

**SITE TABULATION**

AREA OF PARCEL	GROSS AREA	0.87 AC. OR 38,000 S.F.
	HWY. WIDENING	0.11 AC. OR 5,000 S.F.
	NET AREA	0.76 AC. OR 33,000 S.F.
ZONING	B-2 (BUSINESS GENERAL)	
LAND USE	COMMERCIAL (VACANT)	
PROPOSED USE	COMMERCIAL (FAST FOOD RESTAURANT)	
FLOOR SPACE/BUILDING COVERAGE	3,478 S.F.	
MAXIMUM NUMBER OF EMPLOYEES	12 PER SHIFT	
PARKING REQUIRED	(ZONING REGULATIONS SECTION 117) FAST FOOD - 14 SPACES PER 1,000 S.F. 14 X 3.5 = 49 SPACES	
PARKING PROVIDED	PRIOR TO RTE. 1 R/W TAKING 47 REGULAR SPACES 2 HANDICAPPED SPACES 49 TOTAL SPACES	
	AFTER RTE. 1 R/W TAKING 39 REGULAR SPACES 2 HANDICAPPED SPACES 41 TOTAL SPACES (ACCEPTED AS ADEQUATE AFTER HIGHWAY WIDENING PER LETTER 6-14-96 FROM GINA TIRINIANZI)	
FLOOR AREA RATIO TO SITE ACREAGE	9% (PRIOR TO RTE. 1 R/W TAKING) 10% (AFTER RTE. 1 R/W TAKING)	
AREA OF PARKING LOT	PRIOR TO RTE. 1 R/W TAKING 29,702 S.F. OR 0.68 AC. AFTER RTE. 1 R/W TAKING 27,562 S.F. OR 0.63 AC.	
GREEN AREA ON SITE	PRIOR TO RTE. 1 R/W TAKING 4,820 S.F. OR 13% OF GROSS AREA AFTER RTE. 1 R/W TAKING 2,960 S.F. OR 9% OF GROSS AREA	

THERE ARE NO FLOODPLAINS OR WETLANDS ON SITE  
THERE ARE NO HYDRIC SOILS - SOILS ARE B0B2-BELTSVILLE SILT & LOAM  
THE SITE IS NOT IN A FLOOD AREA AND FALLS IN ZONE C ON THE FEMA  
MAP PANEL 240044 0040B

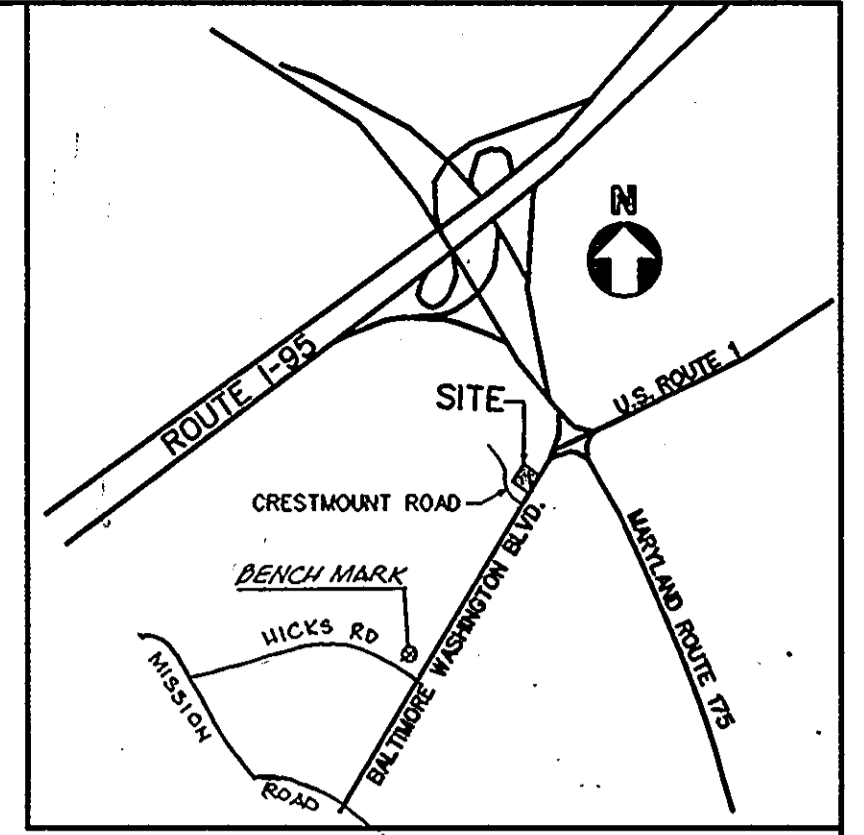
THERE ARE 0 SIDE AND REAR BUILDING SETBACKS SINCE ADJACENT ZONING IS B-2.  
A 10' SETBACK FOR PARKING IS PROVIDED ALONG THE FRONTAGE - PUBLIC R/W RTE. 1  
THE TOTAL CUTTING, CLEARING, OR GRADING OF FOREST RESOURCES IS LESS  
THAN 40,000 S.F. THIS SITE IS NOT SUBJECT TO A PREVIOUSLY APPROVED FOREST  
CONSERVATION PLAN.

ALL ENVIRONMENTAL ISSUES RELATIVE TO THE ABANDONED GULF GASOLINE FUEL  
STATION HAVE BEEN RESOLVED TO THE SATISFACTION OF THE DOE - CASE # 90-466 HO

**GENERAL NOTES**

- ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV: STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION
- ALL EXISTING STRUCTURES, PAVING, AND OTHER IMPROVEMENTS ON THE SITE SHALL BE REMOVED.
- THE LOCATION OF UTILITIES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION AND DEPTH OF ANY UTILITIES AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
- FAILURE TO MENTION SPECIFICALLY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THE DRAWINGS:
 

MISS UTILITY	1-800-257-7777
C & P TELEPHONE	725-9976
HOWARD COUNTY BUREAU OF UTILITIES	313-4900
AT&T CABLE LOCATION DIVISION	393-3553
B&E	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION INSPECTION/SURVEY DIVISION (24 HRS. PRIOR TO START OF WORK)	313-1880 313-2417
- SEE ARCHITECTURAL DRAWINGS FOR BUILDING SPECIFICATIONS.
- MAXIMUM BUILDING HEIGHT - 16'-2"
- ALL AREAS TO BE PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH PLANS APPROVED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
- ANY DAMAGE TO PUBLIC RIGHT OF WAY AND/OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE.
- ALL SLOPES SHALL BE 2:1 OR FLATTER
- THE CONTRACTOR SHALL MAINTAIN MINIMUM 4' COVER ON WATER MAINS
- ALL PROPOSED UTILITIES SHALL RECEIVE FULL TRENCH COMPACTION
- FOR DETAILS OF RAMPS AND SIGNS FOR THE HANDICAPPED, SEE MARYLAND BUILDING CODE FOR THE HANDICAPPED AND AGED AND AS SHOWN ON SHEET-1 & 4
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED
- THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES TO HIS OWN SATISFACTION BEFORE STARTING CONSTRUCTION
- WATER CONTRACT NO. 76W - SEWER CONTRACT NO. 676S



**VICINITY MAP**  
SCALE: 1" = 2000'

BENCH MARK:  
HOWARD COUNTY SURVEY CONTROL  
STATION #0030 ELEV. 217.54  
CONCRETE MONUMENT/WM CORNER  
INTERSECTION OF HICKS RD. AND RTE. 1  
0.2' BELOW SURFACE

**SHEET INDEX**

SHEET 1	SITE PLAN
SHEET 2	DETAILS
SHEET 3	SEDIMENT CONTROL
SHEET 4	SEDIMENT CONTROL
SHEET 5	STORM WATER MANAGEMENT
SHEET 6	STORM WATER MANAGEMENT
SHEET 7	LANDSCAPE PLAN

APPROVED: FOR PUBLIC WATER, SEWER AND STORM DRAIN SYSTEMS & PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

\_\_\_\_\_  
DIRECTOR

\_\_\_\_\_  
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

\_\_\_\_\_  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

\_\_\_\_\_  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

\_\_\_\_\_  
DIRECTOR

\_\_\_\_\_  
DATE

APPROVED: FOR PUBLIC WATER AND SEWER SYSTEM HOWARD COUNTY HEALTH DEPARTMENT

\_\_\_\_\_  
COUNTY HEALTH OFFICER

\_\_\_\_\_  
DATE

**LEGEND**

EXISTING GRADE	216
PROPOSED GRADE	220
EX. CONC. CURB & GUTTER	
PROPOSED CONC. CURB & GUTTER	
PROPERTY LINE	
BUILDING RESTRICTION LINE	
EXISTING WATER LINE	
PROPOSED WATER LINE	
EXISTING STORM DRAIN	
PROPOSED STORM DRAIN	
EXISTING SANITARY SEWER	
PROPOSED SANITARY SEWER	
EXISTING GAS LINE	
NUMBER OF PARKING SPACES	2 2 1/2" GAS
PROPOSED GAS LINE	
EXISTING ELECTRIC LINE	

WASHINGTON BLVD. U.S. RTE. 1

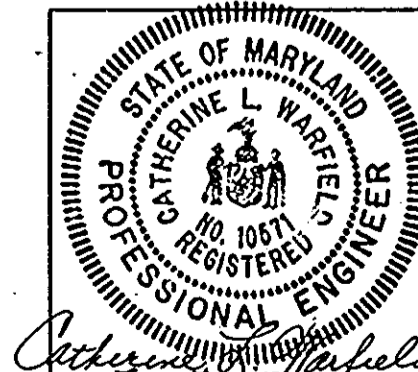
**PLAN**  
SCALE: 1" = 20'

WATER CONTRACT NO. 76W  
SEWER CONTRACT NO. 676S

**PERMIT INFORMATION BLOCK**

SUBDIVISION NAME	EX. LESSOR L.L.C.
LOT / PARCEL	415
SECTION / AREA	43
TAX / ZONING / MA. ELEC. DIST.	9 B-2 6
CENSUS TRACT	6069.01
WATER CODE	B 02
SEWER CODE	3350000

**C.L. WARFIELD & ASSOC., INC.**  
CONSULTING ENGINEERS  
4900 KEMP ROAD  
REISTERSTOWN, MARYLAND 21136  
(410) 429-2981



**ENGINEER CERTIFICATION:**  
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.

Engineer: C.L. WARFIELD AND ASSOCIATES, INC. Date: 8-5-96  
Name: Catherine L. Warfield PE#: 10571

**DEVELOPERS CERTIFICATION:**  
I/We certify that all development and construction will be done according to this plan and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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.

Developer Name: [Signature] Date: 8/5/96

**SITE PLAN**

**#7940 WASHINGTON BOULEVARD**

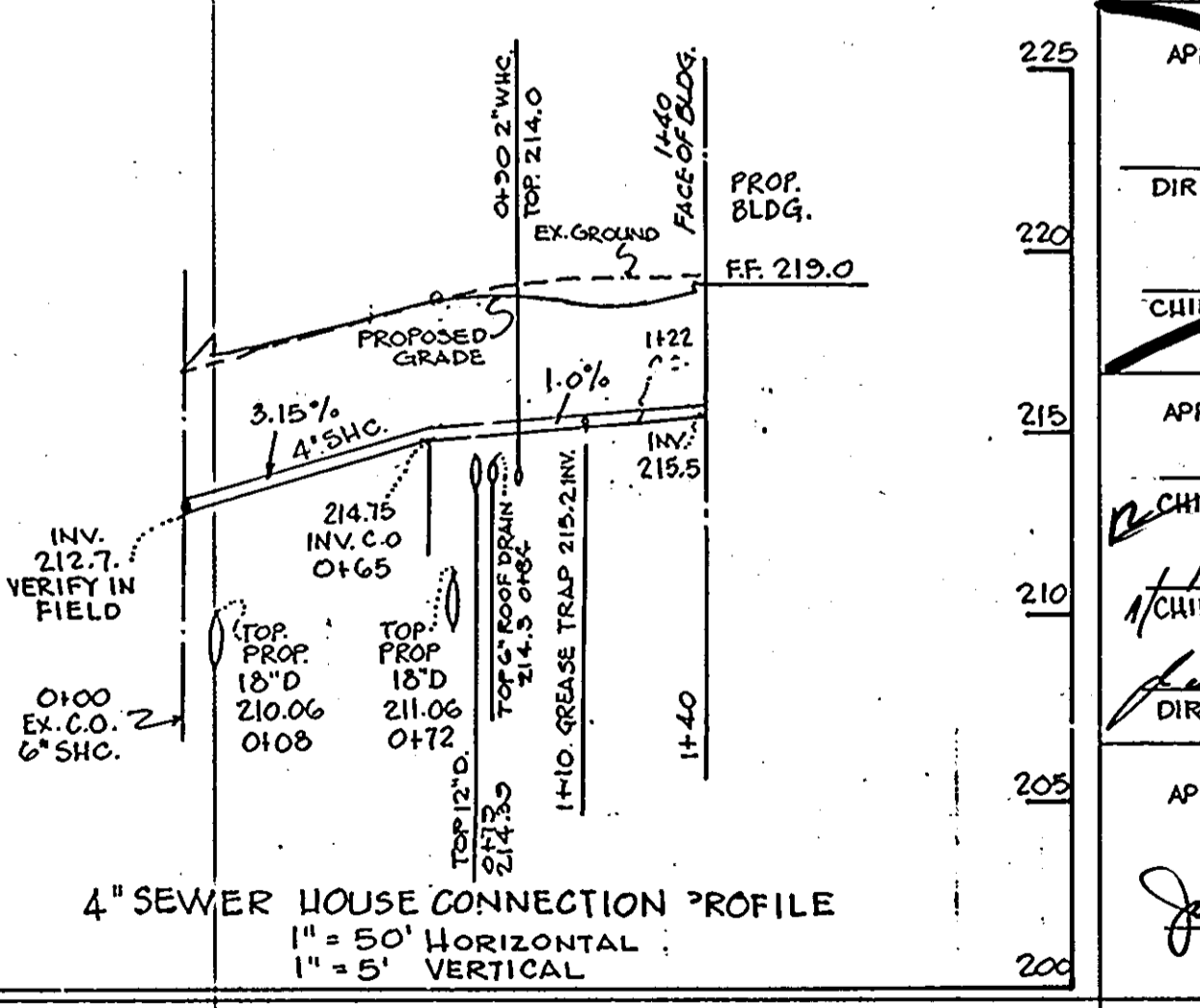
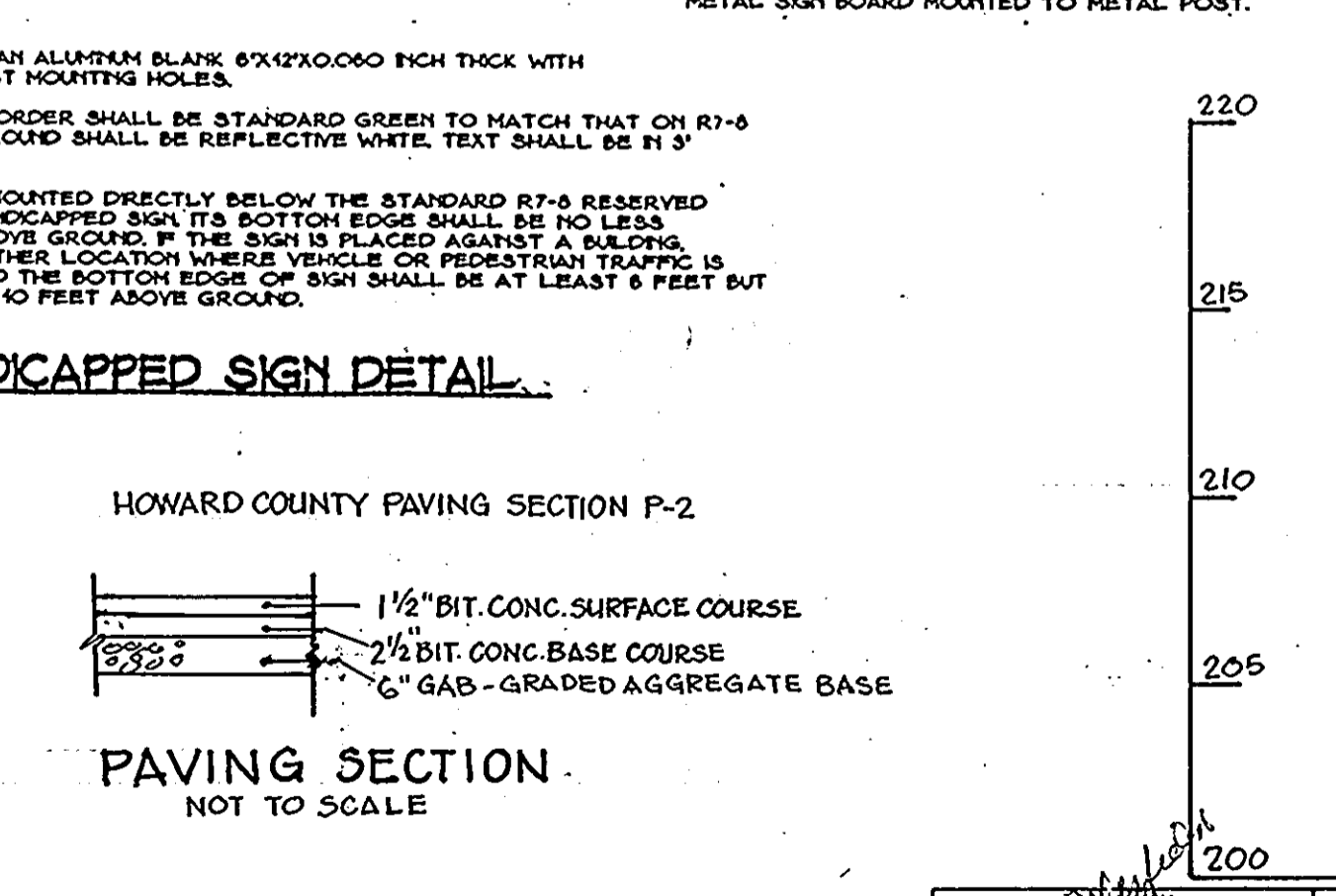
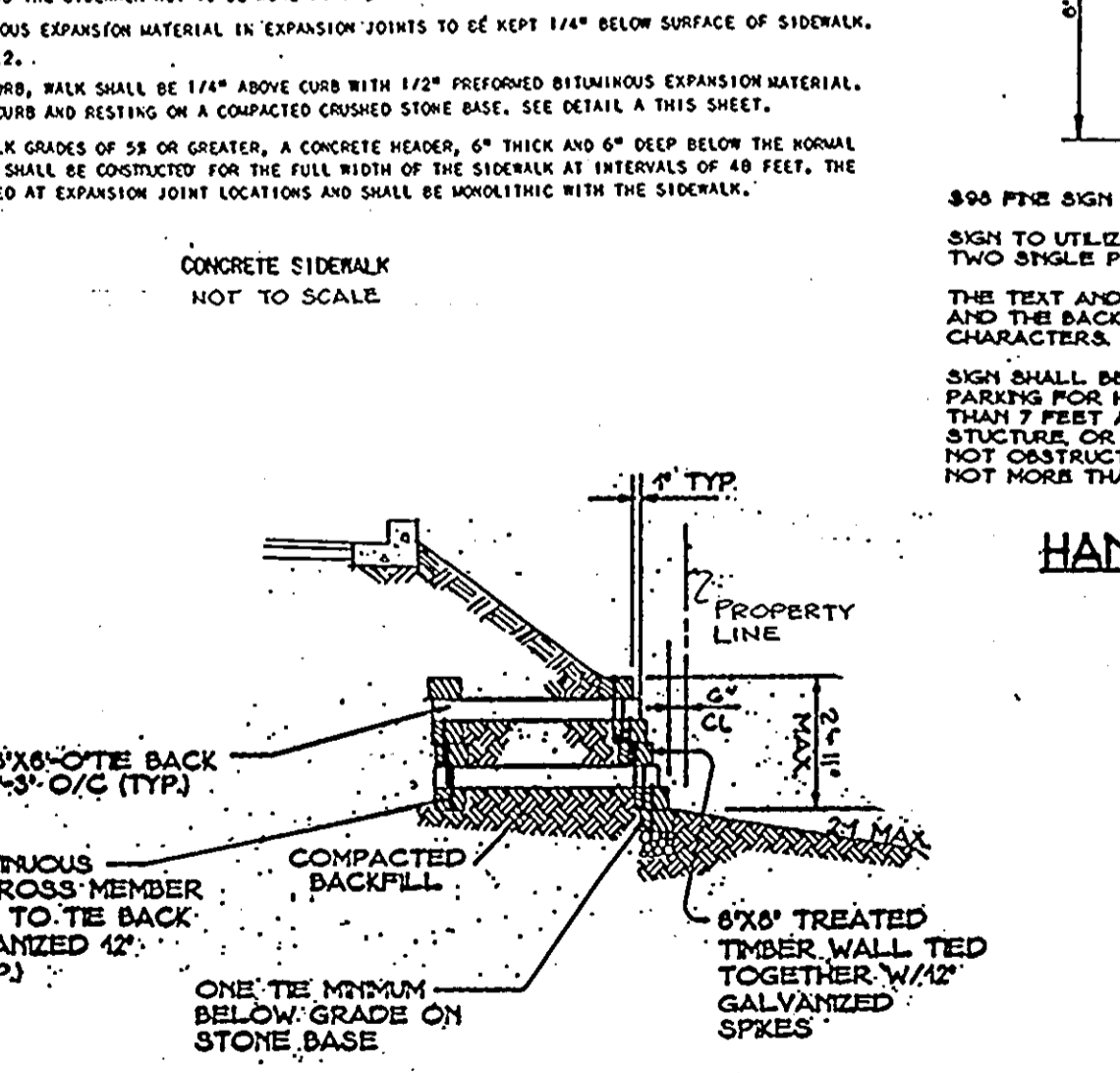
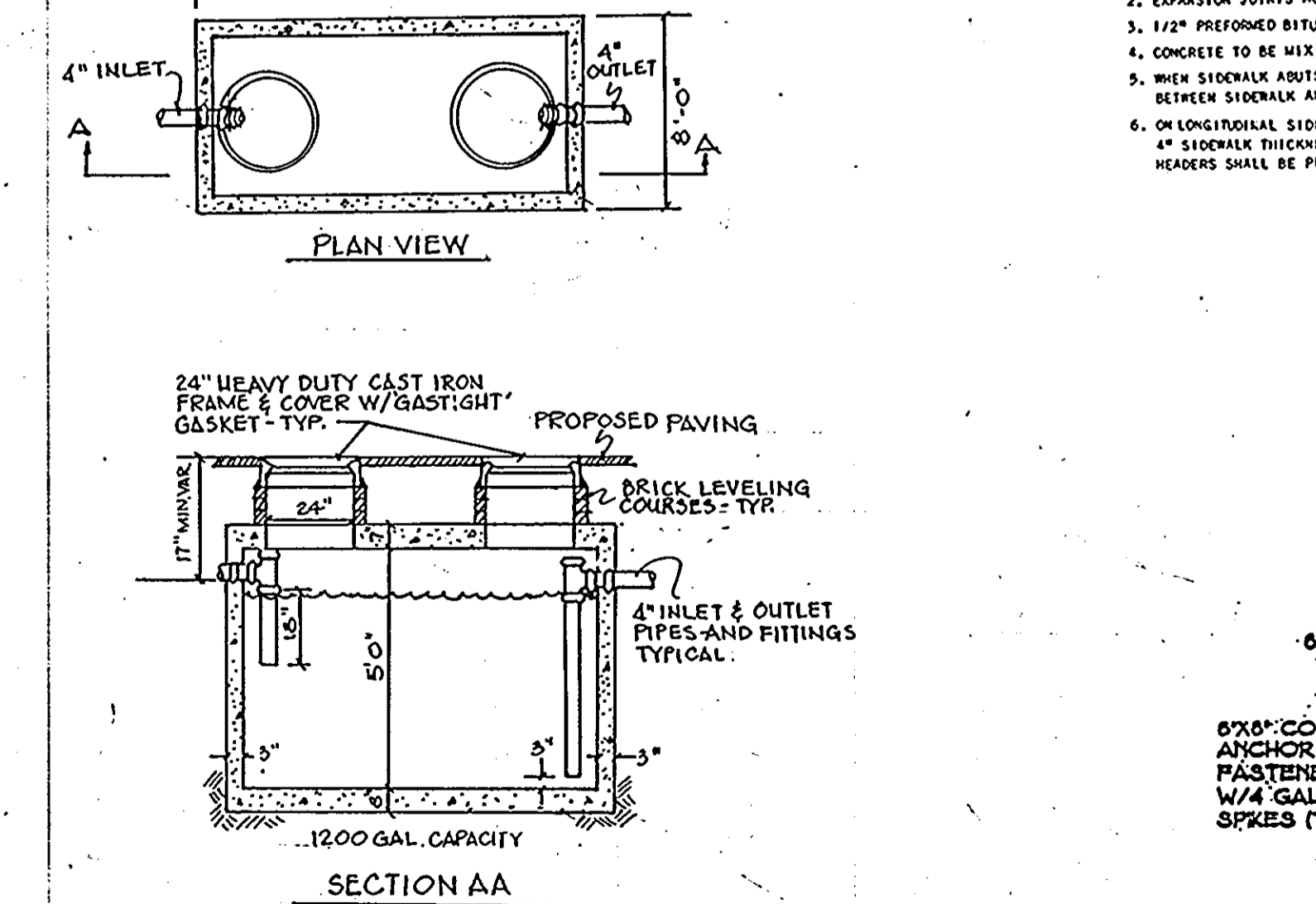
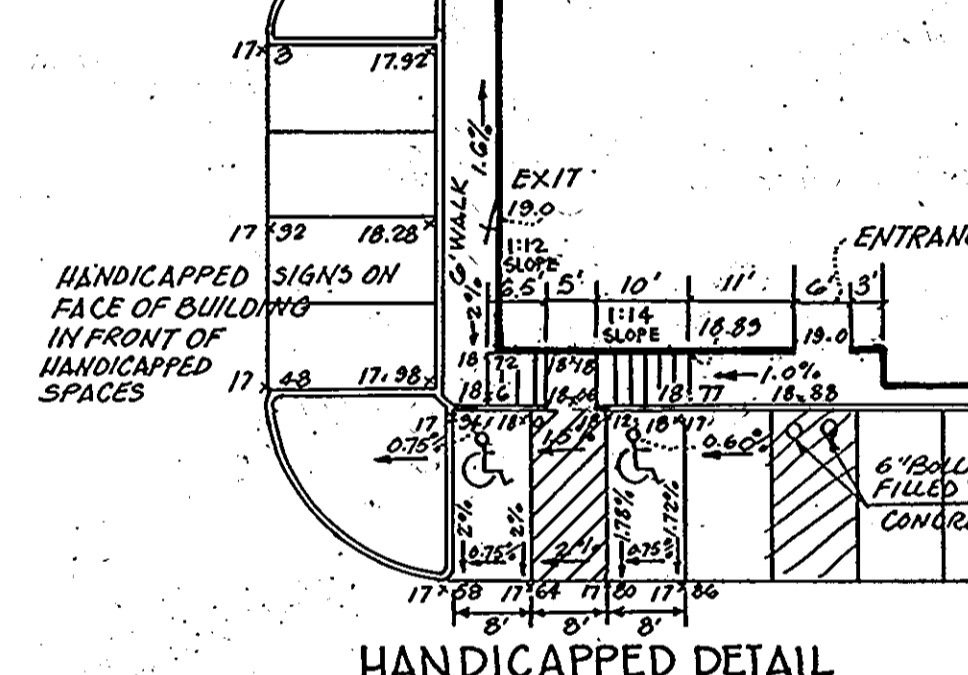
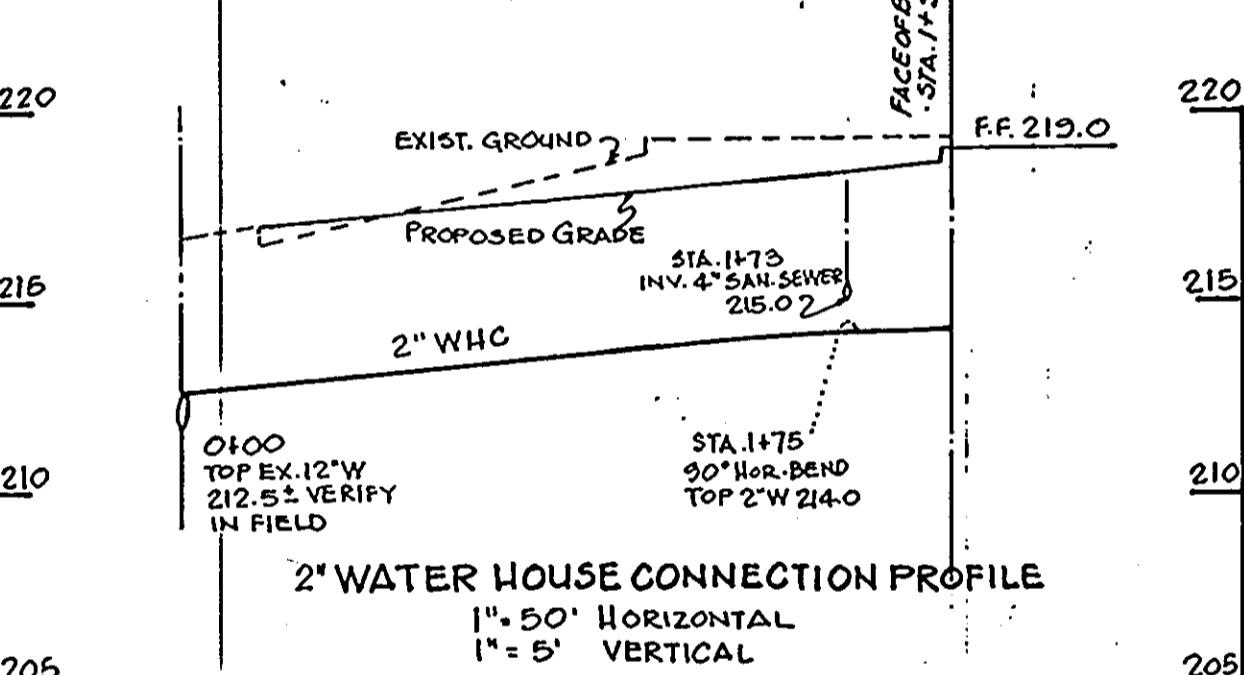
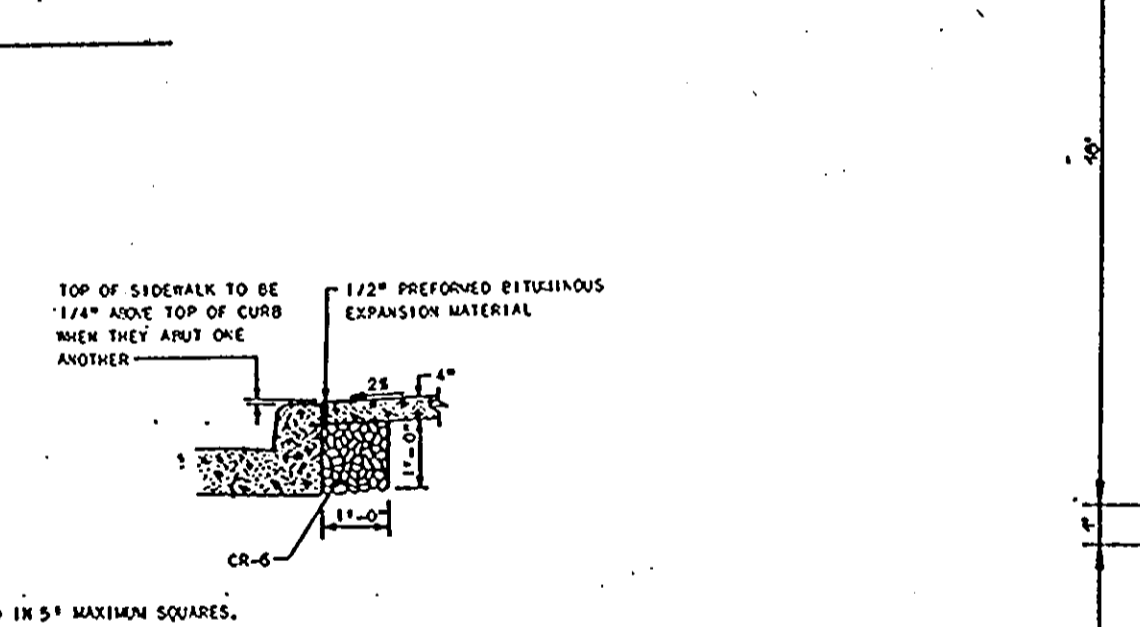
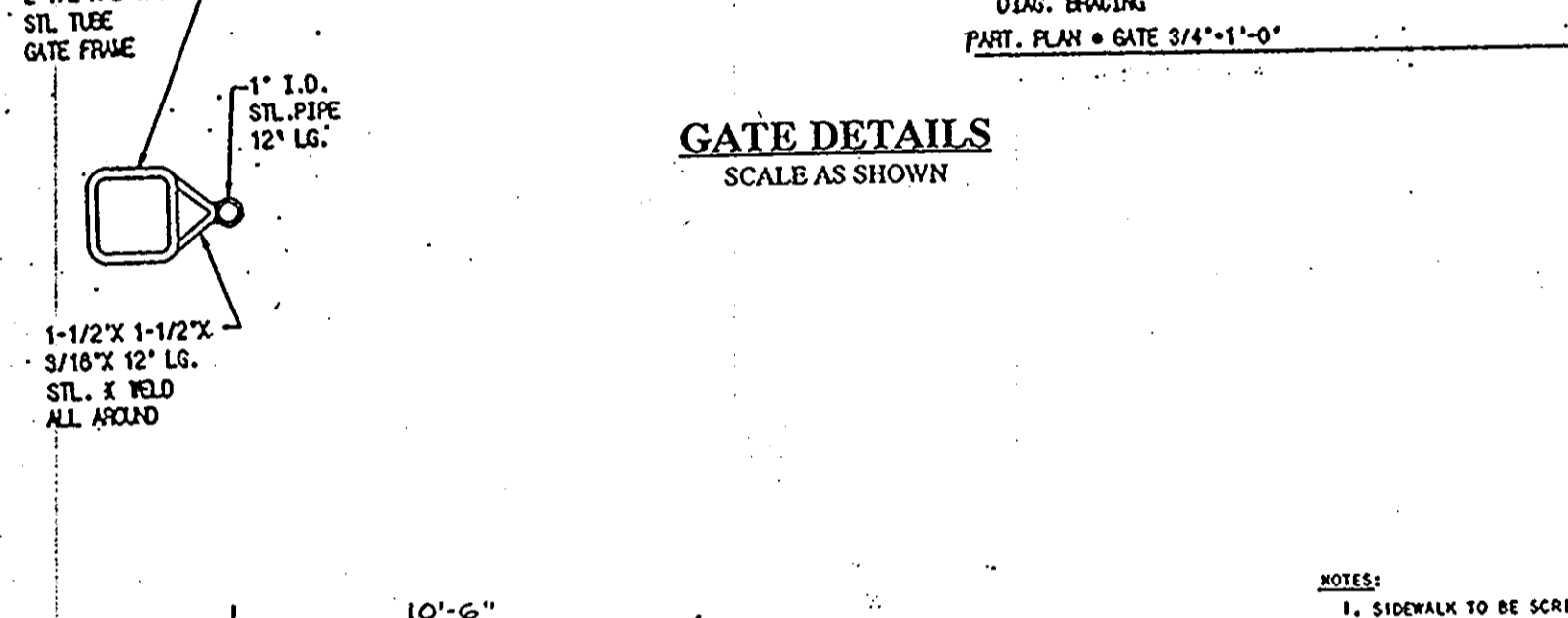
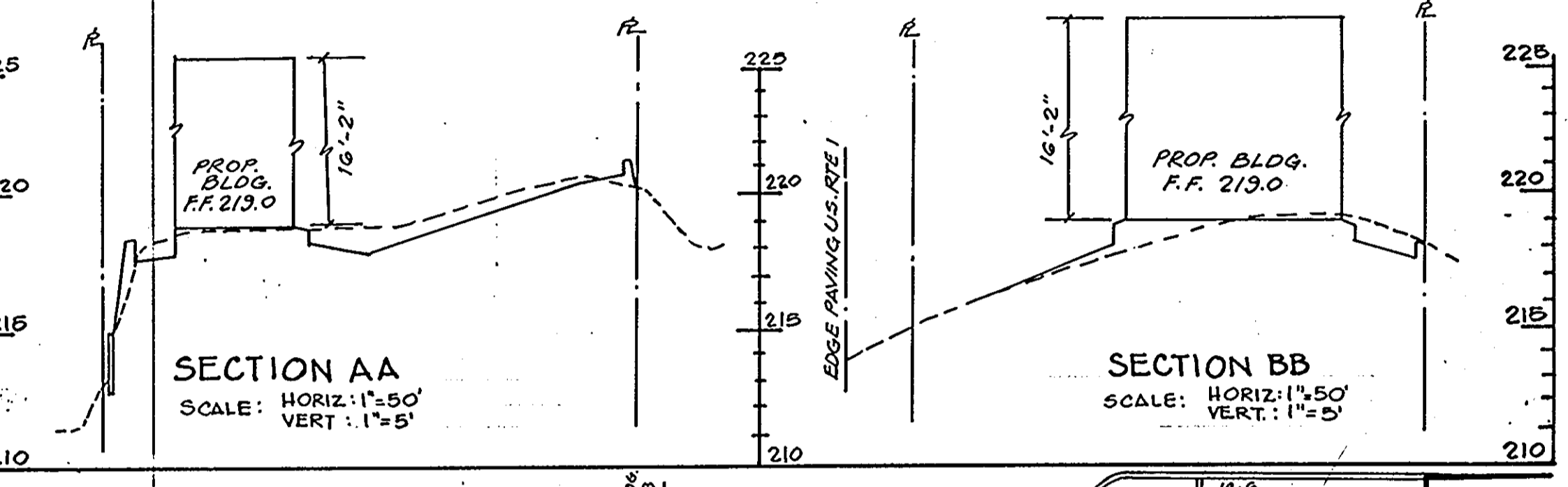
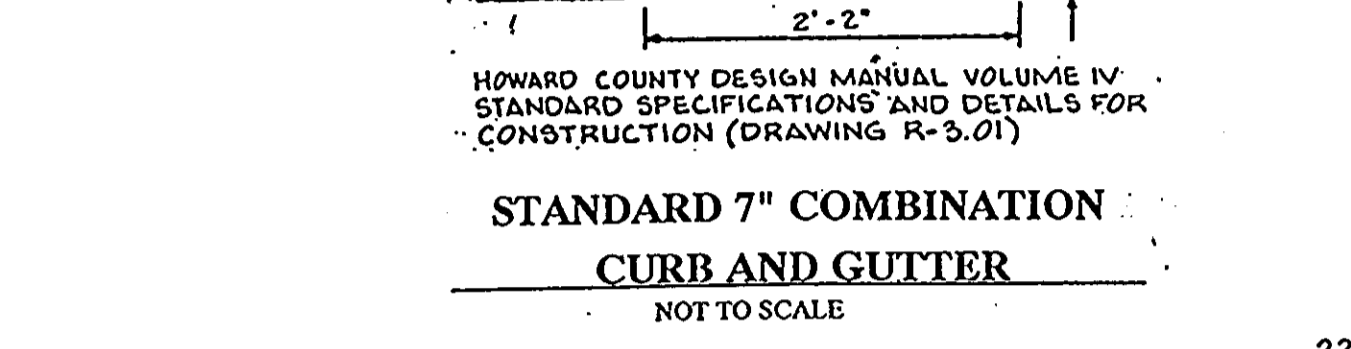
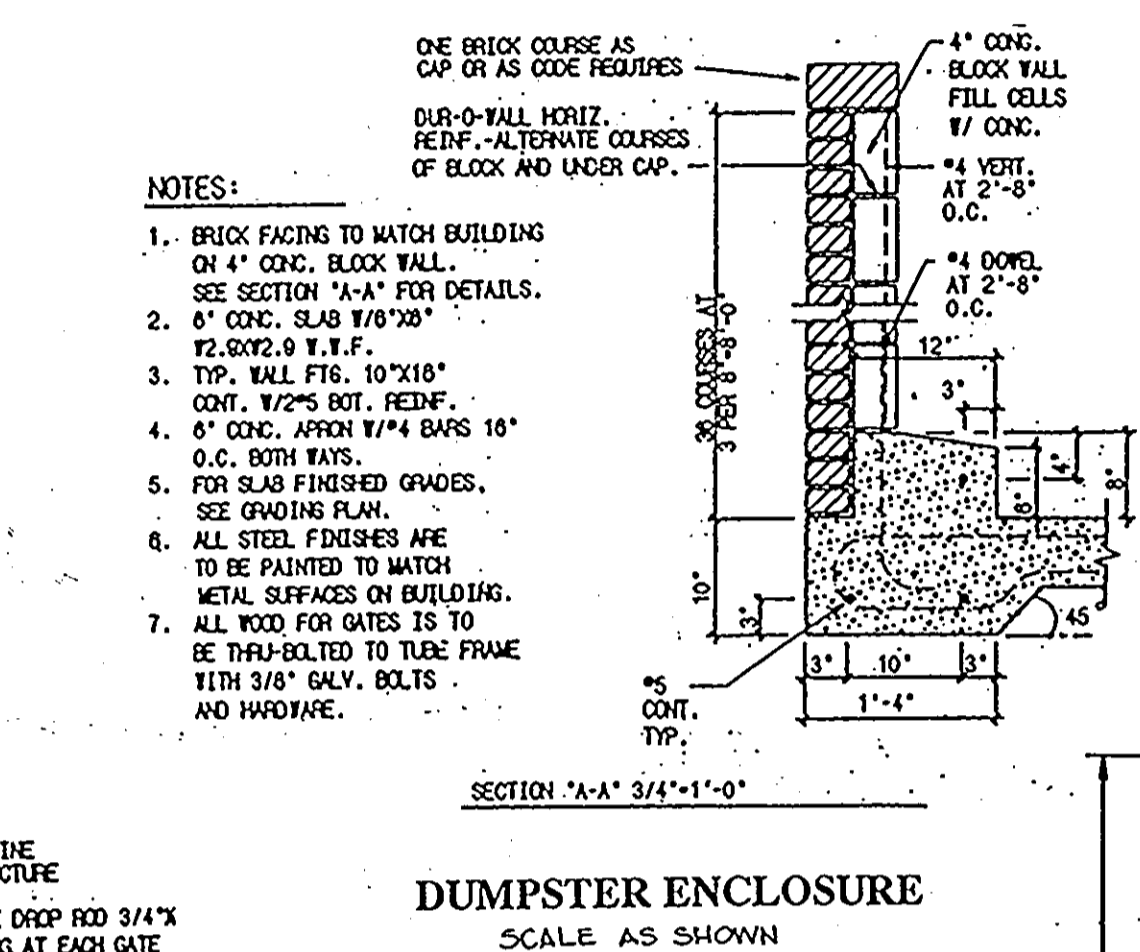
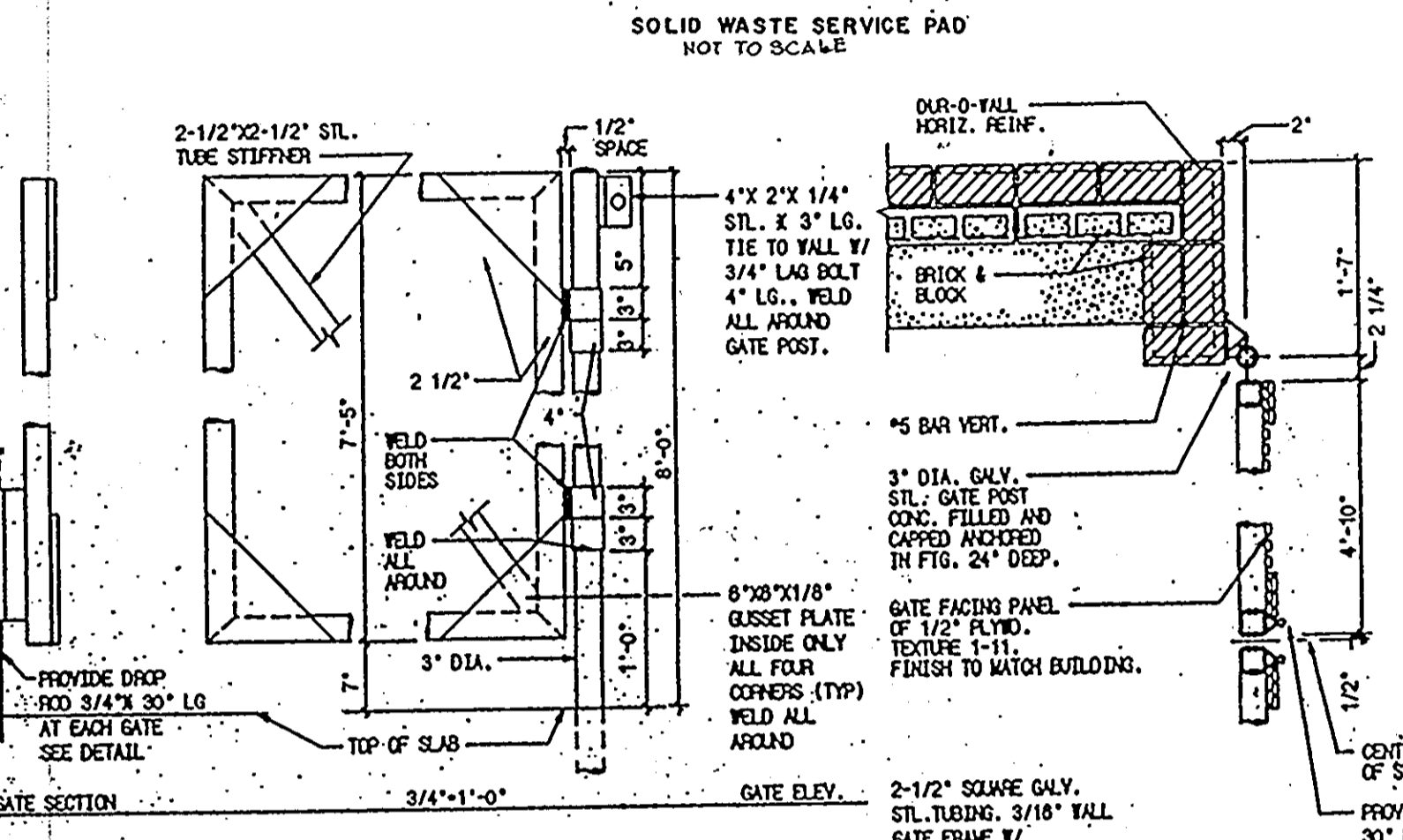
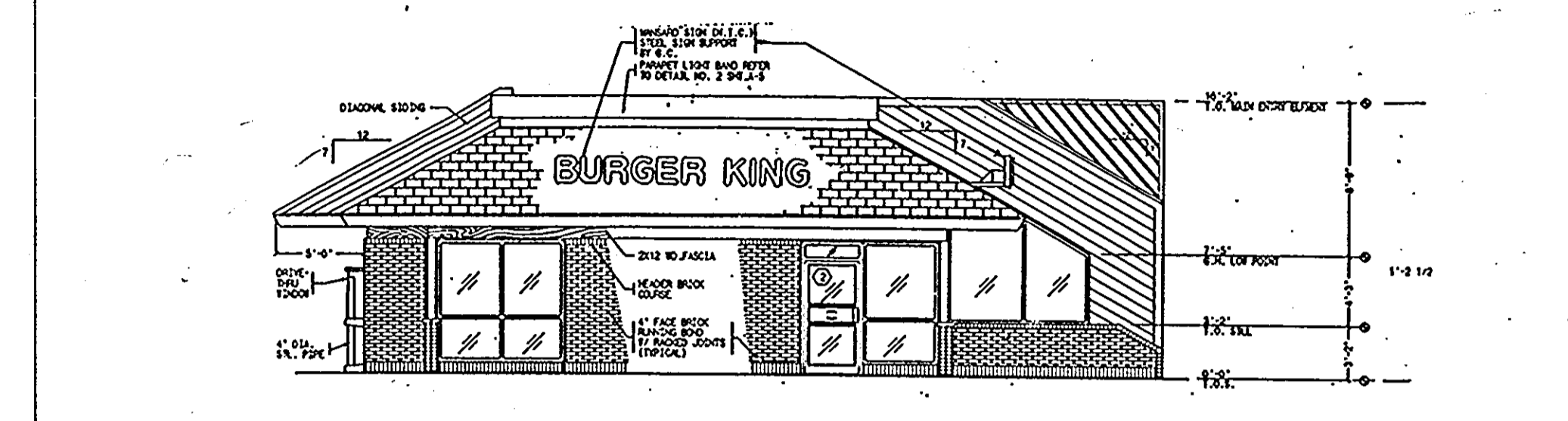
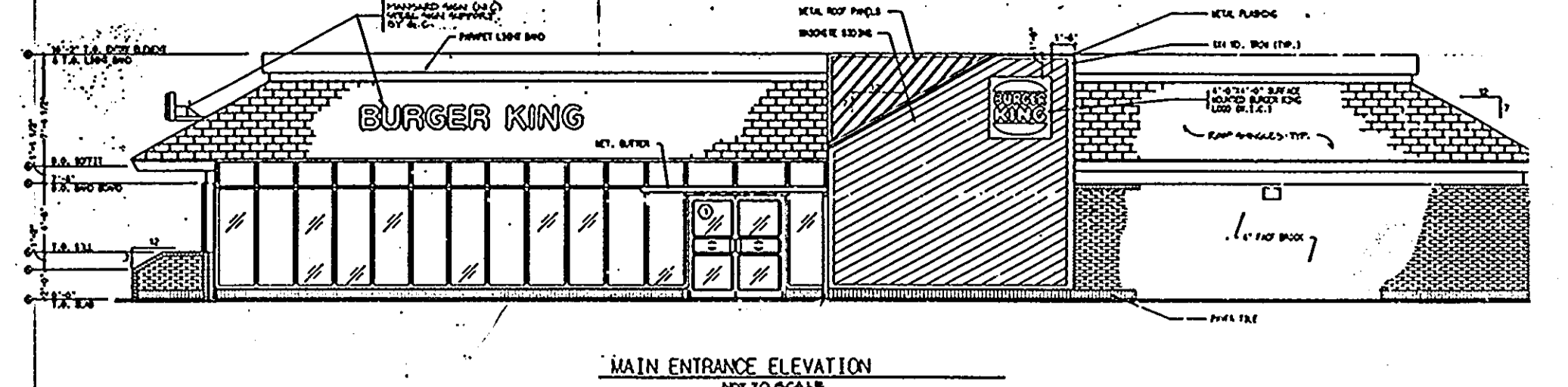
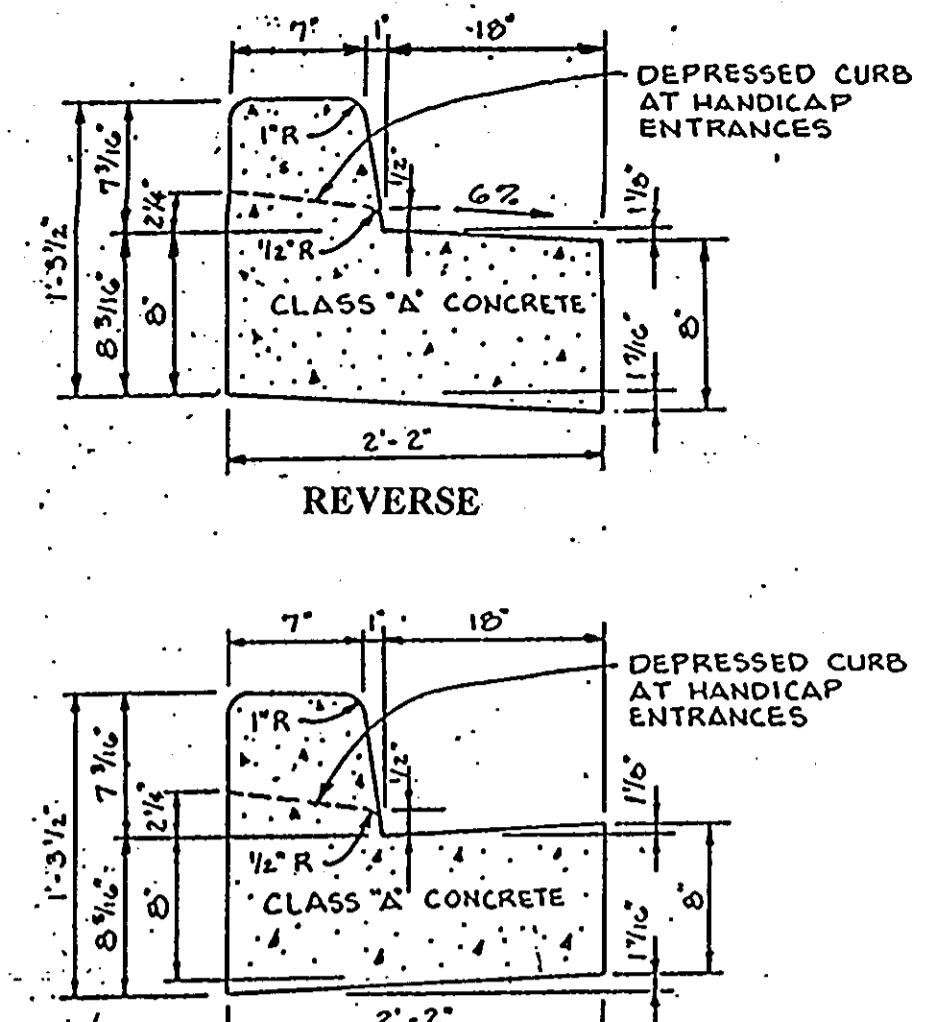
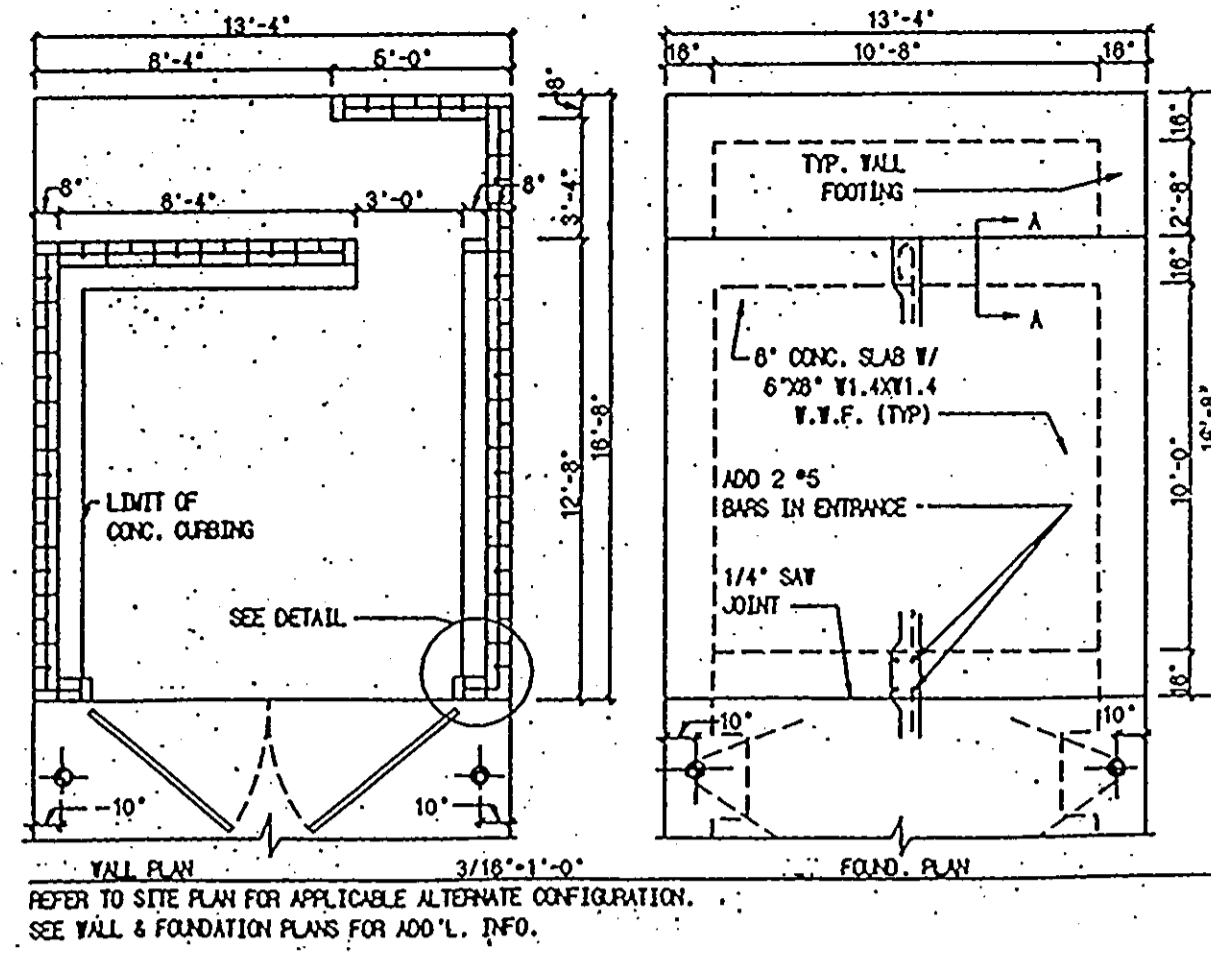
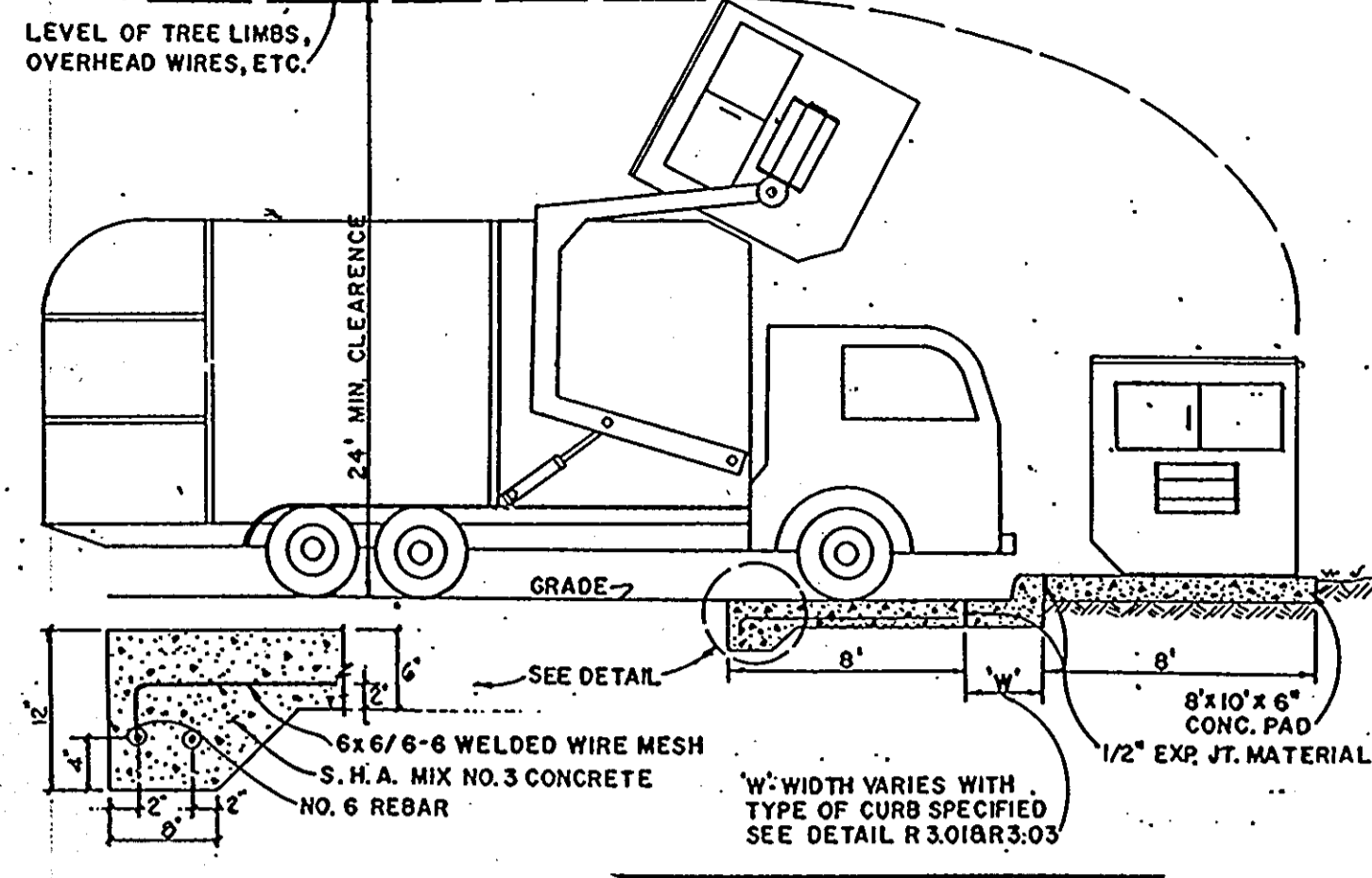
**OWNER**

BK JESSUP, LLC  
17 WEST PENNSYLVANIA AVE.  
SUITE 500  
BALTIMORE, MARYLAND 21204  
(410) 296-4800

DEED REF.: LIBER 3714 FOLIO 578

7940 WASHINGTON BOULEVARD  
HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT NO. 6  
CENSUS TRACT: 6069.01  
TAX MAP: 43 PARCEL: 415

WATER CODE: B02  
SEWER CODE: 3350000  
SCALE: 1" = 20'  
DATE: 8-5-96  
SHEET: 1 OF 7



APPROVED FOR PUBLIC WATER, SEWER AND STORM DRAIN SYSTEMS & PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

CHIEF, BUREAU OF ENGINEERING \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *Richard Blood* 11/29/96 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH *Paul R. Smith* 11/22/96 DATE

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED: FOR PUBLIC WATER AND SEWER SYSTEM HOWARD COUNTY HEALTH DEPARTMENT

*James M. Bond* 11/19/96 DATE

COUNTY HEALTH OFFICER \_\_\_\_\_ DATE \_\_\_\_\_

NOTES:

1. A PRECAST 1500 GAL. UNIT MODIFIED TO INCLUDE ALL COMPONENTS SHOWN ON THIS DETAIL IS AN ACCEPTABLE ALTERNATE.
2. APPLY BITUMASTIC COATING TO THE EXTERIOR BOTTOM & SIDES.

NOTE:

1. TIMBERS SHALL BE CCA TREATED LANDSCAPING TIMBERS (40 LB/OP. RETENTION)
2. HARDWARE SHALL BE HOT DIPPED GALVANIZED.
3. WALL LIMITS AND ELEVATIONS TO BE SET IN FIELD AS REQUIRED.

HOWARD COUNTY PAVING SECTION P-2

PAVING SECTION NOT TO SCALE

ENGINEER CERTIFICATION:

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.

Engineer: *C. L. Warfield* AND ASSOCIATES Date: 8-5-96  
Name: *Catherine L. Warfield* PE: 10571

DEVELOPERS CERTIFICATION:

I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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.

Developer Name: *Richard Blood* Date: 8/2/96



C.L. WARFIELD & ASSOC., INC.  
CONSULTING ENGINEERS  
4900 KEMP ROAD  
REISTERSTOWN, MARYLAND 21136  
(410) 429-2981

DETAILS

#7940 WASHINGTON BOULEVARD

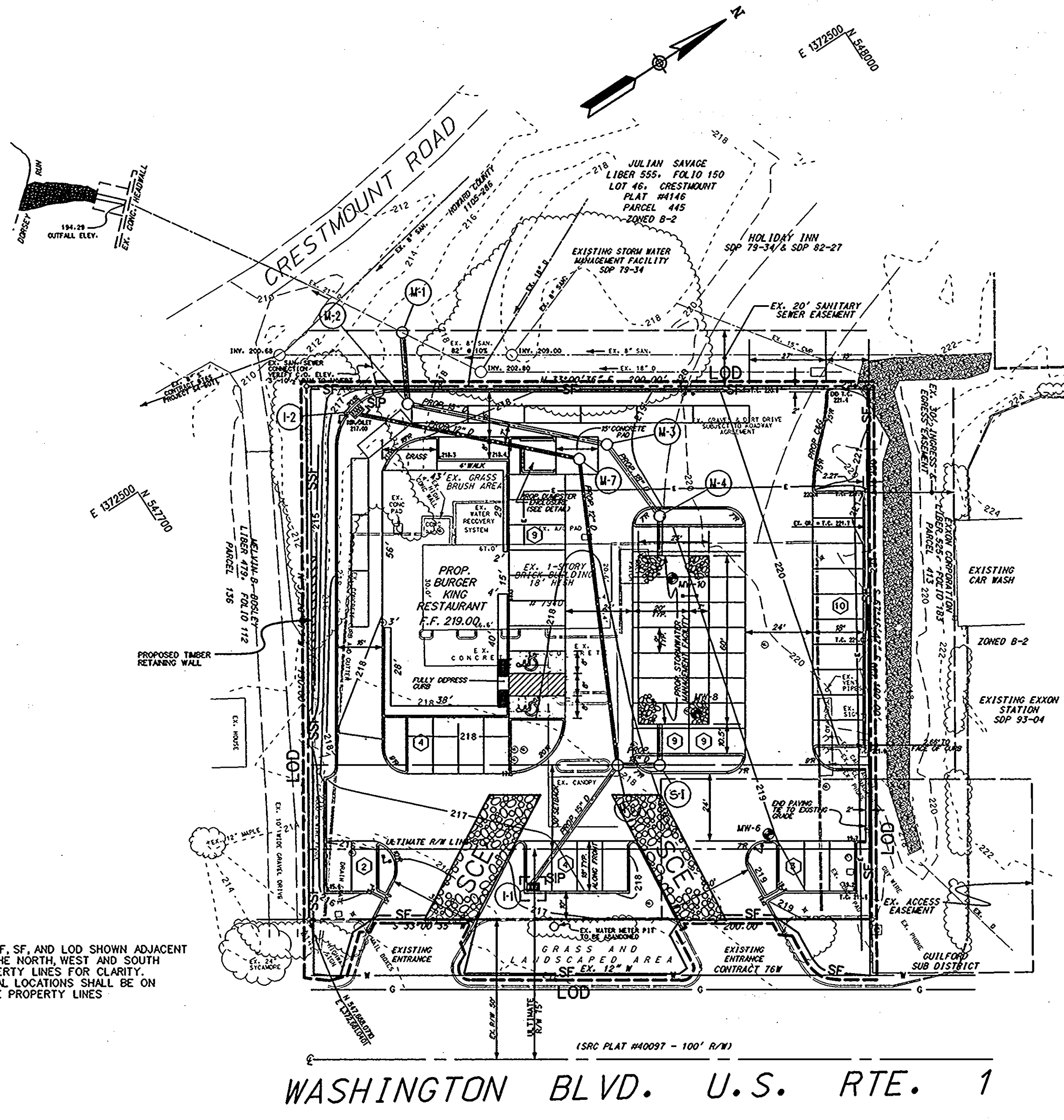
OWNER

BK JESSUP, LLC  
17 WEST PENNSYLVANIA AVE.  
SUITE 500  
BALTIMORE, MARYLAND 21204  
(410) 296 4800

DEED REF. - LIBER 3714 FOLIO 10

7940 WASHINGTON BOULEVARD  
HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT NO. 6  
CENSUS TRACT: 6069.01  
TAX MAP: 43 PARCEL: 415

WATER CODE: 902  
SEWER CODE: 3550000  
SCALE: AS SHOWN  
DATE: 8-5-96  
SHEET 2 OF 7



WASHINGTON BLVD. U.S. RTE. 1

**SEDIMENT CONTROL PLAN**

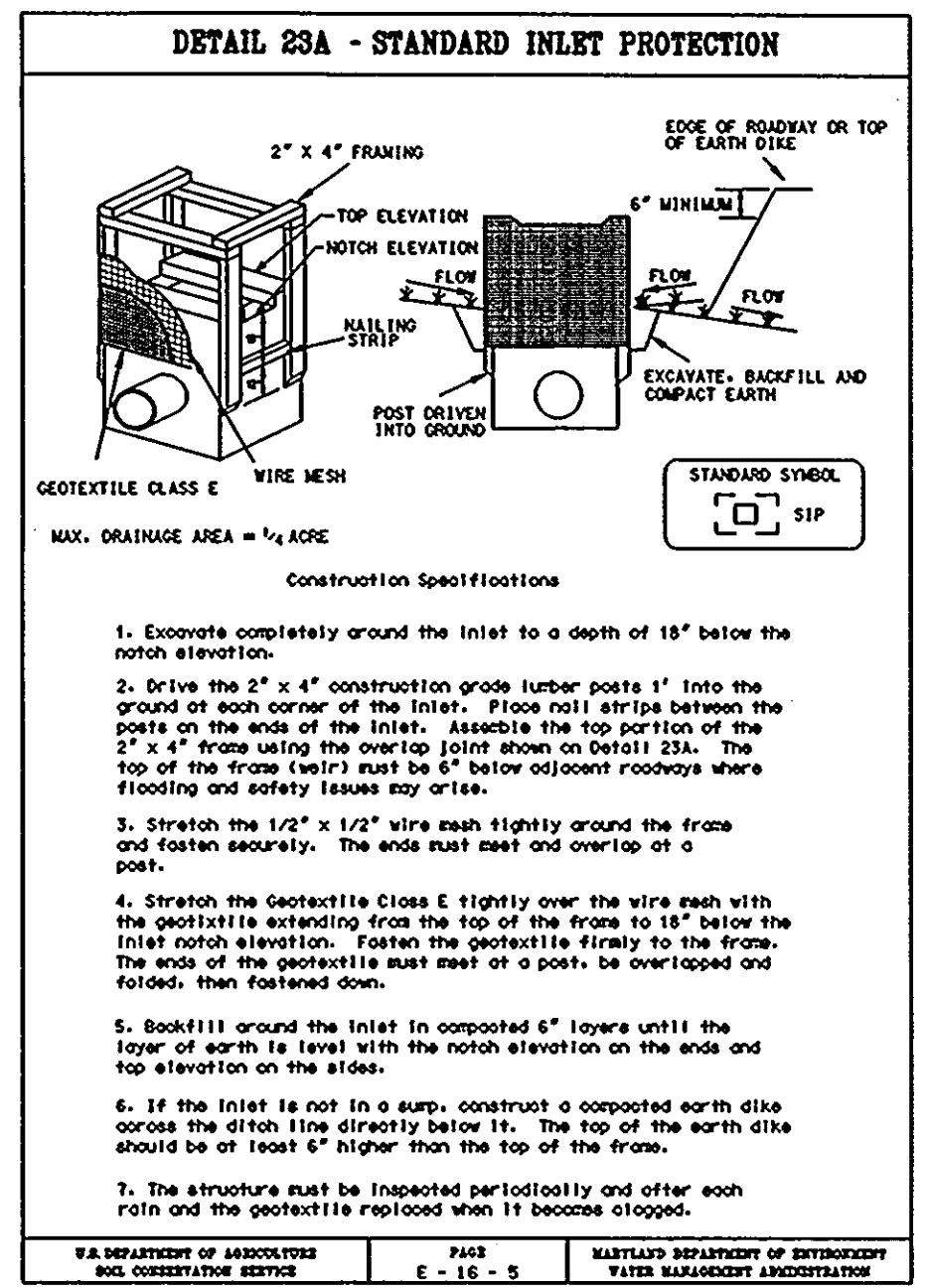
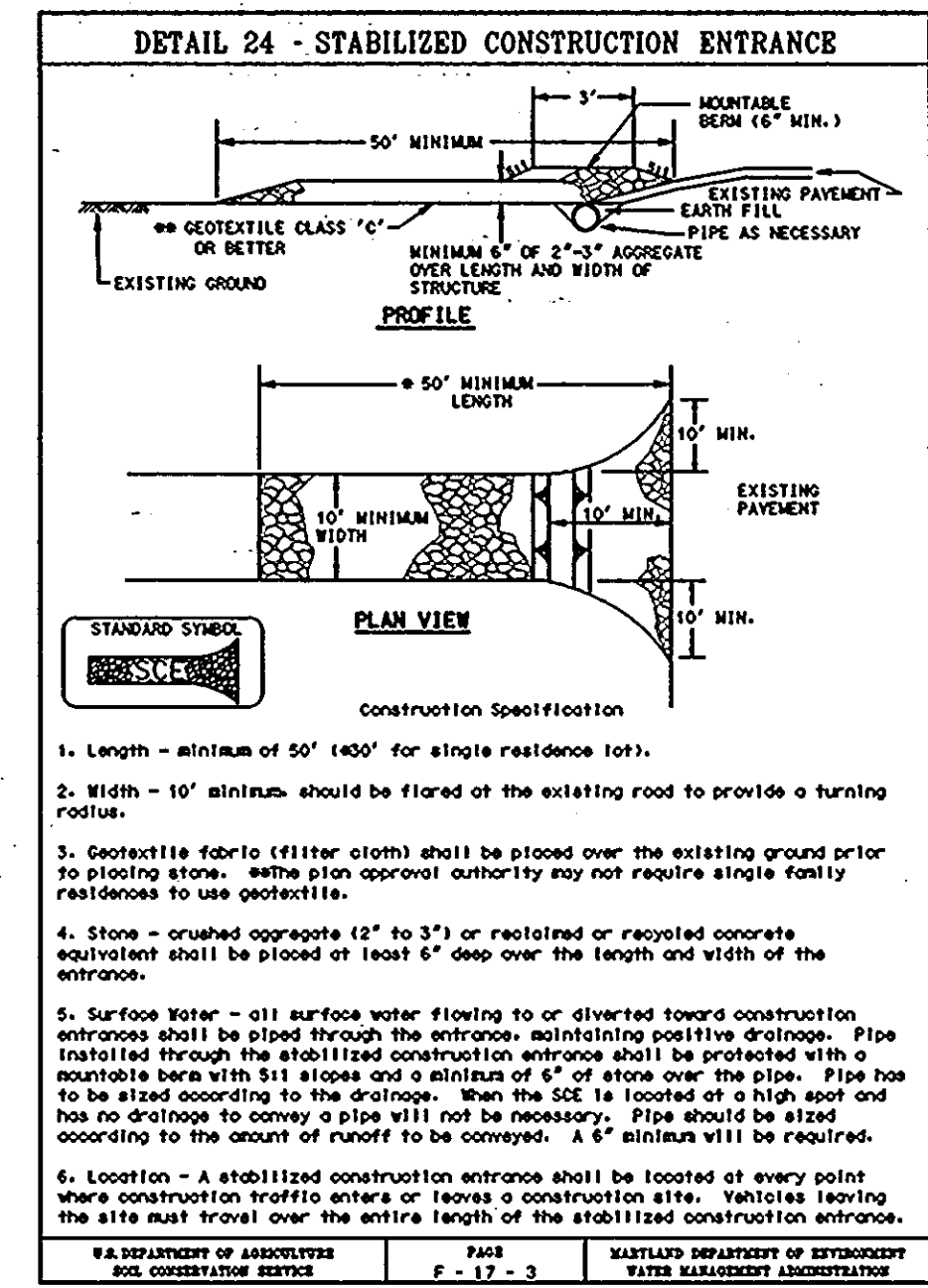
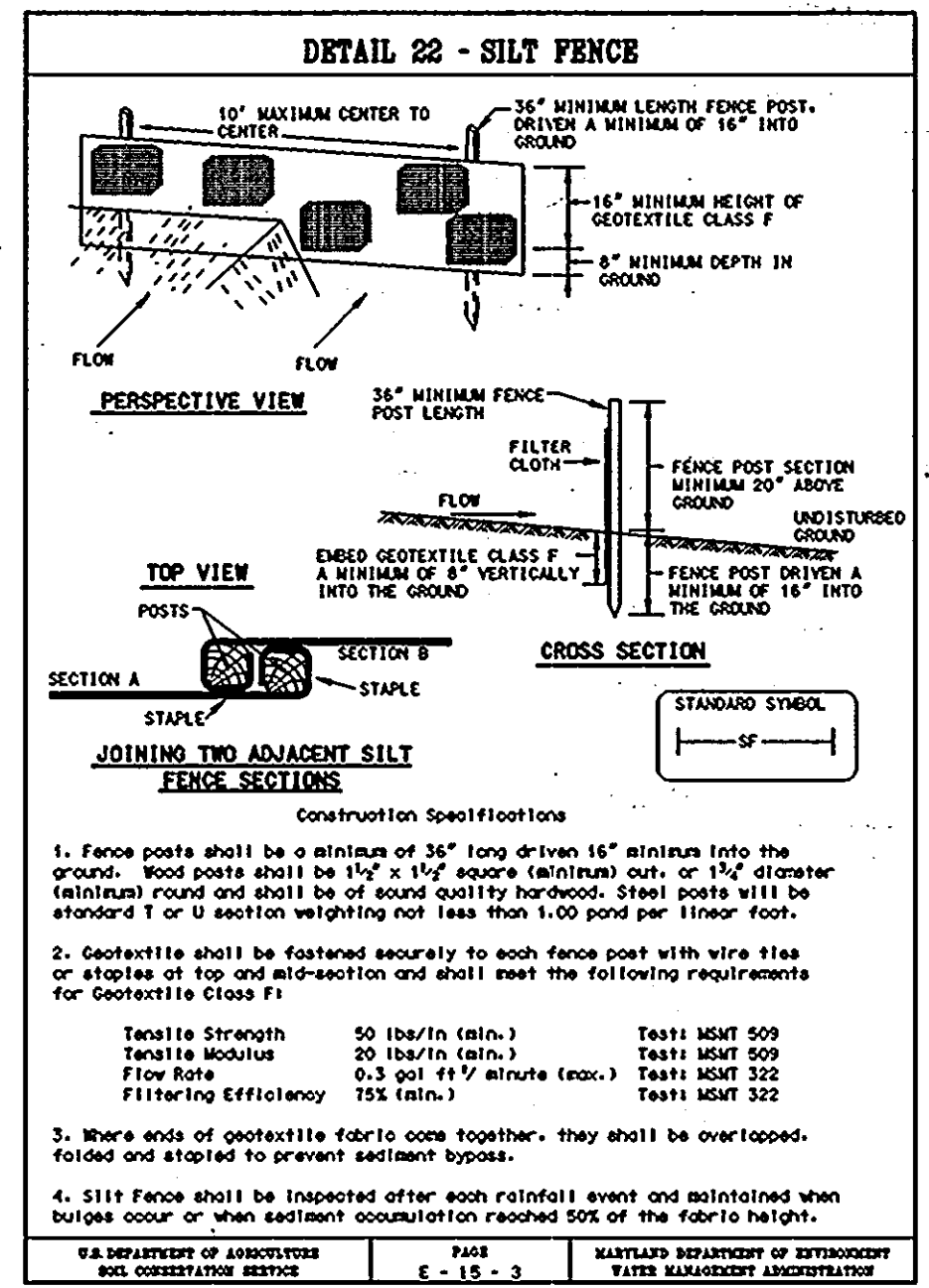
SCALE: 1"=30'

**LEGEND**

EXISTING GRADE	----- 220 ----- 216 -----
PROPOSED GRADE	----- 218 -----
EX. CONC. CURB & GUTTER	=====
PROPOSED CONC. CURB & GUTTER	=====
PROPERTY LINE	=====
BUILDING RESTRICTION LINE	=====
EXISTING WATER LINE	----- W -----
PROPOSED WATER LINE	----- W -----
EXISTING STORM DRAIN	----- S -----
PROPOSED STORM DRAIN	----- S -----
EXISTING SANITARY SEWER	----- S -----
PROPOSED SANITARY SEWER	----- S -----
EXISTING GAS LINE	----- G -----
NUMBER OF PARKING SPACES	②
LIMIT OF DISTURBANCE	----- LOD -----
SILT FENCE	----- SF -----
SUPER SILT FENCE	----- SSF -----
INLET PROTECTION	----- SIP -----
STABILIZED CONSTRUCTION ENTRANCE	----- SCE -----

**SEQUENCE OF CONSTRUCTION**

- OBTAIN A GRADING PERMIT.
- DEMOLISH ALL EXISTING STRUCTURES AND PHYSICAL IMPROVEMENTS ON THE SITE.
- CLEAR AND GRUB WITHIN LIMITS OF DISTURBANCE AND INSTALL PERIMETER SEDIMENT CONTROL DEVICES.
- GRADE SITE. CONSTRUCT TIMBER WALL.
- INSTALL UTILITIES - WATER, SANITARY SEWER, STORM DRAIN, STORM WATER MANAGEMENT FACILITY, ETC. AND INSTALL INLET PROTECTION AT I-1 AND I-2.
- STABILIZE SLOPES IN ACCORDANCE WITH PERMANENT SEEDING NOTES AND STABILIZE DRIVEWAYS AND PARKING AREAS WITH STONE SUBBASE.
- COMPLETE ALL CONSTRUCTION AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
- AFTER SITE HAS BEEN STABILIZED, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.

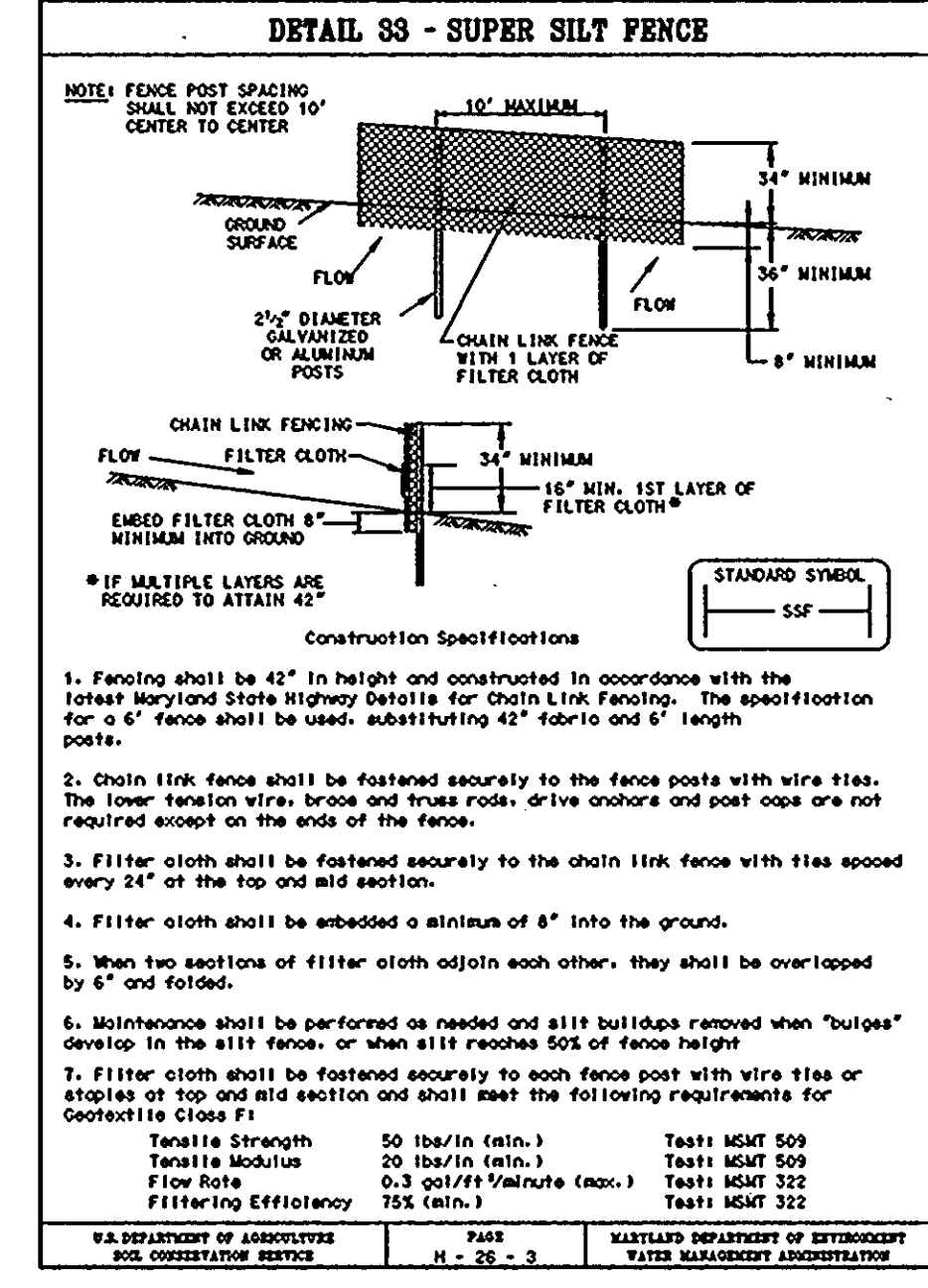


**SEDIMENT CONTROL NOTES**

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855)
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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 GREATER THAN 3:1; B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 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.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 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.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL IS OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:  

TOTAL AREA OF SITE	0.87 ACRES
AREA DISTURBED	0.96 ACRES
AREA TO BE ROOFED OR PAVED	0.74 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.18 ACRES
TOTAL CUT	1,833 CU YDS
TOTAL FILL	775 CU YDS

 OFFSITE WASTE/BORROW LOCATION TO BE PROVIDED BY CONTRACTOR - SUBJECT TO APPROVAL BY HOWARD COUNTY SEDIMENT CONTROL.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
- 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.
- OFFSITE TOPOGRAPHY HAS MODERATE SLOPE. NO OFFSITE WATER ENTERS THE SITE.



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

*John R. Robertson* 11/6/96 DATE  
HOWARD S.C.D.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

*Cheryl Simmons* 11/6/96 DATE  
S.S. SOIL CONSERVATION SERVICE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Michael Blood* 11/2/96 DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*James S. Smith* 11/22/96 DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH  
DIRECTOR

APPROVED FOR PUBLIC WATER, SEWER, AND STORM DRAIN SYSTEMS & PUBLIC ROADS: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

\_\_\_\_\_  
DIRECTOR DATE

\_\_\_\_\_  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED FOR PUBLIC WATER AND SEWER SYSTEM HOWARD COUNTY HEALTH DEPARTMENT

*James M. Bond* 11/19/96 DATE  
COUNTY HEALTH OFFICER

**EROSION AND SEDIMENT CONTROL PLAN AND DETAILS**

**#7940 WASHINGTON BOULEVARD**

**OWNER**

BK JESSUP, LLC  
17-WEST PENNSYLVANIA AVE.  
SUITE 500  
BALTIMORE, MARYLAND 21204  
(410) 236 4800

7940 WASHINGTON BOULEVARD  
HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT NO. 6  
CENSUS TRACT: 6069.01  
TAX MAP: 43 PARCEL: 415

WATER CODE: B02  
SEWER CODE: 3350000  
SCALE: 1" = 30'  
DATE: AUGUST 5, 1996  
SHEET 3 OF 7

**C.L. WARFIELD & ASSOC., INC.**  
CONSULTING ENGINEERS  
4900 KEMP ROAD  
REISTERSTOWN, MARYLAND 21136  
(410) 429-2981

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Name: *Charles L. Warfield* PE#: 10571

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I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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.  
Developer Name: *John R. Robertson* Date: 8/5/96

Topsol - Construction and Material Specifications

Section I - Vegetative Stabilization Methods and Materials

- A. Site Preparation
  - i. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
  - ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
  - iii. Schedule required soil test to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
- B. Soil Amendments (Fertilizer and Lime Specifications)
  - i. Soil test must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
  - ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer.
  - iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98-100% will pass through a #20 mesh sieve.
  - iv. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.

Section II - Temporary Seeding

Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 12 months, for longer duration of vegetative cover, Permanent Seeding is required.

Temporary Seeding Summary  
Seed Mixture (Hardness Zone 6b)  
From Table 26

Species	Application Rate (lb/oc)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-10-10)	Lime Rate
Rye Plus	150	3/1 - 4/30	1"	600 lb/oc	2 tons/oc
Foxtail		5/1 - 8/14		(15lb/1000 sf)	(1000b/1000sf)
Millet		8/15 - 11/15			

Section III - Permanent Seeding

Seeding grass and legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

No.	Species	Application Rate (lb/oc)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate		
3	Tall Fescue	125	3/1 - 5/15	1/2"	90 lb/oc	175 lb/oc	175 lb/oc	2 tons/oc
	Perennial Ryegrass	15	8/15 - 10/15	1/2"	2.0 lb/1000sf	4.0 lb/1000sf	4.0 lb/1000sf	100 lb/1000sf
	Kentucky Bluegrass	10						
7	Tall Fescue	110	3/1 - 5/15	1/2"	90 lb/oc	175 lb/oc	175 lb/oc	2 tons/oc
	Weeping Lovegrass Plus	3	5/16 - 8/14	1/2"	2.0 lb/1000sf	4.0 lb/1000sf	4.0 lb/1000sf	100 lb/1000sf
	Sericea Lespedeza	20	8/15 - 10/15					

C. Seedbed Preparation

1. Temporary Seeding
  - a. Seedbed preparation shall consist of loosening soil to a depth of 3-5" by means of suitable agricultural or construction equipment such as disc harrows or chiselplows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
  - b. Apply fertilizer and lime as prescribed on the plans.
  - c. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
- ii. Permanent Seeding
  - a. Minimum soil conditions required for permanent vegetative establishment:
    1. Soil pH shall be between 6.0 and 7.0.
    2. Soluble salts shall be less than 500 parts per million (PPM).
    3. The soil shall contain less than 40% clay but enough fine grained material (O-30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or sericea lespedeza is to be planted then a sandy soil (<30% silt plus clay) would be acceptable.
    4. Soil shall contain 1.5% minimum organic matter by weight.
    5. Soil must contain sufficient pore space to permit adequate root penetration.
    6. If these conditions cannot be met by soils on site, adding topsol is required in accordance with Section 21 Standard and Specification for Topsol.
  - b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsol to the surface area and to create horizontal erosion check slots to prevent topsol from sliding down a slope.
  - c. Apply soil amendments per soil test or as included on the plans.
  - d. Mix soil amendments into the top 3-5" of topsol by disking or other suitable means. Lawn rows should be rolled to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions would prevent normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to toughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. Seed Specifications

- i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material this job.
- ii. Seed tags shall be made available to the inspector to verify type and rate of seed used.
- iii. Inoculant - the inoculant for treating legume seed in the seed mixtures shall be pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80 degrees F. can weaken bacteria and make the inoculant less effective.

E. Methods of Seeding

- i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cultipacker seeder.
  - a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorus) 200 lbs/oc; K20 (potassium) 200 lbs/oc.
  - b. Lime-use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
  - c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
- ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
  - a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
  - b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
  - a. Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
  - b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mulch Specifications (in order of preference)

- i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
- ii. Wood Cellulose Fiber Mulch (WCFM)
  - a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
  - b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
  - c. WCFM, including dye, shall contain no germination or growth inhibiting factors.
  - d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seeds, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting growth of the seed grass seedings.
  - e. WCFM material shall contain no elements or compounds at concentration levels that will be phytotoxic.
  - f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 16% maximum and water holding capacity of 90% minimum.

G. Matching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

- i. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
- ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
- iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

- H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
  - i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.
  - ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
  - iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. The remainder of area should be applied uniform after binder application. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petrosel, Terra Tack II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
  - iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 500 to 3,000 feet long.

Section IV - Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

A. General Specifications

- i. Class of turfgrass sod shall be Maryland or Virginia State Certified or Approved. Sod labels shall be made available to the job foreman and inspector.
- ii. Sod shall be machine cut at a uniform soil thickness of 3/4", plus or minus 1/4", at a time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the supplier's width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pods and torn or uneven ends will not be acceptable.
- iii. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- iv. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
- v. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.

B. Sod Installation

- i. During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.
- ii. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to the tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- iii. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.
- iv. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pod and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.

C. Sod Maintenance

- i. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4". Watering should be done during the heat of the day to prevent wilting.
- ii. After the first week, sod watering is required as necessary to maintain adequate moisture content.
- iii. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cuttings or subsequent cuttings. Grass height shall be maintained between 2" and 3" unless otherwise specified.

24.0 Materials Specifications

Table 27 Geotextile Fabrics

CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F SILT FENCE	0.40-0.80*	90	190

\* US Std Sieve CW-02215

- The properties shall be determined in accordance with the following procedures:
- Apparent opening size MSMT 323
  - Grab tensile strength ASTM 1652: 4x8" specimen, 1x 2" clamps, 12"/min. strain rate in both
  - Burst strength ASTM D 3786

The fabric shall be inert to commonly encountered chemicals and hydrocarbons, and will be rot and mildew resistant. It shall be manufactured from fibers consisting of long chain synthetic polymers, and composed of a minimum of 85% by weight of polypropylene, polyesters, or polyamides. The geotextile fabric shall resist deterioration from ultraviolet exposure. In addition, Classes A through E shall have a 0.01 cm./sec. minimum permeability when tested in accordance with MSMT 507 and an apparent minimum elongation of 20 percent (20%) when tested in accordance with the grab tensile strength requirements listed above.

Silt Fence Class F geotextile fabrics for silt fence shall have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modulus when tested in accordance with MSMT 509. The material shall also have a 0.3 gal./ft<sup>2</sup>/min. flow rate and seventy-five percent (75%) minimum filtering efficiency when tested in accordance with MSMT 322.

Geotextile fabrics used in the construction of all fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amounts of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a temperature range of 0 to 120 degrees F.

- I. Topsol salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsol to be salvaged for a given soil type can be found in the representative soil profile sections in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
- II. Topsol Specifications - Soil to be used as topsol must meet the following:
  - i. Topsol shall be loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand, other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsol shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of clinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
  - ii. Topsol must be free of plant parts such as barnyard grass, quackgrass, Johnsongrass, nutcracker, poison ivy, thistle, or other as specified.
  - iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsol. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- III. For sites having disturbed areas under 5 acres:
  - i. Place topsol (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
- IV. For sites having disturbed areas over 5 acres:
  - i. On soil meeting topsol specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
    - a. pH for topsol shall be between 6.0 and 7.0. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
    - b. Organic content of topsol shall be not less than 1.5 percent by weight.
    - c. Topsol having soluble salt content greater than 500 parts per million shall not be used.
    - d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
  - ii. Note: Topsol substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsol.
  - iii. Place topsol (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsol Application

- i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence, and Sediment Traps and Basins.
- ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
- iii. Topsol shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- iv. Topsol shall not be placed while the topsol or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.
- VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
  - i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
    - a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted at the time of acquisition of the compost by the Maryland Department of the Environment under COMAR 26.04.06.
    - b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
    - c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
  - ii. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

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

*John L. Robertson* 11/6/96  
HOWARD S.C.D. DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

*Cheryl Simmons* 11/6/96  
US SOIL CONSERVATION SERVICE DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Richard Blood* 11/19/96  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*James S. Smith* 11/22/96  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED FOR PUBLIC WATER, SEWER, AND STORM DRAIN SYSTEMS & PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

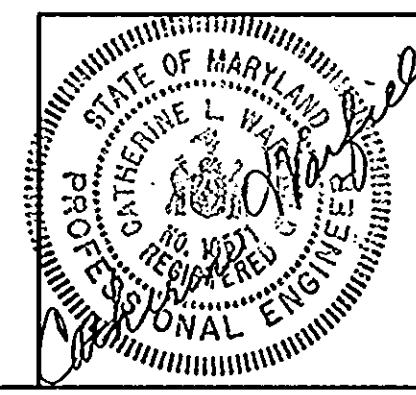
DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_  
CHIEF, BUREAU OF ENGINEERING \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED FOR PUBLIC WATER AND SEWER SYSTEM HOWARD COUNTY HEALTH DEPARTMENT

*James M. Boyd* 11/19/96  
COUNTY HEALTH OFFICER DATE

**EROSION AND SEDIMENT CONTROL DETAILS**  
**#7940 WASHINGTON BOULEVARD**  
**OWNER**

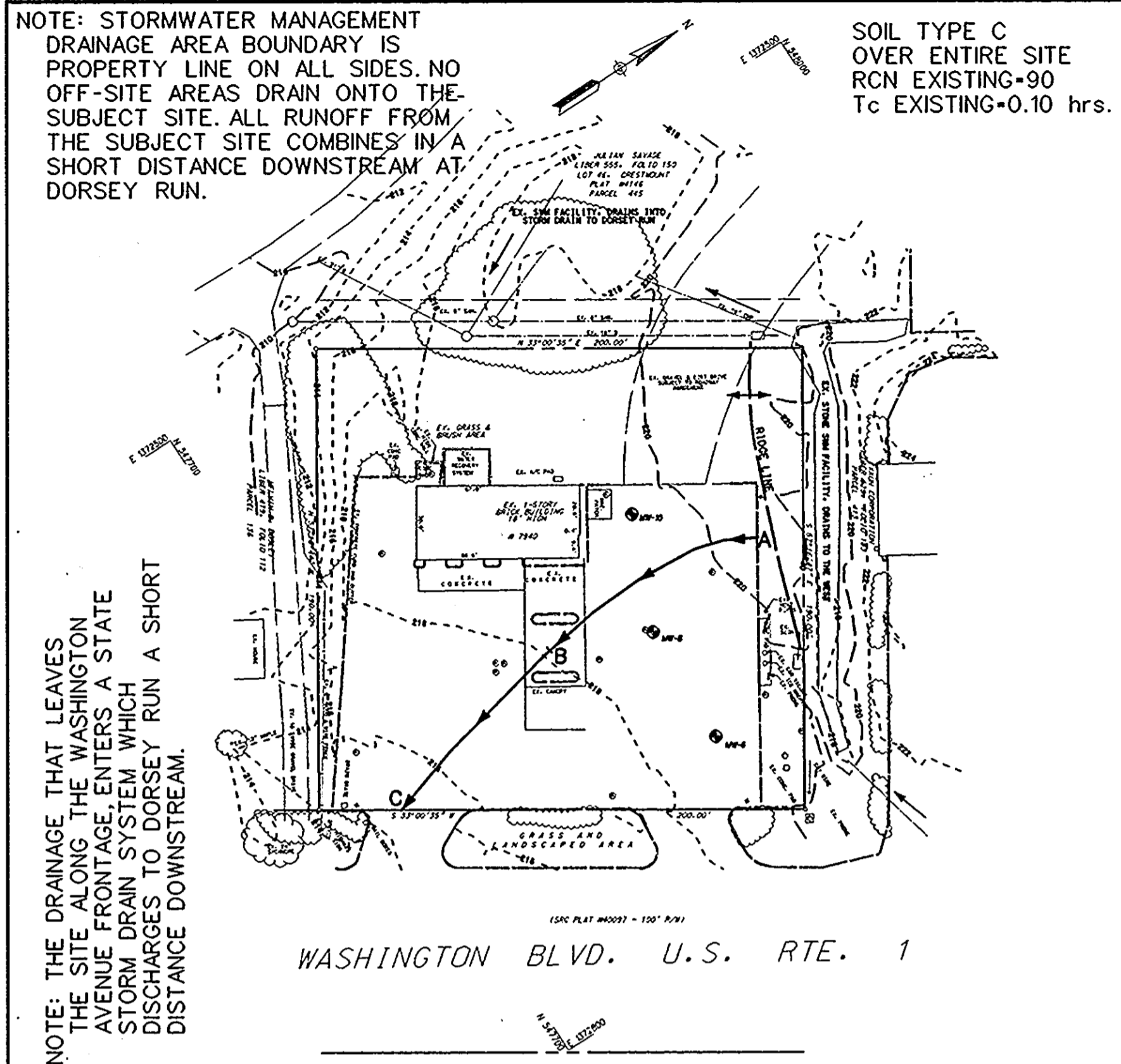
BK JESSUP, LLC  
17 WEST PENNSYLVANIA AVE.  
SUITE 500  
BALTIMORE, MARYLAND 21204  
(410) 296-4800  
7940 WASHINGTON BOULEVARD  
HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT NO. 6  
CENSUS TRACT 06B.01  
TAX MAP: 43 PARCEL: 415  
WATER CODE: B02  
SEWER CODE: 3350000  
SCALE: 1" = 30'  
DATE: SEPTEMBER 24, 1996  
SHEET 4 OF 7



ENGINEER CERTIFICATION:  
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.  
Engineer: *C.L. Warfield* Date: 9-25-96  
Name: *Catherine S. Warfield* PE#: 10571

DEVELOPERS CERTIFICATION:  
I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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.  
Developer Name: *John K. Boyd* Date: 9/26/96

**C.L. WARFIELD & ASSOC., INC.**  
CONSULTING ENGINEERS  
4900 KEMP ROAD  
REISTERSTOWN, MARYLAND 21136  
(410) 429-2981



FACILITY TYPE: PRIVATELY MAINTAINED, UNDERGROUND STONE ATTENUATION DEVICE FOR QUANTITY MANAGEMENT, AND STORMCEPTOR FOR WATER QUALITY MANAGEMENT.

HAZARD CLASSIFICATION: N/A

WATER QUALITY MANAGEMENT PROVIDED

60% TSS REMOVAL FOR STORMCEPTOR DEVICE BASED ON DISCHARGING DORSEY RUN WHICH IS CLASSIFIED AS STATE STREAM USE CLASS-1. THIS CORRESPONDS TO A TYPE-3 STORMCEPTOR HABITAT. 0.542 AC. IMPERVIOUS EXISTING 0.747 AC. IMPERVIOUS PROPOSED 0.205 AC. NET ADDED IMPERVIOUS

2. & 10-YR. QUANTITY MANAGEMENT PROVIDED

TOTAL DRAINAGE AREA TO FACILITY: 0.610 AC.

IMPERVIOUS DRAINAGE AREA TO FACILITY: 0.584 AC

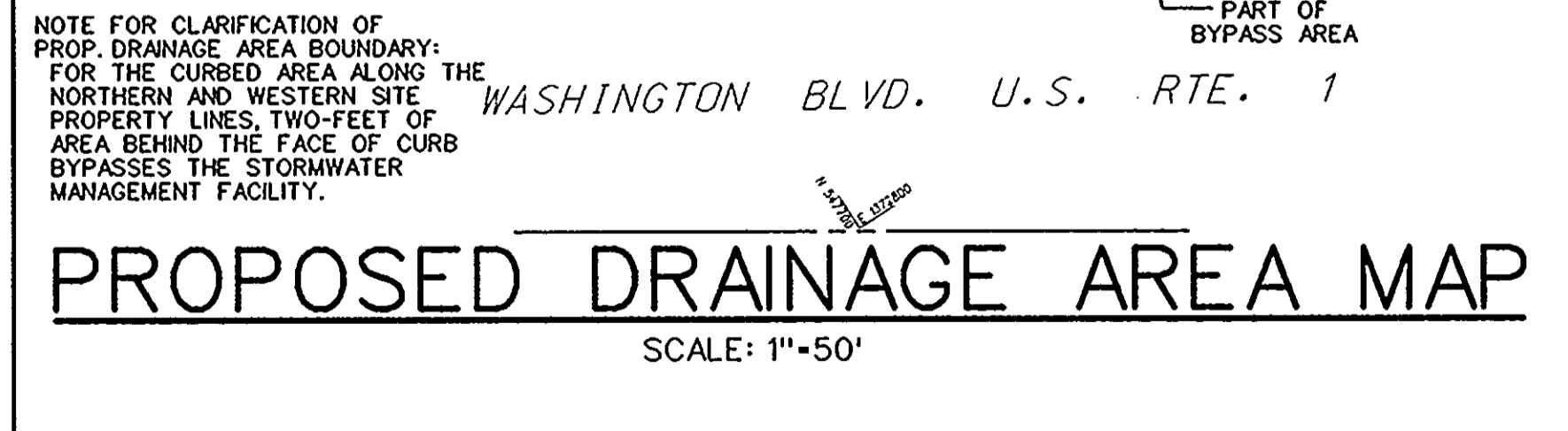
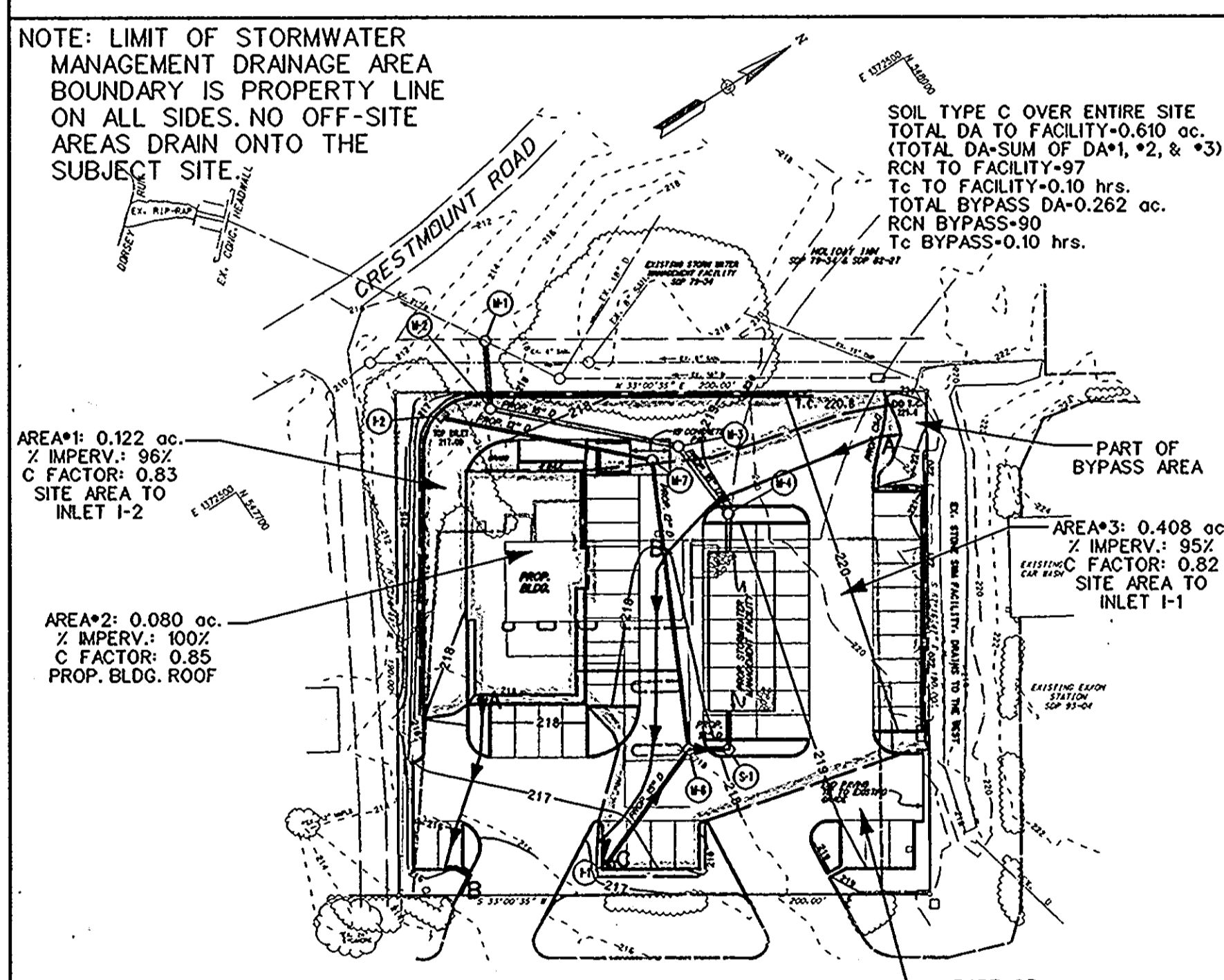
SUMMARY TABLE:

STORM EVENT (YR.)	EXISTING RELEASE RATE (CFS.)	COMPUTED INFLOW TO FACILITY (CFS.)	RELEASE FROM FACILITY (CFS.)	TOTAL PROPOSED DISC. (CFS.)	WSEL IN FACILITY AT DISC. (FT.)	STORAGE VOLUME PROVIDED (AC. FT.)
2	2.61	2.16	1.83	2.55	212.30	0.0317
10	4.58	3.50	3.10	4.41	212.97	0.0409
100	6.74	4.96	4.89	6.92	213.25	0.0448

STRUCTURE SCHEDULE:

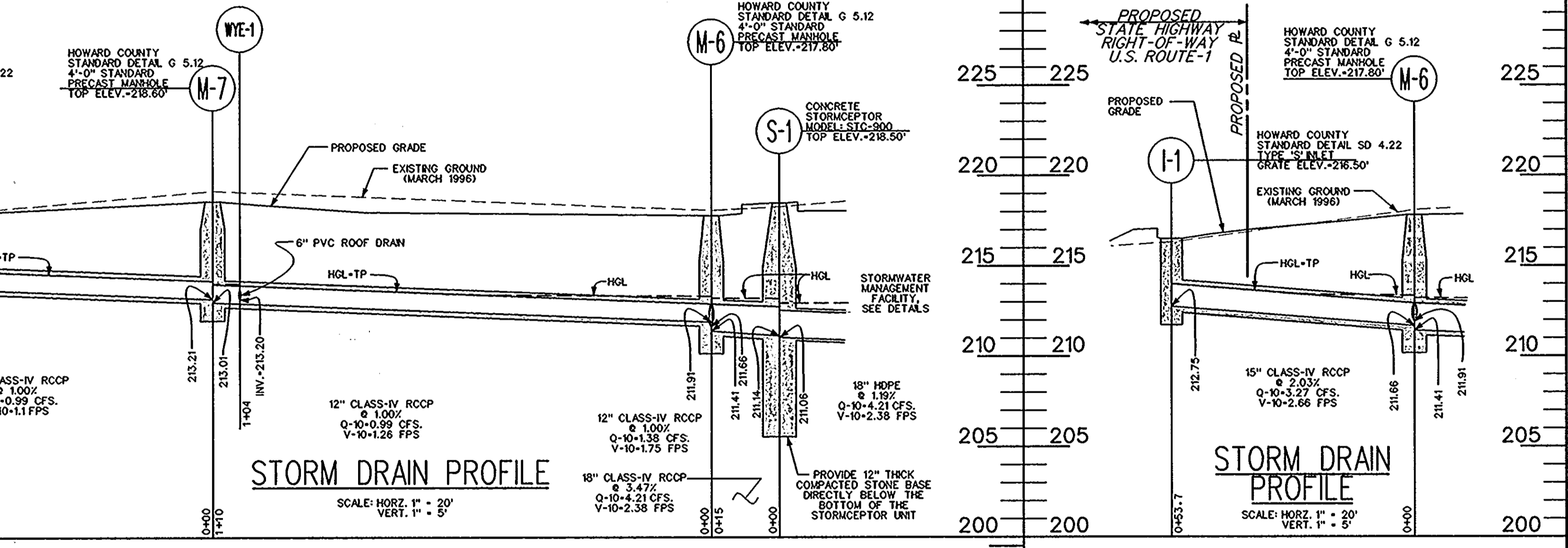
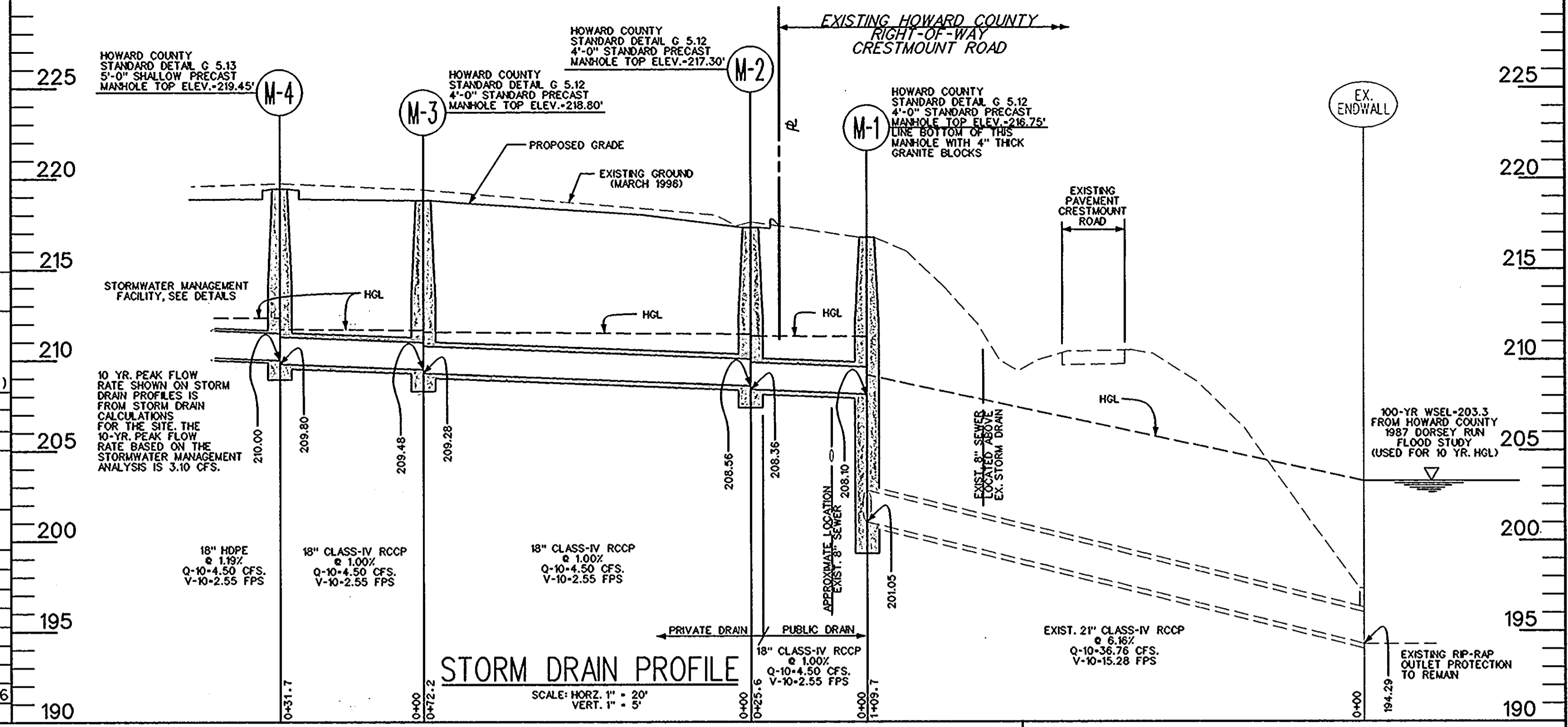
NO.	TYPE	INV. IN	INV. OUT	TOP OF CURB OR RIM EL	REMARKS
I-1	TYPE 'S' INLET	-	212.75	216.50	
I-2	TYPE 'S' INLET	-	214.02	217.00	
M-1	STD. 4' MH	208.10	201.05	216.75	GRANITE BOT.
M-2	STD. 4' MH	208.56	208.36	217.30	
M-3	STD. 4' MH	209.48	209.28	218.80	
M-4	STD. 5' MH	210.00	209.80	219.45	
S-1	STORMCEPTOR	211.14	211.06	218.50	MODEL: STC-900
M-6	STD. 4' MH	211.91	211.41	217.80	& INV. IN 211.66
M-7	STD. MH	213.21	213.01	218.60	

EXISTING DRAINAGE AREA MAP



LEGEND

- EXISTING GRADE
- PROPOSED GRADE
- EX. CONC. CURB & GUTTER
- PROPOSED CONC. CURB & GUTTER
- PROPERTY LINE
- BUILDING RESTRICTION LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING GAS LINE
- STORM DRAIN & SWM DRAINAGE AREA BOUNDARY TO PATH



SOIL BORINGS

SCALE: HORIZ: NONE VERT: 1"=10'

BORING	DEPTH (FT.)	SOIL DESCRIPTION
MW-10	0.8	ASPHALT
	10.0	Brown silty fill with gravel
	12.0	Brown, moist, silty SAND with gravel
	18.0	Brown-orange, very moist, silty SAND with gravel
MW-8	0.8	ASPHALT
	8.7	Dark to black/brown, very moist, silty SAND and GRAVEL
	10.5	Brown-orange, very moist, sandy, clayey SILT
	13.5	Brown, moist, very dense, silty SAND and GRAVEL
MW-6	0.6	ASPHALT-2"/CONCRETE-5"
	6.5	Pea Gravel
	8.5	Brown Sand/Pea Gravel/Odor
	13.0	Brown-gray, very moist, silty SAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

APPROVED: FOR PUBLIC WATER, SEWER, AND STORM DRAIN SYSTEMS & PUBLIC ROADS: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED: FOR PUBLIC WATER AND SEWER SYSTEM HOWARD COUNTY HEALTH DEPARTMENT

ENGINEER CERTIFICATION: 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.

ENGINEER: C.L. WARFIELD AND ASSOCIATES, INC. DATE: 9-26-96

DEVELOPERS CERTIFICATION: I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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.

DEVELOPER: THORNTON DATE: 9/26/96

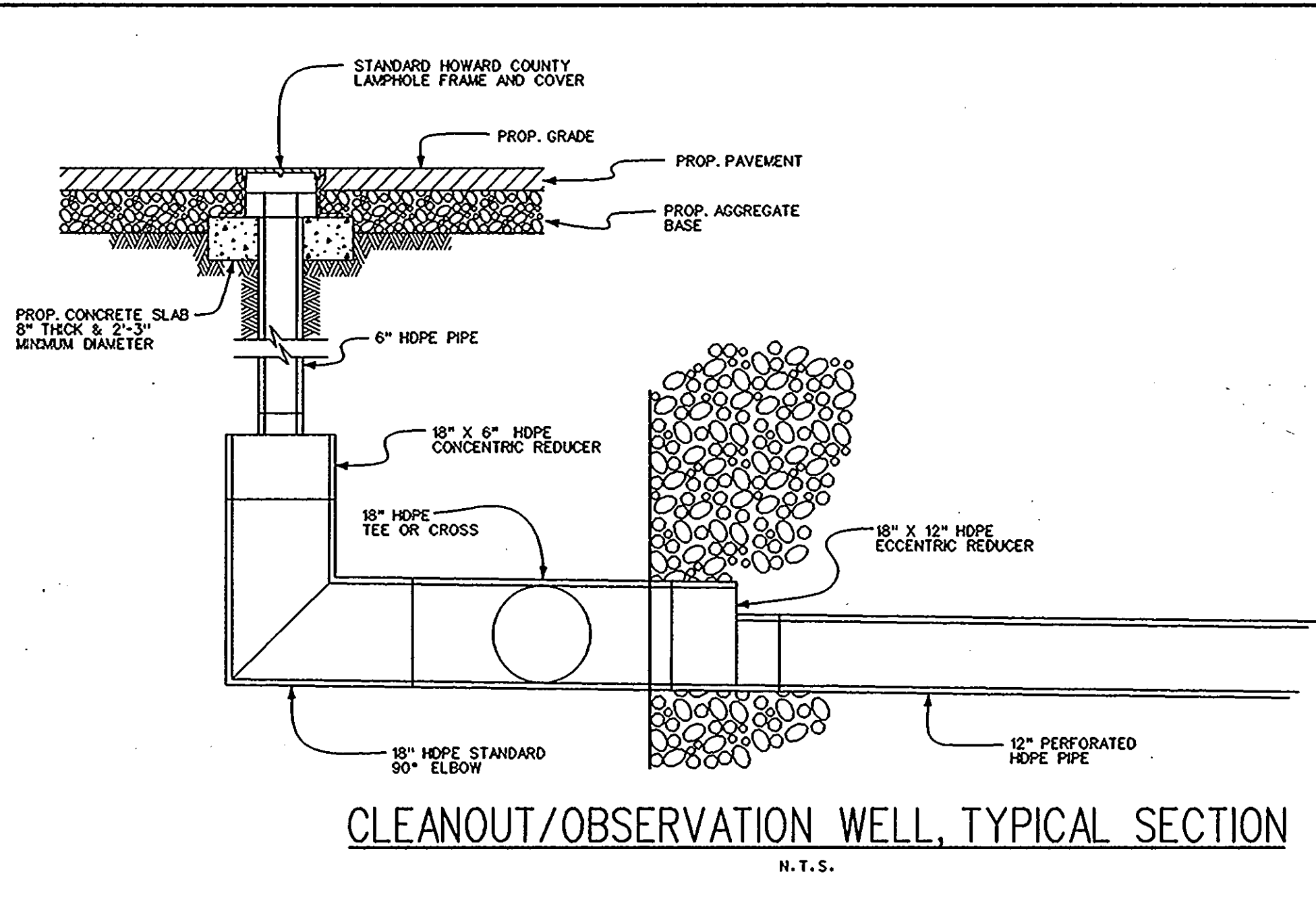
DRAINAGE AREA MAP & STORMWATER MANAGEMENT DETAILS

#7940 WASHINGTON BOULEVARD

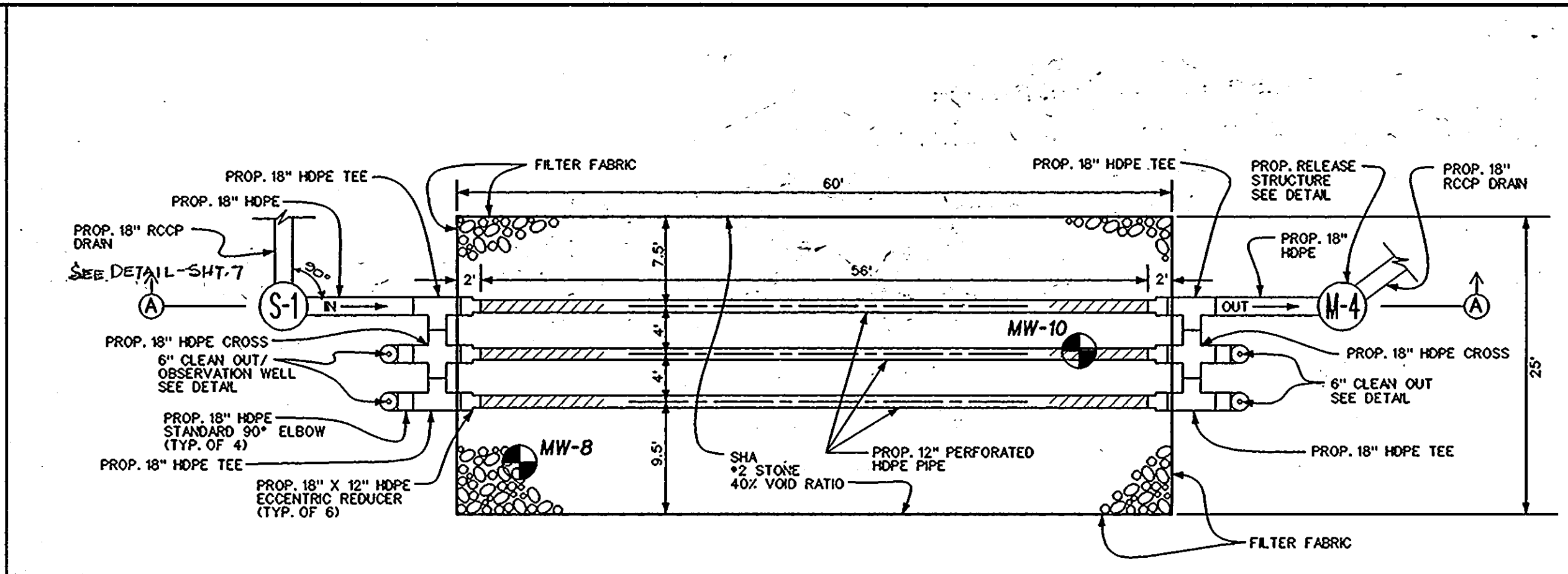
OWNER

LEGEND

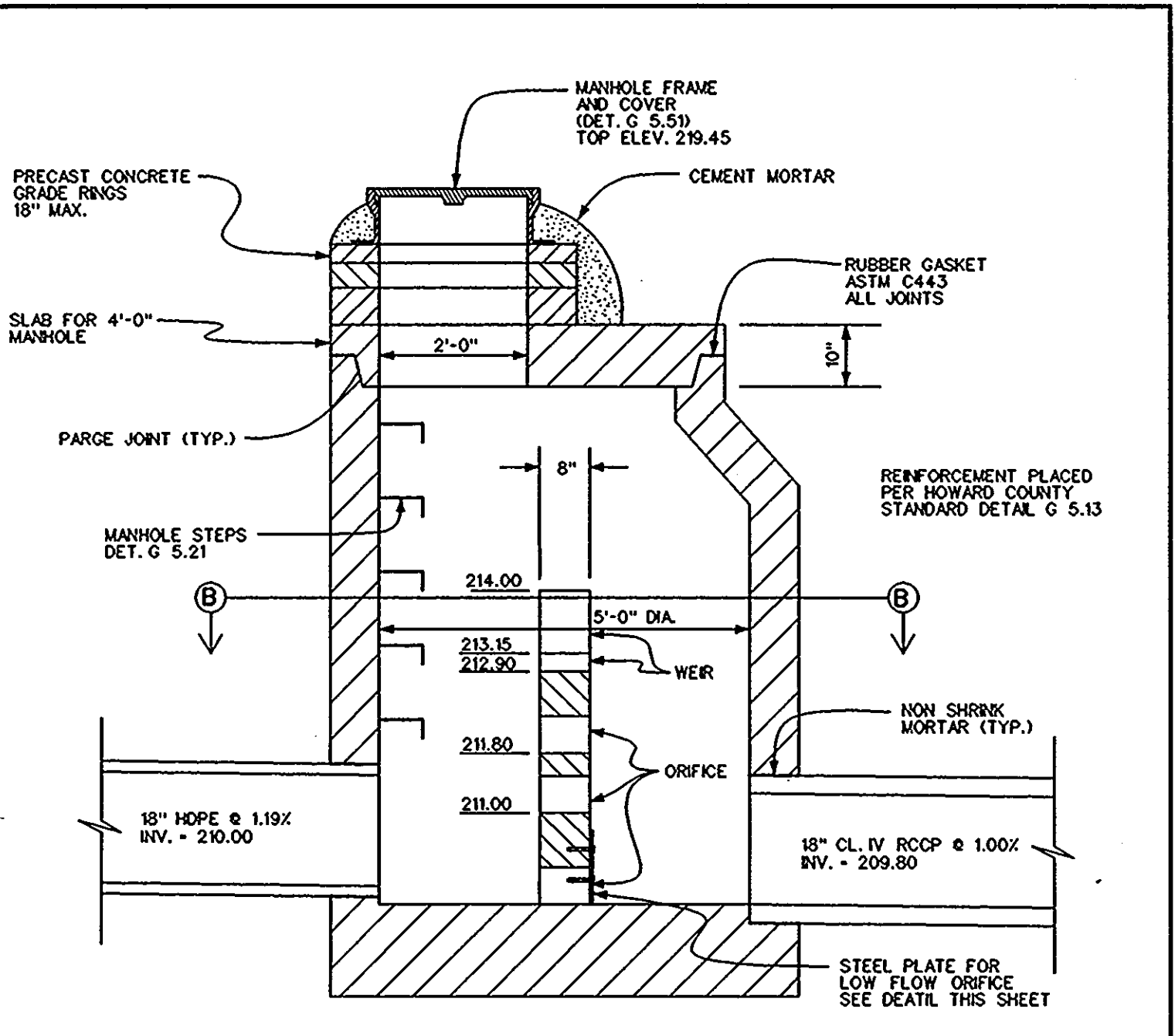
- EXISTING GRADE
- PROPOSED GRADE
- EX. CONC. CURB & GUTTER
- PROPOSED CONC. CURB & GUTTER
- PROPERTY LINE
- BUILDING RESTRICTION LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING GAS LINE
- STORM DRAIN & SWM DRAINAGE AREA BOUNDARY TO PATH



CLEANOUT/OBSERVATION WELL, TYPICAL SECTION  
N.T.S.



STORMWATER MANAGEMENT FACILITY PLAN  
SCALE: 1" = 10'



RELEASE STRUCTURE (M-4) DETAIL  
SCALE: 1" = 2'

STORMWATER MANAGEMENT FACILITY OPERATION & MAINTENANCE SCHEDULE

**Underground Stone Facility (Observation Wells)**  
The observation well/cleanouts shall be monitored quarterly and after large storms for the first year after completion of construction. A log book shall be maintained indicating the depth of water in the well, and the time of the measurements for each observation. The rate at which the device dewater after large storms shall also be recorded in the log book. If available, the rainfall depth and duration shall be recorded as well. After the first year of monitoring, the monitoring schedule shall be reduced to an annual basis (preferably in the fall) unless the performance data indicate that a more frequent basis is required. If a more frequent basis is required, conversion to an annual basis will be investigated after another year. This process will repeat as necessary.

**Stormceptor and Storm Drain Structures**  
Manhole M-4 and Stormceptor S-1 and the connecting pipes shall be inspected by owner once every six months. Any material in the system that is preventing the facility from functioning properly shall be removed during inspection. Accumulated debris and material shall be removed by a Vacuum Waste Disposal Contractor when the sediment and material in the bottom of the chamber accumulates to six inches deep. All silt and debris shall be removed from the Stormceptor, storm drain structures, connecting pipes. Material removed from the facility, including any liquid, shall be disposed of by an approved "Best Management Practice" method.

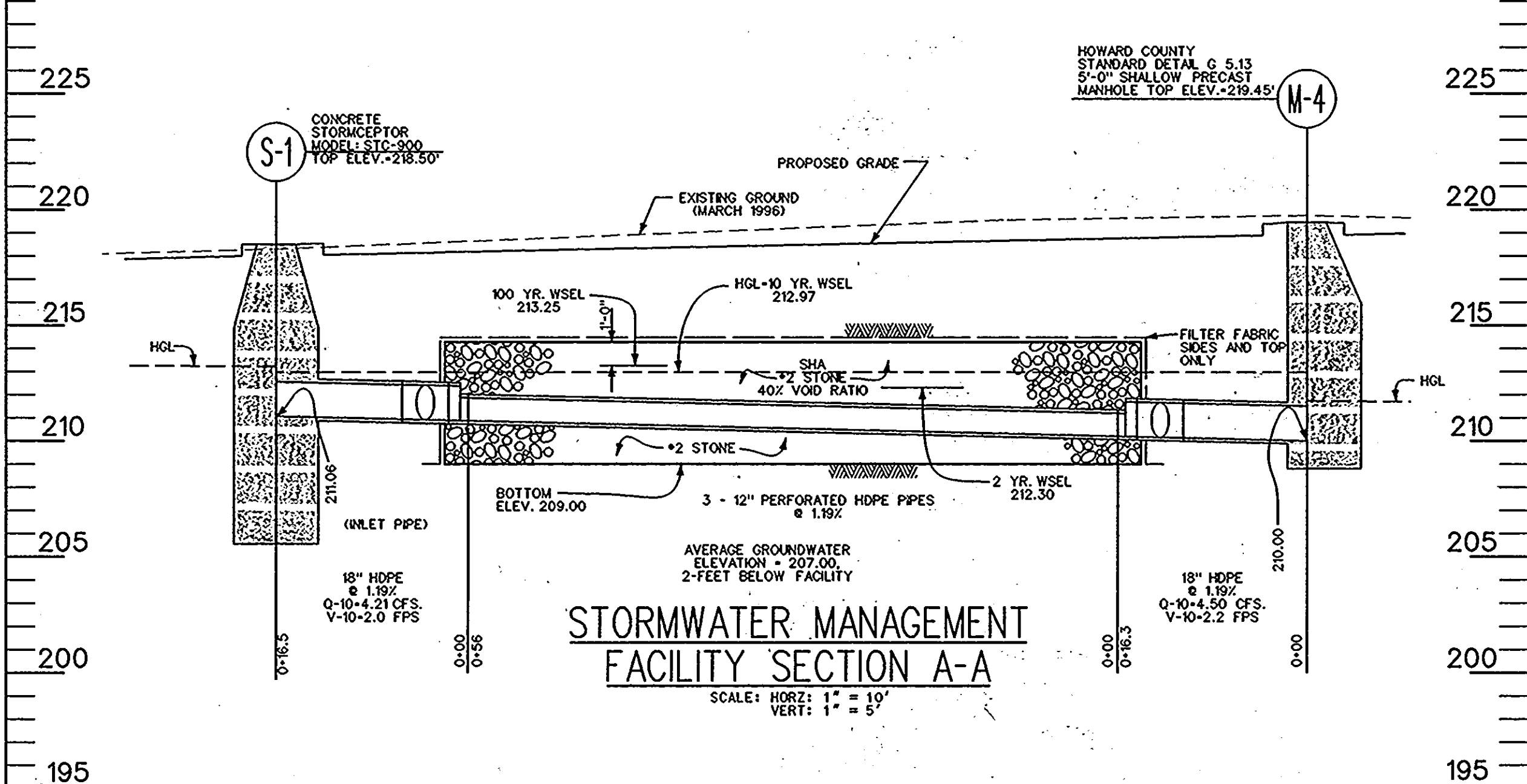
**Responsibility**  
The owner will be responsible for all inspecting, maintaining, and keeping records for this private stormwater management facility.

REQUIRED SEQUENCE OF INSTALLATION FOR STORMWATER MANAGEMENT FACILITY

- Construction of the stormwater management device shall be in accordance with the Sequence of Construction on the Erosion and Sediment Control Plan. Construction of the stormwater management facility shall be undertaken during a 5-day dry weather forecast time frame. Install Stormceptor along with storm drain system and in accordance with the recommendations of the Stormceptor Corporation, dewatering as necessary.
- The stormwater management facility shall not be constructed or placed in service until the contributing drainage area has been stabilized.
- Excavate to the design dimensions of the stormwater management facility. Place the excavated material away from the excavated site. Sides and bottom of the facility shall be smooth and free of any roots, organics, or other objectionable material. If vertically excavated walls for the stone fill are difficult to maintain, the side slopes may be laid back to maintain stability. A trapezoidal rather than a rectangular excavation cross section may result; however, the stone walls shall remain vertical. Dewater excavation as necessary.
- Cut all filter cloth to the proper size prior to installation. The filter cloth for the walls must be of sufficient size to conform to the wall irregularities and for a 8-inch minimum top overlap. Place the wall filter cloth into the excavation and anchor at the top with stones. For overlaps between rolls of filter cloth the upstream roll shall overlap the downstream roll by a minimum of 2-feet to provide a shingled effect. No filter cloth shall be installed on the bottom of the excavation.
- Place the stone aggregate in accordance with the specifications. Install the HDPE pipes and fittings located between M-4 and S-1 at the design elevations; but do not connect the pipes to the drainage structures. Install the filter cloth around the projecting pipes as the stone is filled in. While installing the aggregate, natural and fill soils shall be prevented from entering and intermixing with the aggregate. All aggregate that becomes contaminated by natural or fill soils shall be removed and replaced with uncontaminated aggregate. All voids between the filter cloth and the excavation walls shall be eliminated during the aggregate fill operation by placing natural soil on the excavation walls.
- Connect pipes to the drainage structures M-4 and S-1. Place filter cloth over the top of the aggregate and backfill to the pavement subgrade elevation in accordance with the specifications.
- Place aggregate pavement base and pavement.
- As built plans are required for this facility. These plans must be prepared and sealed by a registered professional engineer. Each stage of construction outlined above must be witnessed and approved by a registered professional engineer or his representatives prior to proceeding to the next step. The engineer shall make necessary measurements including but not limited to pipe lengths, perforation size, perforation spacing, filter cloth placement, invert elevations, stone placement, etc. The contractor shall not proceed with any work involving the stormwater management facility unless the engineer is present.

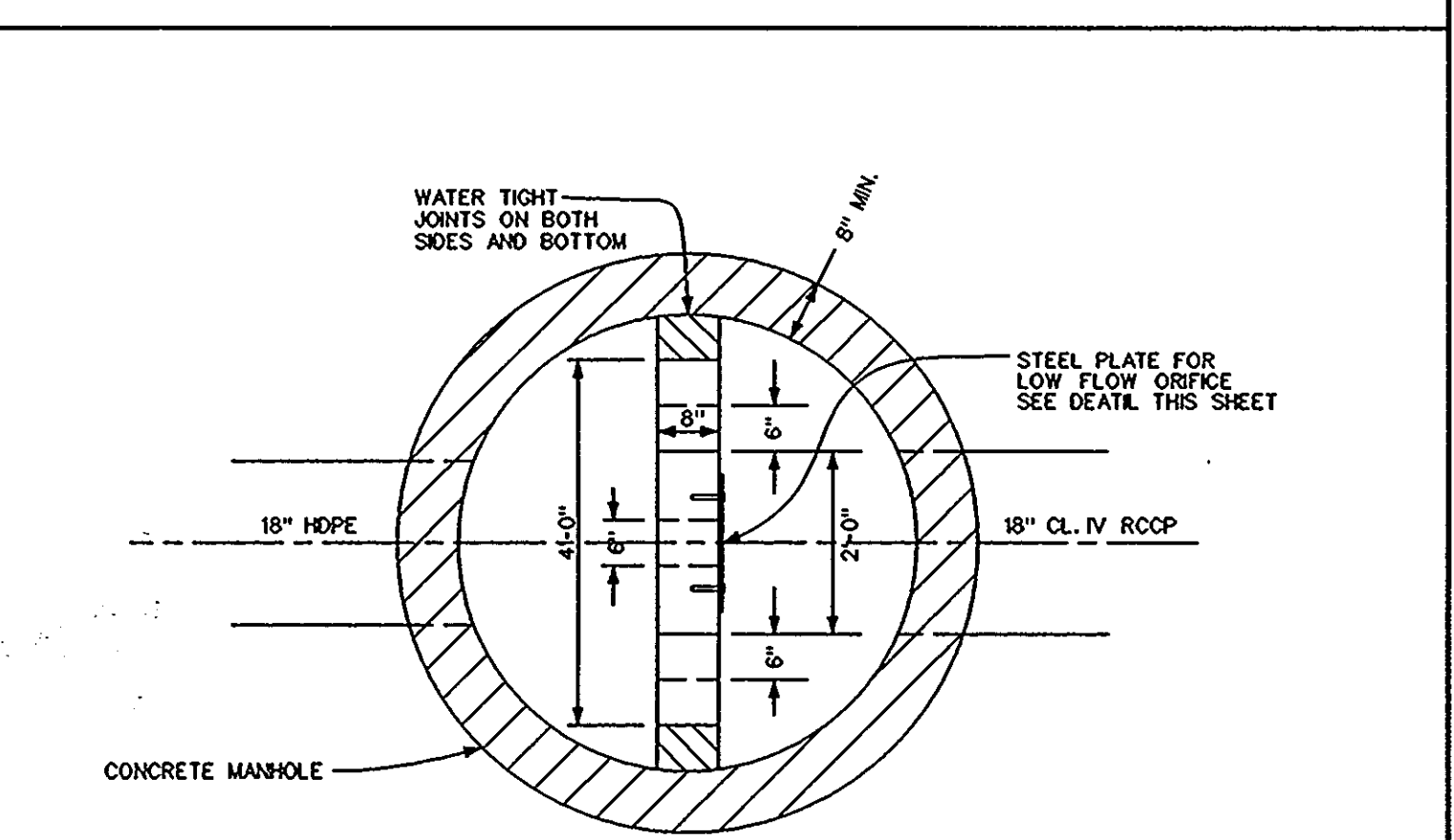
STORMWATER MANAGEMENT FACILITY SPECIFICATIONS

- Soil Backfill:**
- The backfill material shall be approved material from the stormwater management facility excavation, or from other approved borrow areas. The material shall be free of roots, organics, or other objectionable material. The material shall be placed in horizontal 6" thick lifts and compacted by hand tamping, manually directed hand tamping, or plate vibrators.
- Aggregate:**
- Stormwater management facility stone shall be clean aggregate conforming to MDDT #2 stone for use in stone stormwater management devices. The aggregate shall be greater than or equal to 40 percent. The aggregate shall be placed in 9-inch lifts, and compacted using plate vibrators.
- Pipe:**
- Materials:**
- HDPE pipe and fitting material shall be high density polyethylene meeting the requirements of ASTM D3350 Cell Classification 3244202; or ASTM D1248 Type III, Class C, Category 4, Grade P33. The pipe shall have a smooth interior and annular-corrugated exterior. Joints shall meet the requirements of AASHTO M294. The joints shall provide a minimum pull-apart strength of 400 lbs. The joints shall incorporate a silt-tight gasket.
  - Bedding and backfill apply to the sections of pipe located outside of the stone device.
  - Bedding: The pipe shall be firmly and uniformly bedded throughout its entire length.
  - Backfill: Backfill shall conform to soil backfill as stated above.
  - Installation: Installation shall be in accordance with the manufacturer's requirements.
  - Connection to Structures: Fill annular space between the outside of the pipe and the opening in the structure with waterproof mortar. Trowel mortar to a smooth flat finish.
- Filter Fabrics:**
- MIRAFI 140N or equivalent shall be used.
- Stormceptor:**
- See shop drawings from the Stormceptor Corporation for detailed dimensions of the Stormceptor unit. The unit shall consist of the Treatment Chamber, Access Way, By-pass Insert, Fittings, Manhole Frame and Cover, and Appurtenances. Further technical information is available through the Stormceptor Corporation at 1-800-762-4703.
  - The concrete unit shall be pre-designed for H-20 loading. The concrete manhole sections shall conform to ASTM C-475.
  - Provide rubber gasketed joints per ASTM C-443 between concrete sections of the structure.
  - Two eight inch inspection ports shall be provided in the Stormceptor Insert. One above the inflow drop pipe and one above the outflow riser pipe.
  - Provide copolymer polypropylene plastic encapsulated manhole steps at 16-inches on center.
  - Minimum concrete strength shall be f'c=4,000 psi. Minimum steel strength shall be f'c=60,000 psi.
  - Reinforcement design shall meet ASTM C-475.
  - Flexible pipe connectors shall meet ASTM C-923.
  - Installation and handling shall be in accordance with the Stormceptor Corporation Recommendations and State and Local Codes.

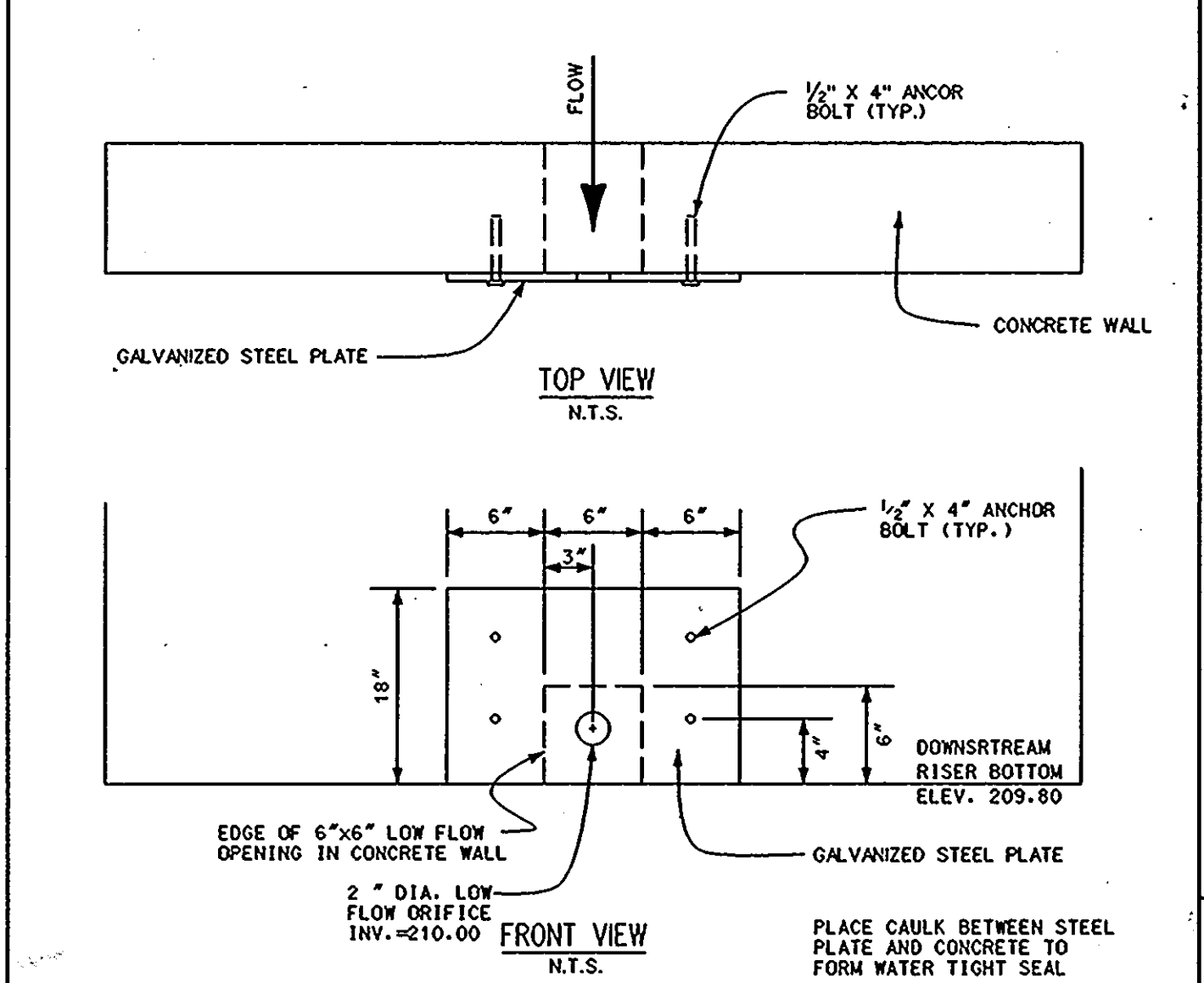


STORMWATER MANAGEMENT FACILITY SECTION A-A  
SCALE: HORIZ: 1" = 10'  
VERT: 1" = 5'

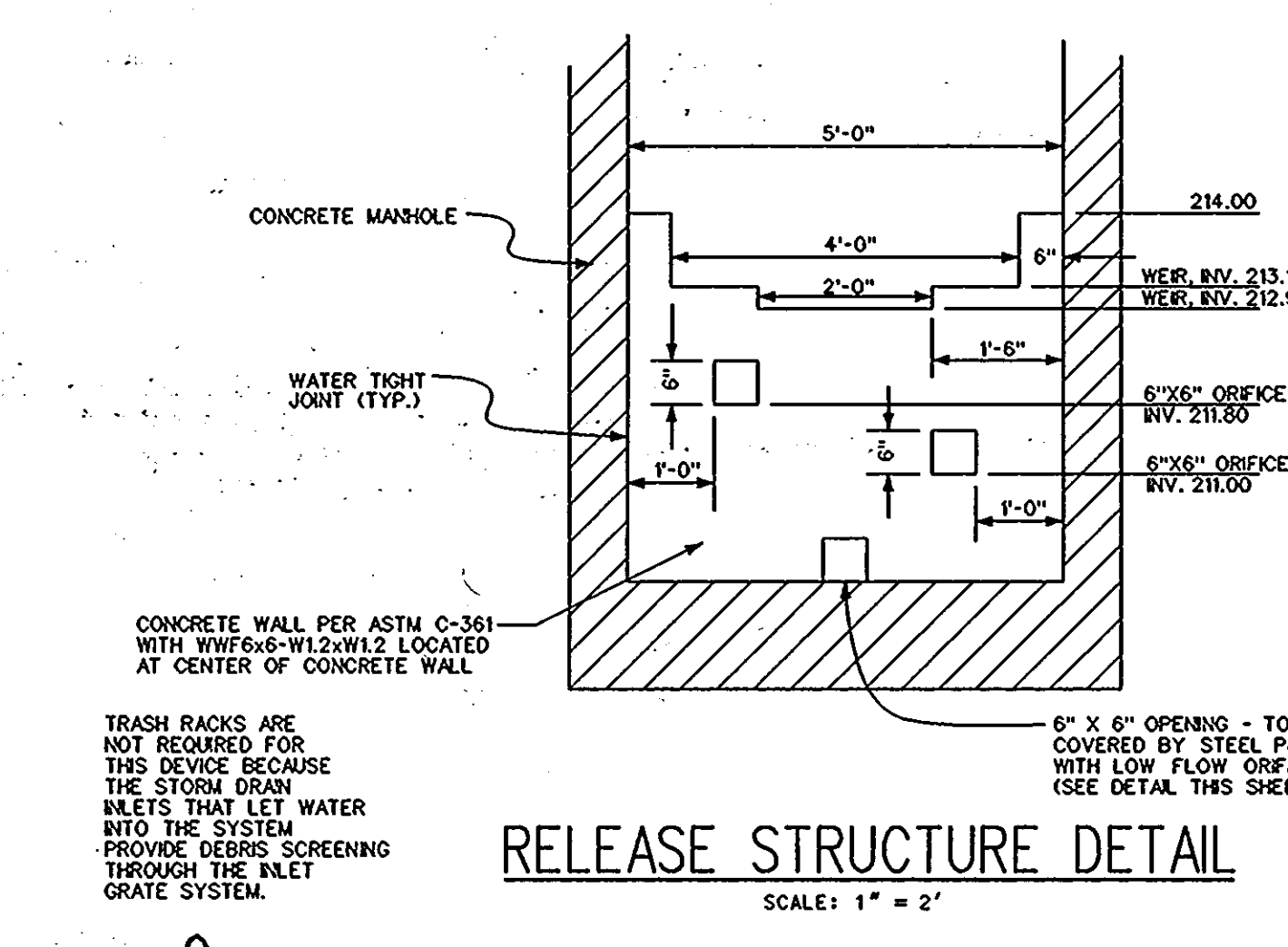
RELEASE STRUCTURE (M-4) PLAN



RELEASE STRUCTURE (M-4) PLAN  
SCALE: 1" = 2'



STEEL ORIFICE PLATE DETAILS  
N.T.S.



RELEASE STRUCTURE DETAIL  
SCALE: 1" = 2'

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH  
DIRECTOR  
DATE: 11/3/96  
DATE: 11/12/96  
DATE: 11/22/96

APPROVED: FOR PUBLIC WATER AND SEWER SYSTEM  
HOWARD COUNTY HEALTH DEPARTMENT  
COUNTY HEALTH OFFICER  
DATE: 11/19/96

STORMWATER MANAGEMENT DETAILS  
#7940 WASHINGTON BOULEVARD  
OWNER

BK JESSUP, LLC  
17 WEST PENNSYLVANIA AVE.  
SUITE 500  
BALTIMORE, MARYLAND 21204  
(410) 298 4800  
7940 WASHINGTON BOULEVARD  
HOWARD COUNTY, MARYLAND  
ELECTION DISTRICT NO. 6  
CENSUS TRACT: 6062.01  
TAX MAP: 43 PARCEL: 415  
WATER CODE: B02  
SEWER CODE: 3350000  
SCALE: AS NOTED  
DATE: SEPTEMBER 24, 1996  
SHEET 6 OF 7

C.L. WARFIELD & ASSOC., INC.  
CONSULTING ENGINEERS  
4900 KEMP ROAD  
REISTERSTOWN, MARYLAND 21136  
(410) 429-2981

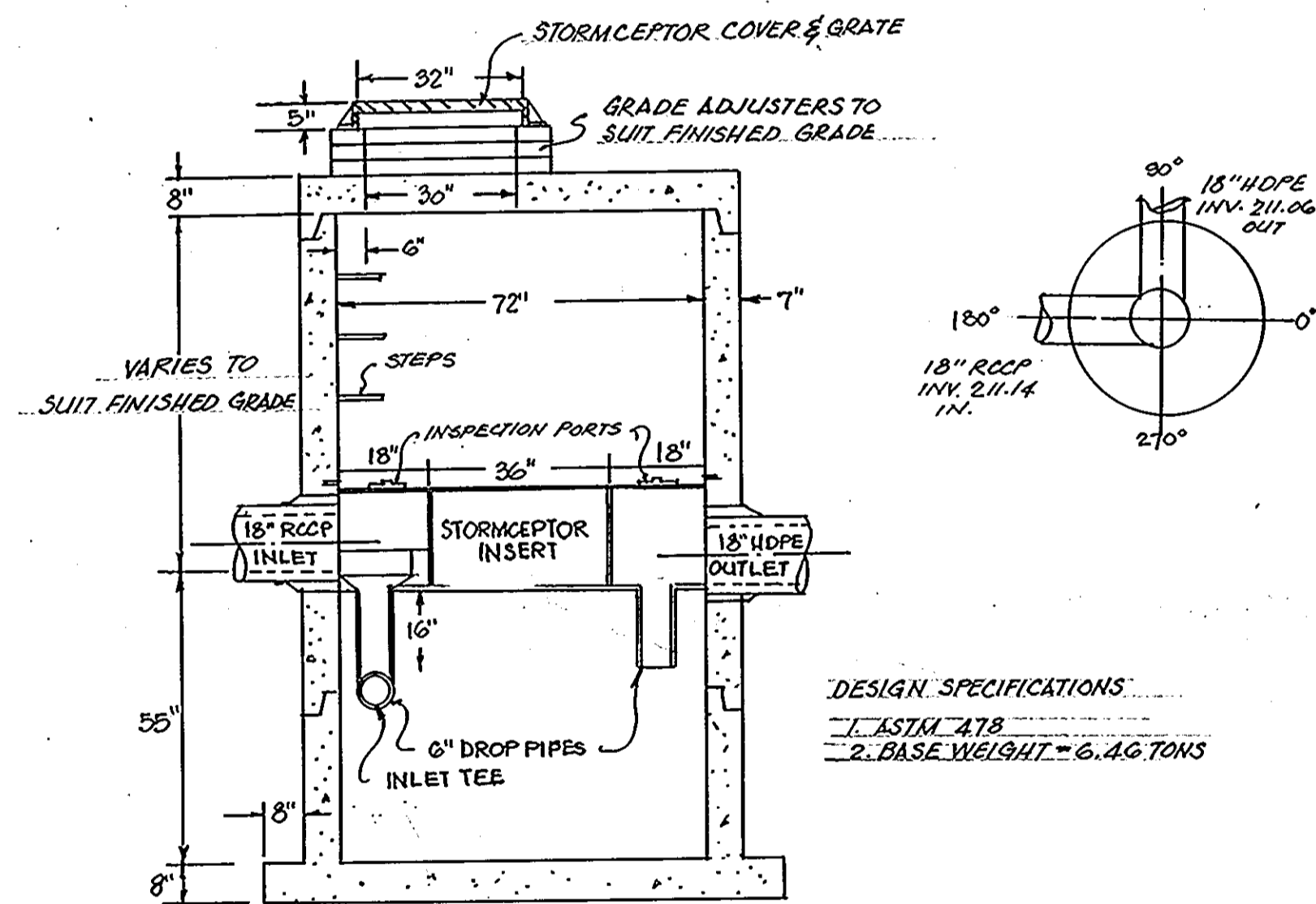
ENGINEER CERTIFICATION:  
I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
Engineer: C.L. WARFIELD AND ASSOCIATES, INC. Date: 9-25-96  
Name: Catherine A. Warfield PE#: 10571  
DEVELOPERS CERTIFICATION:  
I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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.  
Developer Name: [Signature] Date: 9/26/96

PLANT LIST				
NO.	KEY	BOTANICAL NAME	COMMON NAME	SIZE
4	ZEL	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN JAPANESE ZELKOVA	2 1/2" - 3" cd.
4	AC	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	3 1/2" FT. MULTI-STEM
42	EAC	EUONYMUS ALATUS 'COMPACTA'	DWARF WINGED EUONYMUS	30" HT.
25	VR	VIBURNUM RHYTIDOPHYLLUM	LEATHERLEAF VIBURNUM	36" HT.
10	AGW	AZALEA 'GUMPO WHITE'	GUMPO WHITE AZALEA	18" HT.

SCHEDULE A PERIMETER LANDSCAPE EDGE		
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	E	N/A
LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	124'	N/A - 0 SETBACK ALLOWED BY ZONING ON ALL OTHER SIDES
CREDIT FOR EXISTING VEGETATION	NO	N/A
CREDIT FOR WALL, FENCE OR BERM	NO	N/A
NUMBER OF PLANTS REQUIRED		
SHADE TREES	4	N/A
EVERGREEN TREES	0	N/A
SHRUBS	31	N/A
NUMBER OF PLANTS PROVIDED		
SHADE TREES	2	N/A
EVERGREEN TREES	0	N/A
OTHER TREES (2:1 SUBSTITUTION)	0	N/A
SHRUBS (10:1 SUBSTITUTION)	7.7 (61 REQUIRED)	N/A

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF ISLANDS REQUIRED @ 1:20 SP	3
NUMBER OF PARKING SPACES	50
NUMBER OF TREES REQUIRED	3
NUMBER OF TREES PROVIDED	
SHADE TREES	2
OTHER TREES (2:1 SUBSTITUTION - 2 REQ'D)	4

NOTE:  
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF \$700.00 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT.



STC 900 PRECAST CONCRETE STORMCEPTOR  
900 U.S. GALLON CAPACITY  
NOT TO SCALE



C.L. WARFIELD & ASSOC., INC.  
CONSULTING ENGINEERS  
4900 KEMP ROAD  
REISTERSTOWN, MARYLAND 21136  
(410) 429-2981

ENGINEER CERTIFICATION:  
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.  
Engineer: C.L. WARFIELD AND ASSOCIATES, INC. Date: 8-5-96  
Name: Catherine A. Warfield PE# 10571

DEVELOPERS CERTIFICATION:  
I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department for the Environment 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.  
Developer Name: [Signature] Date: 8/5/96

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 11/2/96  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 11/21/96  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH  
 [Signature] \_\_\_\_\_  
 DIRECTOR DATE

~~APPROVED FOR PUBLIC WATER, SEWER AND STORM DRAIN SYSTEMS & PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS~~

~~DIRECTOR DATE~~

~~CHIEF, BUREAU OF ENGINEERING~~

APPROVED FOR PUBLIC WATER AND SEWER SYSTEM  
 HOWARD COUNTY HEALTH DEPARTMENT  
 [Signature] 11/19/96  
 COUNTY HEALTH OFFICER DATE

LANDSCAPE PLAN  
 #7940 WASHINGTON BOULEVARD  
 OWNER

BK JESSUP, LLC  
 17 WEST PENNSYLVANIA AVE.  
 SUITE 500  
 BALTIMORE, MARYLAND 21204  
 (410) 296 4800

7940 WASHINGTON BOULEVARD  
 HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT NO. 6  
 CENSUS TRACT: 6069.01  
 TAX MAP: 43 PARCEL: 415

WATER CODE: B02  
 SEWER CODE: S350000  
 SCALE: 1" = 20'  
 DATE: 8-5-96  
 SHEET 7 OF 7

