

The grid and north arrow shown hereon are referred to the system of coordinates established in the Maryland Coordinate System and based on the following station and bearing:

Howard Co. Monument
46-C3 N 537,405.00 E 1,347,556.23
Bearing 10:
47-AA N 29° 34' 10.7" E

Elevations shown hereon are referred to the Maryland Coordinate System Vertical Datum (NGVD/29) and based on the following Bench Mark:
Howard Co. Station: 2039003-R
Elevation: 400.862

QUANTITIES BOX

ITEM NO.	DESCRIPTION	BID QUANTITY	AS-BUILT QUANTITY
1	8" DIP SAN. SEWER MAIN	235'	
2	SANITARY SEWER MANHOLE	2	
3	4" DIP SAN. SEWER SERVICE CONNECTION	38'	
4	4" DIP WATER MAIN	405'	
5	1" WATER SERVICE CONN.	30'	
6	11.25" DIP HORIZ. BEND	1	

WHC LOCATION DATA

LOT NO.	NORTH	EAST
1	537,154.49	1,343,911.47
2	537,053.54	1,343,826.76
3	536,975.97	1,343,761.67

SEWER MANHOLE LOCATION DATA

NO.	NORTH	EAST	OFFSET
1	536,838.91	1,343,833.54	-----
2	537,045.74	1,343,944.84	-----

WATER LINE LOCATION DATA

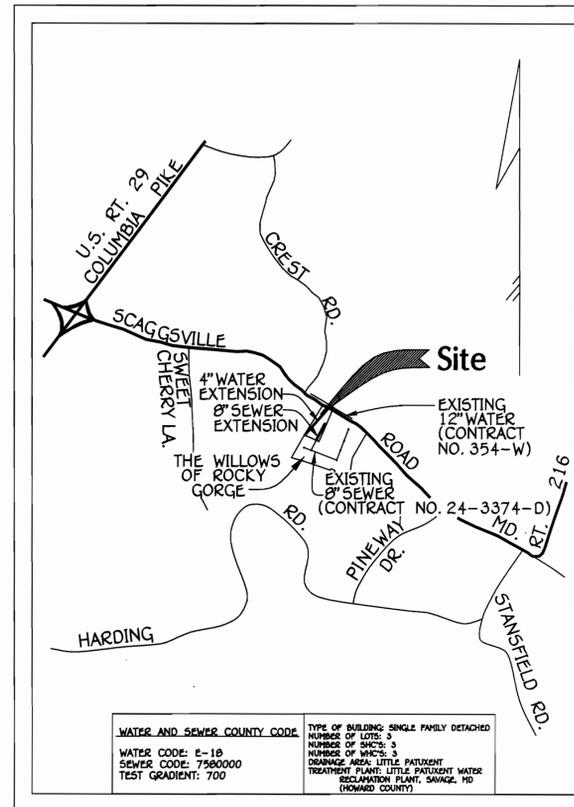
DESC.	WL STA	NORTH	EAST
4" X 12" T.S. & VALVE	0+00	537,261.36	1,343,989.25
POPE & BUTTRESS	4+68.83	536,902.22	1,343,687.89

*SEE NOTE BELOW

* LOCATION OF EXISTING WATER MAIN SHOWN ON THESE DRAWINGS IS BASED UPON THE LOCATION SHOWN ON THE CONSTRUCTION DRAWINGS * THE WILLOWS OF ROCKY GORGE LOT NO. 1-45 CONTRACT NO. 24-3374-D*

HIGDON HEIGHTS

LOTS 1-3
WATER AND SEWER MAIN EXTENSIONS
CONTRACT NO. 24-3686-D
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



VICINITY MAP
1" = 600'

WATER AND SEWER COUNTY CODE
WATER CODE: E-18
SEWER CODE: 7980000
TEST GRADIENT: 700

TYPE OF BUILDING: SINGLE FAMILY DETACHED
NUMBER OF LOTS: 3
NUMBER OF SLOTS: 3
NUMBER OF UNITS: 3
DRAINAGE AREA: LITTLE PATENT WATER TREATMENT PLANT, LITTLE PATENT WATER RECLAMATION PLANT, SAVAGE, MD (HOWARD COUNTY)

GENERAL NOTES

PART I

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAIL FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 HOWARD COUNTY BUREAU OF UTILITIES, DPW (410) 313-4900
 BALTIMORE GAS & ELECTRIC CO. (410) 850-4620
 (CONTRACTOR SERVICES)
 BALTIMORE GAS & ELECTRIC CO. (410) 787-9068
 (UNDERGROUND DAMAGE CONTROL)
 COLONIAL PIPELINE CO. (410) 795-1390
 MISS UTILITY 1-800-257-7777
 (410) 531-5833
 STATE HIGHWAY ADMINISTRATION
 TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
 CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
 PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE OPERATIONS.
 THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTRY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS SHALL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.
 SEDIMENT CONTROL SHALL BE IMPLEMENTED IN ACCORDANCE WITH SECTION WITH DPW 219 OF THE STANDARDS AND SPECIFICATIONS (VOL. IV) OF THE HOWARD COUNTY DESIGN MANUAL AND THESE PLANS.

PART II WATER

- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON THE PLAN OR IN THE SPECIFICATIONS.
- SINGLE WATER HOUSE CONNECTIONS SHALL BE 3/4". DOUBLE WATER HOUSE CONNECTIONS SHALL BE 1".

PART III SEWER

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL SEWER HOUSE CONNECTIONS SHALL BE 4"
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER. STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

GP-95-187

DEVELOPER'S CERTIFICATION

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Eula P. Higdon 9/14/88
DEVELOPER'S SIGNATURE DATE

EULA P. HIGDON 9/14/88
DEVELOPER'S NAME TRUST # DATE

ENGINEER'S CERTIFICATION

I 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.

Richard H. Berich 8/12/88
ENGINEER'S SIGNATURE DATE

Richard H. Berich 8/12/88
ENGINEER'S NAME DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmons 10/13/88
U.S.D.A. Natural Resources Conservation Service DATE

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

John R. Britton 10/13/88
Howard Soil Conservation District DATE

HOWARD CO. SUBDIV. NO. F-99-178

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- SHEET 1 - TITLE SHEET
- SHEET 2 - SITE PLAN, PROFILE, AND DETAILS
- SHEET 3 - SEDIMENT AND EROSION CONTROL PLAN AND DETAILS

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY MARYLAND

Richard H. Berich 9-30-98
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY MARYLAND

Richard H. Berich 9/2/89
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

PURDUM and JESCHKE, LLC
Consulting Engineers and Land Surveyors
Civil • Structural • Environmental
The Professional Engineering Center
8005 Harford Road
Baltimore, Maryland 21234
Phone: 410-668-8800 Fax: 410-668-8801



engineering	illustration	approval	project	date
BY	No	REVISION	DATE	

TITLE SHEET

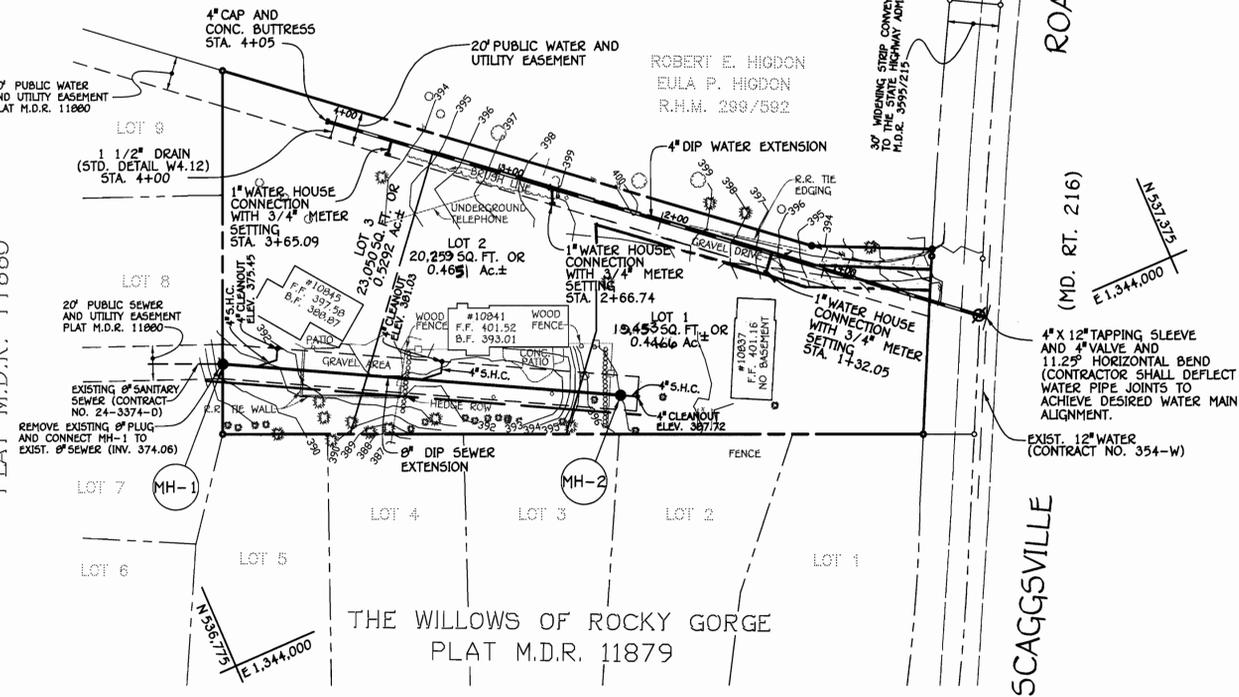
600' SCALE MAP No. 46 BLOCK No. 11

HIGDON HEIGHTS
LOTS 1-3
WATER AND SEWER MAIN EXTENSIONS
CONTRACT No. 24-3686-D
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE:
AS SHOWN

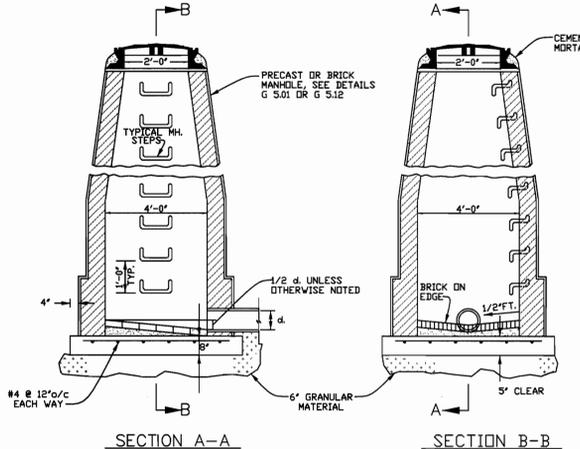
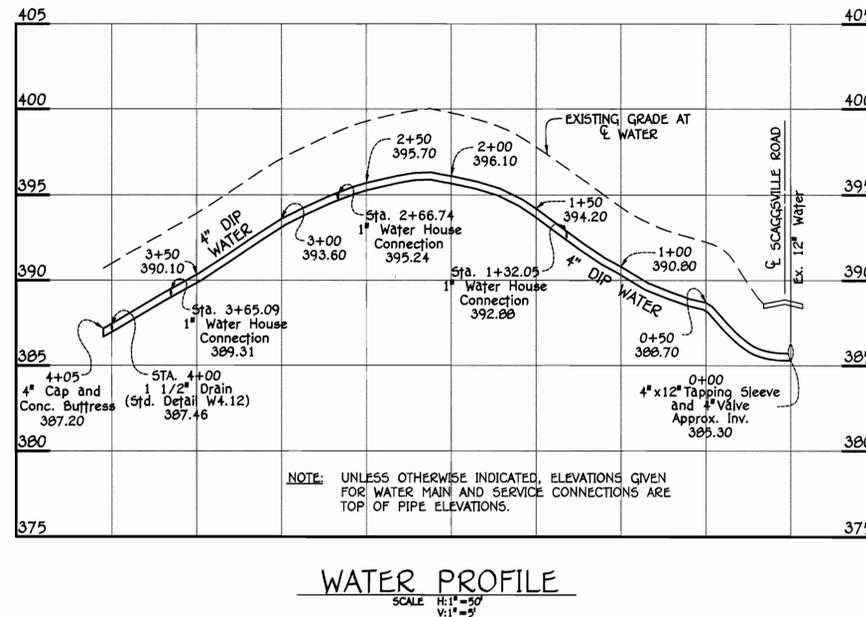
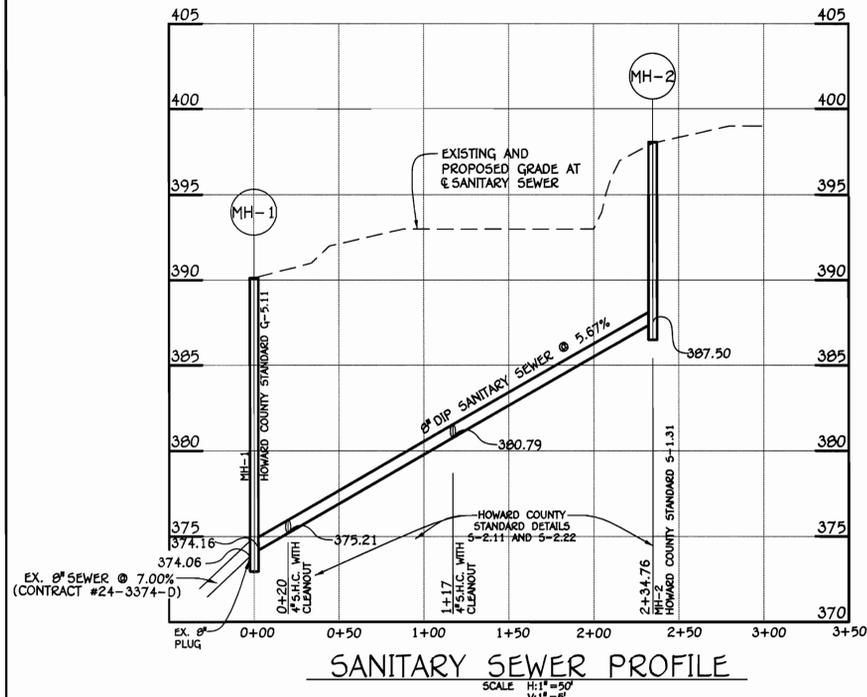
1 OF 3

THE WILLOWS OF ROCKY GORGE
PLAT M.D.R. 11880

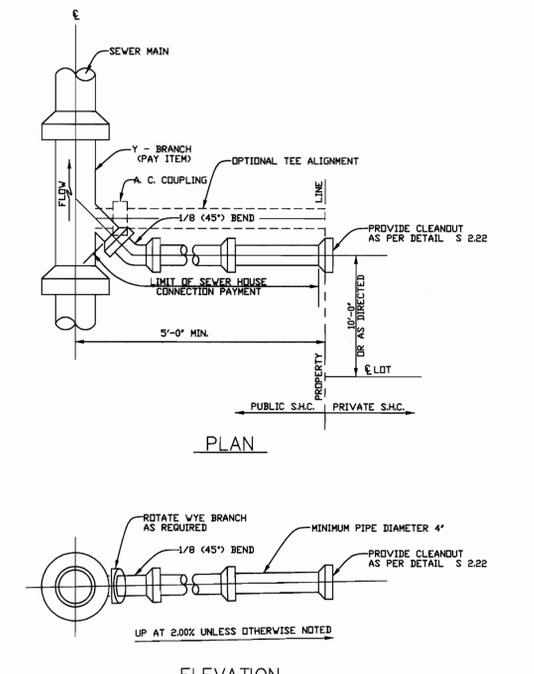
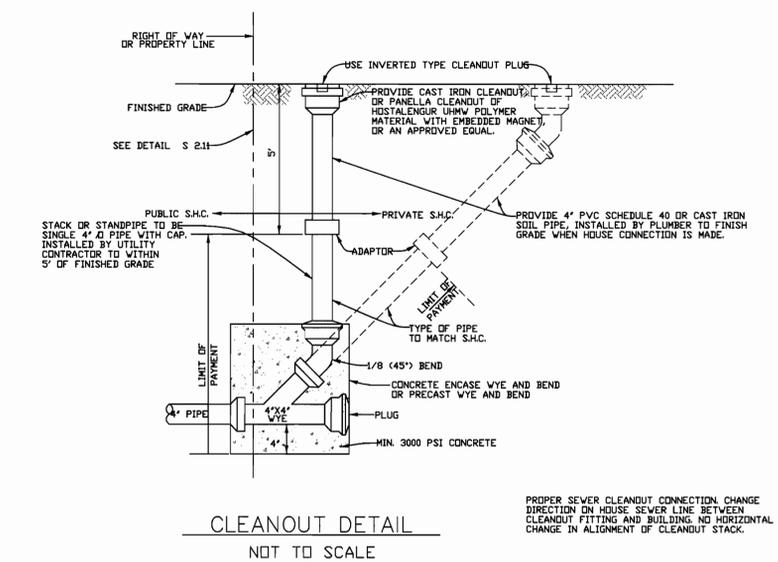


PLAN
SCALE: 1" = 50'

NOTE: CONTRACTOR SHALL SET THE 1 INCH BALL VALVE AND BOX FOR EACH WATER HOUSE CONNECTION AT THE EDGE OF THE EASEMENT.



NOTE: SEE GENERAL NOTES APPLICABLE TO ALL BRICK MANHOLES ON DETAIL G 5.01 AND ALL PRECAST MANHOLES ON DETAIL G 5.12.



GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES

1. MANHOLE BASE SHALL BE BEDDED ON 6-INCH GRANULAR MATERIAL ON FIRM SUBGRADE.
2. EXCAVATION BELOW PIPES SHALL BE BACKFILLED WITH GRANULAR OR SELECT MATERIAL 1/3 OF WAY TO TOP OF PIPE.
3. CONNECTION BETWEEN MANHOLE WALL AND SEWER SHALL BE NON-SHRINK GROUT OR RUBBER GASKET (COMPRESSION TYPE) JOINT.
4. MANHOLE STEPS SHALL BE AS SPECIFIED ON DETAIL G 5.11.
5. PROVIDE 2 COATS COAL TAR EPOXY COATING, 16 MIL DRY, SANITARY SEWER ONLY. (EXTERIOR SURFACE ONLY)
6. PROVIDE PIPE JOINT WITHIN 2'-0" MAXIMUM FROM OUTSIDE OF MANHOLE WALL.
7. MANHOLE CHANNELS SHALL BE FORMED TO PROVIDE A SMOOTH HYDRAULIC TRANSITION BETWEEN PIPES. BENCHES SHALL BE TO TOP OF PIPE OR AS SHOWN ON PLANS. MANHOLE CHANNELS AND BENCHES SHALL BE FROM SEWER BRICK, GRADE SS, ASTM C-32.
8. MANHOLE SHALL BE IN ACCORDANCE WITH ASTM C 478 EXCEPT AS SHOWN.

LEGEND

EXIST. WATER MAIN	---
PROP. WATER MAIN	---
EXIST. WATER HOUSE CONNECTION (SINGLE)	---
EXIST. SEWER MAIN	---
EXIST. SEWER MANHOLE	○
EXIST. SEWER HOUSE CONNECTION	---
PROP. SEWER MAIN	---
PROP. SEWER MANHOLE	●
PROP. SEWER HOUSE CONNECTION	---
PROP. WATER HOUSE CONNECTION (SINGLE)	---

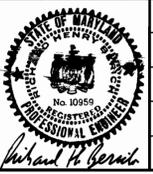
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY MARYLAND

9-30-98
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY MARYLAND

9/29
CHIEF, DEVELOPMENT ENGINEERING DIVISION

PURDUM and JESCHKE, LLC
Consulting Engineers and Land Surveyors
Civil, Structural & Environmental
The Professional Engineering Center
8005 Harford Road
Baltimore, Maryland 21234
Phone: 410-668-8800 Fax: 410-668-8801



engineering	
illustration	
approval	
project	
date	
BY	No
REVISION	
DATE	

SITE PLAN, PROFILE, AND DETAILS

600' SCALE MAP No. _____

BLKCK No. _____

HIGDON HEIGHTS
LOTS 1-3
WATER AND SEWER MAIN EXTENSIONS
CONTRACT No. 24-3686-D

6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE:
AS NOTED

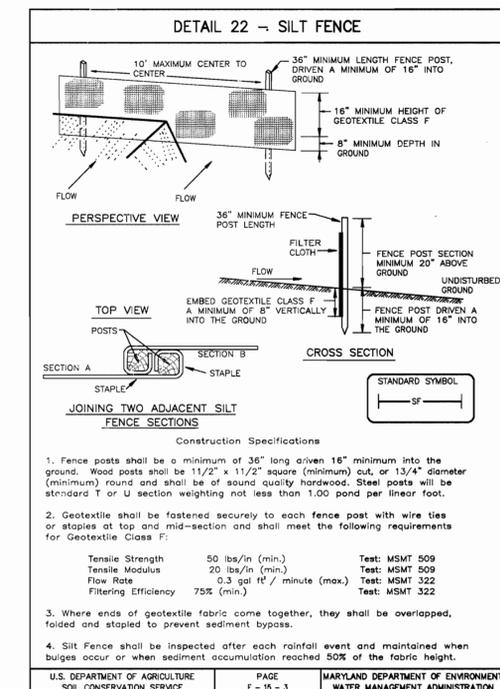
2 OF 3

THE WILLOWS OF ROCKY GORGE
PLAT M.D.R. 11880

ROBERT E. HIGDON
EULA P. HIGDON
R.H.M. 299/592

THE WILLOWS OF ROCKY GORGE
PLAT M.D.R. 11879

PLAN
SCALE: 1" = 50'



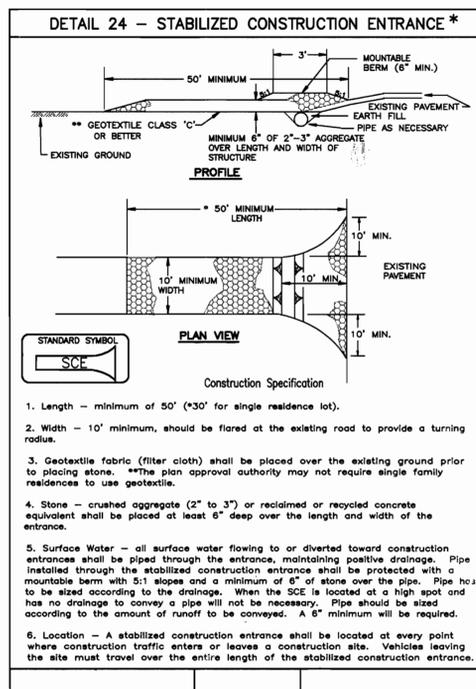
SILT FENCE

Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-15-3A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES

All disturbed areas shall be stabilized as follows:

Seedbed Preparation: Loosen upper three inches of soil by raking, disking 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 acres 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 disk 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.).
- Acceptable - Apply 2 tons per acres 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 disk into upper three inches of soil

Seeding: For the periods March 1 thru April 31, 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 love grass. 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 348 gallons per acre (8 gal./1000 sq. ft.) for anchoring.

Maintenance: Inspect all seeding 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, disking 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 October 15, seed with 2.5 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 1.5 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% 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 additional rates and methods not covered.

EROSION AND SEDIMENT CONTROL NOTES

- All sediment control operations are to be in accordance with section 219 of the Howard County Volume IV Design Manual and the Standards and Specifications for the Sediment Control in Developing Areas.
- All erosion and sediment control devices shall be installed as the first order of business.
- All excavated materials shall be stockpiled on the upgrade side of the main trench.
- Immediately following backfill of the sewer main trench, all disturbed area are to be stabilized in accordance with permanent stabilization and seeding notes shown on this sheet.
- Throughout the project, the Contractor shall regularly inspect all sediment control devices and provide all necessary maintenance to insure that all devices are in operative condition.
- All sediment control facilities shall remain in place until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

STANDARD SEDIMENT CONTROL NOTES

- A minimum of 48 hours must be given to the Howard County Department of Inspections, Licensees 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 SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded area on the project site.
- All sediment traps shown must be fenced and warning signs posted around their perimeter in accordance with Col. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for the permanent seeding, sod, temporary seeding, and mulching. Temporary stabilization with mulch alone shall 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 Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site:	1.45 acres
Area Disturbed:	0.36 acres
Area to be roofed or paved:	0.00 acres
Area to be vegetatively stabilized:	0.36 acres
Total cut:	1,900 cubic yards
Total fill:	1,900 cubic yards
- 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 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 filled and stabilized within one working day whichever is shorter.

SEQUENCE OF CONSTRUCTION

- Obtain the required grading permit.
- Notify Miss Utility 48 hours before commencing work (1-800-257-7777).
- Contact Howard County construction inspection division 48 hours prior to commencing work (410-792-7272)
- Install the required sediment and erosion control devices as indicated on the plan. The Contractor may be required to install a stabilized construction entrance if required by the Howard County sediment control inspector.
- The Contractor shall inspect and provide necessary maintenance on all sediment erosion control devices daily and after each rainfall.
- Clear and grub as necessary: only as required for excavation and installation of the water and sewer mains. Only within the designated water, sewer and utility easements or within the limit of disturbance.
- Install sewer and water lines and back fill trenches.
- Stabilize, seed and mulch all disturbed areas in accordance with the temporary seeding notes on this sheet.
- Clean up construction site.
- When all areas draining to sediment control devices have been permanently stabilized, and after permission has been obtained from the Howard County Sediment Control Inspector, remove all erosion and sediment control devices.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within 7 calendar days for all perimeter slopes greater than 3:1 and within 14 calendar days for all other disturbed graded areas on the project site.

SEDIMENT CONTROL CERTIFICATIONS

() PROVIDE THE FOLLOWING CERTIFICATION BLOCKS ON SEDIMENT CONTROL PLANS:

() BY THE DEVELOPER
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Eula P. Higdon 9/16/98
SIGNATURE OF DEVELOPER DATE
PRINT NAME BELOW SIGNATURE

() BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Richard H. Berish 9/16/98
SIGNATURE DATE
PRINT NAME BELOW SIGNATURE

() REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

USDA-NATURAL RESOURCES DATE

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

HOWARD SCD DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY MARYLAND

PURDUM and JESCHKE, LLC
Consulting Engineers and Land Surveyors
Civil & Structural Engineering
The Professional Engineering Center
8005 Hartford Road
Baltimore, Maryland 21234
Phone: 410-668-8800 Fax: 410-668-8801



engineering			
illustration			
approval			
project			
date			
BY	No	REVISION	DATE

SEDIMENT AND EROSION
CONTROL - PLAN AND DETAILS

HIGDON HEIGHTS
LOTS 1-3
WATER AND SEWER MAIN EXTENSIONS
CONTRACT No. 24-3686-D
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE:
AS NOTED

3 OF 3

The grid and north arrow shown hereon are referred to the system of coordinates established in the Maryland Coordinate System and based on the following station and bearing:

Howard Co. Monument
46-C3 N 537,405.88 E 1,347,556.23
Bearing to:
47-AA N 29° 34' 10.7"E

Elevations shown hereon are referred to the Maryland Coordinate System Vertical Datum (NGVD/29) and based on the following Bench Mark:
Howard Co. Station: 2039003-R
Elevation: 400.862

QUANTITIES BOX				
ITEM NO.	DESCRIPTION	BID QUANTITY	ASBUILT QTY.	ITEM MANUFACTURE
1	8" DIP SAN. SEWER MAIN	235'	235	CL 52 D.I.P. ATLANTIC STATES
2	SANITARY SEWER MANHOLE	2	2	PRECAST / FREDERICK PRECAST
3	4" DIP SAN. SEWER SERVICE CONNECTION	38'	38	CL 52 D.I.P. ATLANTIC STATES
4	4" DIP WATER MAIN	405'	415	" " " "
5	1" WATER SERVICE CONN.	30'	30	TYPE "K" 1" READING TUBE
6	11.25" DIP HORIZ. BEND	1		

WHC LOCATION DATA		
LOT NO.	NORTH	EAST
1	537,154.49	1,343,911.47
2	537,053.54	1,343,826.76
3	536,975.97	1,343,761.67

SEWER MANHOLE LOCATION DATA			
NO.	NORTH	EAST	OFFSET
1	536,838.91	1,343,833.54	-----
2	537,045.74	1,343,944.84	-----

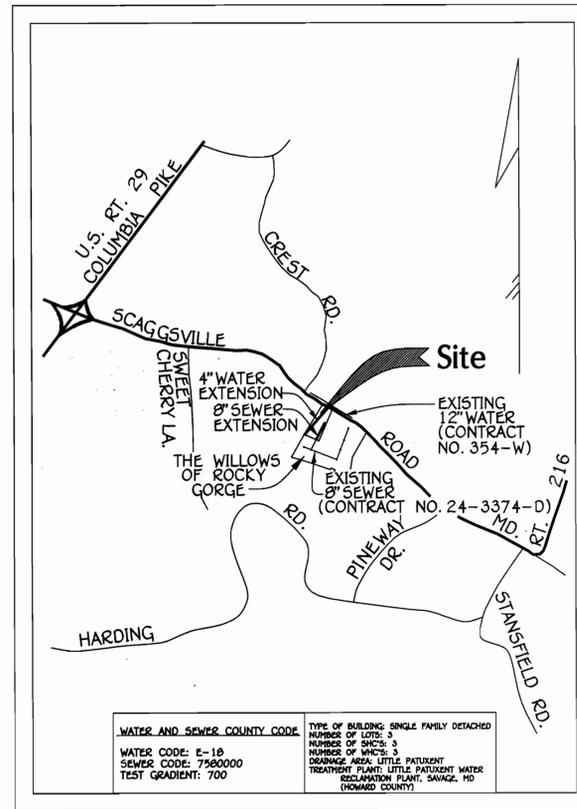
WATER LINE LOCATION DATA			
DESC.	WL STA.	NORTH	EAST
4" x 12" T.S. & VALVE	0+00	537,261.36	1,343,989.25
4" CAP & BUTTRESS	4+68.83	536,902.22	1,343,687.89

* LOCATION OF EXISTING WATER MAIN SHOWN ON THESE DRAWINGS IS BASED UPON THE LOCATION SHOWN ON THE CONSTRUCTION DRAWINGS "THE WILLOWS OF ROCKY GORGE LOT NO. 1-45 CONTRACT NO. 24-3374-D"

*SEE NOTE BELOW

HIGDON HEIGHTS

LOTS 1-3
WATER AND SEWER MAIN EXTENSIONS
CONTRACT NO. 24-3686-D
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



VICINITY MAP
1" = 600'

TABLE OF CONTENTS
SHEET 1 - TITLE SHEET
SHEET 2 - SITE PLAN, PROFILE, AND DETAILS
SHEET 3 - SEDIMENT AND EROSION CONTROL PLAN AND DETAILS

GENERAL NOTES

PART I

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAIL FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - HOWARD COUNTY BUREAU OF UTILITIES, DPW (410) 313-4900
 - BALTIMORE GAS & ELECTRIC CO. (410) 850-4620 (CONTRACTOR SERVICES)
 - BALTIMORE GAS & ELECTRIC CO. (410) 787-9068 (UNDERGROUND DAMAGE CONTROL)
 - COLONIAL PIPELINE CO. (410) 795-1390
 - MISS UTILITY 1-800-257-7777
 - STATE HIGHWAY ADMINISTRATION (410) 531-5533
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE OPERATIONS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTRY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS SHALL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.
- SEDIMENT CONTROL SHALL BE IMPLEMENTED IN ACCORDANCE WITH SECTION WITH DPW 219 OF THE STANDARDS AND SPECIFICATIONS (VOL. IV) OF THE HOWARD COUNTY DESIGN MANUAL AND THESE PLANS.

PART II WATER

- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON THE PLAN OR IN THE SPECIFICATIONS.
- SINGLE WATER HOUSE CONNECTIONS SHALL BE 3/4". DOUBLE WATER HOUSE CONNECTIONS SHALL BE 1".

PART III SEWER

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL SEWER HOUSE CONNECTIONS SHALL BE 4"
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER. STANDARD DETAIL C5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

GP-96-187

DEVELOPER'S CERTIFICATION

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Eula P. Higdon 9/14/98
DEVELOPER'S SIGNATURE DATE

EULA P. HIGDON 9/14/98
DEVELOPER'S NAME TRUSTEE DATE

ENGINEER'S CERTIFICATION

I 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.

Richard H. Berich 8/12/98
ENGINEER'S SIGNATURE DATE

Richard H. Berich 8/12/98
ENGINEER'S NAME DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Charles J. Simmons 10/13/98
U.S.D.A. Natural Resources Conservation Service Date

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

John R. [Signature] 10/13/98
Howard Soil Conservation District Date

HOWARD CO. SUBDIV. NO. F-99-178

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY MARYLAND

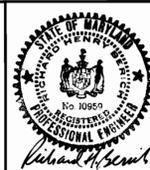
Richard H. Berich 9-30-98
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY MARYLAND

[Signature] 9/2/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

PURDUM and JESCHKE, llc
Consulting Engineers and Land Surveyors
Civil • Structural • Environmental

The Professional Engineering Center
8005 Harford Road
Baltimore, Maryland 21234
Phone: 410-668-8800 Fax: 410-668-8801



engineering				
illustration				
approval				
project				
date	K.C.I	1	ASBUILT CONDITIONS ADDED TO PLAN	10/18
BY	No		REVISION	DATE

TITLE SHEET

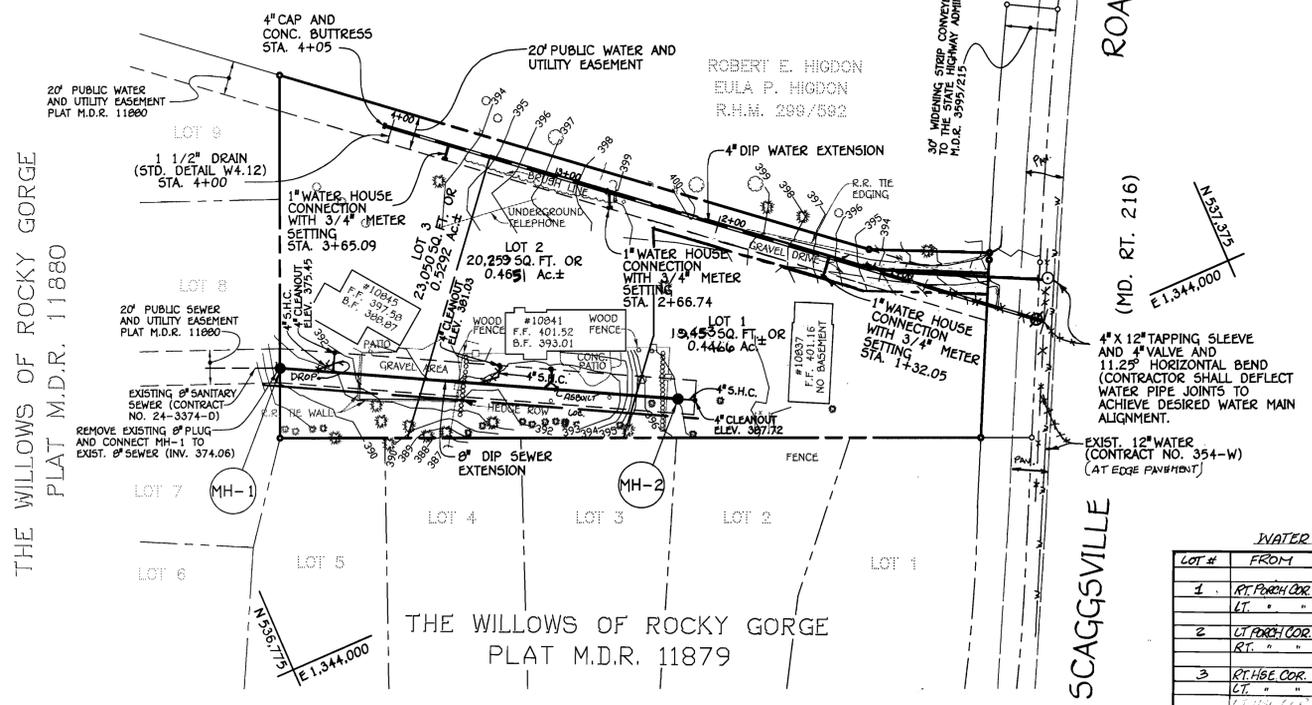
600' SCALE MAP No. 46 BLOCK No. 11

HIGDON HEIGHTS
LOTS 1-3
WATER AND SEWER MAIN EXTENSIONS
CONTRACT No. 24-3686-D
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE:
AS SHOWN

1 OF 3

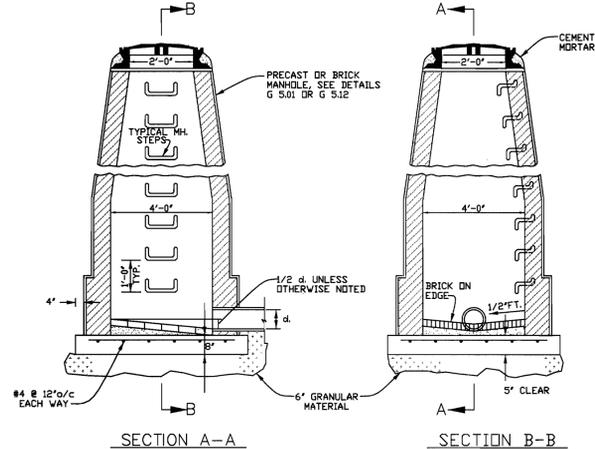
THE WILLOWS OF ROCKY GORGE
PLAT M.D.R. 11880



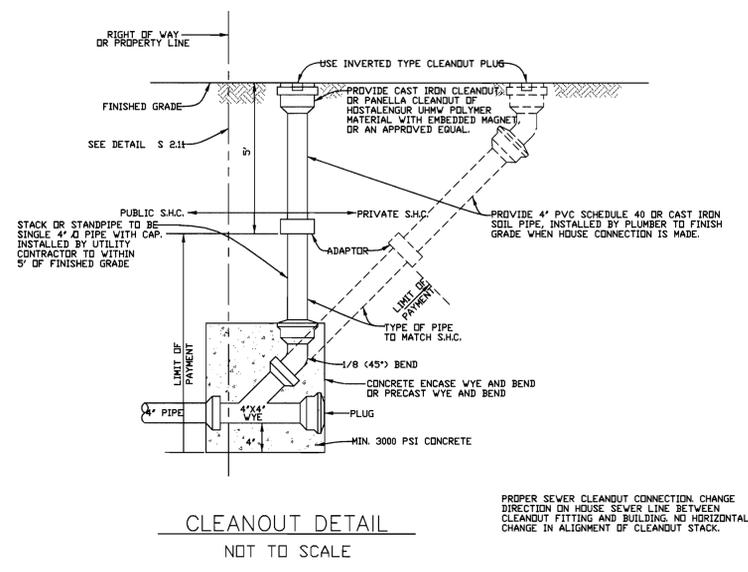
PLAN
SCALE: 1"=50'

TERMINAL MANHOLE NOT TO SCALE

LOT #	FROM	TO	DIST (FT)	LOT #	FROM	TO	DIST (FT)
1	RT. PORCH COR.	METER	10.0'	1	FRONT HS COR.	CLEAN OUT	70.0 (FT)
	LT. " "	VAULT	18.0'		REAR HS COR.	" "	52.0
2	LT. PORCH COR.	METER	68.5'	2	REAR HS COR.	" "	7.0'
	RT. " "	VAULT	60.0'		" "	" "	0.0'
3	RT. HSE COR.	METER	88.5'	3	LT. PORCH COR.	CLEAN OUT	12.3'
	LT. " "	VAULT	88.0'		RT. HSE COR.	" "	28.0'

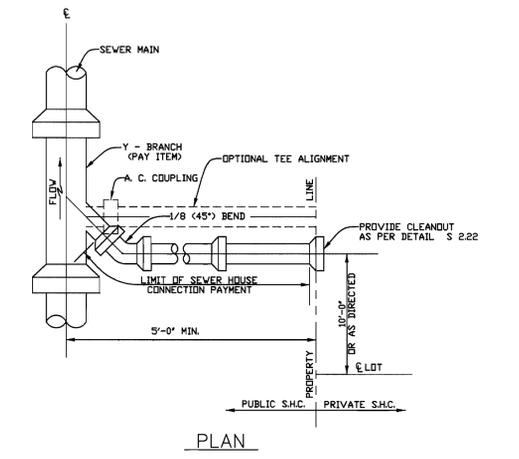


NOTE:
SEE GENERAL NOTES APPLICABLE TO ALL
BRICK MANHOLES ON DETAIL G 5.01 AND
ALL PRECAST MANHOLES ON DETAIL G 5.12.

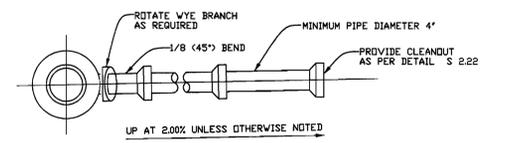


GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES

- MANHOLE BASE SHALL BE BEDDED ON 6-INCH GRANULAR MATERIAL ON FIRM SUBGRADE.
- EXCAVATION BELOW PIPES SHALL BE BACKFILLED WITH GRANULAR OR SELECT MATERIAL 1/3 OF WAY TO TOP OF PIPE.
- CONNECTION BETWEEN MANHOLE WALL AND SEWER SHALL BE NON-SHRINK GROUT OR RUBBER GASKET (COMPRESSION TYPE) JOINT.
- MANHOLE STEPS SHALL BE AS SPECIFIED ON DETAIL G 5.51
- PROVIDE 2 COATS COAL TAR EPOXY COATING, 16 MIL. DRY, SANITARY SEWER ONLY. (EXTERIOR SURFACE ONLY)
- PROVIDE PIPE JOINT WITHIN 2'-0" MAXIMUM FROM OUTSIDE OF MANHOLE WALL.
- MANHOLE CHANNELS SHALL BE FORMED TO PROVIDE A SMOOTH HYDRAULIC TRANSITION BETWEEN PIPES. BENCHES SHALL BE TO TOP OF PIPE OR AS SHOWN ON PLANS. MANHOLE CHANNELS AND BENCHES SHALL BE FROM SEWER BRICK, GRADE 55, ASTM C-32.
- MANHOLE SHALL BE IN ACCORDANCE WITH ASTM C 478 EXCEPT AS SHOWN.



PLAN

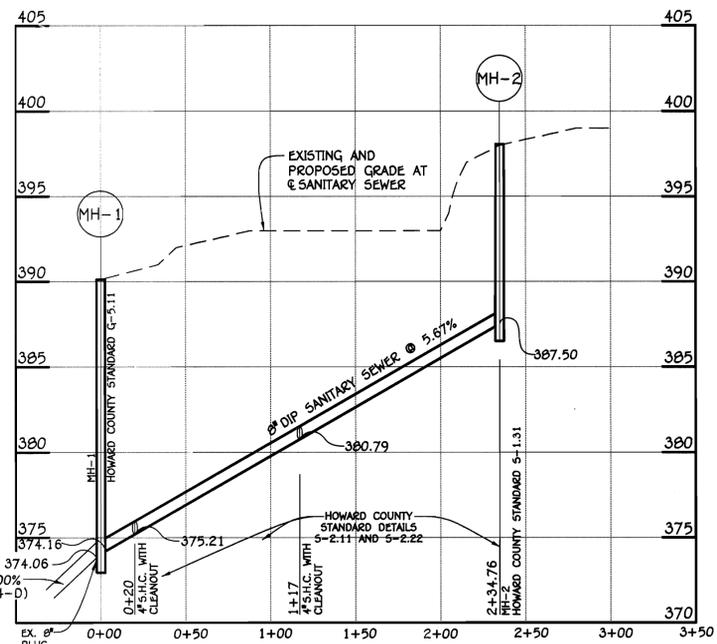


ELEVATION

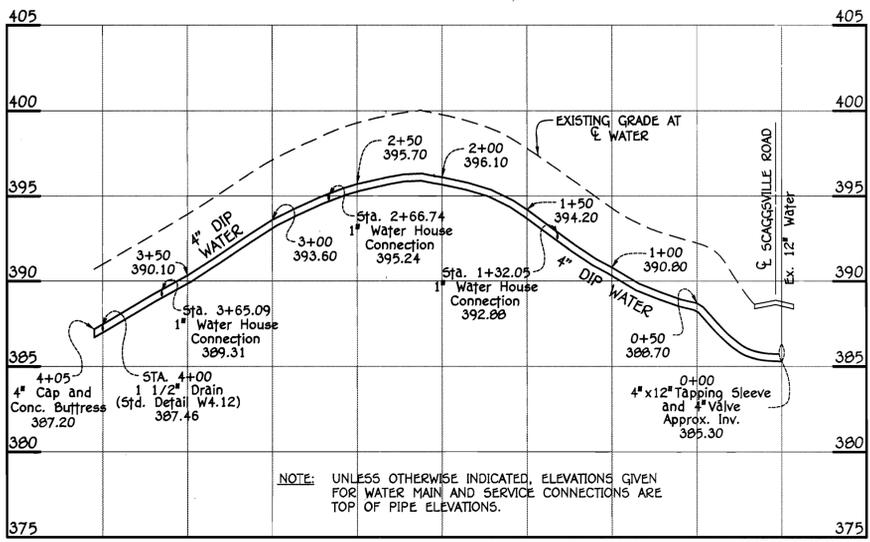
SEWER HOUSE CONNECTION NOT TO SCALE

LEGEND

- EXIST. WATER MAIN
- PROP. WATER MAIN
- EXIST. WATER HOUSE CONNECTION (SINGLE)
- EXIST. SEWER MAIN
- EXIST. SEWER MANHOLE
- EXIST. SEWER HOUSE CONNECTION
- PROP. SEWER MAIN
- PROP. SEWER MANHOLE
- PROP. SEWER HOUSE CONNECTION
- PROP. WATER HOUSE CONNECTION (SINGLE)



SANITARY SEWER PROFILE
SCALE: H: 1"=50' V: 1"=5'



WATER PROFILE
SCALE: H: 1"=50' V: 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY MARYLAND
9-30-98
DATE

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engineering					
illustration					
approval					
project					
date	K.G.I.	1	AS BUILT CONDITIONS ADDED TO PLAN	10/10/00	
	BY	No	REVISION	DATE	

SITE PLAN, PROFILE, AND DETAILS
600' SCALE MAP No. _____ BLOCK No. _____

HIGDON HEIGHTS
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CONTRACT No. 24-3686-D
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HOWARD COUNTY, MARYLAND

SCALE: AS NOTED
2 OF 3