

- GENERAL NOTES:**
- Subject property is zoned: NTSFLD per 10-18-93 Comprehensive Zoning Plan.
  - The total area included in this submission is: 1.81 Acres.
  - The total number of lots included in this submission is: 7
  - Improvement to property: Single Family Detached
  - The maximum lot coverage permitted is: 30%
  - Department of Planning and Zoning reference file numbers: S-93-21, P-95-12, F-96-102, WP-95-70, F-98-37
  - Utilities shown as existing are taken from approved Water and Sewer plans Contract #34-3655-D, approved Road Construction plans F-98-37
  - Any damage to county owned rights-of-way shall be corrected at the developer's expense.
  - All roadways are public and existing.
  - The existing topography was taken from Road Construction Plans prepared by Morris & Ritchie Associates in January 1996.
  - The coordinates shown herein are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System - Howard County Monuments Numbers: 29G4 & 29G5
  - The contractor shall notify the Department of Public Works/Division of Construction Inspection at (410) 313-1880 at least twenty-four (24) hours prior to the start of work.
  - The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
  - For driveway entrance details, refer to Ho. Co. Design Manual Volume IV details R.6.03 & R.6.05
  - In accordance with FDP-Phase 222-A, Part VII bay windows or chimneys not more than 10 feet in width may project not more than 4 feet into any setbacks; porches and decks may project not more than 3 feet into the front or rear setbacks.
  - Stormwater Management is provided per: F-96-102.
  - SHC Elevations shown are at the Property lines.
  - This plan has been prepared in accordance with provision of Section 16-124 of the Howard County Code and the Landscape Manual. Financial Surety for the required 5 landscape trees in the amount of \$1,050 is part of the builders grading permit application, Lot 35. For schedules and details, see sheet 2 of 3.
  - Quantity Stormwater Management for Section 4, Area G, is provided by one facility below Lot 12 on Silent Sun Place. Quality Management for this section will be provided by one extended Detention Fac. adj. to the SWM Pond. This subdiv. is loc. in the Cl. I Watershed in the Patuxent River

**SHEET INDEX**

DESCRIPTION	SHEET No.
SITE DEVELOPMENT PLAN	1 of 3
SEDIMENT AND EROSION CONTROL PLAN	2 of 3
SEDIMENT AND EROSION CONTROL DETAILS	3 of 3

**OWNER / DEVELOPER**  
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.  
 10278 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21044

**SPECIAL NOTES:**  
 This plan is for house siting and lot grading only. Improvements shown within the rights-of-way on this S.D.P. are not to be used for construction. For approved Road Construction Plans F-98-37 and/or approved Water and Sewer Plans Contract #34-3655-D.

SUBDIVISION NAME	SECTION/AREA	LOTS/PARCELS
VILLAGE OF RIVER HILL	4/6	5, 6, 7, 33, 34, 35 & 36
PLAT NO.	ZONE	TAX MAP NO.
13507, 13508, 13509	NTSFLD	35
WATER CODE	SEWER CODE	CENSUS TRACT
1-10	6653000	6055

**CLARK • FINEFROCK & SACKETT, INC.**  
 ENGINEERS • PLANNERS • SURVEYORS  
 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

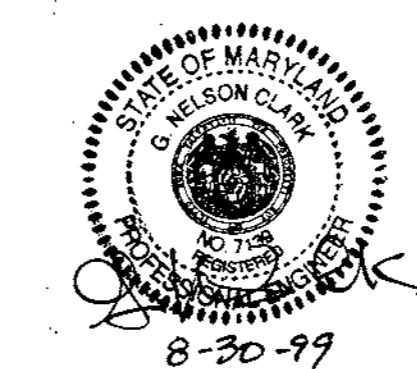
**SITE DEVELOPMENT PLAN**  
 LOTS 5, 6, 7, 33, 34, 35 AND 36  
**COLUMBIA VILLAGE OF RIVER HILL**  
 SECTION 4 AREA 6  
 FIFTH (5th) ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

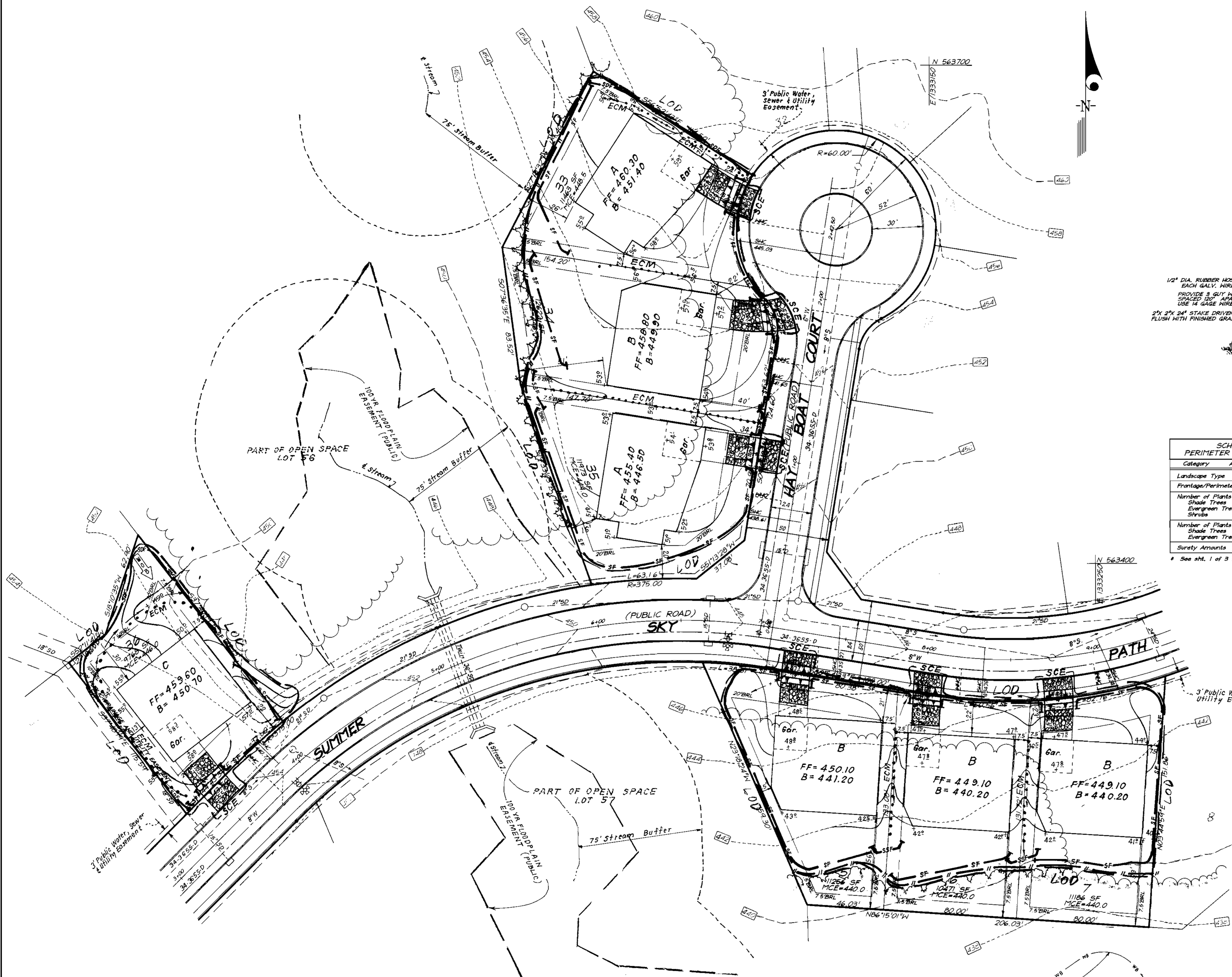
**DESIGNED:** D.M.  
**DRAWN:** DSV  
**CHECKED:** J.M.E.  
**DATE:** B-25-99

**SCALE:** 1" = 30'  
**DRAWING:** 1 of 3  
**JOB NO.:** 99-097  
**FILE NO.:** 99-097X

FOR: WILLIAMSBURG BUILDERS  
 5435 HARRERS FARM ROAD  
 Columbia, Maryland 21044

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 9/15/99  
 9/16/99  
 9/20/99





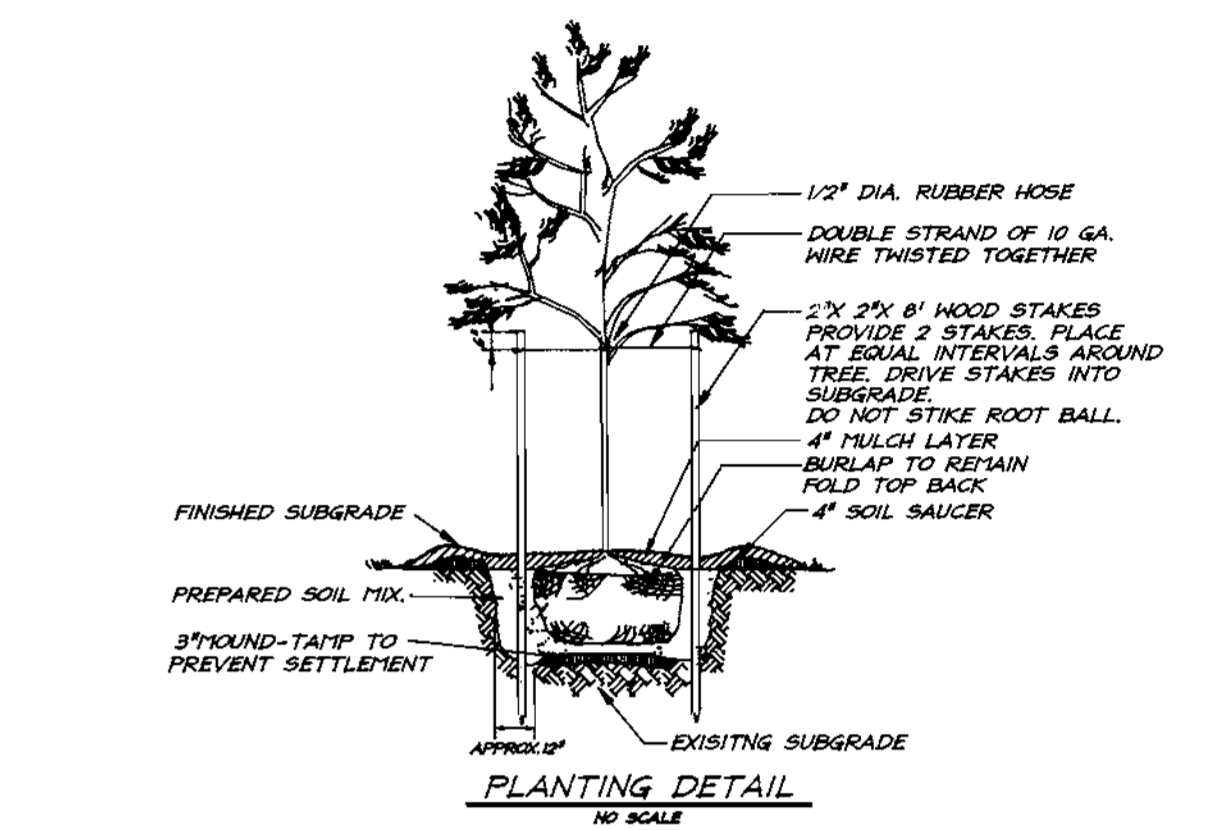
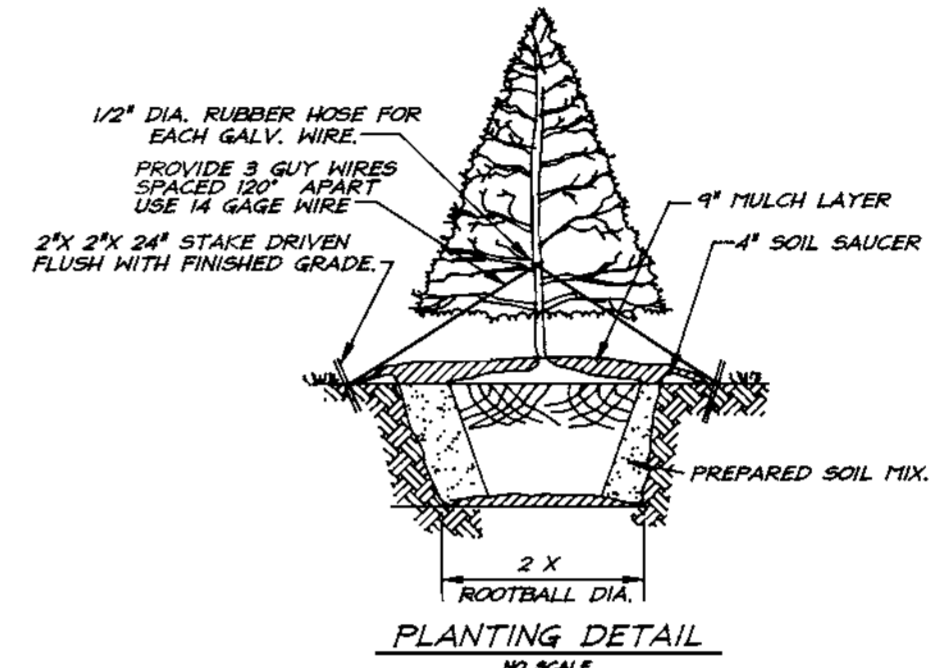
**LEGEND**

CONTOUR INTERVAL  
 EXISTING CONTOUR  
 PROPOSED CONTOUR  
 DIRECTION OF DRAINAGE

WALK OUT BASEMENT  
 SPOT ELEVATION

STABILIZED CONSTRUCTION ENTRANCE

EROSION CONTROL MATTING  
 SILT FENCE  
 LIMIT OF DISTURBANCE  
 SUPER SILT FENCE  
 SUPER DIVERSION FENCE  
 TREE PROTECTION FENCE  
 EXISTING TREES TO REMAIN



**SCHEDULE A PERIMETER LANDSCAPE EDGE LOT 35**

Category	Adjacent to Roadways	Lot
Landscape Type		B
Frontage/Perimeter		100'
Number of Plants Required		
Shade Trees (1/80)		2
Evergreen Trees (1/40)		3
Shrubs		
Number of Plants Provided		
Shade Trees		2
Evergreen Trees		3
Surety Amounts		\$1050

\* See sht. 1 of 3 for surety note. (General Note 17)

**PLANT SCHEDULE**

KEY	PLANT NAME	SIZE	QUAN.	REMARK
(A)	ACER RUBRUM OCTOBER GLORY	2 1/2" - 3" CAL.	2	
(B)	OCTOBER GLORY MAPLE	12" - 14" HT.	2	
(C)	PINUS STROBUS WHITE PINE	6" - 8" HT.	3	

- NOTES:**
- All plant materials shall be full and heavy, be well formed and symmetrical, conform to the most current AAN specifications and be installed in accordance with HRD planting specifications.
  - Contractor shall verify location of all underground utilities prior to digging.
  - Final location of plant material may need to vary to meet final field conditions. Trees shall not be planted in the bottom of drainage swales.

**DEVELOPER'S/BUILDERS CERTIFICATE**

I/We certify that the landscaping shown on this plan will be done according to plan, section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a Certificate of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Name: **BOB CORBETT** Date: **7-20-99**

**OWNER/DEVELOPER**

HOWARD RESEARCH AND DEVELOPMENT CORP  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MD 21044

APPROVED DEPARTMENT OF PLANNING & ZONING

*[Signature]* 9/15/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 9/16/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 9/20/99  
 DIRECTOR

Reviewed for: **HOWARD S.C.D.**  
 and meets Technical Requirements  
*[Signature]* 9/14/99  
 U.S. Natural Resources Conservation Service

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

*[Signature]* 9/14/99  
 Approved

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I/We certify that all development and construction will be done according to this plan of development and plan for sediment and erosion control and that all 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 or their authorized agents, as are deemed necessary.

Name: **BOB CORBETT** Date: **7-20-99**

**ENGINEER'S CERTIFICATE**

I hereby certify that this plan for Sediment and Erosion 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]* 7-20-99  
 G. NELSON CLARK Date: **7-20-99**

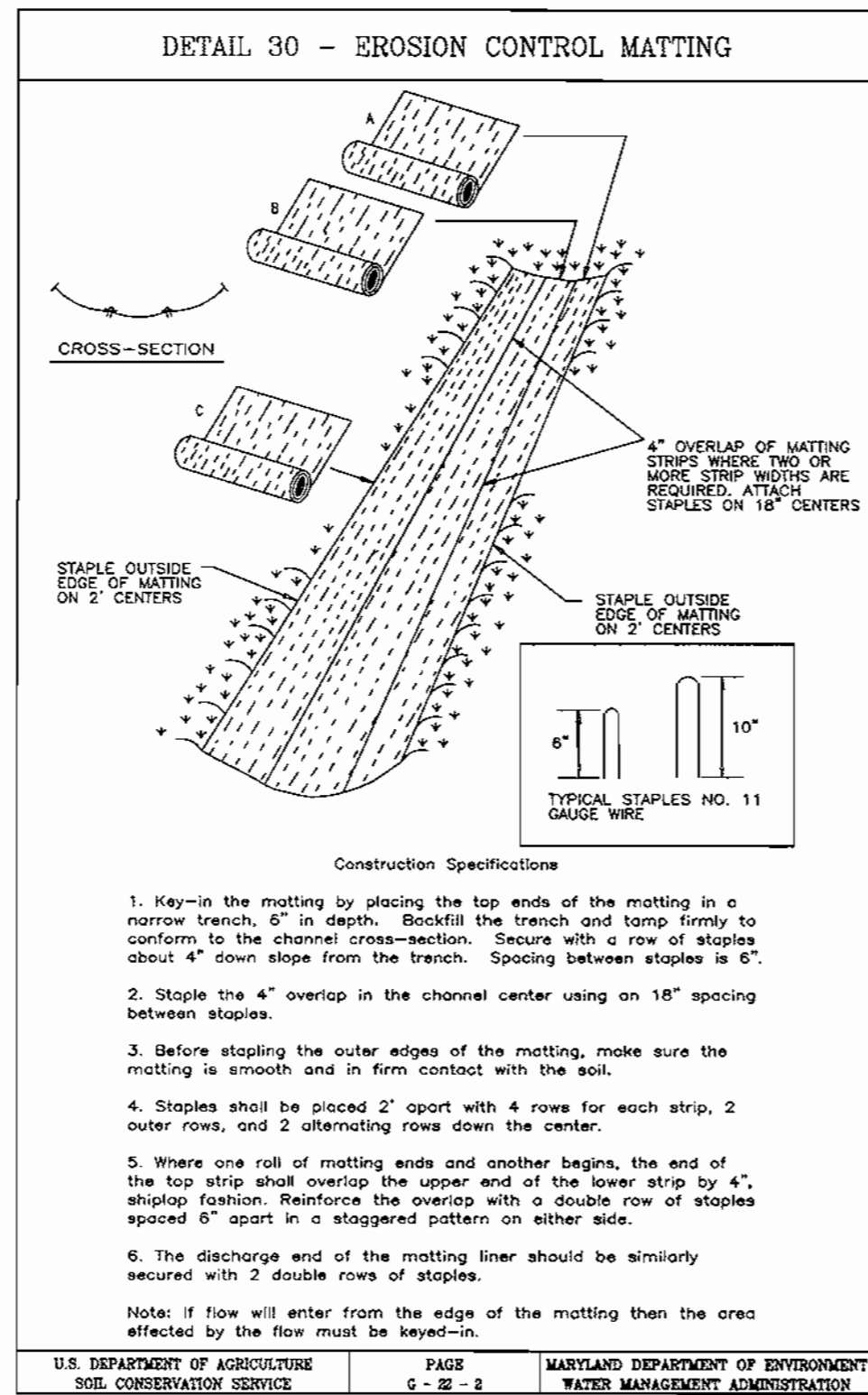
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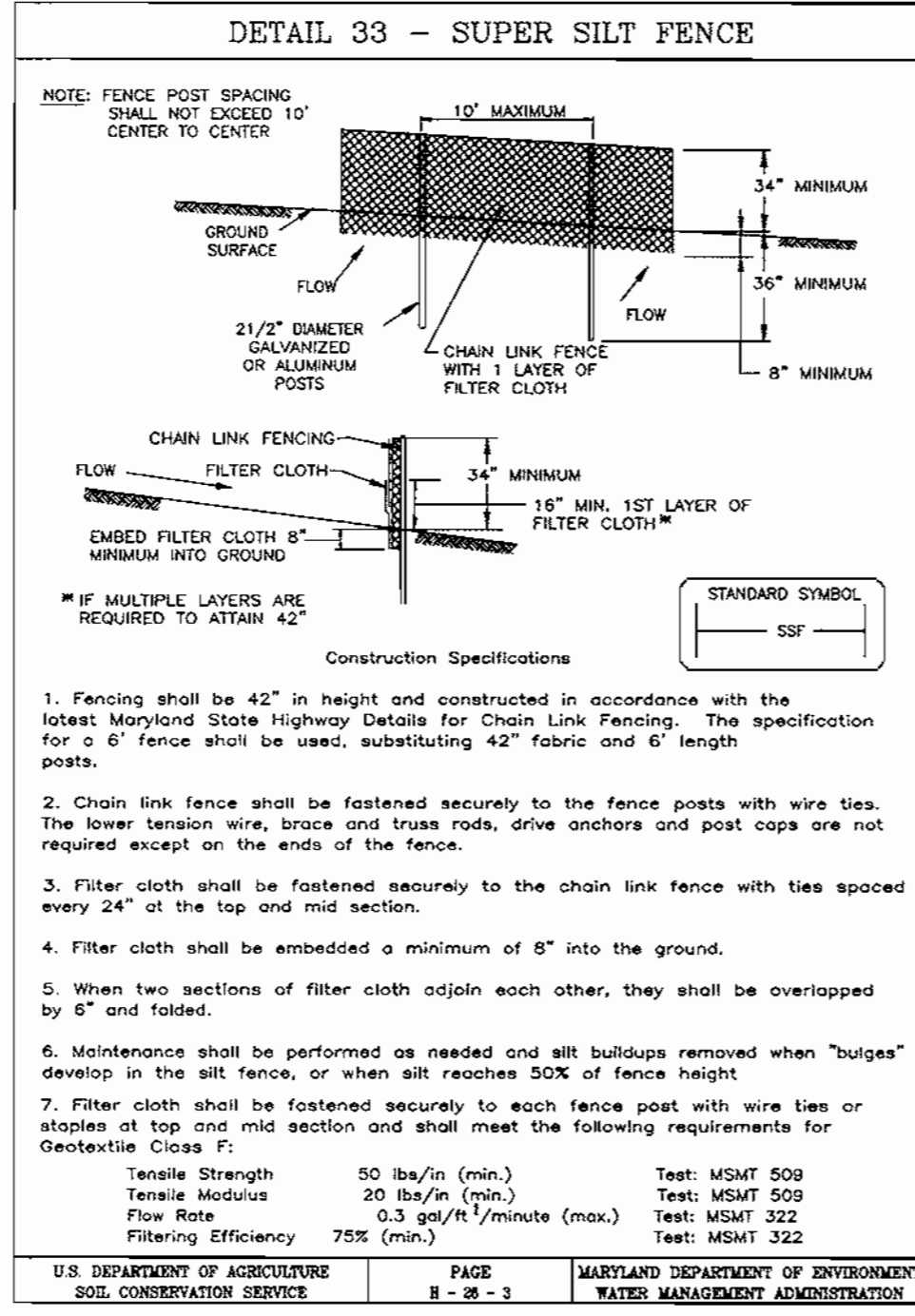
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DRAWN DSV	<b>COLUMBIA VILLAGE OF RIVER HILL</b>	DRAWING 2 of 3
CHECKED P.C.		JOB NO. 99-097
DATE 8-25-99	FOR: WILLIAMSBURG BUILDERS 5405 HARPERS FARM ROAD Columbia, Maryland 21044	FILE NO. 99-097 S & E

21.0 STANDARDS AND SPECIFICATIONS

FOR TOPSOIL



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE 6-28-2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE 6-28-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

**Definition**  
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

**Purpose**  
To provide a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

**Conditions Where Practice Applies**

- This practice is limited to areas having 2:1 or flatter slopes where:
  - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
  - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
  - The original soil to be vegetated contains material toxic to plant growth.
  - The soil is so acidic that treatment with limestone is not feasible.

**Construction and Material Specifications**

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.

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**Purpose**  
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**Conditions Where Practice Applies**

- For sites having disturbed areas over 5 acres:
  - On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
    - pH for topsoil shall be between 6.0 and 7.5. 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.
    - Organic content of topsoil shall be not less than 1.5 percent by weight.
    - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
    - 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.
  - Place topsoil (if required) and apply soil amendments specified in 20.0 Vegetative Stabilization-Section I-Vegetative Stabilization Methods and Materials.

**Construction and Material Specifications**

- 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.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
- Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed 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.
- Topsoil shall not be placed while the topsoil 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 seedbed preparation.

**Construction and Material Specifications**

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.

**Construction and Material Specifications**

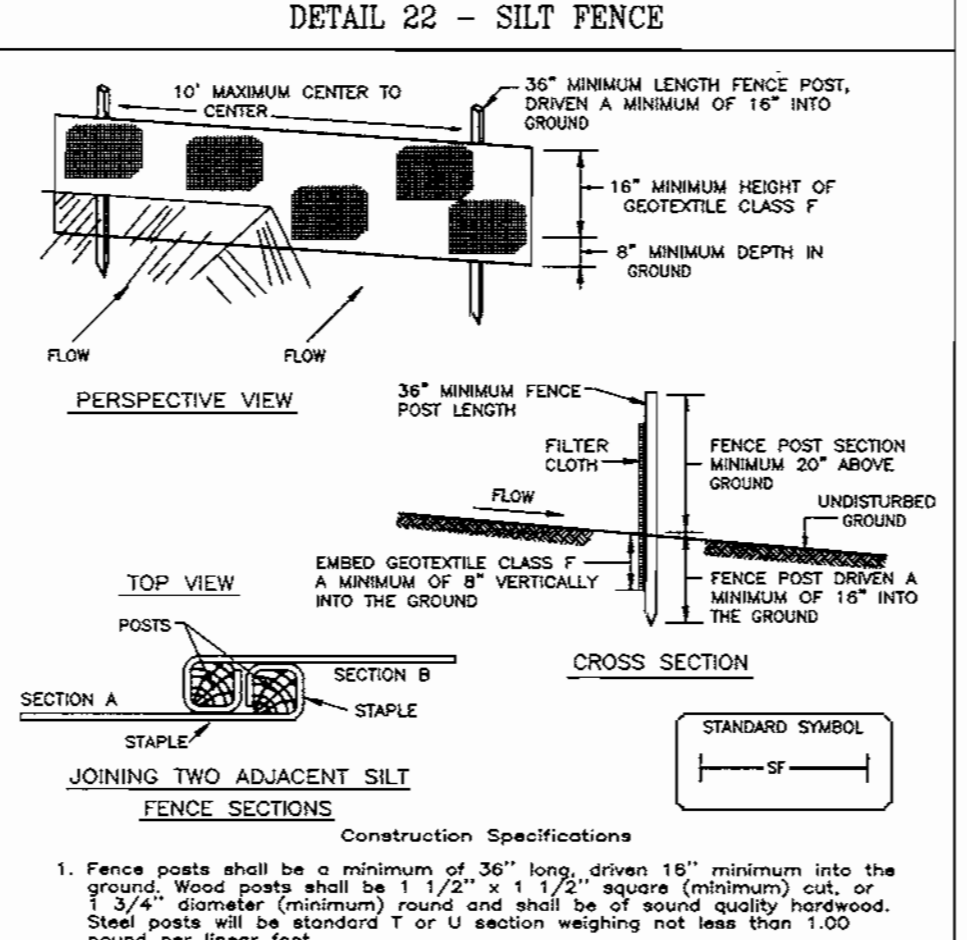
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
  - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 and 1/2" in diameter.
  - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
  - 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 topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

**Construction and Material Specifications**

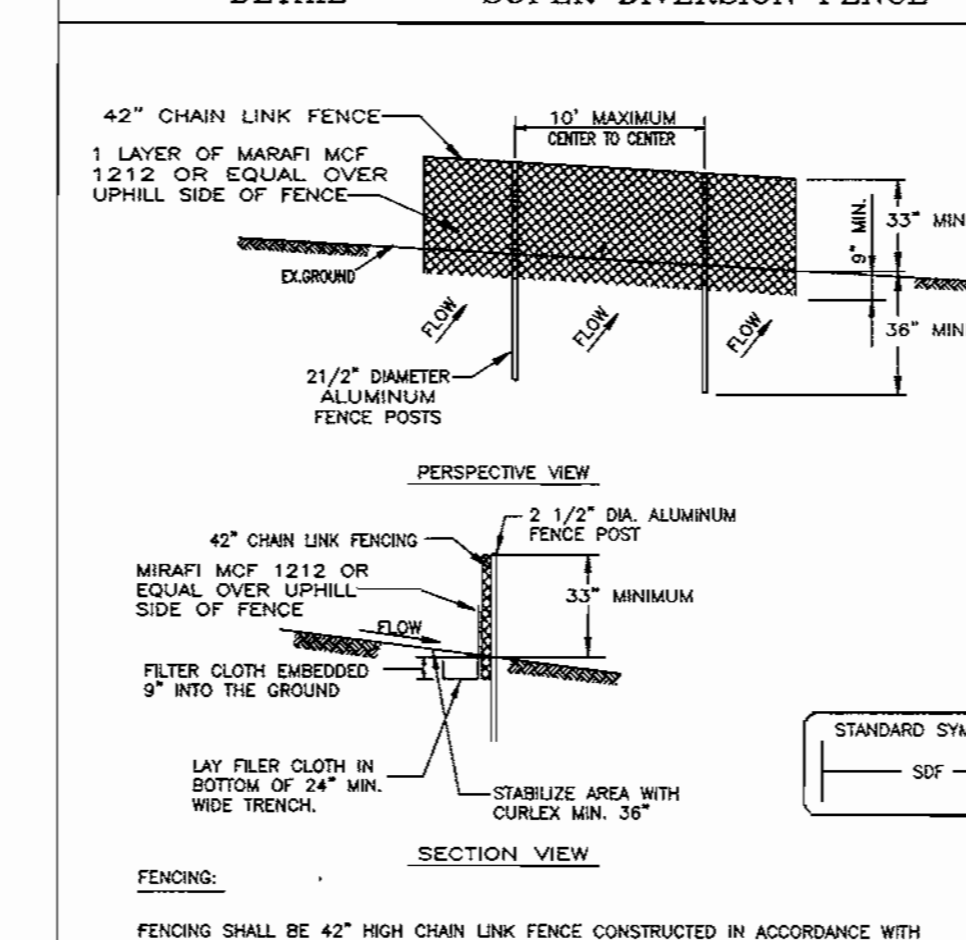
- For sites having disturbed areas under 5 acres:
  - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

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- For sites having disturbed areas under 5 acres:
  - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.



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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE 6-28-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:

- Preferred-Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs./1000 sq.ft.).
- Acceptable-Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and apply 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 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs./1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs./acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 200 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 (9 gal/1000 sq.ft.) for anchoring.

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

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.).

SEEDING: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq.ft.). For the period November 1 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 200 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 (9 gal/1000 sq.ft.) for anchoring.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEDIMENT AND EROSION CONTROL NOTES

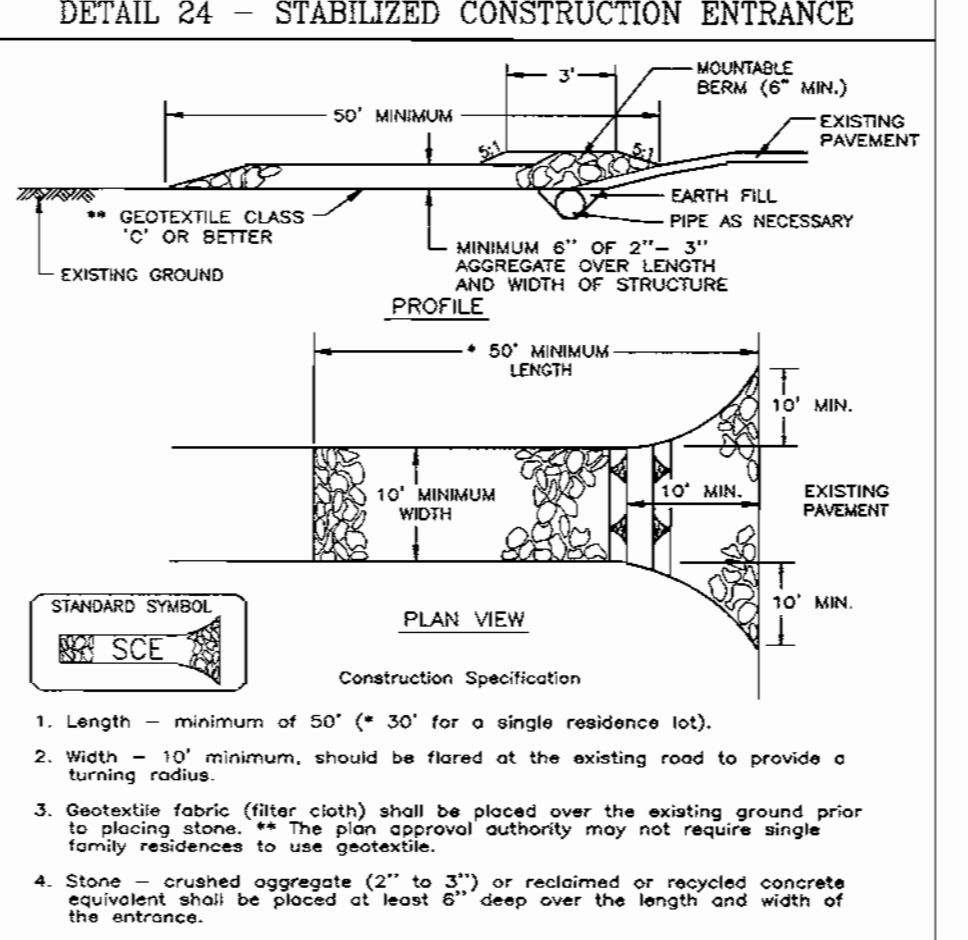
- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within:
  - 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1.
  - 14 days for all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeters in accordance with Vol. I, Chapter 7, 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, sod, temporary seeding and mulching (Sec. G). 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 has been obtained from the Howard County Sediment Control Inspector.
- SITE ANALYSIS:
 

Total Area of Site:	101 AC.
Area Disturbed:	183 AC.
Area to be roofed or paved:	0.68 AC.
Area to be vegetatively stabilized:	0.36 AC.
Total Cut:	2028 CY.
Offsite Water/Borrow Area Location:	7
- 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 control 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.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.
- The total amount of silt fence = 1227 L.F.
- The total amount of super silt fence = 153 L.F.
- The total amount of super diversion fence = 302 L.F.

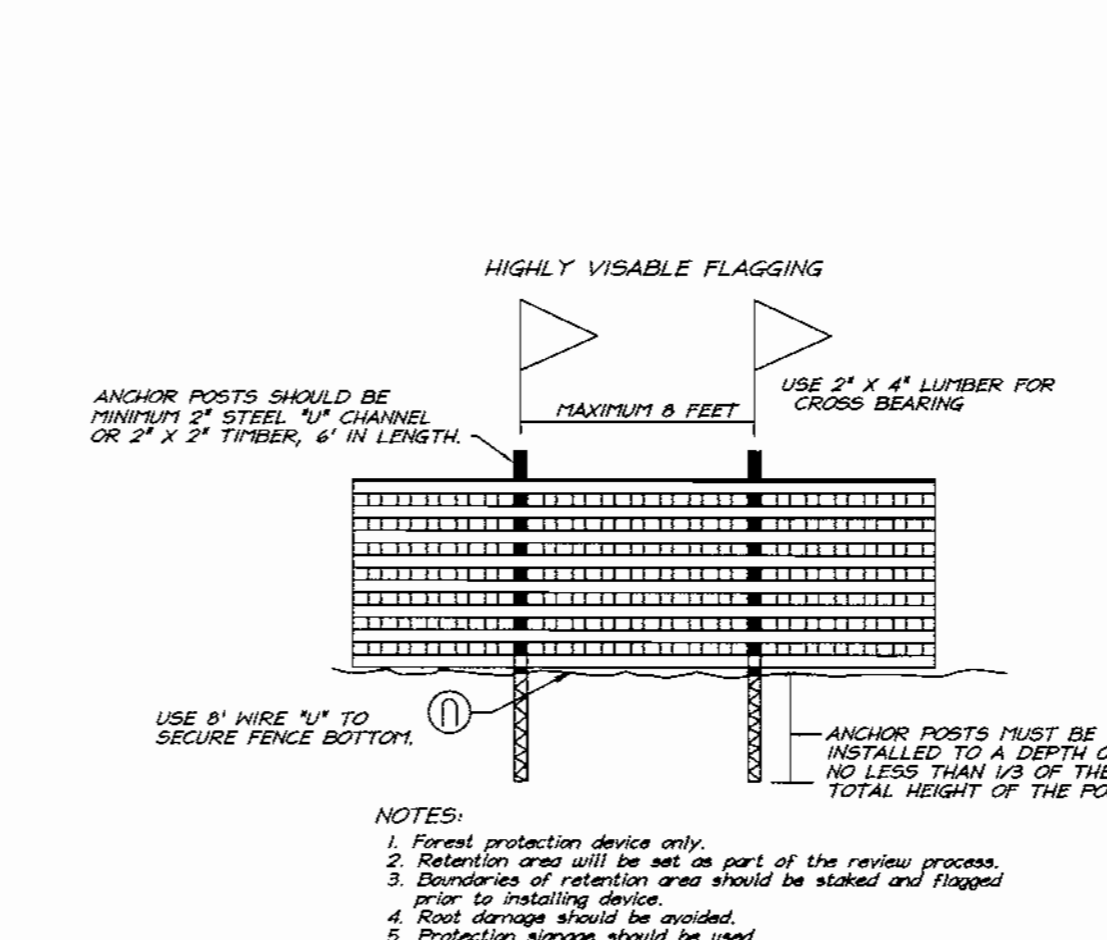
\*It is the responsibility of the contractor to identify the spoil/borrow site and notify and gain approval from the sediment control inspector of the site and its grading permit number at the time of construction.

CONSTRUCTION SEQUENCE:

	NO. OF DAYS
1. Obtain grading permit.	7
2. Install tree protection fence.	7
3. Install sediment and erosion control devices and stabilize.	14
4. Excavate for foundations, rough grade and temporarily stabilize.	30
5. Construct structures, sidewalks and driveways.	60
6. Final grade and stabilize in accordance with Stds. and Specs.	14
7. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	7



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Reviewed for HOWARD S.C.D. and for the Technical Requirements by *John R. Plutner* 9/14/99 U.S. National Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. *John R. Plutner* 9/14/99 Approved

APPROVED: DEPARTMENT OF PLANNING & ZONING *Cheryl Hamilton* 9/15/99 DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*Cheryl Hamilton* 9/16/99 DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*John R. Plutner* 9/20/99 DATE  
DIRECTOR

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and construction will be done according to this plan of development and plan for sediment and erosion control and that all 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 construction. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed appropriate.

*Bob Corbett* 8-25-99 DATE  
NAME BOB CORBETT

ENGINEER'S CERTIFICATE

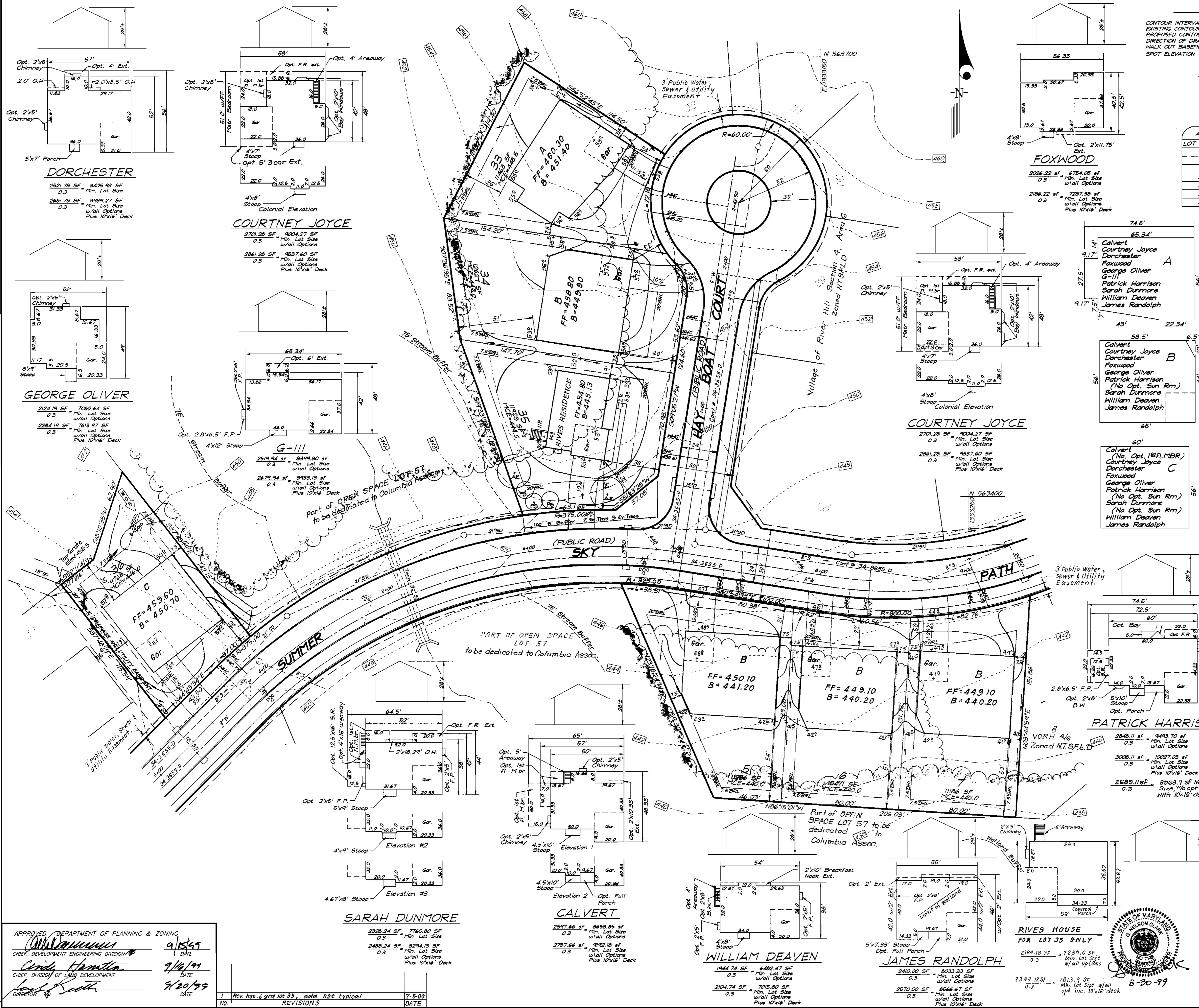
I hereby certify that this plan for Sediment and Erosion Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

*G. Nelson Clark* 8-25-99 DATE  
NAME G. NELSON CLARK



**CLARK • FINEFROCK & SACKETT, INC.**  
ENGINEERS • PLANNERS • SURVEYORS  
7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED P.C.	SEDIMENT CONTROL NOTES & DETAILS LOTS 5, 6, 7, 33, 34, 35 AND 36	SCALE 1" = 30'
DRAWN D.V.	<b>COLUMBIA VILLIAGE OF RIVER HILL</b> SECTION 4 AREA 6 FIFTH (5TH) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	DRAWING 3 OF 3
CHECKED P.C.		JOB NO. 99-097
DATE 8-25-99	FOR: WILLIAMSBURG BUILDERS 5485 HARPERS FARM ROAD Columbia, Maryland 21044	FILE NO. 99-097-5E

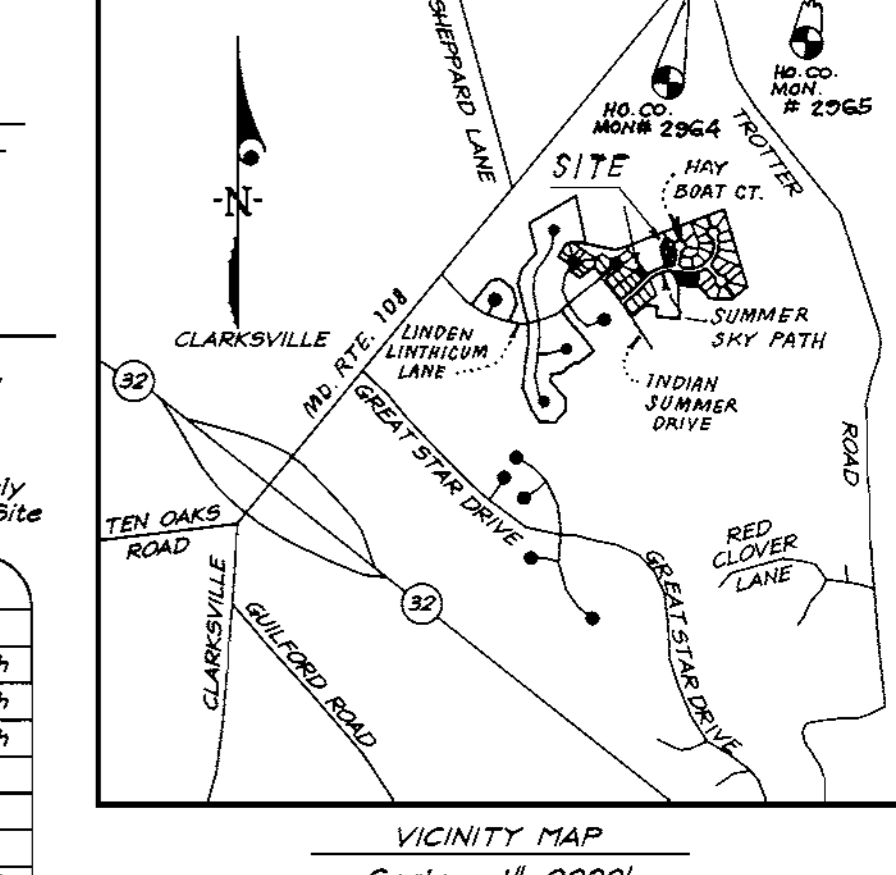


**LEGEND**  
 CONTOUR INTERVAL: 2 FT.  
 EXISTING CONTOUR: ---  
 PROPOSED CONTOUR: - - -  
 DIRECTION OF DRAINAGE: →  
 WALK OUT BASEMENT: ---  
 SPOT ELEVATION: +78.4

**BENCHMARKS:**  
 Howard County Monument 2964  
 Intersection of MD. Route 108 and Trotter Road  
 Howard County Monument 2965  
 an additional 2.54' Northwesterly  
 along MD. Route 108 away from Site

**ADDRESS CHART**

LOT NUMBER	STREET ADDRESS
5	12220 Summer Sky Path
6	12224 Summer Sky Path
7	12228 Summer Sky Path
33	5909 Hay Boat Court
34	5905 Hay Boat Court
35	5901 Hay Boat Court
36	12217 Summer Sky Path



- GENERAL NOTES:**
1. Subject property is zoned: NTSFLD per 10-18-93 Comprehensive Zoning Plan.
  2. The total area included in this submission is: 1.81 Acres.
  3. The total number of lots included in this submission is: 7
  4. Improvement to property: Single Family Detached
  5. The maximum lot coverage permitted is: 30%
  6. Department of Planning and Zoning reference file numbers: 5-93-21, P-95-12, F-96-102, WP-95-70, F-98-37
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  12. The contractor shall notify the Department of Public Works/Division of Construction Inspection at (410) 313-1880 at least twenty-four (24) hours prior to the start of work.
  13. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
  14. For driveway entrance details, refer to Ho. Co. Design Manual Volume IV details R.6.03 & R.6.05.
  15. In accordance with FDP-Phase 222-A, Part VII bay windows or chimneys not more than 10 feet in width may project not more than 4 feet into any setbacks; porches and decks may project not more than 3 feet into the front or rear setbacks.
  16. Stormwater Management is provided per: F-96-102.
  17. SHC Elevations shown are at the Property lines.
  18. This plan has been prepared in accordance with provision of Section 16-124 of the Howard County Code and the Landscape Manual. Financial Surety for the required 5 landscape trees in the amount of \$1,050 is part of the builders grading permit application, Lot 35. For schedules and details, see sheet 2 of 3.
  19. Quantity Stormwater Management for Section 4, Area G, is provided by one facility below Lot 12 on Silent Sun Place. Quality Management for this section will be provided by one extended Detention Fac. adj. to the SWM Pond. This subdiv. is loc. in the Cl. 1 Watershed in the Patuxent River

**SHEET INDEX**

DESCRIPTION	SHEET No.
SITE DEVELOPMENT PLAN	1 of 3
SEDIMENT AND EROSION CONTROL PLAN	2 of 3
SEDIMENT AND EROSION CONTROL DETAILS	3 of 3

**OWNER / DEVELOPER**  
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.  
 10276 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21044

**SPECIAL NOTES:**  
 This plan is for house siting and lot grading only. Improvements shown within the rights-of-way on this S.D.P. are not to be used for construction. For construction, see approved Road Construction Plans F-98-37 and/or approved Water and Sewer Plans Contract #34-3655-D.

SUBDIVISION NAME	SECTION/AREA	LOTS/PARCELS
VILLAGE OF RIVER HILL	4/6	5, 6, 7, 33, 34, 35 & 36
PLAT NO.	BLOCK NO.	ZONE
13507, 13508, 13509	1	NTSFLD
TAX MAP NO.	ELECTION DIST.	CENSUS TRACT
35	5th	6055
WATER CODE	SEWER CODE	
1-10	6653000	

**CLARK • FINEFROCK & SACKETT, INC.**  
 ENGINEERS • PLANNERS • SURVEYORS  
 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED BY: D.M.  
 DRAWN BY: DSV  
 CHECKED BY: J.M.E.  
 DATE: 8-25-99

**SITE DEVELOPMENT PLAN**  
 LOTS 5, 6, 7, 33, 34, 35 AND 36

**COLUMBIA VILLAGE OF RIVER HILL**  
 SECTION 4 AREA 6  
 FIFTH (5th) ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

FOR: WILLIAMSBURG BUILDERS  
 5485 HARPERS FARM ROAD  
 Columbia, Maryland 21044

SCALE: 1" = 30'  
 DRAWING: 1 of 3  
 JOB NO.: 99-097  
 FILE NO.: 99-097X

8-30-99

**DORCHESTER**  
 2521.78 SF = 8406.89 SF  
 0.3 Min. Lot Size  
 2661.78 SF = 8939.27 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**COURTNEY JOYCE**  
 2701.28 SF = 9004.27 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2861.28 SF = 9537.60 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**GEORGE OLIVER**  
 2124.19 SF = 7080.64 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2284.19 SF = 7613.97 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**G-III**  
 2519.94 SF = 8399.80 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2679.94 SF = 8933.13 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**FOXWOOD**  
 2026.22 SF = 6754.06 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2186.22 SF = 7287.38 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**COURTNEY JOYCE**  
 2701.28 SF = 9004.27 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2861.28 SF = 9537.60 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**PATRICK HARRISON**  
 2848.11 SF = 9493.70 SF  
 0.3 Min. Lot Size  
 w/all Options  
 3008.11 SF = 10027.03 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck  
 2689.11 SF = 8963.71 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature]

DATE: 9/15/99  
 DATE: 9/16/99  
 DATE: 9/20/99

**SARAH DUNMORE**  
 2328.24 SF = 7760.80 SF  
 0.3 Min. Lot Size  
 2488.24 SF = 8294.13 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**CALVERT**  
 2897.66 SF = 9658.05 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2757.66 SF = 9192.18 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**WILLIAM DEAVEN**  
 1944.74 SF = 6482.47 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2104.74 SF = 7015.80 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**JAMES RANDOLPH**  
 2410.00 SF = 8038.33 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2570.00 SF = 8566.41 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**RIVES HOUSE FOR LOT 35 ONLY**  
 2184.18 SF = 7280.6 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2344.18 SF = 7813.9 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

NO.	REVISIONS	DATE
1	Rev. hse & gnd lot 35, add hse typical	7-5-00

**GENERAL NOTES**

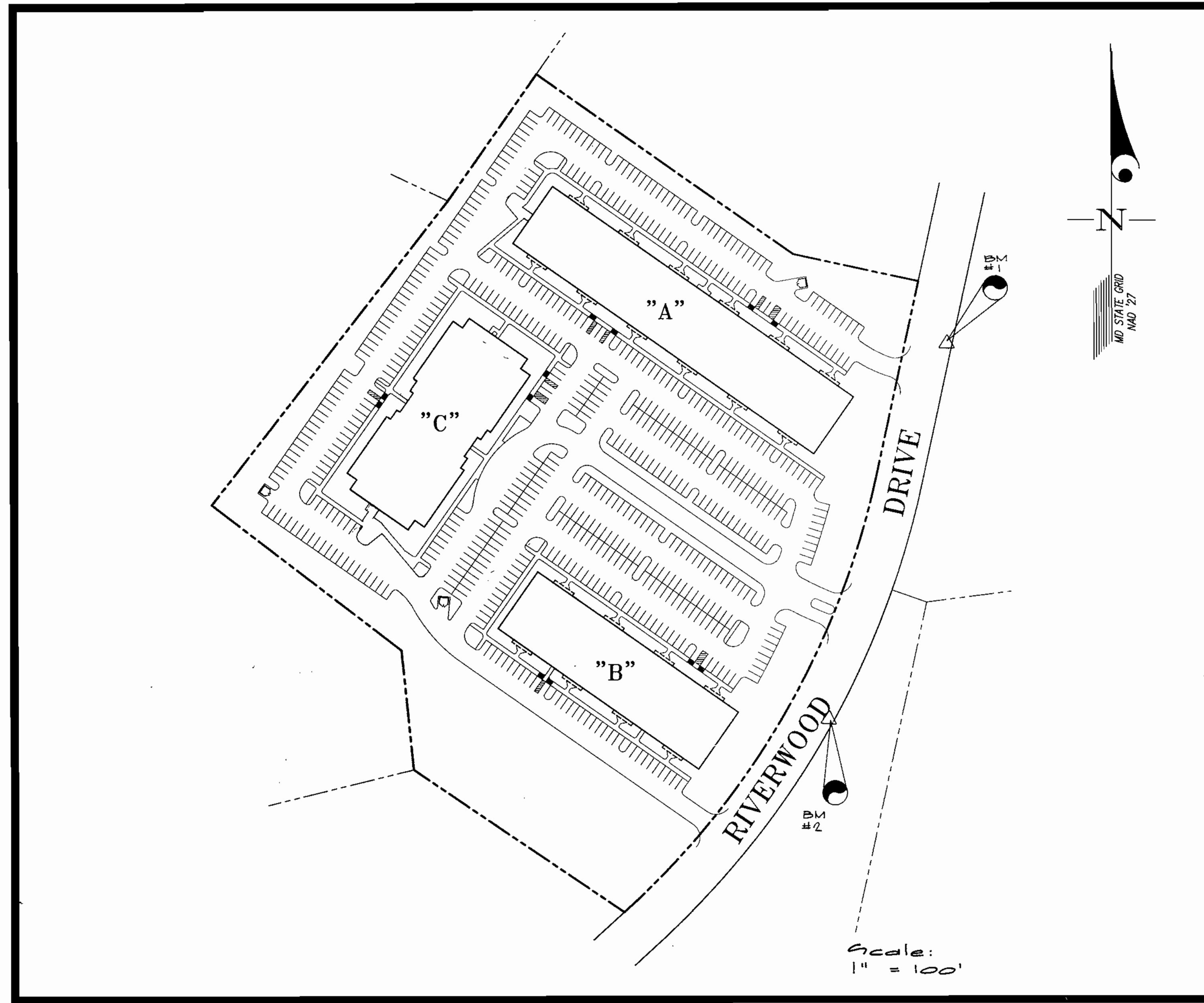
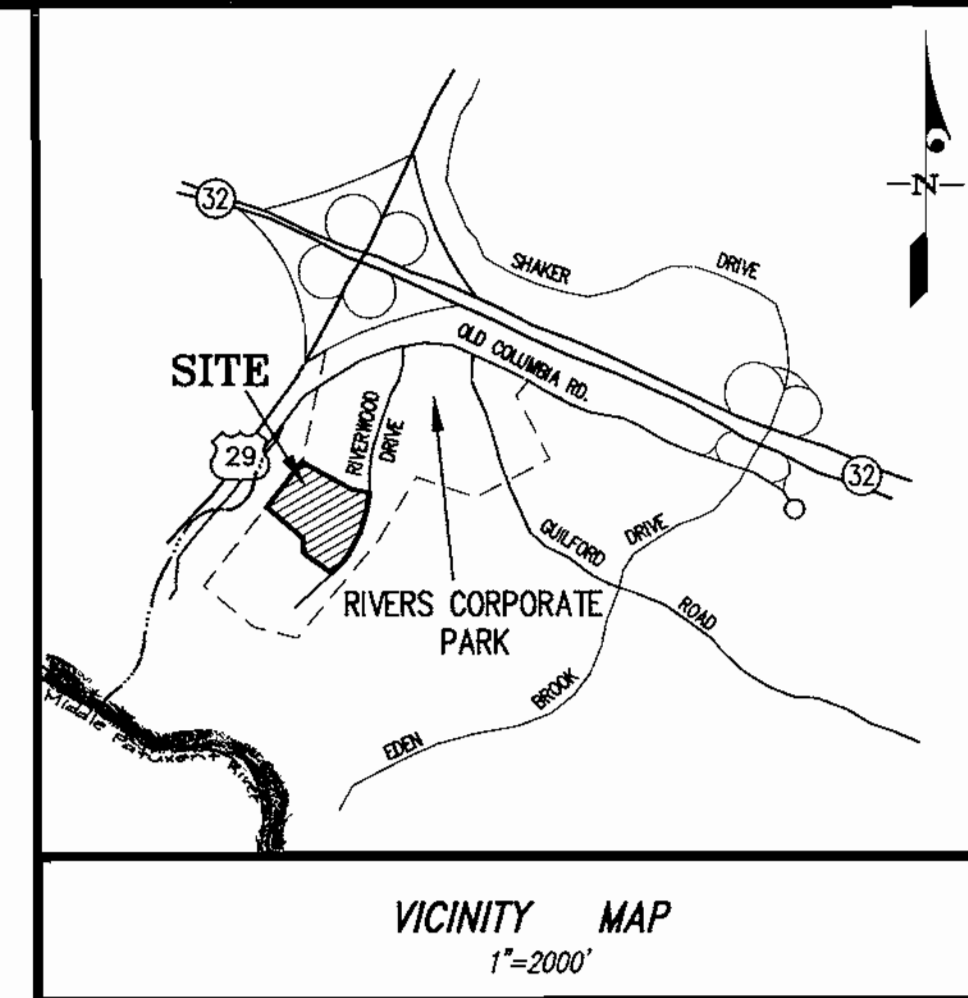
- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standard and specifications if applicable.
- The contractor shall notify the Department of Public Works at (410) 313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- The contractor shall notify the Howard County Department of Public Works, Bureau of Utilities at (410) 313-4900 at least five working days prior to starting any excavation work.
- Area of Parcel: 12,684.3 Ac. Disturbed Area: 11.25 Ac.
- Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- All plan dimensions are to face of curb unless otherwise noted.
- Existing topography was determined by approved final construction plans for development.
- Boundary information and coordinate data for this site are based on the MD State Plane System (NAD 27) as projected on the recorded plat for this subdivision.
- Water and sewer shown is public.
- All existing water and sewer is shown per Contract No. 34-1146-D & 24-1025-D.
- Stormwater management quantity and quality control is being provided onsite.
- All existing public storm drain is per F-84-02 & F-82-28.
- All curb radii is 5' unless noted otherwise.
- Utility information taken from approved final construction plans for development.
- Sidewalks adjacent to perpendicular parking shall be 6' wide. All other sidewalks shall be 5' wide, except where dimensioned otherwise. Provide 3' radius rounding at all angle breaks and intersections.
- Contractor shall utilize PVC pipe for all sewer house connections. Contractor shall utilize D.I.P. (Cl. 51) for 4" and 6" water house connections and D.I.P. (Cl. 50) for 8" water house connections.
- For all storm drain connections at existing stubs, the contractor shall remove the existing blocking and maintain the same grade and alignment.
- Use trench bedding class "C" for storm drains.
- Paved areas indicated are private except as noted.
- Project background: See Dept. of Planning & Zoning File Numbers: F-84-02, F-82-28, W/S Contr. No's 34-1146-D & 24-1025-D.
- Recording reference: Plat No. 6020.
- All proposed ramps shall be in accordance with current A.D.A. standards. Maximum sidewalk cross slope shall be two percent. Provide a five-foot by five-foot level (2 percent max.) landing at the top and bottom of all ramps and building entrances and exits.
- All water meters shall be located inside buildings.
- The proposed water and sewer house connection alignments indicated on the plans, from the existing utilities to the building, are to be constructed by the building plumber and are approximate. The proposed stubs are located 5' from the building face.
- The proposed roof drain alignment connections indicated on the plans, from the stubs to the building, are to be constructed by the building plumber and are approximate. The proposed stubs are located 5' from the building face.
- Maintain 2% cross-slopes on sidewalks, per standard details. Where sidewalk is adjacent to building, slope away from building, and utilize expansion joint material and sealer in the joint between the sidewalk and the building wall.
- Sufficient sight distance per the Howard County Design Manual must be provided at all access points. Any landscaping that obstructs the line of sight must be relocated.
- A traffic study and A.P.F.O. analysis, which included this Parcel, were performed as part of this site development plan.
- There is no floodplain on this site.
- There are no wetlands on this site.
- This site is exempt from the Forest Conservation Act in accordance with Section 16.1202 (b)(1)(v).
- All exterior lighting shall comply with Zoning Regulations, Section 17d.
- On Sept. 22, 1999, WP 00-19 was approved per H.C. Subdivision & Land Development Regulations, Sect. 16.110(a)(1) to permit grading with stream buffer, & is subject to the following:
  - Proposed grading can only occur above the point where "swale becomes natural" above the 340' contour.
  - Grading will be limited to the extent indicated on WP exhibit.
  - Grading in this area cannot occur until GDP 00-28 receives signature approval.

# SITE DEVELOPMENT PLAN

## RIVERS CORPORATE PARK

### SECTION 1 AREA 2

### PARCEL 'D'



**BENCHMARK**

BM#1 GLW Trvm Sta. 700	N488738.49 Elev. 777.99	Desc. Pk nail in top of curb.
BM#2 GLW Trvm Sta. 701	N488759.69 Elev. 770.91	Desc. Pk nail in top of curb.

- SITE ANALYSIS**
- Area of site: 552,528 sq. ft. or 12.6843 ac.
  - Disturbed Area: 11.25 ac.
  - Present Zoning: New Town (Employment) FDP 184-A-III
  - Proposed Use: Research and Development/Office
  - Floor space: Building A 47,640 s.f.  $\Delta$   
Building B 29,520 s.f.  
Building C 64,254 s.f. (2 story @ 32,127 s.f. each)  
Total Floor Space: 134,414 s.f.
  - Total number of Parking Spaces required: 267\*
  - Total number of Handicap Spaces required: 13
  - Minimum number of Van accessible: 2
  - Total number of Parking Spaces provided: 624 (provides parking ratio of 4.64 sp./1000 s.f.)
  - Total number of Handicap Spaces provided: 16
  - Total number of Van accessible provided: 5
  - Building coverage: 102,287 s.f.
  - Floor/Area ratio (F.A.R.): 134,414/552,528 = 0.24
  - Impervious area = 0.1%.
- \* - Based on General Office use @ 2. spaces/1000 s.f.

## KEY MAP

SCALE: 1"=100'

**SHEET INDEX**

- |                                |  |
|--------------------------------|--|
| 1. Cover Sheet                 | 7. Sediment Control Details                |
| 2. Site Development Plan       | 10. Storm Drain Profiles & Schedules       |
| 3. Site Details/Paving Plan    | 11. Storm Drain Profiles & Schedules       |
| 4. Handicap Accessibility Plan | 12. Stormwater Management Profiles/Details |
| 5. Landscape & Lighting Plan   | 13. Stormwater Management Profiles/Details |
| 6. Landscape Notes & details   | 14. WHC and SHC Profiles                   |
| 7. Drainage Area Map           | 15. Utility Plan                           |
| 8. Sediment Control Plan       | 16. Pond Specifications                    |

**APPROVED**  
DATE: SEPT. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*John V. Cavala* 11/23/99  
Director Date

*Chris Hamilton* 11/19/99  
Chief, Division of Land Development Date

*David Williams* 11/12/99  
Chief, Development Engineering Division Date



**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20886  
TEL: 301-421-0224 FAX: 410-383-1820 DSW/MS 301-988-2524 FAX: 301-421-4186

PREPARED FOR:  
**NOTTINGHAM PROPERTIES, INC.**  
100 WEST PENNSYLVANIA AVENUE  
TOWSON, MD. 21284  
PH: 410-825-0545  
ATTN: MR. CHUCK McMAHON

**SITE DEVELOPMENT PLAN**  
**RIVERS CORPORATE PARK**  
SECTION 1 AREA 2 ~ PARCEL 'D'  
PLAT No. 6020

ADDRESS CHART		SUBDIVISION NAME:		SECTION/AREA		PARCEL	
PARCEL 'D'	STREET ADDRESS	RIVERS CORPORATE PARK	1/2	41	12	6	6088.01
"A"	7140 RIVERWOOD DRIVE	PLAT	ZONE	TAX MAP	BLOCK	ELEC. DIST.	CENSUS TRACT
"B"	7170 RIVERWOOD DRIVE	6020	NEW TOWN	41	12	6	6088.01
"C"	7100 RIVERWOOD DRIVE						

**Stormwater Management Facility Maintenance Schedule**

**Routine Maintenance**

Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.

Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year. Once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.

Debris and litter next to the outlet structure shall be removed during regular mowing operations, and as needed.

Visible signs of erosion in the pond as well as rip-rap outlet area shall be required as soon as it is noticed.

**Non-Routine Maintenance**

Structural components of the pond such as the dam, high structure and pipes shall be repaired upon the detection of any damage. The components should be inspected during routine maintenance operations.

Sediment should be removed when its accumulation significantly reduces the design storage, interferes with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary by the Howard County Dept. of Public Works.

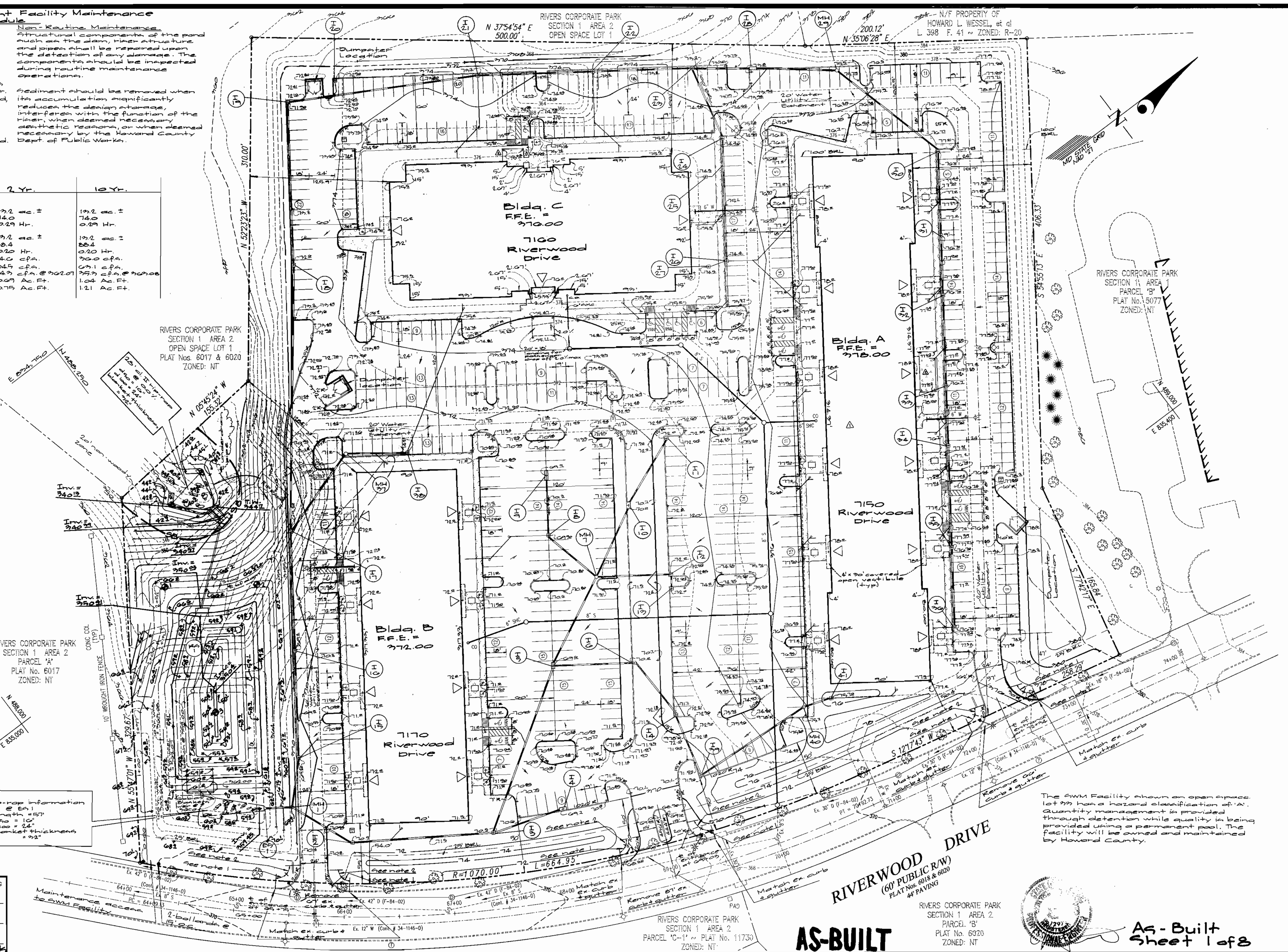
G.W.M. Facility Summary	2 Yr.	10 Yr.
Before Development		
Drainage Area	19.2 ac. ±	19.2 ac. ±
Curve Number	74.0	74.0
Time of Concentration	0.29 Hr.	0.29 Hr.
After Development		
Drainage Area	19.2 ac. ±	19.2 ac. ±
Curve Number	58.4	58.4
Time of Concentration	0.20 Hr.	0.20 Hr.
Before Development	14.9 cfs.	20.0 cfs.
After Development (no management)	24.5 cfs.	67.1 cfs.
After Development (managed)	14.9 cfs. @ 70.0'	25.9 cfs. @ 70.0'
Storage Required (TR-55)	0.09 Ac. Ft.	1.04 Ac. Ft.
Storage Provided (TR-20)	0.75 Ac. Ft.	1.21 Ac. Ft.

Street Name	Sta.	Off. Curb	Fixture / Pole Type	Comment
Riverwood Drive	65+45	28" L	150' post HPS vapor retarder, as shown on plan	
"	69+55	28" L	"	
"	72+19	28" L	"	

- Notes**
- Contractor is to use standard/Rev 7" curb & gutter in this area.
  - Contractor is to transition from 7" curb & gutter within R/W to 6" curb & gutter on site in this area.
  - For handicap parking/access see sheet.

**Legend**

- Standard 6" Curb & gutter
- Revised 6" Curb & gutter
- Existing Curb
- Proposed Spot Elevation
- Existing Contour
- Proposed Contour
- Entrance that is handicap accessible
- Stormwater Management Basin Location
- 90' stream Buffer
- Street Light (by BS & S)



**APPROVED**  
 BOARD OF ZONING ADJUSTMENT  
 DATE: SEPT 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: Frank J. Taylor - 11/19/99  
 Chief, Division of Land Development: Cindy Hamilton - 11/19/99  
 Chief, Development Engineering Division: Mike Williams - 11/12/99

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURLINGTON OFFICE PARK  
 BURLINGTON, MARYLAND 20866  
 TEL: 301-421-4024 FAX: 301-421-4188

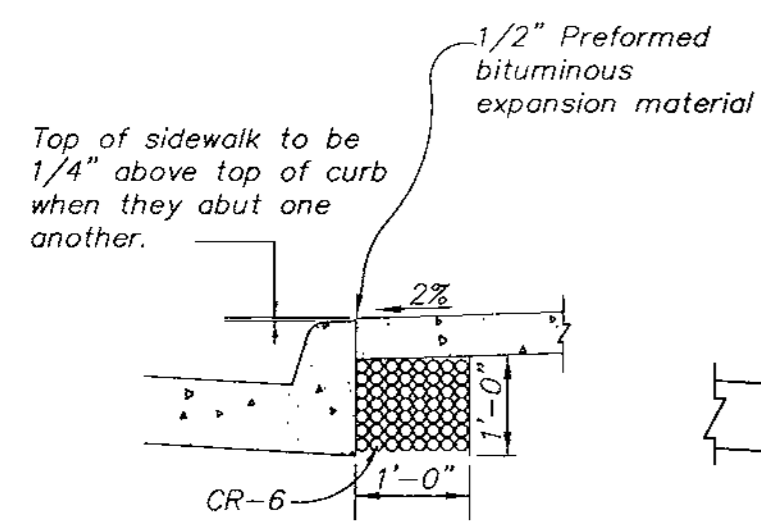
DATE	REVISION	BY	APP'R.
11-19-99	As submitted for permit		
11-19-99	add notes in front of Bldg. A & B		
11-19-99	As submitted for permit		

PREPARED FOR:  
 NOTTINGHAM PROPERTIES, INC.  
 100 WEST PENNSYLVANIA AVENUE  
 TOWSON, MD. 21284  
 PH: 410-825-0545  
 ATTN: MR. CHUCK McMAHON

**AS-BUILT**  
 SITE DEVELOPMENT PLAN  
**RIVERS CORPORATE PARK**  
 SECTION 1 AREA 2 - PARCEL 'D'  
 PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
1"=40'	NT	99030
DATE	TAX MAP - GRID	SHEET
11/19/99	41-12	2 OF 10

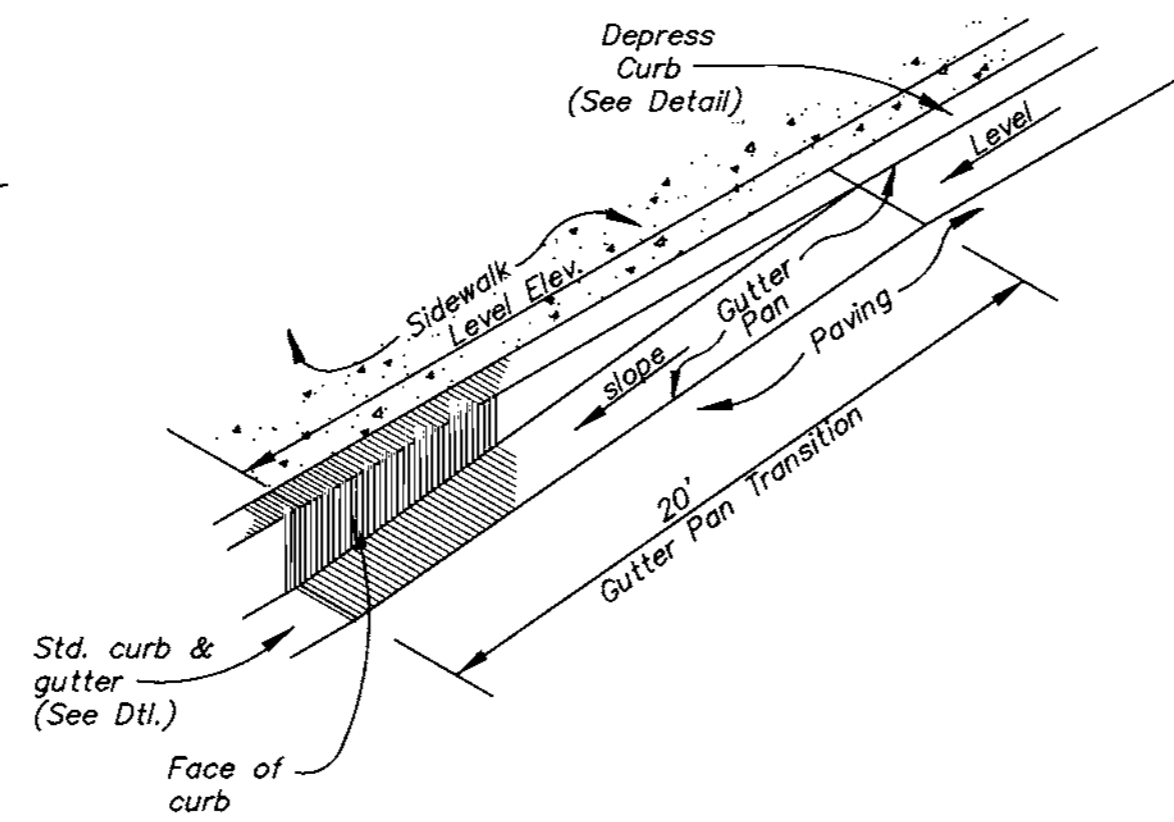
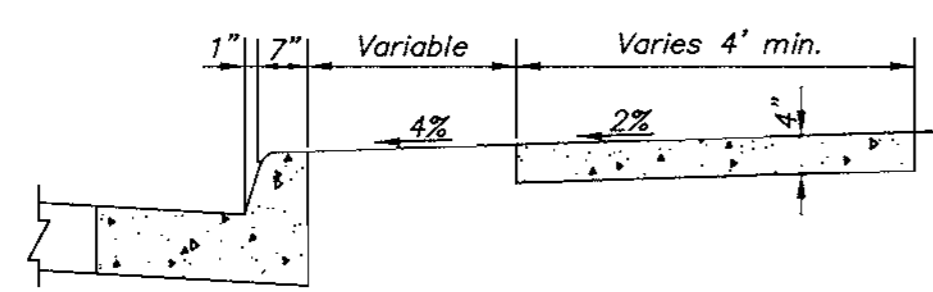
SDP-00-28



Detail A

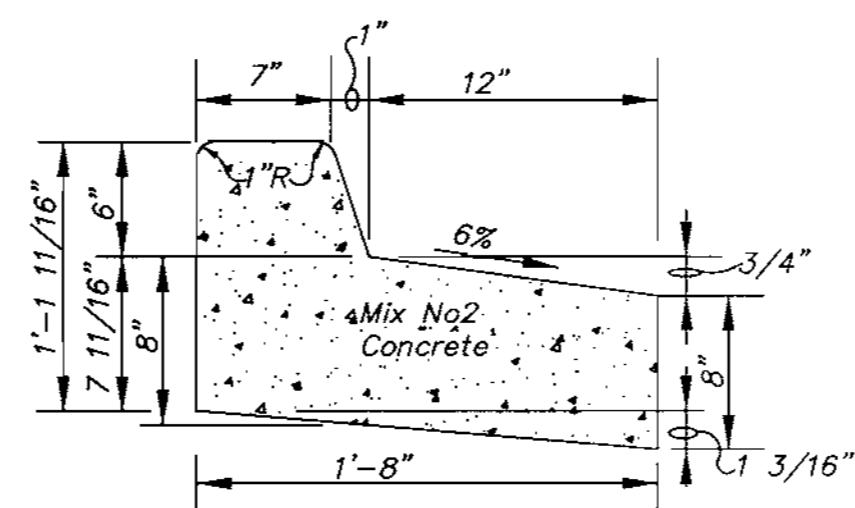
Notes:

- Sidewalk to be scribed in 5' maximum squares.
- Expansion joints across the sidewalk not to be more than 15' apart.
- 1/2" preformed bituminous expansion material in expansion joints to be kept 1/4" below surface of sidewalk.
- Concrete to be mix No.2
- When sidewalk abuts curb, walk shall be 1/4" above curb with preformed bituminous expansion material between sidewalk and curb and resting on a compacted crushed stone base. See detail A this sheet.
- On longitudinal sidewalk grades of 5% or greater, a concrete header, 6" thick and 6" deep below the normal 4" sidewalk thickness shall be constructed for the full width of the sidewalk at intervals of 48'. The headers shall be placed at expansion joint locations and shall be monolithic with the sidewalk.



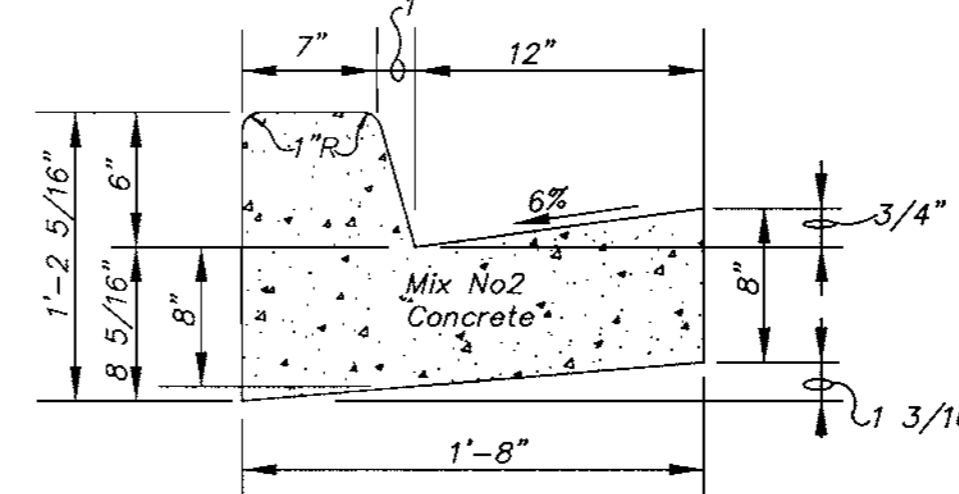
Gutter Transition - Isometric

N.T.S.



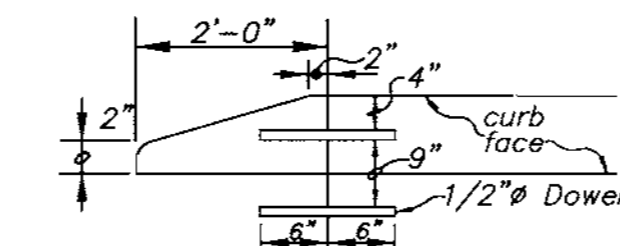
Reverse 6" Combination Curb & Gutter

N.T.S.



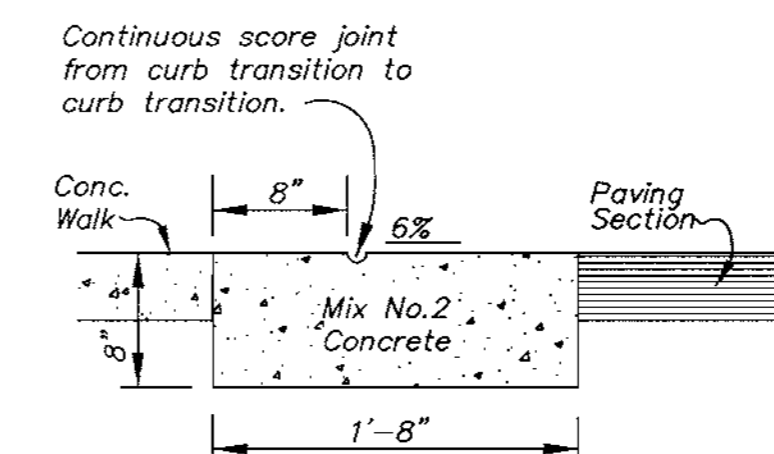
Standard 6" Combination Curb & Gutter

N.T.S.



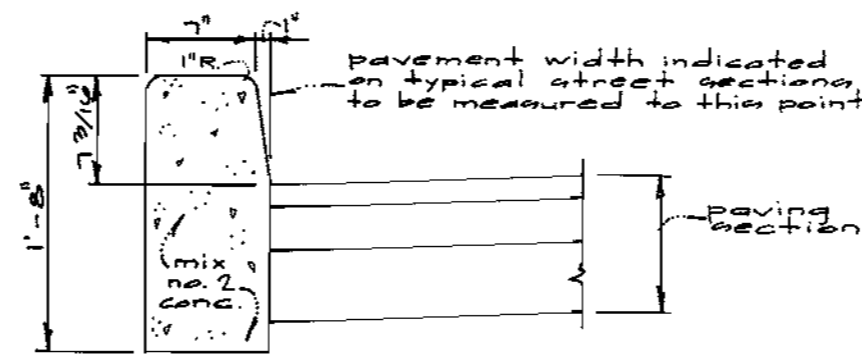
Nose Down Curb Detail

N.T.S.



Depressed Curb Entrance

N.T.S.



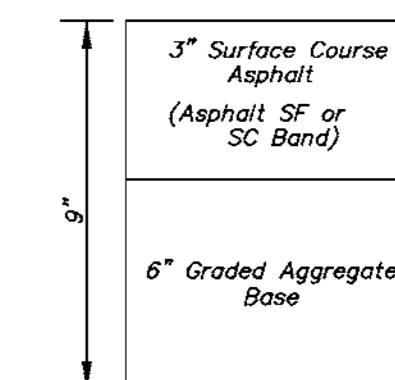
Standard Barrier Curb

N.T.S.

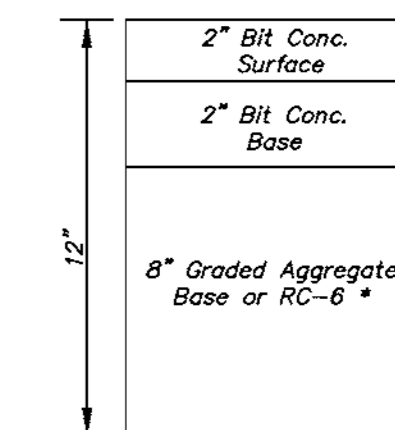
Section Type

LIGHT DUTY

Granular Base Alternates



HEAVY DUTY

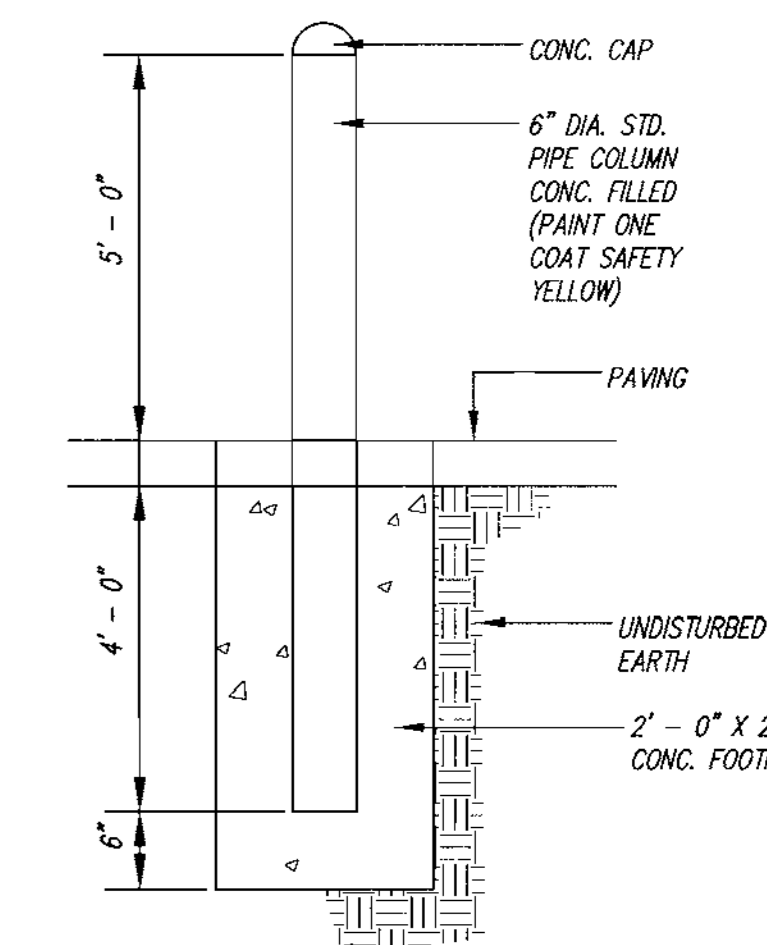


Note:  
In accordance with the soils report prepared by E.C.S. Ltd., it is recommended that CBK testing be performed to develop specific pavement sections for the various vehicular uses on site.

\* RC-6 can be substituted, given the material used meets the gradation requirements for graded aggregate base.

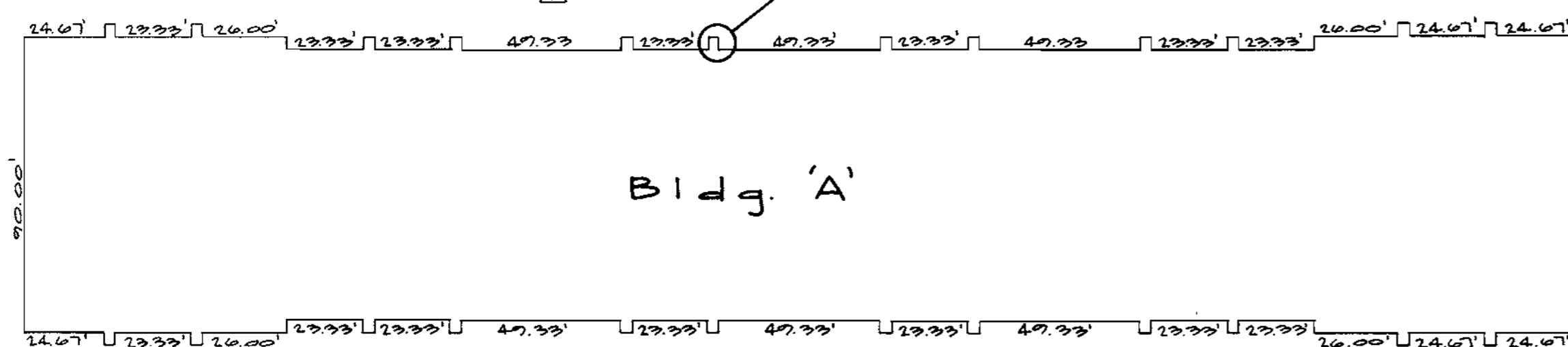
Paving Section

N.T.S.



BOLLARD DETAIL

(N.T.S.)



Bldg. 'A'

Plan  
1" = 40'



BUILDING 'A'

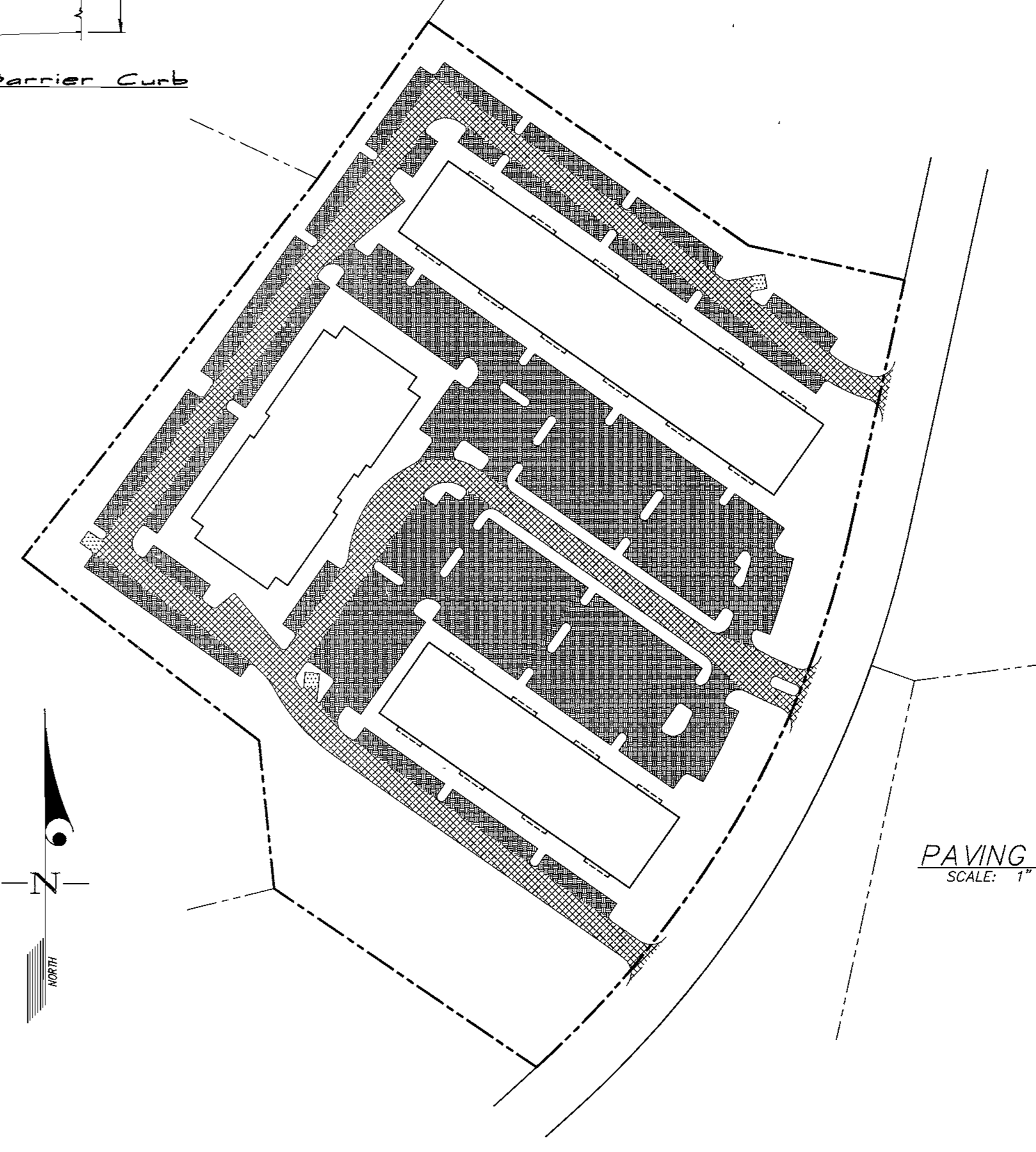


BUILDING 'B'



BUILDING 'C'

FRONT ELEVATIONS  
SCALE: 1" = 30'



PAVING PLAN  
SCALE: 1" = 100'

LEGEND

- Light Duty
- Heavy Duty
- Concrete \* Pad

\* - See Ho.Co. Detail # R.11.01 for concrete reinforcement

APPROVED  
PLANNING BOARD  
of HOWARD COUNTY  
DATE: SEPT. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
Director: [Signature] 11/19/99  
Chief, Division of Land Development: [Signature] 11/19/99  
Chief, Development Engineering Division: [Signature] 11/19/99



GLW GUTSCHICK LITTLE & WEBER, P.A.  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK  
BURTONVILLE, MARYLAND 20886  
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
12-20-99	Added revised bldg. 'A' footprint		
11-4-99	As submitted for signature		

PREPARED FOR:  
NOTTINGHAM PROPERTIES, INC.  
100 WEST PENNSYLVANIA AVENUE  
TOWSON, MD. 21284  
PH: 410-825-0545  
ATTN: MR. CHUCK McMAHON

SITE DETAILS / PAVING PLAN  
RIVERS CORPORATE PARK  
SECTION 1 AREA 2 ~ PARCEL 'D'  
PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct. 18, 1999	41 - 12	3 OF 10

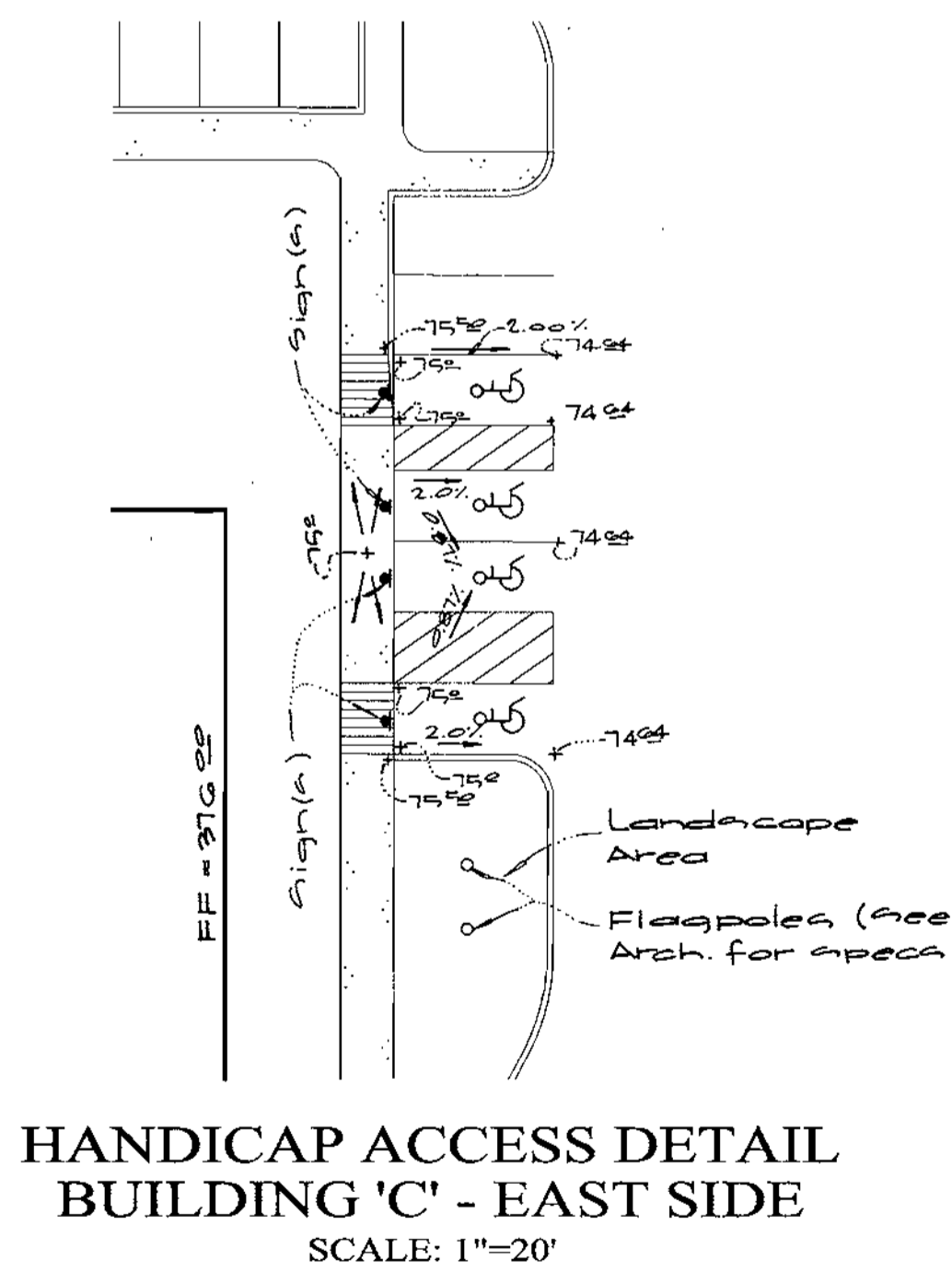
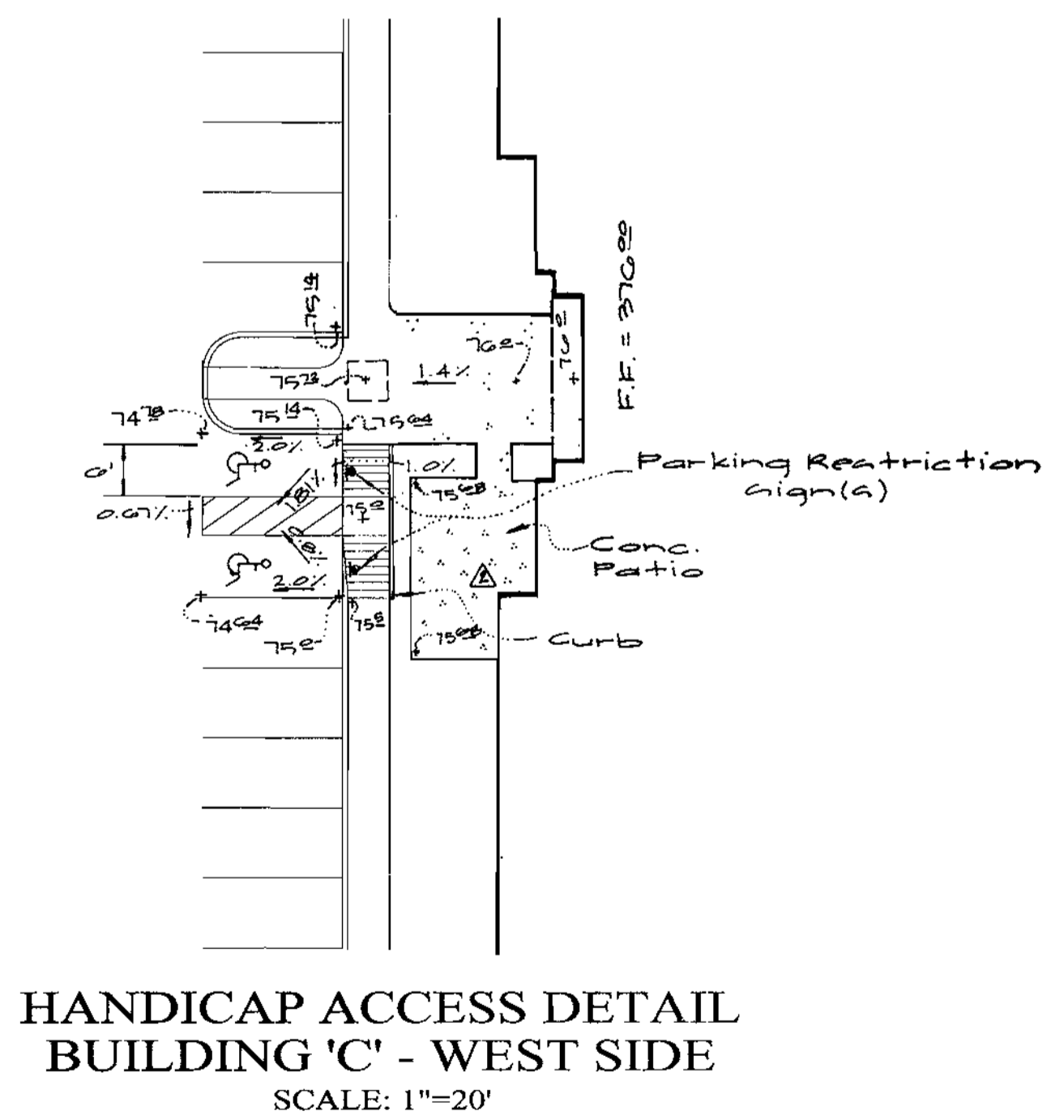
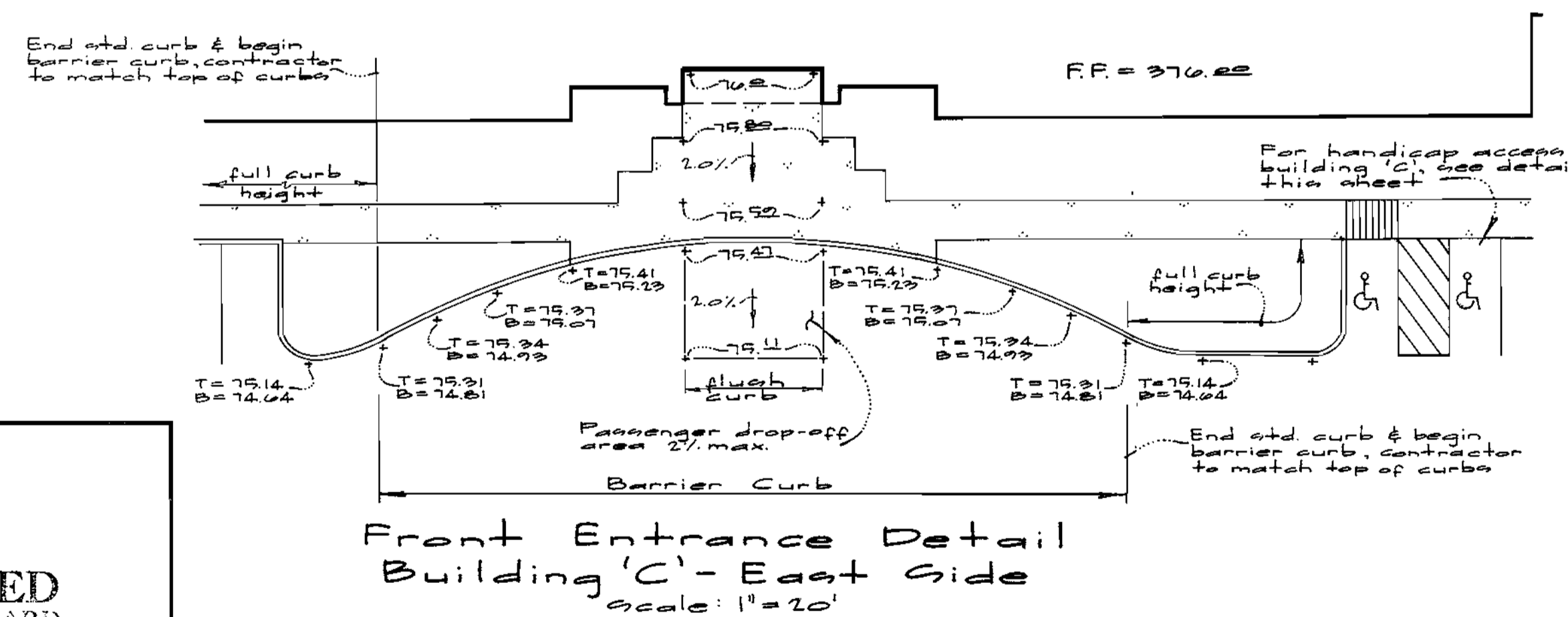
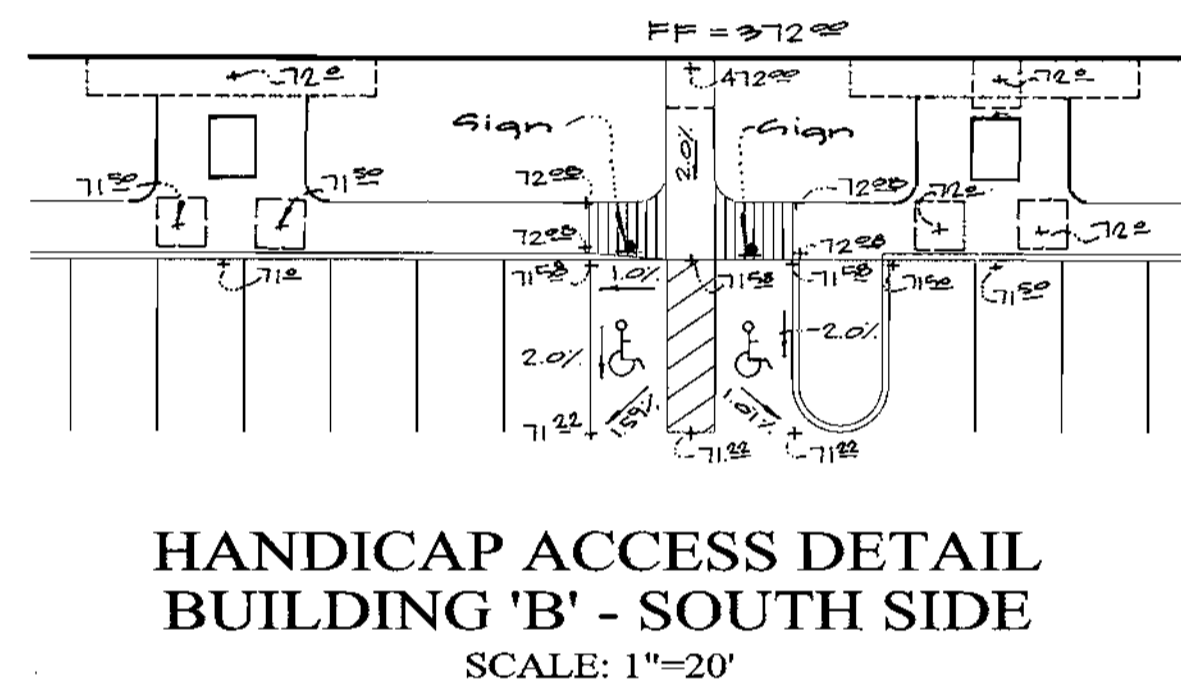
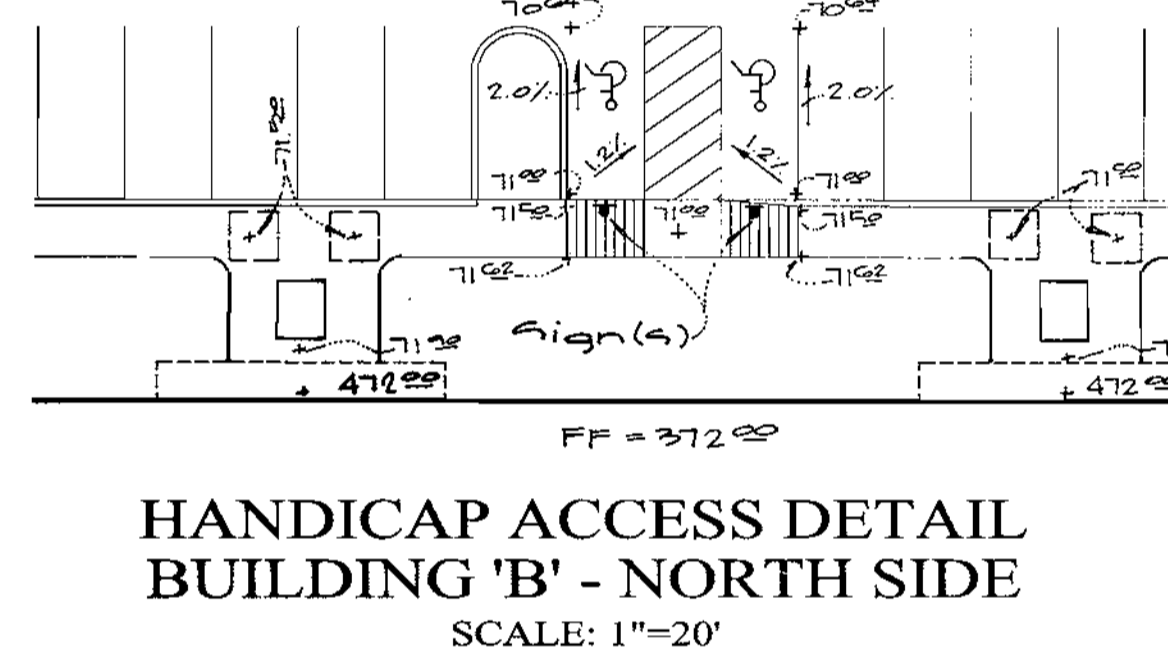
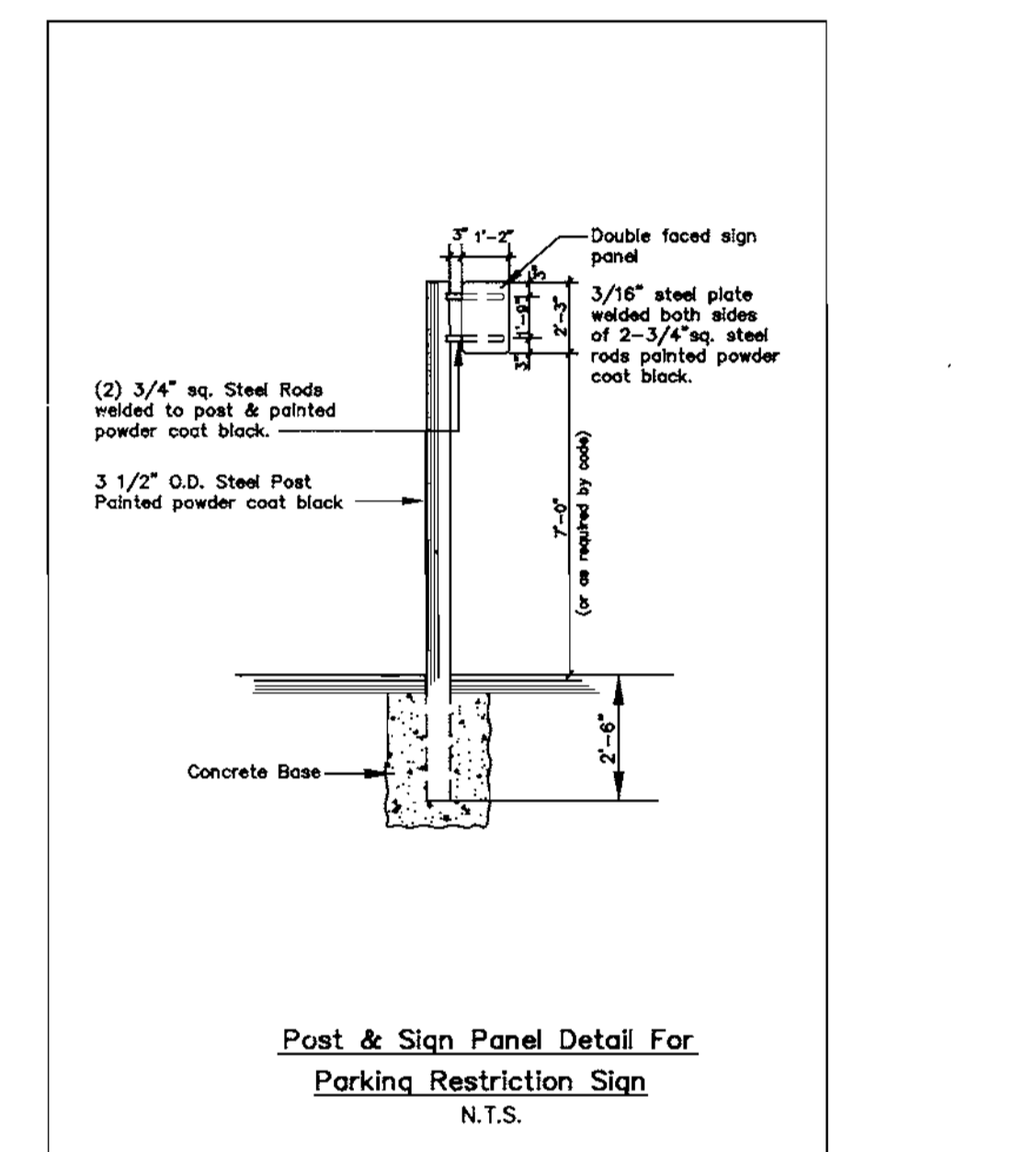
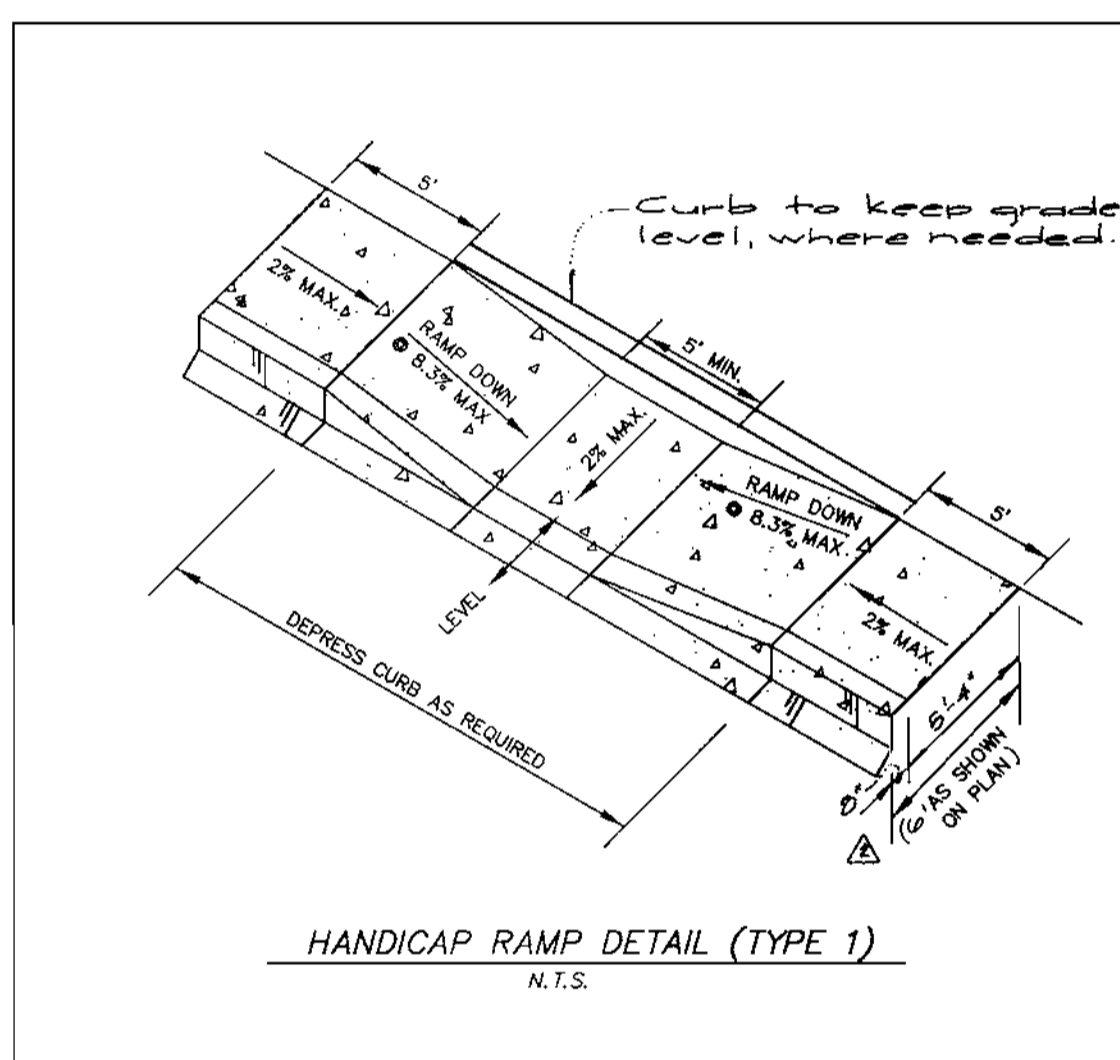
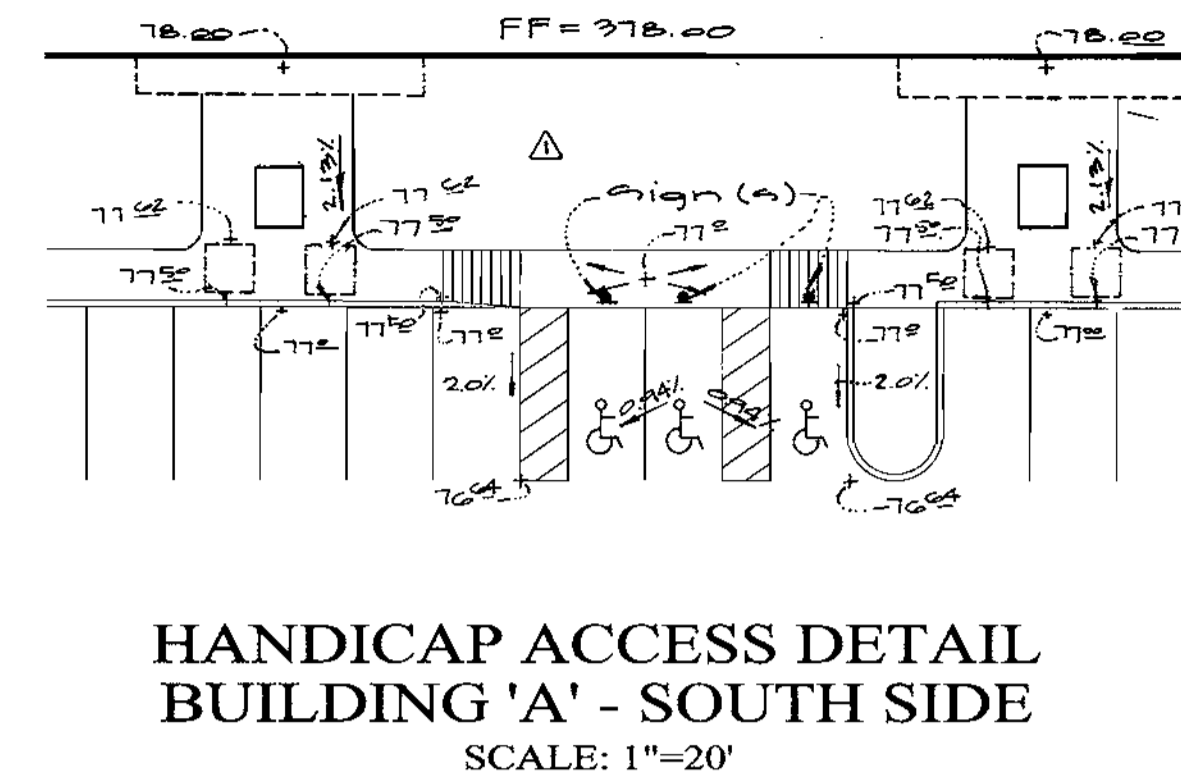
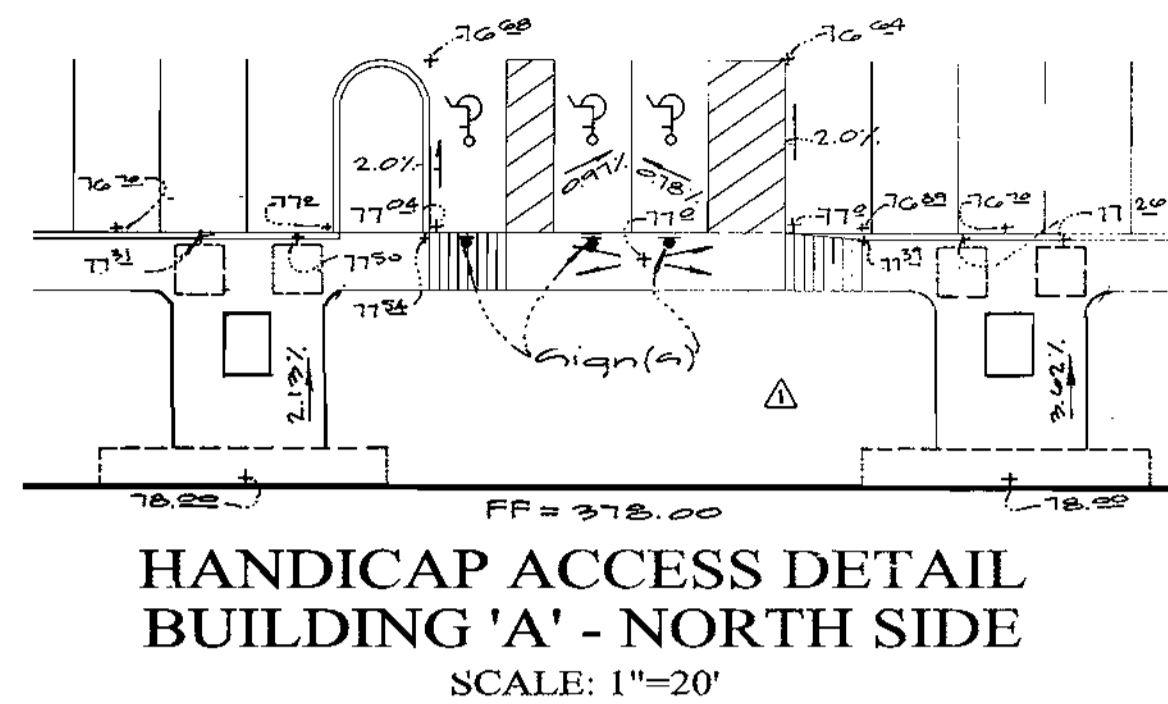
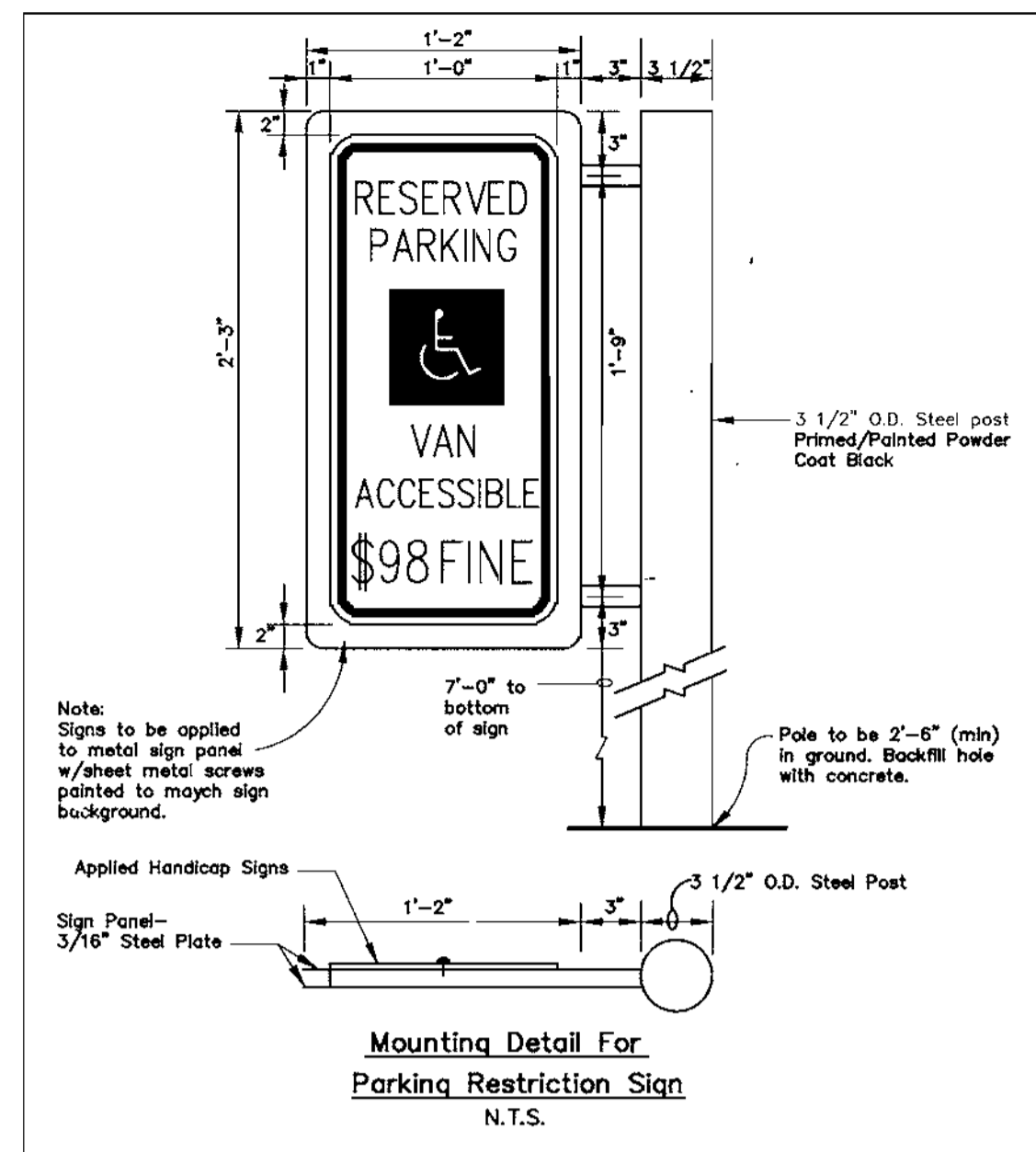
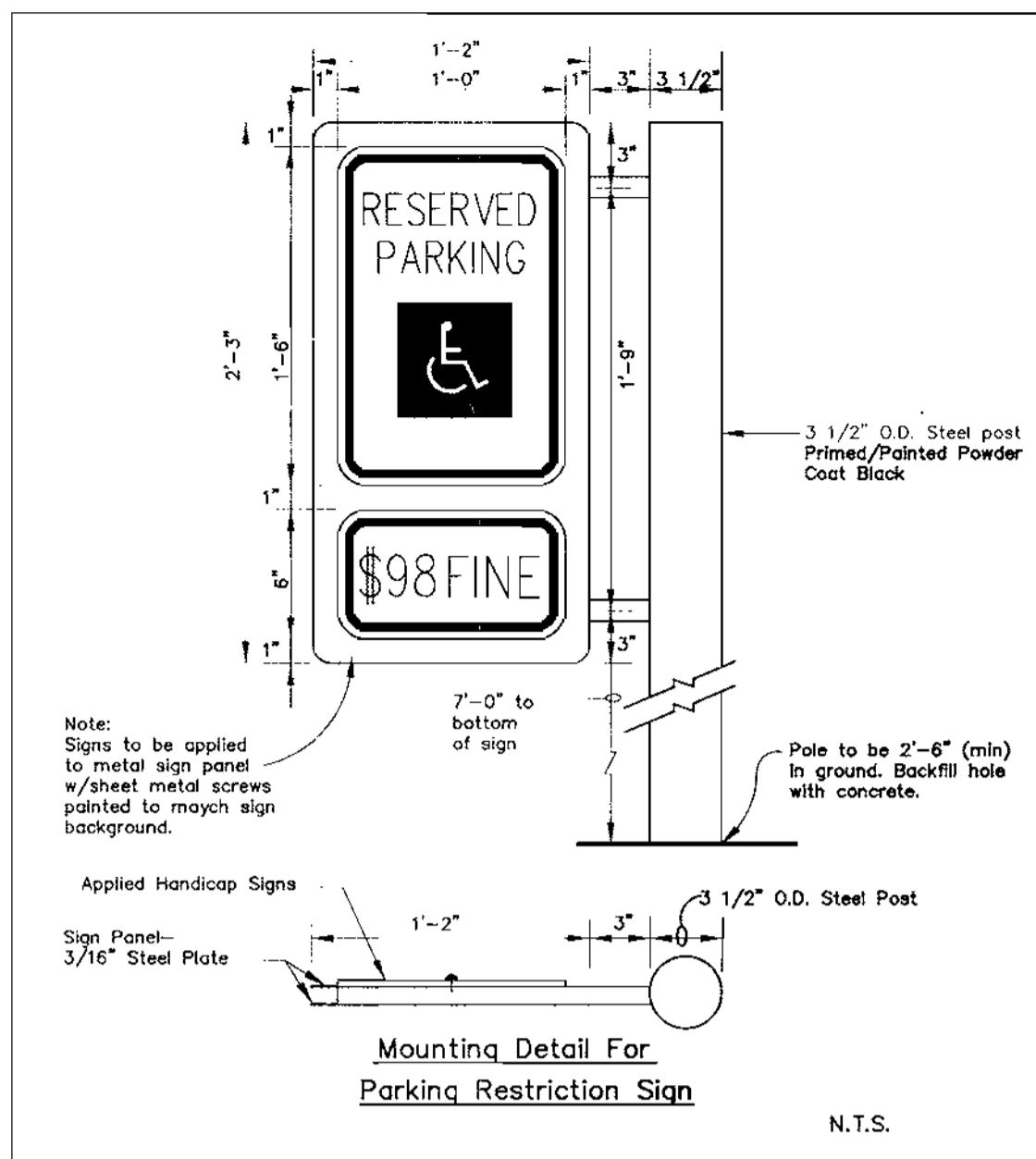
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DES. DRN. CHK.

DATE REVISION BY APPR.

GUILFORD ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND



**APPROVED**  
PLANNING BOARD  
of HOWARD COUNTY  
DATE: SEPT. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*David J. Zager* 11/18/99  
 Director Date  
*David Hamilton* 11/18/99  
 Chief, Division of Land Development Date  
*David R. ...* 11/12/99  
 Chief, Development Engineering Division Date



**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

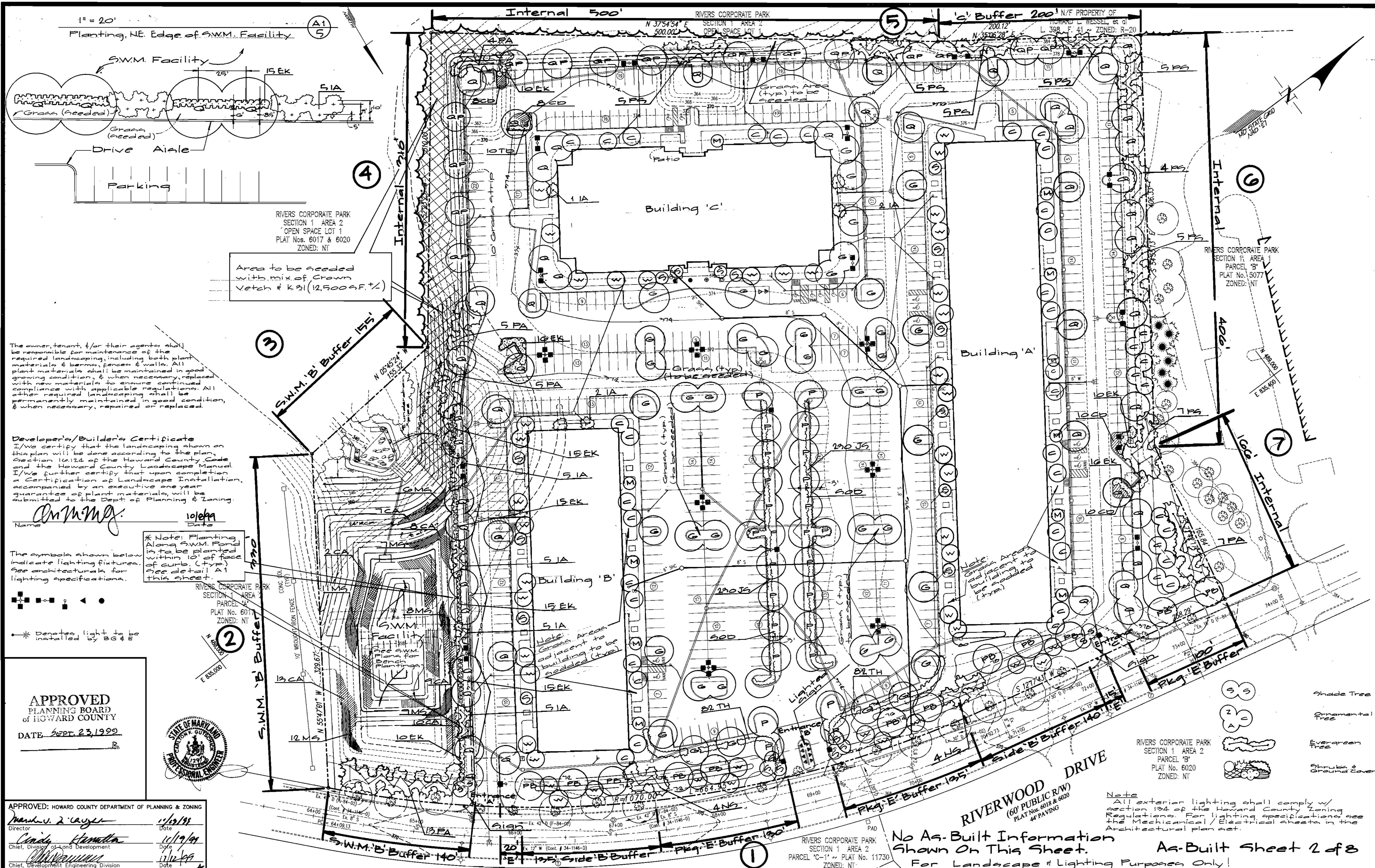
DATE	REVISION	BY	APPR.
8-3-00	Rev HDCP Access detail		
12-10-00	Rev handicap access details for Building 'A'		
11-4-99	As submitted for signature		

PREPARED FOR:  
**NOTTINGHAM PROPERTIES, INC.**  
 100 WEST PENNSYLVANIA AVENUE  
 TOWSON, MD. 21284  
 PH: 410-825-0545  
 ATTN: MR. CHUCK McMAHON

**HANDICAP ACCESS DETAILS**  
**RIVERS CORPORATE PARK**  
 SECTION 1 AREA 2 ~ PARCEL 'D'  
 PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	99030
DATE	TAX MAP -- GRID	SHEET
Oct. 18, 1999	41 - 12	4 OF 16





The owner, tenant, &/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials & barriers, fences & walls. All plant materials shall be maintained in good growing condition, & when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, & when necessary, repaired or replaced.

**Developer's/Builder's Certificate**  
 I/We certify that the landscaping shown on this plan will be done according to the plan, Section 10.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a Certification of Landscape Installation, accompanied by an executive one year guarantee of plant materials, will be submitted to the Dept. of Planning & Zoning.

Name: *C. M. M. J.*  
 Date: *10/16/99*

The symbols shown below indicate lighting fixtures. See architectural for lighting specifications.

- Denotes light to be installed by BG & M

\* Note: Planting Along SWM Pond is to be planted within 10' of face of curb, (typ). See detail A1 this sheet.

**APPROVED**  
 PLANNING BOARD  
 of HOWARD COUNTY  
 DATE: SEPT. 23, 1999



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *Mark V. 2. Crayer* Date: *11/12/99*  
 Chief, Division of Land Development: *Carole Hamilton* Date: *11/19/99*  
 Chief, Development Engineering Division: *William...* Date: *11/12/99*

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 5909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

PREPARED FOR:  
 NOTTINGHAM PROPERTIES, INC.  
 100 WEST PENNSYLVANIA AVENUE  
 TOWSON, MD. 21284  
 PH: 410-825-0545  
 ATTN: MR. CHUCK McMAHON

**Landscape & Lighting Plan**  
 RIVERS CORPORATE PARK  
 SECTION 1 AREA 2 - PARCEL 'D'  
 PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
1"=40'	NT	99030
DATE	TAX MAP - GRID	SHEET
10/16/99	41-12	5 OF 16

**No As-Built Information Shown On This Sheet.**  
 For Landscape & Lighting Purposes Only!  
**As-Built Sheet 2 of 8**

Note: All exterior lighting shall comply w/ section 124 of the Howard County Zoning Regulations. For lighting specifications see the Mechanical/Electrical sheets in the Architectural plan set.

RIVERS CORPORATE PARK  
 SECTION 1 AREA 2  
 PARCEL 'D'  
 PLAT No. 6020  
 ZONED: NT

- SS Shade Tree
- AE Ornamental Tree
- ET Evergreen Tree
- SG Shrubs & Ground Cover

SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT	COMMENTS
<b>SHADE TREES</b>					
G	41	Gleditsia triacanthos var. inermis 'Shadenaster' / Shadenaster Honeylocust	3-3 1/2" Cal.	B&B	
P	27	Platanus x acerifolia 'Bloodgood' / Bloodgood London Planetree	3 1/2-4" Cal.	B&B	
PB	12	Platanus x acerifolia 'Bloodgood' / Bloodgood London Planetree	2 1/2-3" Cal.	B&B	
Q	50	Quercus pelustris / Pin Oak	3 1/2-4" Cal.	B&B	
QP	15	Quercus pelustris / Pin Oak	2 1/2-3" Cal.	B&B	
<b>EVERGREEN TREES</b>					
IA	25	Ilex x attenuata 'Fosteri' / Foster's American Holly	5'-6" Ht.	B&B	
PA	34	Picea abies / Norway Spruce	8' 10" Ht.	B&B	
NS	8	Picea abies / Norway Spruce	6'-8" Ht.	B&B	
PS	41	Pinus strobus / White Pine	8'-10" Ht.	B&B	
<b>ORNAMENTAL TREES</b>					
C	42	Cornus x 'Rutdon' / Celestial White Flowering Dogwood	1 3/4"-2" Cal.	B&B	
W	44	Cotoneaster viridis 'Winter King' / Winter King Hawthorn	1 3/4"-2" Cal.	B&B	
M	11	Magnolia x Galaxy / Galaxy Magnolia	6'-7" Ht.	B&B	
S	24	Styrax japonicus / Japanese Snowbell	6'-7" Ht.	B&B	
<b>SHRUBS</b>					
CD	36	Cotoneaster dameri 'Coral Beauty' / Coral Beauty Cotoneaster	18"-24" Spr.	B&B	+/-2.5-3' O.C.
EK	112	Euonymus kiautschovicus 'Paulii' / Paulii Spreading Euonymus	2 1/2-3" Ht.	B&B	
JS	460	Juniperus chinensis var. sargentii / Sargent Juniper	15"-18" Spr.	B&B	+/-2.5' O.C.
TD	10	Taxus media 'densiformis' / Dense Yew	2-2 1/2" Ht.	B&B	
TH	164	Taxus media 'Hicksii' / Hicks Yew	2-2 1/2" Ht.	B&B	+/- 2' O.C. (set back min. of +/-4' from curb)
<b>GRASSES and GROUNDCOVERS</b>					
CA	59	Calamagrostis canadensis x stricta / Feather Reed Grass	1 Gal		plant with even spacing in approximate areas designated on plan
MS	53	Miscanthus sinensis / Japanese Silver Grass	1 Gal		plant with even spacing in approximate areas designated on plan

Note: - Crown Vetch mix (with K31) to be seeded along bank as shown on the Landscape Plan  
 - Each tree located within a lawn area to be planted with a +/- three to five foot diameter mulch circle.

**ALTERNATIVE COMPLIANCE:**

- 2 1/2 - 3" Shade Tree..... = 1 E.S.T.
- 3 1/2 - 4" Shade Tree..... = 1.5 E.S.T.
- < 8' Evergreen Tree... = 0.5 E.S.T.
- 8-10' Evergreen Tree... = 1 E.S.T.
- All Ornamental Tree... = 0.5 E.S.T.

Required Planting (HRD Standards) = 28 E.S.T. per acre  
 12.6843 Acres x 28 E.S.T./Acre = 355 E.S.T.

**Planting Provided:**

- (1 E.S.T.) 2 1/2 - 3" Shade Trees..... = 27.0 E.S.T.
- (1.5 E.S.T.) 3 1/2 - 4" Shade Trees..... = 177.0 E.S.T.
- (0.5 E.S.T.) < 8' Evergreen Trees..... = 16.5 E.S.T.
- (1 E.S.T.) 8-10' Evergreen Trees..... = 75.0 E.S.T.
- (0.5 E.S.T.) All Ornamental Trees... = 60.5 E.S.T.

TOTAL PROVIDED:..... 356.0 E.S.T.

SCHEDULE A		PERIMETER LANDSCAPE EDGE Category		Perimeter								
Landscape Type	Linear Feet of Roadway/Perimeter Frontage	Adj. to Perimeter Property								On-site S.W.M. Perim.		
		1a	1b	2a	3a	4	5a	5b	6		7	8
		415'	400'	330'	155'	310'	500'	200'	406'	166'	290'	
Credit for Ex. Vegetation (Yes, No, Linear Feet) (describe below if needed)		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (describe below if needed)		YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	
Number of Plants Required		8	10	7	3	n/a	n/a	5	n/a	n/a	6	
Shade Trees		8	0	8	4	n/a	n/a	10	n/a	n/a	7	
Evergreen Trees		0	75	0	0	n/a	n/a	0	n/a	n/a	0	
Shrubs												
Number of Plants Provided		-- Alternative Compliance... exceeds county req. --										
Shade Trees		-- Alternative Compliance... exceeds county req. --										
Evergreen Trees		-- Alternative Compliance... exceeds county req. --										
Other Trees (2:1 subst.)		-- Alternative Compliance... exceeds county req. --										
Shrubs (10:1 subst.)		-- Alternative Compliance... exceeds county req. --										
(describe plant substitution credits below if needed)												
Schedule 'A' Number of Shade Trees for bonding:		39	x	\$300	=	\$11,700						
Schedule 'A' Number of Evergreen Trees for bonding:		37	x	\$150	=	\$5,550						
Schedule 'A' Number of Shrubs for bonding:		75	x	\$30	=	\$2,250						
Schedule 'A' Number of Street Trees for bonding:		0	x	\$30	=	\$0						
TOTAL Estimate for Bonding:					=	\$19,500						
COMMENTS: * SWM plantings to be relocated elsewhere on site to avoid conflict w/ SWM facility												

SCHEDULE B		PARKING LOT INTERNAL LANDSCAPING	
Number of Parking Spaces =	624 Spaces (Provided)		
Number of Trees Required =	31 Trees @ 1 per 20 spaces		
Number of Trees Provided			
Shade Trees			
Other Trees (2:1 substitution)			
NOTE:			
Alternative Compliance per HRD's Standards			
Alternative Compliance exceeds County requirements			
Schedule 'B' Number of Equivalent Shade Trees (EST) for bonding:	31	x	\$300 = \$9,300

**LANDSCAPING NOTES**

- This plan has been prepared in accordance with Section 16.124 of the Howard County Code and Chapter VI (Alternative Compliance) of the Howard County Landscape Manual.
- Contractor shall notify all utilities at least (5) five days before starting work. All General Notes, especially those regarding utilities, on Sheet 1 shall apply.
- Field verify underground utility locations and existing conditions before starting planting work. Contact engineer / landscape architect if any relocations are required.
- Plant quantities shown on Plant List are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on the plan and those shown on the plant list, the quantities on the plan shall take precedence.
- All plant material shall be full, heavy, well formed, and symmetrical, and conform to the A.A.N. Specifications, and be installed in accordance with project specifications.
- No substitution shall be made without written consent of the owner or his representative.
- All areas disturbed by construction activities but not otherwise planted, paved, or mulched shall be seeded or sodded in accordance with the project specifications.
- The contractor shall notify the owner in writing if he/she encounters soil drainage conditions which may be detrimental to the growth of the plants.
- All exposed earth within limits of planting beds shall be mulched with shredded hardwood mulch per Planting Details.
- "Schedule A - Perimeter Landscape Edge" and "Schedule B - Parking Lot Internal Landscaping" are provided for landscape surety calculation purposes only. Financial surety for the required landscaping shall be posted with the Developer Agreement in the amount of \$29,100.
- Tabulation for landscape shown:  
 Required planting by HRD for 12.6843 acre of office at 28 trees / acre = 355 E.S.T.  
 Planting provided: (\*See adjacent chart titled 'Alternative Compliance')  
 (1 E.S.T.) 2 1/2 - 3" Shade Trees..... = 27.0 E.S.T.  
 (1.5 E.S.T.) 3 1/2 - 4" Shade Trees..... = 177.0 E.S.T.  
 (0.5 E.S.T.) < 8' Evergreen Trees..... = 16.5 E.S.T.  
 (1 E.S.T.) 8-10' Evergreen Trees..... = 75.0 E.S.T.  
 (0.5 E.S.T.) All Ornamental Trees... = 60.5 E.S.T.  
 TOTAL PROVIDED:..... 356.0 E.S.T.  
 1 E.S.T. = Equivalent Shade Trees  
 - The balance of the HRD required shade trees is provided by larger caliper material and proposed shrubs and ground covers.  
 - Foundation plantings to be designed at a future date; these plantings are above and beyond the aforementioned requirements and are therefore not subject to County/HRD review.

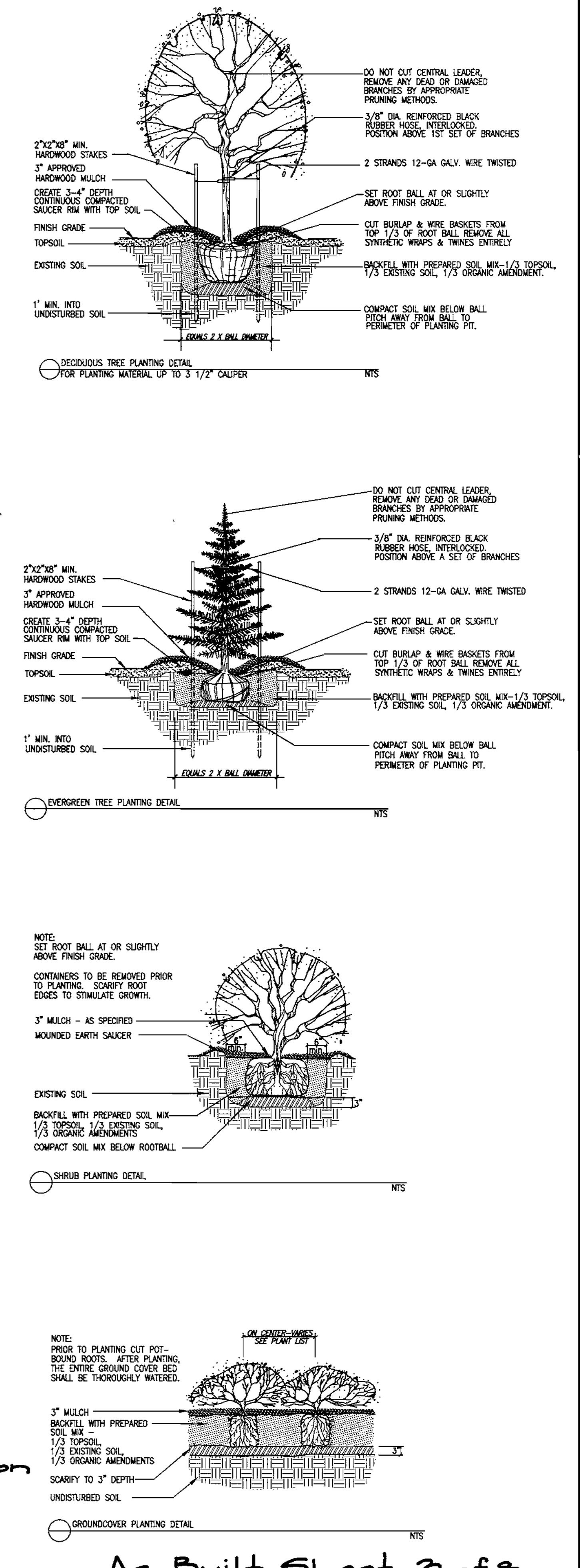
**PLANT MATERIALS AND PLANTING METHODS**

- A. Plant Materials**
- The landscape contractor shall furnish and install and/or dig, ball, burlap and transplant all of the plant materials called for on drawings and/or listed in the Plant Schedule.
- Plant Names**  
 Plant names used in the Plant Schedule shall conform with "Standardized Plant Names," latest edition.
  - Plant Standards**  
 All plant material shall be equal to or better than the requirements of the "USA Standard for Nursery Stock" latest edition, as published by the American Association of Nurserymen (hereafter referred to as AAN Standards). All plants shall be typical of their species and variety, shall have a normal habit of growth and shall be first quality, sound, vigorous, well-branched and with healthy, well-furnished root systems. They shall be free of disease, insect pests and mechanical injuries.
  - Plant Measurements**  
 All plants shall conform to the measurements specified in the Plant Schedule as approved by the ARC.  
    - Caliper measurements shall be taken six inches (6") above grade for trees under four-inch (4") caliper and twelve (12") above grade for trees four inches (4") in caliper and over.
    - Minimum branching height for all shade trees shall be six feet (6'), maximum eight feet (8').
    - Caliper, height, spread and size of ball shall be generally as follows:  

CALIPER	HEIGHT	SPREAD	SIZE OF BALL
3" - 3.5"	14'-16'	8'-8'	32" diameter
3.5" - 4"	14'-16'	8'-10'	36" diameter
4" - 4.5"	16'-18'	8'-10'	40" diameter
4.5" - 5"	16'-17'	10'-12"	44" diameter
5" - 5.5"	16'-20'	10'-12"	48" diameter
5.5" - 6"	18'-20'	12'-14'	52" diameter
  - Plant Identification**  
 Legible labels shall be attached to all shade trees, minor trees, specimen shrubs and bundles or boxes of other plant material giving the botanical and common names, size and quantity of each. Each shipment of plants shall bear certificates of inspection as required by Federal, State and County authorities.
  - Plant Inspection**  
 The ARC may, upon request by the builder or developer, at least ten (10) days prior to the installation of any proposed plant material, inspect all proposed plant material at the source of origin.
  - Planting Methods**  
 All proposed plant materials that meet the specifications in Section A are to be planted in accordance with the following methods during the proper planting seasons as described in the following:  
    - Planting Seasons**  
 The planting of deciduous trees, shrubs and vines shall be from March 1st to June 15th and from September 15th to December 15th. Planting of deciduous material may be continued during the winter months providing there is no frost in the ground and frost-free topsoil planting mixtures are used.  
 The planting of evergreen material shall be from March 15th to June 15th and from August 15th to December 1st. No planting shall be done when ground is frozen or excessively moist. No frost or wet topsoil shall be used at any time.
    - Digging**  
 All plant material shall be dug, balled and burlapped (B&B) in accordance with the "AAN Standards".
    - Excavation of Plant Pits**  
 The landscaping contractor shall excavate all plant pits, vine pits, hedge trenches and shrub beds in accordance with the following schedule:  
      - Locations of all proposed plant material shall be staked and approved in the field by the landscape architect before any of the proposed plant material is installed by the landscape contractor.
      - All pits shall be generally circular in outline, vertical sides; depth shall not be less than 6" deeper than the root ball; diameter shall not be less than two times the diameter of the root ball as set forth in the following schedule.  

PLANT SIZE	ROOT BALL	DIAMETER	PIT DEPTH
3" - 3.5" cal.	32"	64"	28"
3.5" - 4" cal.	36"	72"	32"
4" - 4.5" cal.	40"	80"	36"
4.5" - 5" cal.	44"	88"	40"
5" - 5.5" cal.	48"	96"	44"
5.5" - 6" cal.	52"	104"	48"
  - Planting Details**  
    - If areas are designated as shrub beds or hedge trenches, they shall be excavated to at least 18" depth minimum. Areas designated for ground covers and vines shall be excavated to at least 12" in depth minimum.
    - Diameter and depth of tree pits shall generally be as follows:  

PLANT SIZE	ROOT BALL	DIAMETER	PIT DEPTH
3" - 3.5" cal.	32"	64"	28"
3.5" - 4" cal.	36"	72"	32"
4" - 4.5" cal.	40"	80"	36"
4.5" - 5" cal.	44"	88"	40"
5" - 5.5" cal.	48"	96"	44"
5.5" - 6" cal.	52"	104"	48"
    - A 20% compaction figure of the soil to be removed is assumed and will be allowed in calculation of extra topsoil. The tabulated pit sizes are for purposes of uniform calculation and shall not override the specified depths below the bottoms of the root balls.
    - Staking, Guying and Wrapping  
 All plant material shall be staked or guyed, and wrapped in accordance with the following specifications:  
      - Stakes: Shall be sound wood 2" x 2" rough sawn oak or similar durable woods, or lengths, minimum 7'-0" for major trees and 5'-0" minimum for minor trees.
      - Wire and Cable: Wire shall be #10 gal. galvanized or bethonized annealed steel wire. For trees over 3" caliper, provide 5/16" turn buckles, eye and eye with 4" take-up. For trees over 5" caliper, provide 3/16", 7 strand cable cadmium plated steel, with galvanized "eye" thimbles of wire and hose on trees up to 3" in caliper.
      - Hose: Shall be new 2 ply reinforced rubber hose, minimum 1/2" I.D. "Plastic Lock Ties" or "Paul's Tree Braces" may be used in place of wire and hose on trees up to 3" in caliper.
      - All trees under 3" in caliper are to be planted and staked in accordance with the attached "Typical Tree Staking Detail".
  - Plant Pruning, Edging and Mulching**  
    - Each tree, shrub or vine shall be pruned in an appropriate manner to its particular requirements, in accordance with accepted standard practice. Broken or bruised branches shall be removed with clean cuts flush with the adjacent trunk or branches. All cuts over 1" in diameter shall be treated with an approved antiseptic tree wound dressing.
    - All trenches and shrub beds shall be edged and cultivated to the lines shown on the drawing. The areas around isolated plants shall be edged and cultivated to the full diameter of the pit. Sod which has been removed and stacked shall be used to trim the edges of all excavated areas to the neat lines of the plant pit saucers, the edges of shrub areas, hedge trenches and vine pockets.
    - After cultivation, all plant materials shall be mulched with a 2" layer of fine, shredded pine bark, peat moss, or another approved material over the entire area of the bed or saucer.
  - Plant Inspection and Acceptance**  
 The ARC shall be responsible for inspecting all planting projects on a periodic basis to assure that all work is proceeding in accordance with the approved plans and specifications.
  - Plant Guarantee**  
 All plant material shall be guaranteed for the duration of one full growing season, after final inspection and acceptance of the work in the planting project. Plants shall be alive and in satisfactory growing condition at the end of the guarantee period.  
    - For this purpose, the "growing season" shall be that period between the end of the "Spring" planting season, and the commencement of the "Fall" planting season.
    - Guarantee for planting performed after the specified end of the "Spring" planting season, shall be extended through the end of the next following "Spring" planting season.



**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 DATE: SEPT 23, 1999  
 R

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *David V. Lyle* 11/19/99  
 Chief, Division of Land Development: *Chris Hamilton* 11/19/99  
 Chief, Development Engineering Division: *John DeWitt* 11/12/99

PREPARED FOR:  
 NOTTINGHAM PROPERTIES, INC.  
 100 WEST PENNSYLVANIA AVENUE  
 TOWNSON, MD 21204  
 PH. 410-825-0545  
 ATTN: MR. CHUCK McMAHON

No As-Built Information  
 Shown on This Sheet.

As-Built Sheet 7 of 8

GLW GUTSCHICK LITTLE & WEBER, P.A.  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWN, MARYLAND 20866  
 TEL: 301-421-4024 BALT. 410-880-1180 DC/VA. 301-889-2524 FAX: 301-421-4186

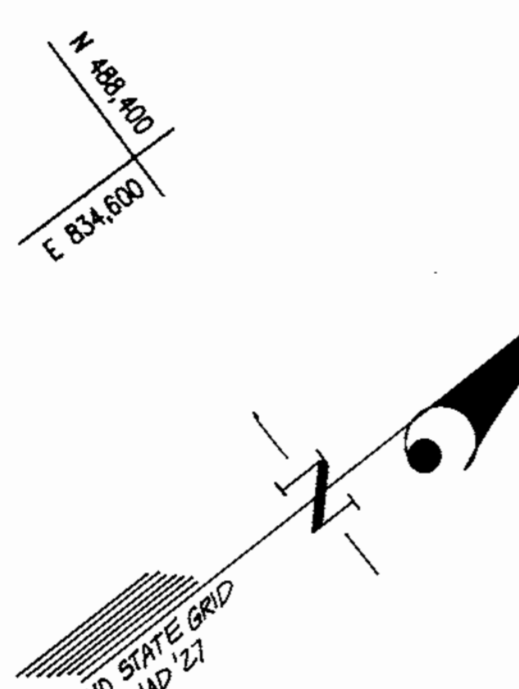
DATE	REVISION	BY	APP'R.
11/19/99	As submitted for signature		

LANDSCAPE NOTES & DETAILS  
 RIVERS CORPORATE PARK  
 SECTION 1 AREA 2 - PARCEL 'D'  
 PLANT No. 6020  
 GUILFORD ELECTION DISTRICT, NO. 6

SCALE: NOT TO SCALE (PLOT AT 1"=1')  
 ZONING: NT  
 TAX MAP - GRID: 41-12  
 DATE: 11/19/99

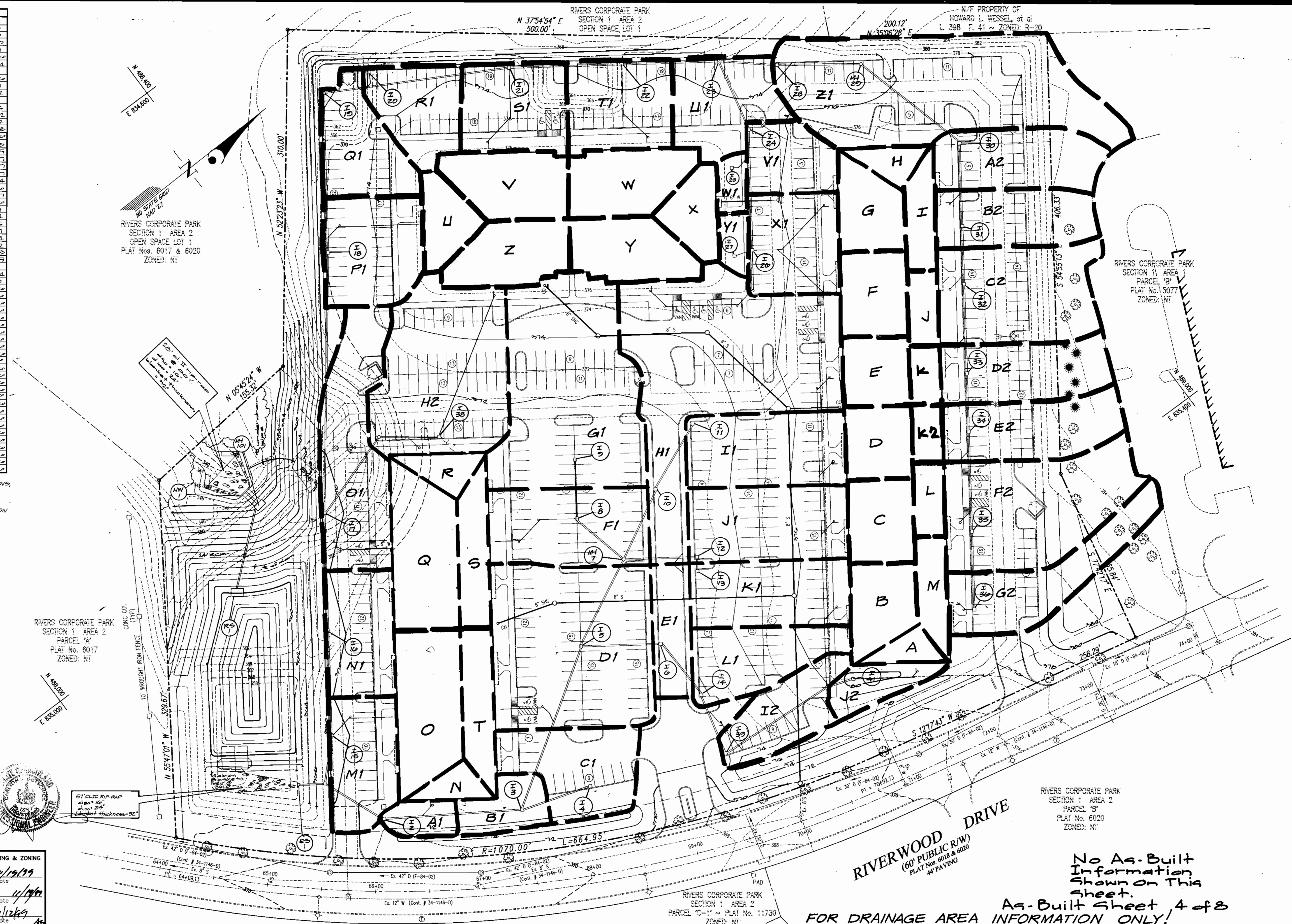
G. L. W. FILE NO. 99030  
 SHEET 6 OF 16  
 HOWARD COUNTY, MARYLAND  
 SDP 00 28

Area	Inlet	Area	Inlet	Area	Inlet	Area
A1	I-2	0.04	0.0	0.00	0.19	
B1	I-3	0.06	0.0	0.00	0.19	
C1	I-4	0.12	0.0	0.00	0.19	
D1	I-5	0.24	0.0	0.00	0.19	
E1	I-6	0.48	0.0	0.00	0.19	
F1	I-8	0.96	0.0	0.00	0.19	
G1	I-9	0.96	0.0	0.00	0.19	
H1	I-10	0.96	0.0	0.00	0.19	
I1	I-11	0.96	0.0	0.00	0.19	
J1	I-12	0.96	0.0	0.00	0.19	
K1	I-13	0.96	0.0	0.00	0.19	
L1	I-14	0.96	0.0	0.00	0.19	
M1	I-15	0.96	0.0	0.00	0.19	
N1	I-16	0.96	0.0	0.00	0.19	
O1	I-17	0.96	0.0	0.00	0.19	
P1	I-18	0.96	0.0	0.00	0.19	
Q1	I-19	0.96	0.0	0.00	0.19	
R1	I-20	0.96	0.0	0.00	0.19	
S1	I-21	0.96	0.0	0.00	0.19	
T1	I-22	0.96	0.0	0.00	0.19	
U1	I-23	0.96	0.0	0.00	0.19	
V1	I-24	0.96	0.0	0.00	0.19	
W1	I-25	0.96	0.0	0.00	0.19	
X1	I-26	0.96	0.0	0.00	0.19	
Y1	I-27	0.96	0.0	0.00	0.19	
Z1	I-28	0.96	0.0	0.00	0.19	
A2	I-29	0.96	0.0	0.00	0.19	
B2	I-30	0.96	0.0	0.00	0.19	
C2	I-31	0.96	0.0	0.00	0.19	
D2	I-32	0.96	0.0	0.00	0.19	
E2	I-33	0.96	0.0	0.00	0.19	
F2	I-34	0.96	0.0	0.00	0.19	
G2	I-35	0.96	0.0	0.00	0.19	
H2	I-36	0.96	0.0	0.00	0.19	
I2	I-37	0.96	0.0	0.00	0.19	
J2	I-38	0.96	0.0	0.00	0.19	
K2	I-39	0.96	0.0	0.00	0.19	
L2	I-40	0.96	0.0	0.00	0.19	
M2	I-41	0.96	0.0	0.00	0.19	
N2	I-42	0.96	0.0	0.00	0.19	
O2	I-43	0.96	0.0	0.00	0.19	
P2	I-44	0.96	0.0	0.00	0.19	
Q2	I-45	0.96	0.0	0.00	0.19	
R2	I-46	0.96	0.0	0.00	0.19	
S2	I-47	0.96	0.0	0.00	0.19	
T2	I-48	0.96	0.0	0.00	0.19	
U2	I-49	0.96	0.0	0.00	0.19	
V2	I-50	0.96	0.0	0.00	0.19	
W2	I-51	0.96	0.0	0.00	0.19	
X2	I-52	0.96	0.0	0.00	0.19	
Y2	I-53	0.96	0.0	0.00	0.19	
Z2	I-54	0.96	0.0	0.00	0.19	



RIVERS CORPORATE PARK  
SECTION 1 AREA 2  
OPEN SPACE LOT 1  
PLAT Nos. 6017 & 6020  
ZONED: NT

NOTES:  
1. DUE TO PREVIOUS MASS GRADING OPERATIONS, 'C' SOILS WERE USED FOR STORM DRAIN DESIGN.  
2. 5.0 MINUTE INLET TIME OF CONCENTRATION WAS USED FOR STORM DRAIN DESIGN.



**APPROVED**  
PLANNING BOARD  
of HOWARD COUNTY  
DATE SEPT 23, 1999



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
Director: Charles J. DiCay Date: 11/19/99  
Chief, Division of Land Development: Cindy Kamstra Date: 11/19/99  
Chief, Development Engineering Division: Michael J. ... Date: 11/23/99

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE, SUITE 250 - BURTNSVILLE OFFICE PARK  
BURTNSVILLE, MARYLAND 20866  
TEL: 301-421-4024 FAX: 301-421-4198

DATE	REVISION	BY	APP'R.

PREPARED FOR:  
**NOTTINGHAM PROPERTIES, INC.**  
100 WEST PENNSYLVANIA AVENUE  
TOWSON, MD. 21284  
PH: 410-825-0545  
ATTN: MR. CHUCK McMAHON

**DRAINAGE AREA MAP**  
**RIVERS CORPORATE PARK**  
SECTION 1 AREA 2 ~ PARCEL 'D'  
PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
1"=40'	NT	99030
DATE	TAX MAP - GRID	SHEET
SEP 1999	41-12	7 OF 16

**RIVERWOOD DRIVE**  
(60' PUBLIC R/W)  
PLAT Nos. 6018 & 6020  
44' PAVING

RIVERS CORPORATE PARK  
SECTION 1 AREA 2  
PARCEL 'B'  
PLAT No. 6020  
ZONED: NT

**No As-Built Information**  
Shown on This Sheet.  
**As-Built Sheet 4 of 8**  
**FOR DRAINAGE AREA INFORMATION ONLY!**

GUILFORD ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND

**EX. TRAP #3 (DETAIL D)**

STONE OUTLET SEDIMENT TRAP ST II	
EX. DRAINAGE AREA*	1.57 AC
PROP. DRAINAGE AREA*	1.59 AC
STORAGE REQUIRED*	764 CF
STORAGE PROVIDED*	8942 CF
LIMIT OF WET STORAGE*	300.30
WEIR LENGTH*	8'
CHANNEL DEPTH*	1'
TOP OF DAM ELEV.*	360.00
WEIR CREST ELEV.*	360.00
OUTLET ELEV. (LIMIT WET STG)*	360.3
CLEANOUT ELEV.*	360.15
BOTTOM ELEV.*	364.00
BOTTOM DIMENSIONS*	26'x56'

**SEDIMENT BASIN DATA**

EXISTING DRAINAGE AREA*	13.2 AC
PROPOSED DRAINAGE AREA*	13.2 AC
STORAGE REQUIRED:	
WET*	23,760 CF
DRY*	23,760 CF
STORAGE PROVIDED:	
WET*	23,760 CF @ 357.4
DRY*	24,025 CF @ 350.5
RISER:	
BARREL:	10'x6' (MOD. A-10)
TOP OF DAM*	36" R.C.P. ASTM C-391
WEIR LENGTH:	
2-YEAR*	10'-2"
10-YEAR*	9'-2"
WEIR CREST ELEVATION:	
2-YEAR*	359.50
10-YEAR*	362.50
RISER CREST ELEVATION:	363.10
BOTTOM DIMENSIONS*	54'x16.5'
BOTTOM ELEVATION*	355.0
CLEANOUT ELEVATION*	350.2
DISCHARGES:	
BEFORE	AFTER (W/MANAGEMENT)
2 YEAR 14.6 CFS	14.1 CFS @ 362.40
10 YEAR 36.0 CFS	35.4 CFS @ 363.66

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

*Cheryl Simmon* 11/19/99  
Natural Resources Conservation Service

These plans have been reviewed for the Howard Soil Conservation District & meet the technical requirements for small pond construction, soil erosion & sediment control.

*Cheryl Simmon* 11/19/99  
Natural Resources Conservation Service

**APPROVED**  
PLANNING BOARD  
OF HOWARD COUNTY

DATE Sept 23, 1999

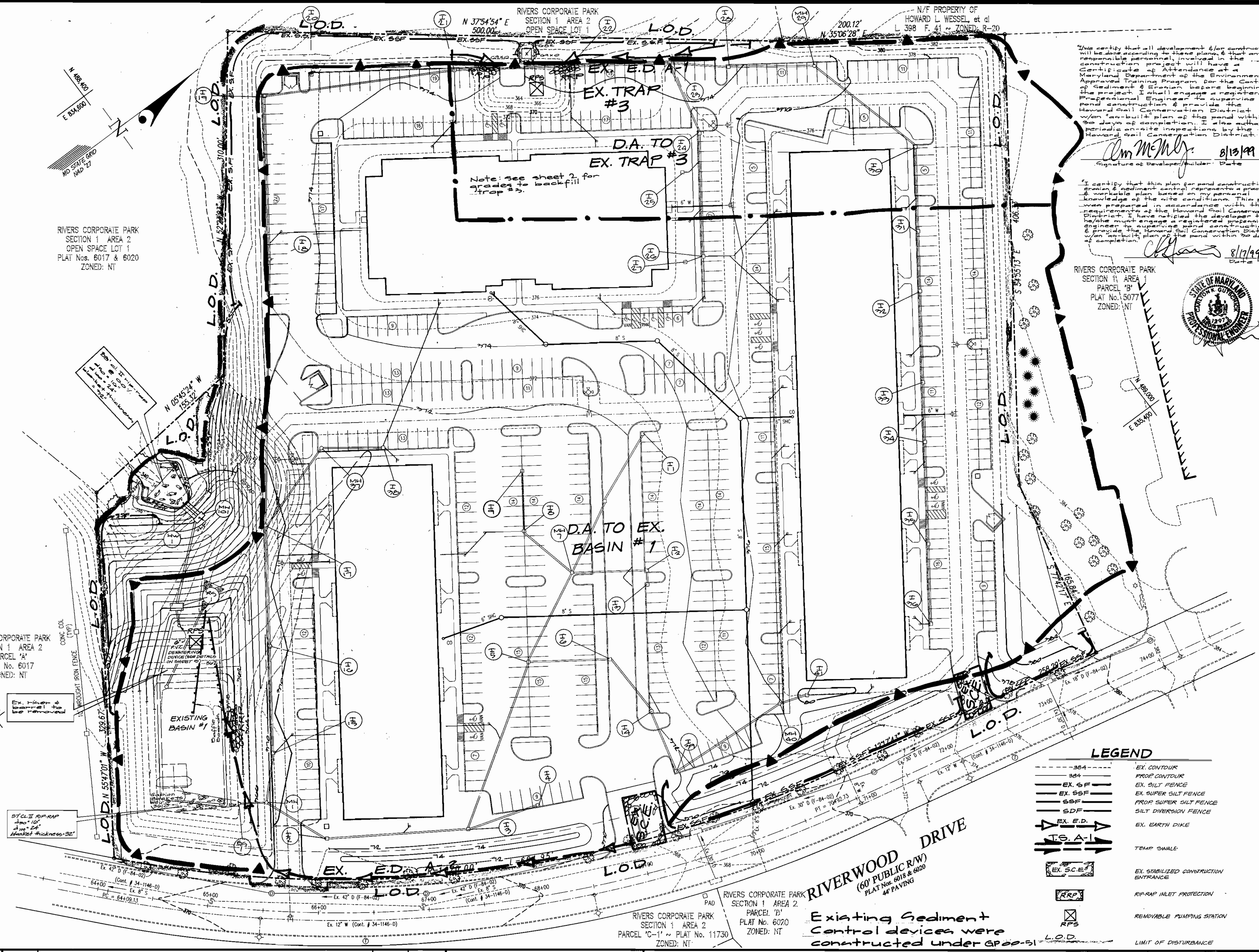
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*David V. ...* 11/19/99  
Director

*...* 11/19/99  
Chief, Division of Land Development

*...* 11/19/99  
Chief, Development Engineering Division

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-821-4024 FAX: 301-821-4186



I/We certify that all development &/or construction will be done according to these plans, & that any responsible personnel involved in the construction project will have a certificate of attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment & Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction & provide the Howard Soil Conservation District with an as-built plan of the pond within 30 days of completion. I also authorize the contractor to make site inspections by the Howard Soil Conservation District.

*Chuck McMahon* 8/13/99  
Signature of Developer/Builder Date

I certify that this plan for pond construction, erosion & sediment control represents a practical & realistic 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/she must engage a registered professional engineer to supervise pond construction & provide the Howard Soil Conservation District with an as-built plan of the pond within 30 days of completion.

*Cheryl Simmon* 8/17/99  
Date

RIVERS CORPORATE PARK  
SECTION 1 AREA 2  
PARCEL 'B'  
PLAT No. 5077  
ZONED: NT

STATE OF MARYLAND  
PROFESSIONAL ENGINEER

**LEGEND**

---	EX. CONTOUR
---	PROP. CONTOUR
---	EX. SILT FENCE
---	EX. SUPER SILT FENCE
---	PROP. SUPER SILT FENCE
---	SILT DIVERSION FENCE
---	EX. EARTH DIKE
---	TEMP. SWALE
---	EX. STABILIZED CONSTRUCTION ENTRANCE
---	RIP-RAP INLET PROTECTION
---	REMOVABLE PUMPING STATION
---	L.O.D. LIMIT OF DISTURBANCE

**RIVERWOOD DRIVE**  
(60' PUBLIC R/W)  
PLAT Nos. 6018 & 6020  
44' PAVING

Existing Sediment Control devices were constructed under GP 20-51

DATE	REVISION	BY	APPR.
11-4-99	As submitted for signature		

PREPARED FOR:  
NOTTINGHAM PROPERTIES, INC.  
100 WEST PENNSYLVANIA AVENUE  
TOWSON, MD. 21284  
PH: 410-825-0545  
ATTN: MR. CHUCK McMAHON

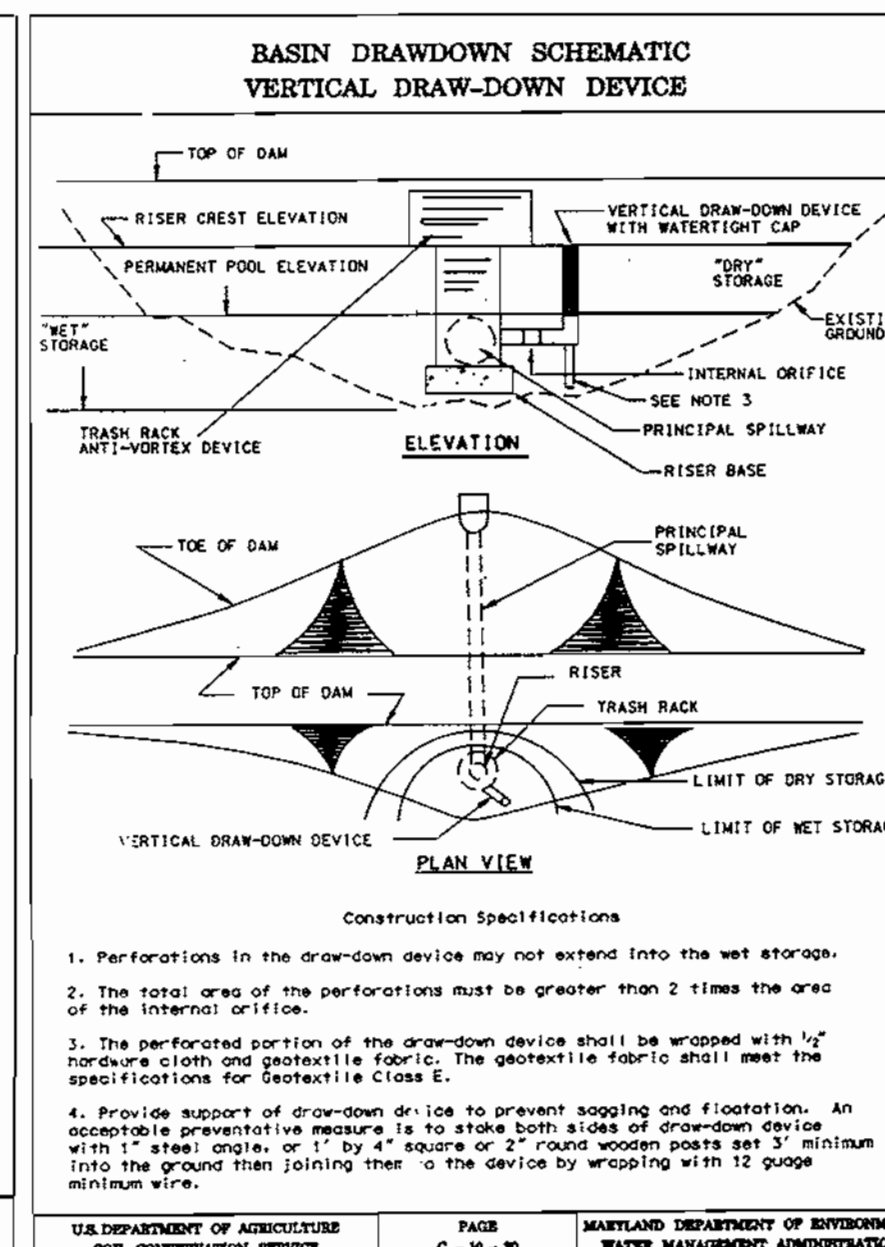
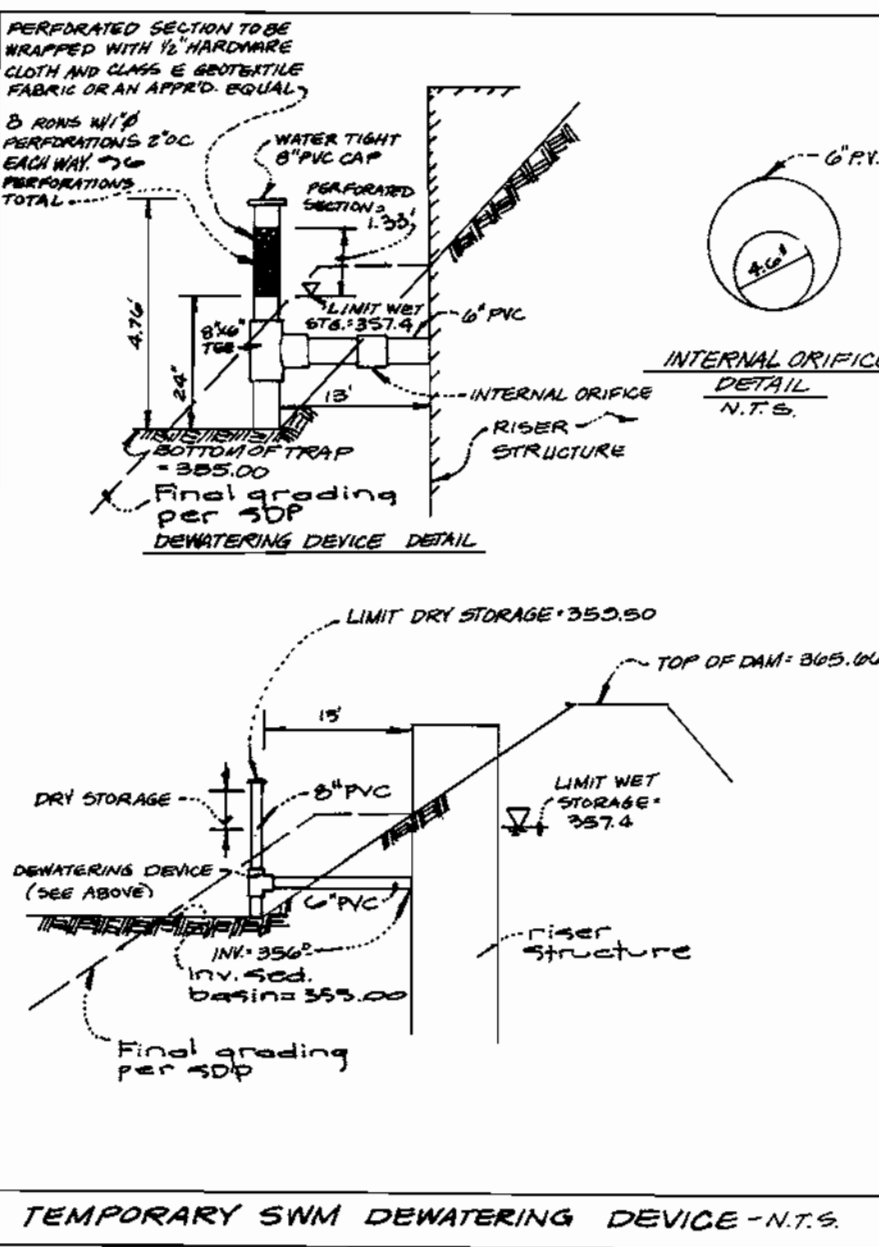
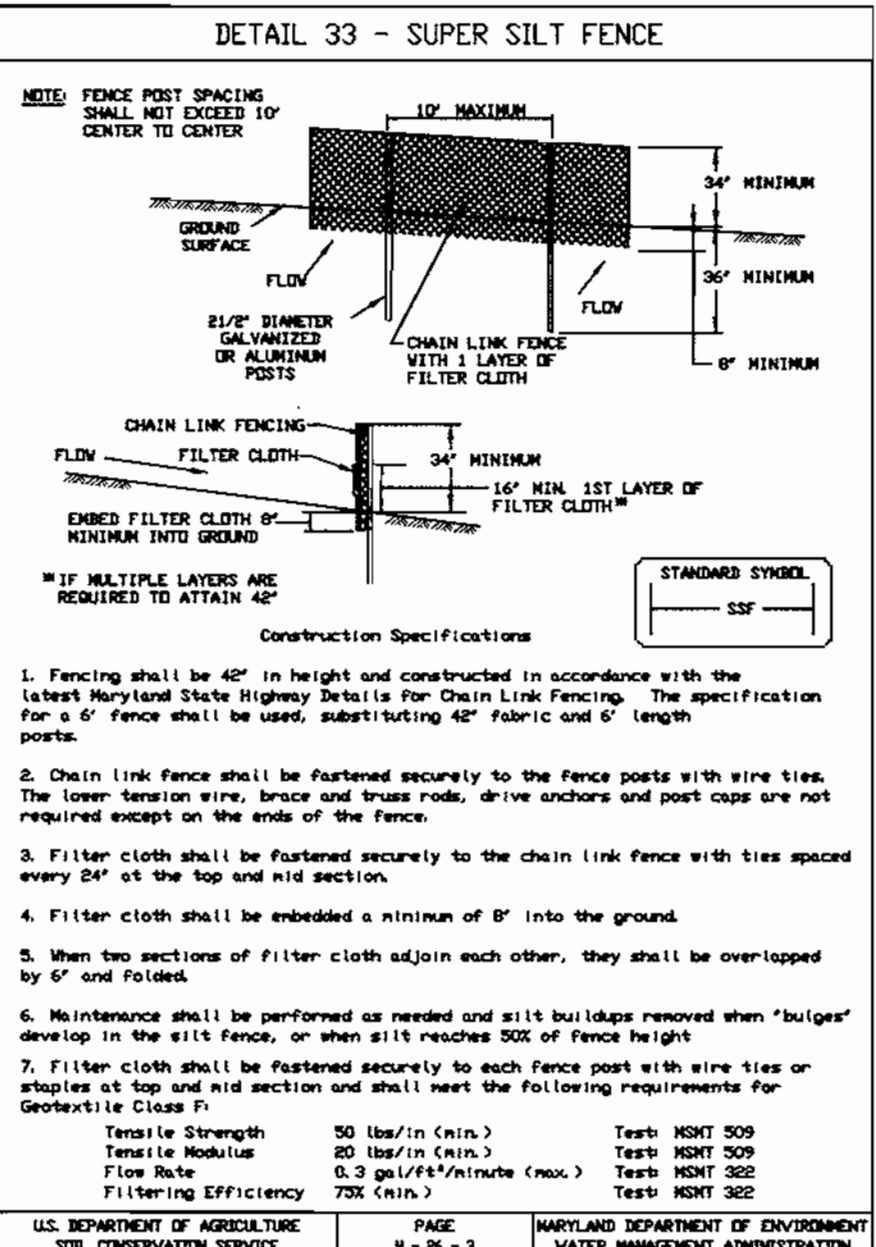
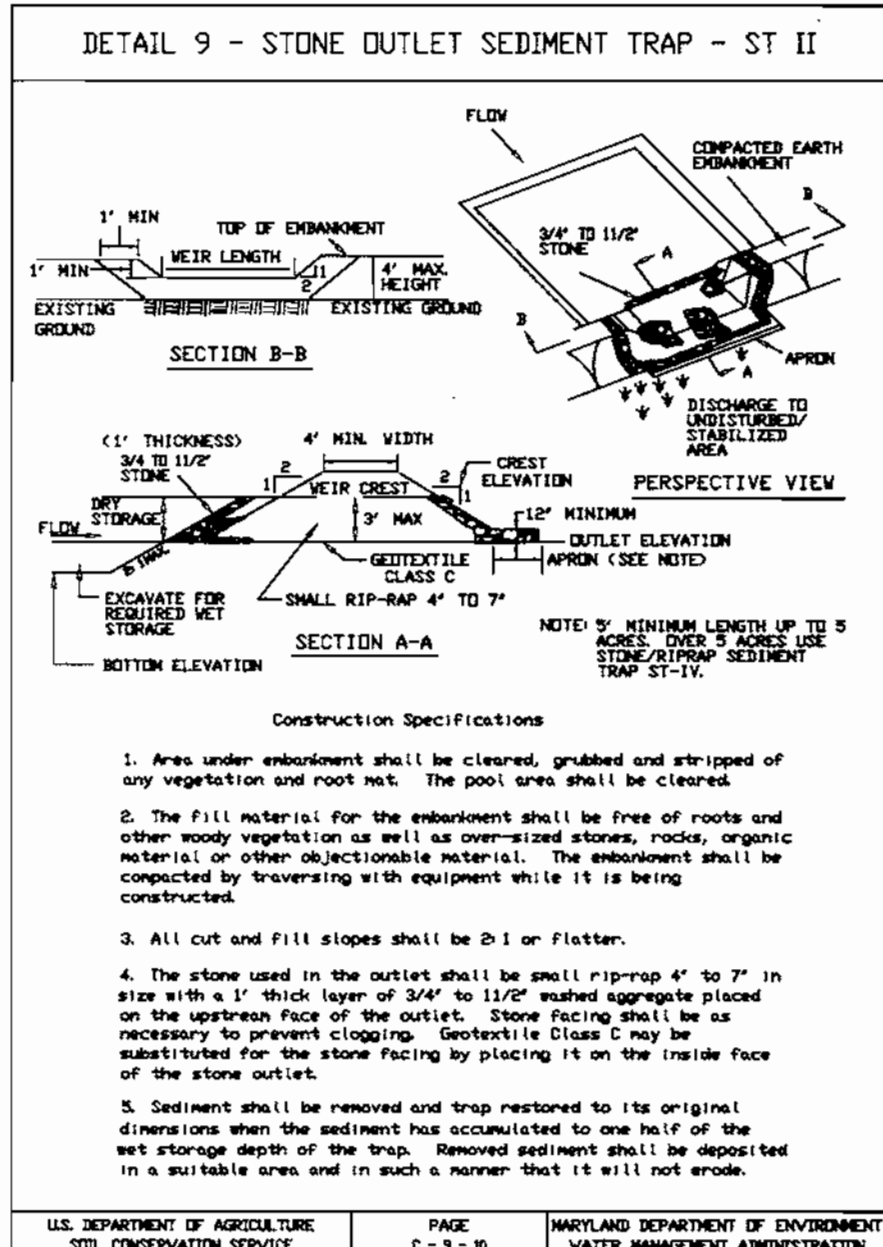
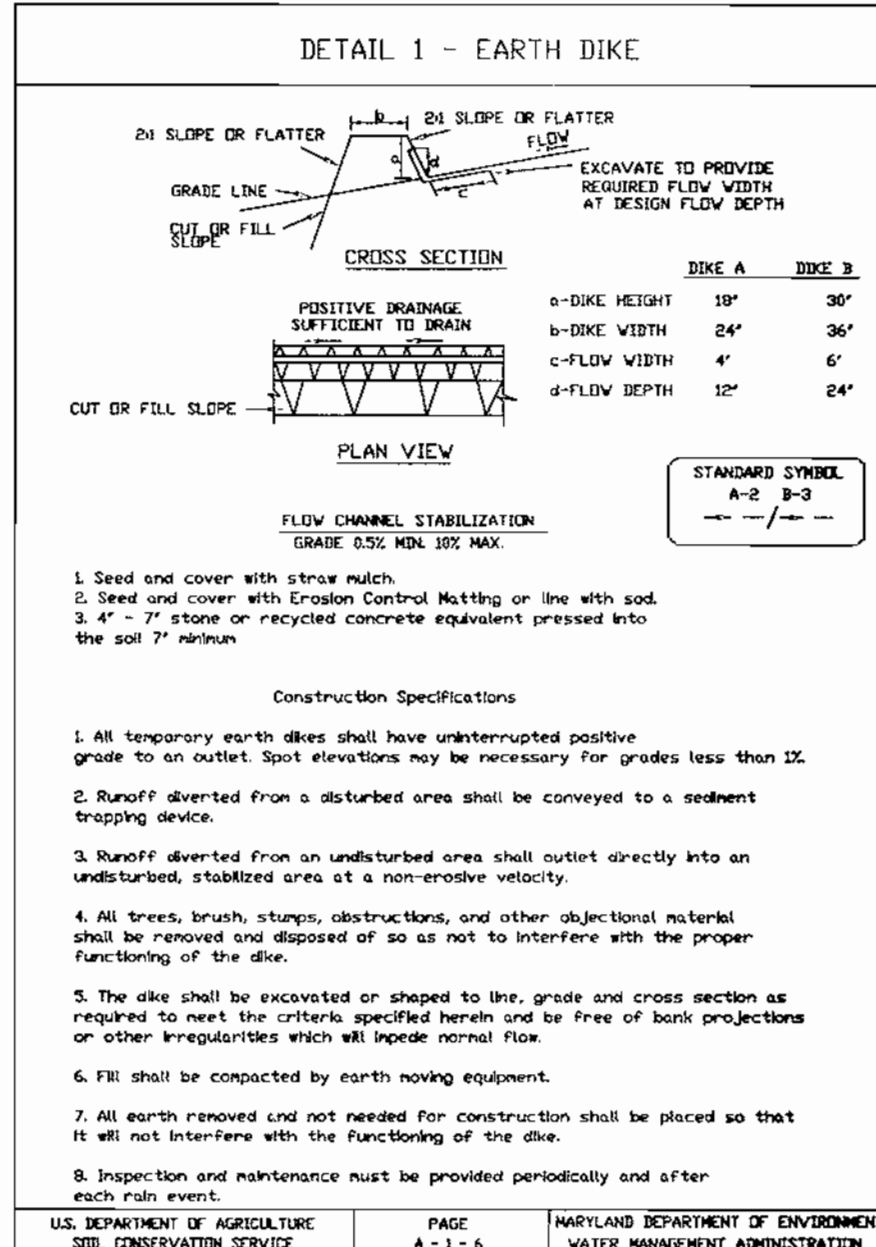
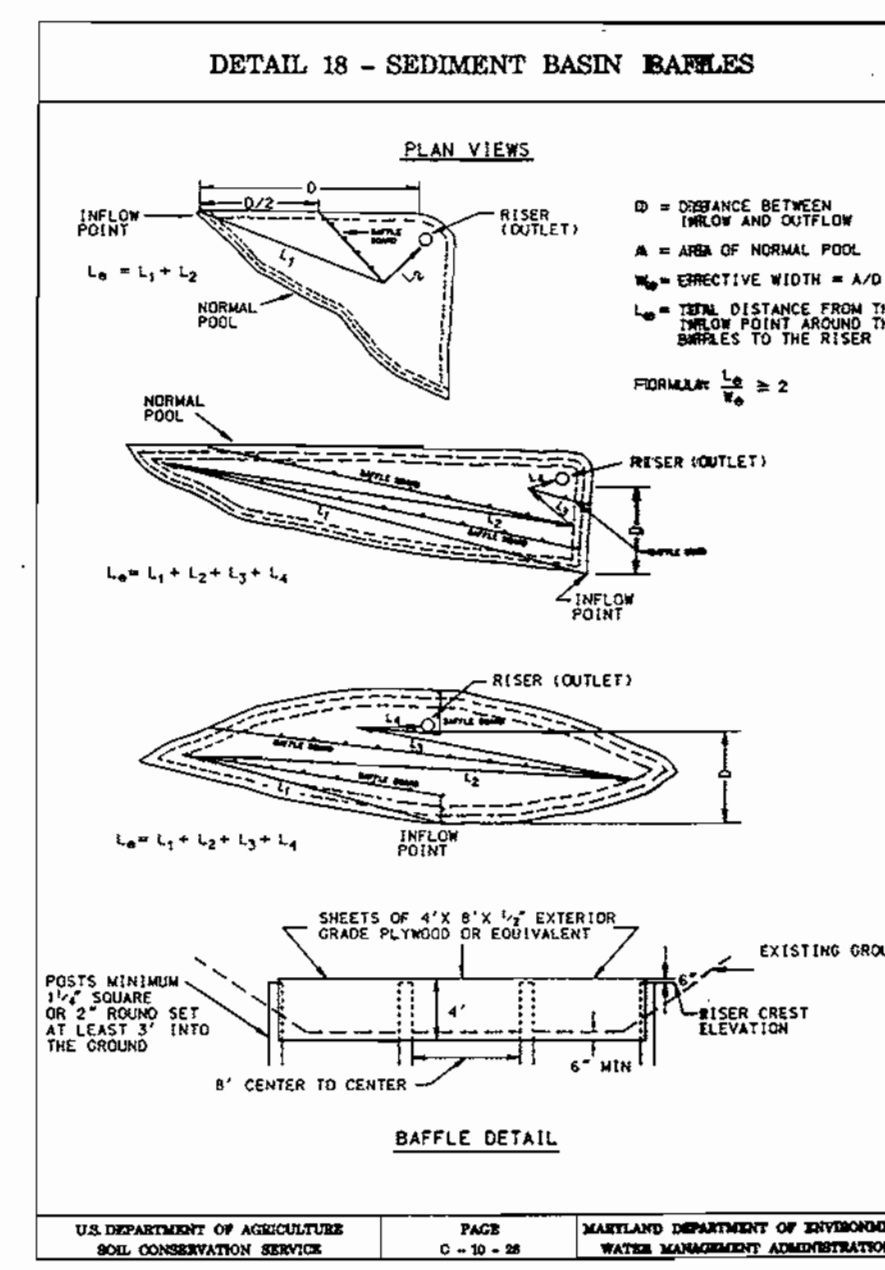
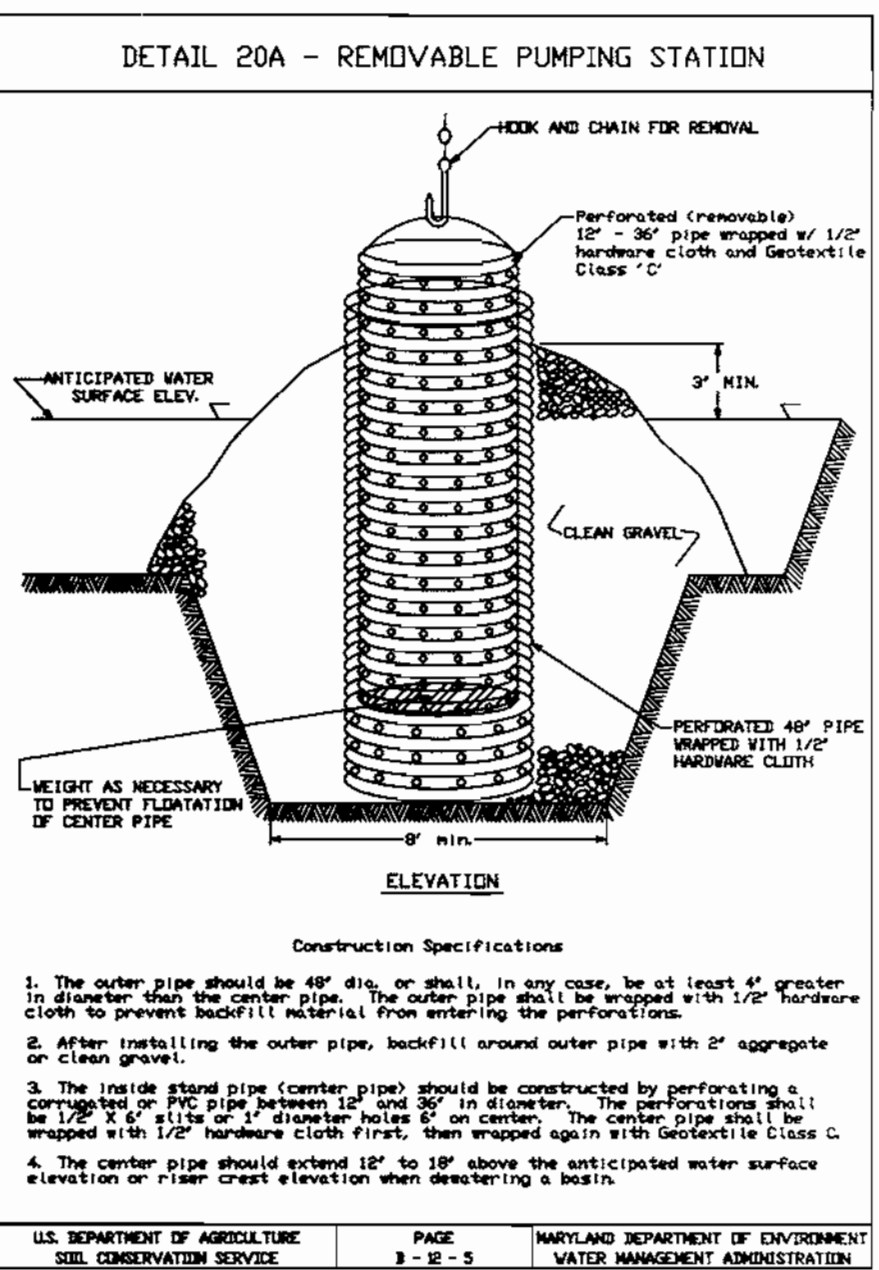
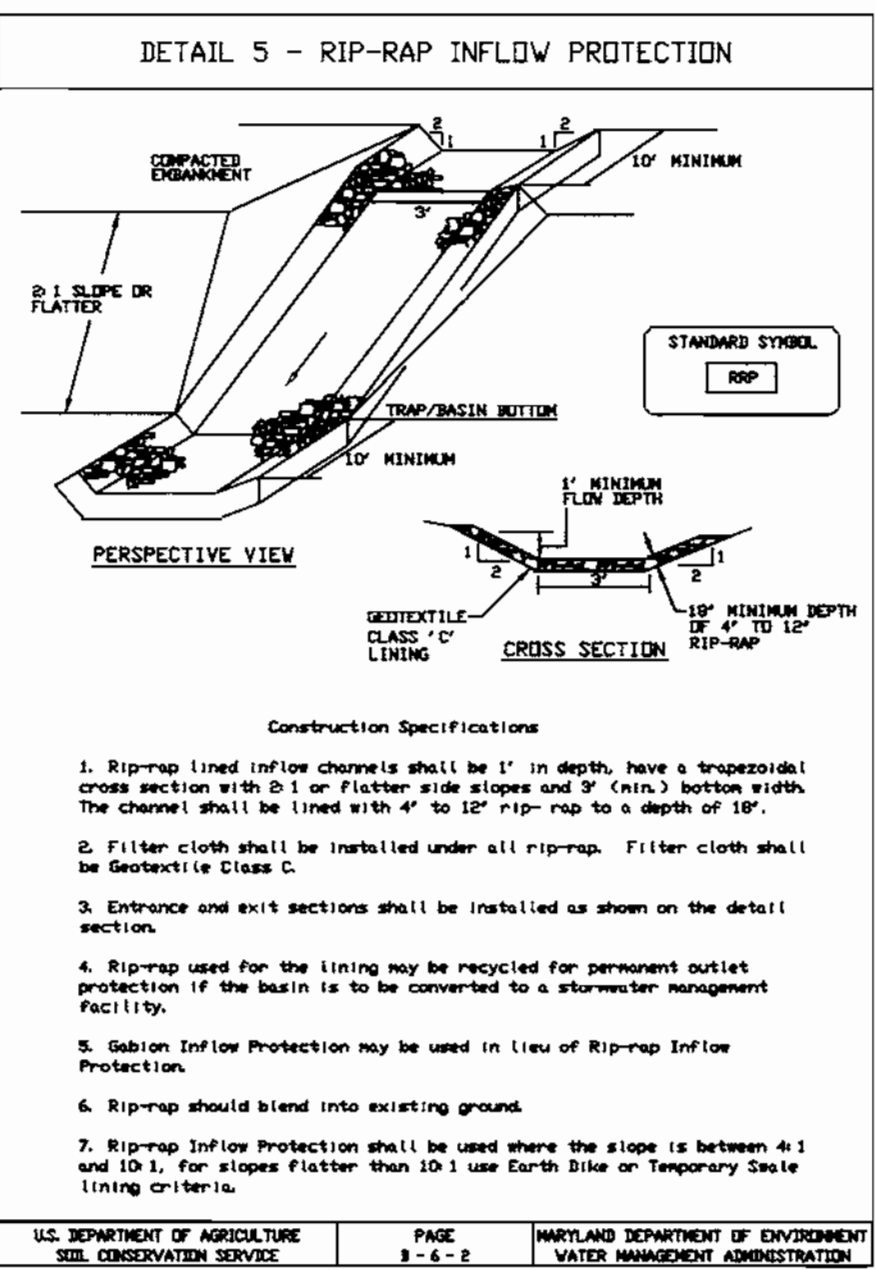
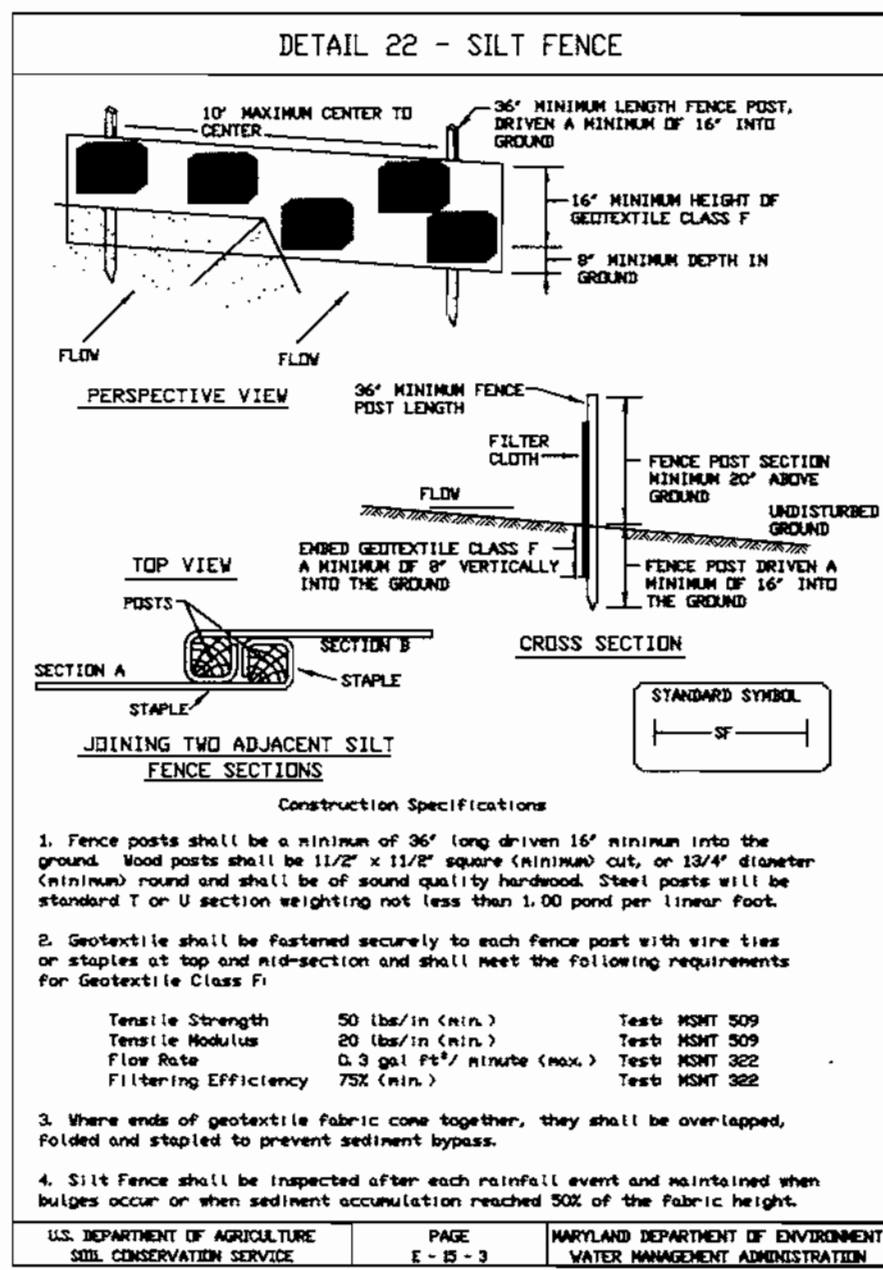
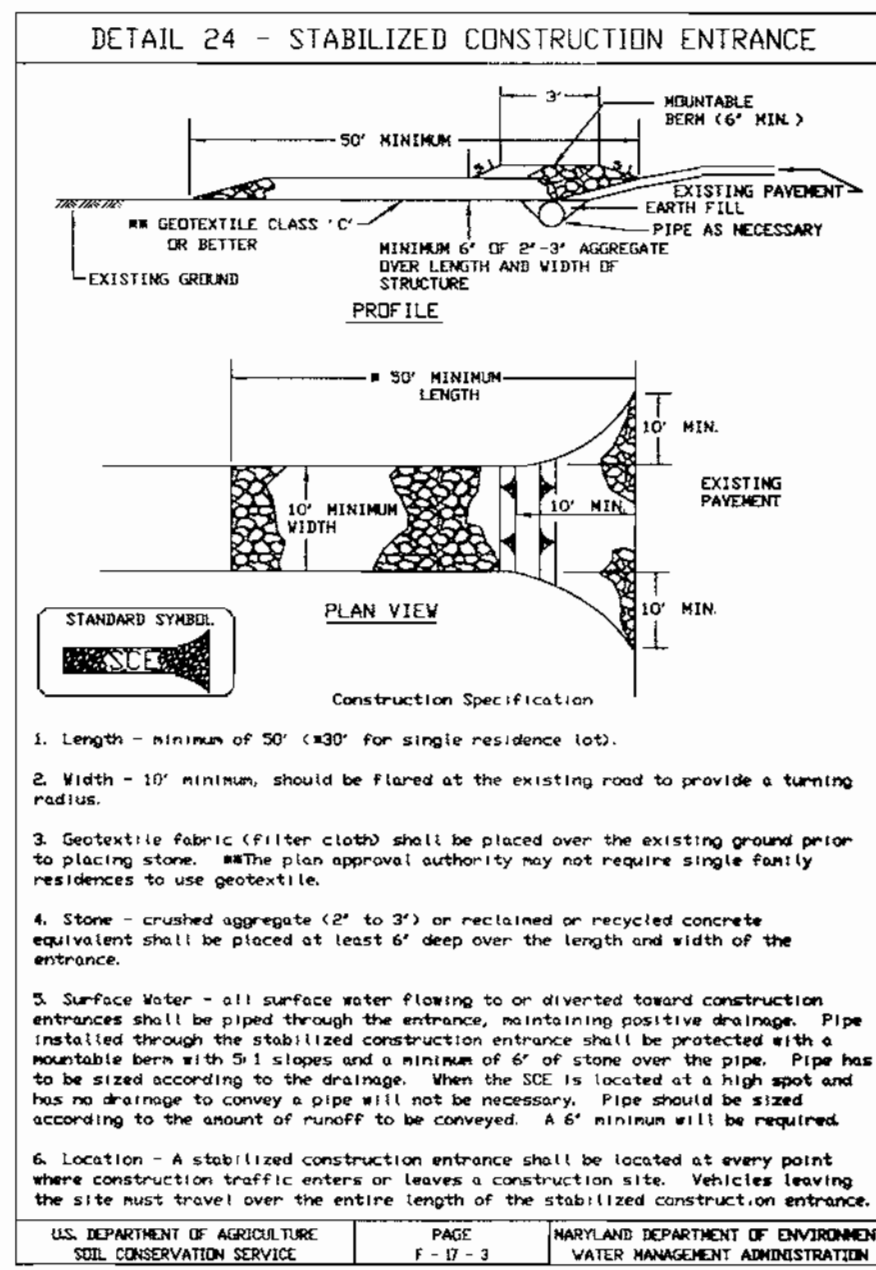
SEDIMENT & EROSION CONTROL PLAN  
RIVERS CORPORATE PARK  
SECTION 1 AREA 2 ~ PARCEL 'D'  
PLAT No. 6020

RIVERS CORPORATE PARK  
SECTION 1 AREA 2  
PARCEL 'B'  
PLAT No. 6020  
ZONED: NT

RIVERS CORPORATE PARK  
SECTION 1 AREA 2  
PARCEL 'C' - 1 ~ PLAT No. 11730  
ZONED: NT

SCALE: 1"=40'  
DATE: Oct 18, 1999  
ZONING: NT  
TAX MAP - GRID: 41-12  
G. L. W. FILE No.: 99030  
SHEET: 8 OF 16

HOWARD COUNTY, MARYLAND



**PERMANENT SEEDING NOTES**

Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq 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 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect 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 sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 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.

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

**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

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

Seeding: For periods March 1 thru April 30 and from August 15 thru October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted, weed-free, 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.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

**SEDIMENT CONTROL NOTES**

1. 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. (410) 313-1855.
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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and 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, sod, temporary seeding and mulching (Sec. G). 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:
 

Total Area of Site	12.68	Acres
Area Disturbed	11.98	Acres
Area to be roofed or paved	7.72	Acres
Area to be vegetatively stabilized	4.72	Acres
Total Cut	27,210	Cu. Yds.
Total Fill	27,210	Cu. Yds.
Off-site waste/borrow area location:	N/A	
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County DPW 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 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.
11. Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within one working day, whichever is shorter.

**APPROVED PLANNING BOARD OF HOWARD COUNTY**

DATE Sept 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Mervin V. DeLoe* 11/15/99  
Director

*Chris Hamatta* 11/19/99  
Chief, Division of Land Development

*Chris Hamatta* 11/12/99  
Chief, Development Engineering Division

**GLW GUTSCHICK LITTLE & WEBER, P.A.**

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK  
BURTNSVILLE, MARYLAND 20886

TEL: 301-421-4024 FAX: 301-989-2524 DC/VA: 301-989-2524

**SEQUENCE OF CONSTRUCTION**

1. OBTAIN GRADING PERMIT AND ARRANGE ON-SITE PRE-CONSTRUCTION MEETING WITH SEDIMENT CONTROL INSPECTOR. (1 DAY)
2. INSPECT ALL EXISTING SEDIMENT CONTROL DEVICES CONSTRUCTED UNDER GP - AND REPAIR AS NEEDED. RECONFIGURE EXISTING SEDIMENT BASIN #1 PER THESE PLANS, RELOCATE SILT FENCE OR SUPER SILT FENCE AND RELOCATE EARTH DIKES/SWALES AS NEEDED TO INSURE POSITIVE DRAINAGE TO TRAPS. (1 WEEK)
3. ROUGH GRADE SITE. CONSTRUCT WATER AND SEWER FROM EXISTING STUBS TO THE BUILDINGS AND INSTALL ALL STORM DRAIN RUNS. AS STORM DRAIN CONSTRUCTION NEARS EXISTING TRAPS #2 AND #3, BACKFILL TRAPS. NO RIPRAP SHOULD BE INSTALLED UNTIL AFTER THE STORM DRAINS HAVE BEEN FLUSHED. OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO THE BACKFILLING OF TRAPS. (2 MONTHS)
4. FINE GRADE SITE. (1 MONTH)
5. CONSTRUCT BUILDINGS. (9 MONTHS)
6. INSTALL CURB AND GUTTER, SIDEWALK AND BASE PAVING. STABILIZE ALL REMAINING AREAS WITH GRASS, SEED AND MULCH. (2 WEEKS)
7. WHEN AREAS DRAINING TO SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND PERMISSION HAS BEEN GRANTED BY THE SEDIMENT CONTROL INSPECTOR, FLUSH STORM DRAIN SYSTEM AND CONVERT SEDIMENT BASIN TO FINAL CONFIGURATION FOR THE STORM WATER MANAGEMENT POND AND INSTALL RIPRAP PROTECTION. SEED AND MULCH ANY REMAINING DISTURBED AREAS. (2 WEEKS)
8. INSTALL SURFACE PAVING. (2 WEEKS)
9. INSTALL LANDSCAPING. (2 WEEKS)
10. REMOVE ANY REMAINING SEDIMENT CONTROLS AND STABILIZE AS NEEDED. (2 DAYS)

PREPARED FOR:  
NOTTINGHAM PROPERTIES, INC.  
100 WEST PENNSYLVANIA AVENUE  
TOWSON, MD. 21284  
PH: 410-825-0545  
ATTN: MR. CHUCK McMAHON

SEDIMENT CONTROL NOTES & DETAILS

**RIVERS CORPORATE PARK**  
SECTION 1 AREA 2 ~ PARCEL 'D'  
PLAT No. 6020

SCALE: AS SHOWN  
ZONING: NT  
G. L. W. FILE No. 99030

DATE: Oct 18, 1999  
TAX MAP - GRID: 41-12  
SHEET: 9 OF 16

**DEVELOPER'S/BUILDER'S CERTIFICATE**

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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and 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.

*Chm McMah* 8/13/99  
Signature of Developer/Builder Date

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

*Howard Soil Conservation District* 11/19/99  
Signature of District Engineer Date

**ENGINEER'S CERTIFICATE**

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

*Chris Hamatta* 8/17/99  
Signature of Engineer Date

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

*Chris Hamatta* 11/19/99  
Signature of District Engineer Date

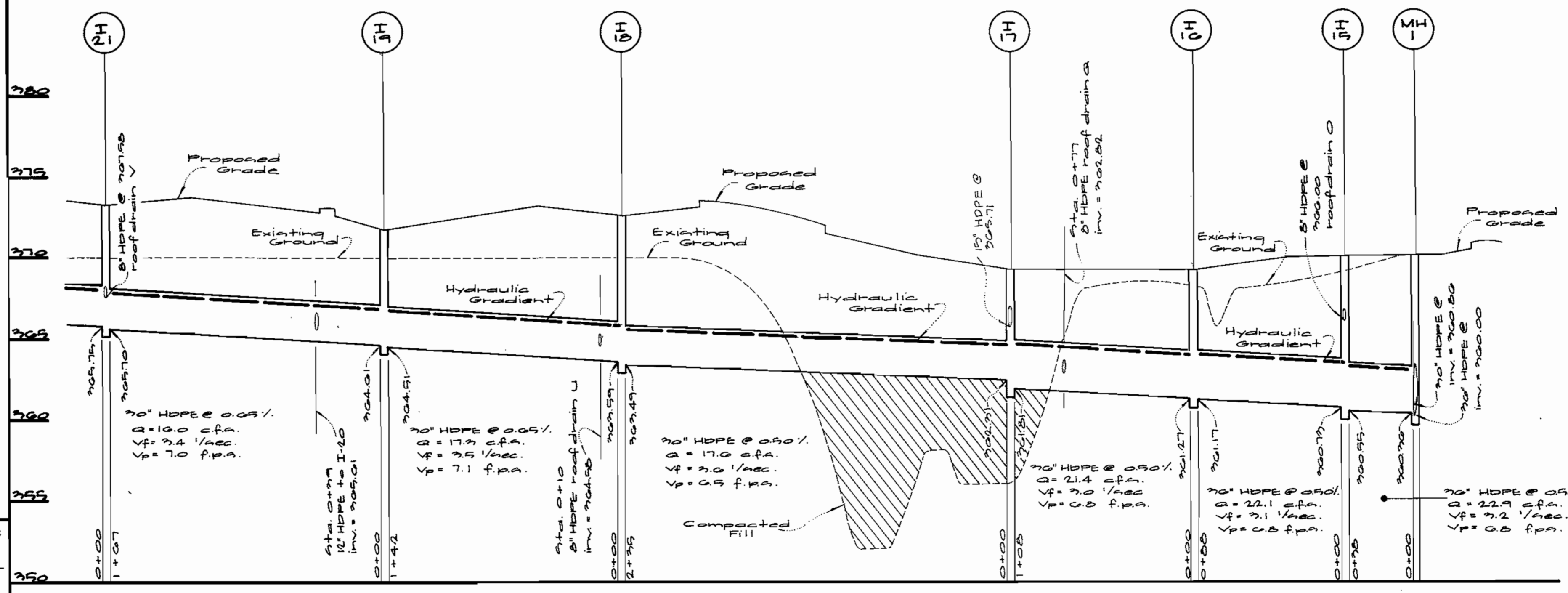
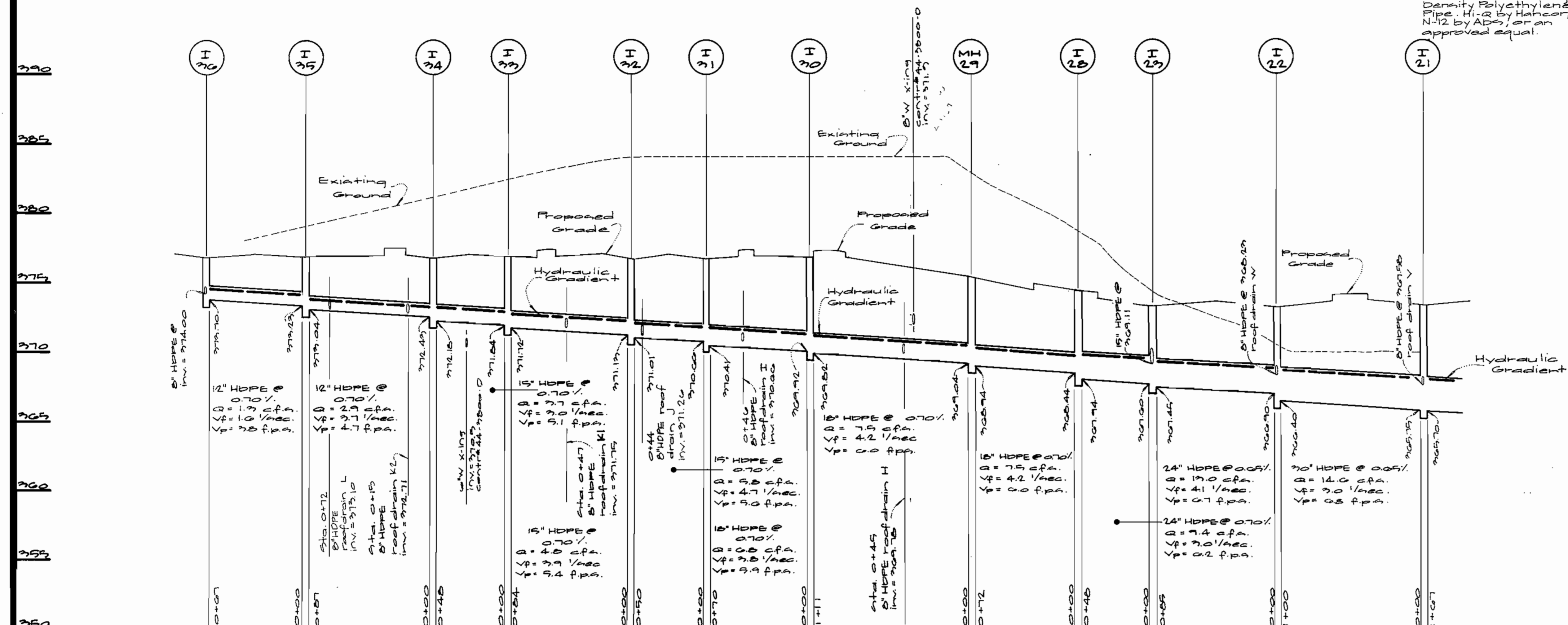


Pipe Schedule			
size	type	quantity (l.f.)	Remarks
8"	HDPE	572'	
12"	"	154'	
15"	"	102'	
24"	"	123'	
30"	"	644'	
36"	"	224'	

Structure Schedule									
No.	Type	Width (inside)	Top Elevation		Invert Elevation		St'd Detail	Locations	Remarks
			Upper	Lower	Upper	Lower			
I-15	WR Inlet	---	369.70	---	369.00	369.55	SD 4.3B	See Plan	
I-16	"	---	369.70	---	369.50	369.17	"	"	
I-17	"	---	369.70	---	369.17	369.81	"	"	
I-18	"	---	373.10	---	369.59	369.40	"	"	
I-19	"	---	372.48	372.40	369.61	369.51	"	"	
I-21	"	---	373.70	---	369.58	369.70	"	"	
I-22	"	---	373.70	---	368.23	369.40	"	"	
I-23	A-5 Inlet	---	374.38	374.30	368.44	369.74	SD 4.40	"	
I-24	WR Inlet	---	377.10	377.20	369.92	369.82	SD 4.3B	"	
I-25	"	---	377.20	---	370.00	370.41	"	"	
I-26	"	---	377.20	---	371.13	371.01	"	"	
I-27	"	---	377.20	---	371.84	372.72	"	"	
I-28	"	---	377.20	---	372.43	372.18	"	"	
I-29	"	---	377.20	---	373.23	373.04	"	"	
I-30	"	---	377.20	---	374.00	373.70	"	"	
I-31	Double Comb	---	373.10	373.00	---	369.50	SD 4.3B	"	
MH 29	Std Manhole	4'-0"	---	---	369.04	368.94	S. 5.01	"	
MH 101	A-10 Inlet	4'-0"	350.20	---	341.00	340.90	SD 4.41	"	
HW 1	type 'C' endwall	---	344.00	---	340.00	---	SD 5.21	"	

HDPE indicates High Density Polyethylene Pipe. H-2 by Halcrow, H-12 by Alder, or an approved equal.

Note: For inlets located within parking or in grass areas, top elevation indicates grate elevation. For all other instances, top elevation indicates top of curb.



**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 DATE: SEPT. 23, 1992

STATE OF MARYLAND  
 DEPARTMENT OF PLANNING & ZONING  
 PROFESSIONAL EXAMINEE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Thomas C. McCarty* 11/19/99  
 Director Date

*Chris Hamilton* 11/19/99  
 Chief, Division of Land Development Date

*Robert [Signature]* 11/12/99  
 Chief, Development Engineering Division Date

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 FAX: 301-421-4186

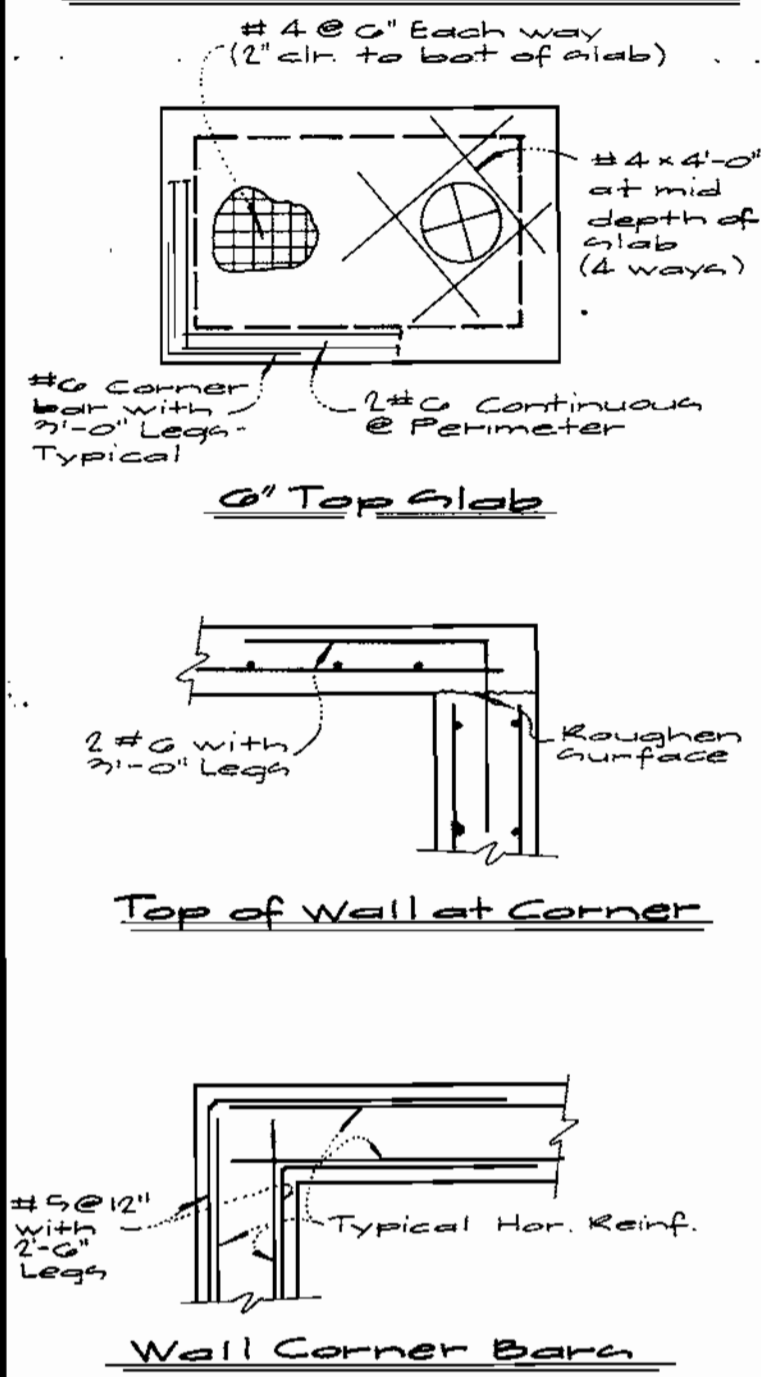
DATE	REVISION	BY	APPR.
Nov 2, 99	As submitted for signature		

PREPARED FOR:  
**NOTTINGHAM PROPERTIES, INC.**  
 100 WEST PENNSYLVANIA AVENUE  
 TOWSON, MD. 21204  
 PH: 410-825-0545  
 ATTN: MR. CHUCK McMAHON

**STORM DRAIN PROFILES & SCHEDULES**  
**RIVERS CORPORATE PARK**  
 SECTION 1 AREA 2 - PARCEL 'D'  
 PLAT No. 6020

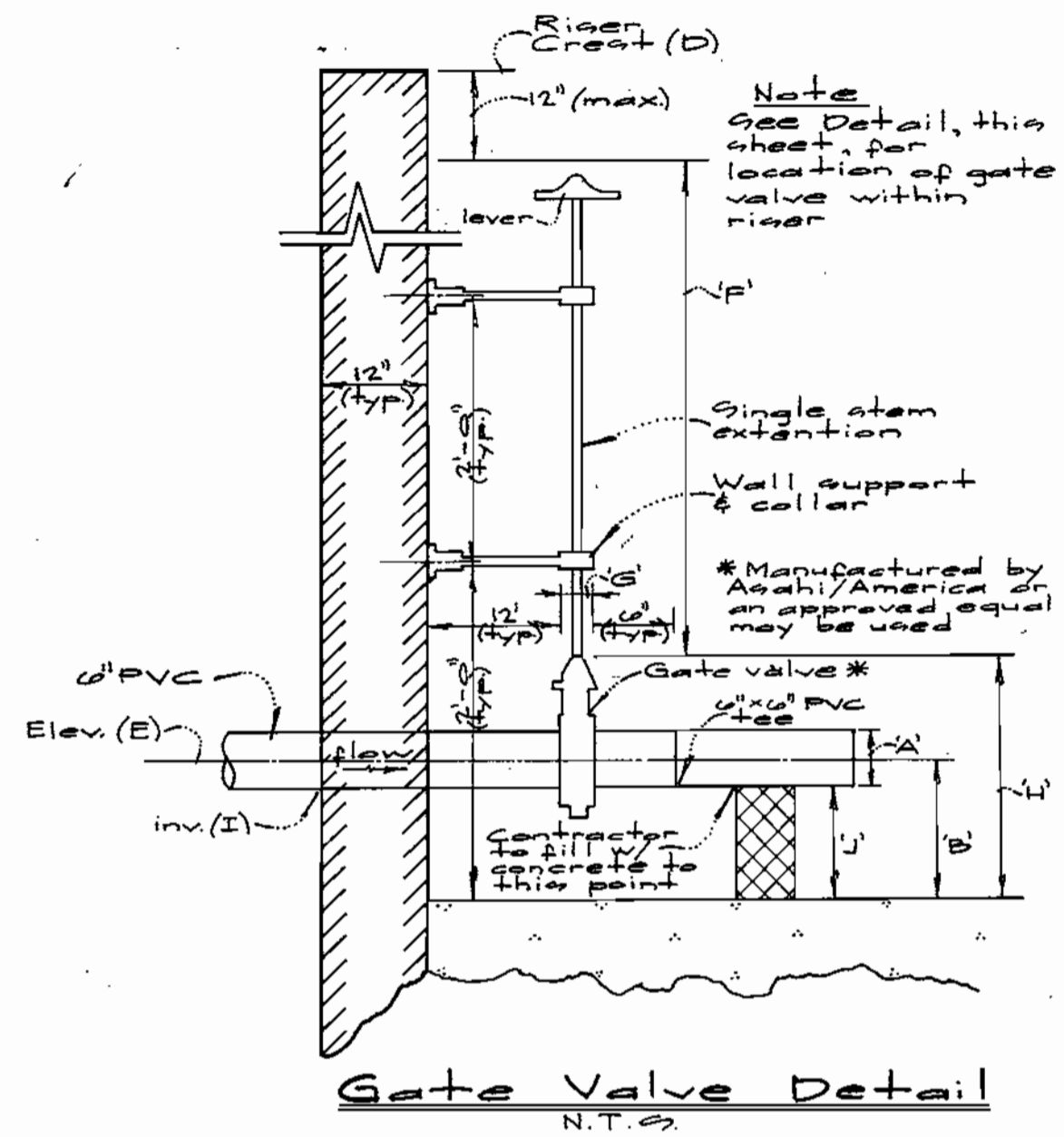
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct. 12, 1999	41 - 12	11 OF 16

**Riser Sections**

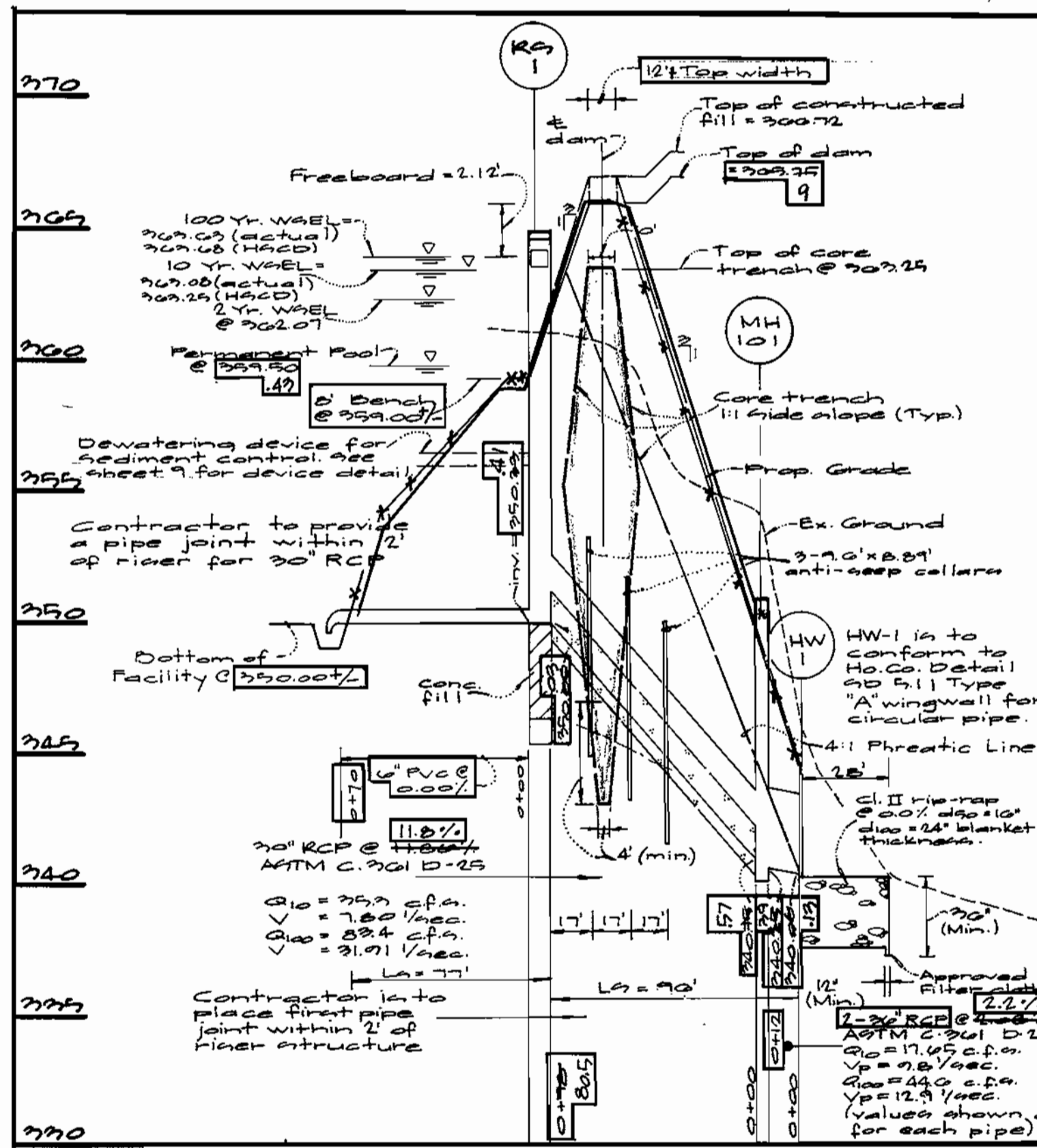
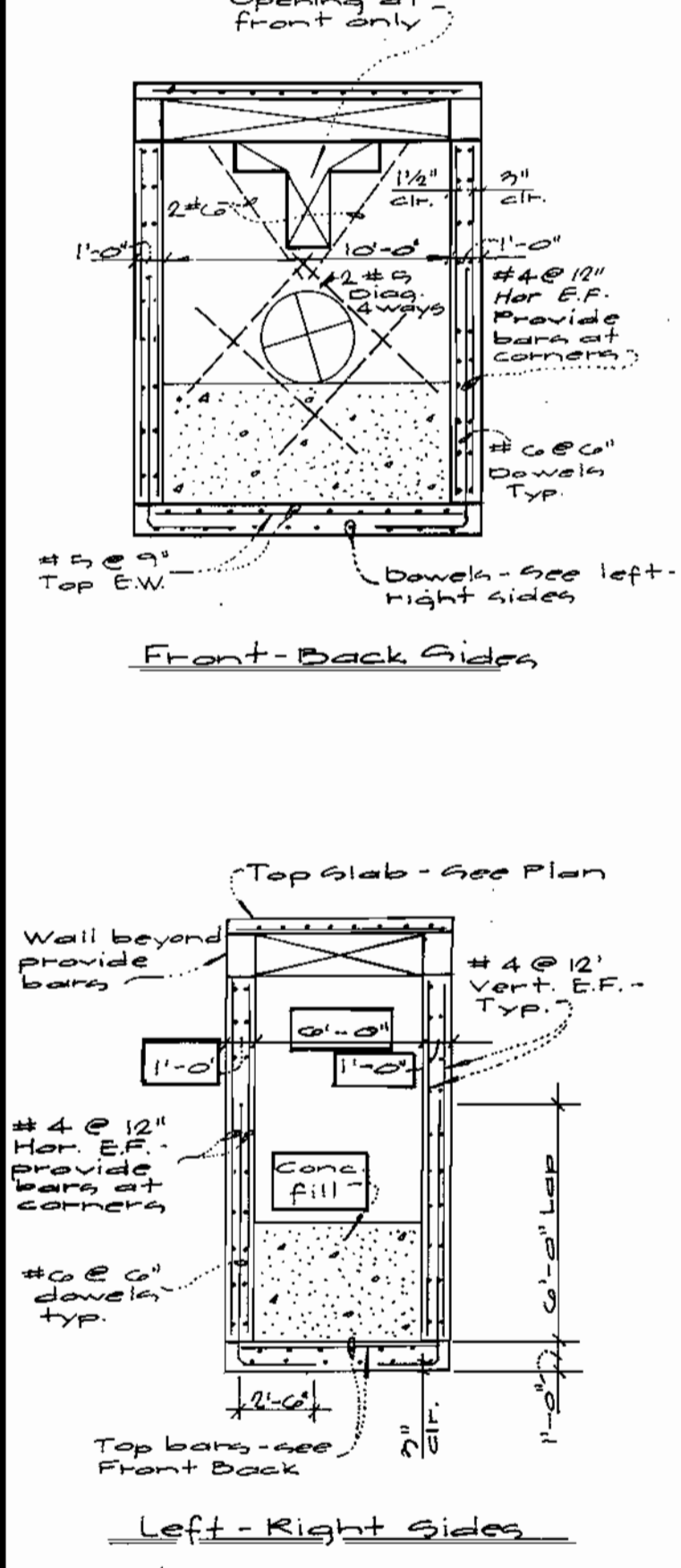
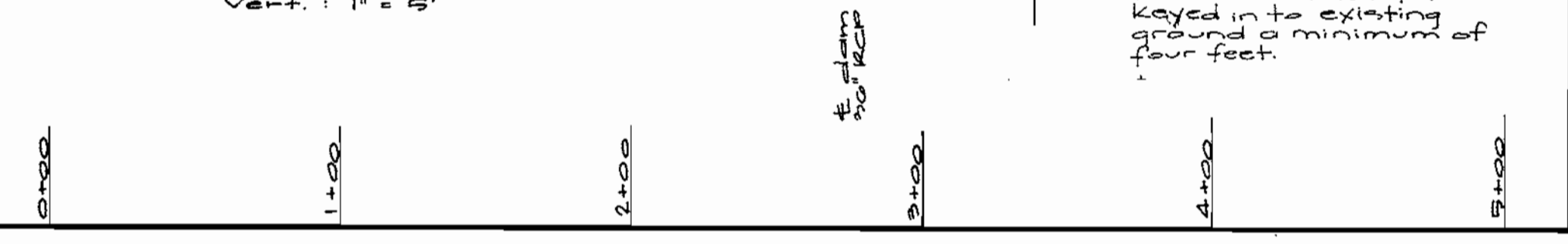


**Gate Valve Dimensions & Elevations**

A	B(in)	C	D	E	F(H)	G(in)	H(in)	I	J(in)
0'	7'	35000	309.10	35050	12'-2"	10 1/2"	17 1/2"	35033	4'

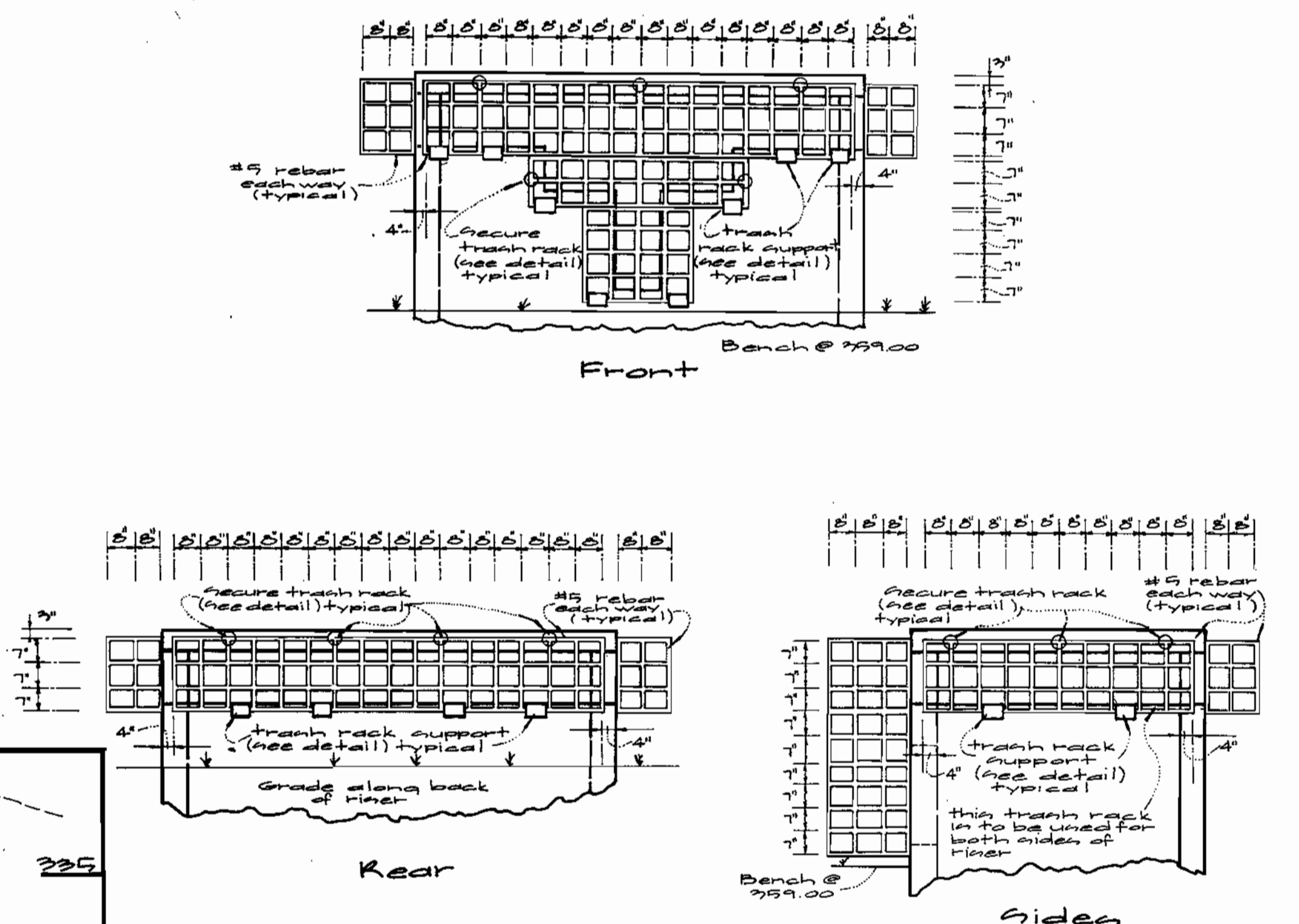


**Profile Along Access And Centerline of Dam/Core Trench**



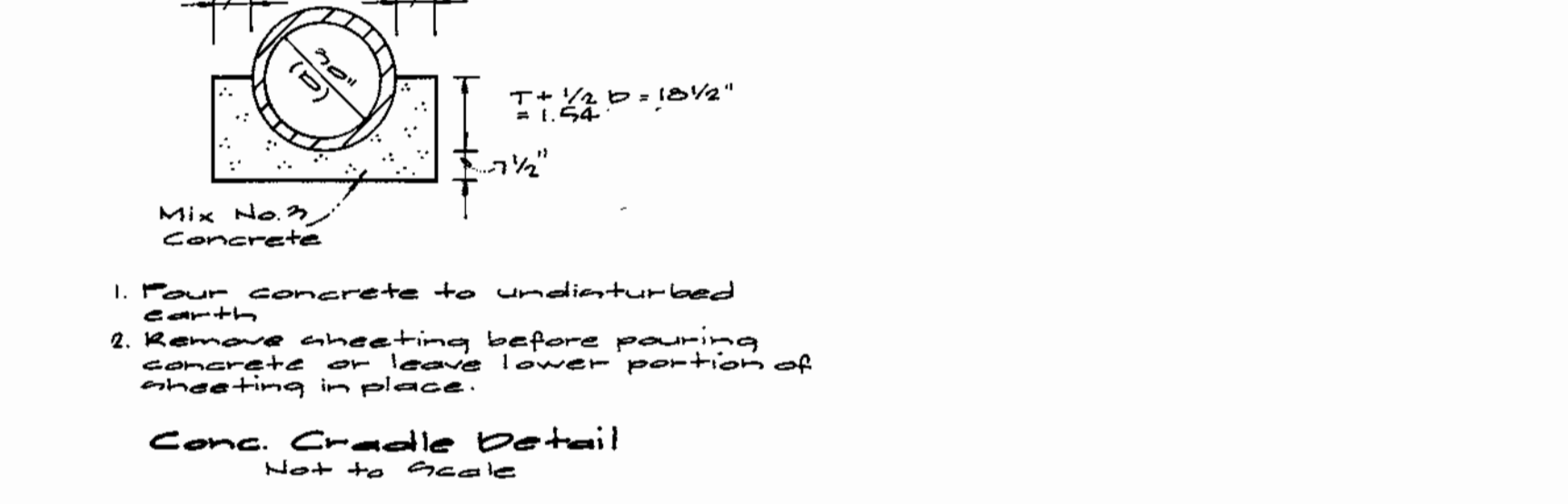
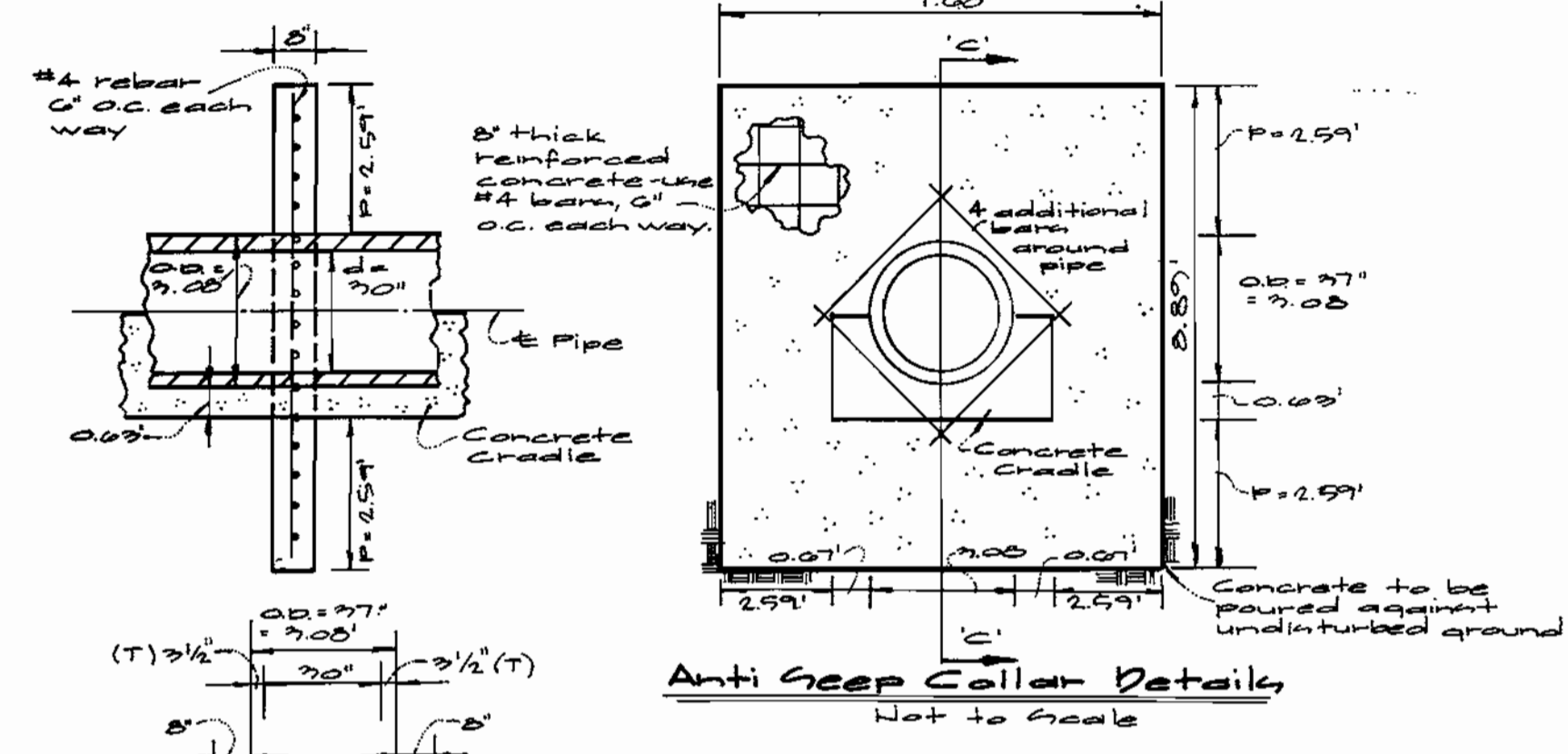
**Profile Along & Principal Spillway**

Scale: Horiz.: 1" = 50'  
Vert.: 1" = 5'

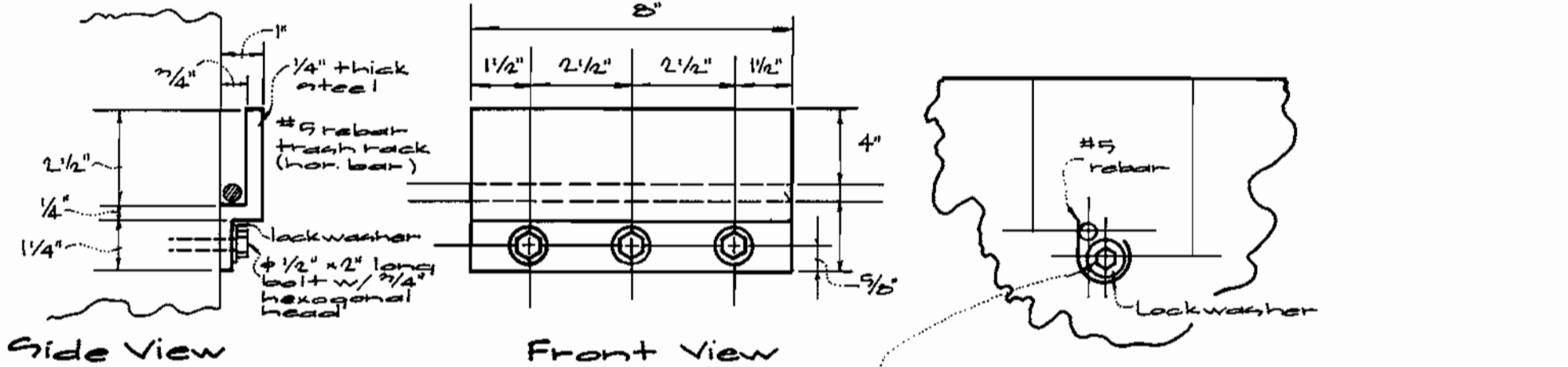


**Trash Rack Details**

Scale: 1" = 3'

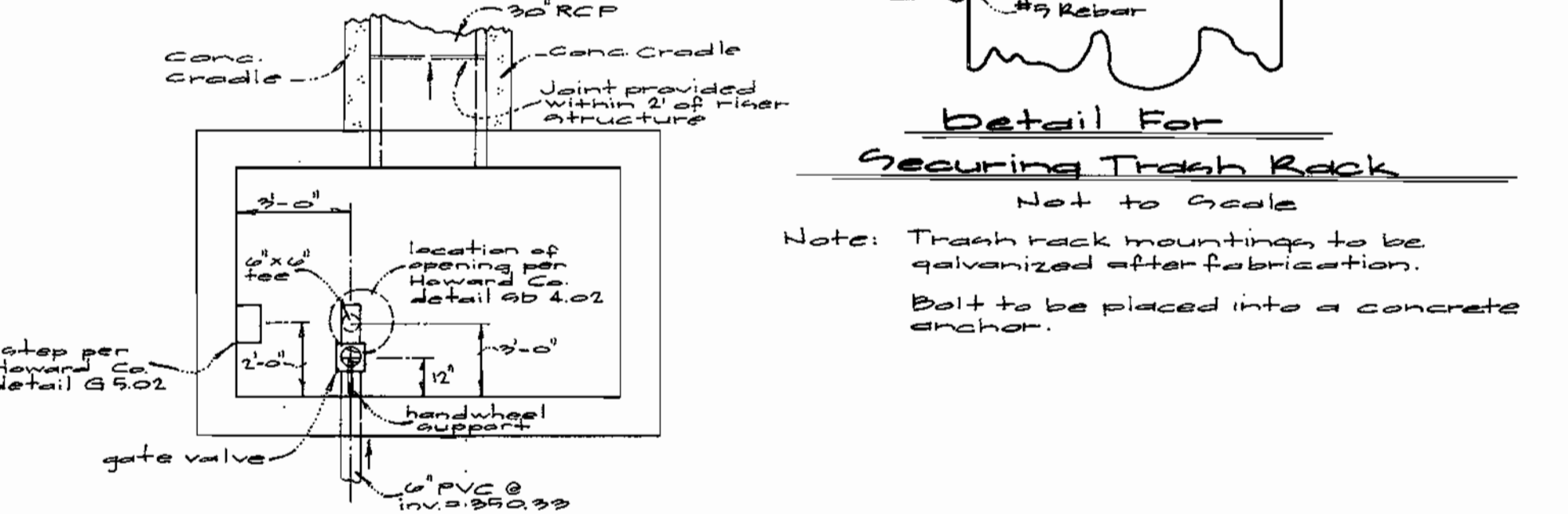


1. Four concrete to undisturbed earth  
2. Remove sheeting before pouring concrete or leave lower portion of sheeting in place.



**Trash Rack Support**

Note: Trash rack mountings to be galvanized after fabrication. Supports to be used on rear & side racks.



**Detail For Dewatering Device**

Scale: 1" = 4'

**APPROVED PLANNING BOARD OF HOWARD COUNTY**  
DATE: SEPT 23, 1999

Contractor must provide shop drawings to Gutschick, Little & Weber, PA. for review and submission to Howard County Development Engineering Division if a present riser structure is changed rather than poured in place.

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING**

*David V. H. Layton* 11/19/99  
Director

*Chris Hamilton* 11/19/99  
Chief, Division of Land Development

*John W. ...* 11/12/99  
Chief, Development Engineering Division

**DEVELOPER'S/BUILDER'S CERTIFICATE**

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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and 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.

*Chris ...* 8/13/99  
Signature of Developer/Builder

**ENGINEER'S CERTIFICATE**

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.

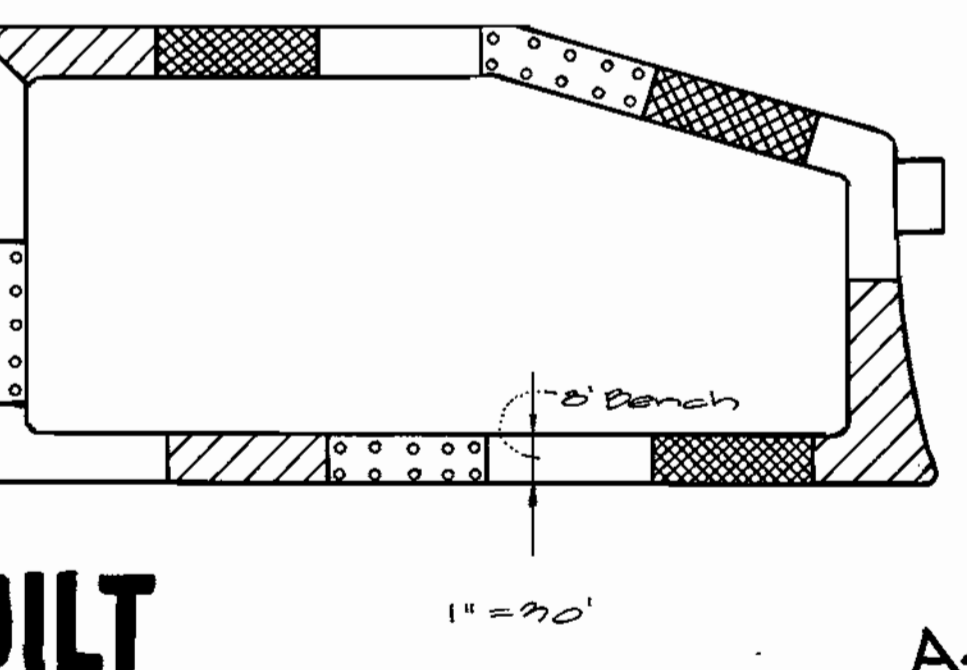
*Charles ...* 11/19/99  
Natural Resources Conservation Service

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

*John ...* 11/19/99  
Howard Soil Conservation District

**AS-BUILT**

1" = 30'



**Wetland Planting Detail**

1" = 30'

Common Three Square (Scirpus pungens)  
Lizard Tail (Sagurus Camus)  
Smart Weed (Polygonum spp.)

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
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3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD 20866  
TELEPHONE: (301)421-4024 NO.VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186

PREPARED FOR:

Nottingham Properties, Inc.  
100 West Pennsylvania Ave.  
Towson, Maryland 21204

Mr. Charles McMahon  
410-825-0545

Guilford Election District No. 6

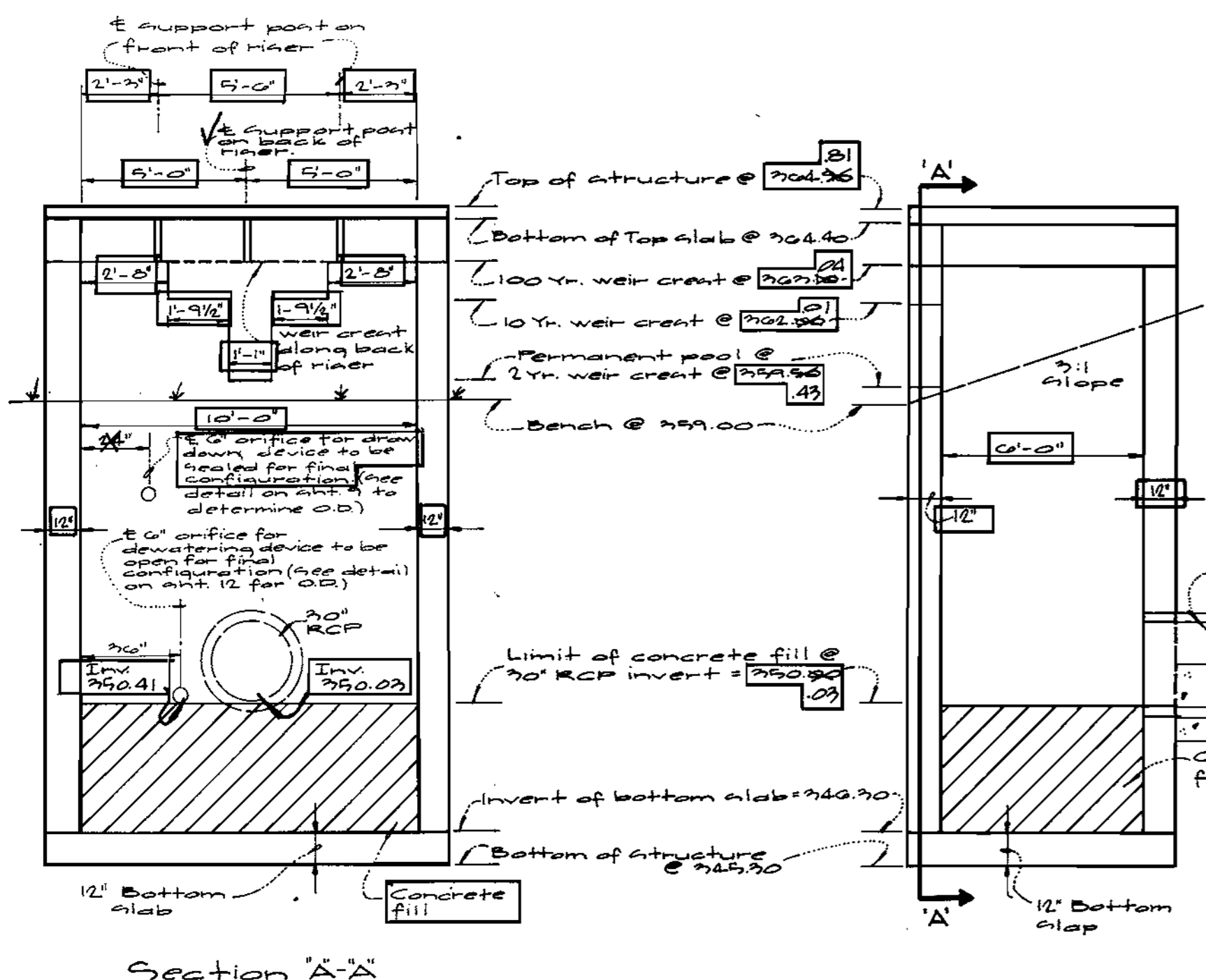
**AS-BUILT**

S.W.M. Profiles and Details

**Rivers Corporate Park**  
Section 1 Area 2 Parcel 'D'  
Plat No. 0020

DES. dev.	SCALE As shown	ZONING NT	G.L.W. FILE NO. 99070
DRN. f.m.m.	DATE Dec. 1, 2000	TAX MAP No. 41	SHEET 12 of 10
CHK. ...	DATE 1-19-99		





Elev.	Soil Description	Extra Depth
754.16	Surface	0.25
754.16	Micaceous fine to med. sand, with silt, trace fine to med. rack fragments, gray brown, moist, med. dense (SM/Fill) sandy loam.	2.5
749.41	Micaceous fine to coarse sand, some silt, trace clay, orange brown, moist, med. dense (SM) [Saprolite] sandy loam.	6.0
749.41	Micaceous fine to med. sand, little silt, trace clay, orange brown, moist, med. dense (SM) [Saprolite] loamy sand.	8.5
749.41	Very micaceous fine to med. sand, little silt, dark greenish brown, saturated, loose to med. dense (SM) [Saprolite] loamy sand.	15.0

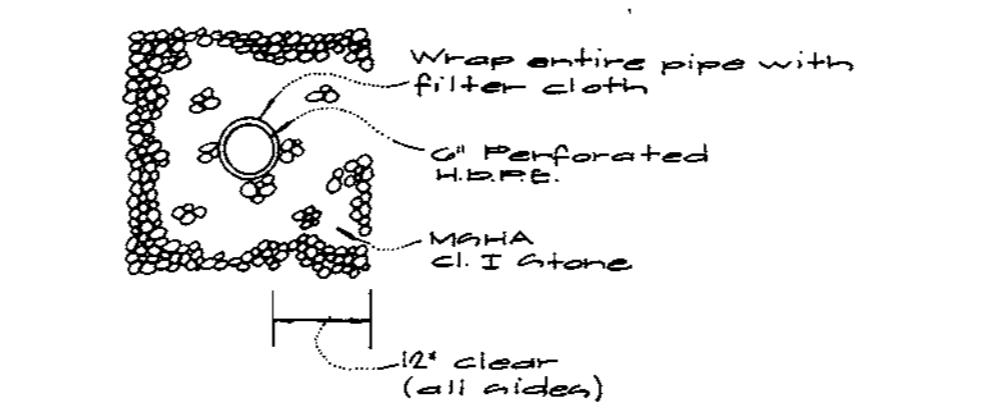
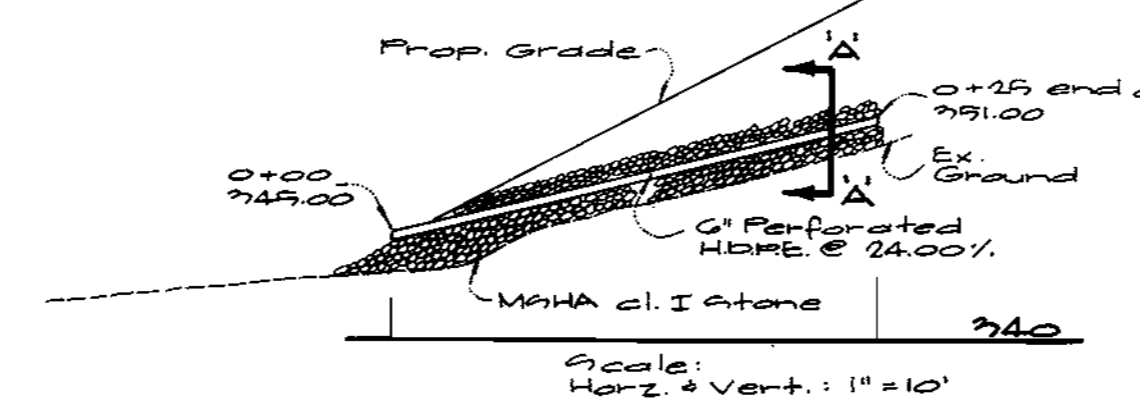
SWM 1  
At completion of boring hole wet & saved at 9'10"  
\* 24 hours after completion water at 5'7", hole saved at 6'0"

Elev.	Soil Description	Extra Depth
755.82	Surface	0.25
755.82	Micaceous fine to med. sand, some silt, trace fine rack fragments, gray brown, moist, med. dense (SM/Fill) sandy loam.	2.5
749.41	Micaceous fine to med. sand, little silt, trace clay, orange brown, moist, med. dense (SM/Fill) loamy sand.	6.0
749.41	Micaceous fine to med. sand, little silt, trace clay, orange brown, moist, med. dense (SM/Fill) loamy sand.	8.0
749.41	Micaceous fine to med. sand, some silt, trace clay, orange brown, moist, med. dense (SM) [Saprolite] loamy sand.	11.0
749.41	Micaceous fine to med. sand, little silt, trace clay, orange brown, moist, med. dense (SM) [Saprolite] loamy sand.	15.0
749.41	Micaceous fine to coarse sand w/ fine to med. rack fragments, little silt, dark orange brown, saturated, extremely dense (SM/GM) decomposed rock material.	14.5

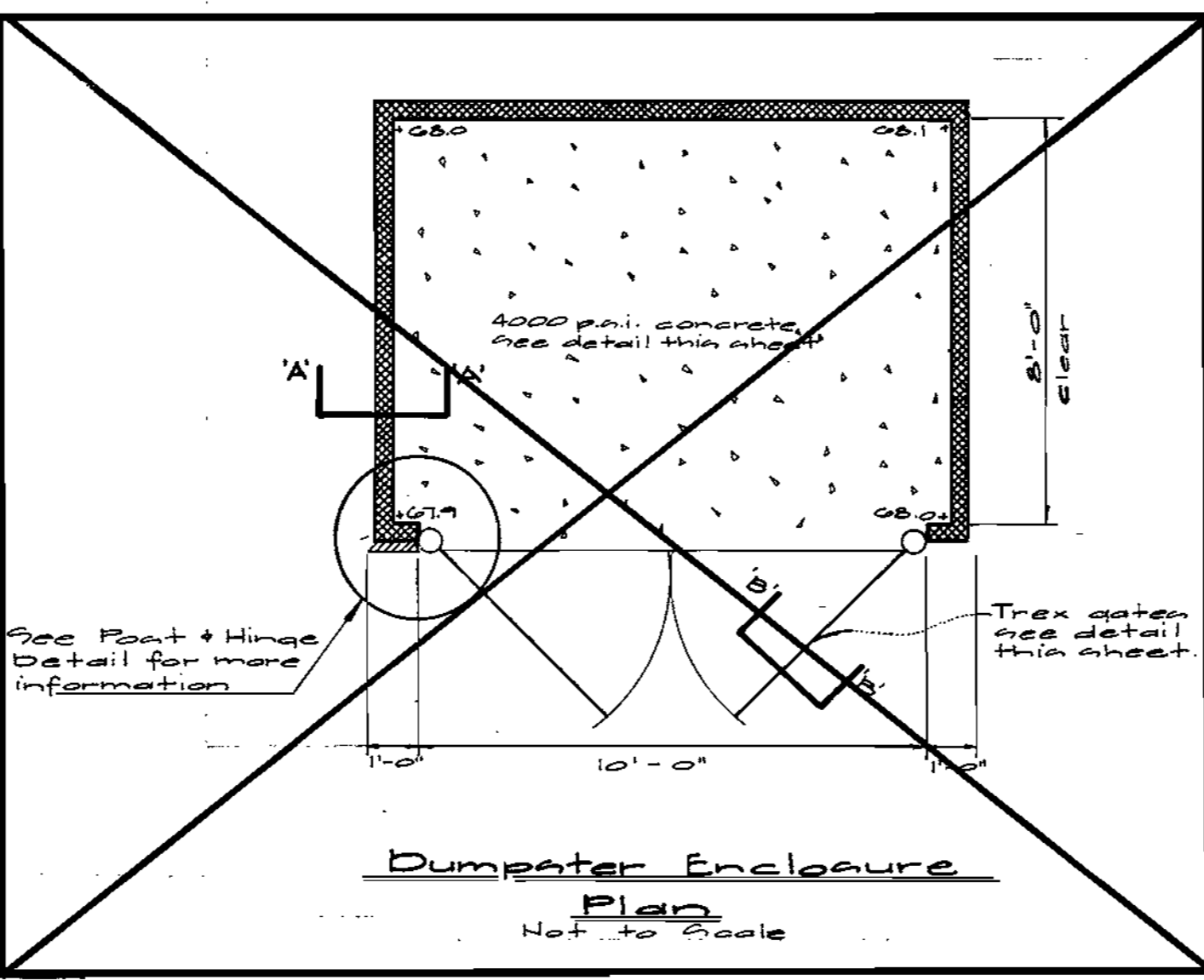
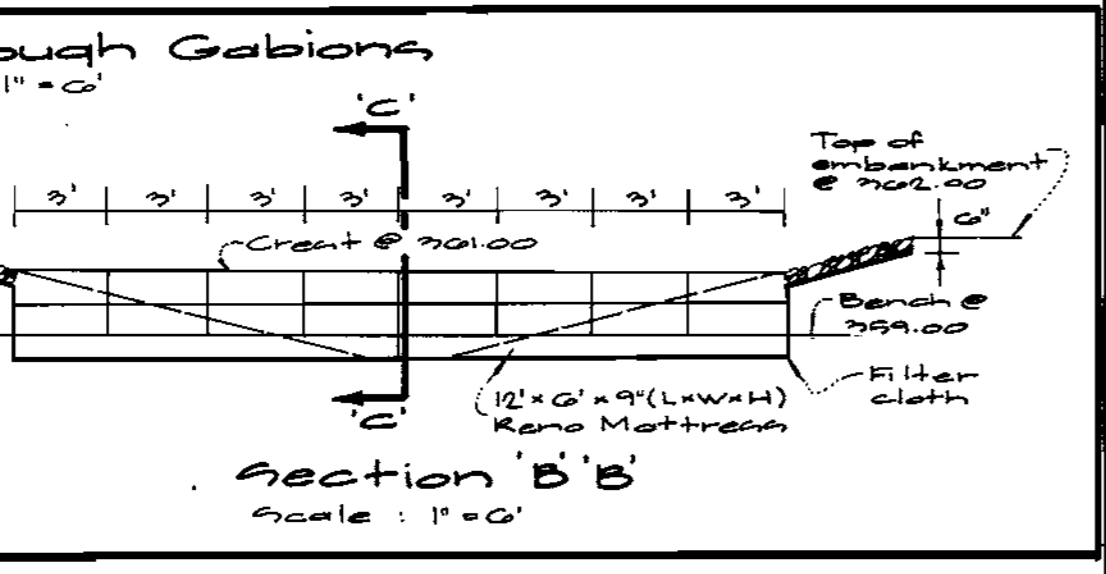
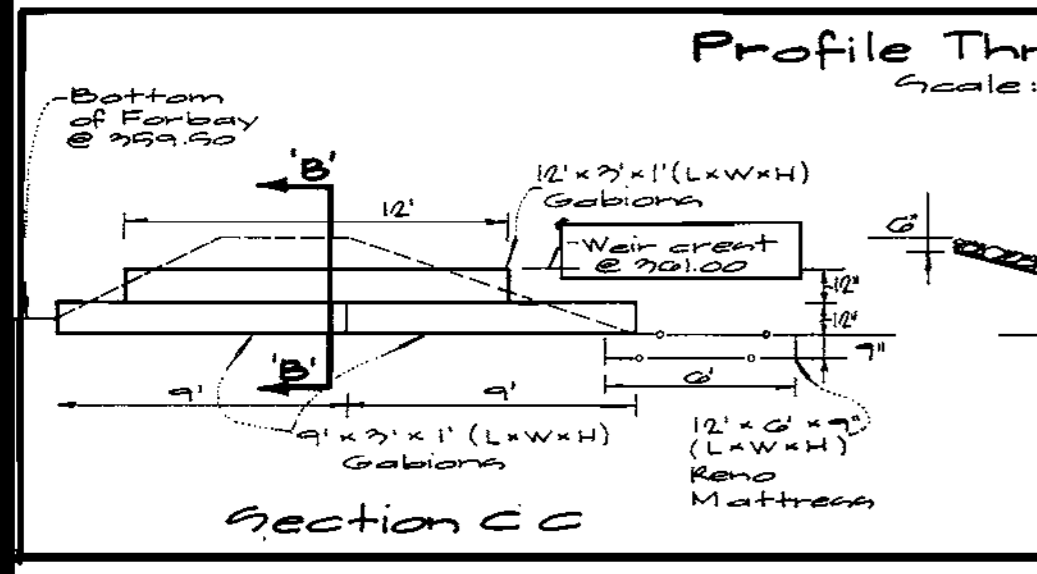
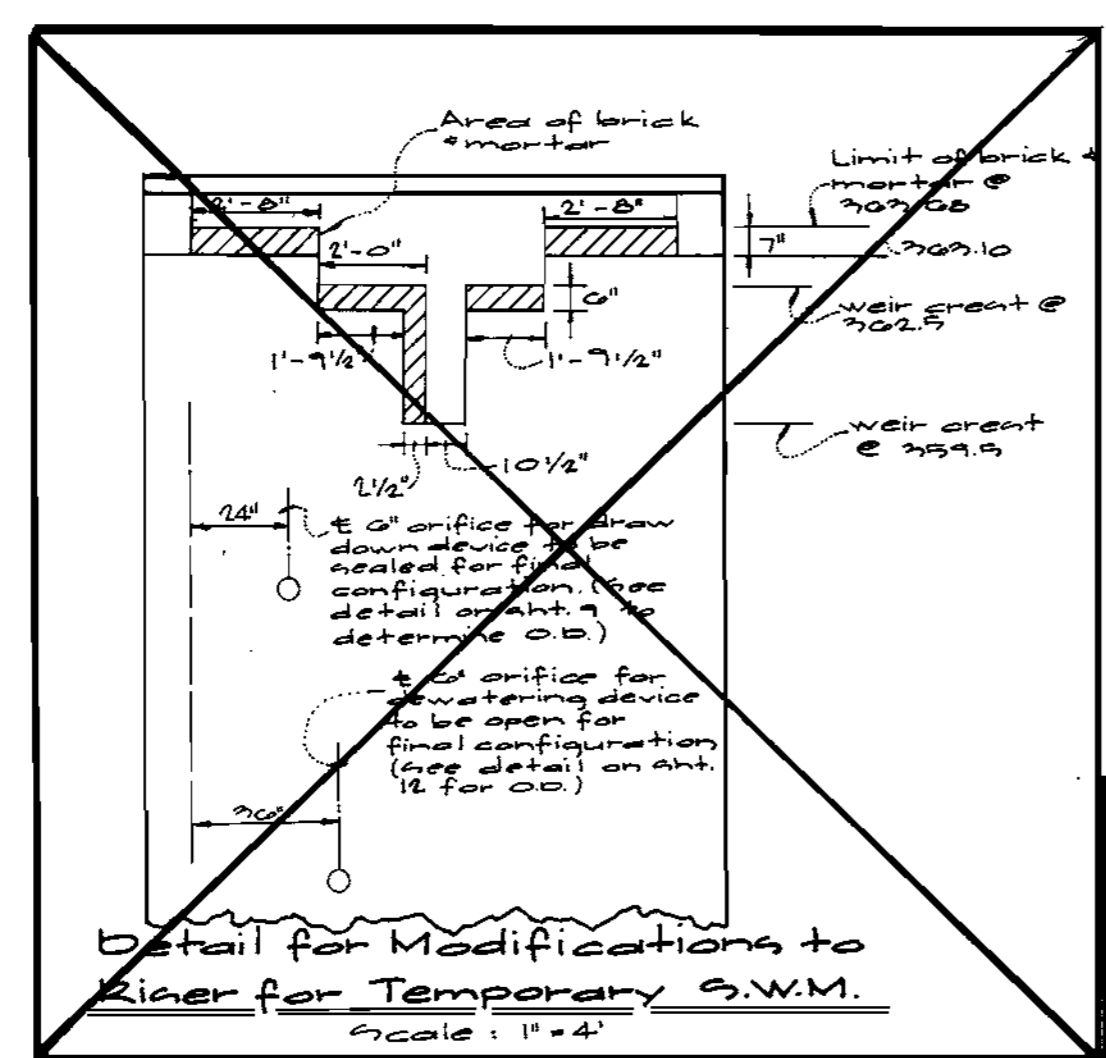
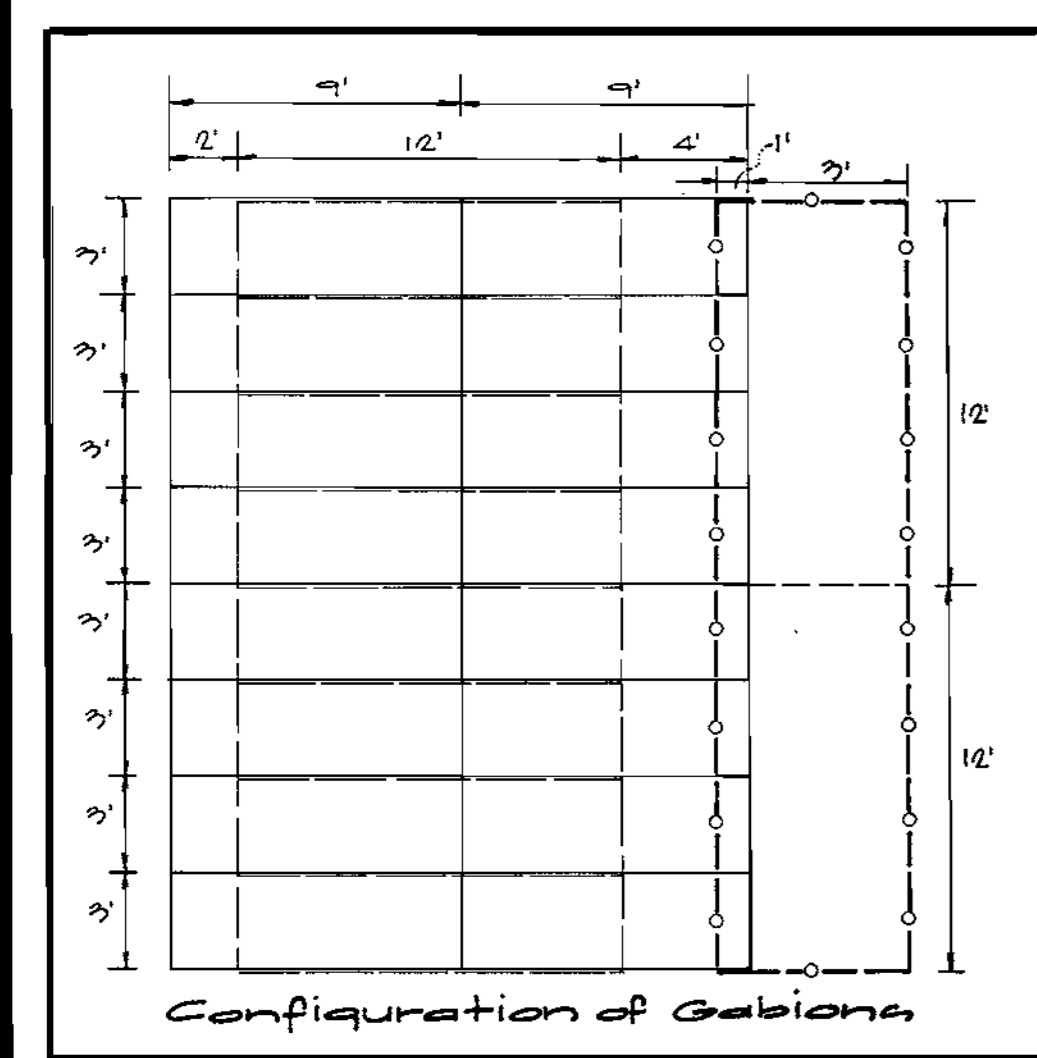
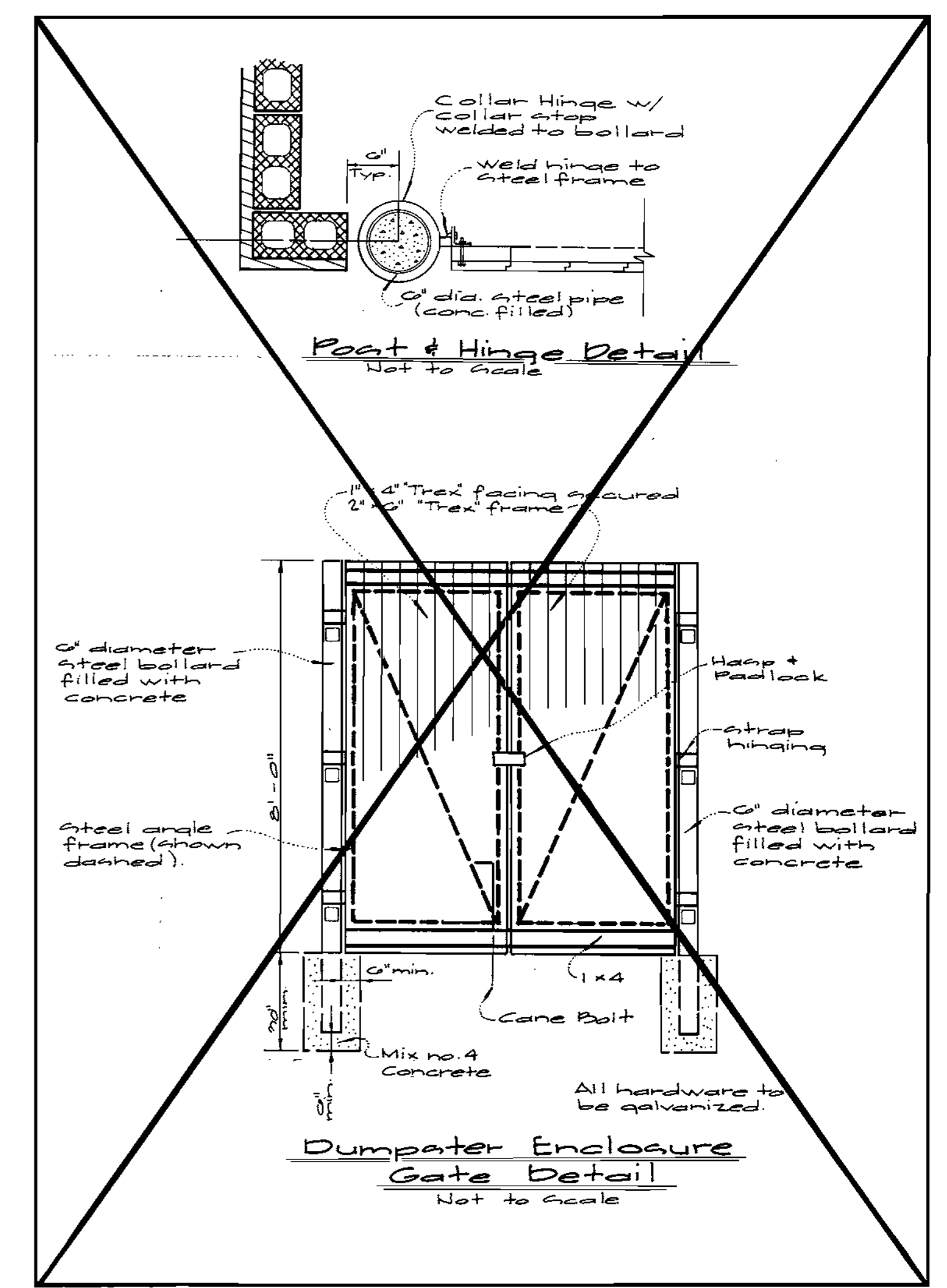
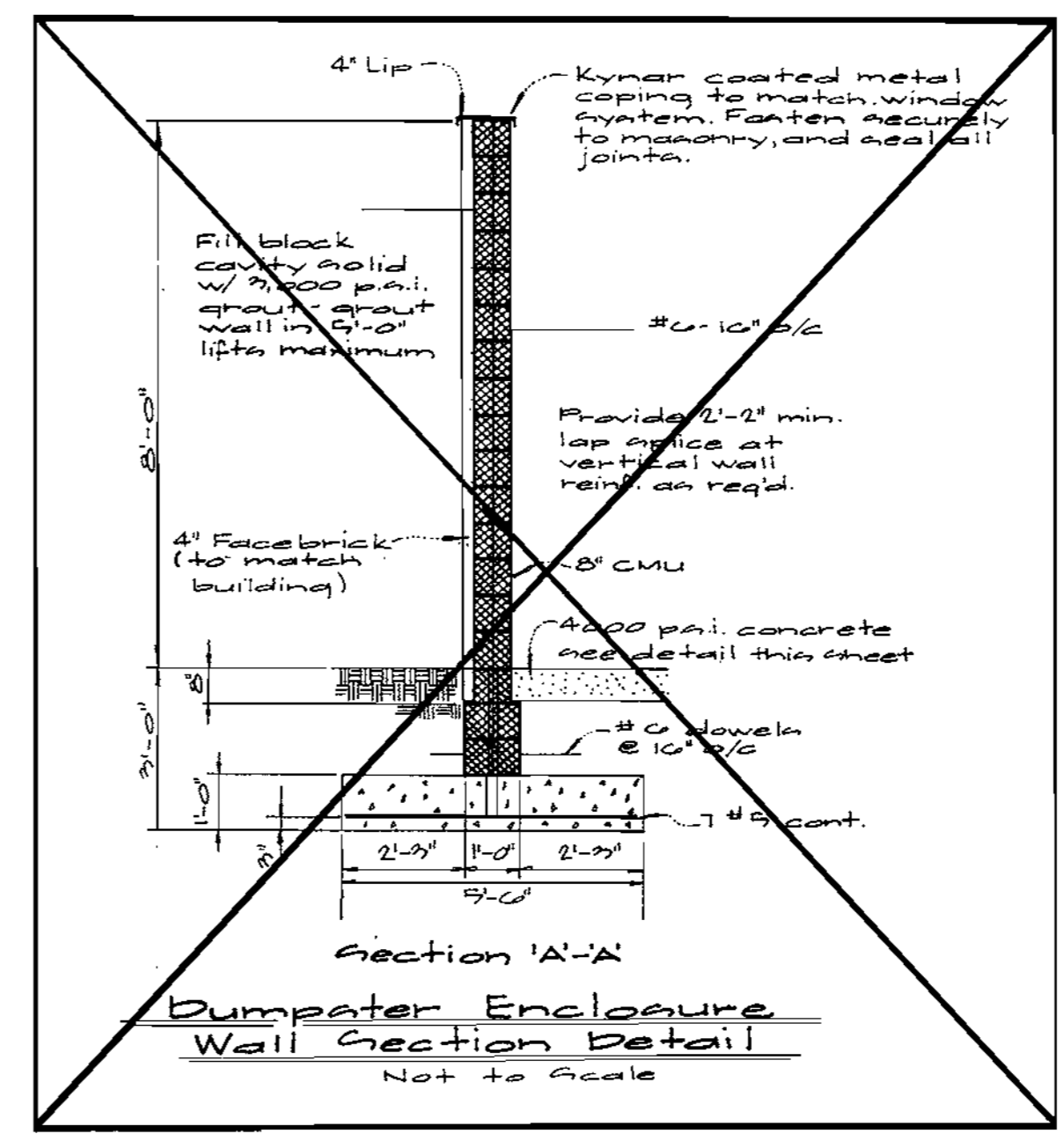
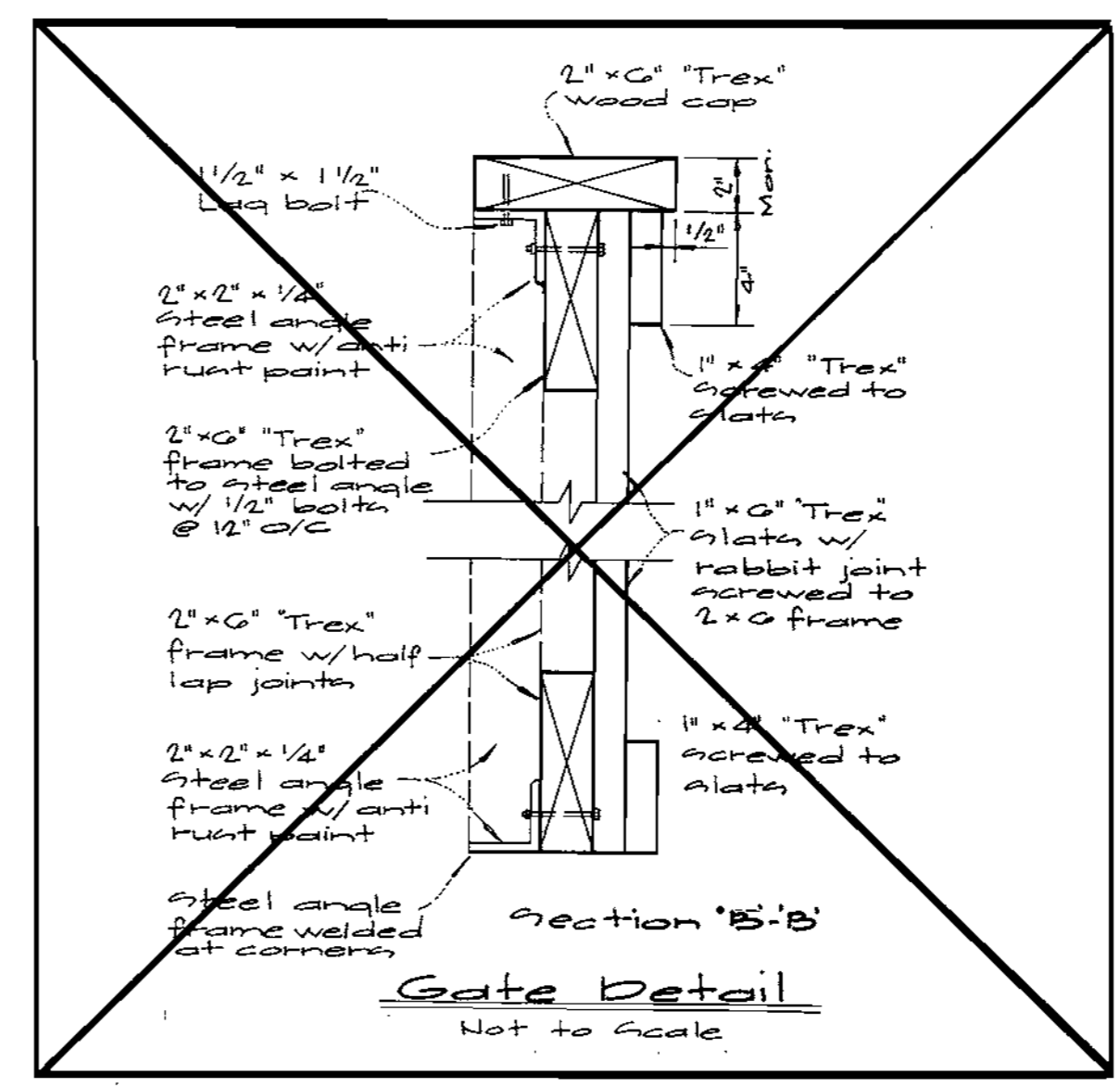
SWM 2  
At completion of boring hole wet & saved at 10'2"  
\* 24 hours after completion water at 4'9", hole saved at 5'2"

Elev.	Soil Description	Extra Depth
754.16	Surface	0.25
754.16	Micaceous clayey silt, with fine to med. sand, little silt, trace fine rack fragments, orange brown, moist, med. dense (CL/Fill) silt loam.	2.5
754.16	Micaceous fine to med. sand, little sand trace clay, gray-brown, moist, med. dense (SM/Fill) loamy sand.	5.0
754.16	Micaceous fine to med. sand, little sand trace clay, gray-brown, moist, med. dense (SM/Fill) loamy sand.	8.0
754.16	Clayey fine to med. sand, some silt, trace roots, dark gray, moist, med. dense (SM/GM) possible topsoil materials, sandy loam.	11.0
754.16	Micaceous fine to med. sand, little silt, brown green, saturated, med. dense (SM) [Saprolite] loamy sand.	15.0
754.16	Micaceous fine to coarse sand, some silt, greenish brown, saturated, medium dense (SM) [Saprolite] sandy loam.	25.0

SWM 3  
At completion of boring hole wet & saved at 17'4"  
\* 24 hours after completion water at 12'4", hole saved at 10'0"



Section A-A  
1" x 2"  
Underdrain Detail



APPROVED  
PLANNING BOARD  
of HOWARD COUNTY  
DATE SEPT. 23, 1999

Approved: Howard County Department of Planning & Zoning  
Director: David U. Sawyer 11/15/99  
Chief, Division of Land Development: Wanda Hamilton 11/19/99  
Chief, Development Engineering Division: Chris [Signature] 11/12/99



ENGINEER'S CERTIFICATE  
I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

CK [Signature] 8/17/99  
Date

DEVELOPER'S/BUILDER'S CERTIFICATE  
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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and 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.

Ch [Signature] 8/13/99  
Signature of Developer/Builder Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.  
Ch [Signature] 11/19/99  
Natural Resources Conservation Service Date

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.  
[Signature] 11/19/99  
Howard Soil Conservation District Date

As-Built

As-Built Sheet 7 of 8

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20866  
TELEPHONE: (301)421-4024 NO. VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186

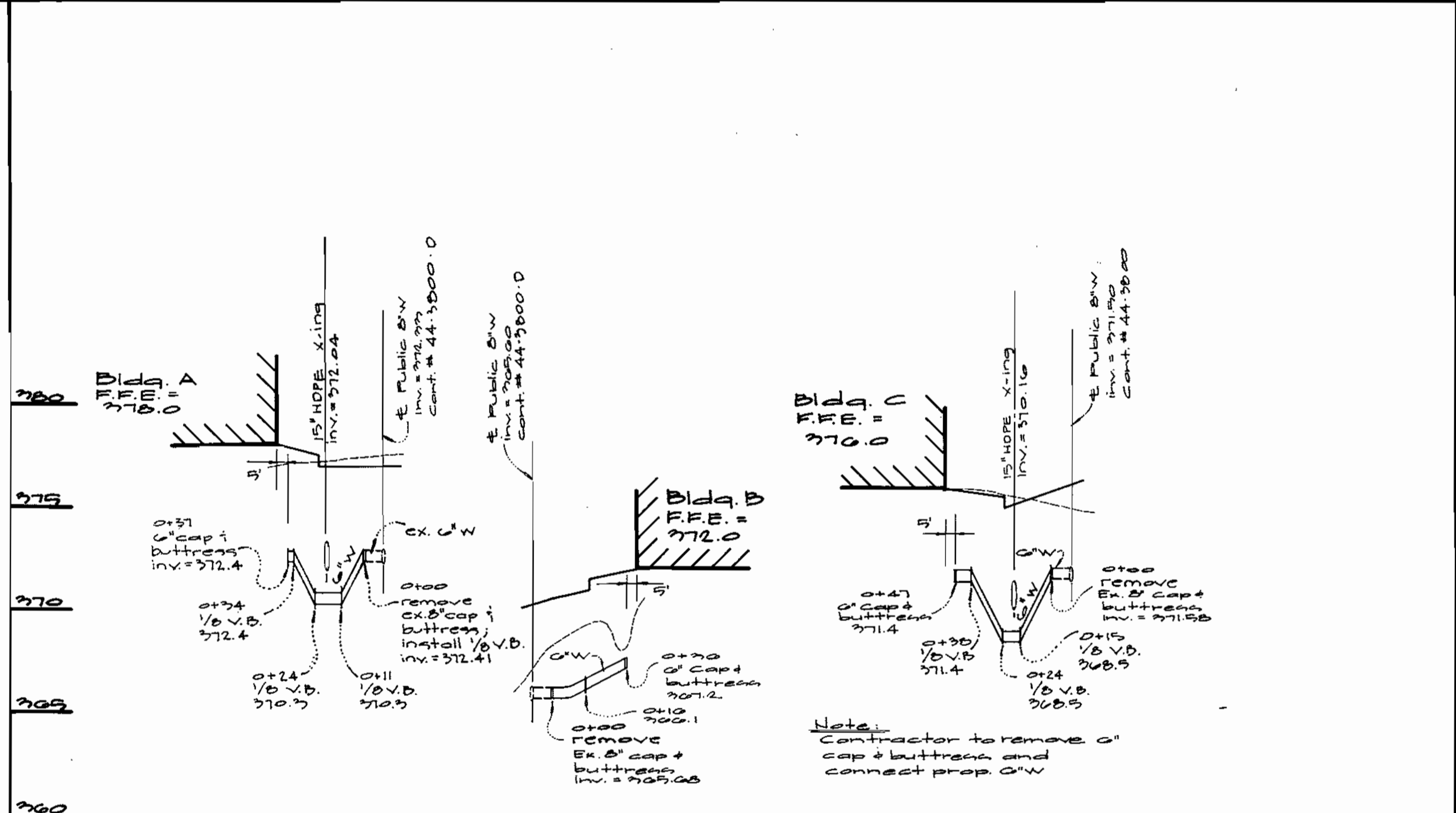
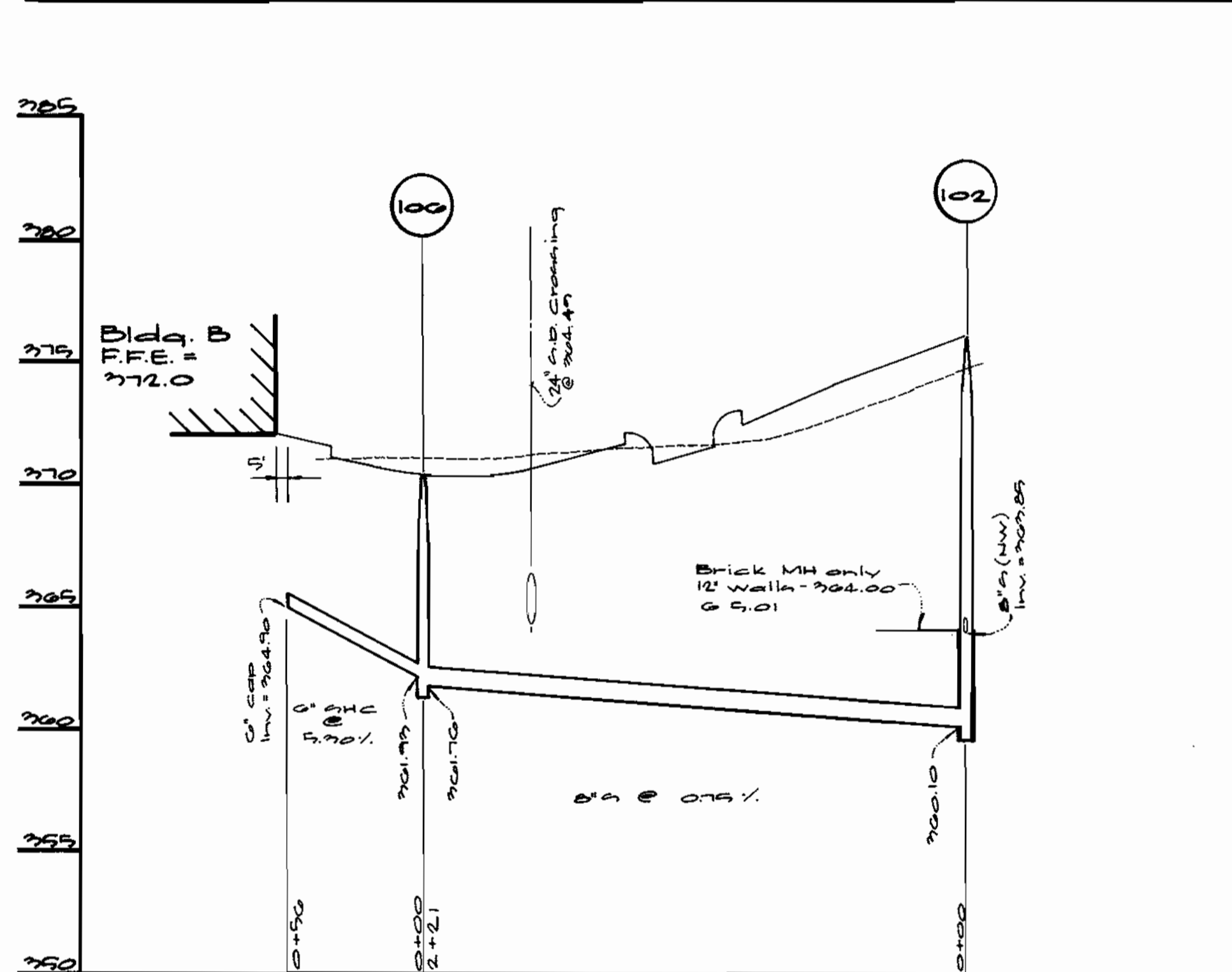
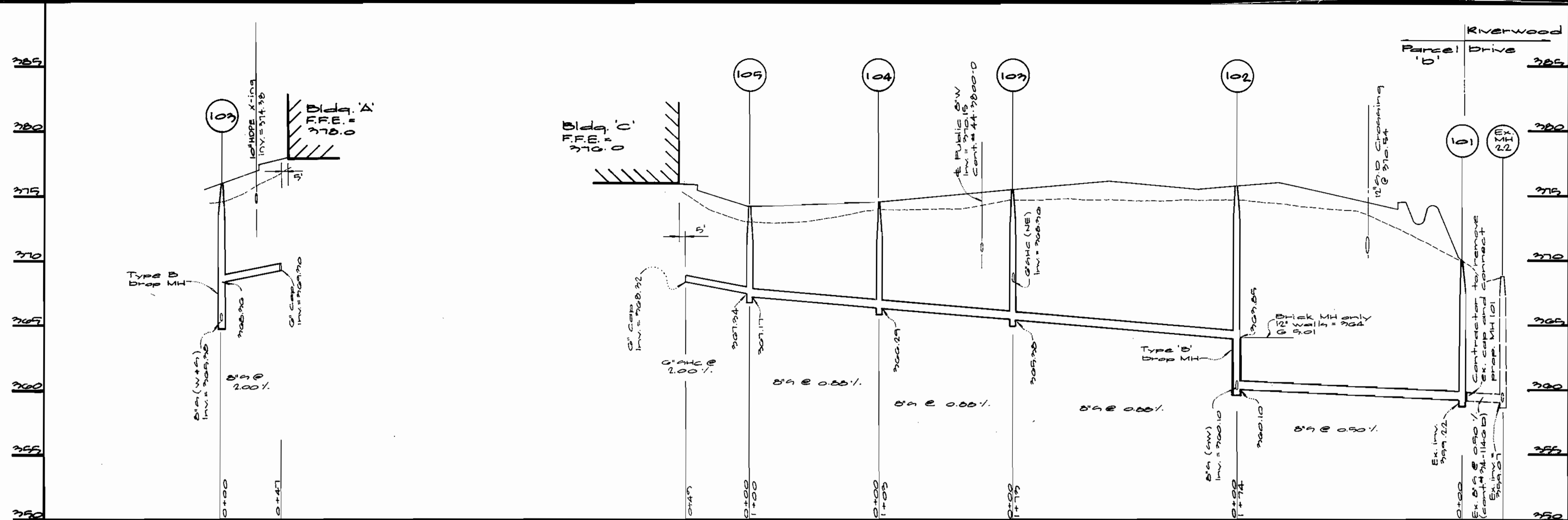
DATE	REVISION	BY	APPR.

PREPARED FOR:  
Nottingham Properties, Inc.  
100 West Pennsylvania Avenue  
Towson, Maryland 21204  
Mr. Charles E. McMahon  
410-625-0945

Stormwater Management / Site Details  
**Rivera Corporate Park**  
Section 1 Area 2 Parcel 'D'  
Plot No. 0020  
Suiford Election District No. 6  
Howard County, Maryland

DES. dev.	SCALE As shown	ZONING NT	G.L.W. FILE NO. 99070
DRN. f.m.m. <td>DATE Dec. 2000</td> <td>TAX MAP No. 41-12</td> <td>SHEET 13 of 16</td>	DATE Dec. 2000	TAX MAP No. 41-12	SHEET 13 of 16
CHK.:	1999		

GDP 00-28



Water House Connection Profiles  
 Scale: Horiz. 1"=50'  
 Vert. 1"=5'

APPROVED  
 PLANNING BOARD  
 of HOWARD COUNTY  
 DATE SEPT. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: Mark V. deLoyle Date: 11/19/99  
 Chief, Division of Land Development: Andy Hamilton Date: 11/19/99  
 Chief, Development Engineering Division: Chuck McMahon Date: 11/26/99



GLW GUTSCHICK LITTLE & WEBER, P.A.  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	DESCRIPTION	BY	APP'R.
Nov 4, 99	As submitted for signature		

PREPARED FOR:  
 NOTTINGHAM PROPERTIES, INC.  
 100 WEST PENNSYLVANIA AVENUE  
 TOWSON, MD. 21284  
 PH: 410-825-0545  
 ATTN: MR. CHUCK McMAHON

UTILITY PROFILES  
 RIVERS CORPORATE PARK  
 SECTION 1 AREA 2 - PARCEL 'D'  
 PLAT No. 6020  
 GUILFORD ELECTION DISTRICT No. 6  
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	99030
DATE	TAX MAP - GRID	SHEET
Sept. 18, 1999	41 - 12	14 OF 16



POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and striped 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 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. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

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. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Area on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in a maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated in to the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

When a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill - Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed 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 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for 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 AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. 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 or an approved equal may be used: Nexon, Plasit-Cote, Bloc-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Material - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

- 2. 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.

- 3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe & riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

Helically corrugated pipe shall have either continuously welded seams or have lock seams.

- 4. 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.

- 5. Backfilling shall conform to "Structure Backfill".
- 6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

- 1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.
- 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 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
- 3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed 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. The first joint must be located within 2 feet from the riser.

- 4. Backfilling shall conform to "Structure Backfill".

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

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

- 1. Materials - PVC pipe shall be PVC - 1120 or PVC - 1220 conforming to ASTM D-1785 or ASTM D-2241.
- 2. Joints and connections to anti-seep collars shall be completely watertight.
- 3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
- 4. Backfilling shall conform to "Structure Backfill".
- 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standards Specifications for Construction and Materials, Section 608, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The rip rap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slopely condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

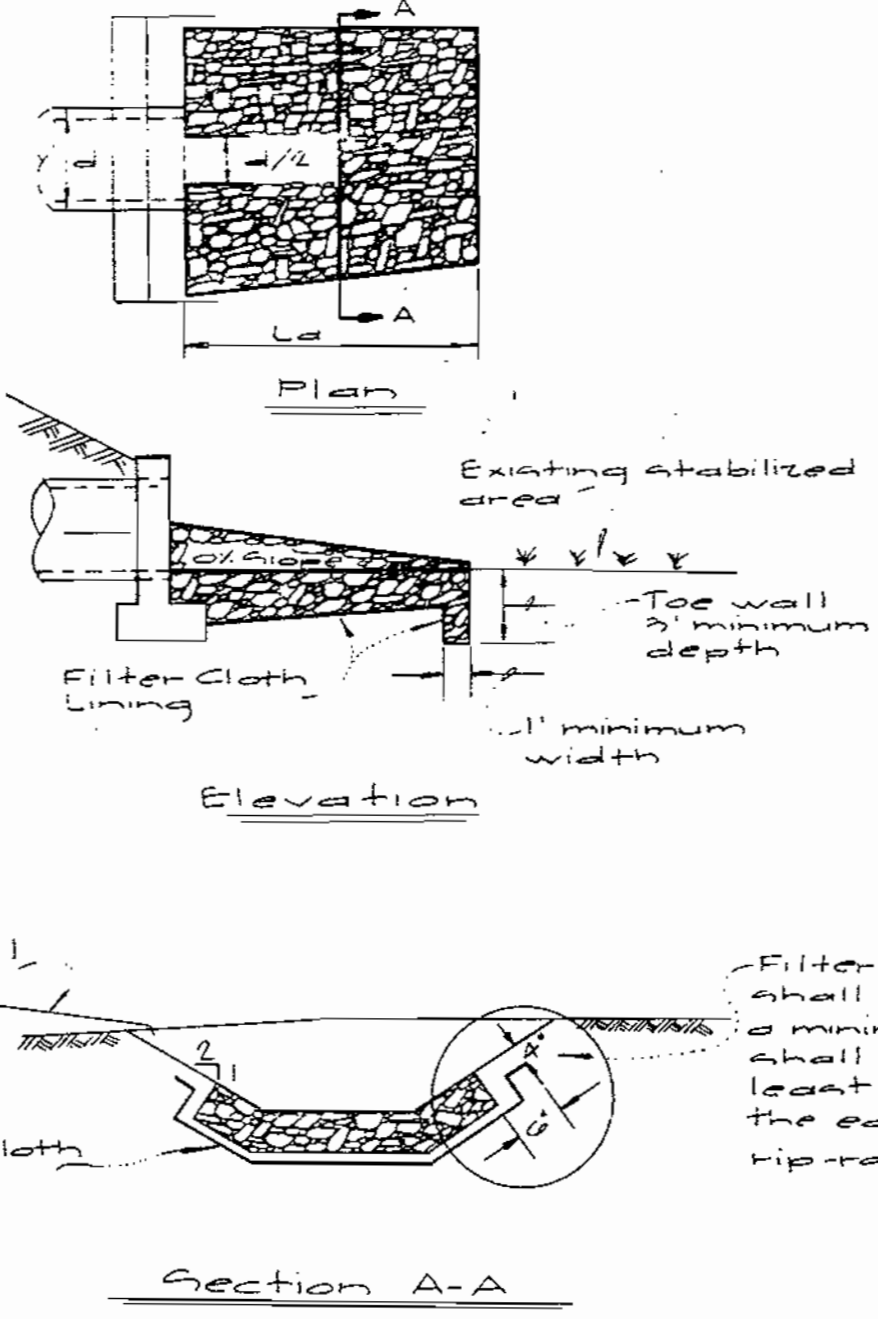
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction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

BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

- 1) No excess fill, construction material, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 2) Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 3) Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material, or any other deleterious substance.
- 4) Place heavy equipment on mats or suitably operate the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 5) Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, waterways, or permanent modification of the 100-year floodplain in excess of that lost under the originally authorized structure or fill.
- 6) Rectify any nontidal wetlands, wetland buffers, waterways, or 100-year floodplain temporarily impacted by any construction.
- 7) All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (Lolium multiflorum), Millet (Setaria italica), Barley (Hordeum sp.), Oats (Uroda sp.), and/or Rye (Secale cereale). These species will allow for the stabilization of the site while also allowing for the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. Kentucky 31 fescue shall not be utilized in wetland or buffer areas. The area should be seeded and mulched to reduce erosion after construction activities have been completed.
- 8) After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
- 9) To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream.

Use 1 waters: In-stream work shall not be conducted during the period March 1 through June 15, inclusive, during any year.

- 10) Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
- 11) Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.



Rock Outlet Protection III

Table with columns for TOPSOIL and FILL. It contains detailed specifications for soil quality, compaction, and placement, including references to Maryland Department of Transportation standards.

NOTE: In addition to the Howard County Standard Specifications, and those on this sheet, the construction of the Stormwater Management facility shall be in accordance with the recommendations contained in the geotechnical report by ECS, Ltd., dated May 11, 1999 and August 11, 1999. If the provisions of the report conflict with Howard County's specifications or those on this sheet in any way, the more stringent requirement shall apply.

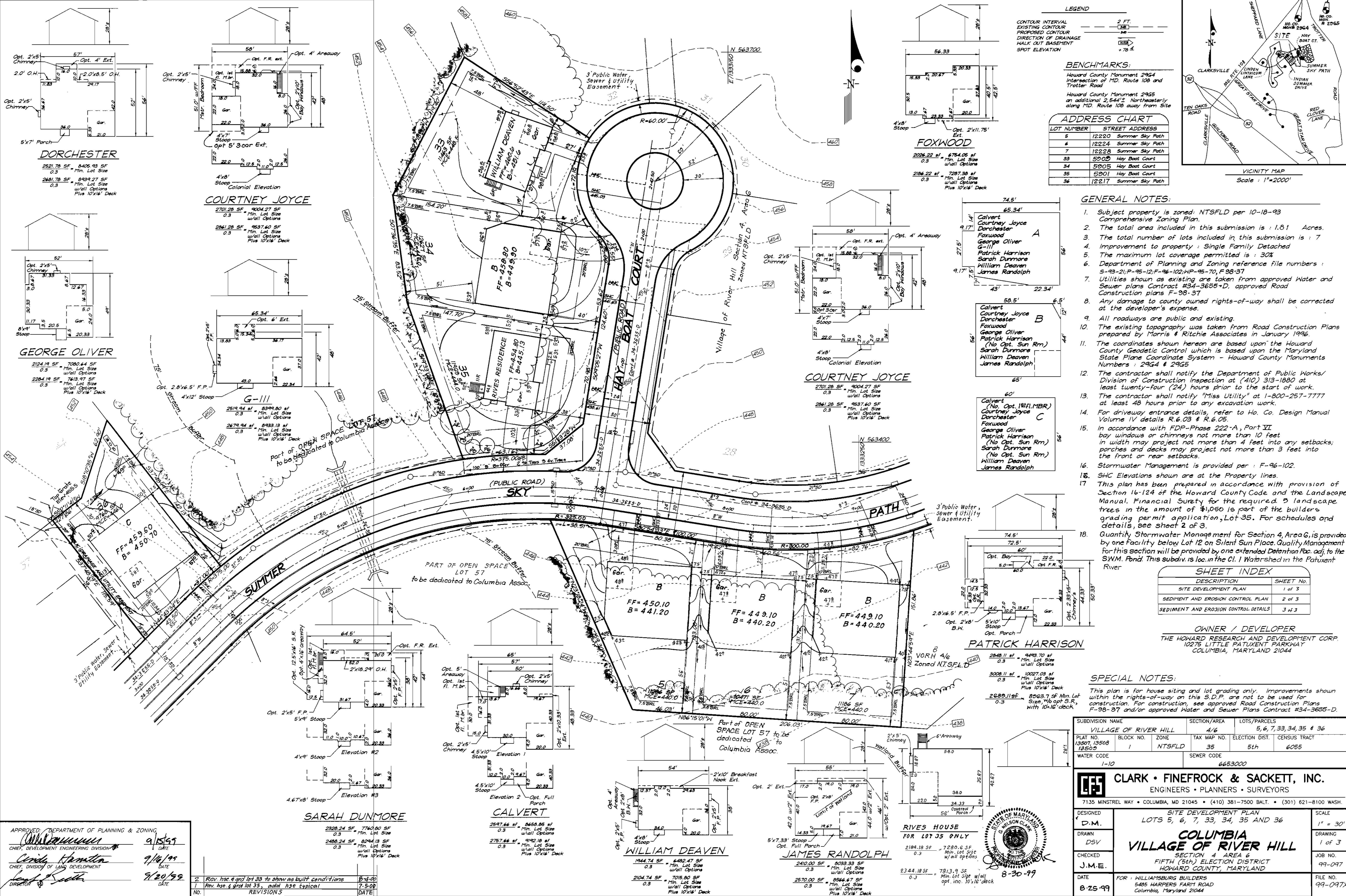
APPROVED PLANNING BOARD OF HOWARD COUNTY. DATE SEPT. 23, 1999. APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING. Director: David C. DeLage, Cindy Hamilton, etc.

ENGINEER'S CERTIFICATE: I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. Signature: [Signature], Date: 8/17/99. DEVELOPER'S/BUILDER'S CERTIFICATE: I certify that all development and/or construction will be done according to these plans... Signature: [Signature], Date: 8/13/99.

PREPARED FOR: Nottingham Properties, Inc. 100 West Pennsylvania Avenue, Towson, Maryland 21284. Mr. Charles E. McMahon, 410-825-0549. SCALE: as shown. ZONING: NT. SHEET: 16 of 16. SIGNED: [Signatures], DATE: 11/19/99. G.L.W. FILE NO. 99030.

Project information table with columns for DES, DRN, CHK, DATE, REVISION, BY, APPR. Includes project name 'Rivera Corporate Park' and location 'Guilford Election District No. 6'.

SOP 0028



**LEGEND**  
 CONTOUR INTERVAL: 2 FT.  
 EXISTING CONTOUR: (dashed line)  
 PROPOSED CONTOUR: (solid line)  
 DIRECTION OF DRAINAGE: (arrow)  
 WALK OUT BASEMENT: (staircase symbol)  
 SPOT ELEVATION: (number)

**BENCHMARKS:**  
 Howard County Monument 2964  
 Intersection of MD. Route 108 and Trotter Road  
 Howard County Monument 2965  
 an additional 2,644' Northeastly  
 along MD. Route 108 away from Site

**ADDRESS CHART**

LOT NUMBER	STREET ADDRESS
5	12220 Summer Sky Path
6	12224 Summer Sky Path
7	12228 Summer Sky Path
33	5905 Hay Boat Court
34	5905 Hay Boat Court
35	5901 Hay Boat Court
36	12217 Summer Sky Path

- GENERAL NOTES:**
- Subject property is zoned: NTSFLD per 10-18-93 Comprehensive Zoning Plan.
  - The total area included in this submission is: 1.81 Acres.
  - The total number of lots included in this submission is: 7
  - Improvement to property: Single Family Detached
  - The maximum lot coverage permitted is: 30%
  - Department of Planning and Zoning reference file numbers: 5-93-21; F-95-12; F-96-102; WP-95-70; F-98-37
  - Utilities shown as existing are taken from approved Water and Sewer plans Contract #34-3655-D, approved Road Construction plans F-98-37
  - Any damage to county owned rights-of-way shall be corrected at the developer's expense.
  - All roadways are public and existing.
  - The existing topography was taken from Road Construction Plans prepared by Morris & Ritchie Associates in January 1996.
  - The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System - Howard County Monuments Numbers: 2964 & 2965
  - The contractor shall notify the Department of Public Works/Division of Construction Inspection at (410) 313-1880 at least twenty-four (24) hours prior to the start of work.
  - The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
  - For driveway entrance details, refer to Ho. Co. Design Manual Volume IV details R.6.03 & R.6.05
  - In accordance with FDP-Phase 222-A, Part XI bay windows or chimneys not more than 10 feet in width may project not more than 4 feet into any setbacks; porches and decks may project not more than 3 feet into the front or rear setbacks.
  - Stormwater Management is provided per: F-96-102.
  - SHC Elevations shown are at the Property lines.
  - This plan has been prepared in accordance with provision of Section 16-124 of the Howard County Code and the Landscape Manual. Financial Surety for the required 3 landscape trees in the amount of \$1,050 is part of the builder's grading permit application, Lot 35. For schedules and details, see sheet 2 of 3.
  - Quantity Stormwater Management for Section 4, Area G, is provided by one facility below Lot 12 on Silent Sun Place. Quality Management for this section will be provided by one extended Detention Fac. adj. to the SWM Pond. This subdiv. is loc. in the Cl. I Watershed in the Patuxent River

**SHEET INDEX**

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SEDIMENT AND EROSION CONTROL PLAN	2 of 3
SEDIMENT AND EROSION CONTROL DETAILS	3 of 3

**OWNER / DEVELOPER**  
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21044

**SPECIAL NOTES:**  
 This plan is for house siting and lot grading only. Improvements shown within the rights-of-way on this S.D.P. are not to be used for construction. For construction, see approved Road Construction Plans F-98-37 and/or approved Water and Sewer Plans Contract #34-3655-D.

SUBDIVISION NAME	SECTION/AREA	LOTS/PARCELS
VILLAGE OF RIVER HILL	4/6	5, 6, 7, 33, 34, 35 & 36
PLAT NO.	BLOCK NO.	ZONE
13507, 13508, 13509	1	NTSFLD
TAX MAP NO.	ELECTION DIST.	CENSUS TRACT
35	5th	6055
WATER CODE	SEWER CODE	
1-10	6653000	

**CLARK • FINEFROCK & SACKETT, INC.**  
 ENGINEERS • PLANNERS • SURVEYORS  
 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

**SITE DEVELOPMENT PLAN**  
 LOTS 5, 6, 7, 33, 34, 35 AND 36

**COLUMBIA VILLAGE OF RIVER HILL**  
 SECTION 4 AREA 6  
 FIFTH (5th) ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**DESIGNED** D.M.  
**DRAWN** DSV  
**CHECKED** J.M.E.  
**DATE** 8-25-99

**SCALE** 1" = 30'  
**DRAWING** 1 of 3  
**JOB NO.** 99-097  
**FILE NO.** 99-097X

FOR: WILLIAMSBURG BUILDERS  
 5485 HARRIS FARMS ROAD  
 Columbia, Maryland 21044

**APPROVED** DEPARTMENT OF PLANNING & ZONING  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature]

DATE: 9/15/99  
 DATE: 9/16/99  
 DATE: 9/20/99

**REVISIONS**

No.	REVISIONS	DATE
1	Rev. hsc & grad lot 35, add hsc typical	8-4-00
2	Rev. hsc & grad lot 33 to show as built conditions	7-5-00

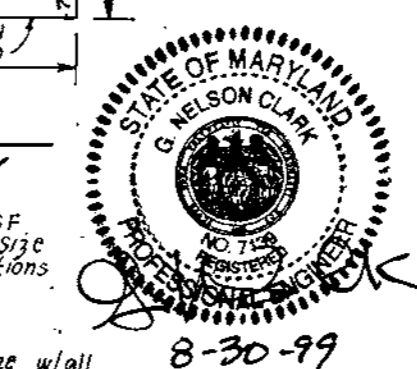
**SARAH DUNMORE**  
 2328.24 SF = 7740.00 SF  
 0.3 Min. Lot Size w/all Options  
 2488.24 SF = 8244.13 SF  
 0.3 Min. Lot Size w/all Options Plus 10'x16' Deck

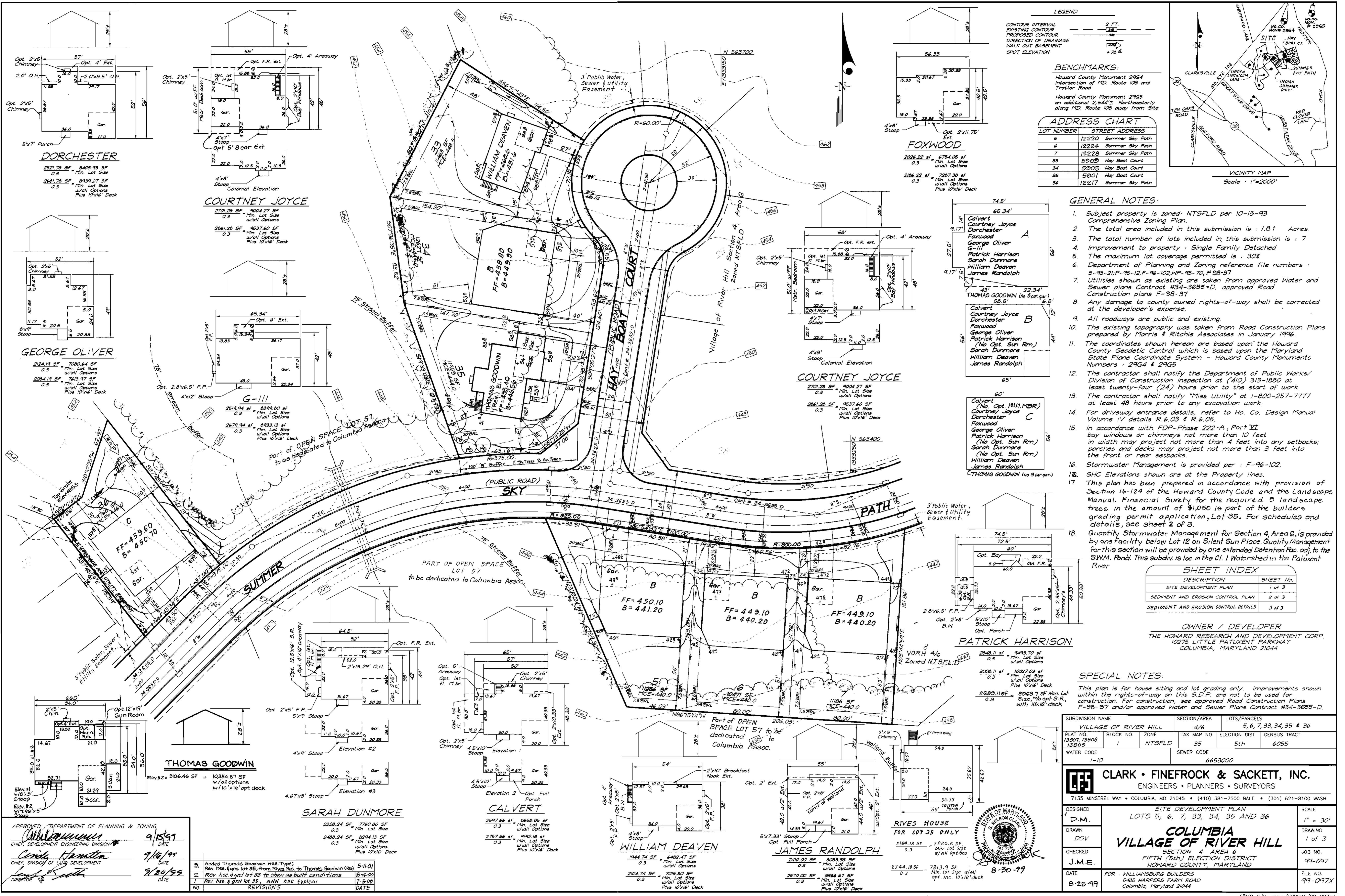
**CALVERT**  
 2547.66 SF = 8460.05 SF  
 0.3 Min. Lot Size w/all Options  
 2757.66 SF = 9142.18 SF  
 0.3 Min. Lot Size w/all Options Plus 10'x16' Deck

**WILLIAM DEAVEN**  
 1944.74 SF = 6482.47 SF  
 0.3 Min. Lot Size w/all Options  
 2104.74 SF = 7018.80 SF  
 0.3 Min. Lot Size w/all Options Plus 10'x16' Deck

**JAMES RANDOLPH**  
 2410.00 SF = 8033.33 SF  
 0.3 Min. Lot Size w/all Options  
 2570.00 SF = 8566.67 SF  
 0.3 Min. Lot Size w/all Options Plus 10'x16' Deck

**RIVES HOUSE FOR LOT 35 ONLY**  
 2184.18 SF = 7280.6 SF  
 0.3 Min. Lot Size w/all Options  
 2344.18 SF = 7813.9 SF  
 0.3 Min. Lot Size w/all Options Plus 10'x16' Deck



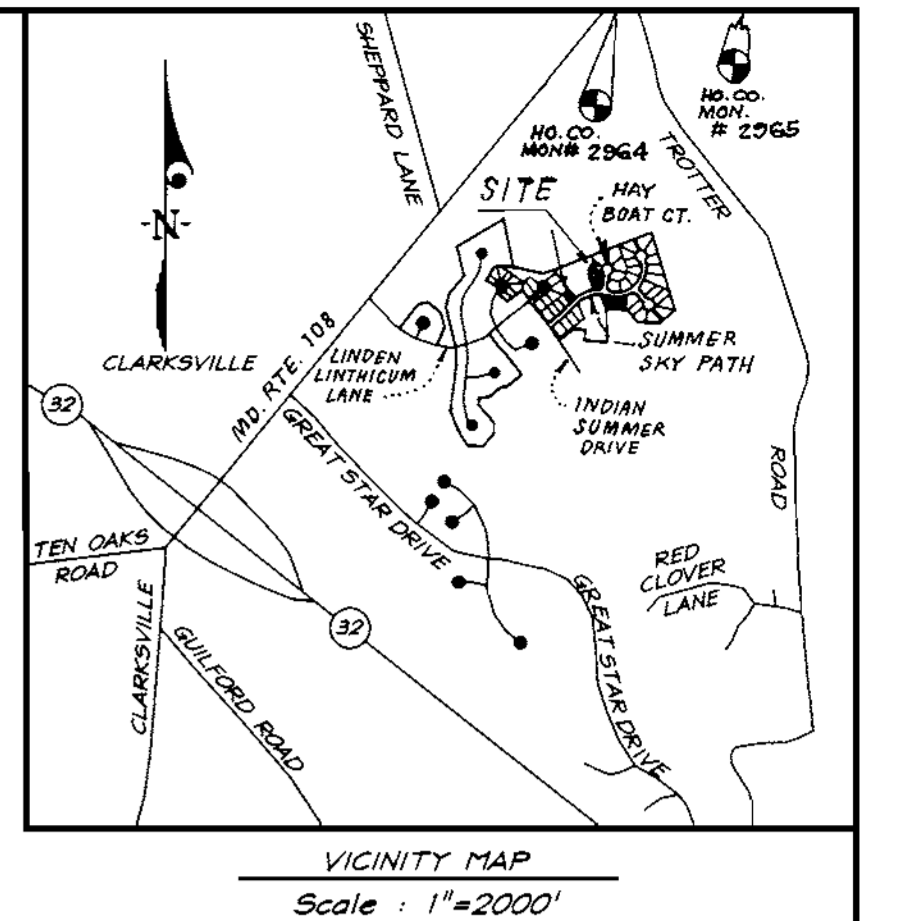


**LEGEND**  
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 EXISTING CONTOUR: ---  
 PROPOSED CONTOUR: - - -  
 DIRECTION OF DRAINAGE: →  
 WALK OUT BASEMENT: ---  
 SPOT ELEVATION: 78.4

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 Howard County Monument 2965  
 an additional 2.544' Northwesterly  
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  19. Quantity Stormwater Management for Section 4, Area G, is provided by one facility below Lot 12 on Silent Sun Place. Quality Management for this section will be provided by one extended Detention Fac. adj. to the SWM Pond. This subdv. is loc. in the Cl. I Watershed in the Patuxent River

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 10275 LITTLE PATUXENT PARKWAY  
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WATER CODE	SEWER CODE	
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**SITE DEVELOPMENT PLAN**  
 LOTS 5, 6, 7, 33, 34, 35 AND 36

**COLUMBIA VILLAGE OF RIVER HILL**  
 SECTION 4 AREA 6  
 FIFTH (5TH) ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

DESIGNED: D.M.  
 DRAWN: DSV  
 CHECKED: J.M.E.  
 DATE: 8-25-99

SCALE: 1" = 30'  
 DRAWING: 1 of 3  
 JOB NO: 99-097  
 FILE NO: 99-097X

FOR: WILLIAMS HARBOR BUILDERS  
 5485 HARRIS FARM ROAD  
 Columbia, Maryland 21044

**DORCHESTER**  
 2521.78 SF = 8405.89 SF  
 0.3 Min. Lot Size  
 2661.78 SF = 8939.27 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**COURTNEY JOYCE**  
 2701.28 SF = 9004.27 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2861.28 SF = 9537.60 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**GEORGE OLIVER**  
 2124.19 SF = 7080.64 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2284.19 SF = 7613.97 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**G-III**  
 2519.94 SF = 8399.80 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2679.94 SF = 8933.13 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**THOMAS GOODWIN**  
 Elev. #2 = 9106.46 SF = 10354.87 SF  
 w/all options  
 w/10'x16' opt deck

**SARAH DUNMORE**  
 2328.24 SF = 7740.00 SF  
 0.3 Min. Lot Size  
 2488.24 SF = 8294.13 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

**CALVERT**  
 2597.66 SF = 8658.05 SF  
 0.3 Min. Lot Size  
 w/all Options  
 2757.66 SF = 9192.10 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

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 2344.18 SF = 7913.9 SF  
 0.3 Min. Lot Size  
 w/all Options  
 Plus 10'x16' Deck

APPROVED: DEPARTMENT OF PLANNING & ZONING  
 Chief, Development Engineering Division  
 Chief, Division of Land Development

9/15/99  
 9/16/99  
 9/20/99

3. Added Thomas Goodwin Hse. Type;  
 Rev. hse. # and lot 35, from Rives Res. to Thomas Goodwin (880)  
 2. Rev. hse. # and lot 35, to show as built conditions  
 1. Rev. hse. # and lot 35, to show hse. typical

5-11-01  
 8-14-00  
 7-5-00

REVISIONS