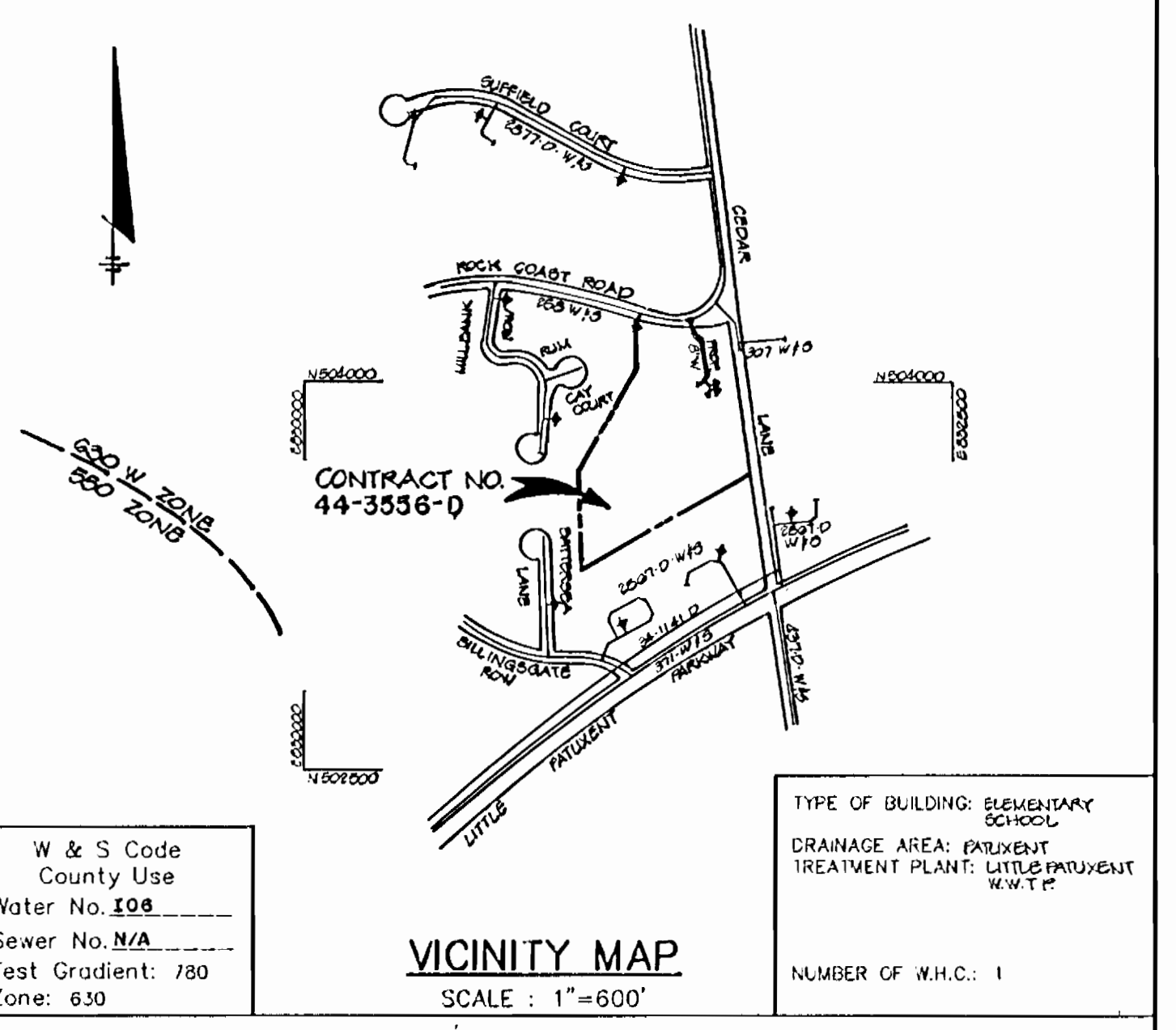


PLAN
SCALE: 1"=50'

4" WATER ABANDONMENT PROCEDURE

- (A) REMOVE A SECTION OF WATER MAIN SOUTH OF 4" VALVE.
- (B) REMOVE THE VALVE BOX.
- (C) PROVIDE PLUG AND BUTTRESS AT THE VALVE.
- (D) THE METER SHALL BE RETURNED TO THE BUREAU OF UTILITIES.



VICINITY MAP
SCALE: 1"=600'

W & S Code
County Use
Water No. 108
Sewer No. N/A
Test Gradient: 780
Zone: 630

TYPE OF BUILDING: ELEMENTARY SCHOOL
DRAINAGE AREA: EXISTENT
TREATMENT PLANT: LITTLE PATRICK W.W.T.P.
NUMBER OF W.H.C.: 1

GENERAL NOTES

1. Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
2. All horizontal controls are based on Maryland State Coordinates.
3. All vertical controls are based on U.S.G.S. data.
4. All pipe elevations shown are invert elevations.
5. 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 for bracing of additional poles 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.
6. 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.
7. 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.
8. Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:

State Highway Administration	531-5533
Baltimore Gas & Electric Co. Contractor Services	850-4820
Baltimore Gas & Electric Co. Underground Damage Control	787-9058
Miss Utility	1-800-251-7777
Colonial Pipeline Co.	795-1590
Bureau of Utilities, Howard County Department of Public Works	313-4900
9. Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the contractor.
10. 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.
11. All water mains to be D.I.P. Class 52 unless otherwise noted.
12. Tops of all water mains to have a minimum of 3-1/2' cover unless otherwise noted.
13. Valves adjacent to trees shall be strapped to trees.
14. All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
15. 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 1005 of the Standard Specifications.
16. The contractor shall not operate any water main valves on the existing water system.
17. All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
18. Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
19. The fire hydrant shall be installed as per standard detail W.1.11.
20. Fire hydrants will be located 3' FROM BACK OF CURB unless otherwise noted.
21. For sprinkler systems, all townhomes or multi-family dwelling units should have a minimum of 1" connection with a 3/4" meter.
22. The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-7450 at least five (5) working days before any open cut of any County road or boring/jacking operation in County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 13.114(a) of the Howard County Code.
23. Sediment control to be provided on an as-needed basis to be determined in the field by the Sediment Control Inspector.
24. Contractor to provide traffic control during construction in accordance with the Manual On Uniform Traffic Control Devices (Latest Edition).
25. Contractor to protect the existing trees or shrubs and replace any damaged during construction.
26. Existing water meter to be removed and returned to Bureau of Utilities. Abandon meter vault.

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
0" WATER	Δ 233 LP	255'	DIP 52 IS	GRIFFIN
0" WATER	Δ 69 LP	76'	DIP 52 IS	GRIFFIN
0" 2" T.S. IV	1 EA	1	M.S. DIP	CLAW/KENNEDY
0" 0" REDUCER	1 EA	1	M.S. DIP	GRIFFIN
0" 1/2" HB	Δ 2 EA	2	M.S. D.I.P.	GRIFFIN
0" VALVE	Δ 2 EA	2	M.S. GATE VALVE	KENNEDY
FIRE HYDRANT	1 EA	1		KENNEDY
1/2" HB		1	M.S. DIP	GRIFFIN

NAME OF UTILITY CONTRACTOR: Ronkin Const.

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications

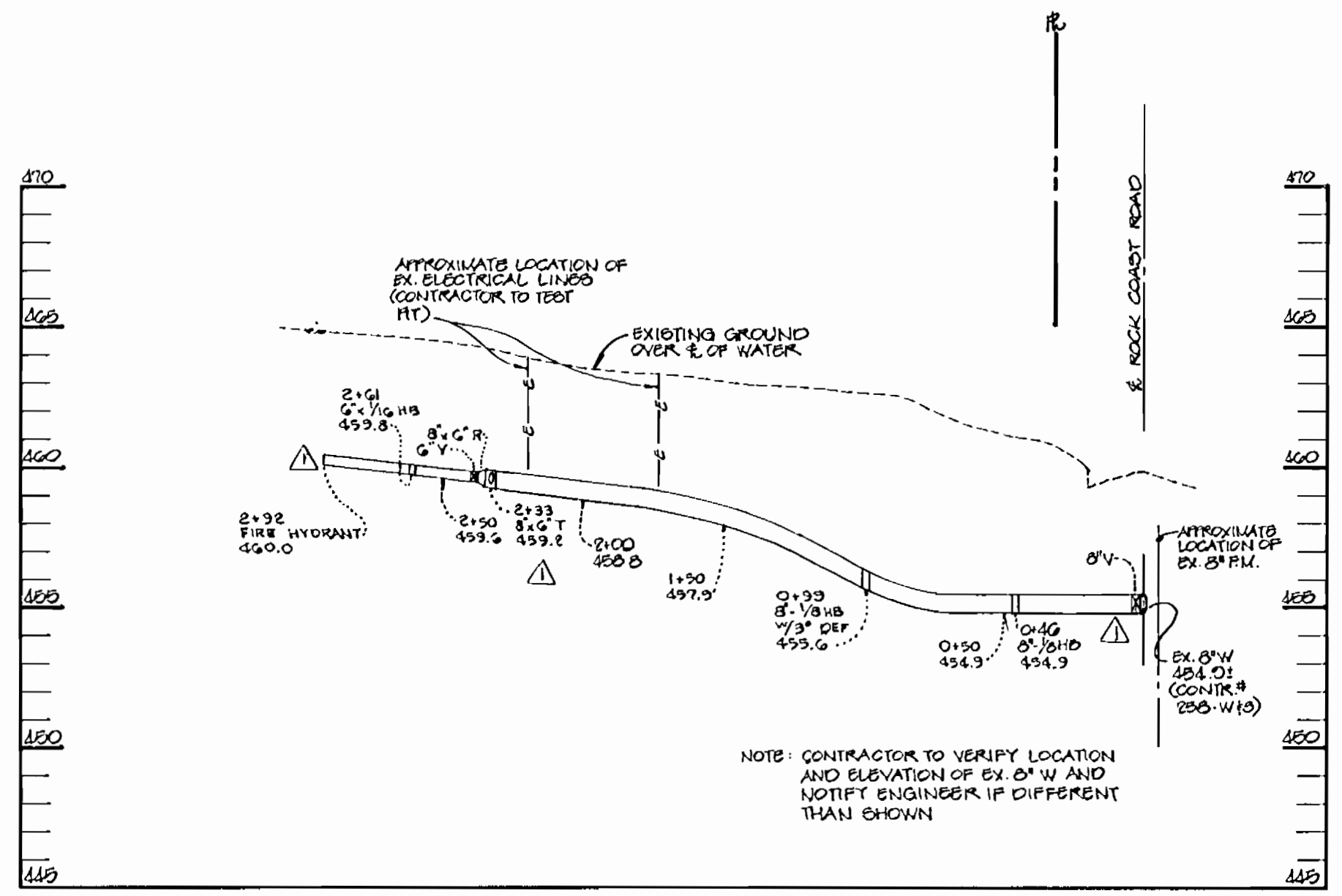
Review for Howard Soil Conservation District and meets technical requirements.

Michael J. Williams 7/30/96
NATURAL RESOURCES CONSERVATION SERVICE DATE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Michael Polutan 7/30/96
HOWARD SOIL CONSERVATION DISTRICT DATE

CHECKBOX
AS-BUILT DATE 10-1-96
SURVEY AND DRAFTING DIVISION



WATER PROFILE
SCALE: HOR: 1"=50'
VERT: 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Michael J. Williams 7/30/96
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Michael Polutan 7/30/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive • Suite 200 • Columbia, MD 21015
410-997-0300 FAX: 410-997-9282
410-997-0811 931.090

J. P. Parikh
JAYKANT B. PAREKH 7/31/96

DES: GJR	
DRN: MAD	
CHK: JOP	
DATE: 7-23-96	
BY: NO.	REVISION
	DATE

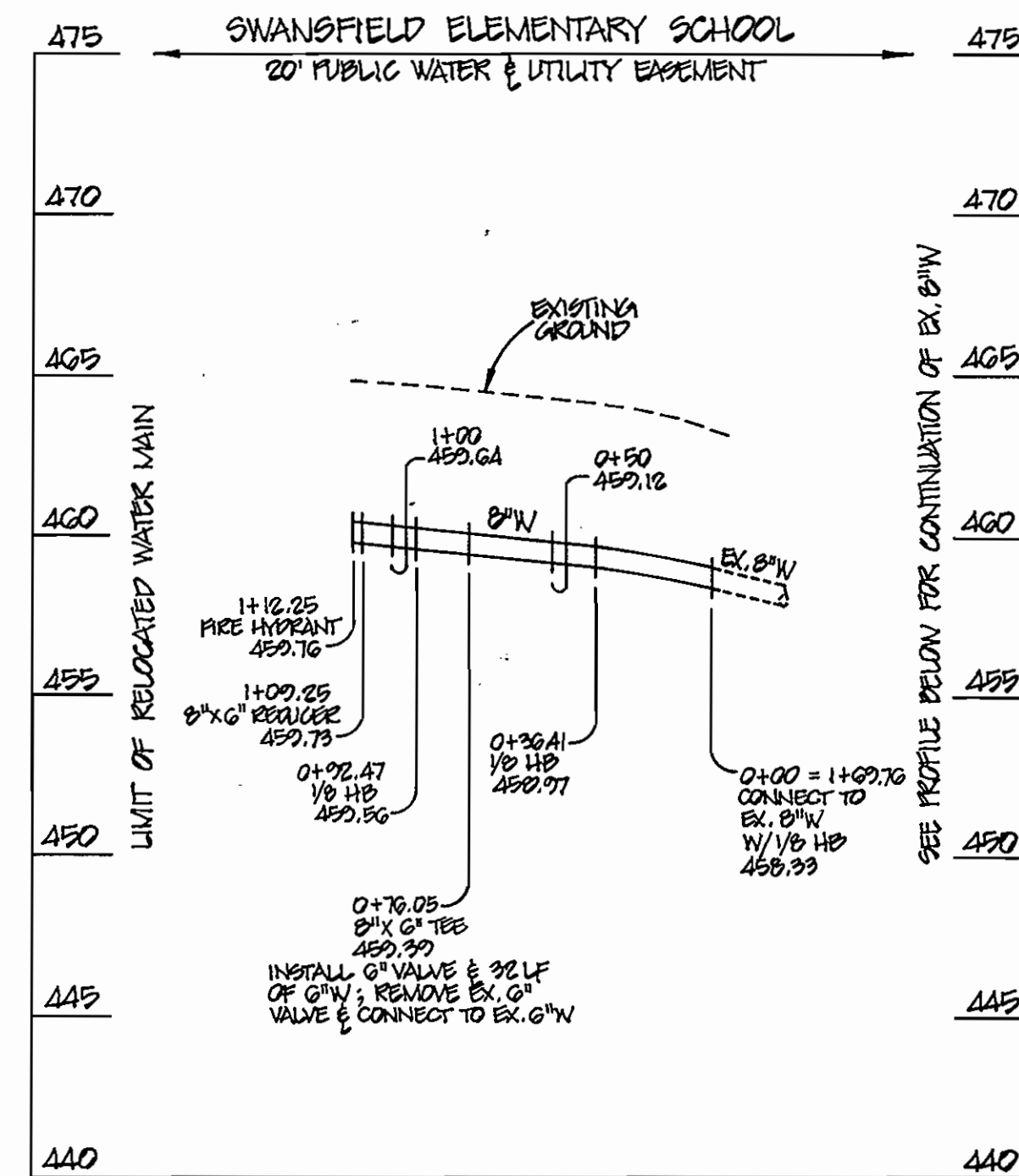
PLAN AND PROFILE OF A WATER MAIN

600' SCALE MAP NO. 20-239 BLOCK NO. 22-29

SWANSFIELD ELEMENTARY SCHOOL
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 44-3556-D

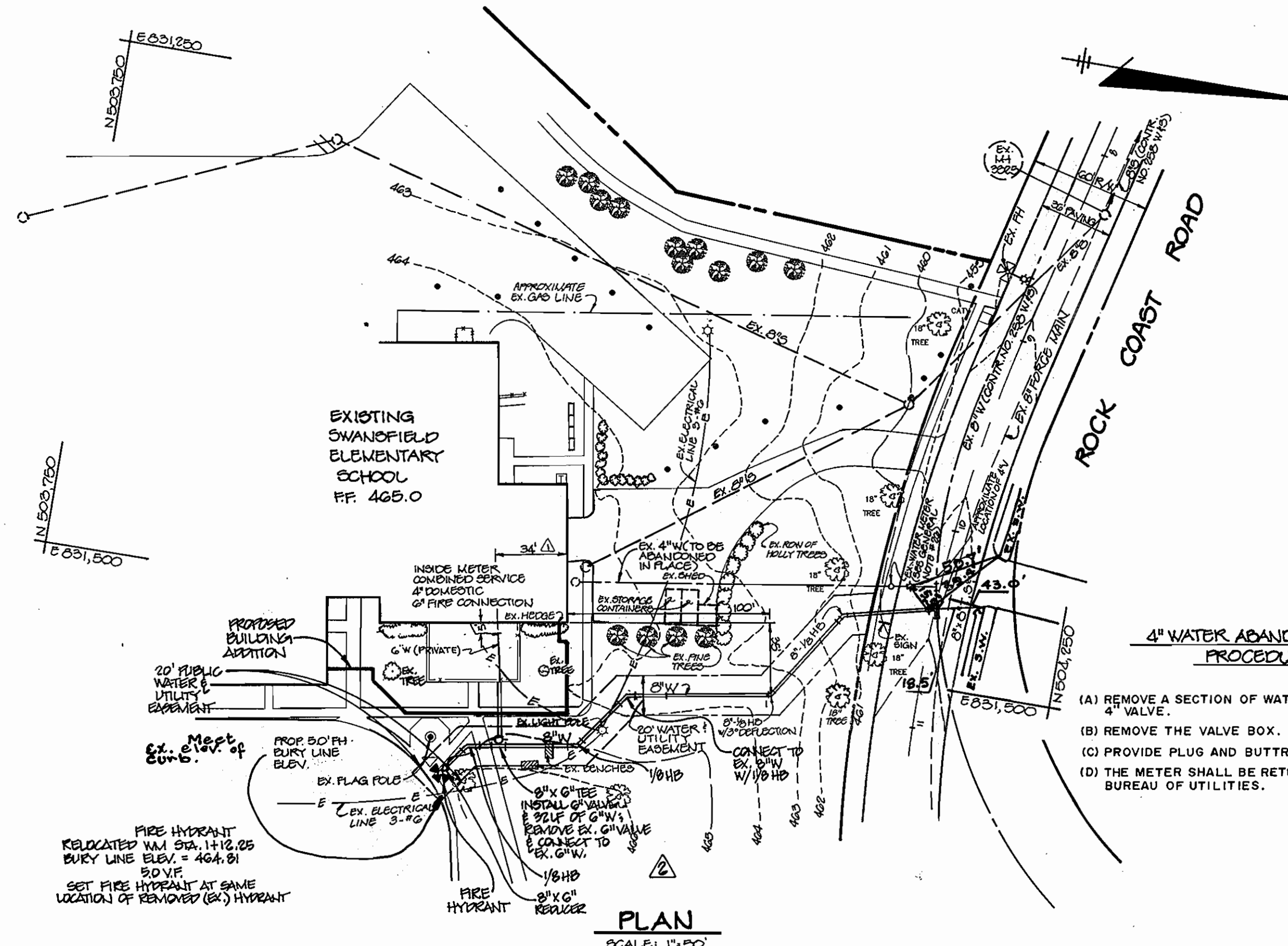
SCALE AS SHOWN

SHEET 1 OF 1



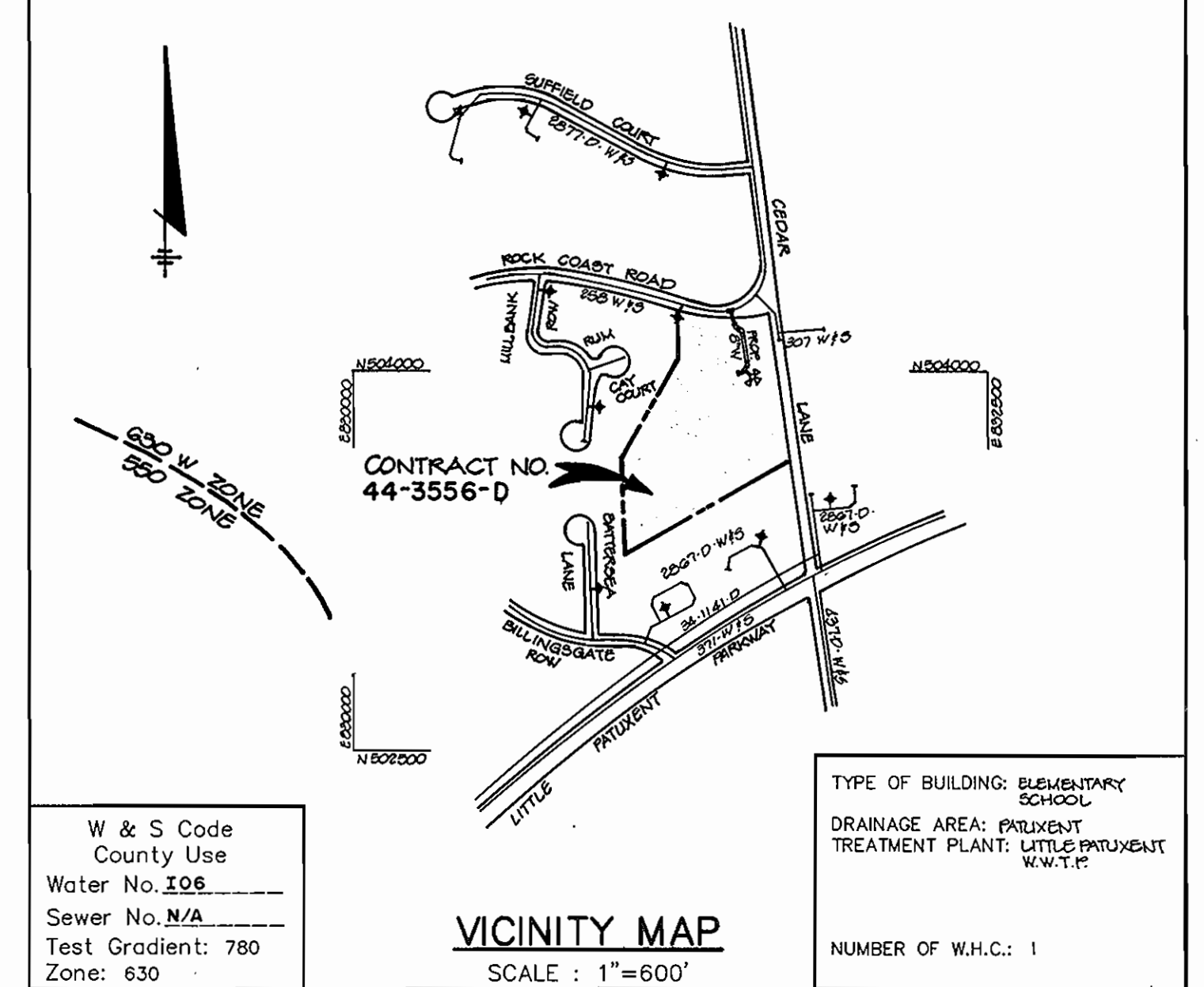
RELOCATED 8" WATER MAIN

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



PLAN
SCALE: 1" = 50'

NOTES: 1. THE CONTRACTOR SHALL CONDUCT A TEST PIT TO DETERMINE THE "AS-BUILT" LOCATION & INVERT OF THE EXISTING 6" WATER MAIN TO THE BUILDING PRIOR TO INSTALLATION OF THE RELOCATED 8" WATER MAIN.
2. EXISTING FIRE HYDRANT SHALL BE REMOVED & RETURNED TO THE BUREAU OF UTILITIES.



VICINITY MAP
SCALE: 1" = 600'

W & S Code
County Use
Water No. 106
Sewer No. N/A
Test Gradient: 780
Zone: 630

TYPE OF BUILDING: ELEMENTARY SCHOOL
DRAINAGE AREA: PAULICENT TREATMENT PLANT: LITTLE PATUXENT R.W.T.P.
NUMBER OF W.H.: 1

GENERAL NOTES

- Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. 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.
- 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 for bracing of additional poles 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.
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- Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:
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Baltimore Gas & Electric Co. Contractor Services 850-4520
Baltimore Gas & Electric Co. Underground Damage Control 787-9068
Miss Utility 1-800-257-7777
Colonial Pipeline Co. 795-1390
Bureau of Utilities, Howard County Department of Public Works 313-4800
- Trees and shrubs are to be protected from damage to 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.
- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains to have a minimum of 3-1/2' cover unless otherwise noted.
- Valves adjacent to tees shall be strapped to tees.
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- Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
- The fire hydrant shall be installed as per standard detail W.1.11.
- Fire hydrants will be located 3' FROM BACK OF CURB unless otherwise noted.
- For sprinkler systems, all townhomes or multi-family dwelling units should have a minimum of 1" connection with a 3/4" meter.
- The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-7450 at least five (5) working days before any open cut of any County road or boring/jacking operation in County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 18.114(a) of the Howard County Code.
- Sediment control to be provided on an as-needed basis to be determined in the field by the Sediment Control Inspector.
- Contractor to provide traffic control during construction in accordance with the Manual On Uniform Traffic Control Devices (Latest Edition).
- Contractor to protect the existing trees or shrubs and replace any damaged during construction.
- Existing water meter to be removed and returned to Bureau of Utilities. Abandon meter vault.

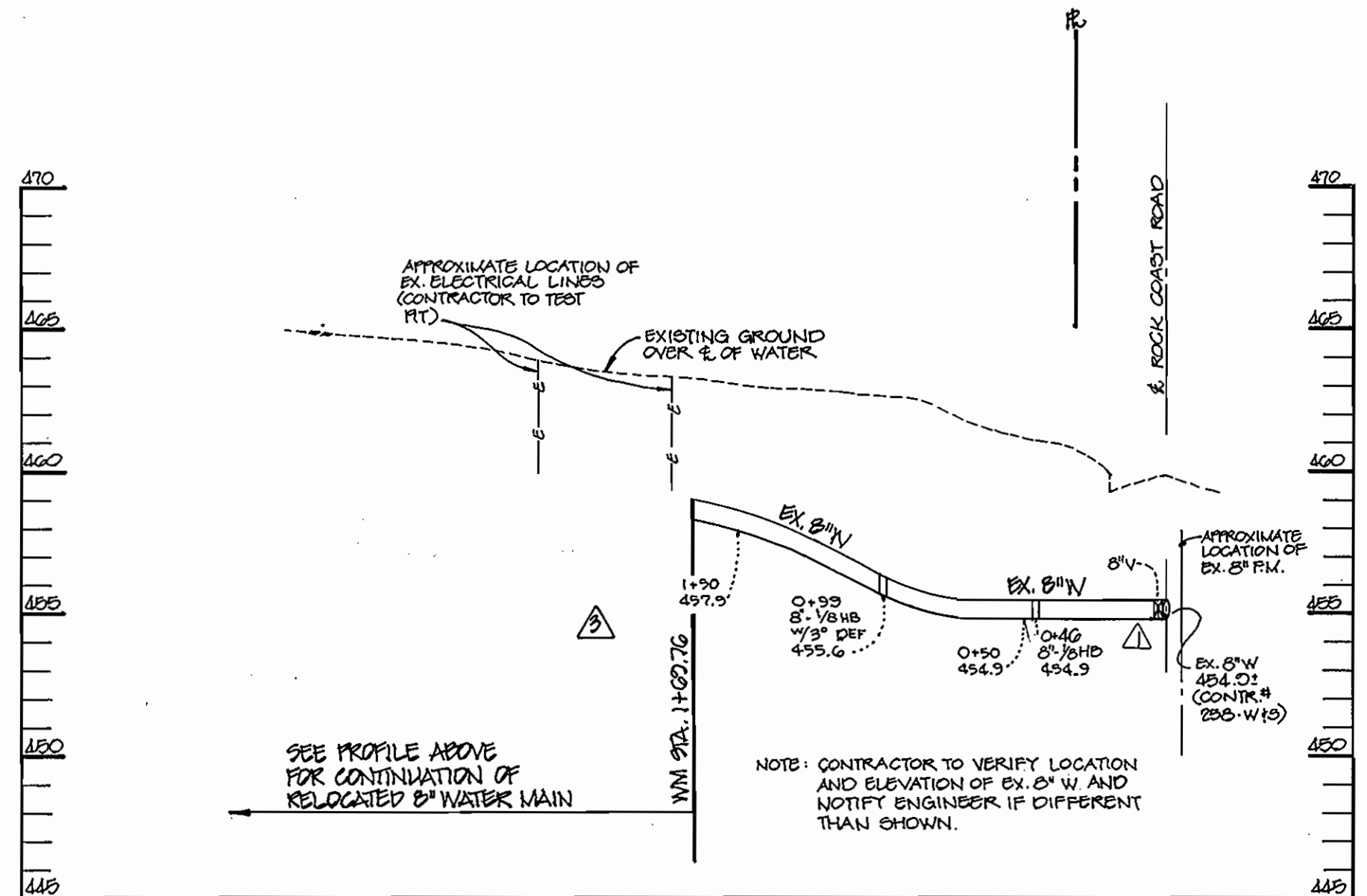
QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" WATER	233 LF	255'	DIP 52 IJ	GRIFFIN
6" WATER	69 LF	76'	DIP 52 IJ	GRIFFIN
8" T.S. TV	1 EA.	1	M.J. DIP	CLOW/KENNEDY
8" REDUCER	1 EA.	1	M.J. DIP	GRIFFIN
8" 1/2 HD.	2 EA.	2	M.J. D.I.P.	GRIFFIN
8" VALVE	2 EA.	2	M.J. GATE VALVE	KENNEDY
FIRE HYDRANT	1 EA.	1		KENNEDY
1/16 HB		1	M.J. DIP	GRIFFIN

NAME OF UTILITY CONTRACTOR: Ronkin Const.
Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications
CHECKBOX
AS-BUILT DATE: 10-21-97
SURVEY AND DRAFTING DIVISION

Review for Howard Soil Conservation District and meets technical requirements.
NATURAL RESOURCES CONSERVATION SERVICE 7/30/96 DATE
This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
HOWARD SOIL CONSERVATION DISTRICT 7/30/96 DATE

STATE OF MARYLAND
TERRELL A. FISHER
PROFESSIONAL ENGINEER
TERRELL A. FISHER #07151
FISHER, COLLINS & CARTER, INC.
FOR REVISIONS 2A & 2B ONLY



WATER PROFILE
SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Michael A. Bivins, RMB 7/20/96 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND 7/31/96 CHIEF, DEVELOPMENT ENGINEERING DIVISION	RIEMER MUEGGE & ASSOCIATES, INC. ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive • Suite 200 • Columbia, MD 21045 410-997-8900 FAX: 410-997-8282 SURVEY/881145 WSI.DWG J. Shell JAYKANT B. PAREKH # 19148	DES: GJR DRN: WAD CHK: JOP DATE: 7-23-96 BY: NO. REVISION DATE	ADD PROFILE OF RELOCATED 8" WATER MAIN 9/3/97 RELOCATE PORTION OF 8" W TO ALLOW BUILDING ADDITION 9/3/97 REV. LOCATION OF WHO; PLAN, PROFILE & QUANTITIES 12-9-96	PLAN AND PROFILE OF A WATER MAIN 600' SCALE MAP NO. 20 & 35 BLOCK NO. 20 & 5	SWANSFIELD ELEMENTARY SCHOOL 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 44-3556-D SCALE AS SHOWN SHEET 1 OF 1
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