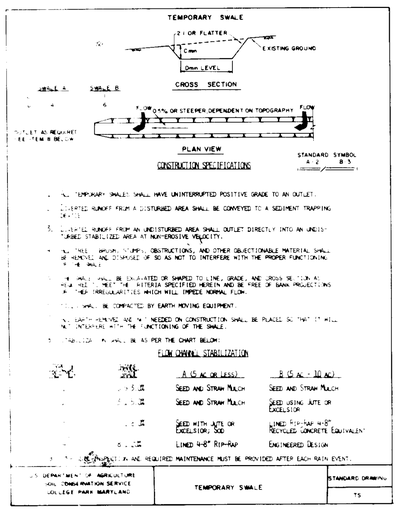
B. Plywood is to be a minimum thickness of 1/4" construction grade lumber.

Installation

1. Cut plywood to extend a minimum of 6" past throat along curb.

2. Attach to anchors in a secure manner which will insure a water tight fit against throat.

3. Brace securely using sandbag or alternate weight. If not watertight, use approved filter cloth under plywood and attach securely.



CONSTRUCTION SPECIFICATIONS

1. TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DISPERSE RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DISPERSE RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREE, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. ALL SWALES SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. SWALES SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. INLETTING OF SWALES IS AS PER THE CHART BELOW.

FLOW CHART STABILIZATION

SWALE SLOPE	A (5 AC OR LESS)	B (5 AC - 10 AC)
0 - 5.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
5.1 - 8.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSIOR
8.1 - 15%	SEED WITH JUTE OR EXCELSIOR, SOD	LINED WITH 4"-8" RIP-RAP RECYCLED CONCRETE EQUIVALENT
15.1 - 50%	LINED WITH 4"-8" RIP-RAP	ENGINEERED DESIGN

9. ROUTINE MAINTENANCE IS REQUIRED. MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	TEMPORARY SWALE	STANDARD DRAWING TS

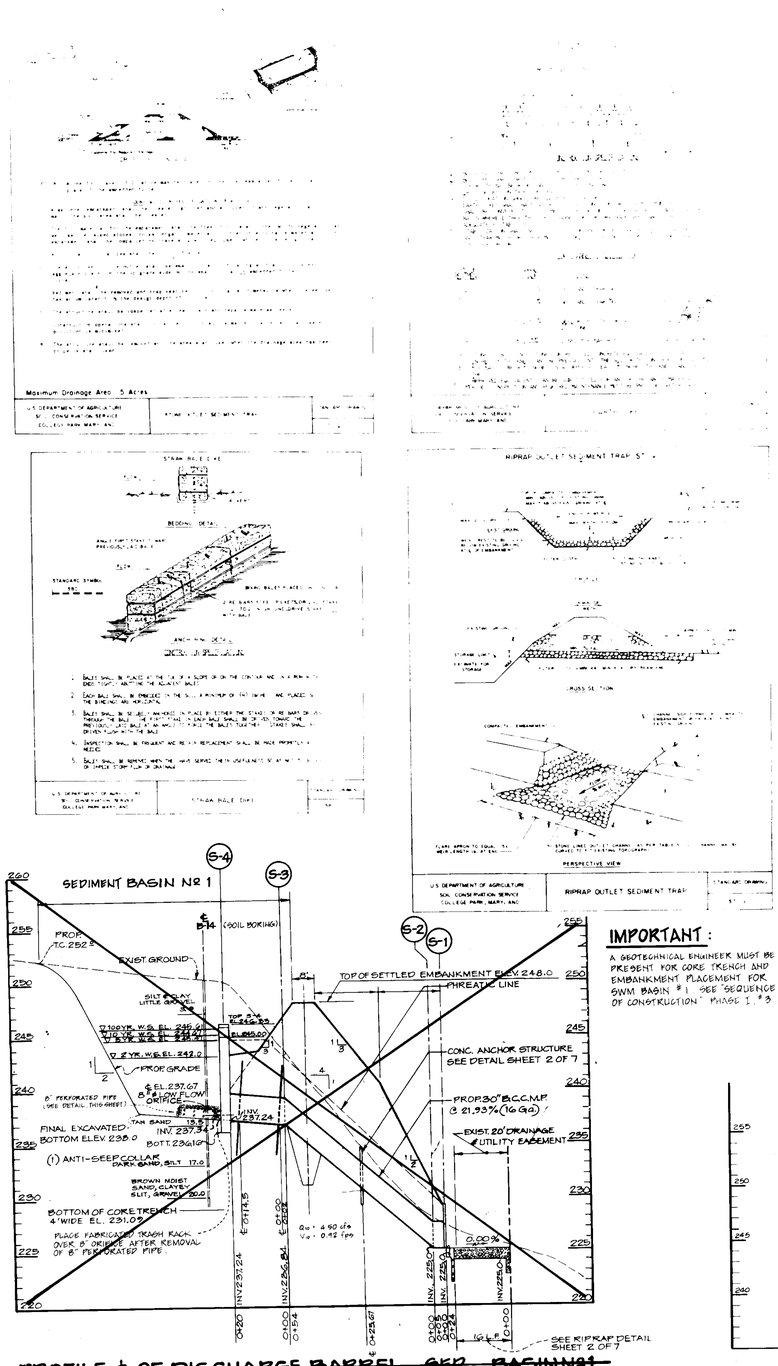
On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

Maximum Drainage Area .5 Acres

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	STONE OUTLET SEDIMENT TRAP	STANDARD DRAWING

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	STAKED SILT FENCE	STANDARD DRAWING SF

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	RIPRAP OUTLET SEDIMENT TRAP	STANDARD DRAWING

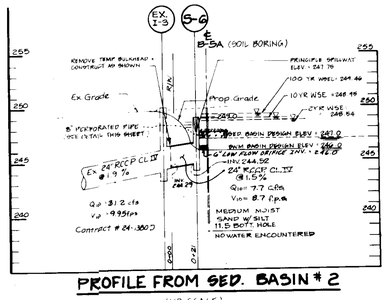


~~PROFILE & OF DISCHARGE BARREL SED. BASIN#1~~

(NO SCALE)

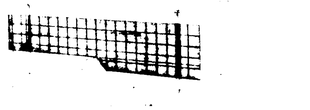
IMPORTANT:

A GEOTECHNICAL ENGINEER MUST BE PRESENT FOR CORE TRENCH AND EMBANKMENT PLACEMENT FOR SWM BASIN # 1. SEE SEQUENCE OF CONSTRUCTION - PHASE I, # 3

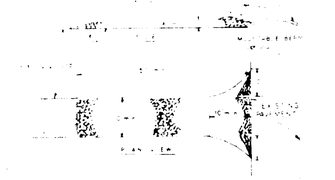


PROFILE FROM SED. BASIN # 2

(NO SCALE)



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	SILT FENCE	STANDARD DRAWING SF



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	STABILIZED CONSTRUCTION ENTRANCE	Standard Drawing SCE

SEDIMENT CONTROL NOTES

A minimum of 2 hours notice must be given to the Howard County Office of Inspection 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 [illegible], Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5) All disturbed areas must be stabilized within the [illegible] 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 is given for their removal has been obtained from the Howard County Sediment Control Inspector

7) Site Analysis

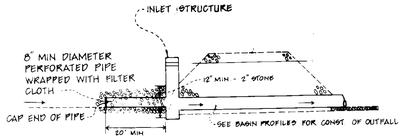
Total Area of Site	8.62	Acres
Area Disturbed	7.96	Acres
Area to be roofed or paved	5.79	Acres
Area to be vegetatively stabilized	2.89	Acres
Total Cut	15,200	Cu. yds
Total Fill	14,800	Cu. yds
Offsite waste/borrow area location	N/A	

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

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 5-29-86

MODIFIED DEWATERING DEVICE - II

(NO SCALE)



– DETAIL TAKEN FROM MD STD 16.15 –

SEQUENCE OF CONSTRUCTION

PHASE ONE

1. OBTAIN A GRADING PERMIT ..... WEEK 1
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE ..... WEEK 1
3. CLEAR & GRUB FOR INSTALLATION OF SEDIMENT BASIN # 2; INSTALL BASIN AS SHOWN ON DETAILS, SHEET SOF7. ALSO, EXCAVATE AND INSTALL RIPRAP OUTLET SEDIMENT TRAPS #1 & 3 AS SHOWN. SEE DETAIL FOR "STONE OUTLET SEDIMENT TRAP V" AND "RIP RAP OUTLET SEDIMENT TRAP IE" FOR CONSTRUCTION SPECIFICATIONS. CONSTRUCT 8' DIAMETER SEDIMENT TRAP DEWATERING DEVICE ..... WEEKS 2-3
4. CLEAR & GRUB FOR INSTALLATION OF REMAINING SEDIMENT CONTROL DEVICES; INSTALL DEVICES & TEMPORARILY STABILIZE ACCORDING TO SPECIFICATIONS ..... WEEK 3
5. ROUGH GRADE ENTIRE SITE; BUILDING AREA TO BE GRADED IN SUCH A MANNER AS TO MAINTAIN POSITIVE DRAINAGE TO RIP RAP OUTLET SEDIMENT TRAP #1 ..... WEEKS 4-5
6. TEMPORARILY STABILIZE SITE ..... WEEK 5

PHASE TWO

1. INSTALL WATER & SEWER SERVICES AS SHOWN ..... WEEK 6
2. CONSTRUCT STORM DRAIN STARTING AT S-1 THROUGH I-8. CONSTRUCT TEMPORARY RIP RAP OUTLET AT S-1. TEMP. BLOCK SHUT I-1 THROUGH I-4. (NOTE: SEDIMENT TRAP EMBANKMENT TO BE RESTORED IMMEDIATELY AFTER STORM DRAIN INSTALLATION OR, AT THE END OF THE DAY, WHICHEVER IS APPLICABLE) ..... WEEKS 6-7
3. INSTALL REMAINING STORM DRAIN STARTING FROM I-13 TO MH#1, FROM MH#1 TO CLEANOUTS IN OPPOSITE DIRECTIONS ..... WEEK 7
4. GRADE FOR INSTALLATION OF C&G, PAVING AND BUILDING. REMOVE SEDIMENT TRAP #3 WITH APPROVAL OF ON SITE INSPECTOR AND INSTALL SILT FENCE AS SHOWN ..... WEEK 8
5. CONSTRUCT BUILDING AND CONNECT TWO BUILDING DRAINS TO 6" RCP ROOF DRAIN SYSTEM ..... WEEKS 9 TO

PHASE III

1. SEDIMENT BASIN #2 TO BE CONVERTED TO SWM BASIN BY DOING THE FOLLOWING:
   a. REMOVE 8" PERFORATED PIPE, PLUG 8" HOLE; PERMANENTLY STABILIZED CUT BOTTOM OF BASIN TO DESIGN ELEV = 246.0'; STORM FACILITY IS READY FOR USE AS INFILTRATION BASIN ..... WEEK 37
2. REMOVE RIP RAP OUTLET SEDIMENT TRAP #1 AND GRADE AREA TO ALLOW DRAINAGE TO SWM BASIN INLET (2-1). SEE "GRADING RESTORATION DETAIL", SHEET 5 OF 7. REMOVE STRUCTURES I-1 THROUGH I-4 ..... WEEK 37
3. WITH APPROVAL OF ONSITE INSPECTOR, REMOVE REMAINING SEDIMENT CONTROL DEVICES AND PERMANENTLY STABILIZE ..... WEEK 37

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE 6-12-86 DATE

U.S. SOIL CONSERVATION SERVICE

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

Approved Howard S.C.D. 6-12-86 DATE

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

COUNTY HEALTH OFFICER — DATE 6-26-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

DIRECTOR — DATE 6-27-86

CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-27-86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR — DATE 6-25-86

CHIEF BUREAU OF ENGINEERING — DATE 6-25-86

STATE OF MARYLAND — JOHN E. C. PATMORE

OWNER'S/DEVELOPER'S CERTIFICATION

"I/We hereby certify that I have reviewed this erosion and sediment control plan and that all clearing, grading, construction and/or development will be done pursuant 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".

Name of Owner/Developer: NEAL KUGHMAN — Date 6/6/86

Name of Firm: HOWARD DEVELOPMENT LTD PART — Phone No. 792-9431

Address: 9242-D SANDY CT JESSUP MD 20794

ENGINEER'S CERTIFICATE

JOHN E. C. PATMORE 8978

DATE	REVISION	BY	PROJ.
12/23/86 7/29/87	SED. BASINS 1 & 2; CONST. NOTES changes to Profile of SWM BASIN # 2, DW		

KIDDE CONSULTANTS, INC.

ENGINEERS, LAND PLANNERS & SURVEYORS

11710 WEST [illegible]

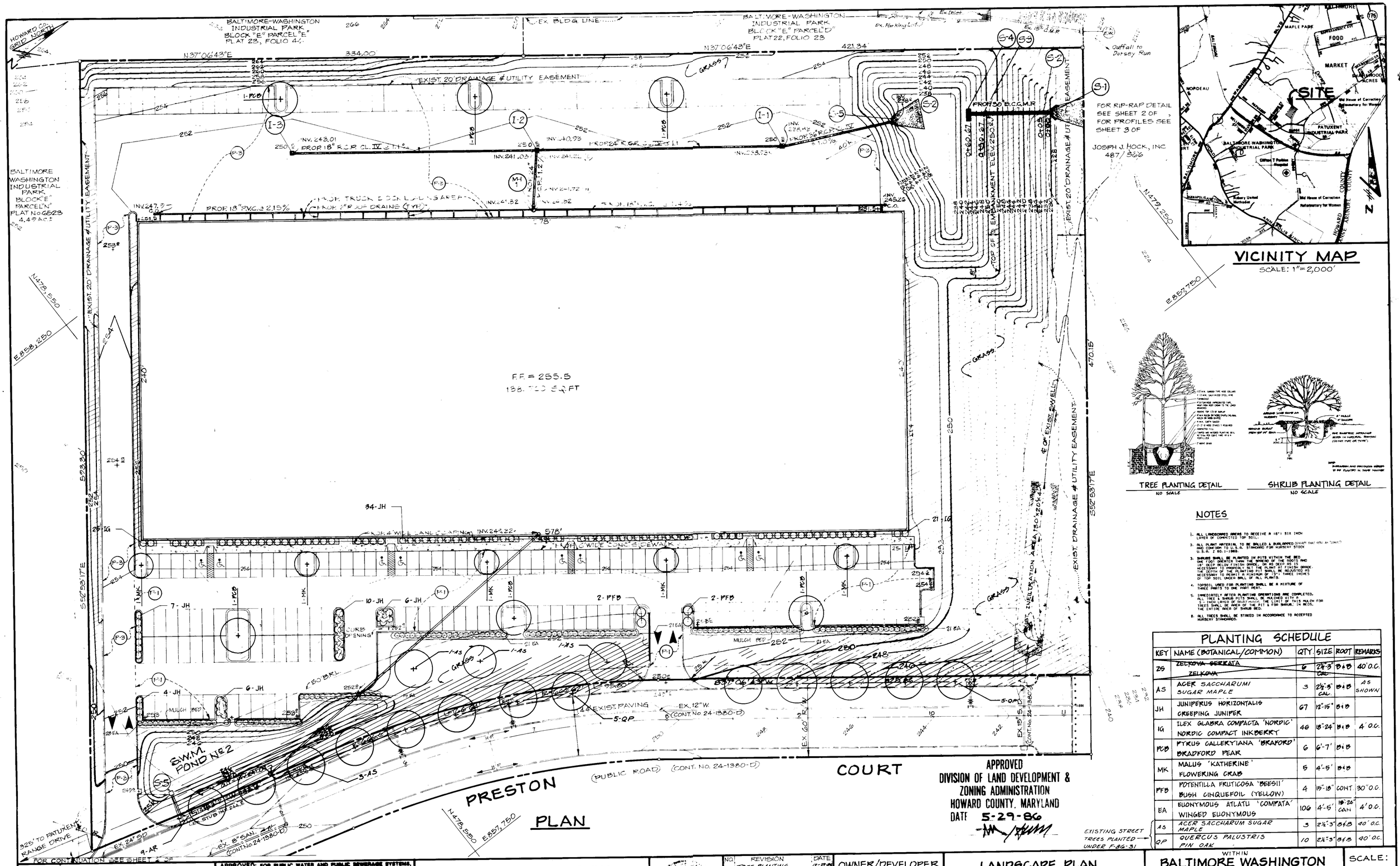
SURVEYED BY: KIDDE
COMPUTED BY: PTV
DRAWN BY: PTV
CHECKED BY: JEM

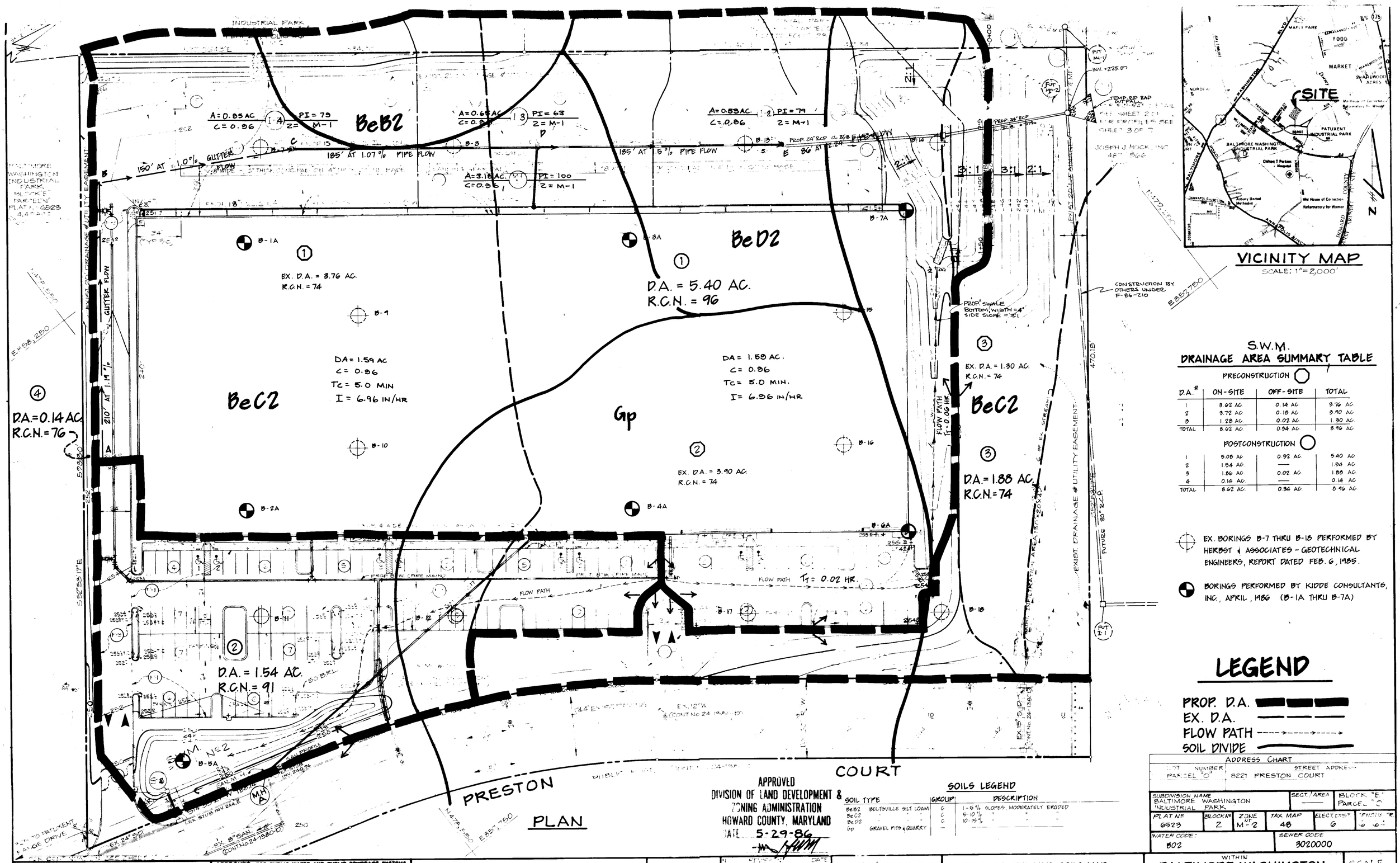
5 OF 7

JOHN E.C. PATMORE MD P.E. NO. 8978

DATE MARCH 1986 SCALE AS SHOWN

SDP-86-187


BALTIMORE-WASHINGTON INDUSTRIAL PARK BLOCK "E" PARCEL "E" PLAT 23, FOLIO 41
EX. BLDG LINE
BALTIMORE-WASHINGTON INDUSTRIAL PARK BLOCK "E" PARCEL "D" PLAT 22, FOLIO 28
Ex. Parking Lot
Ex. Inlet
Ex. 15" C.M.P.
Outfall to Dorsey Run
N37°06'43"E 334.00'
N37°06'43"E 421.34'
EXIST. 20' DRAINAGE & UTILITY EASEMENT
BALTIMORE WASHINGTON INDUSTRIAL PARK BLOCK "E" PARCEL "N" PLAT NO 6623 4.49 AC±
EXIST. 20' DRAINAGE & UTILITY EASEMENT
PROP. 18" R.C.P. CL. IV @ 1.1%
PROP. 24" R.C.P. CL. IV @ 1.1%
PROP. 18" P.V.C. @ 2.15%
PROP. TRUCK & DUMPSTER LOADING AREA
PROP. 2" R.D.F. DRAINS (TYP.)
INV. 243.01
INV. 240.93
INV. 241.03
INV. 241.22
INV. 241.72
INV. 241.82
INV. 238.73
INV. 247.7 C.O.
INV. 245.26 C.O.
INV. 238.42
INV. 238.42 C.O.
PROP. 50' B.C.G.M.R.
PROP. 30' B.C.G.M.R.
TOP OF FILL EMBANKMENT ELEV. 250.67
EXIST. 20' DRAINAGE & UTILITY EASEMENT
EXIST. DRAINAGE & UTILITY EASEMENT
EXIST. 24" S.D.
EX. 15" S.D.
EX. 60' R/W
EX. 12" W. (CONT. No 24-1380-D)
EX. 8" SAN. (CONT. NO. 24-1380-D)
EX. 6" SAN. STUB IN 244.2
EX. 4" WATER STUB IN 244.2
EX. 4" WATER (CONT. No 24-1380-D)
EX. 15" S.D. (CONT. No 24-1380-D)
EX. 24" S.D.
EX. 4" WATER STUB IN 244.2
EX. 4" WATER (CONT. No 24-1380-D)


INDUSTRIAL PARK
A=0.85 AC
C=0.96
PI=79
Z=M-1
BeB2
A=0.65 AC
C=0.96
PI=63
Z=M-1
A=0.83 AC.
C=0.96
PI=79
Z=M-1
150' AT 1.0% GUTTER FLOW
185' AT 1.07% PIPE FLOW
185' AT 5% PIPE FLOW
A=3.18 AC.
C=0.96
PI=100
Z=M-1
PROP. 24" RCP
EX. 18" RCP
B-1A
B-2A
B-3A
B-4A
B-5A
B-6A
B-7A
B-8
B-9
B-10
B-11
B-12
B-13
B-14
B-15
B-16
B-17
B-18
EX. D.A. = 3.76 AC.
R.C.N. = 74
D.A. = 5.40 AC.
R.C.N. = 96
BeD2
DA = 1.59 AC
C = 0.96
Tc = 5.0 MIN
I = 6.96 IN/HR
BeC2
Gp
EX. D.A. = 3.90 AC.
R.C.N. = 74
D.A. = 1.54 AC.
R.C.N. = 91
D.A. = 0.14 AC.
R.C.N. = 76
EX. D.A. = 1.30 AC.
R.C.N. = 74
D.A. = 1.88 AC.
R.C.N. = 74
GUTTER FLOW
210' AT 1.14%
FLOW PATH Tf = 0.06 HR.
FLOW PATH Tf = 0.02 HR.
PROP. SWALE
BOTTOM WIDTH = 4'
SIDE SLOPE = 3:1
TEMP. RIP RAP OUTFALL
SEE SHEET 2 OF 7
FOR PROFILES SEE SHEET 3 OF 7
JOSEPH J. HOCK, INC.
48 - 566
CONSTRUCTION BY OTHERS UNDER F-86-210
EX. 12" W
EX. 8" SAN.
EX. 15" S.D.
EX. 24" SD
PROP. 8" W. FIRE MAIN
PROP. 6" W. FIRE MAIN
PROP. 8" SAN.
PROP. 6" SAN.
MH A
MH 2
PRESTON COURT
PLAN
BALTIMORE WASHINGTON INDUSTRIAL PARK
PARCEL "O"
PLAT NO. 6523
4.44 AC±
EX. INLET 2% DRAINAGE & UTILITY EASEMENT
EX. 24" SD
EX. 8" SAN. CONT. NO. 24-1380-D
EX. 12" W CONT. NO. 24-1380-D
EX. 15" S.D. CONT. NO. 24-1380-D
EX. 8" SAN. CONT. NO. 24-1380-D
EX. 24" RCP
EX. 18" RCP
EX. 12" W
EX. 15" S.D.
EX. 8" SAN.