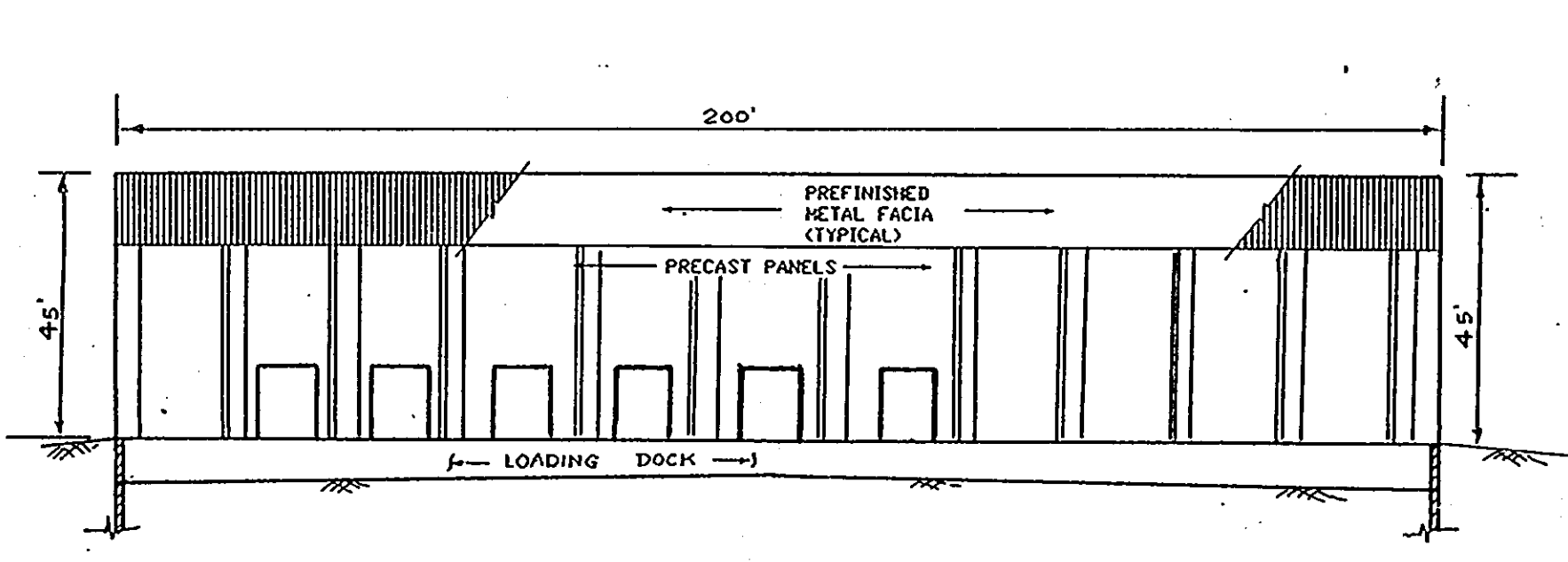
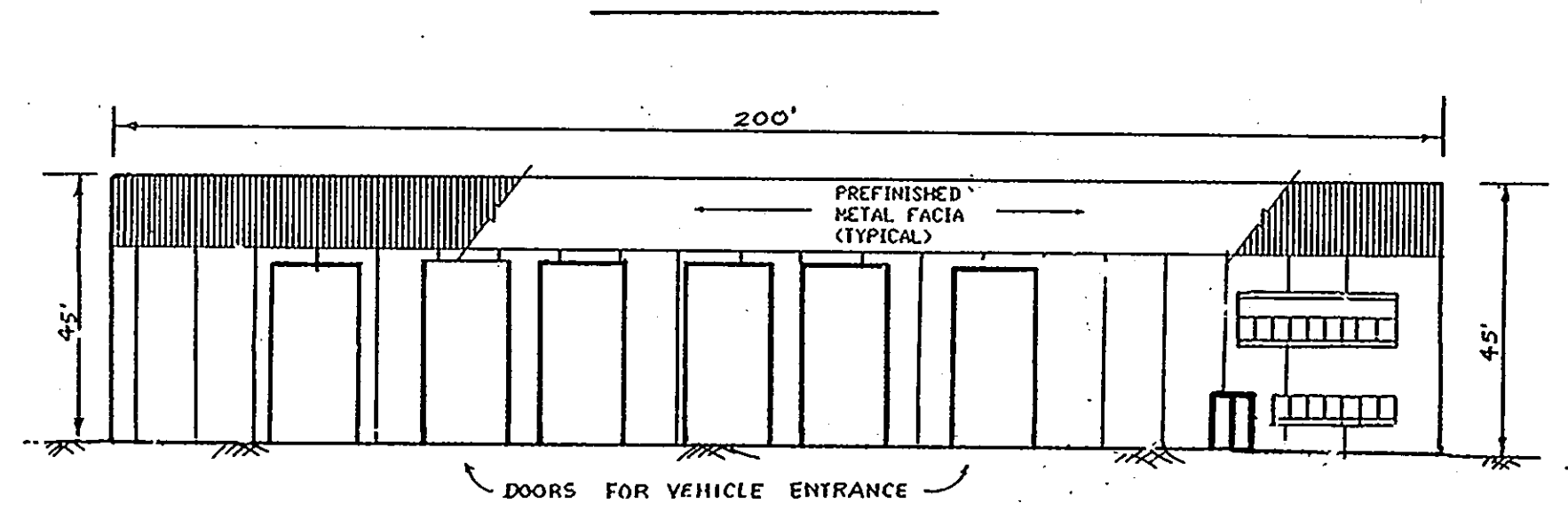


HANDICAPPED RAMP AND PARKING DETAIL  
NO SCALE

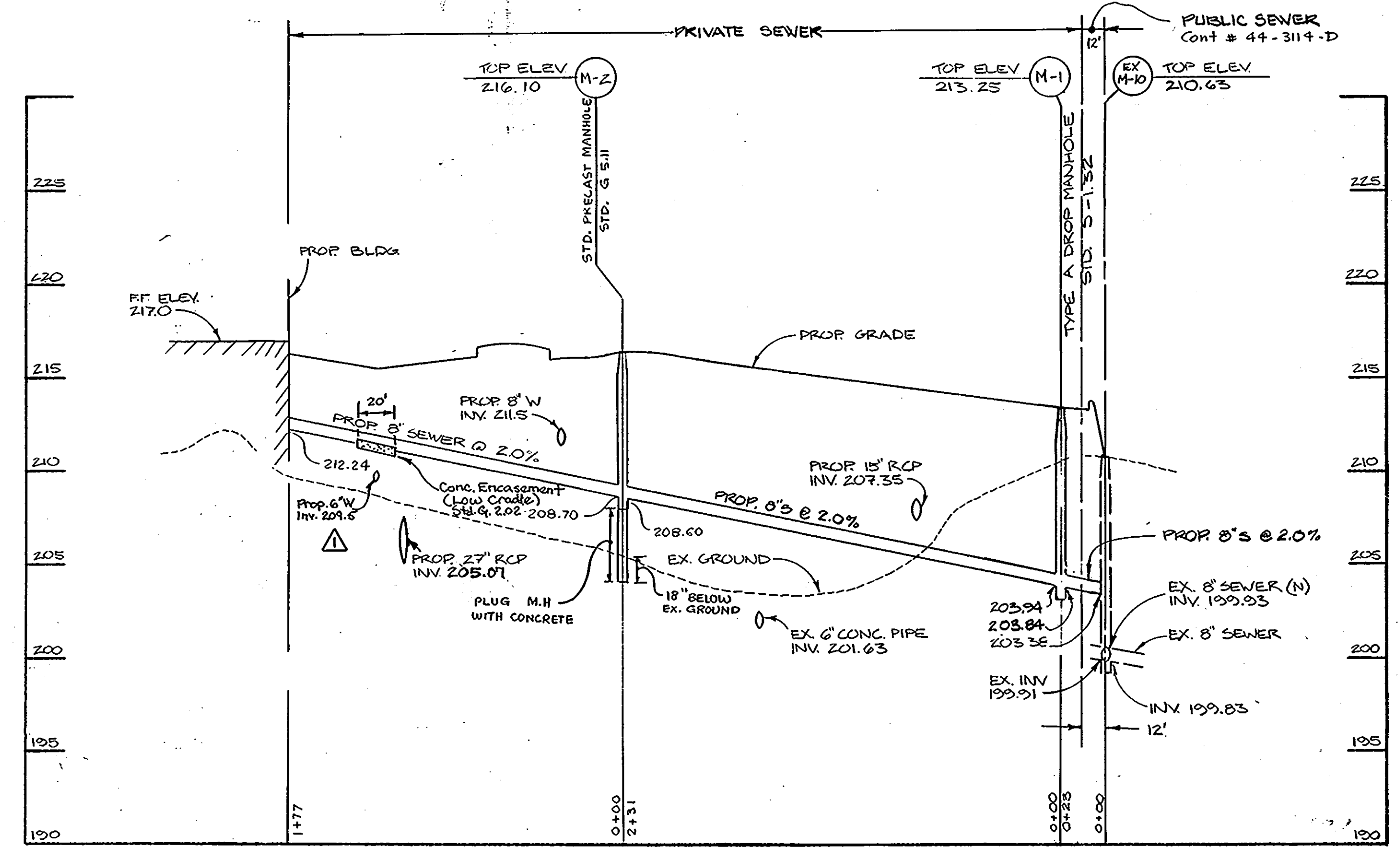


WEST ELEVATION

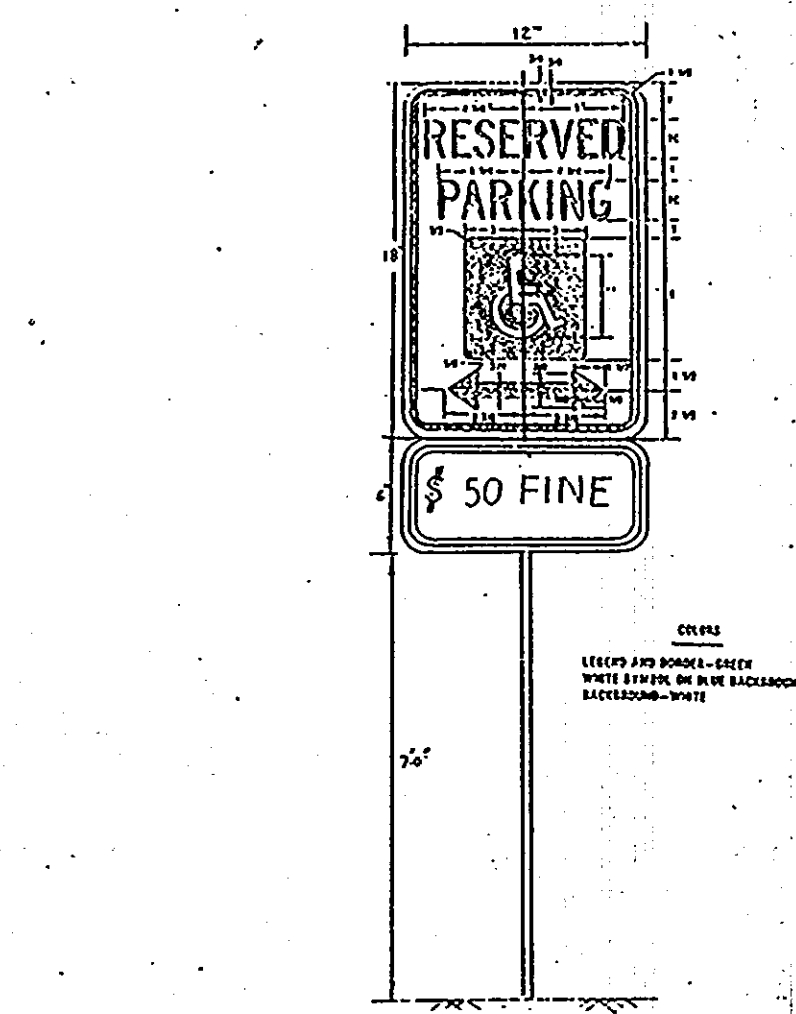


SOUTH ELEVATION

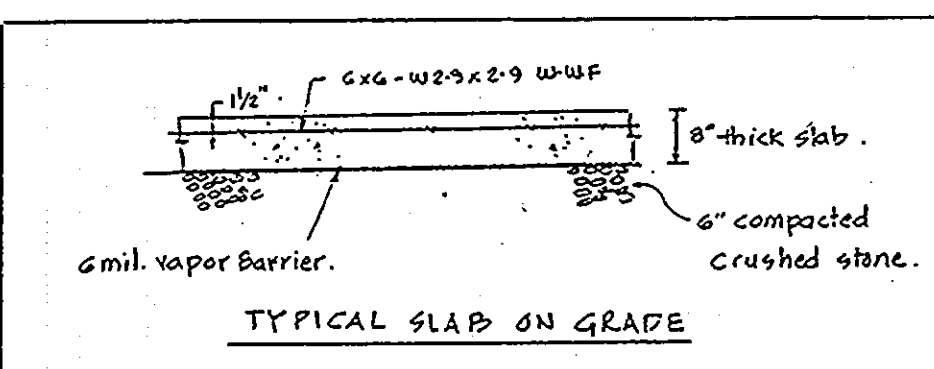
BUILDING PROFILE  
NO SCALE



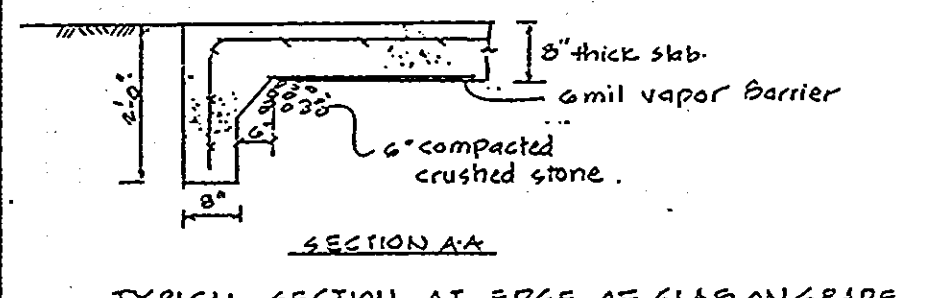
SEWER PROFILE  
SCALE VERT. 1"=5'  
HORIZ. 1"=50'



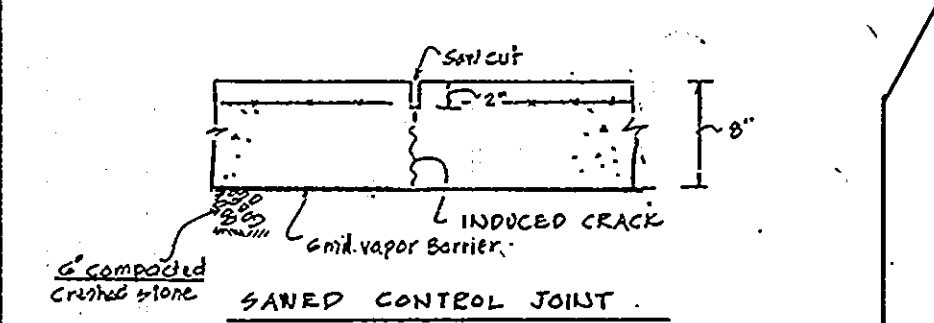
HANDICAPPED PARKING SIGN DETAIL  
(NO SCALE)



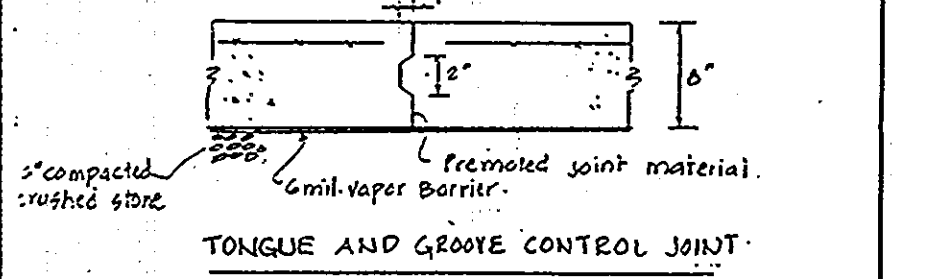
TYPICAL SLAB ON GRADE



TYPICAL SECTION AT EDGE OF SLAB ON GRADE



SAWED CONTROL JOINT

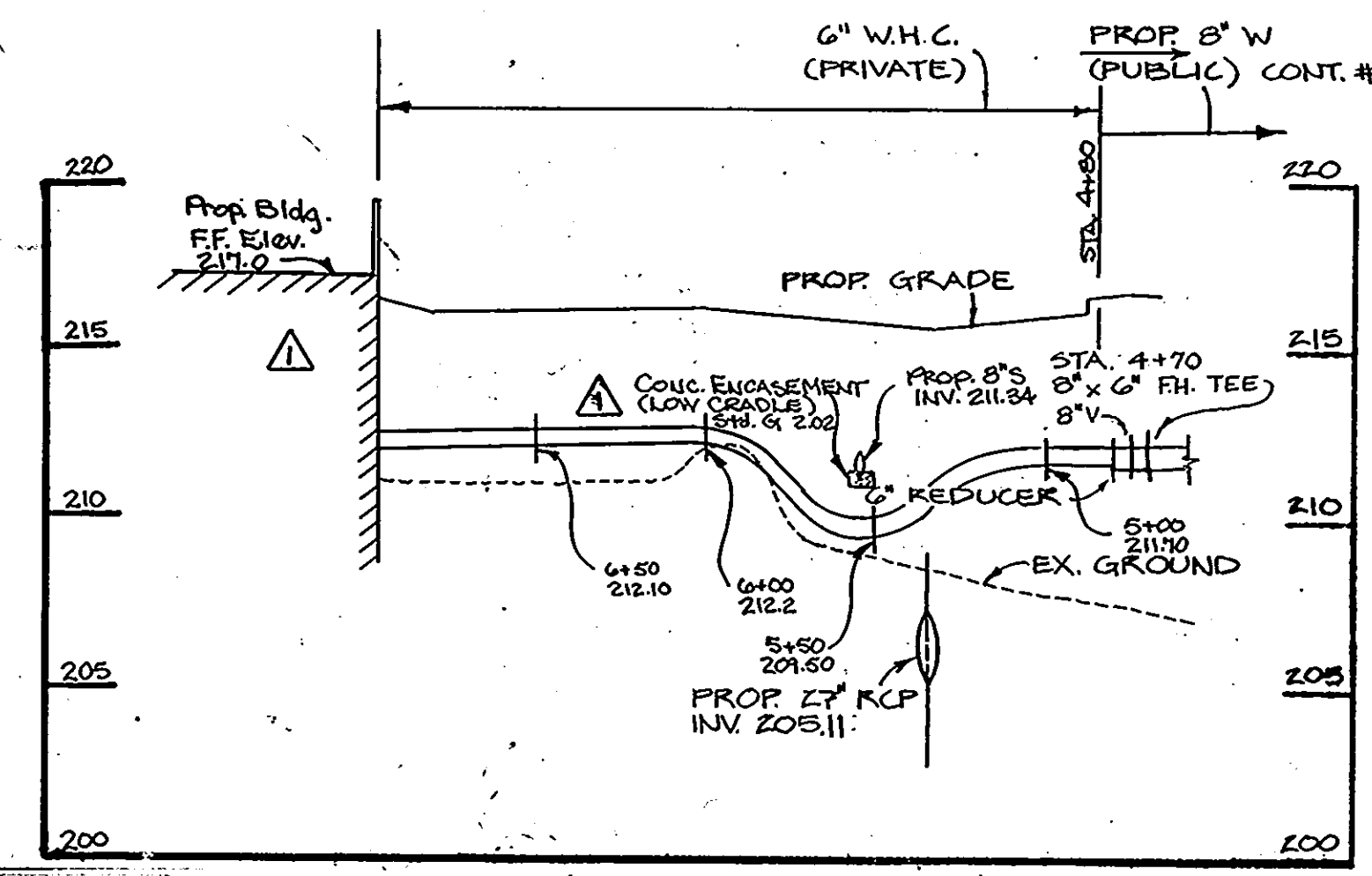


TONGUE AND GROOVE CONTROL JOINT

NOTE: in all control joints cut reinforcement which pass thru joints. See sheet 1 for Control Joint Spacing.

CONCRETE PAD DETAIL  
NO SCALE

NOTE: Pavement tie-in to existing parking area at east end of site to be per Section 2.3, given below. For all other pavement, 1 1/2" Bit Conc. Base may be reduced to 2 1/2" provided that 10" Crusher Run Base Course is used in lieu of 6" Crusher Run Base Course.



WATER PROFILE  
SCALE: 1"=5' VERTICAL  
1"=50' HORIZONTAL

ENGINEER'S CERTIFICATE  
I HEREBY 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.

DEVELOPER'S CERTIFICATE  
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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 OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY.

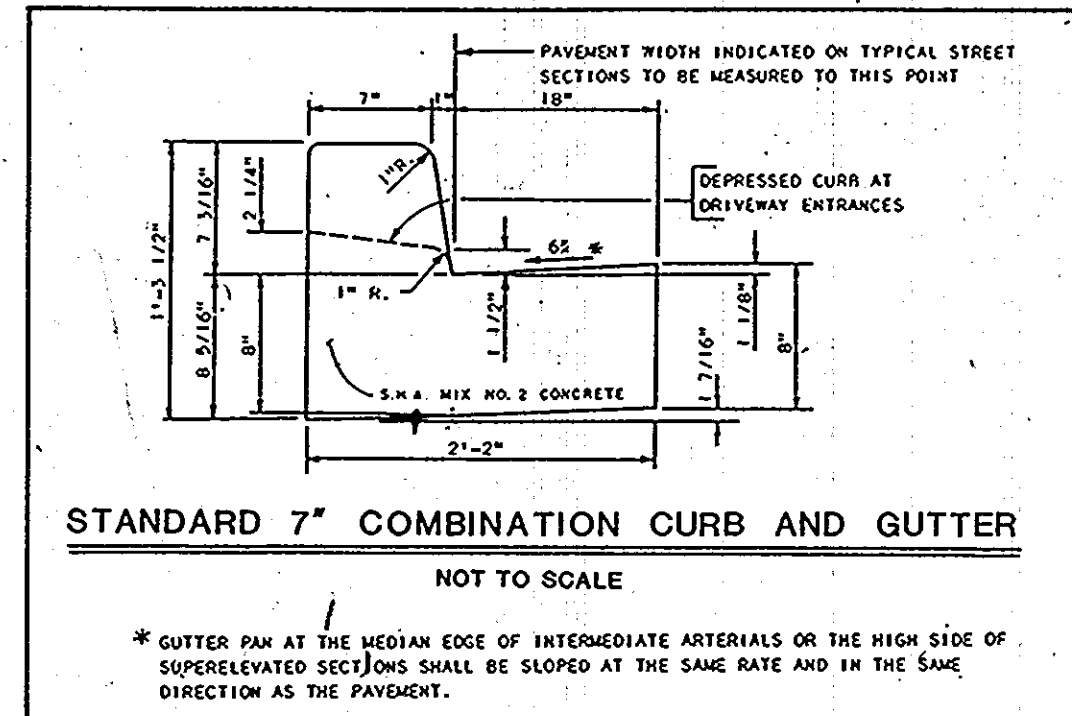
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
James M. Boyd  
COUNTY HEALTH OFFICER  
DATE: 6/17/91

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
James M. Boyd  
DIRECTOR  
DATE: 6/21/91

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
James M. Boyd  
DIRECTOR  
DATE: 6/17/91

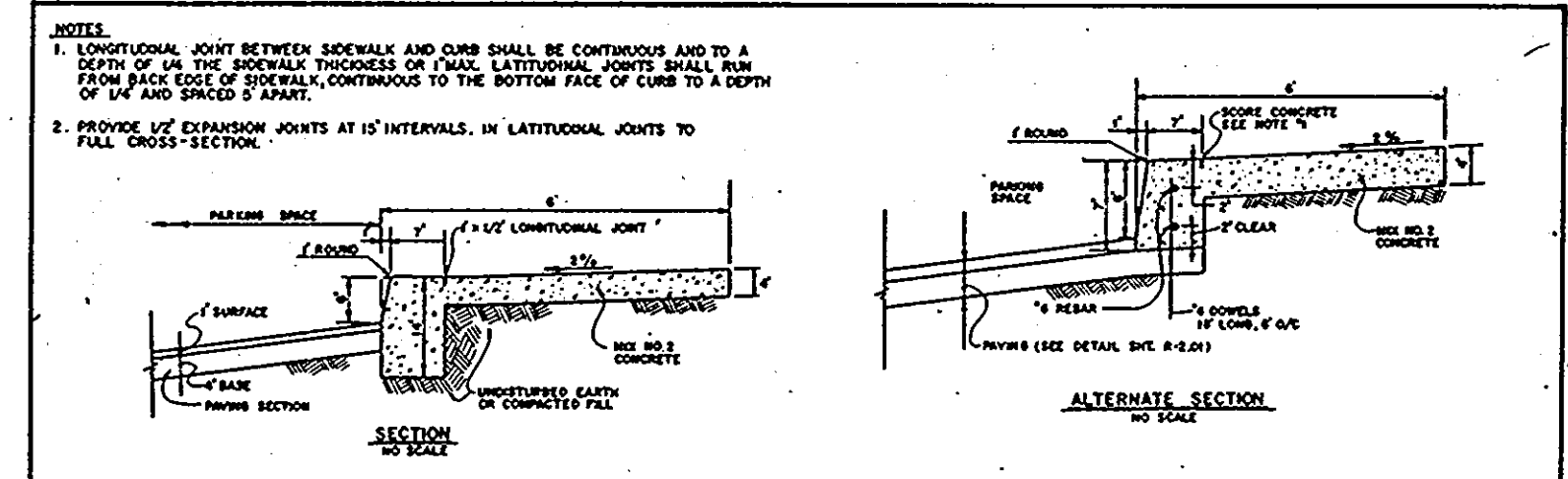
APPROVED: CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
Mark J. Reilly  
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
DATE: 6/20/91

APPROVED: CHIEF BUREAU OF ENGINEERING  
James M. Boyd  
DIRECTOR  
DATE: 4-8-91



STANDARD 7" COMBINATION CURB AND GUTTER  
NOT TO SCALE

\* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT.



ALTERNATE SECTION  
NO SCALE

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

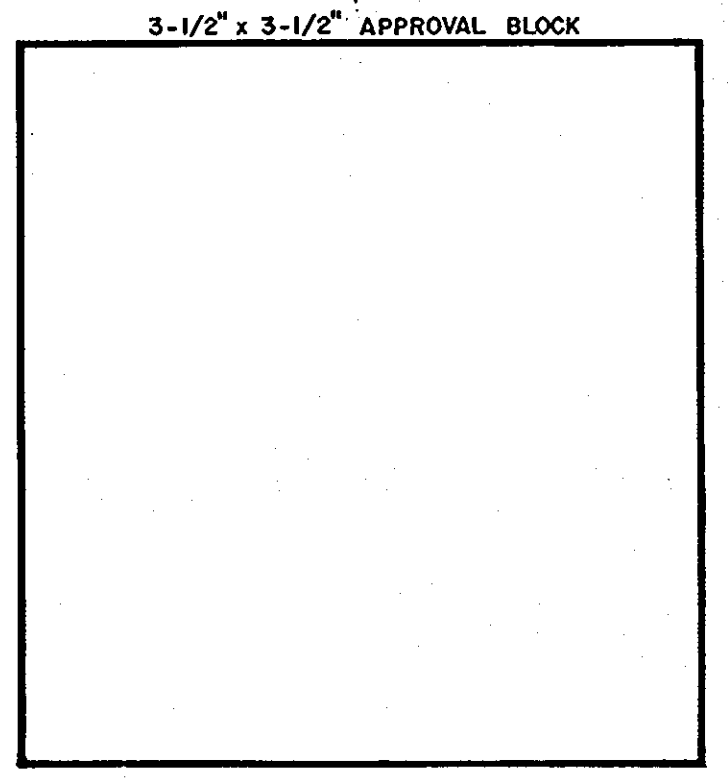
HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
MONOLITHIC CURB & SIDEWALK  
PRIVATE PARKING AREA  
PROJECT ENGR. KIRIT A. PATEL

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	FIXED DEPTH BIT. CONC. ALTERNATE	CONCRETE BASE ALTERNATE
P-1	INDUSTRIAL AND COMMERCIAL INDUSTRIAL CONC. WITH NO HEAVY TRUCKS INDUSTRIAL CONC. WITH HEAVY TRUCKS INDUSTRIAL CONC. WITH HEAVY TRUCKS INDUSTRIAL CONC. WITH HEAVY TRUCKS	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-2	INDUSTRIAL AND COMMERCIAL INDUSTRIAL CONC. WITH NO HEAVY TRUCKS INDUSTRIAL CONC. WITH HEAVY TRUCKS INDUSTRIAL CONC. WITH HEAVY TRUCKS	1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE
P-3	RESIDENTIAL ZONES CONCRETE DRIVEWAYS CONCRETE DRIVEWAYS CONCRETE DRIVEWAYS	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-4	CONCRETE DRIVEWAYS CONCRETE DRIVEWAYS CONCRETE DRIVEWAYS	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE  
DATE: 4-2-91

HOWARD SOIL CONSERVATION DISTRICT  
DATE: 3/28/91

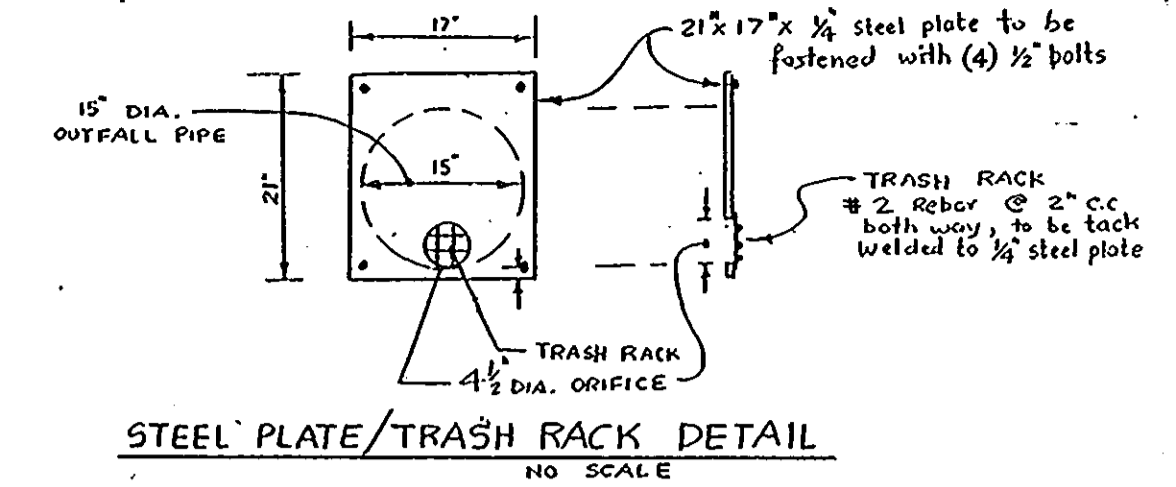
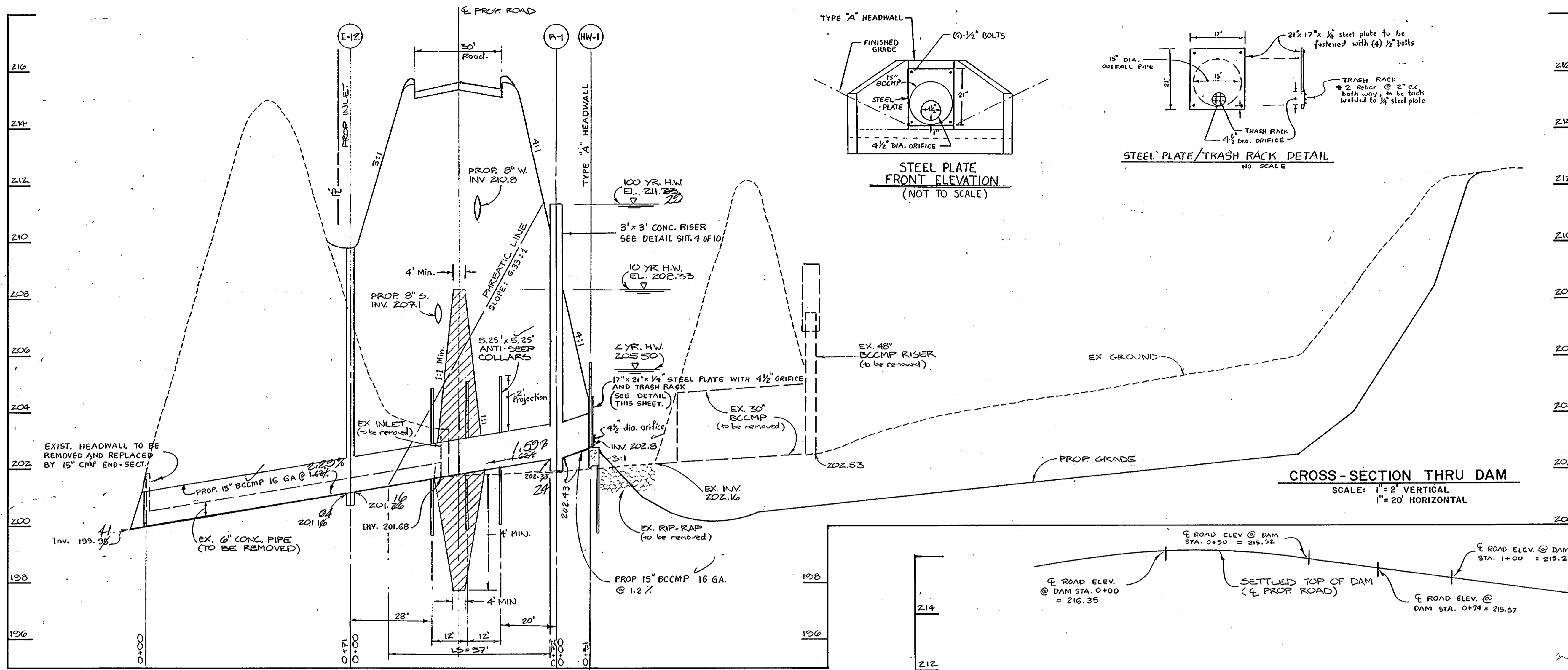


DESIGNED	DATE	DATE	BY	DESCRIPTION
K.A.P.		8-30-91	S.G.P.	Revised Profile for 6" W.C.
DRAWN	DATE	8-30-91	S.G.P.	Provided location of 6" W.C. and Revised 27" RCP Invert Elev. & Location
CHECKED	DATE	8-30-91	R.M.C.	Added Pipe for Sewerage
APPROVED	DATE	8-30-91	R.M.C.	Revised Handicapped Ramp and Parking Detail

**ENGINEERING TECHNOLOGIES ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS  
3458 ELLICOTT CENTER DRIVE SUITE 101  
ELLICOTT CITY, MD. 21043  
(301) 461-9920

**Browning-Ferris Industries**  
GATEWAY INTERNATIONAL BUILDING  
1302 CONCOURSE DRIVE  
LINTHICUM, MARYLAND 21090  
(301) 850-7444

**WATER & SEWER PROFILE AND DETAILS**  
**RECYCLING FACILITY**  
1<sup>ST</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
TAX MAP : 43 PARCEL : 599 & 624 BLOCK : 4  
SCALE: AS SHOWN CONTRACT NO. 90200.20 DATE: 10/90 SHEET: 2 of 10  
SDP # 91-50

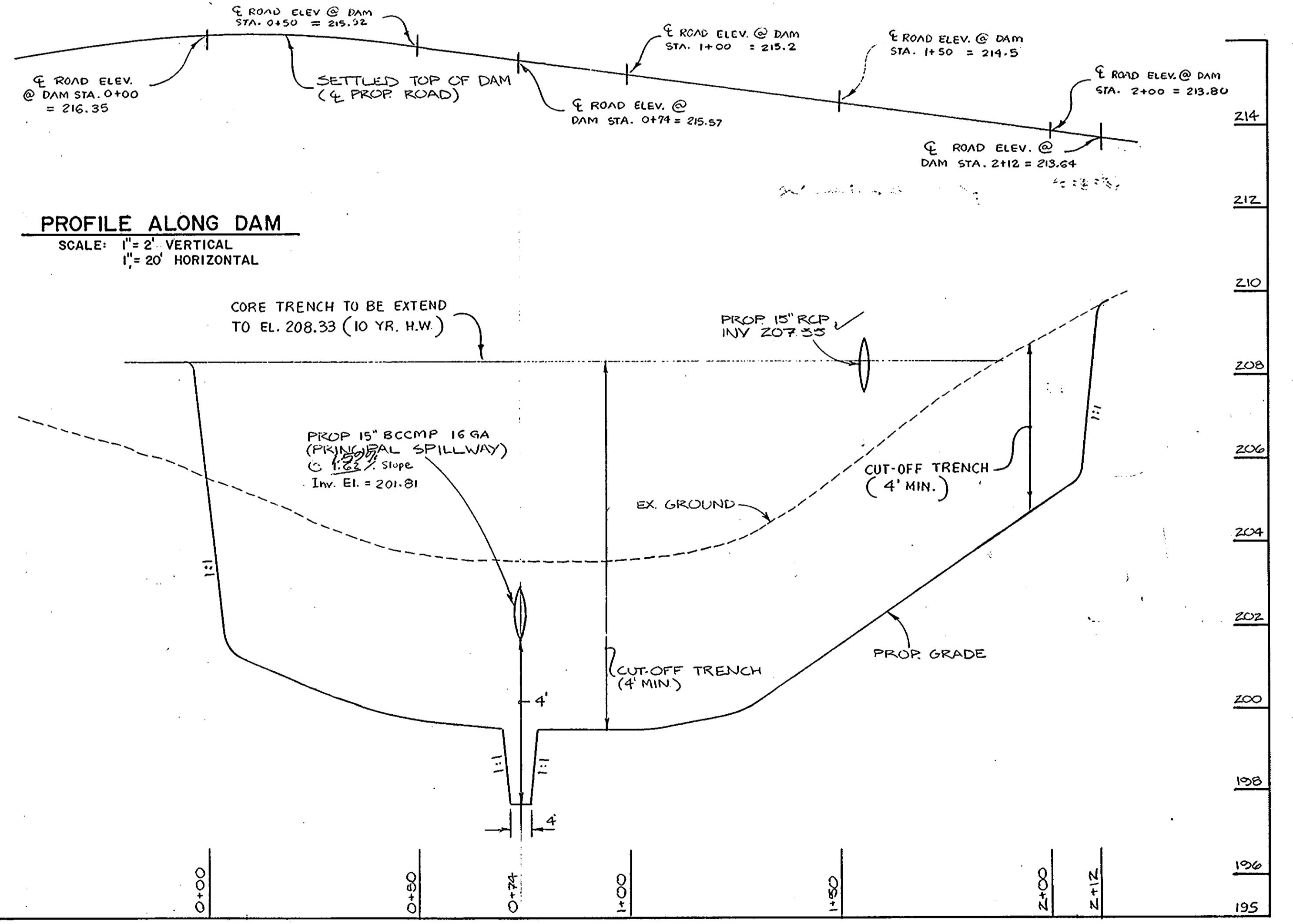


(1) By the Developer:  
 "I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."  
 Signature: *Jim Stone* Date: 3/25/91  
 Print name below signature: JIM STONE

(2) 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."  
 Signature: *Dr. K. S. Khatun* Date: 3/21/91  
 Print name below signature: DR. KATHURIA

(3) 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.  
 Signature: *James M. Holden* Date: 4-2-91  
 U.S. Soil Conservation Service

(4) These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.  
 Signature: *Robert J. Zeln* Date: 3/28/91  
 Howard Soil Conservation District



**ENGINEER'S CERTIFICATE**  
 I HEREBY 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 HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 Signature: *Dr. K. S. Khatun* Date: 3/21/91  
 SIGNATURE OF ENGINEER DATE

**DEVELOPER'S CERTIFICATE**  
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."  
 Signature: *Jim Stone* Date: 3/25/91  
 SIGNATURE OF DEVELOPER DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 County Health Officer: *Joseph Boyle* Date: 6-17-91

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 Planning Director: *Joseph Khatun* Date: 6/21/91

APPROVED: CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
 Chief: *James M. Holden* Date: 6/21/91

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Director: *James M. Holden* Date: 6/21/91

APPROVED: CHIEF BUREAU OF ENGINEERING  
 Chief: *James M. Holden* Date: 4-2-91

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
 Signature: *James M. Holden* Date: 4-2-91  
 U.S. Soil Conservation Service

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Howard Soil Conservation District

3-1/2" x 3-1/2" APPROVAL BLOCK  
 PROJECT ENGR. HIRSH A. PATEL

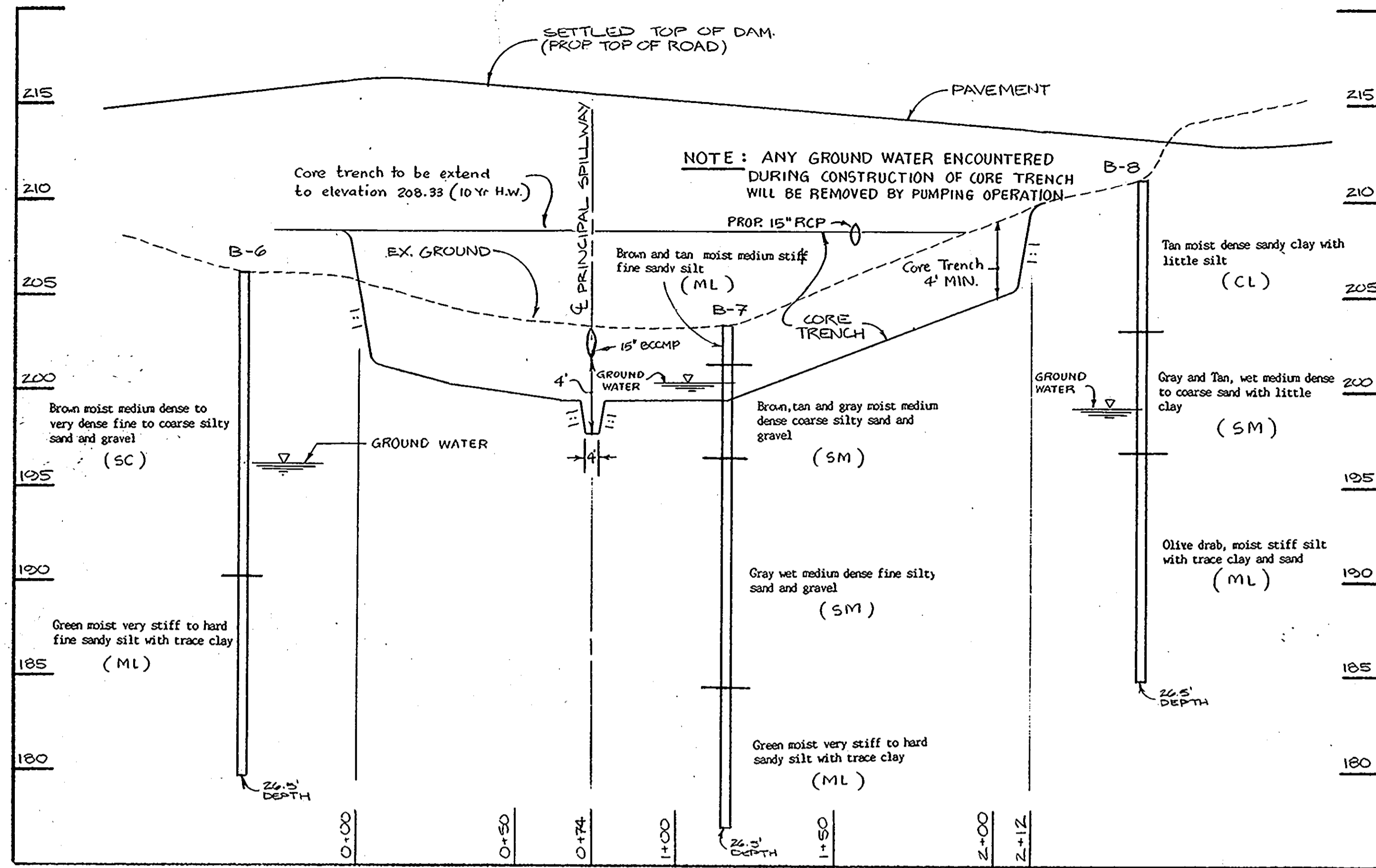
**POND CERTIFICATION**  
 THIS AS-BUILT IS ACCURATE AND COMPLETE AND THE POND AS CONSTRUCTED MEETS THE REQUIREMENTS OF THE STANDARDS AND SPECIFICATIONS FOR PONDS.  
 Signature: *Rodney H. Williams*  
 Rodney H. Williams  
 STATE OF MARYLAND  
 PROFESSIONAL LAND SURVEYOR

DESIGNED	K.A.P.	DATE	DATE	BY	DESCRIPTION
DRAWN	M.C.R.	DATE	8-10-90	RMC	REVISIONS: CHECKS SUBMITTAL DAM ELEVATION NOTE
CHECKED		DATE			
APPROVED		DATE			

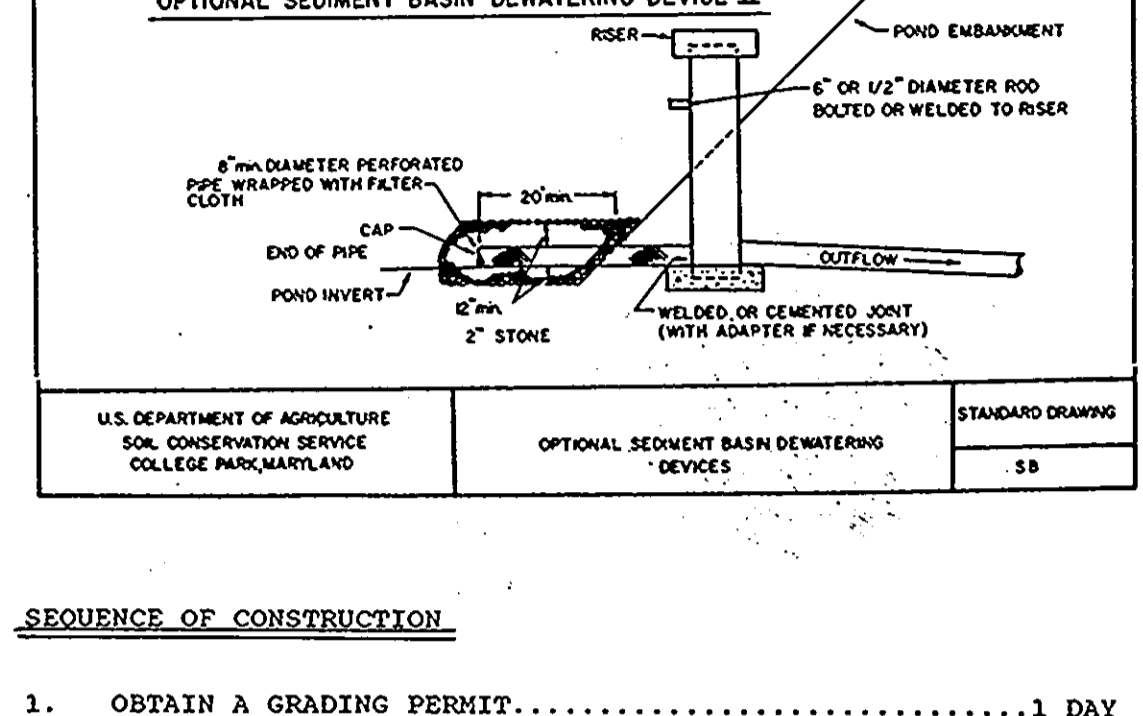
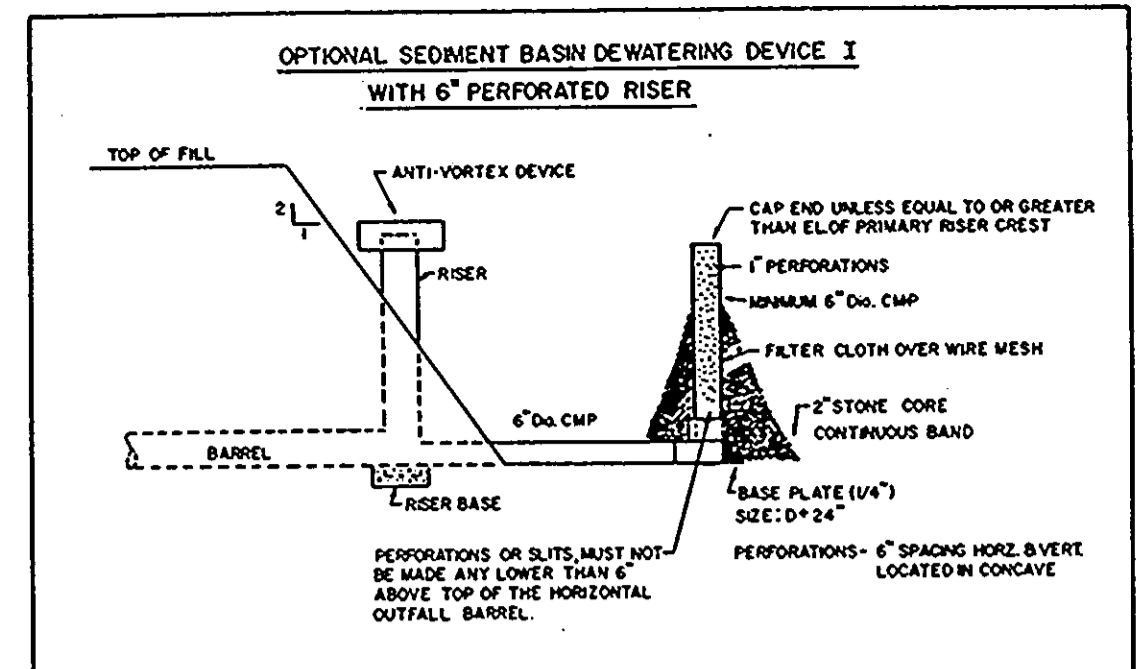
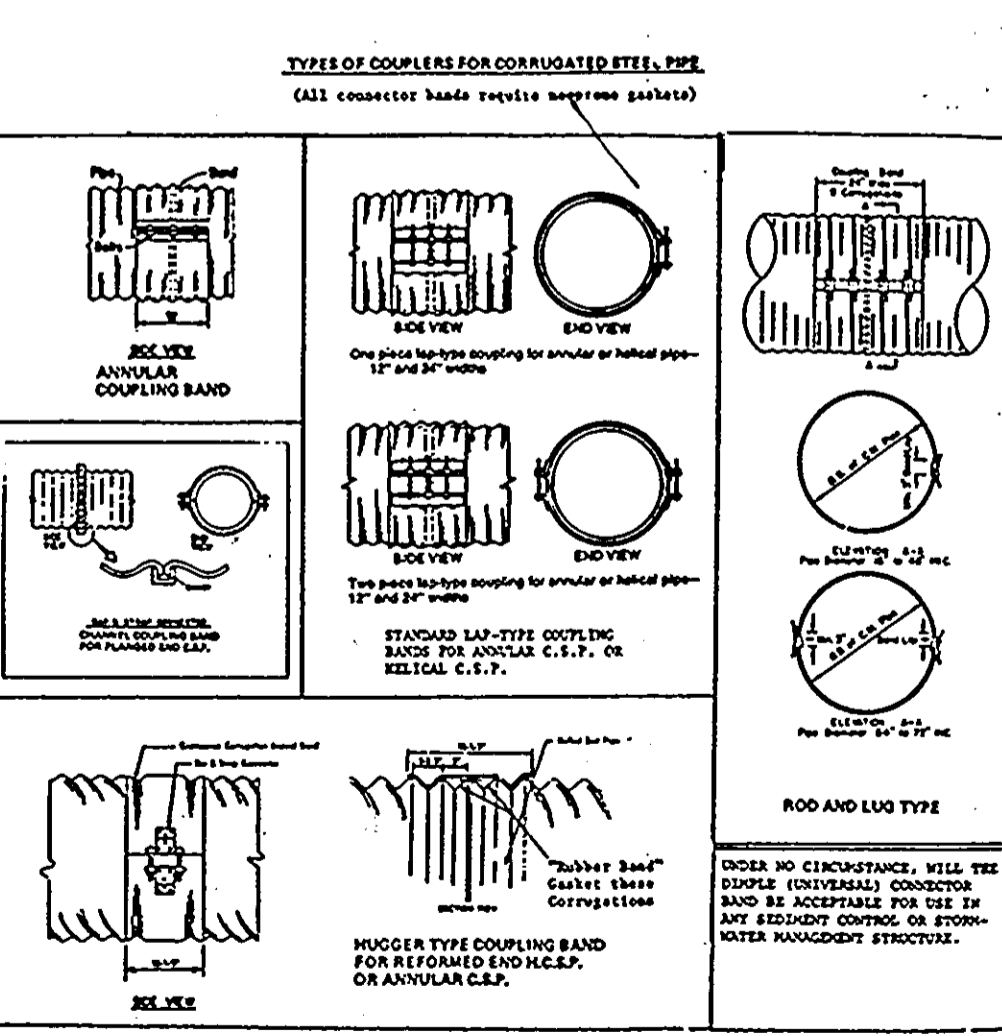
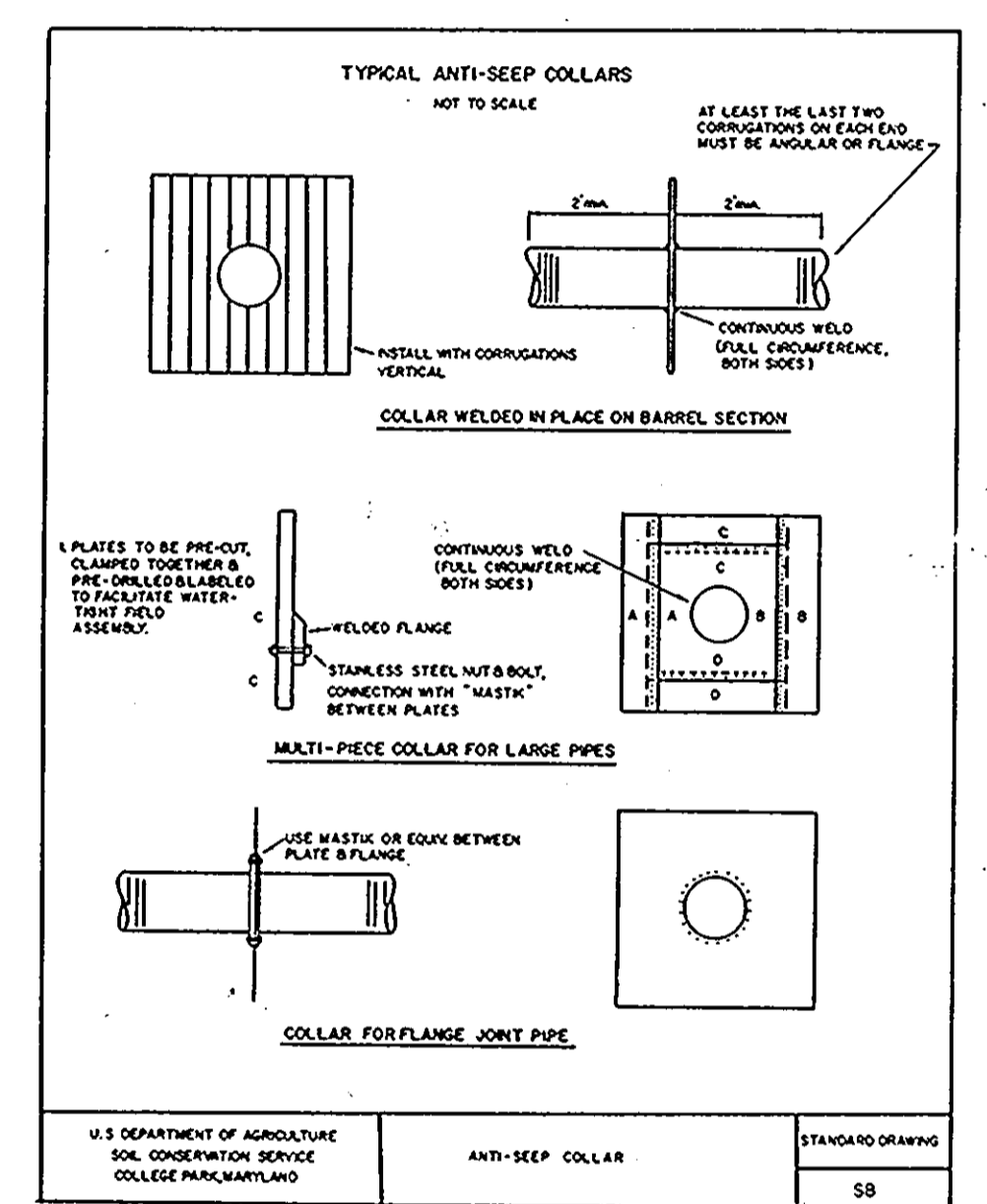
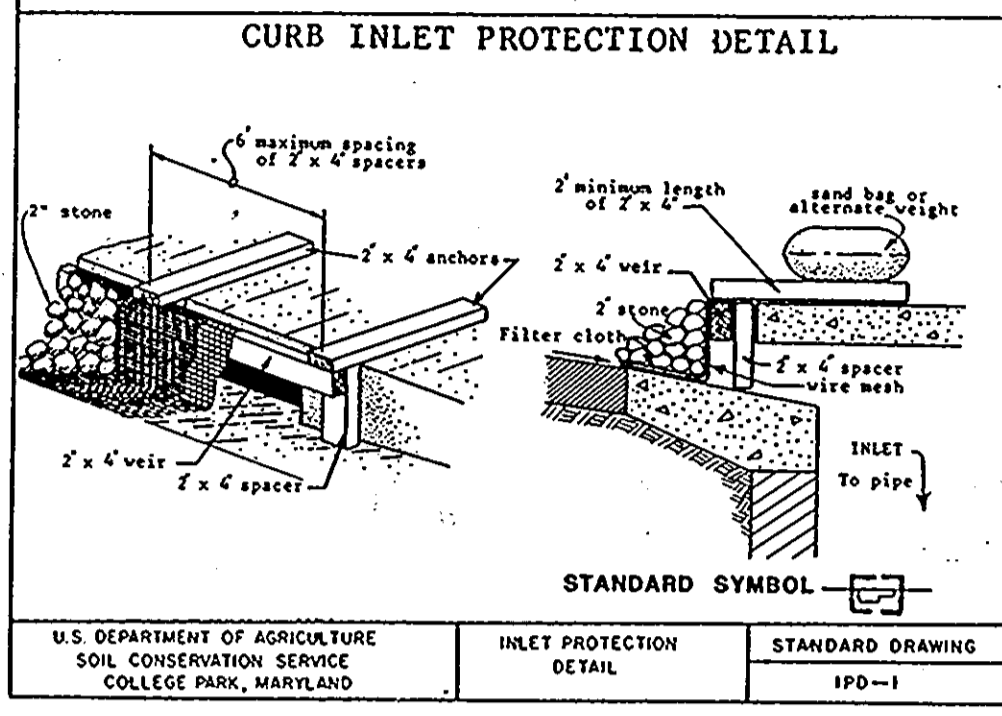
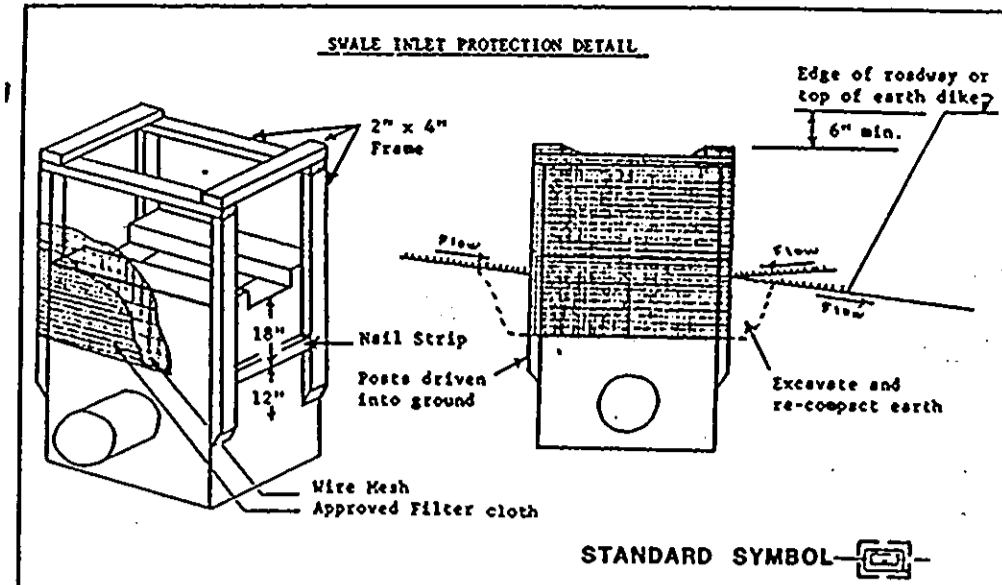
**ENGINEERING TECHNOLOGIES ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3458 ELLICOTT CENTER DRIVE SUITE 101  
 ELLICOTT CITY, MD. 21043  
 (301) 461-9920

**Browning-Ferris Industries**  
 GATEWAY INTERNATIONAL BUILDING  
 1302 CONCOURSE DRIVE  
 LINTHICUM, MARYLAND 21090  
 (301) 850-7444

**CROSS-SECTION AND PROFILE OF DAM**  
**RECYCLING FACILITY**  
 1<sup>ST</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 TAX MAP : 43 PARCEL : 599 & 624 BLOCK : 4  
 SCALE: AS SHOWN CONTRACT NO. 90200.20 DATE: 10/90 SHEET: 3 of 10  
 SDP # 91-50



**EMBankment Profile**  
SCALE: 1" = 5' VERTICAL  
1" = 30' HORIZONTAL



**SEQUENCE OF CONSTRUCTION**

- OBTAIN A GRADING PERMIT.....1 DAY
- CLEAR AND GRUB THE MINIMUM AREA REQUIRED TO INSTALL SEDIMENT CONTROL MEASURES.....2 DAYS
- INSTALL ALL THE SEDIMENT CONTROL MEASURES AS SHOWN ON PLAN INCLUDING STONE CONSTRUCTION ENTRANCE.....1 WEEK
- CLEAR AND GRUB THE AREAS WITHIN LIMITS OF DISTURBANCE.....2 WEEKS
- ROUGH GRADE THE SITE. TEMPORARY ROAD SHALL BE USED TO ACCESS THE CONSTRUCTION AREA WHERE SHOWN ON THE PLAN.....3 WEEKS
- CONSTRUCT THE STORM DRAIN SYSTEM AND UTILITIES TO THE EXTENT POSSIBLE. CONSTRUCT THE BUILDING, PARKING LOT AND SIDEWALKS. COMPLETE GRADING WITHIN THE DRAINAGE AREA TO THE SEDIMENT TRAP TO THE EXTENT POSSIBLE.....4 MONTHS
- EXTEND EXISTING 6" CONC. PIPE AND INSTALL CONTROL STRUCTURE (R-1). CONSTRUCT THE 15" RCP INLET TO R-1. BLOCK PIPE AS REQUIRED AND CONSTRUCT THE STORMWATER MANAGEMENT POND EMBANKMENT AND COMPLETE APPURTENANT STORM DRAIN AND UTILITY CONSTRUCTION.....1 WEEK
- COMPLETE STORMWATER MANAGEMENT POND CONSTRUCTION AND ANY REMAINING STORM DRAIN AND UTILITY WORK. SEDIMENT LADEN RUNOFF SHALL BE DIVERTED TO THE STORMWATER MANAGEMENT POND TO THE MAXIMUM POSSIBLE EXTENT. COMPLETE ALL PAVED AREAS TO FINISHED GRADE AND VEGETATIVELY STABILIZE ALL APPLICABLE AREAS IN ACCORDANCE WITH THE PLANS.....2 WEEKS
- REMOVE ALL SEDIMENT CONTROL MEASURES UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR AND STABILIZE THE AFFECTED AREA WITH PERMANENT VEGETATION.....2 DAYS

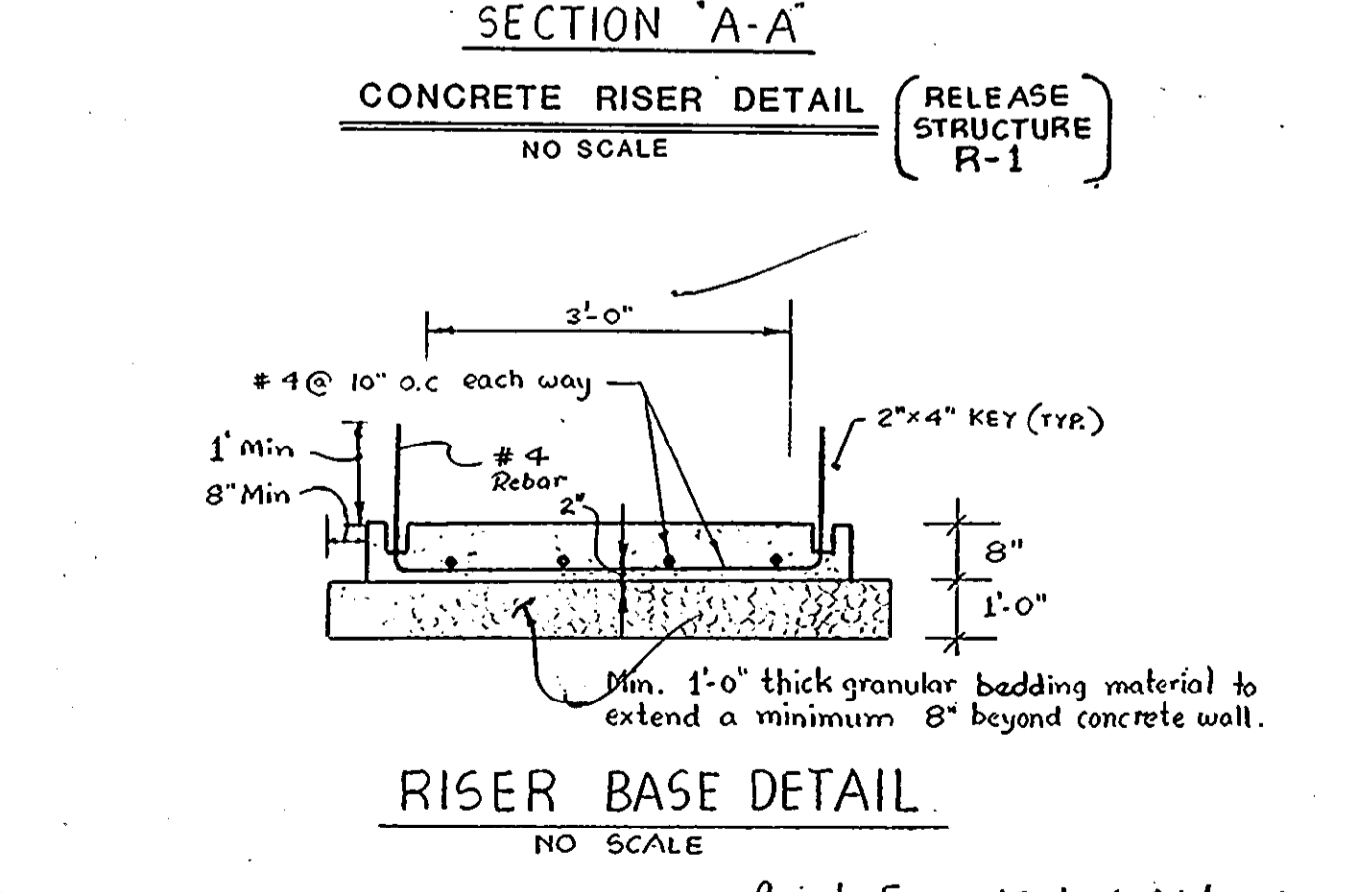
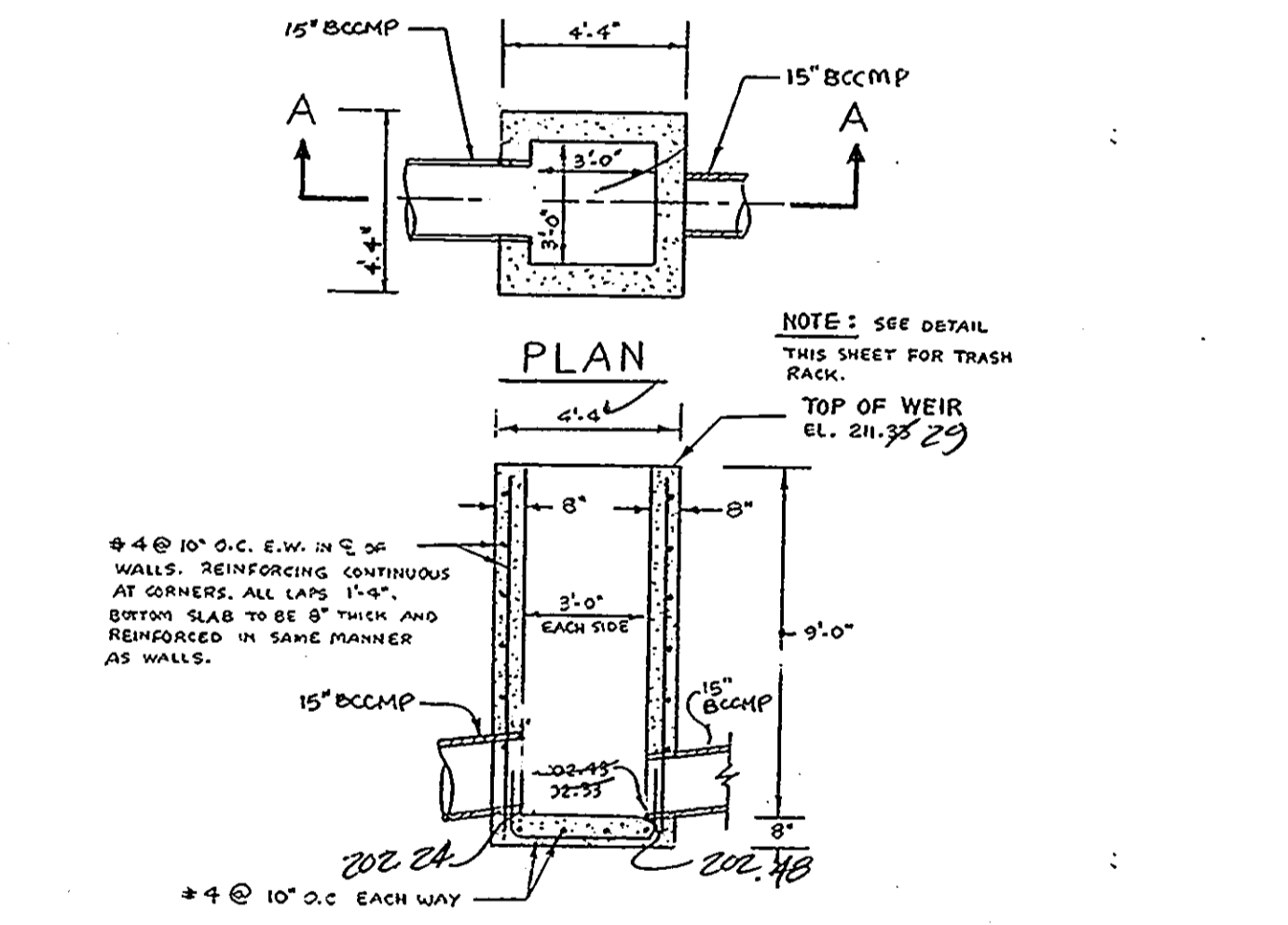
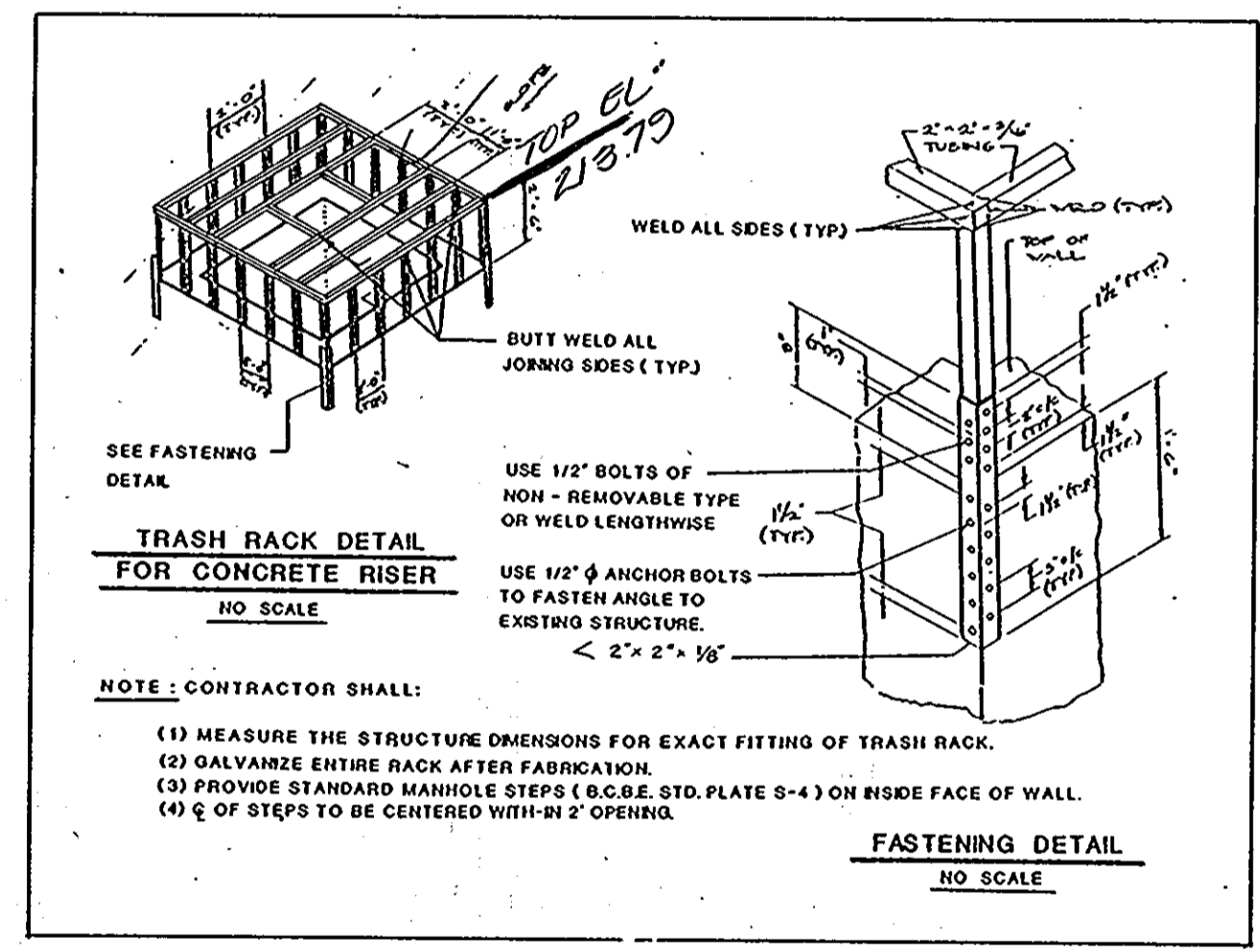
**SEDIMENT CONTROL & POND CONSTRUCTION**

(1) By the Developer:  
"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 Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."  
Signature of Developer: Jim Stone Date: 3/25/91  
Print name below signature: JIM STONE

(2) 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."  
Signature of Engineer: Vir Kathuria Date: 3/22/91  
Print name below signature: VIR KATHURIA

(3) 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.  
Signature: Robert W. Ziehm Date: 4-2-91  
U.S. Soil Conservation Service

(4) These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.  
Signature: Robert W. Ziehm Date: 4-2-91  
Howard Soil Conservation District



**POND CERTIFICATION**  
THIS AS-BUILT IS ACCURATE AND COMPLETE AND THE POND AS CONSTRUCTED MEETS THE REQUIREMENTS OF THE STANDARDS AND SPECIFICATIONS FOR PONDS.  
Signature: Rodney M. Johnson  
Project Engr. - Civit A Patel

**ENGINEER'S CERTIFICATE**  
I HEREBY 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.  
Signature of Engineer: Vir Kathuria Date: 3/22/91

**DEVELOPER'S CERTIFICATE**  
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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 OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY."  
Signature of Developer: Jim Stone Date: 3/25/91

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
Signature: Joyan Boyd Date: 6-17-91  
COUNTY HEALTH OFFICER

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
Signature: James Smith Date: 6/21/91  
PLANNING DIRECTOR

APPROVED: CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
Signature: James Smith Date: 6/21/91  
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Signature: James Smith Date: 6/17/91  
DIRECTOR

APPROVED: CHIEF BUREAU OF ENGINEERING  
Signature: James Smith Date: 4-8-91  
CHIEF BUREAU OF ENGINEERING

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
Signature: Robert W. Ziehm Date: 3/20/91  
U.S. Soil Conservation Service  
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

3-1/2" x 3-1/2" APPROVAL BLOCK

DESIGNED	K.A.P.	DATE	DATE	BY	DESCRIPTION
DRAWN	M.C.R.V.	DATE	4-11-91	RMC	REVIEW FASTENING DETAIL & SECTION A-A, RISER DETAIL & POND CERTIFICATION NOTE
CHECKED		DATE			
APPROVED		DATE			

**ENGINEERING TECHNOLOGIES ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS  
3458 ELLICOTT CENTER DRIVE SUITE 101  
ELLICOTT CITY, MD. 21043  
(301) 461-9920

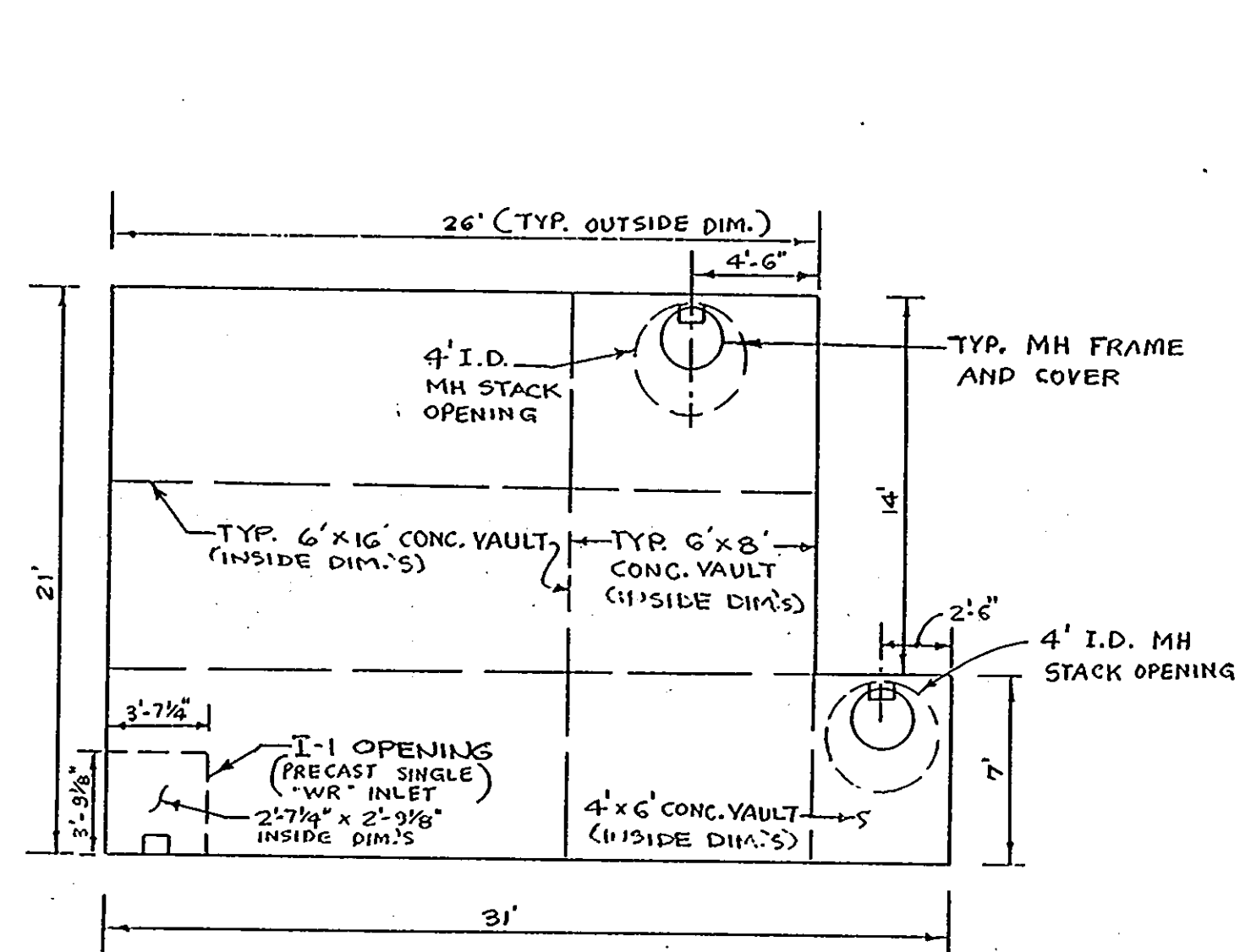
**Browning-Ferris Industries**  
GATEWAY INTERNATIONAL BUILDING  
1302 CONCOURSE DRIVE  
LINTHICUM, MARYLAND 21090  
(301) 850-7444

**NOTES AND DETAILS**

**RECYCLING FACILITY**

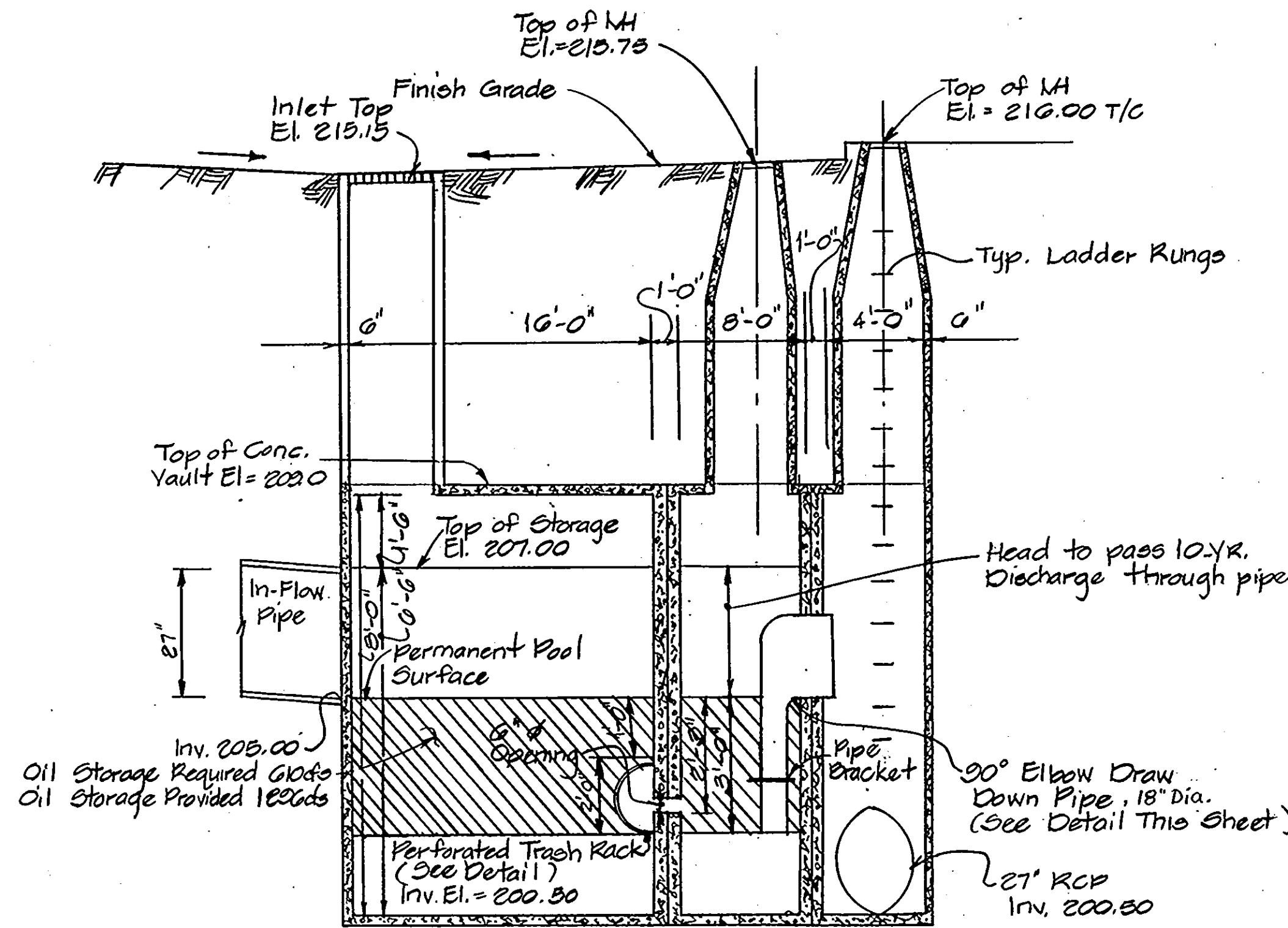
1<sup>st</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
TAX MAP : 43 PARCEL : 599 & 624 BLOCK : 4

SCALE: CONTRACT NO. 90200.20 DATE: 10/90 SHEET: 4 of 10  
SDP # 91-50

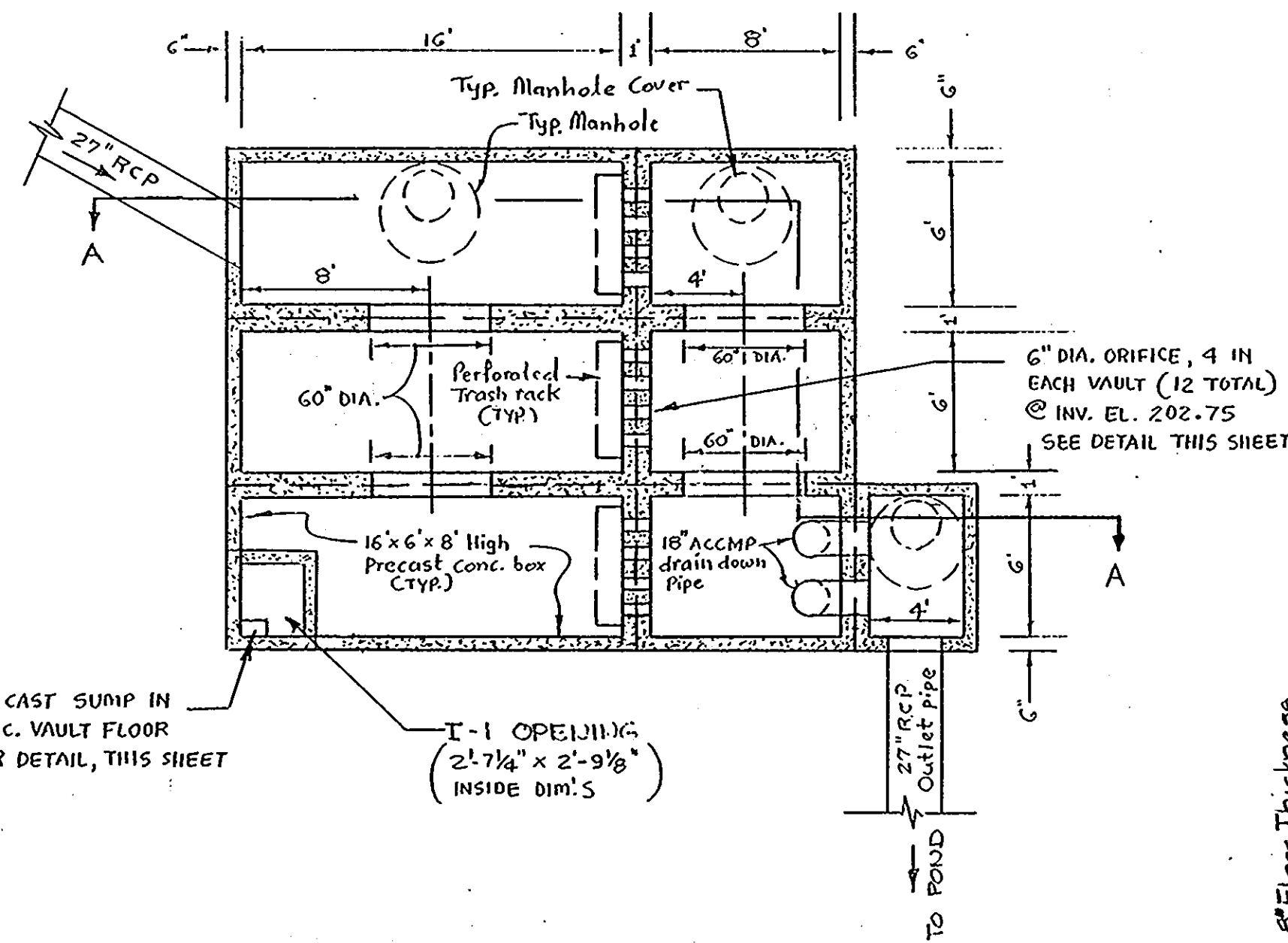


NOTE: LADDER RUNGS TO BE PRECAST @ 1' VERT. SPACING INTO INLET, MANHOLE STACKS AND CONCRETE VAULTS.

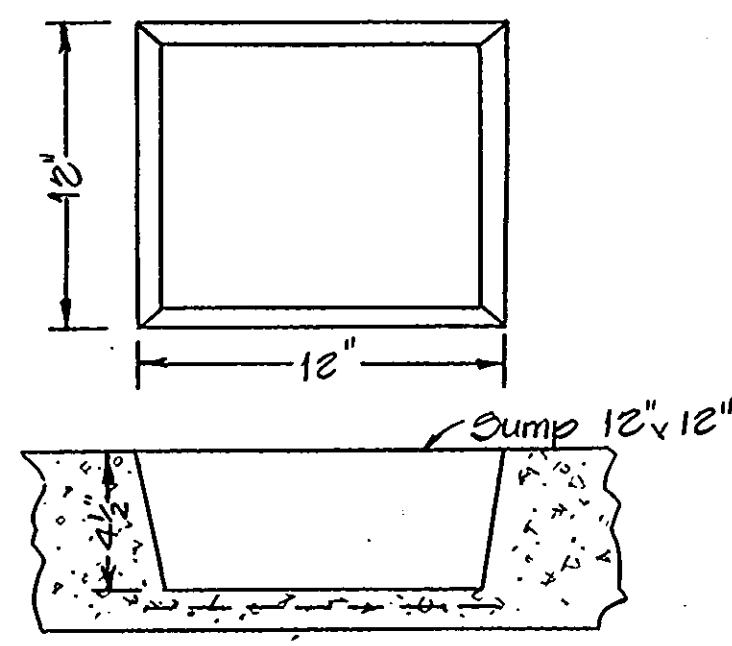
**PLAN VIEW**  
Scale: 1" = 6'-0"



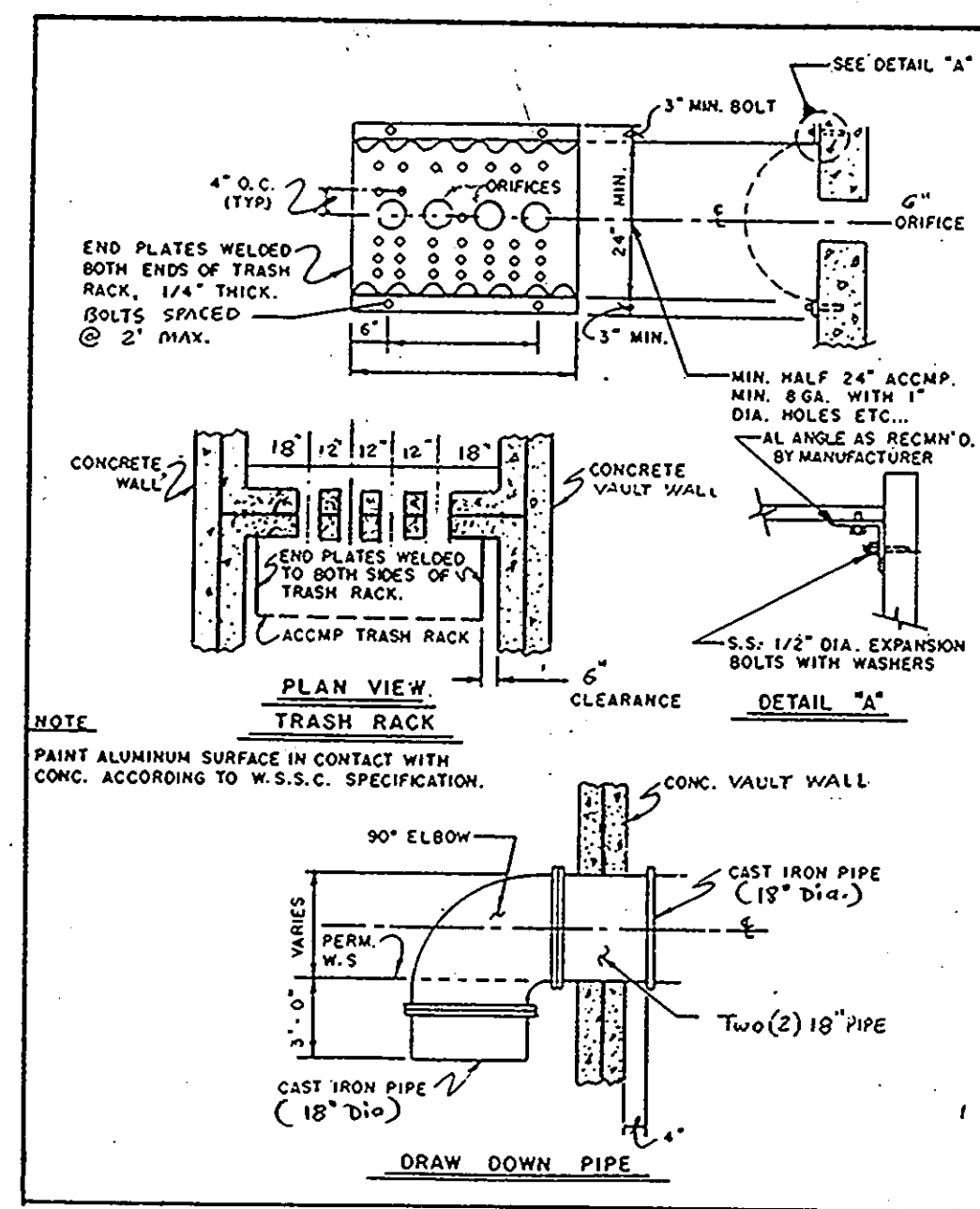
**SECTION - "A-A"**  
Not to Scale



**SECTION THRU PLAN VIEW**  
Scale: 1" = 6'-0"



**SUMP DETAIL**  
Not to Scale



**DRAW DOWN PIPE AND TRASH RACK DETAIL**  
Not to Scale

- OIL/GRIT SEPARATOR GENERAL NOTES**
- STRUCTURE MAY BE POURED IN PLACE, PROVIDING THAT DIMENSIONAL REQUIREMENTS ARE MET. INTERIOR WALLS WITH 60" DIAMETER OPENINGS MAY NOT BE REQUIRED. SHOP DRAWINGS FOR A STRUCTURE TO BE POURED IN PLACE MUST BE APPROVED BY THE ENGINEER.
  - OIL/GRIT SEPARATOR AS SHOWN IS TO BE CONSTRUCTED FROM PRECAST CONCRETE VAULTS. MANUFACTURER SHALL BE ROTONDO/PENN-CAST OR EQUAL AS APPROVED BY THE ENGINEER. THE FOLLOWING CRITERIA SHALL BE USED IN CONSTRUCTION:
    - SUBGRADE FOR THE STRUCTURE SHALL BE PREPARED AS DIRECTED BY THE ENGINEER.
    - CONCRETE VAULTS SHALL BE PRECAST WITH OPENINGS AS SHOWN. VAULTS SHALL BE PLACED SO THAT WALLS ARE FLUSH AND OPENINGS ARE IN PROPER ALIGNMENT. AT ALL ORIFICE AND PIPE OPENINGS, WATERTIGHT SEALS SHALL BE PROVIDED AND INSTALLED PER NPC, INC. OR EQUAL, AS APPROVED BY THE ENGINEER.
    - MANHOLE STACKS SHALL BE PRECAST WITH CONCENTRIC BATTER SECTION FROM 2" INSIDE DIAMETER TO 4" INSIDE DIAMETER. 4" DIAMETER CONCRETE STACKS SHALL BE PLACED FLUSH WITH CONCRETE VAULT OPENINGS. MANHOLE STACKS SHALL BE PER ATLANTIC MANHOLES INC. OR ENGINEER'S APPROVED EQUAL.
    - PRECAST CONCRETE INLET AND MANHOLE STACKS SHALL BE CONNECTED TO CONCRETE VAULT OPENING WITH FLEXIBLE BUTYL RESIN SEALANT, PER AASHTO M-198B, AS RECOMMENDED BY CONCRETE VAULT MANUFACTURER.

**ENGINEER'S CERTIFICATE**  
I HEREBY 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.

*D. Walsh* 3/22/91  
SIGNATURE OF ENGINEER DATE

**DEVELOPER'S CERTIFICATE**  
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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. ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

*Jim Stone* 3/25/91  
SIGNATURE OF DEVELOPER DATE

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

*Joseph M. Boyden* 6-17-91  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*James R. Smith* 6/21/91  
PLANNING DIRECTOR DATE

*Mark S. Prewer* 6/21/91  
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

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

*James P. Chen* 6/7/91  
DIRECTOR DATE

*William E. Reid* 4-8-91  
CHIEF BUREAU OF ENGINEERING DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*James M. Helm* 4-2-91  
U.S. Soil Conservation Service Date

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

*Robert W. Ziehm* 3/29/91  
Howard Soil Conservation District Date

3-1/2" x 3-1/2" APPROVAL BLOCK

DESIGNED		DATE		REVISIONS	
DATE	BY	DATE	BY	DESCRIPTION	

**ENGINEERING TECHNOLOGIES ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS  
3458 ELLICOTT CENTER DRIVE SUITE 101  
ELLICOTT CITY, MD. 21043  
(301) 461-9920



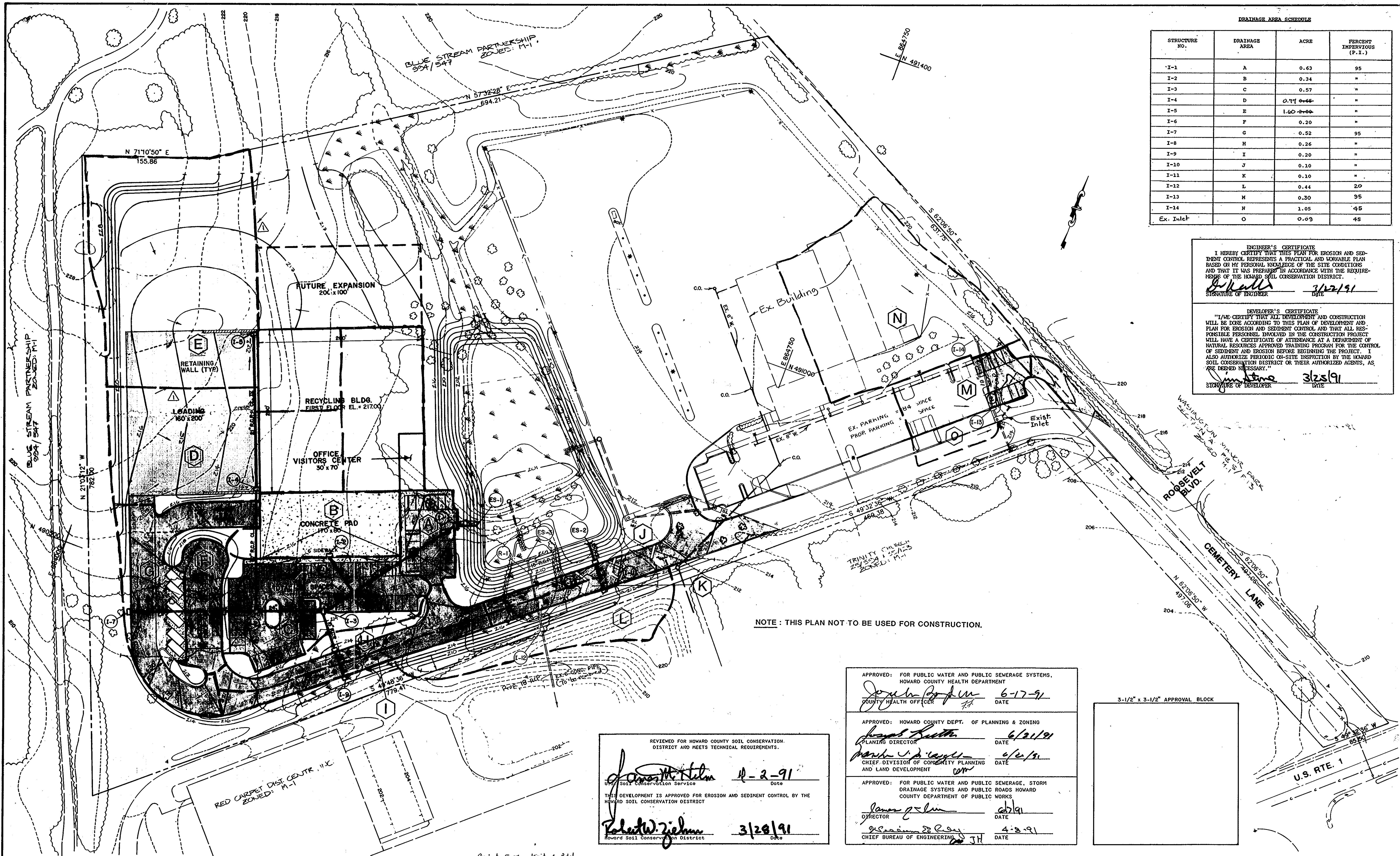
**Browning-Ferris Industries**  
GATEWAY INTERNATIONAL BUILDING  
1302 CONCOURSE DRIVE  
LINTHICUM, MARYLAND 21090  
(301) 850-7444

**OIL/GRIT SEPARATOR PLAN AND DETAILS**

**RECYCLING FACILITY**

1<sup>ST</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
TAX MAP : 43 PARCEL : 599 & 624 BLOCK : 4

SCALE: AS SHOWN CONTRACT NO. 90200.20 DATE: 10/90 SHEET: 4A of 10



**DRAINAGE AREA SCHEDULE**

STRUCTURE NO.	DRAINAGE AREA	ACRE	PERCENT IMPERVIOUS (P.I.)
I-1	A	0.63	95
I-2	B	0.34	"
I-3	C	0.57	"
I-4	D	0.71	"
I-5	E	1.60	"
I-6	F	0.20	"
I-7	G	0.52	95
I-8	H	0.26	"
I-9	I	0.20	"
I-10	J	0.10	"
I-11	K	0.10	"
I-12	L	0.44	20
I-13	M	0.30	95
I-14	N	1.05	45
Ex. Inlet	O	0.09	45

**ENGINEER'S CERTIFICATE**  
 I HEREBY 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.

*[Signature]* 3/23/91  
 SIGNATURE OF ENGINEER DATE

**DEVELOPER'S CERTIFICATE**  
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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 OR THEIR AUTHORIZED AGENTS, AS AND DEEMED NECESSARY.

*[Signature]* 3/23/91  
 SIGNATURE OF DEVELOPER DATE

NOTE: THIS PLAN NOT TO BE USED FOR CONSTRUCTION.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
*[Signature]* 6-17-91  
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*[Signature]* 6/21/91  
 PLANNING DIRECTOR DATE

APPROVED: CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
*[Signature]* 6/21/91  
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* 6/21/91  
 DIRECTOR DATE

APPROVED: CHIEF BUREAU OF ENGINEERING  
*[Signature]* 4-2-91  
 CHIEF BUREAU OF ENGINEERING DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*[Signature]* 4-2-91  
 SOIL CONSERVATION SERVICE DATE

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

*[Signature]* 3/28/91  
 HOWARD SOIL CONSERVATION DISTRICT DATE

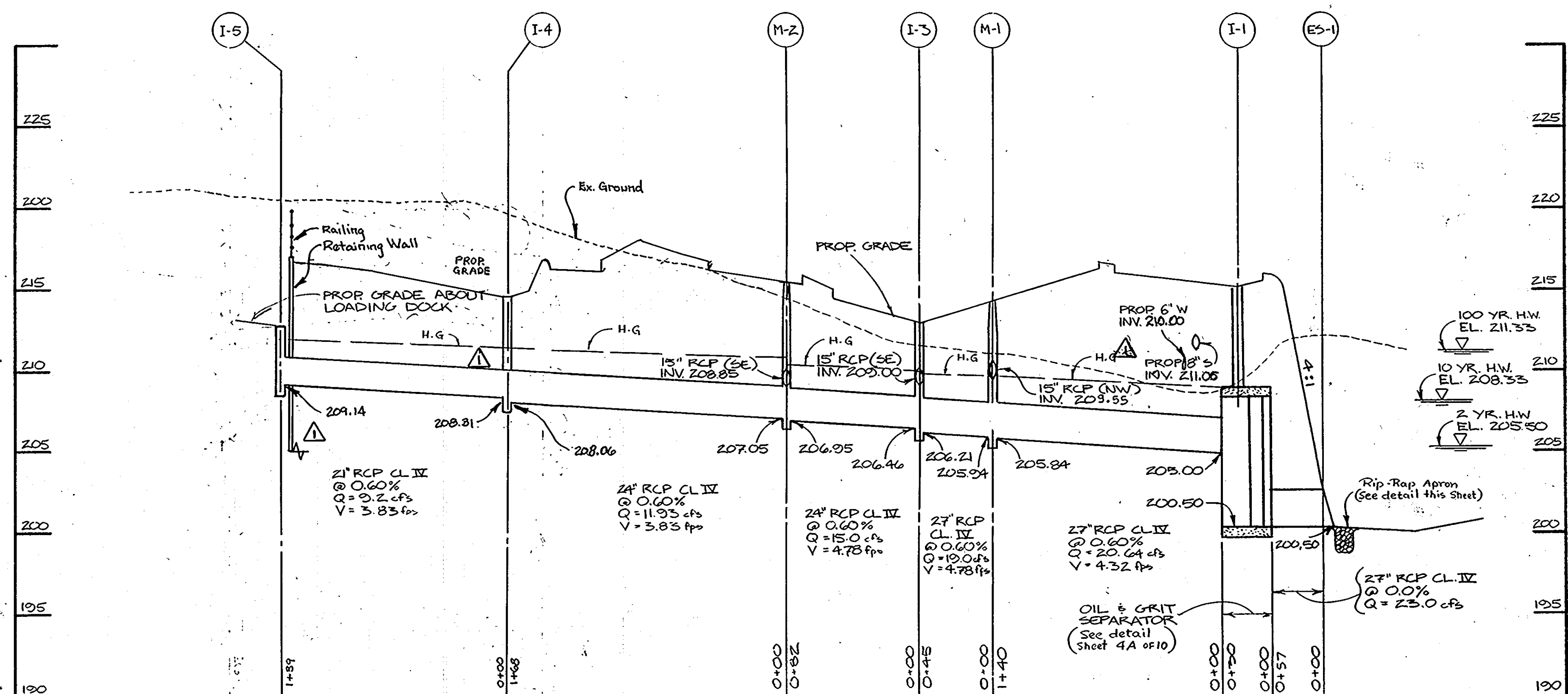
**DESIGNED** K.A.P.  
**DRAWN** M.C.R.  
**CHECKED**  
**APPROVED**

REVISIONS	
DATE	DESCRIPTION
8/20/91	Drainage Area D & E are revised (See Sheet 1 for grading & S.P. Revisions)

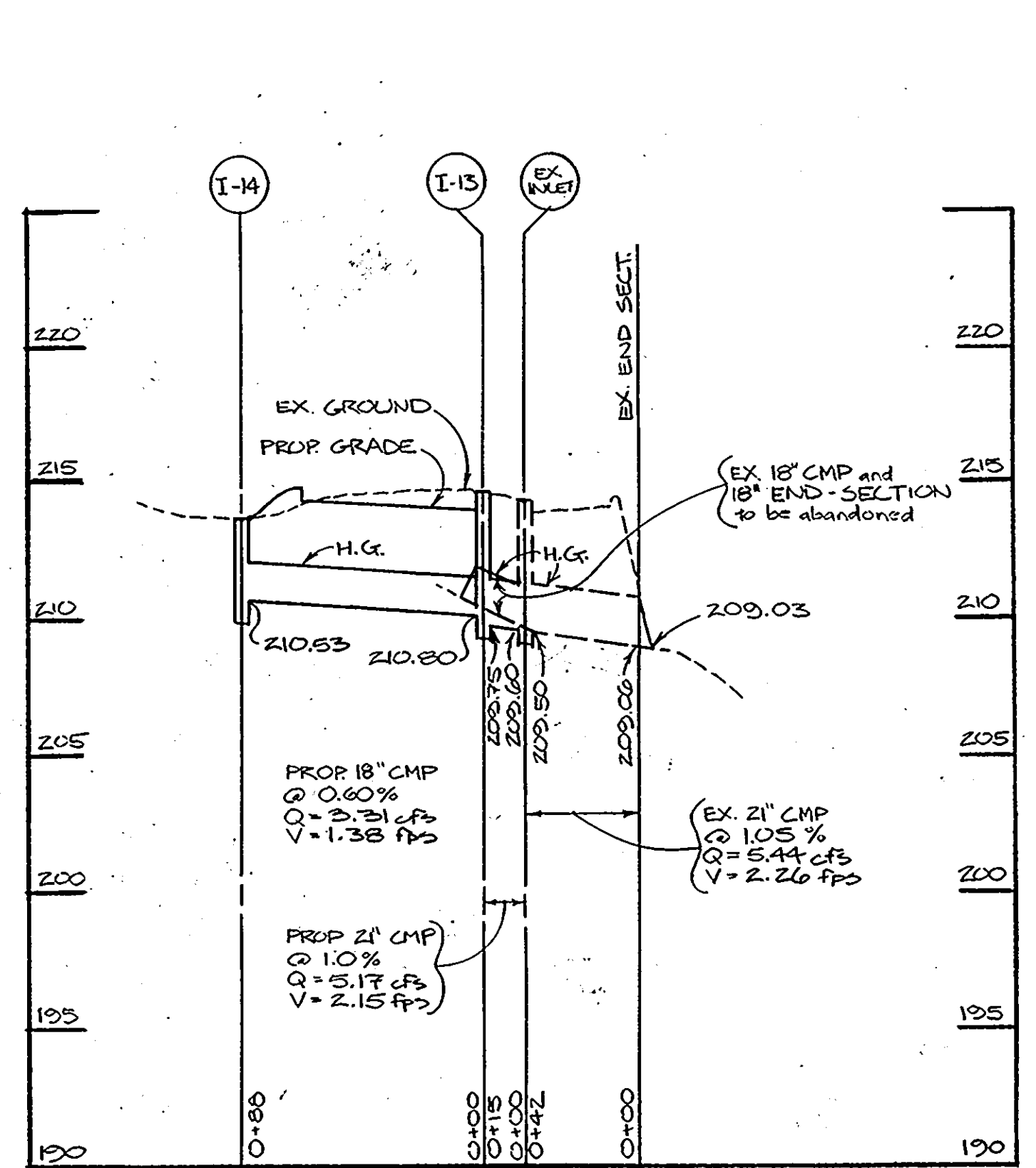
**ENGINEERING TECHNOLOGIES ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3458 ELLICOTT CENTER DRIVE SUITE 101  
 ELLICOTT CITY, MD. 21043  
 (301) 461-9920

**BROWNING-FERRIS INDUSTRIES**  
 GATEWAY INTERNATIONAL BUILDING  
 1302 CONCOURSE DRIVE  
 LINTHICUM, MARYLAND 21090  
 (301) 850-7444

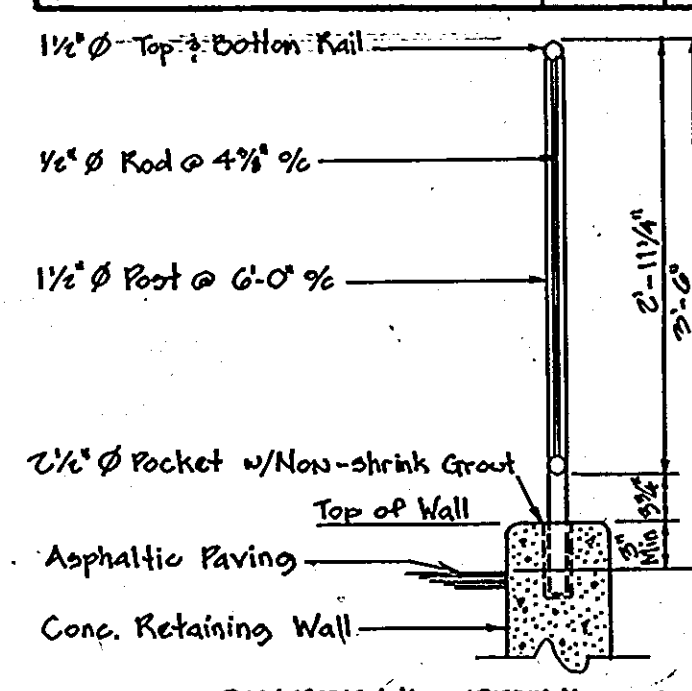
**DRAINAGE AREA MAP**  
**RECYCLING FACILITY**  
 1<sup>st</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 TAX MAP : 43 PARCEL : 599 & 624 BLOCK : 4  
 SCALE: 1" = 50' CONTRACT NO 90200 20 DATE: 10/90 SHEET: 5 of 10  
 SDP # 91-50



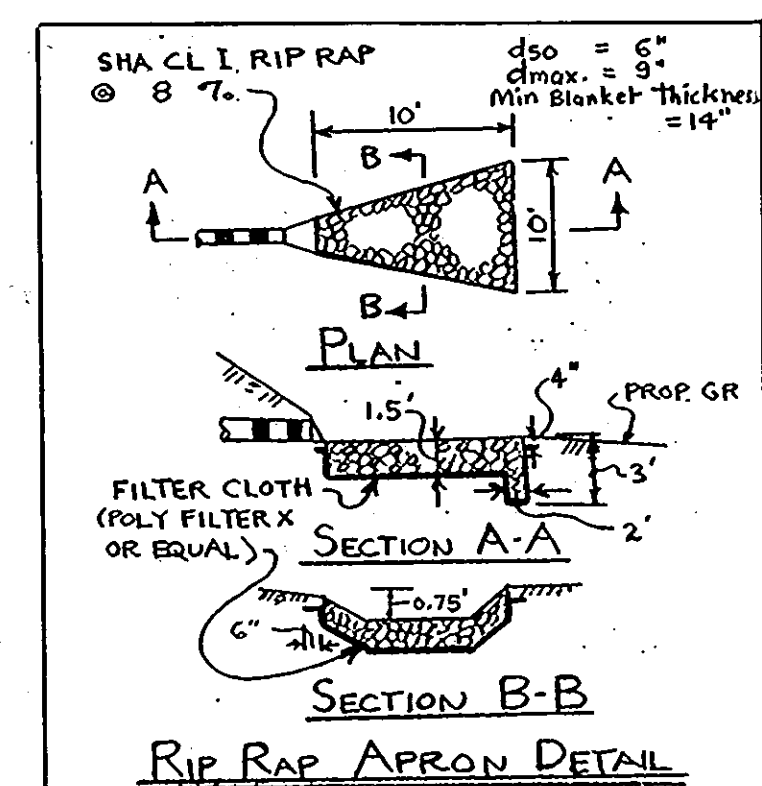
**STORMDRAIN PROFILE**  
SCALE: 1" = 5' VERTICAL  
1" = 50' HORIZONTAL



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

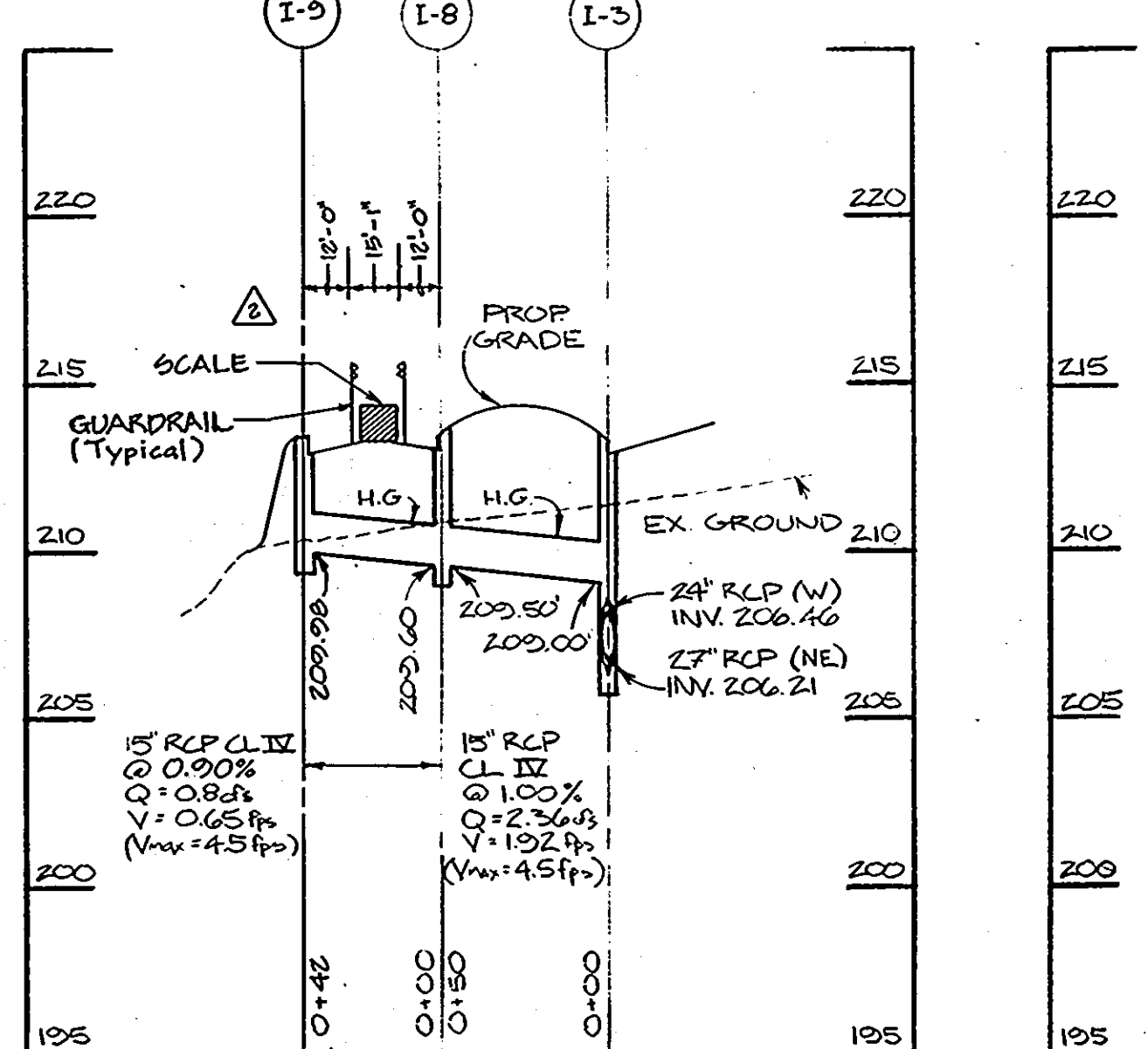
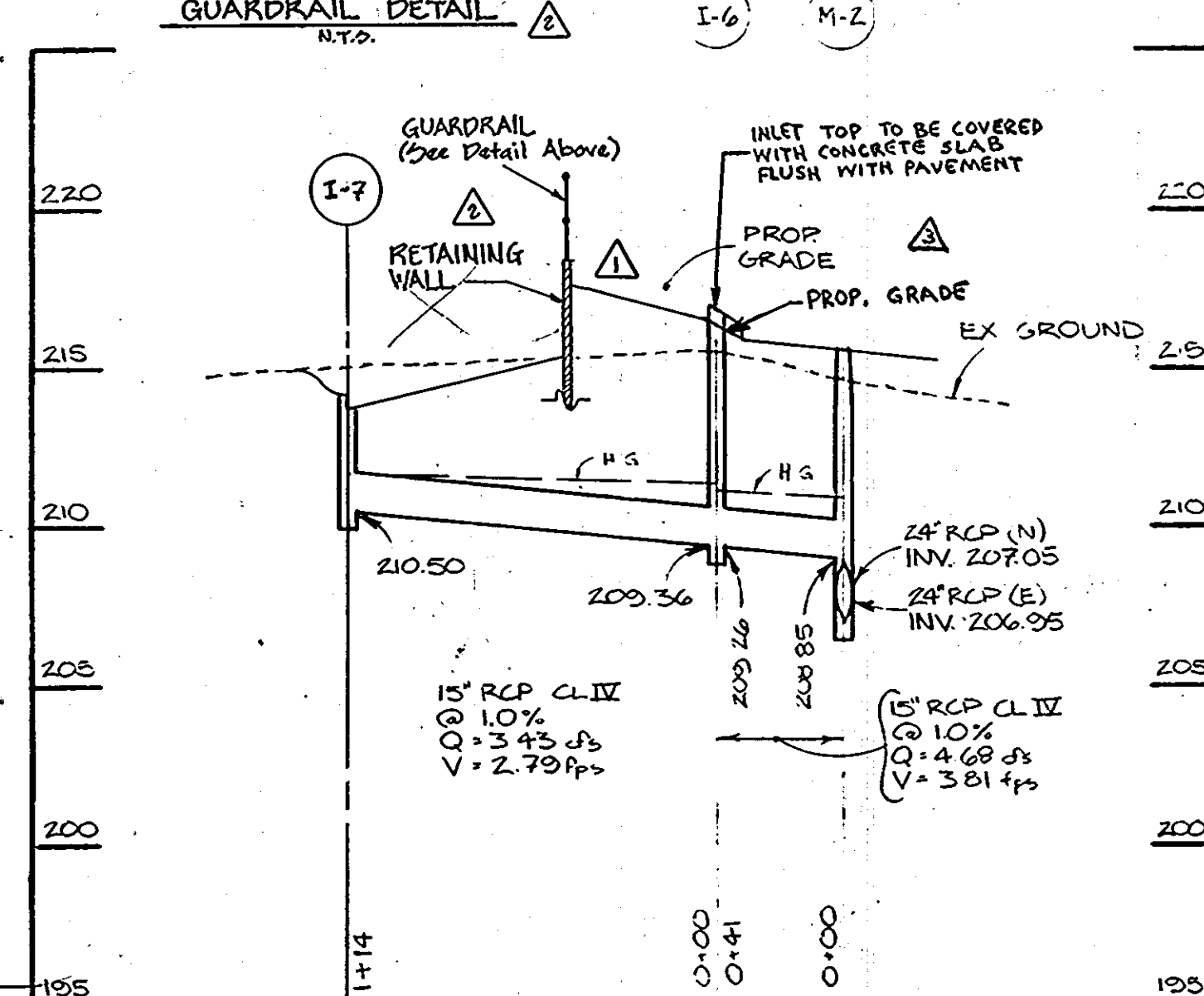


**GUARDRAIL DETAIL**

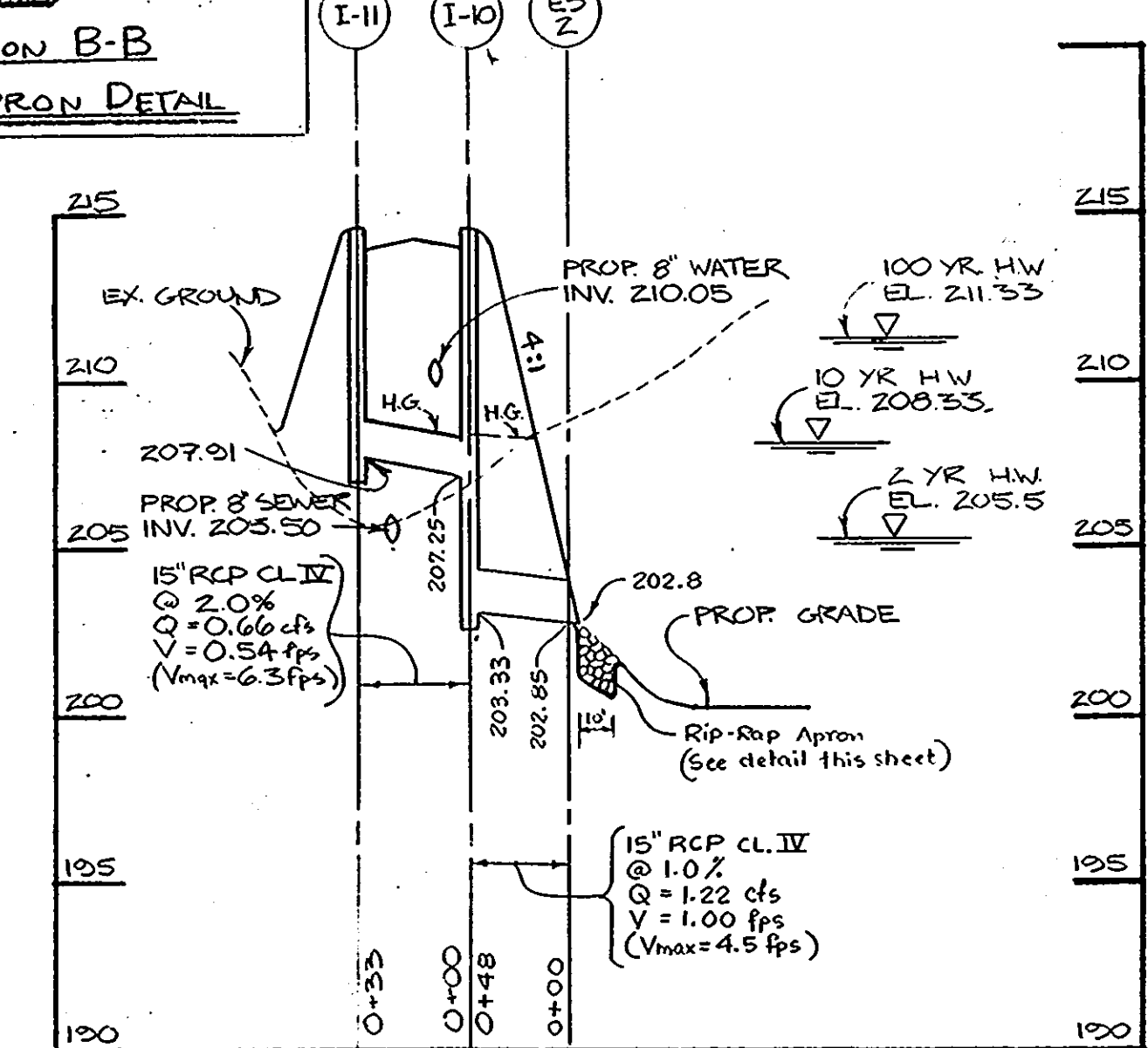
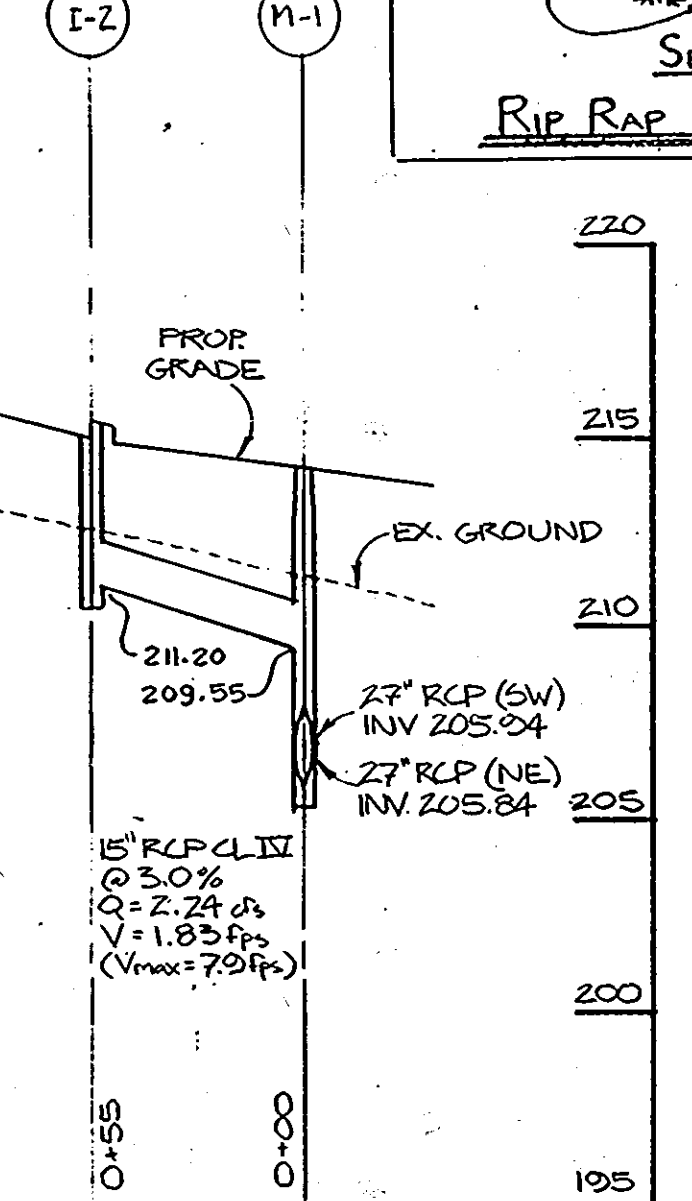


**RIP-RAP APRON DETAIL**

**ENGINEER'S CERTIFICATE**  
I HEREBY 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.  
*[Signature]*  
SIGNATURE OF ENGINEER  
3/22/91  
DATE



**STORMDRAIN PROFILES**  
SCALE: 1" = 5' VERTICAL  
1" = 50' HORIZONTAL



STRUCTURE SCHEDULE

No.	Struct. No.	Type	Inv. In	Inv. Out	Top Bl.	Remarks
1	I-1	A-5	205.00	200.50	215.65 t/c	std SD-4.01
2	I-2	A-5	--	211.20	215.5 t/c	std SD-4.01
3	I-3	5" Comp	208.46	206.21	213.5 t/c	std SD-4.22
4	I-4	5" Inlet	208.30	207.22	213.5 t/c	std SD-4.22
5	I-5	Double "5"	--	209.55	212.75	std SD-4.22
6	I-6	A-5	209.26	209.26	217.0 t/c	std SD-4.01
7	I-7	5" Comp	--	210.50	214.25 t/c	std SD-4.22
8	I-8	A-5	209.60	209.50	213.5 t/c	std SD-4.01
9	I-9	"	--	209.98	"	"
10	I-10	"	207.25	203.33	214.7 t/c	"
11	I-11	"	--	207.91	"	"
12	I-12	Yard Inlet	201.26	201.16	207.5	std SD-4.14
13	I-13	A-5	210.00	209.75	214.6 t/c	std SD-4.01
14	I-14	Yard Inlet	--	210.53	213.75	std SD-4.14
15	M-1	std Precast	205.91	205.84	214.20	std G-5.11
16	M-2	27" Conc.	207.05	206.95	215.50	"
17	FS-1	15" Conc. End Sect.	--	209.50	"	"
18	ES-2	15" Conc. End Sect.	--	202.80	"	"
19	HW-1	"	202.8	--	"	SEE SHT. NO. 3 FOR DETAIL
20	R-1	RISER	202.43	202.33	211.35	"

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
*[Signature]*  
COUNTY HEALTH OFFICER  
6-17-91  
DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*[Signature]*  
PLANNING DIRECTOR  
6/21/91  
DATE

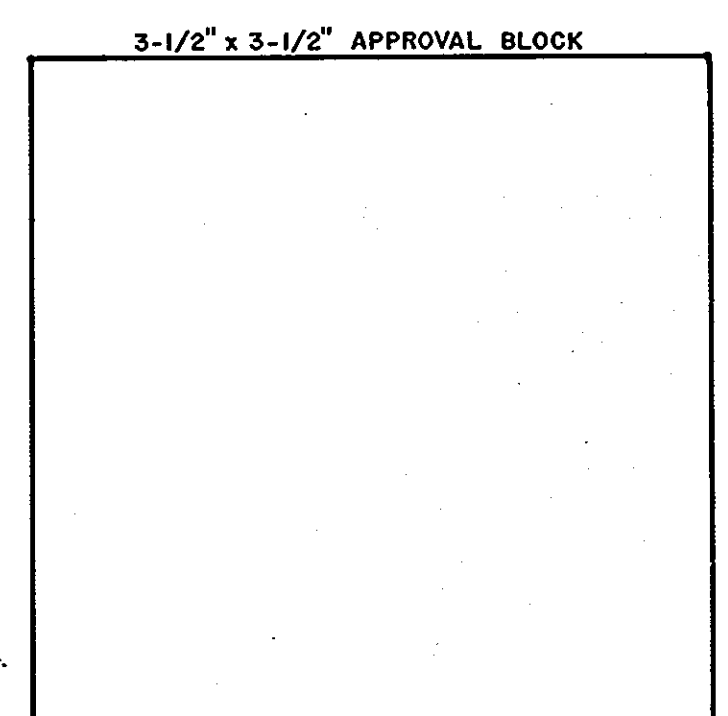
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]*  
DIRECTOR  
6/19/91  
DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]*  
CHIEF BUREAU OF ENGINEERING  
4-8-91  
DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*[Signature]*  
U.S. Soil Conservation Service  
4-2-91  
DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
*[Signature]*  
Howard Soil Conservation District  
3/20/91  
DATE

DEVELOPER'S CERTIFICATE  
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ANIMAL 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.  
*[Signature]*  
SIGNATURE OF DEVELOPER  
3/25/91  
DATE



DESIGNED: K.A.P.  
DRAWN: M.C.R.  
CHECKED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_

DATE	BY	DESCRIPTION
8/30/91	S.G.P.	Revised SD Profile and invert elevations of Water & Sewer
10/14/91	M.C.R.	Revised SD Profile @ I-2, Provided Retaining Wall and Guardrail Detail
7/24/91	K.A.P.	REVISED INLET I-6

**ENGINEERING TECHNOLOGIES ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS  
3458 ELLICOTT CENTER DRIVE, SUITE 101  
ELLICOTT CITY, MD. 21043  
(301) 461-9920

**BROWNING-FERRIS INDUSTRIES**  
GATEWAY INTERNATIONAL BUILDING  
1302 CONCOURSE DRIVE, LINTHICUM, MARYLAND 21090  
(301) 850-7444

**RECYCLING FACILITY**  
1<sup>st</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
TAX MAP : 43 PARCEL : 599 & 624 BLOCK : 4  
SCALE: AS SHOWN CONTRACT NO. 90200.20 DATE: 10/90 SHEET: 6 of 10  
SDP # 91-50





SOIL CONSERVATION SERVICE MARYLAND  
CONSTRUCTION SPECIFICATIONS FOR PONDS

These specifications are appropriate to ponds within the scope of the Standard Practice 378.

I. SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be 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 and below the limits of the dam and reservoir as directed by the owner or his representative. Then 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 areas 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 frostboard) as 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 compacted over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

Compaction

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each fill will 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 sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and is to be certified by the Engineer.

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 as shown on the drawings, with the minimum width being four feet. The depth shall be at least four feet or 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.

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 tamper 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 equipment be driven 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

All pipes shall be circular in cross section.

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 ASTM 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.

Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings are commercially available: Hexon, Plast-Coat, Blue-Rid, and Best-Cure. Coated corrugated steel pipe shall meet the requirements of ASTM M-245 and M-246.

Materials - (Aluminized Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of ASTM Specification M-274-791 with watertight coupling bands or flanges.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of ASTM Specification M-196 or M-111 with watertight coupling bands or flanges. Coupling bands, anti-seep collars, and 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 must be in contact with concrete shall be painted with one coat of zinc chromate primer. No dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

2. Connections - All connections with pipes must be completely watertight. The drain pipe to barrel concrete to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to the completely watertight. Diaple bands are not considered to be 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.

B. Reinforced Concrete Pipe

1. Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. An approved equivalent is ASMA Specification C-301.

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 10X of its outside diameter with a

minimum thickness of 3", or as shown on the drawings.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell and upstream. Joints shall be made in accordance with the recommendations of the manufacturer of the material. After the joints are sealed for 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. For pipes of other materials, specific specifications shall be shown on the drawings.

V. CONCRETE

1. Materials

a. Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.

b. Water - The water used in concrete shall be clean, free from oil, acid, alkali, selen, organic matter or other objectionable substances.

c. Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.

d. Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-1/2) inches.

e. Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

2. Design Mix - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/2 to 6 U.S. Gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

3. Mixing - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixer and of the introduction of the materials, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overmixing requiring the addition of water to preserve the required concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.

4. Forms - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

5. Reinforcing Steel - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

6. Consolidating - Concrete shall be consolidated with internal type mechanical vibrator. Vibration shall be applied by spacing and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.

7. Finishing - Defective concrete, honeycombed areas, voids left by the removal of the rods, ridges on the concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-ditching mortar.

8. Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.

9. Placement Temperature - Concrete may not be placed at temperatures below 37°F with the temperature falling, or 34°F with the temperature rising.

VI. STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a slightly compacted. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

VII. EROSION AND SEDIMENT CONTROL

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

DEVELOPER'S CERTIFICATE

Signature: *[Signature]* Date: 3/25/91

SIGNATURE OF DEVELOPER DATE

PERMANENT SEEDING NOTES

Seeding Preparation: Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 square ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 square ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 600 lbs. per acre 20-0-0 ureaform fertilizer (9 lbs./1000 square ft.)
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 square 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 through April 30, and August 1 through October 15, seed with 60 lbs. per acre (1.4 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 through July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.5 lbs./1000 square ft.) of seeding legume. During the period of October 16 through February 28, project the 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 seed. Option (3) Seed with 60 lbs./acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 14 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.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Seeding Preparation: Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.

Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.) before seeding.

Seeding: For periods March 1 through April 30 and from August 15 through November 15, seed with 24 lbs. per acre of annual rye (3.2 lbs./1000 sq. ft.). For the period May 1 through August 14, seed with 3 lbs. per acre of seeding legume (0.7 lbs./1000 sq. ft.). For the period November 16 through February 28, project the site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible, in the spring or use seed.

Mulching: Apply 14 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 ft. or higher use 348 gal. 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 Inspection and Permitting prior to the start of any construction. (592-2437)

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 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. 31) and (Sec. 34), 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: (FOR PARCEL - F)  
Total Area of Site: 17.3 Acres  
Area Disturbed: 9.5 Acres  
Area to be roofed or paved: 4.90 Acres  
Area to be vegetatively stabilized: 4.60 Acres  
Total: 23,000 Cu. Yds  
Concrete: 23,700 Cu. Yds  
Offsite waste/borrow area location: FROM APPROVED SITE BY HSCD

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

9) Additional sediment controls must be provided, if deemed necessary by the Howard County DEP sediment control inspector.

10) 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 control, 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.

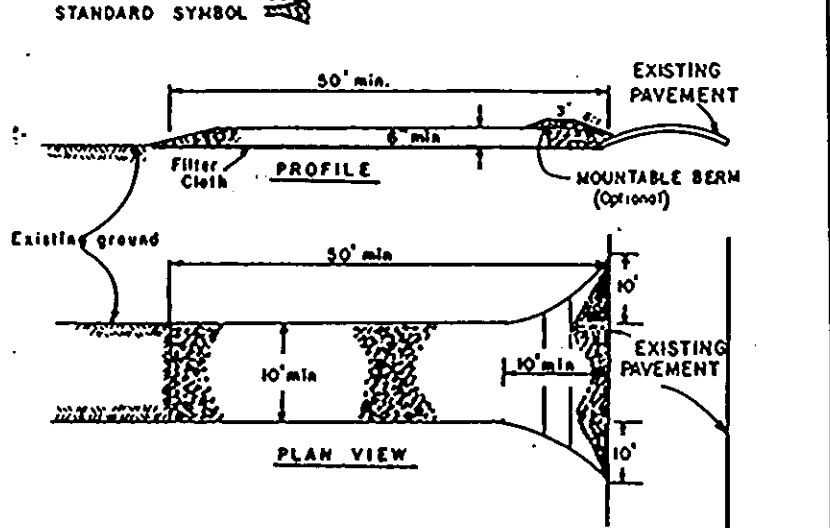
ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND FEASIBLE 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."

Signature: *[Signature]* Date: 3/25/91

SIGNATURE OF ENGINEER DATE

STABILIZED CONSTRUCTION ENTRANCE



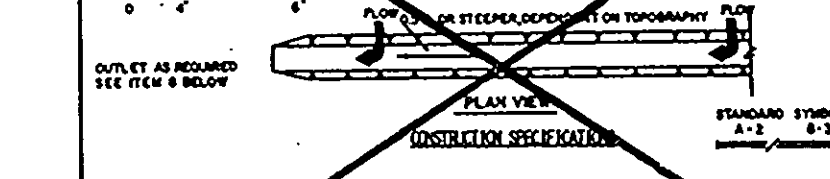
1. Riprap Size - Use #2 stone, or crushed or recycled concrete equivalent. Length - As specified, but not less than 30 centimeters on a straight surface. Thickness - Not less than six (6) inches.

2. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter cloth shall be placed across the slope. If piping is in place, a surface water - All surface water flowing or directed toward construction activities shall be piped across the slope. If piping is in place, a surface water shall be piped across the slope. If piping is in place, a surface water shall be piped across the slope.

3. Maintenance - The entrance shall be maintained in a condition which will prevent erosion or flooding of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.

4. Washing - Wheels 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 established with stone and water drains into an approved sediment trapping device.

5. Periodic inspection and needed maintenance shall be provided after each rain event.



1. All riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

2. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

3. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

4. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

5. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

6. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

7. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

8. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

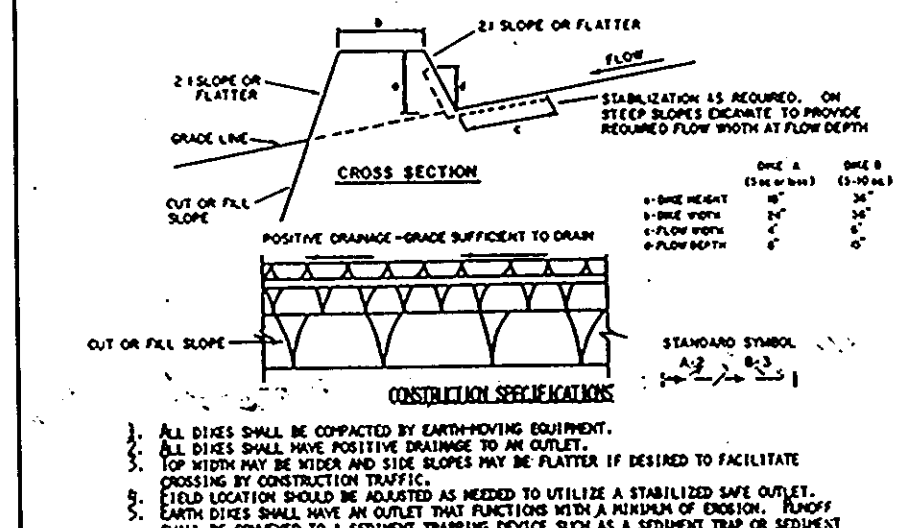
9. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

10. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

11. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

12. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

CONSTRUCTION SPECIFICATIONS



1. All riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

2. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

3. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

4. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

5. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

6. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

7. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

8. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

9. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

10. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

11. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

12. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

13. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

14. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

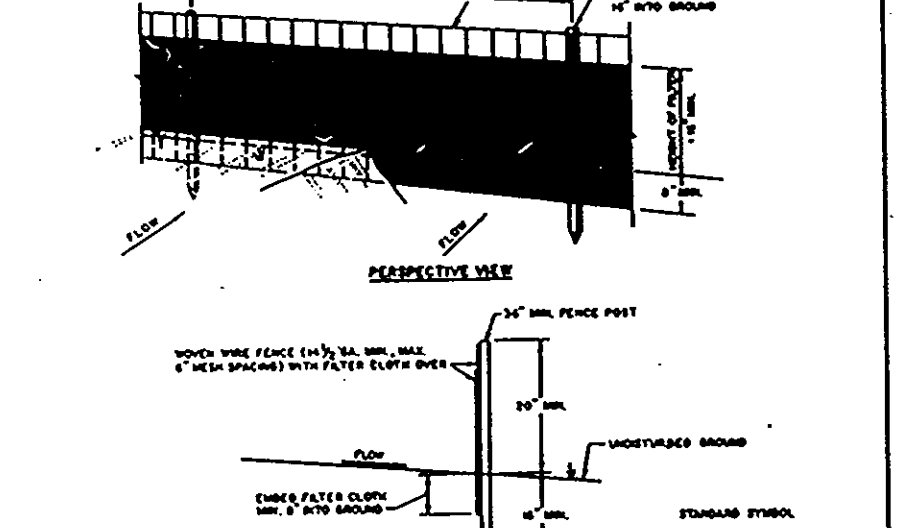
15. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

16. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

17. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

18. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

SILT FENCE



1. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

2. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

3. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

4. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

5. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

6. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

7. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

8. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

9. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

10. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

11. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

12. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

13. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

14. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

15. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

16. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

17. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

18. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade. Riprap shall be placed on a prepared subgrade.

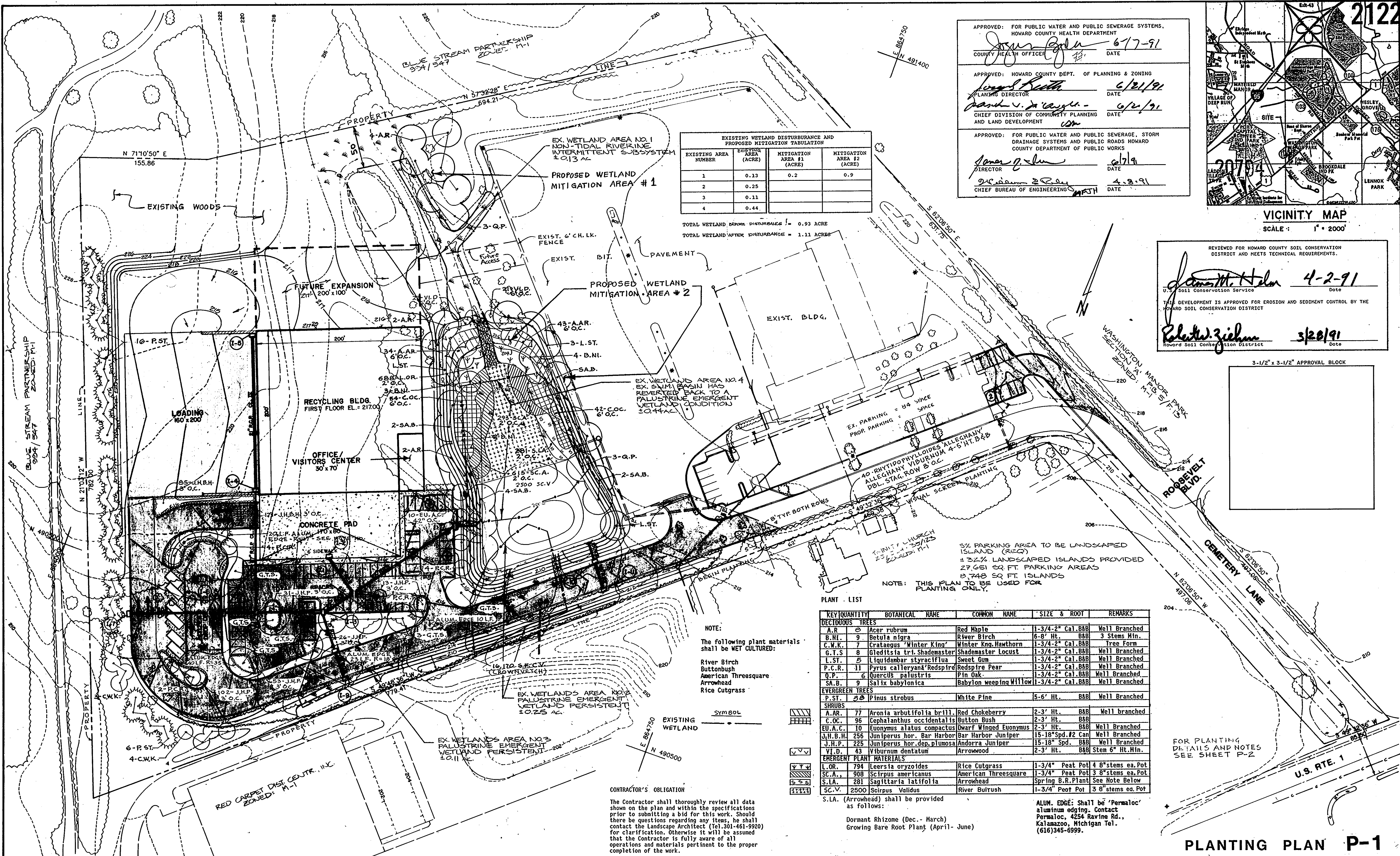
GENERAL NOTES

- 1) ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- 2) ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE EXPENSE OF CONTRACTOR.
- 3) ALL UTILITY COMPANIES MUST BE NOTIFIED 24 HOURS IN ADVANCE OF ANY CONSTRUCTION.
- 4) THE LAND INCLUDED IN THIS PLAN IS ZONED: M-1
- 5) THE AREA SHOWN IN THIS SUBMISSION IS LOCATED ON ZONE MAP NO. 43
- 6) TYPE OF SOIL: Bb2 - Belleville Silt Loam, TuB - Juka Loom, Kbc2 - Keppert Silt Loam, Sib2 - Sassafras Loom
- 7) THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION/SURVEY DIVISION, 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK, AT 792-2222.
- 8) THE LOCATION OF EXISTING UTILITIES IS BASED ON BEST AVAILABLE INFORMATION. THE CONTRACTOR MUST CHECK ALL UTILITIES BY TEST PIT BEFORE START OF CONSTRUCTION.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
Signature: *[Signature]* Date: 6/17/91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
Signature: *[Signature]* Date: 6/21/91

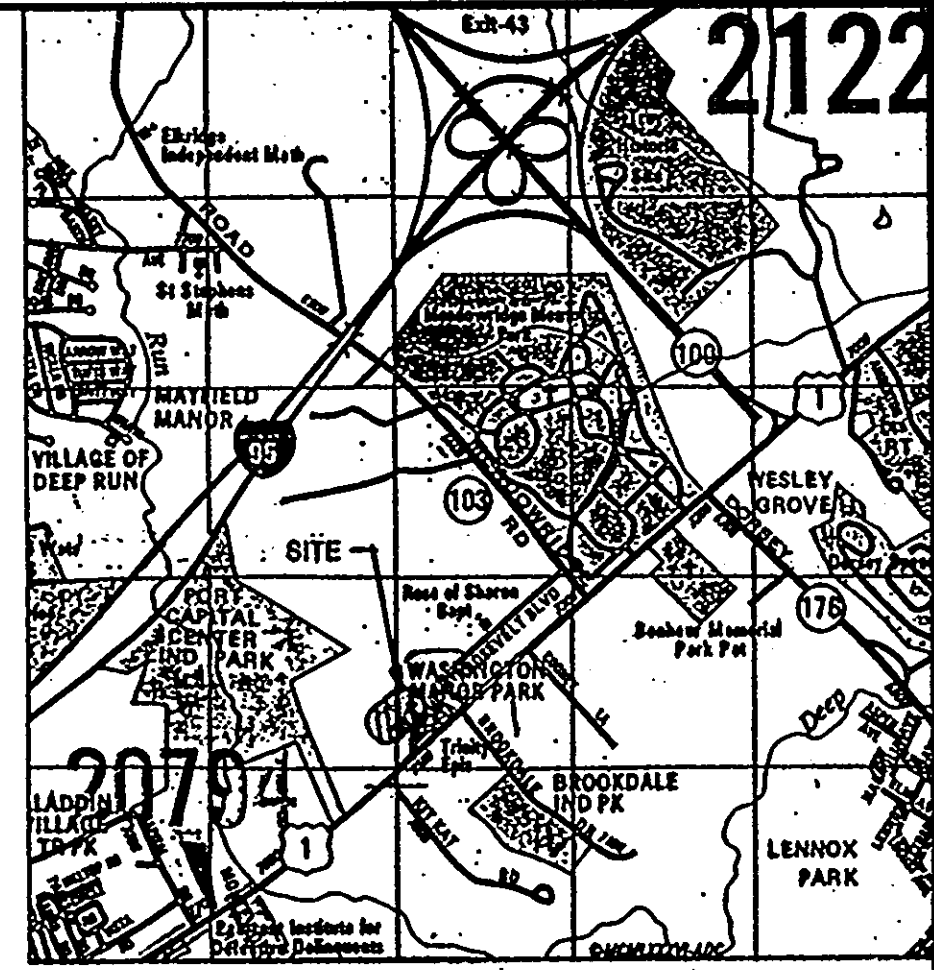
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Signature: *[Signature]* Date: 6/21/91



APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT  
*Jasper E. ...* 6/17/91  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Joseph ...* 6/21/91  
PLANNING DIRECTOR DATE  
*Paul ...* 6/21/91  
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*James ...* 6/21/91  
DIRECTOR DATE  
*William ...* 4-2-91  
CHIEF BUREAU OF ENGINEERING DATE

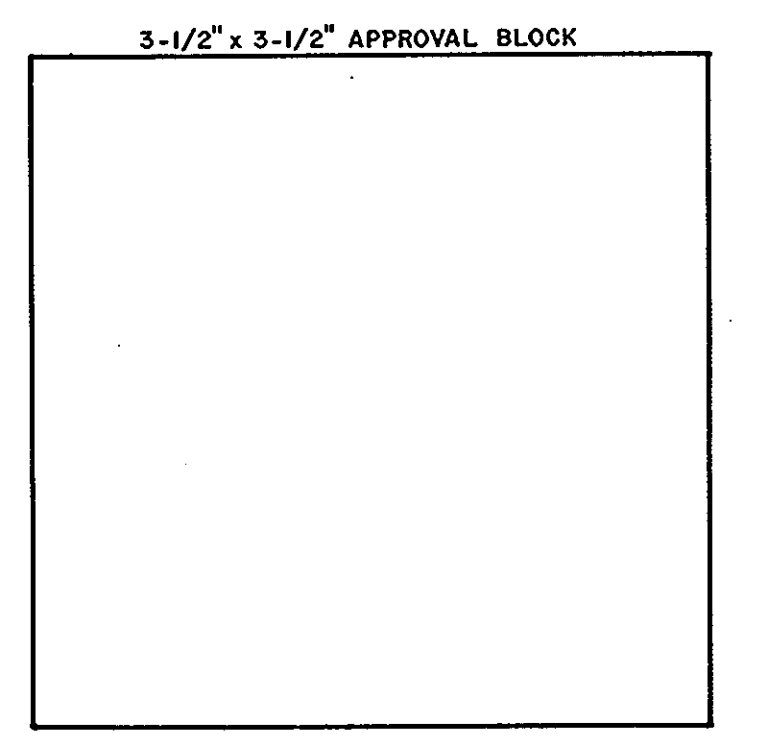


EXISTING WETLAND DISTURBANCE AND PROPOSED MITIGATION TABULATION

EXISTING AREA NUMBER	EXISTING AREA (ACRE)	MITIGATION AREA #1 (ACRE)	MITIGATION AREA #2 (ACRE)
1	0.13	0.2	0.9
2	0.25		
3	0.11		
4	0.44		

TOTAL WETLAND BEFORE DISTURBANCE = 0.93 ACRE  
TOTAL WETLAND AFTER DISTURBANCE = 1.11 ACRE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*James ...* 4-2-91  
U.S. Soil Conservation Service Date  
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT  
*Robert ...* 3/20/91  
Howard County Soil Conservation District Date



PLANT LIST

KEY QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE & ROOT	REMARKS
<b>DECIDUOUS TREES</b>				
A.R.	Acer rubrum	Red Maple	1-3/4-2" Cal. B&B	Well Branched
B.N.I.	Betula nigra	River Birch	6-8' Ht. B&B	3 Stems Min.
C.V.K.	Crataegus 'Winter King'	Winter King Hawthorn	1-3/4-2" Cal. B&B	Tree Form
G.T.S.	Gleditsia tri. Shademaster	Shademaster Locust	1-3/4-2" Cal. B&B	Well Branched
L.S.T.	Liquidambar styraciflua	Sweet Gum	1-3/4-2" Cal. B&B	Well Branched
P.C.R.	Pyrus calleryana 'Redspire'	Redspire Pear	1-3/4-2" Cal. B&B	Well Branched
O.P.	Quercus palustris	Pin Oak	1-3/4-2" Cal. B&B	Well Branched
S.A.B.	Salix babylonica	Babylon weeping Willow	1-3/4-2" Cal. B&B	Well Branched
<b>EVERGREEN TREES</b>				
P.S.T.	Pinus strobus	White Pine	5-6' Ht. B&B	Well Branched
<b>SHRUBS</b>				
A.A.R.	Aronia arbutifolia brill.	Red Chokeberry	2-3' Ht. B&B	Well branched
C.O.C.	Cephalanthus occidentalis	Button Bush	2-3' Ht. B&B	B&B
EU.A.C.	Euonymus alatus compactus	Dwarf Winged Euonymus	2-3' Ht. B&B	Well Branched
J.H.B.H.	Juniperus hor. Bar Harbor	Bar Harbor Juniper	15-18" Spd. #2 Can	Well Branched
J.H.P.	Juniperus hor. dep. plumosa	Andorra Juniper	15-18" Spd. B&B	Well Branched
V.I.D.	Viburnum dentatum	Arrowwood	2-3' Ht. B&B	Stem 6" Ht. Min.
<b>EMERGENT PLANT MATERIALS</b>				
L.OR.	Leersia oryzoides	Rice Cutgrass	1-3/4" Peat Pot	4 8" stems ea. Pot
SC.A.	Scirpus americanus	American Threesquare	1-3/4" Peat Pot	3 8" stems ea. Pot
S.L.A.	Sagittaria latifolia	Arrowhead	Spring B.R. Plant	See Note Below
SC.V.	Scirpus Validus	River Bulrush	1-3/4" Peat Pot	3 8" stems ea. Pot

NOTE:  
The following plant materials shall be WET CULTURED:  
River Birch  
Buttonbush  
American Threesquare  
Arrowhead  
Rice Cutgrass

CONTRACTOR'S OBLIGATION  
The Contractor shall thoroughly review all data shown on the plan and within the specifications prior to submitting a bid for this work. Should there be questions regarding any items, he shall contact the Landscape Architect (Tel. 301-461-9920) for clarification. Otherwise it will be assumed that the Contractor is fully aware of all operations and materials pertinent to the proper completion of the work.

DESIGNED: K.E.M. 2/21/90  
DATE

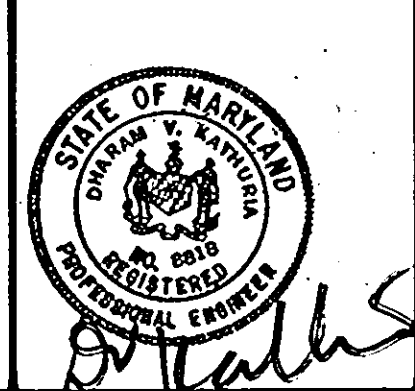
DRAWN: DATE

CHECKED: DATE

APPROVED: DATE

REVISIONS	
DATE	DESCRIPTION
1/14/91	ADDED 4 DECIDUOUS TREES

**ENGINEERING TECHNOLOGIES ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS  
3458 ELLICOTT CENTER DRIVE SUITE 101  
ELLICOTT CITY, MD. 21143  
(301) 461-9920

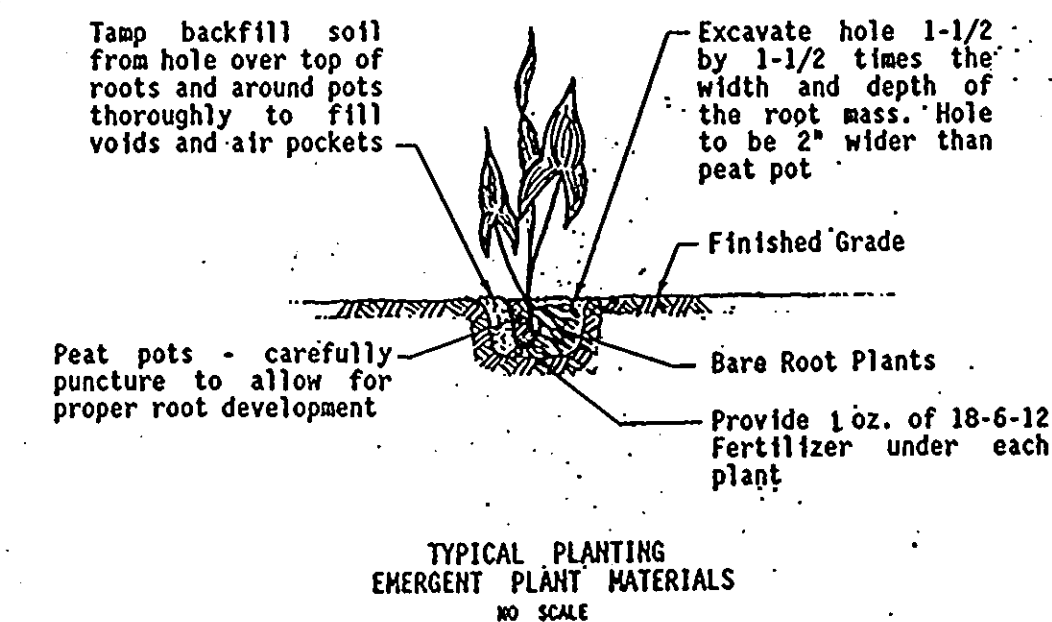
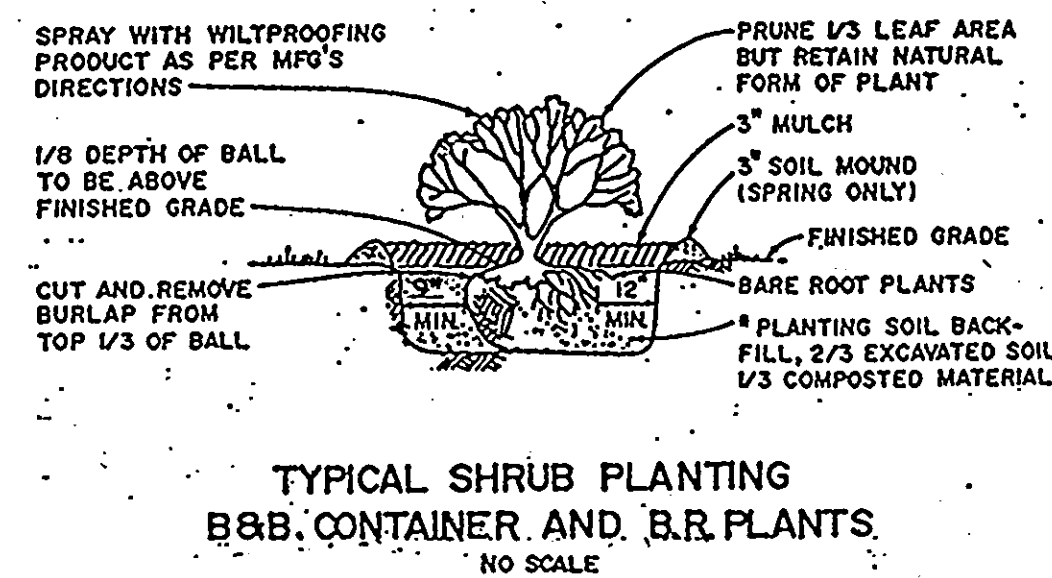
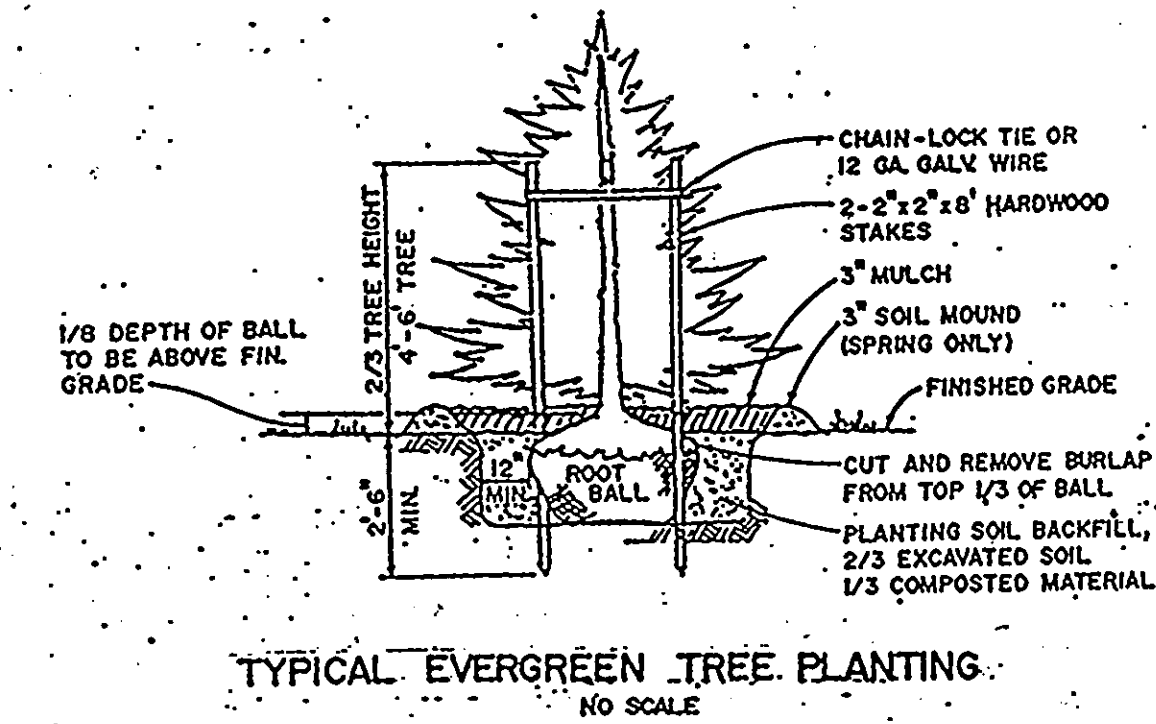
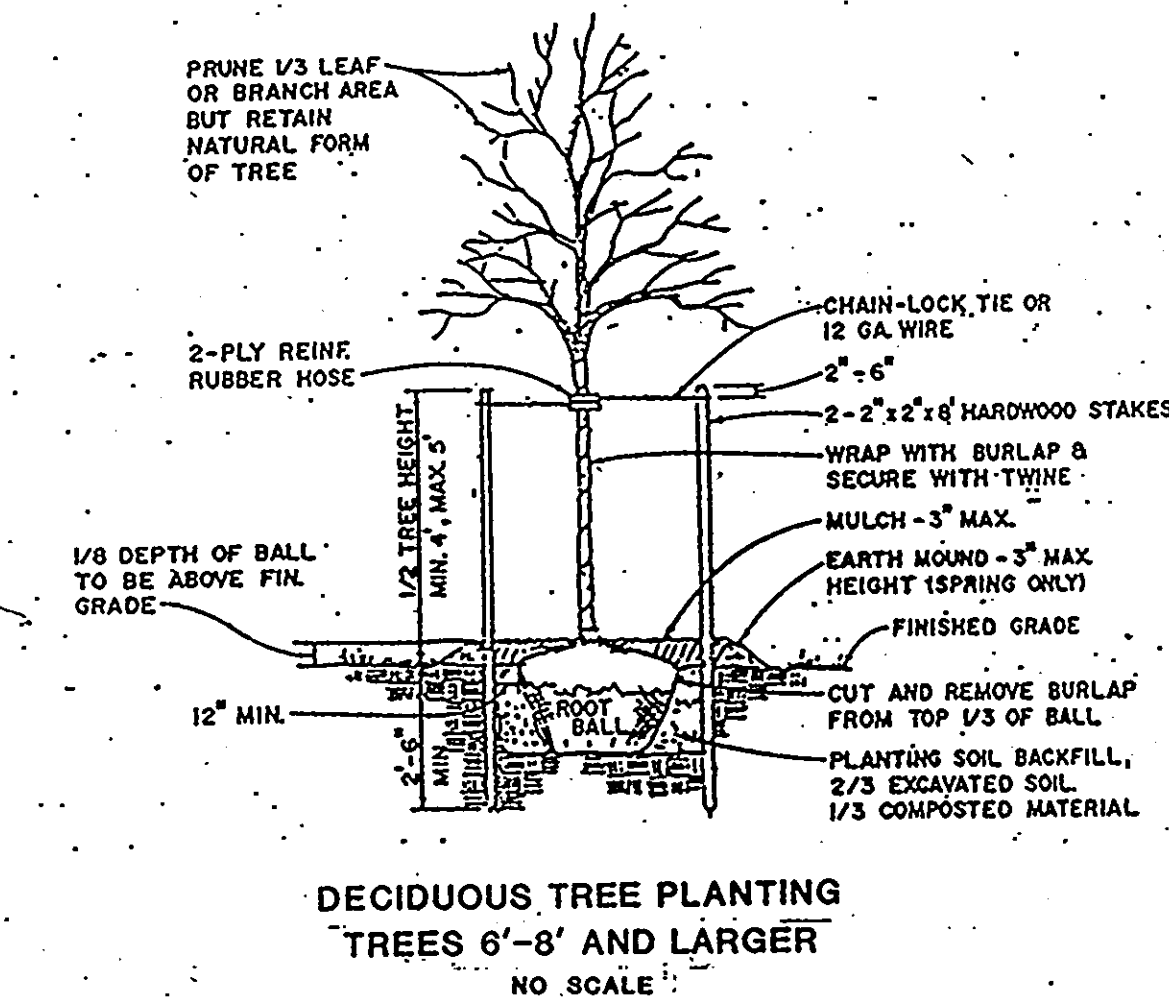


**Browning-Ferris Industries**  
GATEWAY INTERNATIONAL BUILDING  
1302 CONCOURSE DRIVE  
LINTHICUM, MARYLAND 21090  
(301) 850-7444

**LANDSCAPE & WETLAND MITIGATION PLAN**  
**RECYCLING FACILITY**  
1<sup>st</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
TAX MAP : 43 PARCEL : 599 & 624 BLOCK : 4  
SCALE: 1" = 50' CONTRACT NO. 90200.20 DATE: 10/90 SHEET: 9 of 10  
SDP # 91-50

GENERAL NOTES

- The Contractor shall become familiar with all pertinent items, notes and other data which appears on the plan prior to beginning any work. Provide proper materials and perform all work in accordance with the plan and specifications.
- The Contractor shall verify the location of all existing and as built utilities prior to beginning any excavation or rototilling, etc., for tree pits and shrub beds. Notify "MISS UTILITY" (Tel. 1-800-257-7777) at least three (3) working days prior to beginning any work.
- The Contractor shall verify quantities of plant materials shown on the plan and plant list and be prepared to furnish quantities shown. No changes in plant materials quantities, variety or general location shall be made without written permission by the Landscape Architect. Contact the Landscape Architect regarding any questions concerning plant availability, planting operations or related work.
- The Contractor shall carefully inspect the plants within his yard, or delivered to his yard, which are designated for this project prior to bringing any to the project site. Trees or shrubs with broken rootballs or containers, severely damaged roots, split or broken branches, shall not be delivered to the site. All plants shall be full, well shaped and well branched.
- The Contractor shall be responsible for resetting windthrown or leaning trees.
- As part of the maintenance after initial planting, the Contractor shall water all trees, shrubs and ground cover areas once a week for eight (8) weeks unless otherwise instructed by the Owner.
- Should newly installed plants be subject to severe drought (i.e. the period from June thru September), the Contractor shall increase the amount of waterings as directed by the Landscape Architect.
- The guarantee for all plant materials shall be for a period of one (1) year from the date of acceptance.
- All disturbed areas not designated for planting, building or paving construction shall be seeded and mulched or sodded in accordance with the specifications or as directed by the Owner.



NOTE:  
Seeding and mulching of areas not designated for planting, paving, structures or Crownvetch, shall be done in accordance with the Permanent Seeding Notes on sheet No. 7 of

SEQUENCE OF OPERATIONS

- Remove all debris which may exist from previous grading and construction operations, within the areas to be planted and seeded.
- Smooth any areas which may be rutted or uneven due to previous grading and construction operations and debris removal.
- Condition soil within the areas to be seeded and mulched and planted with emergent plant materials, in accordance with the Specifications.
- Plant trees, shrubs and emergent plant materials in accordance with the Plan and Specifications and as directed by the Landscape Architect.
- Seed and mulch all areas within the limits of work which are not designated for planting or access roads.
- Remove all equipment, excess plant materials and debris resulting from the planting and seeding operations from the site.
- Contact the Landscape Architect upon completion of the work to set up an initial inspection of planted and seeded areas.
- Provide maintenance for all trees, shrubs, emergent plant materials and seeded areas in accordance with the Specifications.
- Contact the Landscape Architect at the end of the one year maintenance and guarantee period and set a date for the final inspection.
- Remove tree stakes, wrapping material and guy wires just prior to the final inspection.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*James M. Helms* 4-2-91  
U.S. Soil Conservation Service Date

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

*Robert W. Ziehm* 3/28/91  
Howard Soil Conservation District Date

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

*James P. ...* 6/19/91  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

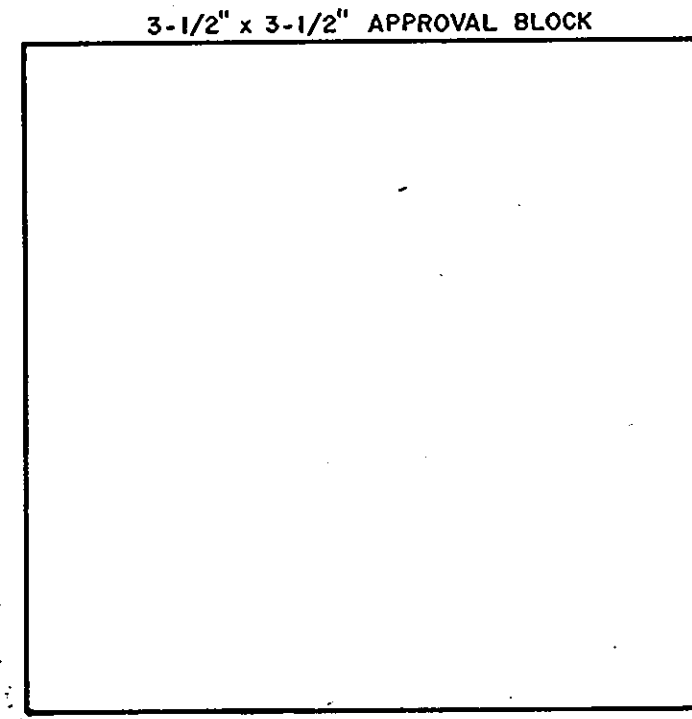
*James R. ...* 6/21/91  
PLANNING DIRECTOR DATE

*Mark ...* 6/20/91  
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

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

*James P. ...* 6/19/91  
DIRECTOR DATE

*Robert ...* 4-2-91  
CHIEF BUREAU OF ENGINEERING DATE



P-2

PLANTING DETAILS AND NOTES

DESIGNED	DATE	REVISIONS		DESCRIPTION
		DATE	BY	
DRAWN	DATE			
CHECKED	DATE			
APPROVED	DATE			

**ENGINEERING TECHNOLOGIES ASSOCIATES, INC.**

ENGINEERS, PLANNERS, SURVEYORS

3458 ELLICOTT CENTER DRIVE SUITE 101  
ELLICOTT CITY, MD. 21043  
(301) 461-9920

**Browning-Ferris Industries**

GATEWAY INTERNATIONAL BUILDING  
1302 CONCOURSE DRIVE  
LINTHICUM, MARYLAND 21090  
(301) 850-7444

LANDSCAPE PLAN

**RECYCLING FACILITY**

1<sup>st</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
TAX MAP : 43 PARCEL : 599 & 624 BLOCK : 4

SCALE: AS SHOWN CONTRACT NO. 90200.20 DATE: 10/90 SHEET: 10 of 10

SDP # 91-50