

WESTERN SCHOOL COMPLEX

WATER MAIN EXTENSION

CAPITAL PROJECT NO. W-8213
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
CONTRACT NO. 44 - 3505

INDEX OF DRAWINGS

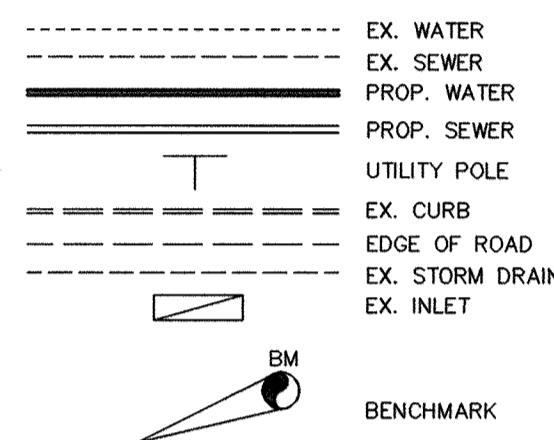
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GENERAL NOTES

- 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 12". 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.
- 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:

State Highway Administration	531-5533
Baltimore Gas & Electric Co. Contractor Services	850-4820
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	313-4900
- 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.
- 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 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 plans or in specifications.
- Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
- The Fire hydrants shall be installed as per standard detail W.1.11.
- For sprinkler system, 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) 313-2450 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 as shown on the drawings and 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 Traffic Control Devices (Latest Edition).
- Contractor to protect the existing trees or shrubs and replace any damaged during construction.

LEGEND



QUANTITIES

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	AS-BUILT TYPE	MANUFACTURER / SUPPLIER
16" D.I.P., CL 52	5100 LF	5086 L.F.	D.I.P.	U.S. PIPE
6" D.I.P., CL 52	170 LF	140 L.F.	"	"
12" D.I.P., CL 52	15 LF	10 L.F.	"	"
3/4" W.H.C.	155 LF	126 L.F.	TYPE K COPPER	
16" VALVE	3	3	RESILIENT SEAT GATE VALVE	U.S. PIPE
12" VALVE	1	1	"	"
8" VALVE	0	1	"	"
2" VALVE	14	13	"	"
FIRE HYDRANTS	14	12	AWWA C-502	U.S. PIPE
1 1/2" AIR RELEASE VALVE & MANHOLE	2	2	ARV MANHOLE	ATLANTIC CONC.
1 1/2" DRAIN ASSEMBLY	1	1		
12"x12" TAPPING SLEEVE & VALVE ASSEMBLY	1	1	T-9 TAPPING SLEEVE	U.S. PIPE

NAME OF UTILITY CONTRACTOR : W.F. WILSON & SONS

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on the drawings.

CHECKBOX TEB

AS-BUILT DATE 10/9/97

SURVEY AND DRAFTING DIVISION

Review for Howard Soil Conservation District and meets technical requirements.

J.G. Washfield 9/3/96
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Robertson 9/3/96
HOWARD SOIL CONSERVATION DISTRICT DATE

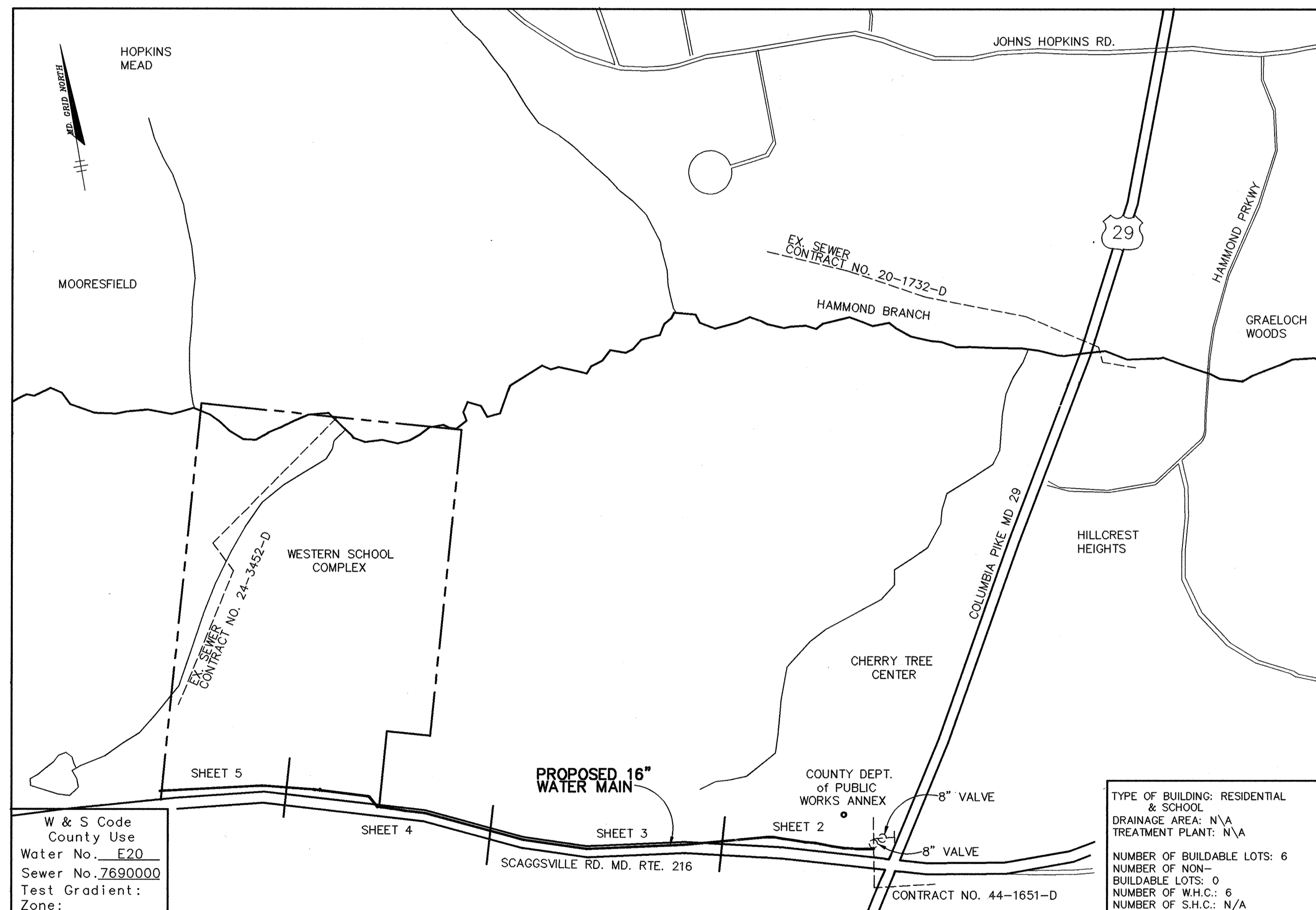
DEVELOPER'S CERTIFICATION

"I WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF ATTENDANCE AT A MARYLAND DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT".

Paul J. Johnson 8/30/96
BUREAU OF ENGINEERING DATE
DEPARTMENT OF PUBLIC WORKS

VICINITY MAP

SCALE : 1"=600'



ENGINEER'S CERTIFICATION

"I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICABLE AND WORKABLE PLAN BASED ON MY PERSONNEL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT".

Frank H. Donaldson
RIEMER MUEGGE/GEORGE MILES BUHR A JOINT VENTURE
8818 CENTRE PARK DRIVE • COLUMBIA, MD. 21045

AS-BUILT

By *[Signature]* Date 1/31/99

AS-BUILT
(FROM DATA PROVIDED BY CONTRACTOR)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

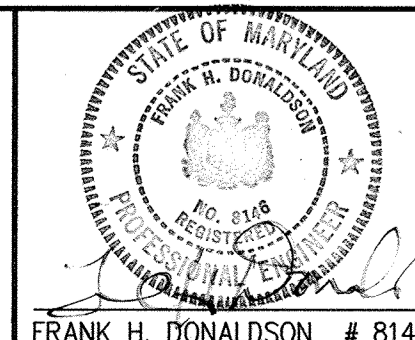
James J. Lewis 8/30/96
DIRECTOR OF PUBLIC WORKS DATE

Paul J. Johnson 8/30/96
CHIEF, BUREAU OF ENGINEERING DATE

Robert J. Semler 8-30-96
CHIEF, BUREAU OF UTILITIES DATE

[Signature] 8/30/96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RIEMER MUEGGE/GEORGE MILES BUHR
A JOINT VENTURE
8818 Centre Park Drive • Columbia, MD 21045
410-997-8900 FAX : 410-997-9282
96910/0411



DES: J.S.C.

DRN: E.L.R.

CHK: G.C.L.

DATE: 8/96

LEM I As built for addition of FH + WSC for Arbor Terrace Senior Housing

BY NO. REVISION DATE

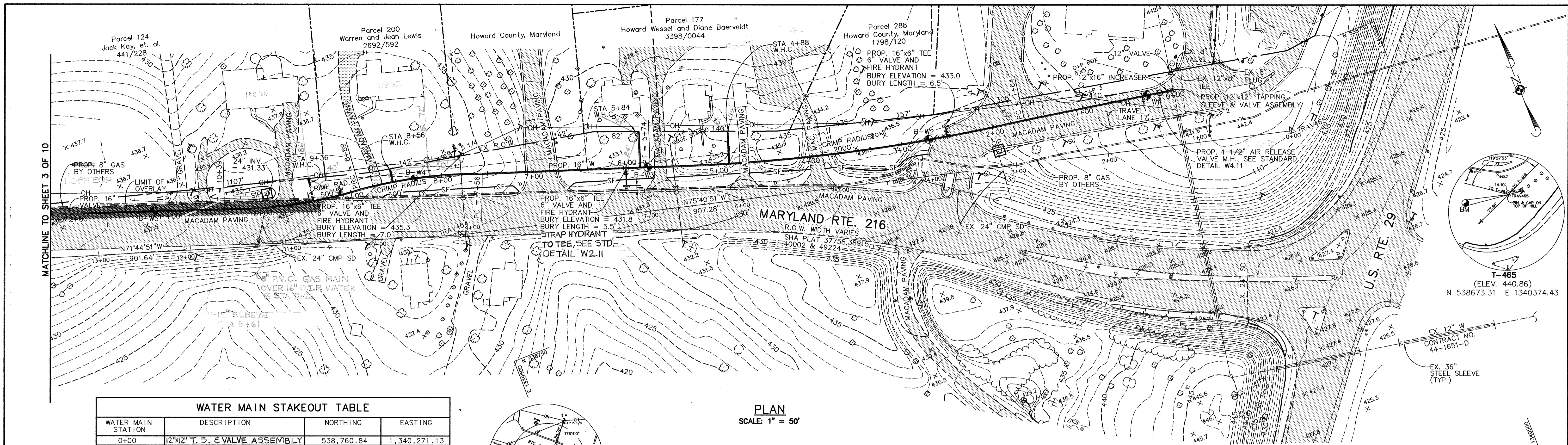
TITLE SHEET

600' SCALE MAP NO. 41 BLOCK NO. 20 & 21

WESTERN SCHOOL COMPLEX
WATER MAIN EXTENSION
TAX MAP: 41 PARCEL:
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 44 - 3505

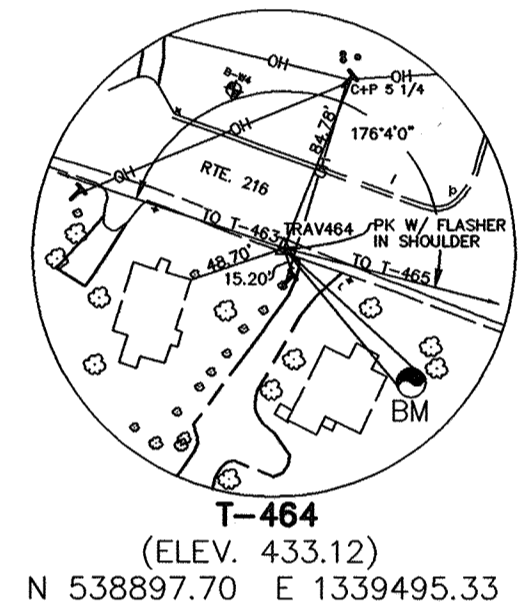
SCALE AS SHOWN

SHEET 1 OF 10



WATER MAIN STAKEOUT TABLE

WATER MAIN STATION	DESCRIPTION	NORTHING	EASTING
0+00	12"x12" T.S. & VALVE ASSEMBLY	538,760.84	1,340,271.13
0+10	12"x16" INCREASER	538,762.58	1,340,261.26
0+15	1 1/2" AIR RELEASE VALVE M.H.	538,763.46	1,340,256.34
1+64	P.C.	538,789.41	1,340,109.17
2+50	16"x6" TEE	538,803.84	1,340,024.86
5+74	P.T.	538,890.66	1,339,713.37
6+00	16"x6" TEE	538,899.26	1,339,687.54
7+56	P.C.	538,950.33	1,339,541.16
8+89	P.R.C.	538,982.86	1,339,412.10
9+11	16"x6" TEE	538,984.63	1,339,395.37
10+39	P.T.	539,016.94	1,339,267.20
12+07	16" VALVE	539,073.69	1,339,108.80



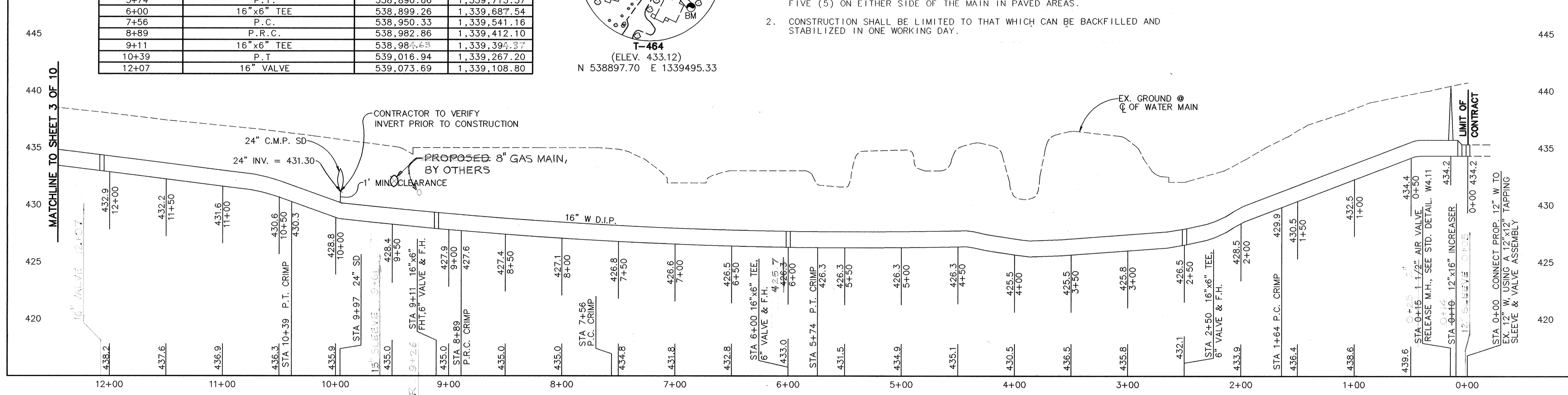
PLAN
SCALE: 1" = 50'

SEDIMENT AND EROSION CONTROL NOTES

- THE PROPOSED LIMIT OF DISTURBANCE SHALL EXTEND TEN (10) FEET ON EITHER SIDE OF THE CENTER OF THE PROPOSED WATER MAIN IN NON-PAVED AREAS AND FIVE (5) ON EITHER SIDE OF THE MAIN IN PAVED AREAS.
- CONSTRUCTION SHALL BE LIMITED TO THAT WHICH CAN BE BACKFILLED AND STABILIZED IN ONE WORKING DAY.

SHEET NOTE

- FOR RESTORATION SCHEDULE SEE SHEET 6 OF 10.



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

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on the drawings.

Review for Howard Soil Conservation District and meets technical requirements.

J.W. Washburn 9/3/96
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Robertson 9/3/96
HOWARD SOIL CONSERVATION DISTRICT DATE

AS-BUILT
Date: 1/31/99

AS-BUILT
(FROM DATA PROVIDED BY CONTRACTOR)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Laura J. Lewis 8/30/96
DIRECTOR OF PUBLIC WORKS DATE

Charles P. Peterson 8/30/96
CHIEF, BUREAU OF ENGINEERING DATE

Robert W. Burman 8/30/96
CHIEF, BUREAU OF UTILITIES DATE

James P. Butler 8/30/96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RIEMER MUEGGE/GEORGE MILES BUHR
A JOINT VENTURE
8818 Centre Park Drive • Columbia, MD 21045
410-997-8900 FAX: 410-997-9282
989010/0102/PLAN

STATE OF MARYLAND
FRANK R. DONALDSON # 8146

DES: J.S.C.			
DRN: E.L.R.			
CHK: G.C.L.			
DATE: 8/96	BY	NO.	REVISION

PLAN AND PROFILE
STA 0+00 TO STA 12+28

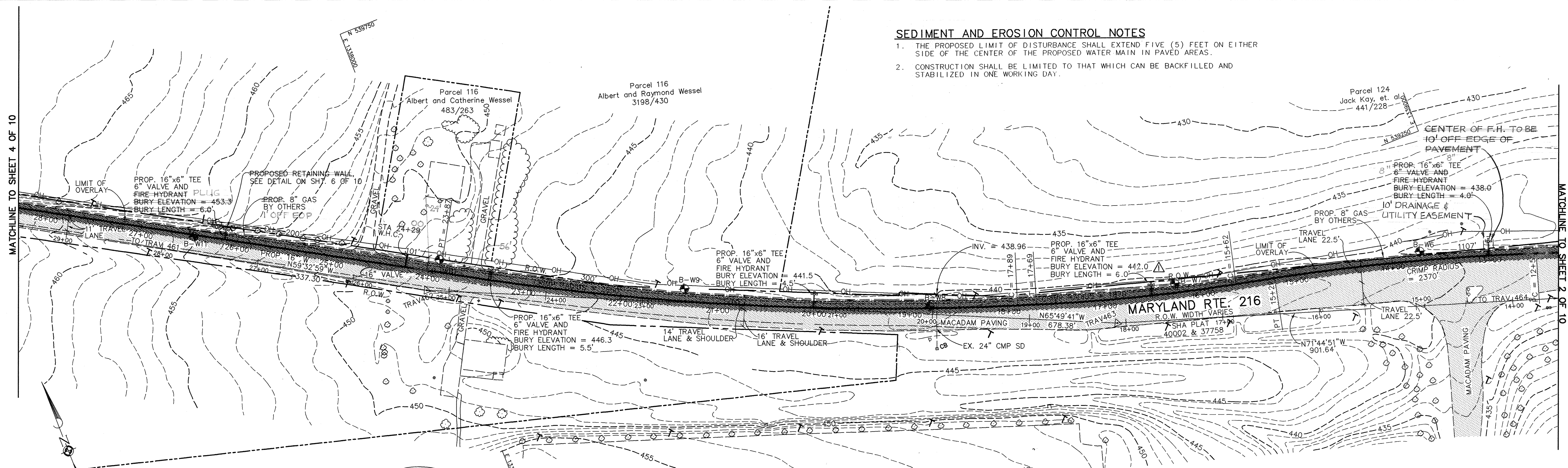
600' SCALE MAP NO. 41 BLOCK NO. 20 & 21

WESTERN SCHOOL COMPLEX
WATER MAIN EXTENSION
TAX MAP: 41 PARCEL:
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 44 - 3505

SCALE AS SHOWN
SHEET 2 OF 10

SEDIMENT AND EROSION CONTROL NOTES

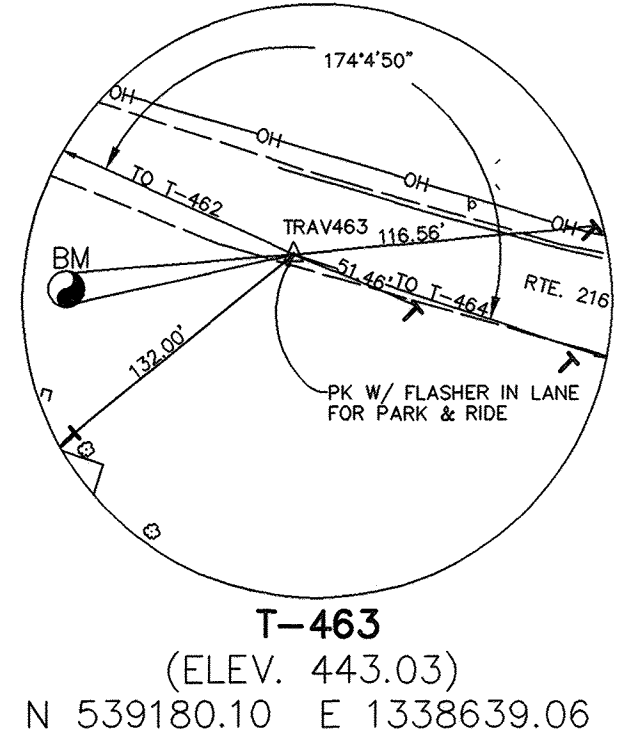
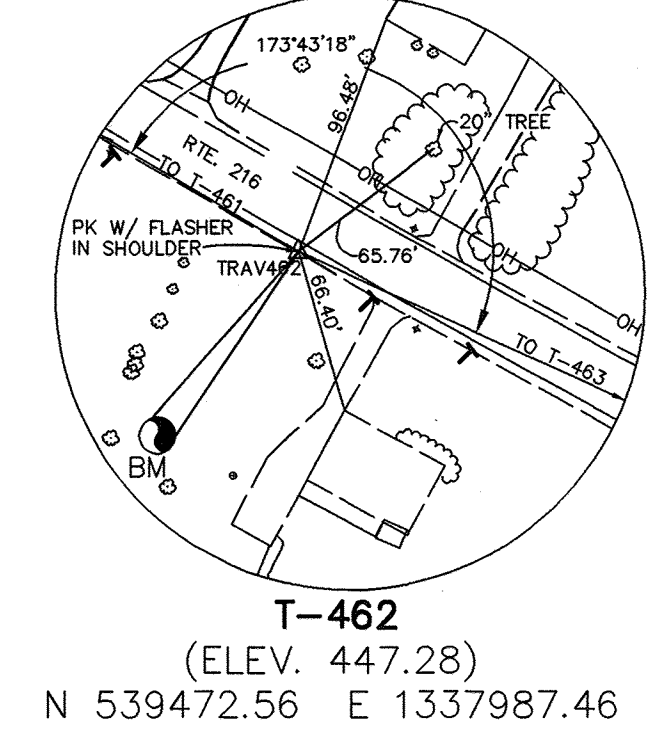
1. THE PROPOSED LIMIT OF DISTURBANCE SHALL EXTEND FIVE (5) FEET ON EITHER SIDE OF THE CENTER OF THE PROPOSED WATER MAIN IN PAVED AREAS.
2. CONSTRUCTION SHALL BE LIMITED TO THAT WHICH CAN BE BACKFILLED AND STABILIZED IN ONE WORKING DAY.



PLAN
SCALE: 1" = 50'

SHEET NOTE

1. FOR RESTORATION SCHEDULE SEE SHEET 6 OF 10.



WATER MAIN STAKEOUT TABLE			
WATER MAIN STATION	DESCRIPTION	NORTHING	EASTING
12+51	P.C.	539,088.39	1,339,067.73
13+00	16"x6" TEE	539,104.27	1,339,019.27
15+22	P.T.	539,163.79	1,338,808.94
15+62	P.C.	539,172.54	1,338,787.59
16+50	16"x6" TEE	539,193.39	1,338,682.41
17+69	P.T.	539,228.45	1,338,568.22
17+89	P.C.	539,234.82	1,338,549.56
20+00	16"x6" TEE	539,309.61	1,338,352.89
23+35	16"x6" TEE	539,458.11	1,338,052.52
23+87	P.T.	539,484.24	1,338,007.37
24+35	16" VALVE	539,508.27	1,337,966.00
26+13	16"x6" TEE	539,595.17	1,337,811.17

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on the drawings.

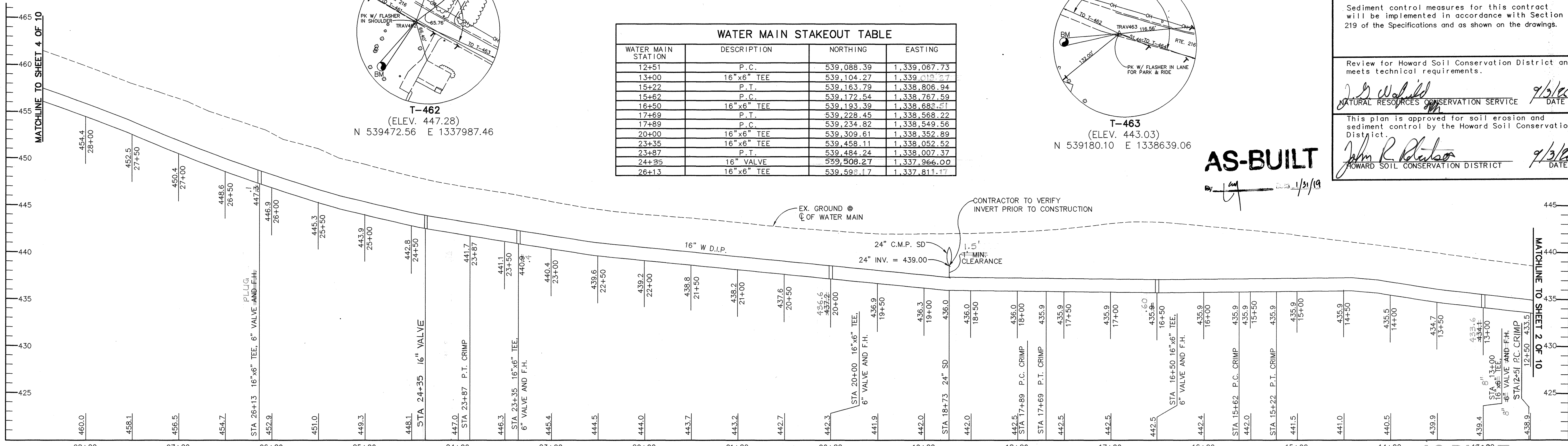
Review for Howard Soil Conservation District and meets technical requirements.

J. D. Wolf
NATURAL RESOURCES CONSERVATION SERVICE
DATE: 9/13/06

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

John R. Peterson
HOWARD SOIL CONSERVATION DISTRICT
DATE: 9/13/06

AS-BUILT



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

AS-BUILT
(FROM DATA PROVIDED BY CONTRACTOR)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Clark
DIRECTOR OF PUBLIC WORKS
DATE: 8/30/06

John R. Peterson
CHIEF, BUREAU OF ENGINEERING
DATE: 8/30/06

John R. Peterson
CHIEF, BUREAU OF UTILITIES
DATE: 8/30/06

James H. Butler
CHIEF, WATER AND SEWER DESIGN DIVISION
DATE: 8/30/06

**RIEMER MUEGGE/GEORGE MILES BUHR
A JOINT VENTURE**
8818 Centre Park Drive • Columbia, MD 21045
410-997-8900 FAX: 410-997-9282
riem@riem.com

STATE OF MARYLAND
FRANK H. DONALDSON # 8146

DES:	J.S.C.	J.S.C.	MODIFY BURY LENGTH & BURY ELEVATION.	10/18/96
DRN:	E.L.R.			
CHK:	G.C.L.			
DATE:	8/96			
BY:	NO.	REVISION	DATE	

PLAN AND PROFILE
STA 12+28 TO STA 28+29

600' SCALE MAP NO. 41 BLOCK NO. 20 & 21

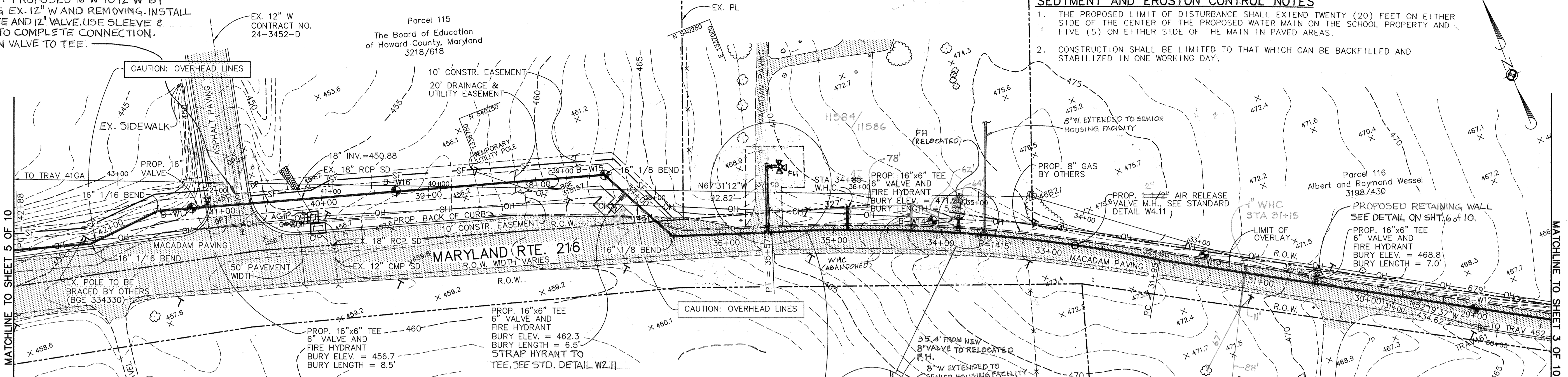
**WESTERN SCHOOL COMPLEX
WATER MAIN EXTENSION
TAX MAP: 41 PARCEL:
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 44 - 3505**

SCALE AS SHOWN
SHEET 3 OF 10

CONNECT PROPOSED 16" W TO 12" W BY CUTTING EX. 12" W AND REMOVING. INSTALL 16" X 12" TEE AND 12" VALVE, USE SLEEVE & SPACER TO COMPLETE CONNECTION. RESTRAIN VALVE TO TEE.

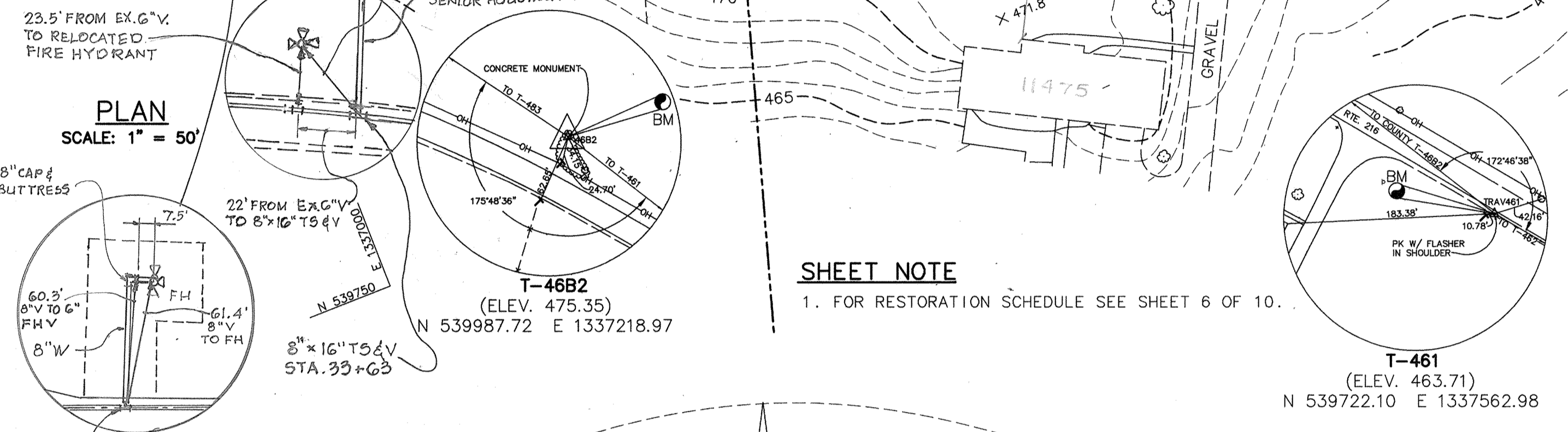
SEDIMENT AND EROSION CONTROL NOTES

1. THE PROPOSED LIMIT OF DISTURBANCE SHALL EXTEND TWENTY (20) FEET ON EITHER SIDE OF THE CENTER OF THE PROPOSED WATER MAIN ON THE SCHOOL PROPERTY AND FIVE (5) ON EITHER SIDE OF THE MAIN IN PAVED AREAS.
2. CONSTRUCTION SHALL BE LIMITED TO THAT WHICH CAN BE BACKFILLED AND STABILIZED IN ONE WORKING DAY.



WATER MAIN STAKEOUT TABLE

WATER MAIN STATION	DESCRIPTION	NORTHING	EASTING
30+50	16"x6" TEE	539,817.07	1,337,433.83
31+95	P.C.	539,890.12	1,337,308.38
32+74	1 1/2" AIR RELEASE VALVE M.H.	539,931.49	1,337,239.80
33+85	16"x6" TEE	539,981.79	1,337,143.11
35+57	P.T.	540,045.83	1,336,982.11
36+50	16" 1/8 BEND	540,076.27	1,336,894.84
37+10	16"x6" TEE	540,129.06	1,336,868.25
37+35	16" 1/8 BEND	540,152.31	1,336,856.53
40+77	16" X 12" TEE	540,251.42	1,336,529.95
41+06	16" X 6" TEE	540,259.75	1,336,502.55
41+15	16" VALVE	540,273.21	1,336,458.14
41+53	16" 1/16 BEND	540,267.92	1,336,389.14
42+22	16" 1/16 BEND	540,267.92	1,336,389.14
42+88	P.C.	540,288.40	1,336,323.32



Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on the drawings.

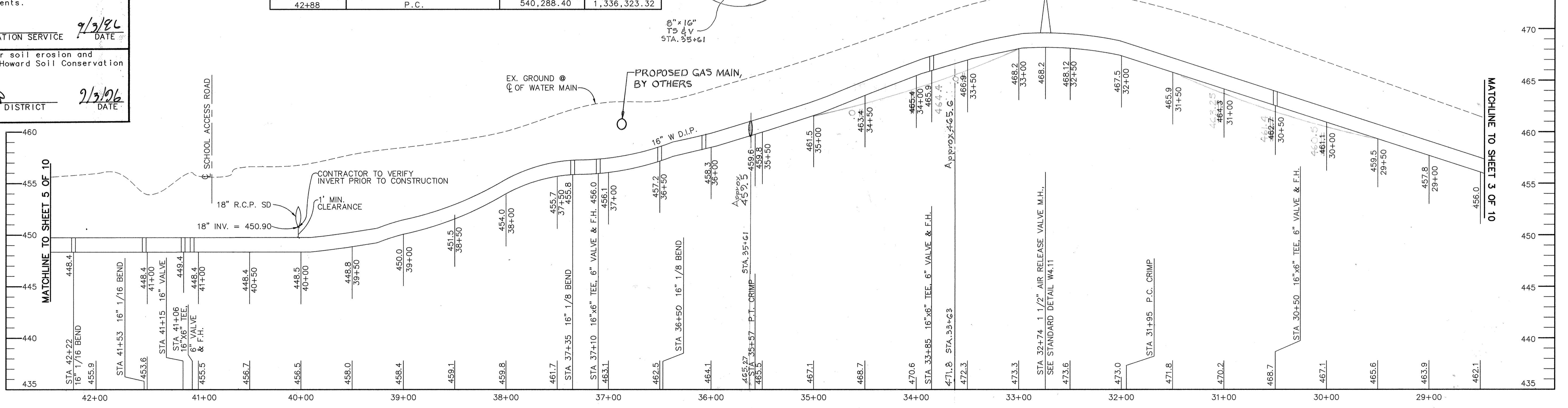
Review for Howard Soil Conservation District and meets technical requirements.

J.S. Warfield 9/3/26
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Robertson 9/3/26
HOWARD SOIL CONSERVATION DISTRICT DATE

SHEET NOTE
1. FOR RESTORATION SCHEDULE SEE SHEET 6 OF 10.

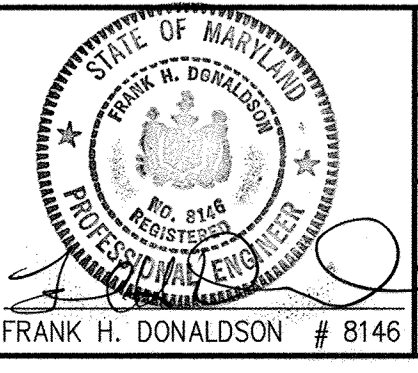


PROFILE
HORIZ: 1" = 50'
SCALE: VERT: 1" = 5'

AS-BUILT AS-BUILT
By *[Signature]* Date 1/31/19
(FROM DATA PROVIDED BY CONTRACTOR)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[Signature] 8/30/26
DIRECTOR OF PUBLIC WORKS DATE
[Signature] 8/30/26
CHIEF, BUREAU OF ENGINEERING DATE
[Signature] 8/30/26
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

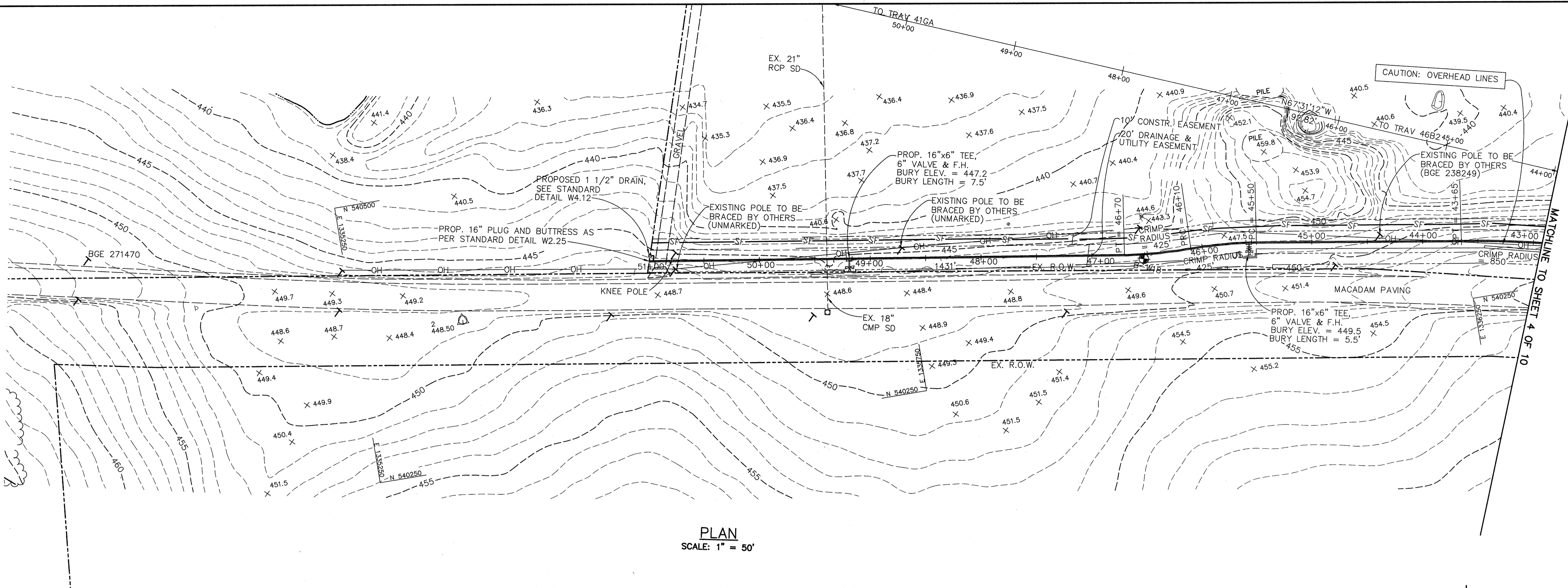
RIEMER MUEGGE/GEORGE MILES BUHR
A JOINT VENTURE
8818 Centre Park Drive • Columbia, MD 21045
410-997-8900 FAX: 410-997-9282
86616/ASB/26



DES:	J.S.C.				
DRN:	E.L.R.				
CHK:	G.C.L.	LEM 1	As built for addition of FH+WSC for Arbor Terrace Senior Housing		
DATE:	8/96				
BY:	NO.	REVISION	DATE		

PLAN AND PROFILE
STA 28+29 TO STA 42+92
600' SCALE MAP NO. 41 BLOCK NO. 20 & 21

WESTERN SCHOOL COMPLEX
WATER MAIN EXTENSION
TAX MAP: 41 PARCEL:
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 44 - 3505
SCALE AS SHOWN
SHEET 4 OF 10



PLAN
SCALE: 1" = 50'

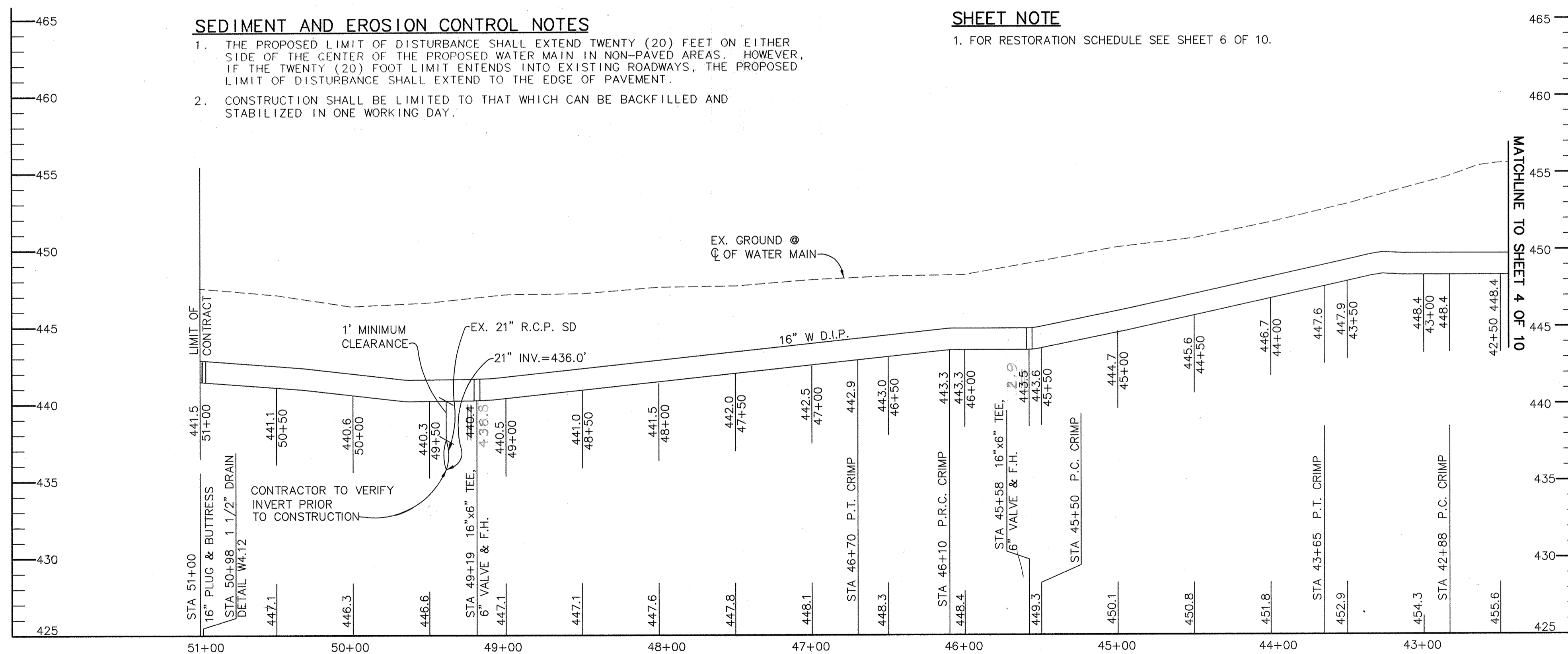
WATER MAIN STAKEOUT TABLE			
WATER MAIN STATION	DESCRIPTION	NORTHING	EASTING
43+65	P.T.	540,302.51	1,336,247.83
45+50	P.C.	540,331.87	1,336,065.33
45+58	16"x6" TEE	540,332.88	1,336,058.62
46+10	P.R.C.	538,950.33	1,339,541.16
46+70	P.T.	540,340.42	1,335,946.06
49+19	16"x6" TEE	540,378.34	1,335,702.16
51+00	PLUG & BUTTRESS	540,405.90	1,335,522.26

SEDIMENT AND EROSION CONTROL NOTES

1. THE PROPOSED LIMIT OF DISTURBANCE SHALL EXTEND TWENTY (20) FEET ON EITHER SIDE OF THE CENTER OF THE PROPOSED WATER MAIN IN NON-PAVED AREAS. HOWEVER, IF THE TWENTY (20) FOOT LIMIT EXTENDS INTO EXISTING ROADWAYS, THE PROPOSED LIMIT OF DISTURBANCE SHALL EXTEND TO THE EDGE OF PAVEMENT.
2. CONSTRUCTION SHALL BE LIMITED TO THAT WHICH CAN BE BACKFILLED AND STABILIZED IN ONE WORKING DAY.

SHEET NOTE

1. FOR RESTORATION SCHEDULE SEE SHEET 6 OF 10.



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

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on the drawings.

Review for Howard Soil Conservation District and meets technical requirements.

J. G. Warfield
NATURAL RESOURCES CONSERVATION SERVICE DATE: 9/3/96

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

John R. Roberts
HOWARD SOIL CONSERVATION DISTRICT DATE: 9/3/96

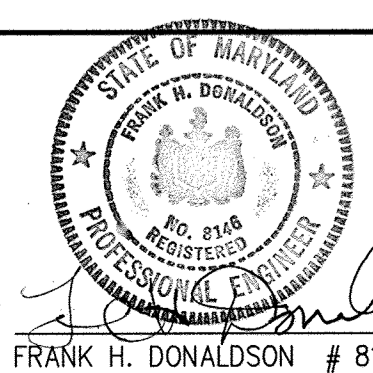
AS-BUILT
DATE: 1/31/19

AS-BUILT
(FROM DATA PROVIDED BY CONTRACTOR)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Lewis 8/30/96
DIRECTOR OF PUBLIC WORKS DATE
John R. Roberts 9/3/96
CHIEF, BUREAU OF UTILITIES DATE
John R. Roberts 9/3/96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RIEMER MUEGGE/GEORGE MILES BUHR
A JOINT VENTURE
8818 Centre Park Drive • Columbia, MD 21045
410-997-8900 FAX: 410-997-9282
969910/ab15PLAN



DES: J.S.C.			
DRN: E.L.R.			
CHK: G.C.L.			
DATE: 8/96			
BY NO.		REVISION	DATE

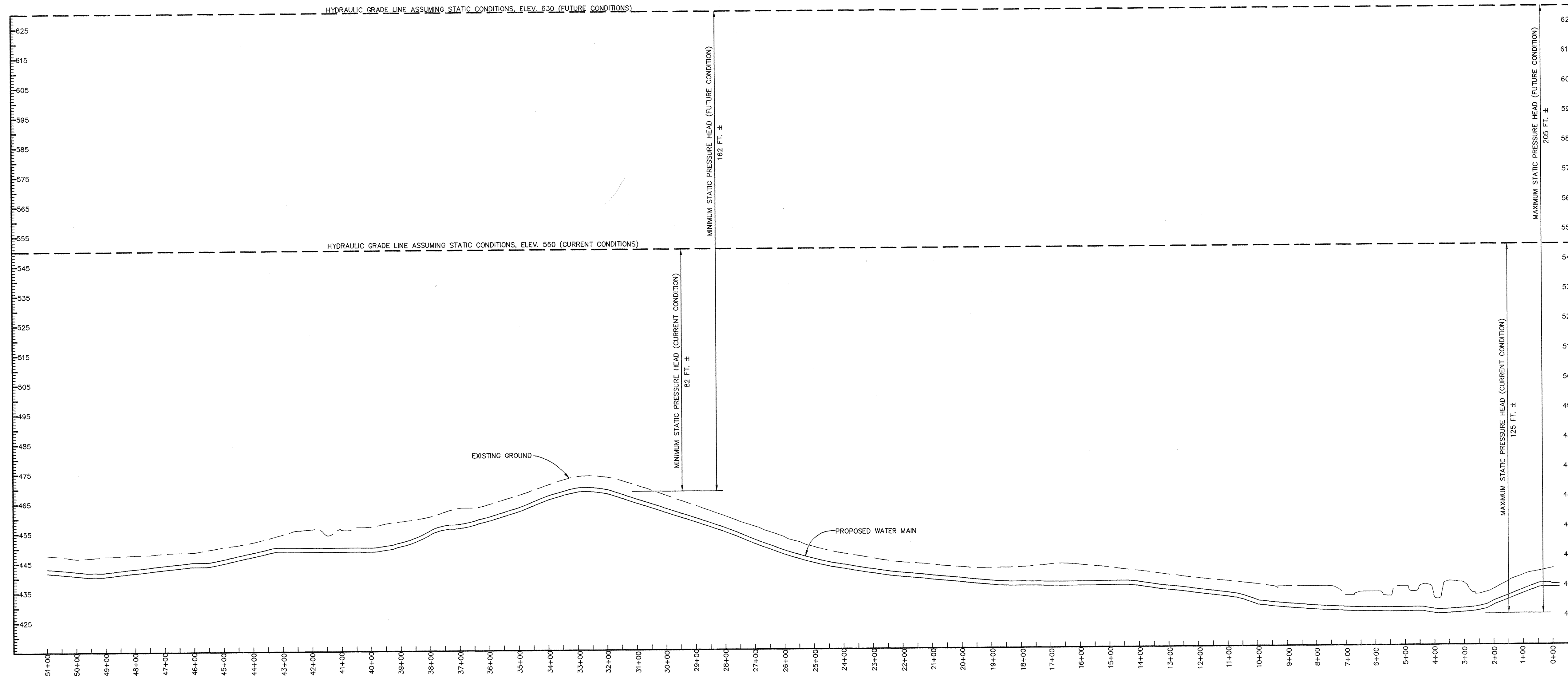
PLAN AND PROFILE
STA 42+91 TO STA 51+00

600' SCALE MAP NO. 41 BLOCK NO. 20 & 21

WESTERN SCHOOL COMPLEX
WATER MAIN EXTENSION
TAX MAP: 41 PARCEL:
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 44 - 3505

SCALE AS SHOWN

SHEET 5 OF 10



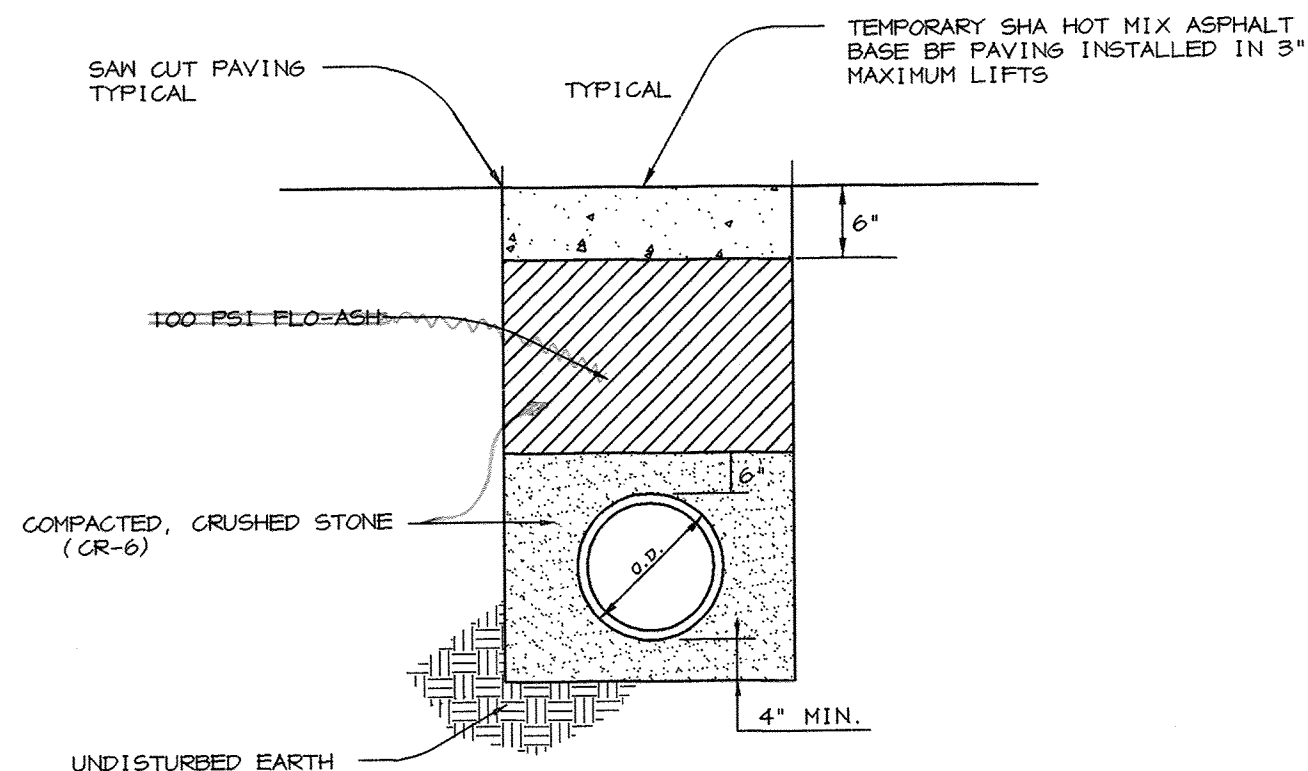
BACKFILL/PAVING REPAIR NOTES

1. THE CONTRACTOR SHALL USE FLO-ASH AND 6" OF TEMPORARY HOT MIX PAVING IN ALL EXISTING PAVED AREAS. THE CONTRACTOR SHALL INSTALL TEMPORARY HOT MIX PAVING AFTER ALLOWING THE FLO-ASH TO SET A MINIMUM OF 6 HOURS. THE TRENCH SHALL BE STEEL PLATED UNTIL THE TEMPORARY PAVING APPLICATION IS INSTALLED. THE CONTRACTOR WILL BE LIMITED TO 250 FEET OF INSTALLED STEEL PLATING AT ANY POINT IN TIME ON THE PROJECT. TEMPORARY HOT MIX PAVING MUST BE PLACED WITHIN 5 WORKING DAYS AFTER STEEL PLATING HAS BEEN PLACED, UNLESS DIRECTED BY THE ENGINEER.
2. FLO-ASH SHALL BE IN ACCORDANCE WITH SECTION 913 OF THE MD SHA STANDARD SPECIFICATION - OCT 1993.
3. IF SAN CUT ALONG TRENCH IS DAMAGED, CUT BACK DAMAGED AREAS AS DIRECTED BY ENGINEER TO FULL 6 INCH TEMPORARY PAVING THICKNESS AND THEN COMPLETE TEMPORARY HOT MIX PAVING AS INDICATED AND TO LIMITS OF PAVING CUT-BACK.
4. UPON COMPLETION OF ALL TEMPORARY TRENCH PAVING, MILL TO 1 1/2 INCH DEPTH ALL EXISTING AND TEMPORARY PAVING FROM CENTERLINE OF EXISTING PAVING TO THE NORTHERNMOST LIMITS OF EXISTING SHOULDER (OR TO THE CONCRETE GUTTER) AND APPLY 1 1/2 INCH THICK SHA HOT MIX ASPHALT SURFACE SF.

HYDRAULIC GRADIENT PROFILE

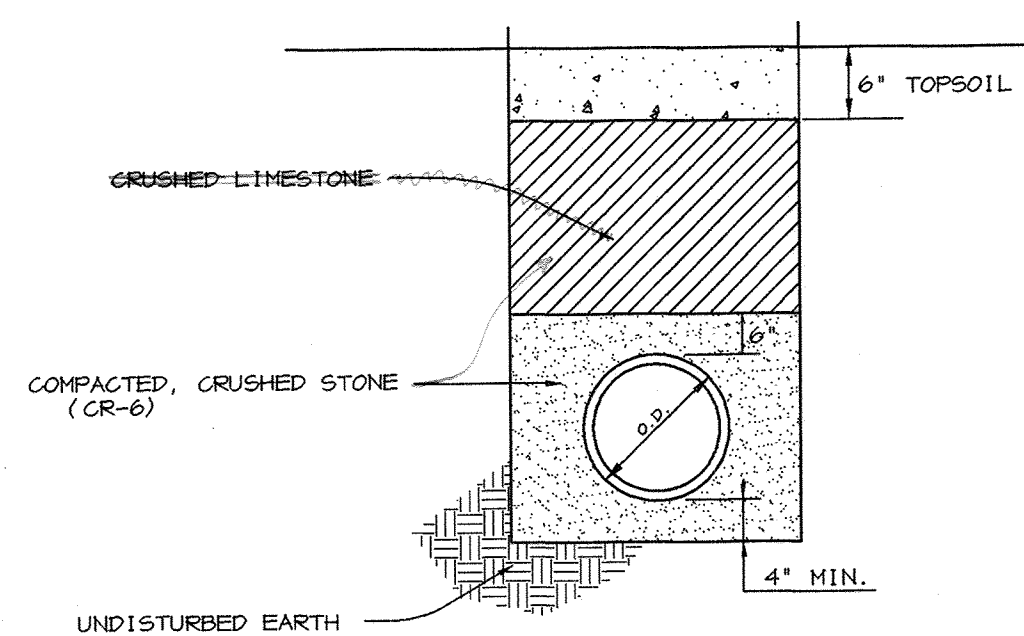
SCALE: HORIZ. 1" = 200'
VERT. 1" = 20'

RESTORATION SCHEDULE		
LOCATION/WATER MAIN STATION	TYPE	AREA (SQ. FT.)
0+00 TO 2+65	PAVING	7,500
2+65 TO 9+30	PAVING	2,550
9+30 TO 36+80	30" SEED & MULCH	17,400
36+80 TO 51+00	PAVING	55,000
	30" SEED & MULCH	41,400



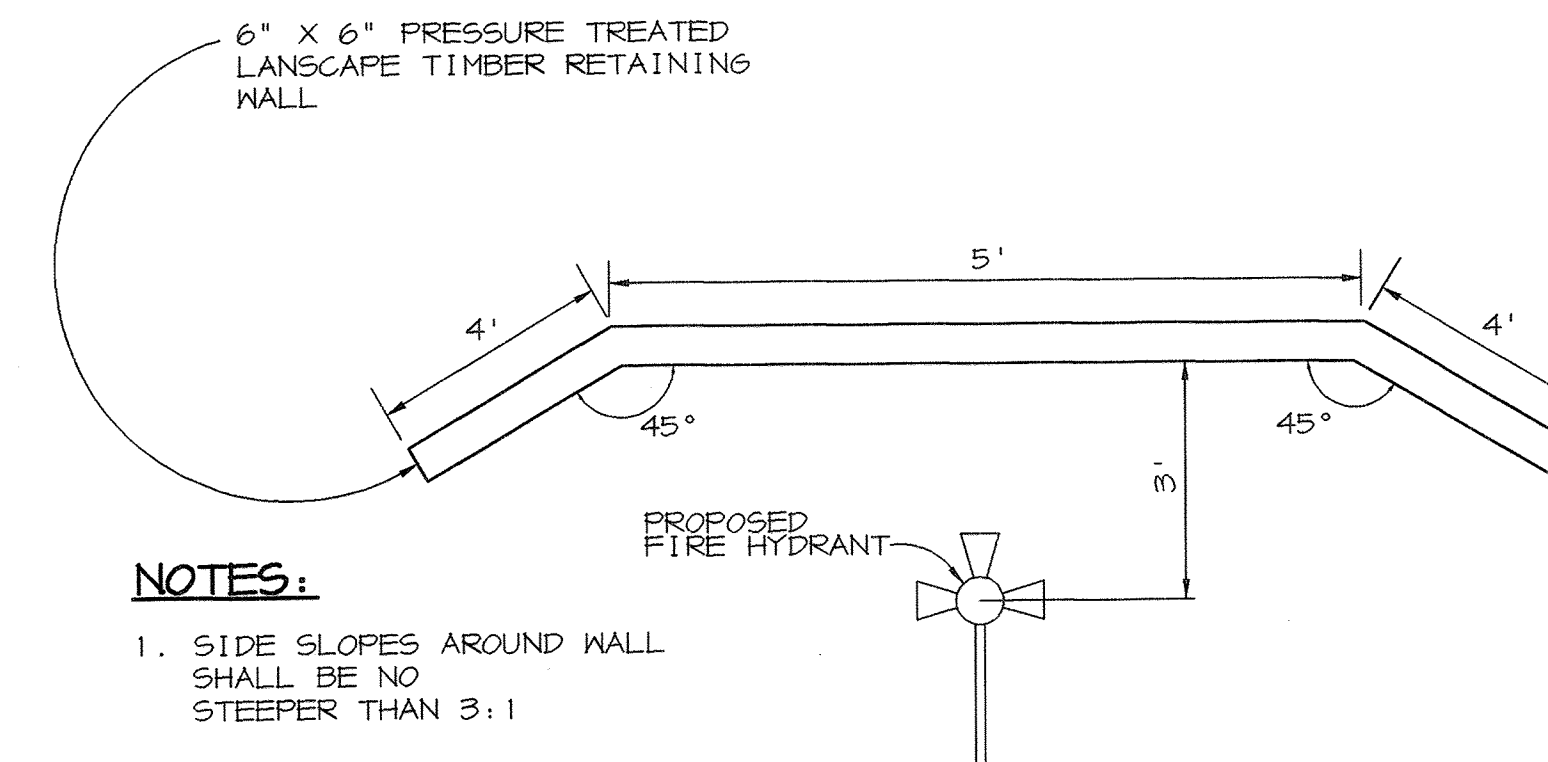
TRENCH BACKFILL & PAVING REPAIR DETAIL

NOT TO SCALE



TRENCH BACKFILL DETAIL FOR OTHER THAN PAVED AREAS

NOT TO SCALE



NOTES:

1. SIDE SLOPES AROUND WALL SHALL BE NO STEEPER THAN 3:1
2. MAX HEIGHT OF RETAINING WALL, 3'

RETAINING WALL DETAIL

NOT TO SCALE

AS-BUILT

By *UMA* Date 1/31/19

AS-BUILT

(FROM DATA PROVIDED BY CONTRACTOR)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

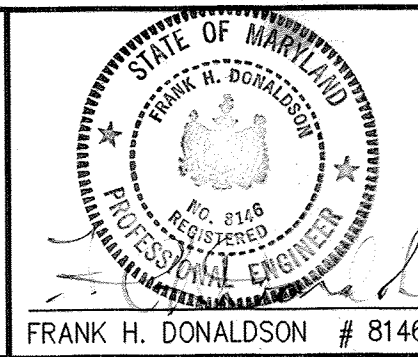
James M. Lewis 8/30/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Sporn 8/30/96
CHIEF, BUREAU OF ENGINEERING DATE

Robert J. Sporn 8-30-96
CHIEF, BUREAU OF UTILITIES DATE

Robert J. Sporn 8-30-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RIEMER MUEGGE/GEORGE MILES BUHR
A JOINT VENTURE
8818 Centre Park Drive • Columbia, MD 21045
410-997-8900 FAX: 410-997-9282
990910/WRP/2022



DES: J.S.C.					
DRN: E.L.R.					
CHK: G.C.L.					
DATE: 8/96	BY	NO.	REVISION	DATE	

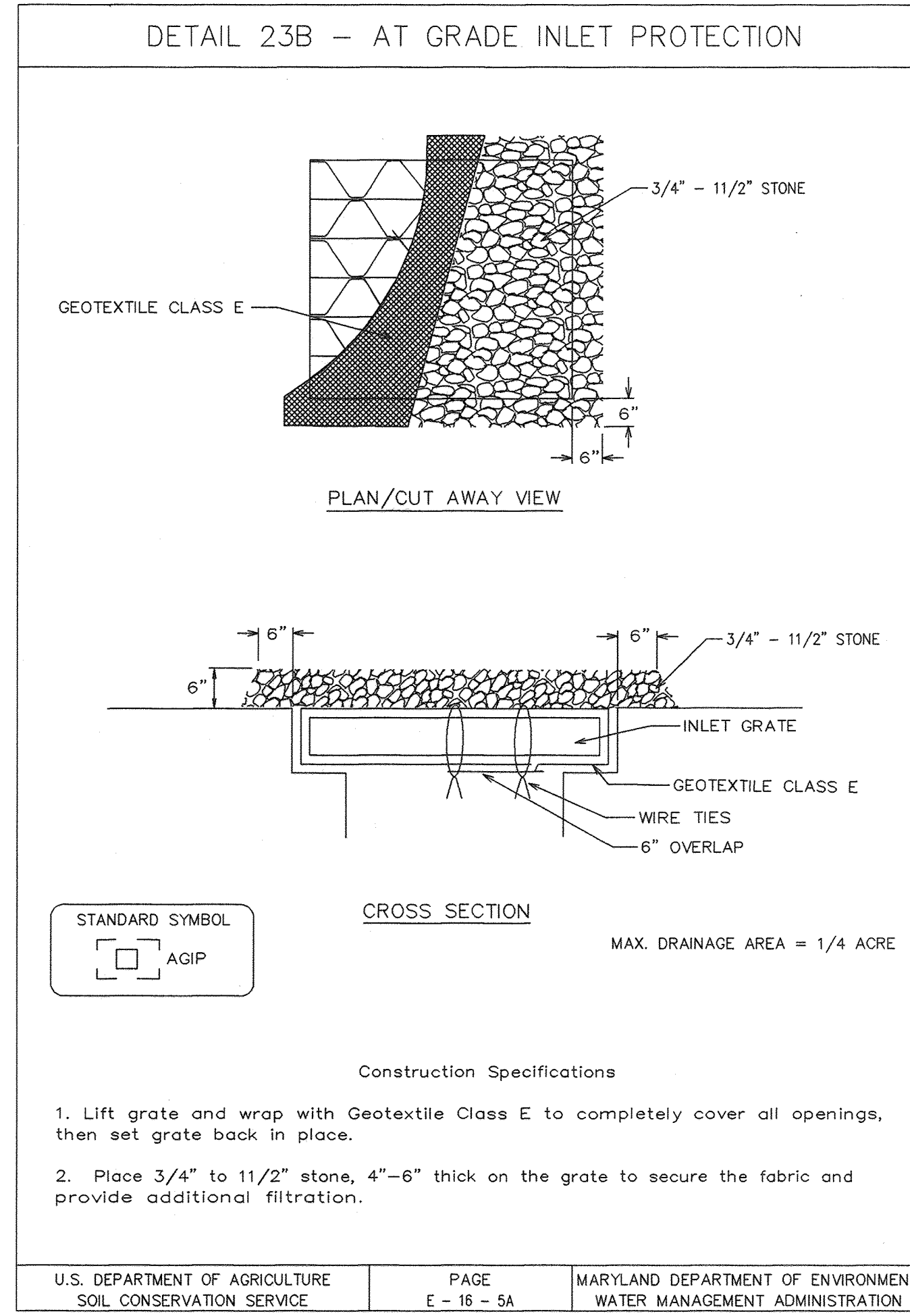
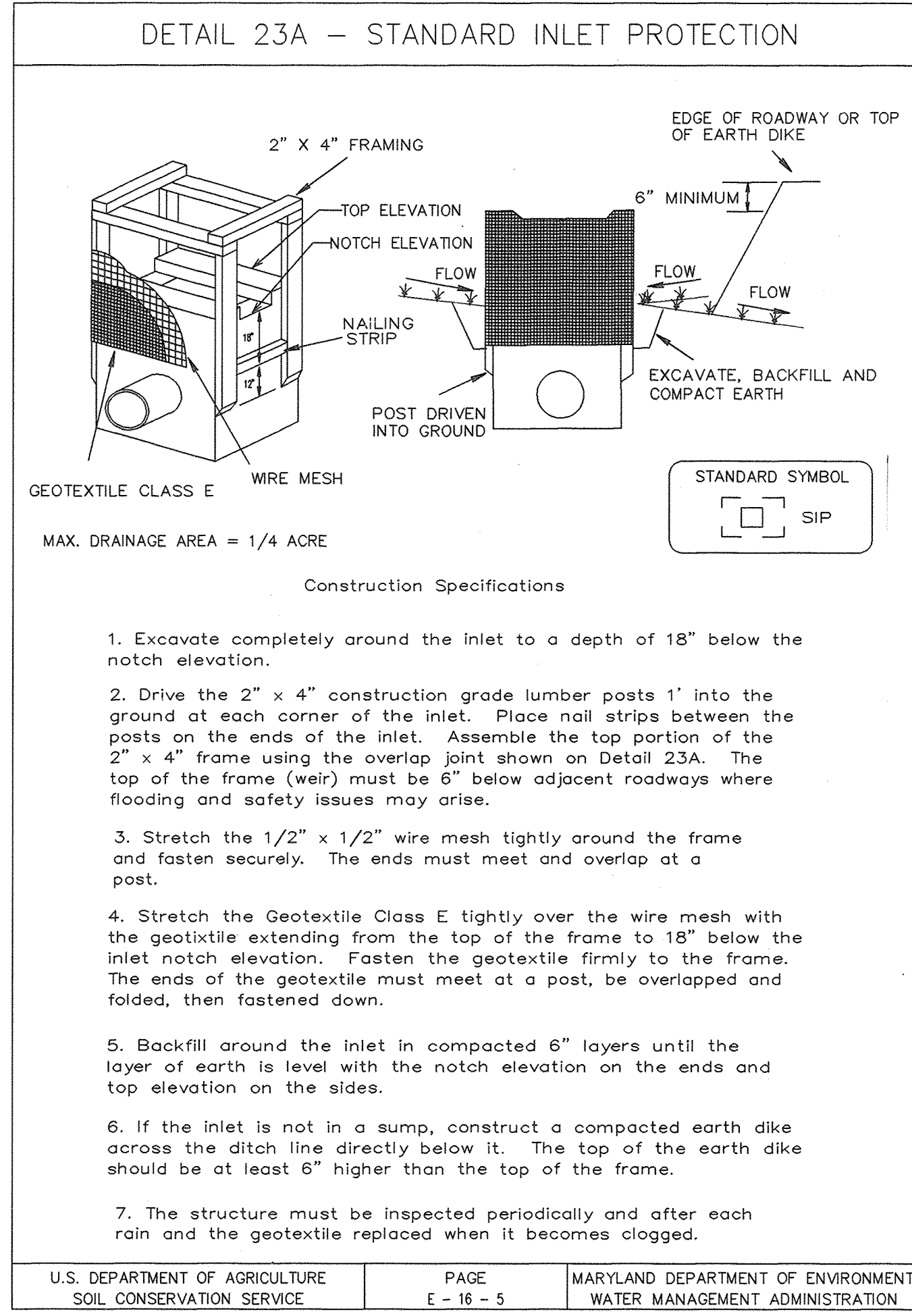
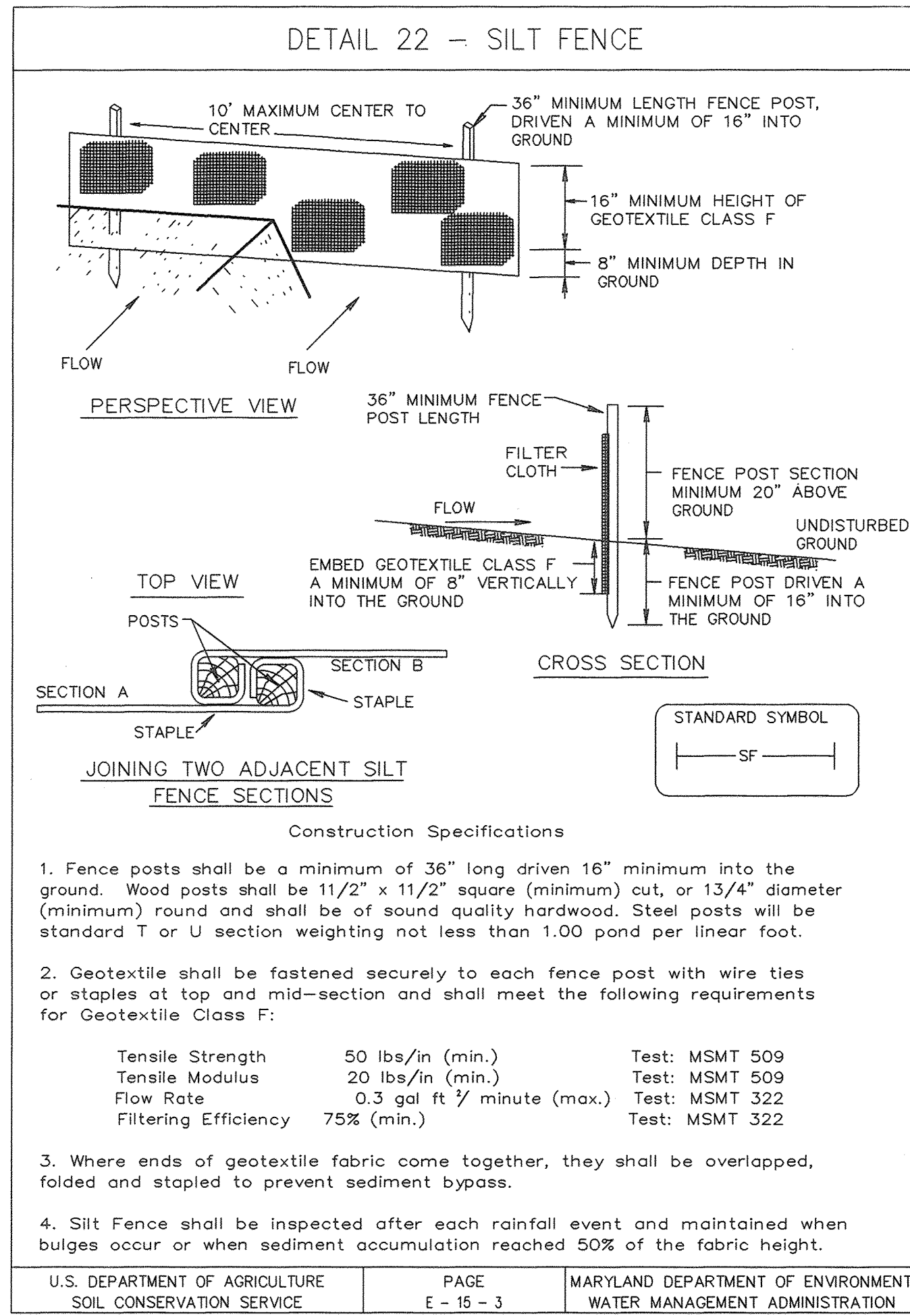
HYDRAULIC GRADIENT PROFILE AND DETAILS

600' SCALE MAP NO. 41 BLOCK NO. 20 & 21

WESTERN SCHOOL COMPLEX
WATER MAIN EXTENSION
TAX MAP: 41 PARCEL:
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 44 - 3505

SCALE AS SHOWN

SHEET 6 OF 10



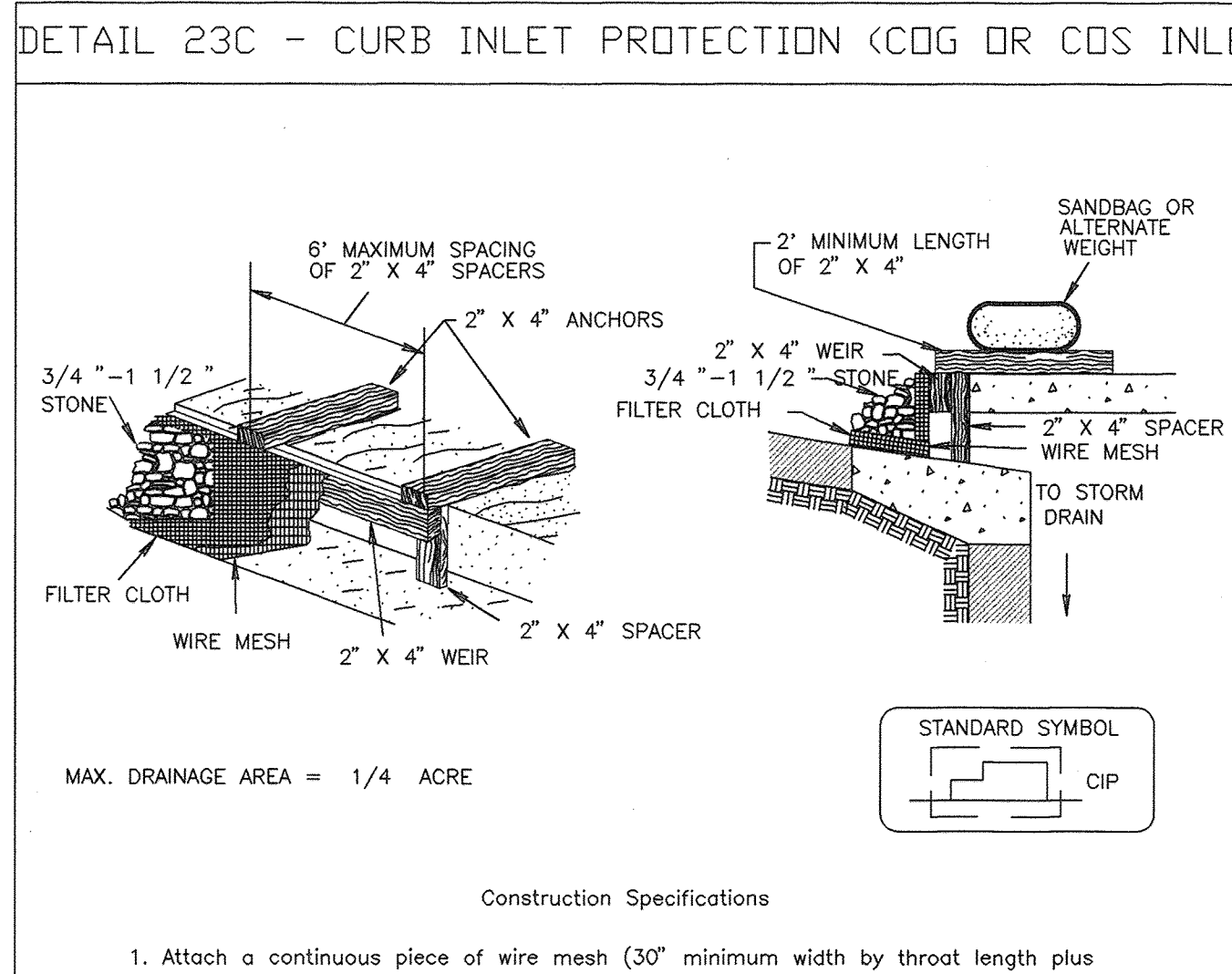
SILT FENCE

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
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TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed 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. per 1000 sq.ft.).

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (10.7 lbs. per 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. per 1000 sq.ft.) of unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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, 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 acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 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. per 1000 sq.ft.).
- Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (14 lbs. per 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 (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:

- 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
- Use sod.
- Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

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

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION 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 AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL, FOR PERMANENT SEEDINGS (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONG 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	N/A
AREA DISTURBED	0.30 ACRES
AREA TO BE ROOFED OR PAVED	0 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.30 ACRES
TOTAL CUT	5000 CU.YDS.
TOTAL FILL	5000 CU.YDS.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
- SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., 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 CAN BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

TOPSOIL SPECIFICATION

TOPSOIL SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD SPECIFICATION SECTION 703.

SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT AND ALL OTHER NECESSARY PERMITS.
- ADVISE SEDIMENT AND EROSION CONTROL INSPECTOR 48 HOURS IN ADVANCE OF COMMENCING WORK. (1 DAY)
- INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS DIRECTED BY HOWARD COUNTY DLP SEDIMENT CONTROL INSPECTOR, AND AS SHOWN ON DRAWINGS. (2 DAY)
- INSTALL NEW WATERMAIN. (30 DAYS)
- STABILIZE DISTURBED AREA AS INDICATED ON THE DRAWING. (4 DAYS)
- REMOVE SEDIMENT AND EROSION CONTROL DEVICES WITH PERMISSION OF INSPECTOR AND STABILIZE BALANCE OF AREA. (1 DAY)

NOTE: CONSTRUCTION SHALL BE LIMITED THAT WHICH CAN BE BACKFILLED AND STABILIZED IN ONE WORKING DAY.

AS BUILT
By _____
AS-BUILT
(FROM DATA PROVIDED BY CONTRACTOR)

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on the drawings.

Review for Howard Soil Conservation District and meets technical requirements.

J. B. Workfield
NATURAL RESOURCES CONSERVATION SERVICE
DATE: 9/3/96

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
John R. Blunt
HOWARD SOIL CONSERVATION DISTRICT
DATE: 9/3/96

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Lewis 8/30/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Smith 8/30/96
CHIEF, BUREAU OF ENGINEERING DATE

Robert J. Smith 8/30/96
CHIEF, BUREAU OF UTILITIES DATE

James L. Strutt
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RIEMER MUEGGE/GEORGE MILES BUHR
A JOINT VENTURE
8818 Centre Park Drive • Columbia, MD 21045
410-997-8900 FAX: 410-997-9282
88-010/0380000

Frank H. Donaldson
FRANK H. DONALDSON # 8146

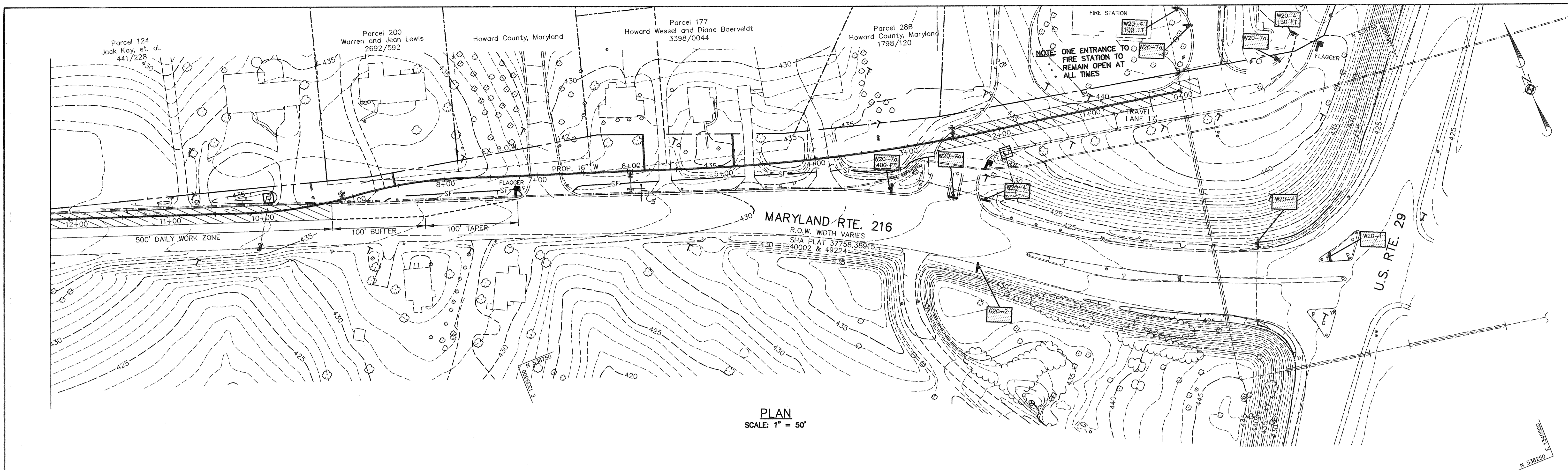
DES:	J.S.C.				
DRN:	E.L.R.				
CHK:	G.C.L.				
DATE:	8/96				
BY	NO.	REVISION	DATE		

SEDIMENT EROSION CONTROL

600' SCALE MAP NO. 41 BLOCK NO. 20 & 21

WESTERN SCHOOL COMPLEX
WATER MAIN EXTENSION
TAX MAP: 41 PARCEL:
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 44 - 3505

SCALE AS SHOWN
SHEET 7 OF 10



PLAN
SCALE: 1" = 50'

GENERAL TRAFFIC CONTROL NOTES

An arrow panel in the flashing arrow mode shall be used anytime there is a lane closure on a multi-lane highway. Arrow panels shall not be used along two-lane two-way roadways unless they display MSHA's "four corner" lamp array.

Vehicles should not occupy or be stopped in a lane beyond a horizontal curve or a vertical curve (hill). Instead vehicles stopping are to be pulled as far off the road as possible or be otherwise parked in a manner as to inhibit the movement of traffic as little as possible. If stopping is necessary and no backing vehicle is available place channelizing devices in accordance with general note #1 along with the appropriate signing.

Warning signs mounted on wood post(s) for the over 24 hour operations shall be installed as shown in Figure 6-1, Part VI of the MUTCD. The bottom of the signs mounted on portable supports shall be not less than one foot above the pavement elevation. All signs shall be installed in such a manner as to provide adequate visibility of these signs and all other existing signs on the highway to the driver.

In urban areas along streets where the prevailing speed is 35 MPH or less, and along secondary roads where the average daily traffic (ADT) is less than 1000 vehicles, the minimum size of 36" x 36" may be used.

For utility operations, advance warning signs may utilize the word "AHEAD" in lieu of distances up to and including 1500 feet. At greater distances, such as 1/2 mile or 1 mile; however, the correct distance value is to be used on such warning signs. Also the UTILITY WORK AHEAD sign may be used in lieu of ROAD CONSTRUCTION, ROAD WORK, or SHOULDER WORK signs only.

No work operations which interfere with the flow of traffic may take place during the peak hours 6 A.M. - 9 A.M. and 3 P.M. - 7 P.M. Monday - Friday unless written approval is received from the SMA District Engineer.

All signs, channelizing devices, etc. shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

APPROVED: [Signature] DATE: 8/30/96
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
WORK ZONE TRAFFIC CONTROL TYPICAL
GENERAL NOTES
STANDARD NO. MD-104.01

TWO LANES, TWO-WAY
MULTI-LANE UNDIVIDED
DIVIDED UNCONTROLLED CONVENTIONAL
EXPRESSWAY FREEWAY

- Flashing warning lights and/or flags may be used to call attention to early warning signs.
- Warning lights may be used to mark channelizing devices as needed.
- Channelizing devices are to be extended to a point where they are visible to approaching traffic. A full taper length (on two-lane, two-way roadways) shall always be provided in advance of curves.
- Taper formula: $L = SW$ for speeds greater than (>) 40 mph
 $L = WS^2/60$ for speeds equal to or less than (≤) 40 mph
Where: L = minimum length of taper
S = numerical value of vehicle speed
W = width of offset
- Maximum spacing between channelizing devices:
a. Taper - approximately equal in feet to the speed limit.
b. Tangent - twice the above taper value.
- Flood lights should be provided to mark flagger stations at night.
- If flaggers are not able to see each other, two-way radio communications shall be used.
- If entire work area is visible from one station, a single flagger may be used.
- Pavement markings no longer applicable shall be removed or obliterated as soon as practicable. Temporary markings shall be used as necessary.

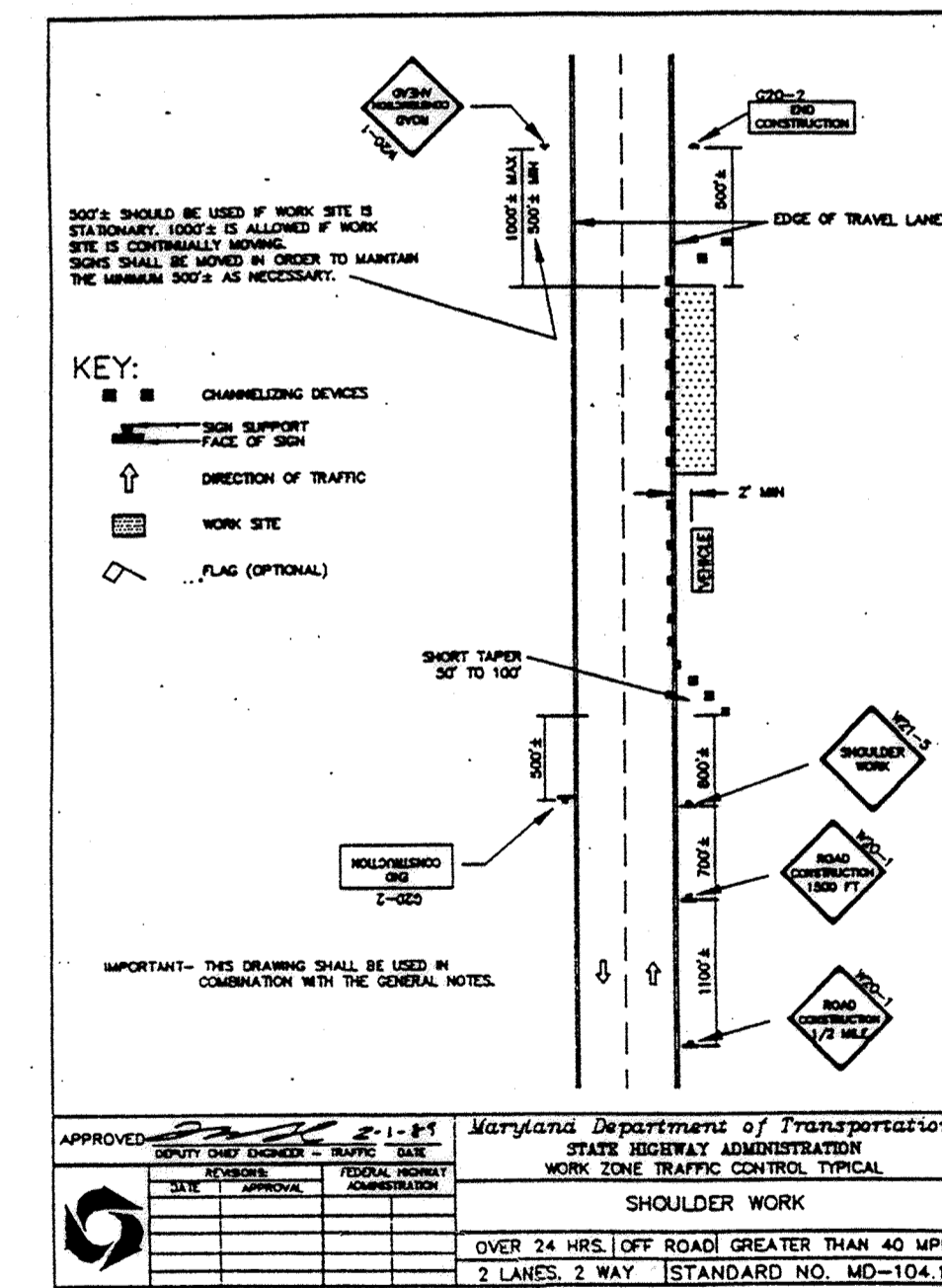
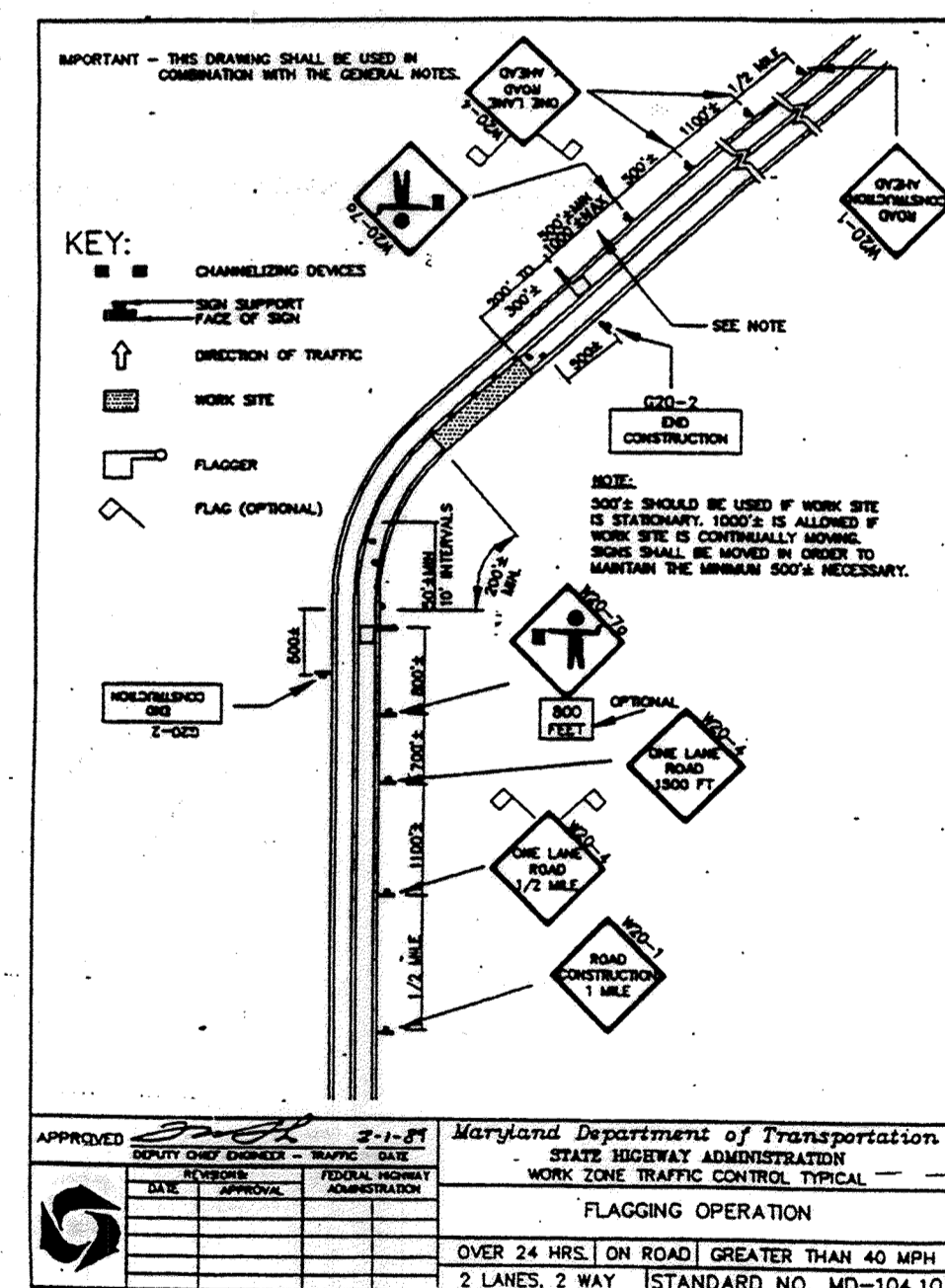
Alternate traffic control plans may be presented to the SMA District Office for approval in accordance with section 814.02 of the MDOT's Standard Specifications for Construction and Materials, January 1982 and any revisions thereto.

For emergency repair operations, a minimum number of traffic control devices (TCD's) may be used. This generally will consist of one sign per direction, flashing lights on the vehicle, a minimum number of channelizing devices, and flags or high level devices. Additional TCD's such as, arrow panel(s), move signing, etc., will be placed as soon as possible to present an array of devices which are consistent with the standard work zone traffic control typicals.

(continued)

APPROVED: [Signature] DATE: 8/30/96
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
WORK ZONE TRAFFIC CONTROL TYPICAL
GENERAL NOTES
STANDARD NO. MD-104.00

DETAILS



LEGEND

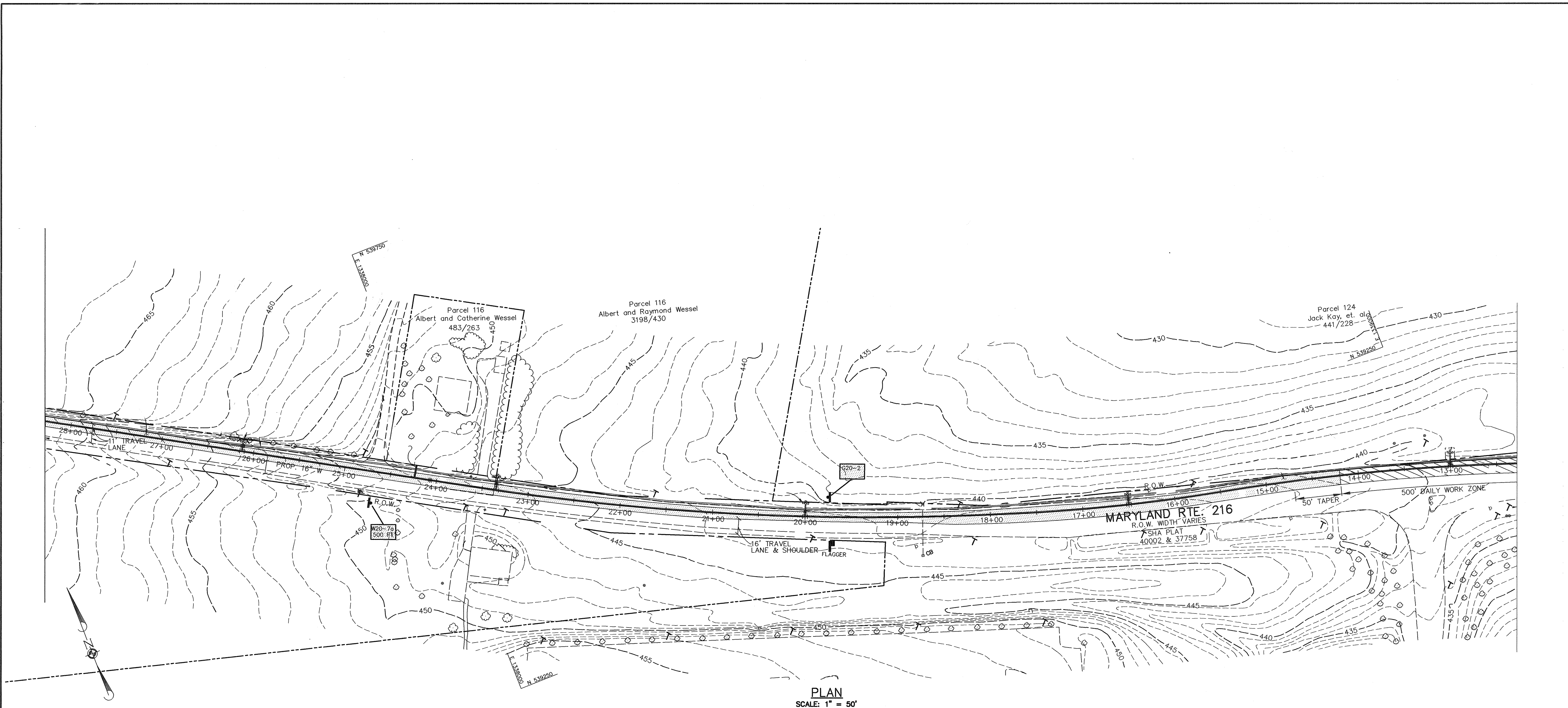
- DAILY WORK ZONE
- LIMITS OF LANE CLOSURE
- SIGN DESIGNATION
- CONSTRUCTION SIGN
- FLAGGER
- CHANNELIZING DEVICES

SHEET NOTES

- A 500 FOOT WORK ZONE SHALL BE FLAGGED OFF EACH DAY FOR CONSTRUCTION OPERATIONS. THE SIGNAGE INDICATED ON PLAN SHEETS 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50 IS THAT REQUIRED FOR THE FIRST 500 FEET OF CONSTRUCTION ASSUMING CONSTRUCTION OPERATIONS COMMENCE AT STATION 0+00. THE 500 FOOT WORK ZONE SHALL MOVE ALONG MD ROUTE 216 AS WORK PROGRESSES. THIS PROCESS WILL MINIMIZE THE STRETCH OF LANE SHUTDOWN REQUIRED DURING CONSTRUCTION. ALL SIGNS SHALL ADHERE TO MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD DETAIL MD-104.103. AS CONSTRUCTION PROCEEDS WESTWARD ADDITIONAL SIGNAGE SHALL BE ADDED AS PER M.S.H.A. STANDARD DETAIL NUMBER MD-104.103. ALL CONSTRUCTION SIGNS SHALL BE MOUNTED ON 105 WINDSTANDS.
- PLACE ONE W20-4 SIGN AND ONE W20-1 SIGN AT THE OUTLET OF LIME KILN ROAD ON TO MD ROUTE 216.

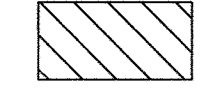
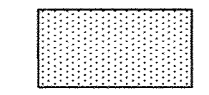




AS-BUILT
By [Signature] Date: 1/31/99
AS-BUILT
(FROM DATA PROVIDED BY CONTRACTOR)

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND [Signature] 8/30/96 DIRECTOR OF PUBLIC WORKS DATE [Signature] 8/30/96 CHIEF, BUREAU OF ENGINEERING DATE [Signature] 8/30/96 CHIEF, BUREAU OF UTILITIES DATE [Signature] 8/30/96 CHIEF, WATER AND SEWER DESIGN DIVISION DATE		RIEMER MUEGGE/GEORGE MILES BUHR A JOINT VENTURE 8818 Centre Park Drive Columbia, MD 21045 410-997-8900 FAX: 410-997-9285 FRANK H. DONALDSON # 8146	DES: J.S.C. DRN: S.A.J. CHK: G.C.L. DATE:	BY NO. REVISION DATE	TRAFFIC CONTROL PLAN 600' SCALE MAP NO. 41 BLOCK NO. 20 & 21	WESTERN SCHOOL COMPLEX WATER MAIN EXTENSION TAX MAP: 41 PARCEL: 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO.	SCALE AS SHOWN SHEET 8 OF 10
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PLAN
SCALE: 1" = 50'

LEGEND

-  DAILY WORK ZONE
-  LIMITS OF LANE CLOSURE
-  SIGN DESIGNATION
-  CONSTRUCTION SIGN
-  FLAGGER
-  CHANNELIZING DEVICES

AS-BUILT
By [Signature] Date *1/31/19*
AS-BUILT
 (FROM DATA PROVIDED BY CONTRACTOR)

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] 8/30/96
 DIRECTOR OF PUBLIC WORKS DATE

[Signature] 8/30/96
 CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 8-30-96
 CHIEF, BUREAU OF UTILITIES DATE

[Signature] 8/30/96
 CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RIEMER MUEGGE/GEORGE MILES BUHR
 A JOINT VENTURE
 8818 Centre Park Drive Columbia, MD 21045
 410-997-8900 FAX: 410-997-9282
 960910/abt 1

STATE OF MARYLAND
 FRANK H. DONALDSON # 8146
 PROFESSIONAL ENGINEER

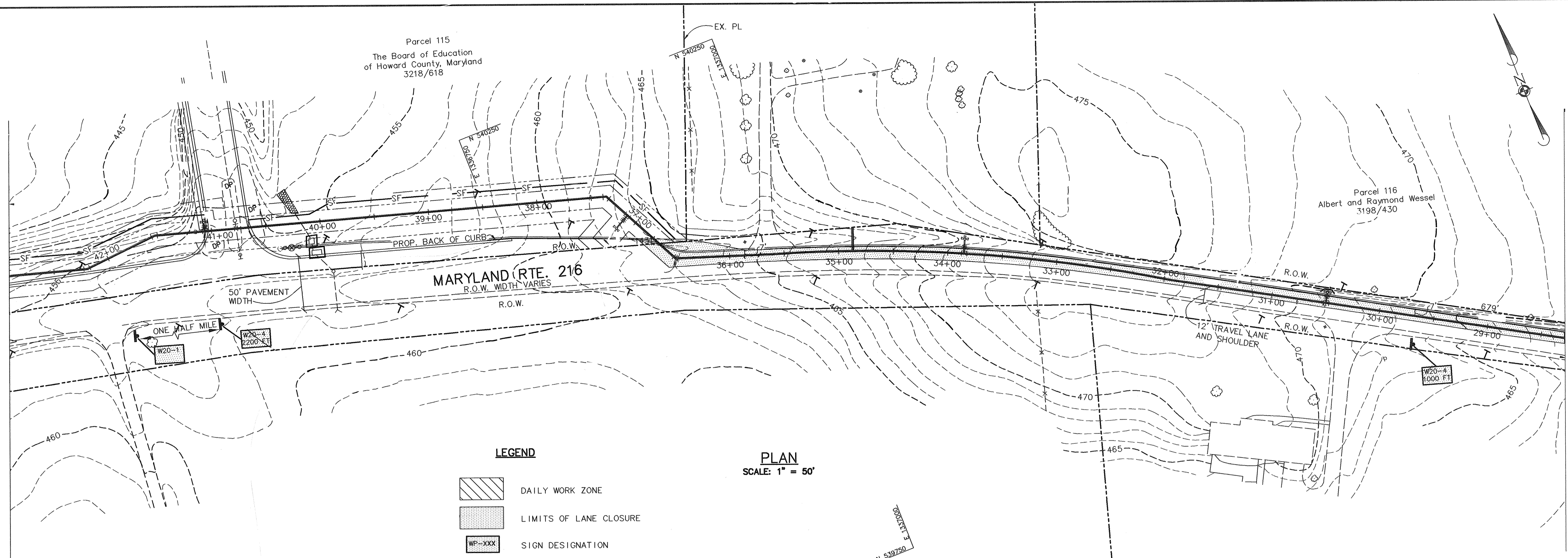
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DRN:	S.A.J.				
CHK:	G.C.L.				
DATE:					
BY	NO.	REVISION	DATE		

TRAFFIC CONTROL PLAN

60' SCALE MAP NO. 41 BLOCK NO. 20 & 21

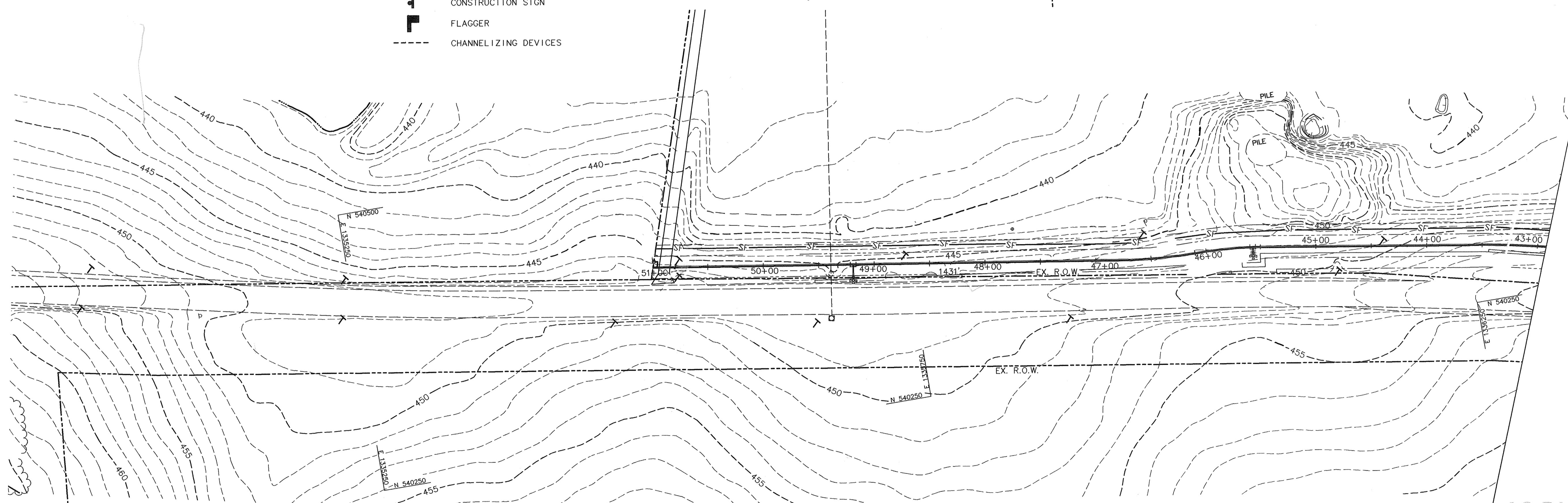
WESTERN SCHOOL COMPLEX
 WATER MAIN EXTENSION
 TAX MAP: 41 PARCEL:
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO.

SCALE AS SHOWN
 SHEET 9 OF 10



- LEGEND**
- DAILY WORK ZONE
 - LIMITS OF LANE CLOSURE
 - SIGN DESIGNATION
 - CONSTRUCTION SIGN
 - FLAGGER
 - CHANNELIZING DEVICES

PLAN
SCALE: 1" = 50'



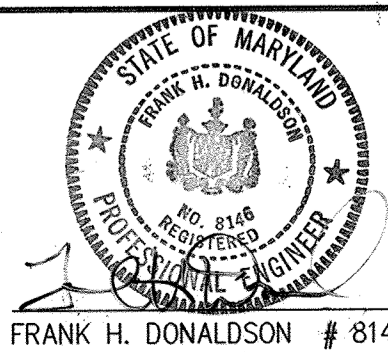
PLAN
SCALE: 1" = 50'

AS-BUILT **AS-BUILT**
DATE: 1/31/19 (FROM DATA PROVIDED BY CONTRACTOR)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Lewis 8/30/16 DIRECTOR OF PUBLIC WORKS DATE
Robert J. Brown 8/30/16 CHIEF, BUREAU OF ENGINEERING DATE
Robert J. Brown 8/30/16 CHIEF, BUREAU OF UTILITIES DATE
James H. Guttley CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RIEMER MUEGGE/GEORGE MILES BUHR
A JOINT VENTURE
8818 Centre Park Drive Columbia, MD 21045
410-997-8900 FAX: 410-997-9282
99w10/sh1



DES: J.S.C.				
DRN: E.L.R.				
CHK: G.C.L.				
DATE:	BY:	NO.	REVISION	DATE

TRAFFIC CONTROL PLAN

600' SCALE MAP NO. 41 BLOCK NO. 20 & 21

WESTERN SCHOOL COMPLEX
WATER MAIN EXTENSION
TAX MAP: 41 PARCEL:
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO.

SCALE AS SHOWN

SHEET 10 OF 10