

ALPHA RIDGE WATER SUPPLY CAPITAL PROJECT NO. W-8203 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS CONTRACT NO. 44-3480

GENERAL NOTES

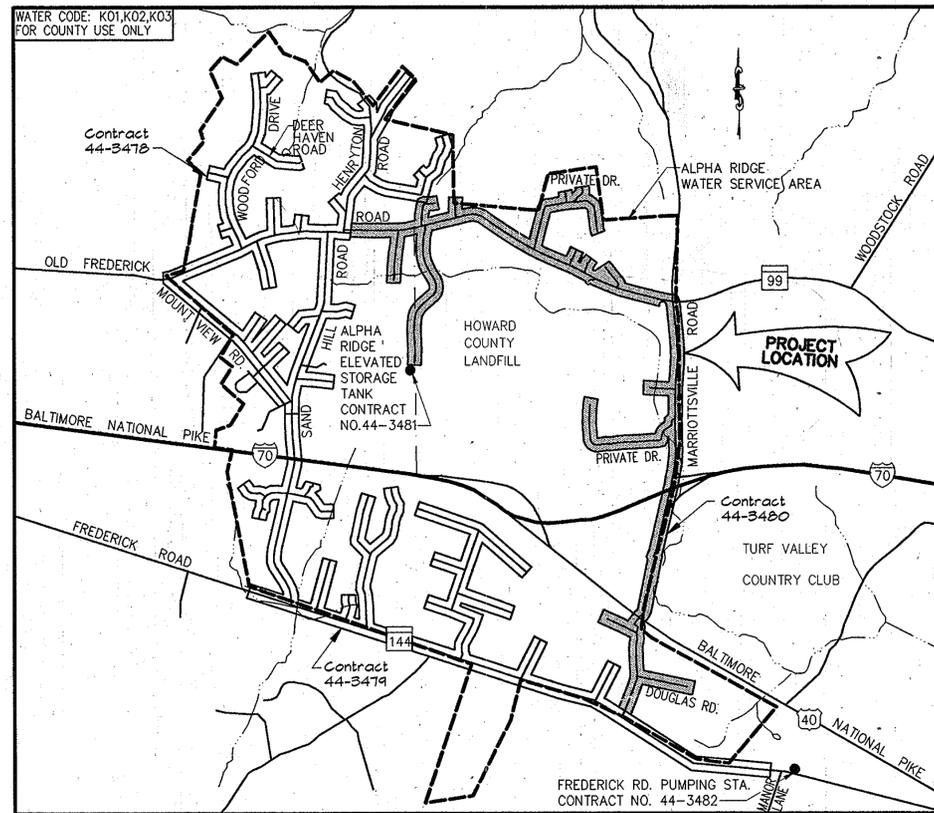
LIST OF MATERIALS

ITEM	UNIT	QUANTITIES		MATERIAL SUPPLIER
		ESTIMATE	AS-BUILT	
4" Water Main	L.F.	2,800	2,832.0	
6" Water Main	L.F.	520	412.0	
8" Water Main	L.F.	3,840	3,702.0	
12" Water Main	L.F.	22,840	21,751.0	
Blow Off	Each	7	7.0	
1" Air Release Valve 4 Manhole	Each	4	4.0	
4" Valve	Each	11	8.0	
6" Valve	Each	41	42.0	
8" Valve	Each	6	7.0	
12" Valve	Each	23	24.0	
Fire Hydrant	Each	41	43.0	
12" Steel Casing	L.F.	75	0.0	
24" Steel Casing	L.F.	67	0.0	
30" Steel Casing	L.F.	200	200.0	
3/4" W.H.C.	L.F.	1,700	2,020.0	
1" W.H.C.	L.F.	3,940	791.0	
1-1/2" W.H.C.	L.F.	6,670	6,578.0	
2" W.H.C.	L.F.	3,370	4,389.0	
1-1/2" Water Main Drains	Each	1	1.0	

All Water House Connections Shall Be For Outside Meter Setting

NOTES:

- Sediment Control Measures For This Contract Will Be Implemented In Accordance With Volume 4, Section 219 Of The Howard County Design Manual And This Plan And The 1994 Maryland Standards And Specifications For Soil Erosion And Sediment Control.
- Limit Of Disturbance Shall Be Held To The Trench.
- Spill From Trenches Shall Be Placed On The Uphill Side, Where Applicable.
- Trench Excavation Shall Be Held To That Which Can Be Backfilled And Stabilized.



VICINITY MAP

Scale: 1" = 2,000'

SEE SHEET 2 FOR 1"=600' MAP

AS BUILT

LEGEND

- C&P T BSE #472852 Utility Pole (BSE Or C&P)
- Sign Post
- MB □ Mailbox
- ◇ Light Pole
- ▨ Paved Roads
- T — T — Buried Telephone Cable(s)
- E — E — Buried Electric Cable(s)
- E/T — E/T — Buried Electric & Telephone Cables

- Approximate Location Of Existing Mains Are Shown. The Contractor Shall Take All Necessary Precautions To Protect Existing Mains And Services And To Maintain An Uninterrupted Water 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, Unless Otherwise Noted.
- 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 The 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 Details For Construction. The Contractor Shall Have A Copy Of Volume IV On The Job, At All Times.
- 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 Performed 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 And Electric - Contractor Services 850-4620
 - Baltimore Gas And Electric - Underground Damage Control - 859-9004
 - Miss Utility - 1-800-257-7777
 - Bell Atlantic Telephone Co. - 597-8585
 - Transcontinental Gas Pipeline Corp. - 1-410-465-0960
 - Bureau Of Utilities, Howard County Department Of Public Works - 313-4400
- Trees And Shrubs Are To Be Protected From Damage To The Maximum Extent Possible. 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.
- Top Of All Water Mains Shall Have A Minimum Of 3'-6" Of Cover Unless Otherwise Noted.
- Valves Adjacent To Tees Shall Be Strapped To Tee.
- All Fittings Shall Be Buttressed Or Anchored With Concrete In Accordance With The Standard Details. Soil Around The Fire Hydrant Shall Be Compacted In Accordance With Section 1000 Of The Standard Specifications.
- Fire Hydrant Shall Be Set To Bury Line Elevations Shown On The Drawings. All Fire Hydrants Shall Be Strapped And Buttressed With Concrete In Accordance With Standard Details. Soil Around The Fire Hydrant Shall Be Compacted In Accordance With Section 1000 Of The Standard Specifications.
- The Contractor Shall Not Operate Any Water Main Valves On The Existing Water System.
- Length Of Disturbance/Open Trench Must Be Limited To Three Pipe Sections Or To The Length Which Can Be Backfilled And Stabilized In One Working Day, Whichever Is Shorter.
- Trench Repair Shall Be In Accordance With Howard County Standard Details.
- All Work Shall Be In Accordance With Howard County Standards And Specifications For Soil Erosion And Sediment Control Section 219.
- In Addition To The General Requirements Noted On The Plans And In The Specifications, The Contractor Shall Also Adhere To The Following Requirements When Constructing The 4" Water Service Mains And Water House Connections Within Easements And On Private Property.
 - A. The Contractor Shall Only Be Permitted To Work Between The Hours Of 9:00 am And 4:00 pm.
 - B. During Construction The Contractor Shall Maintain Ingress And Egress For The Residents And For Emergency Vehicles At All Times.
 - C. Trenches Will Not Be Permitted To Remain Open After Working Hours.
 - D. Stored Materials Will Not Be Permitted Within Private Driveways, Easement Areas Or On Private Property.

Reviewed For Howard County S.C.D. and meets technical requirements.

J.A. Warfield Date: 4/1/96
NATURAL RESOURCE CONSERVATION SERVICE

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

Approved: *John P. Robertson* Date: 4/1/96
HOWARD COUNTY SCD

ENGINEER'S CERTIFICATION

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

Robert Klepper Date: 3-18-96

RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER STREET BALTIMORE, MD. 21217

DEVELOPERS CERTIFICATION

"I/We Certify That All Development And Construction Will Be Done According To This Plan, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certification Of Attendance At A Maryland Department Of Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project.

Robert Klepper Date: 3/29/96
BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS

DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

Robert Klepper Date: 4/3/96
DIRECTOR OF PUBLIC WORKS

Robert Klepper Date: 4-1-96
CHIEF, BUREAU OF UTILITIES

Robert Klepper Date: 3/29/96
CHIEF, BUREAU OF ENGINEERING

Robert Klepper Date: 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION



RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



DES:	DCE				
DRN:	MJS				
CHK:	DCE				
DATE:	3/96				
BY:	NO.				
REVISION:					
DATE:					

TITLE SHEET, VICINITY MAP,
LIST OF MATERIALS & GENERAL NOTES

600' SCALE MAP NO. 31021116 BLOCK NO.

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.

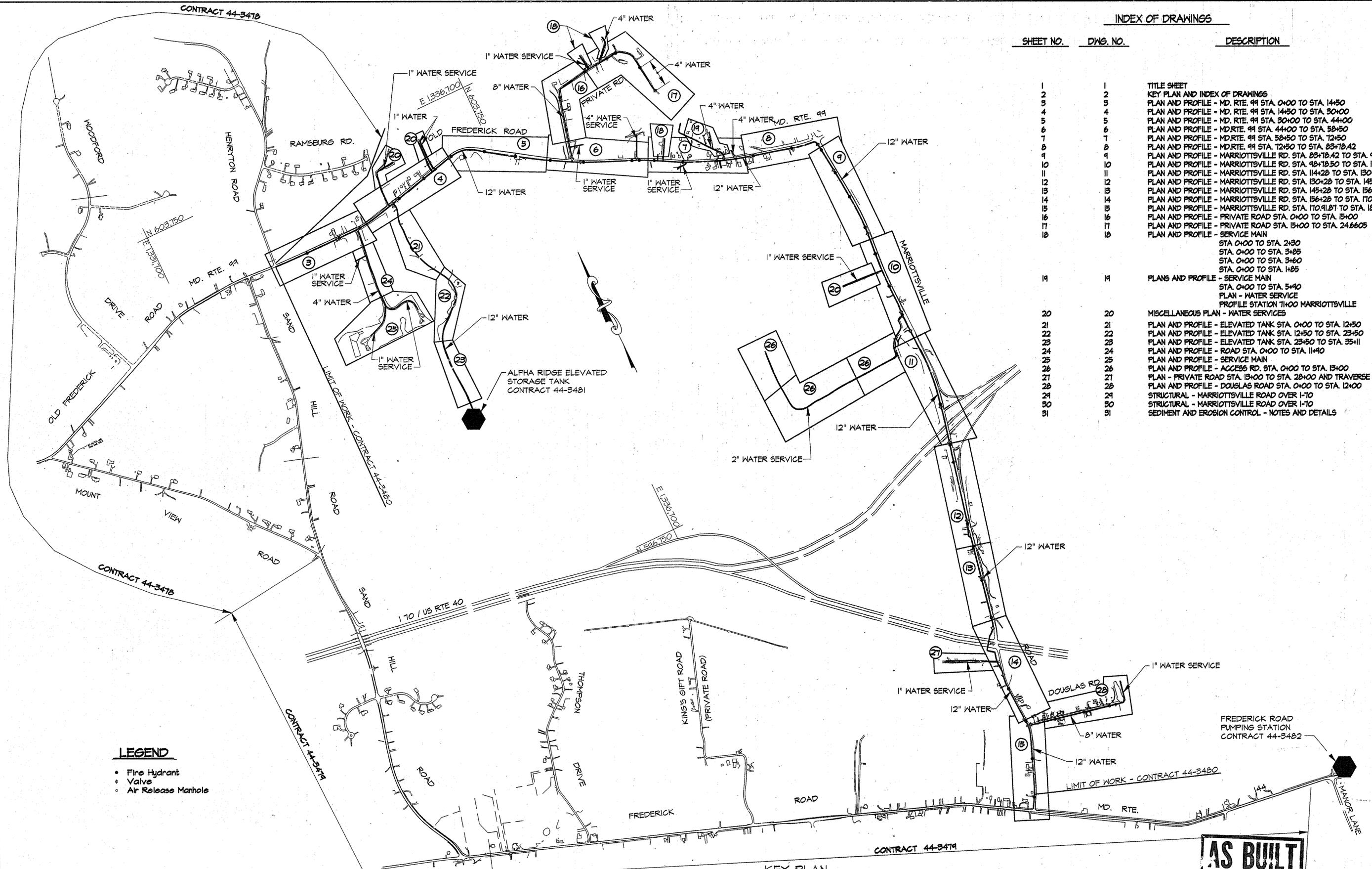
SCALE
AS
SHOWN

SHEET
1 OF 31

CONTRACT 44-3478

INDEX OF DRAWINGS

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4	4	PLAN AND PROFILE - MD. RTE. 99 STA. 14+50 TO STA. 30+00
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28	28	PLAN AND PROFILE - DOUGLAS ROAD STA. 0+00 TO STA. 12+00
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- LEGEND**
- Fire Hydrant
 - ◊ Valve
 - Air Release Manhole

KEY PLAN
Scale: 1"=600'

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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Shaw 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Robert S. Sawyer 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217

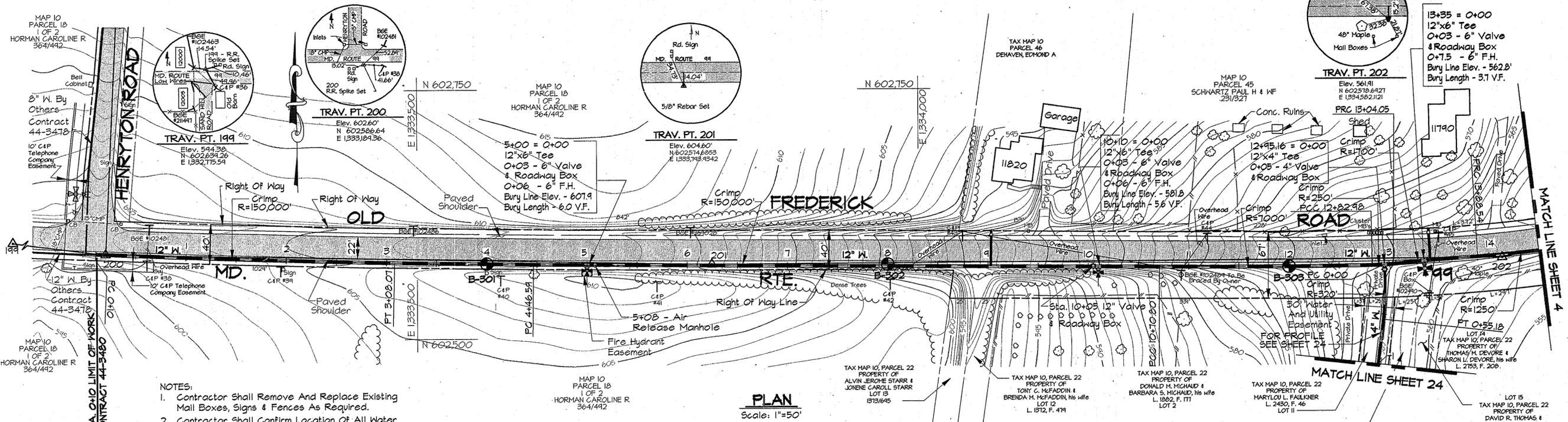


DES:	DCE				
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BY:	NO.	REVISION	DATE	600' SCALE MAP NO.	9, 10, 15, 16 BLOCK NO.

KEY PLAN AND INDEX OF DRAWINGS

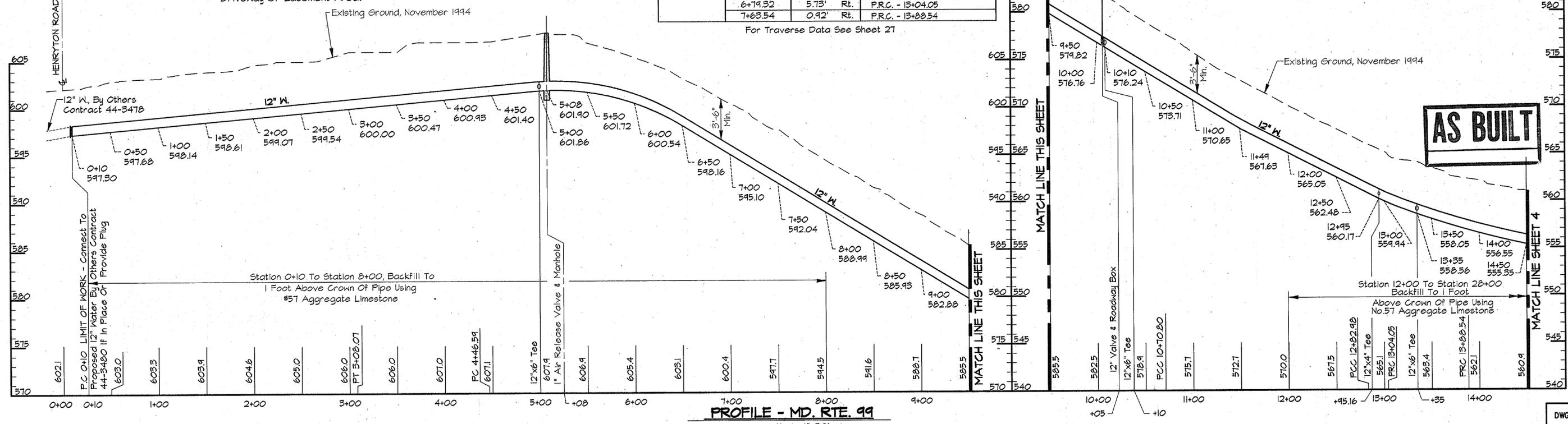
ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 2 OF 31



- NOTES:
1. Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 2. Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 3. All Water Services Are 3/4" Unless Otherwise Noted.
 4. The Contractor Shall Work Only From 9:00am To 4:00pm When Constructing The 4" Water Main And House Connections Within The Private Driveway At Sta. 12+45.
 5. During Construction The Contractor Shall Maintain Ingress And Egress For The Residents And Emergency Vehicles At All Times.
 6. Trenches Will Not Be Permitted To Remain Open After Working Hours Within The Private Driveway.
 7. Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
199 - 200	4+07.27	0.66' Rt.	Limit Of Work - P.C. 0+10
200 - 201	2+28.14	3.70' Rt.	P.T. - 3+08.07
	4+26.65	3.03' Rt.	P.C. - 4+46.59
201 - 202	4+46.11	6.17' Rt.	P.C.C. - 10+70.80
	6+58.28	6.38' Rt.	P.C.C. - 12+82.98
	6+68.77	6.45' Rt.	P.T. - 0+55.18
	6+70.45	6.37' Rt.	12"x4" Tee - 12+95.16
	6+79.32	5.73' Rt.	P.R.C. - 13+04.05
	7+63.54	0.92' Rt.	P.R.C. - 13+28.54



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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *Robert Sawyer* 4/1/96
 Chief, Bureau of Engineering: *Robert Sawyer* 3/29/96
 Chief, Bureau of Utilities: *Robert Sawyer* 4-1-96
 Chief, Water and Sewer Design Division: *Robert Sawyer* 3-29-96

RIK & K
RUMMEL, KLEPPER & KAHL
 CONSULTING ENGINEERS
 81 MOSHER ST.
 BALTIMORE, MARYLAND 21217



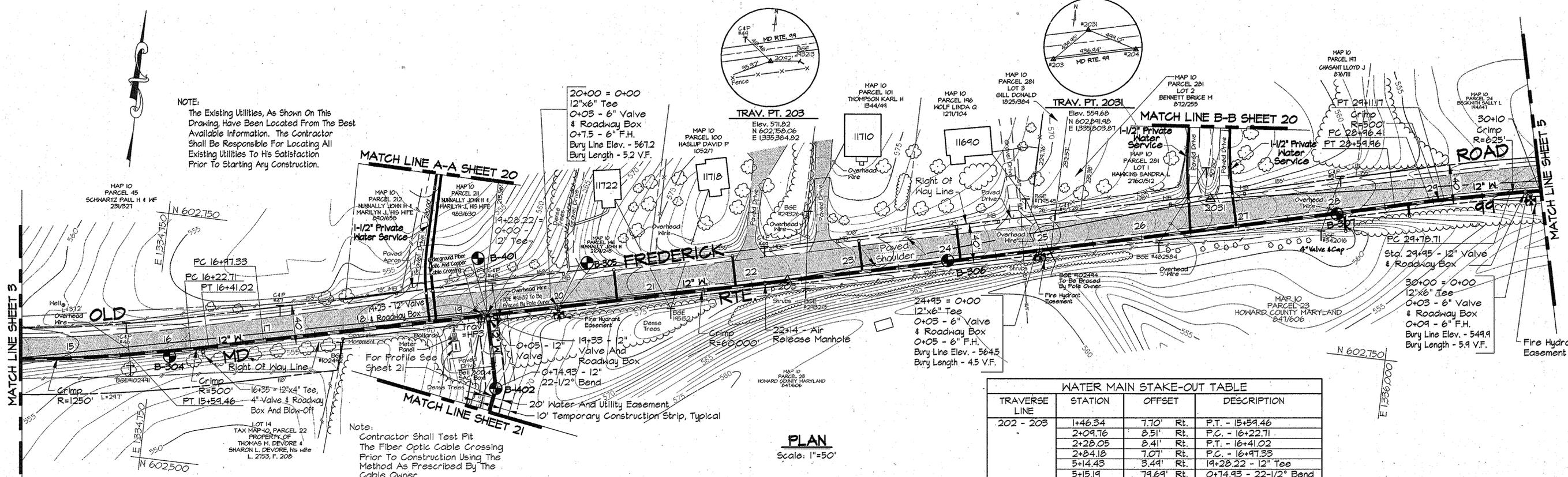
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CHK:	SRK				
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PLAN AND PROFILE - MD. RTE. 99
 STA. 0+10 TO STA. 14+50
 600' SCALE MAP NO. 10 BLOCK NO. 19 & 20

ALPHA RIDGE WATER SUPPLY
 CAPITAL RIDGE PROJECT W-8203
 CONTRACT NO. 44-3480
 ELECTION DISTRICT NO. 3
 HOWARD COUNTY, MARYLAND

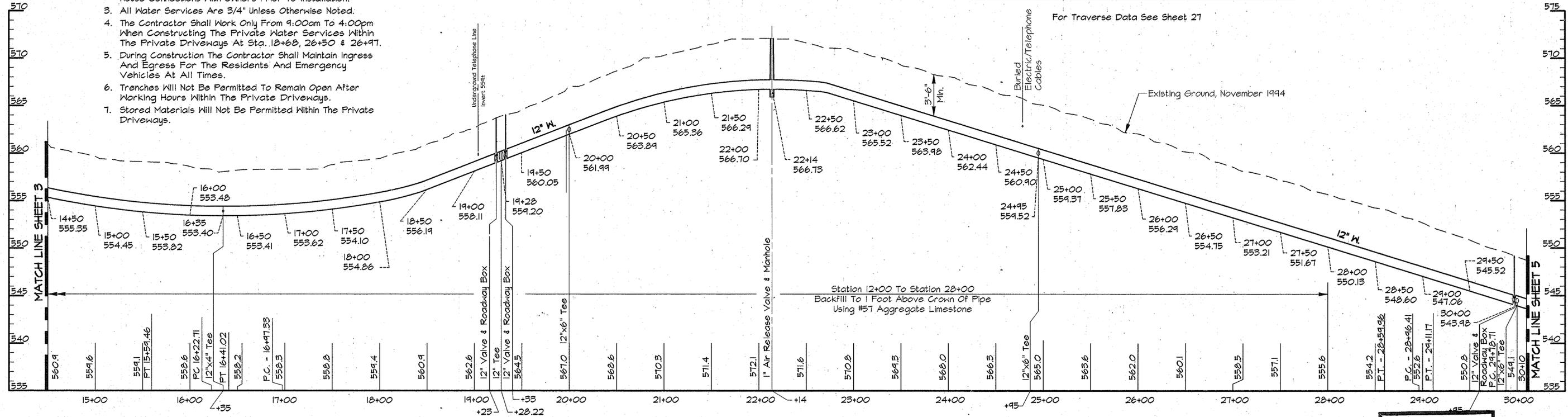
DWG. NO.
 SCALE AS SHOWN
 SHEET 3 OF 31

NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.



TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
202 - 203	1+46.34	7.70' Rt.	P.T. - 15+59.46
	2+09.76	8.51' Rt.	P.C. - 16+22.71
	2+28.05	8.41' Rt.	P.T. - 16+41.02
	2+84.18	7.07' Rt.	P.C. - 16+97.33
	5+14.43	3.49' Rt.	19+28.22 - 12" Tee
2031 - 204	5+15.19	79.69' Rt.	0+74.93 - 22-1/2" Bend
	1+29.92	17.44' Rt.	P.T. - 28+59.96
	2+23.28	14.76' Rt.	P.C. - 28+96.41
	2+38.01	13.84' Rt.	P.T. - 29+11.7
	3+05.48	10.90' Rt.	P.C. 29+78.71
	3+21.15	10.04' Rt.	29+95 - 12" Valve
	3+26.14	10.32' Rt.	30+00 - 12"x6" Tee

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences, As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.
 - The Contractor Shall Work Only From 9:00am To 4:00pm When Constructing The Private Water Services Within The Private Driveways At Sta. 18+68, 26+50 & 26+97.
 - During Construction The Contractor Shall Maintain Ingress And Egress For The Residents And Emergency Vehicles At All Times.
 - Trenches Will Not Be Permitted To Remain Open After Working Hours Within The Private Driveways.
 - Stored Materials Will Not Be Permitted Within The Private Driveways.



PROFILE - MD RTE 99
Scale: Horiz. 1"=50'
Vert. 1"=5'

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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. Clew 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Simpson 3/29/96
CHIEF, BUREAU OF ENGINEERS DATE

Robert J. Simpson 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

Oliver J. Lee 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
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CONSULTING ENGINEERS
81 MOSHER ST.
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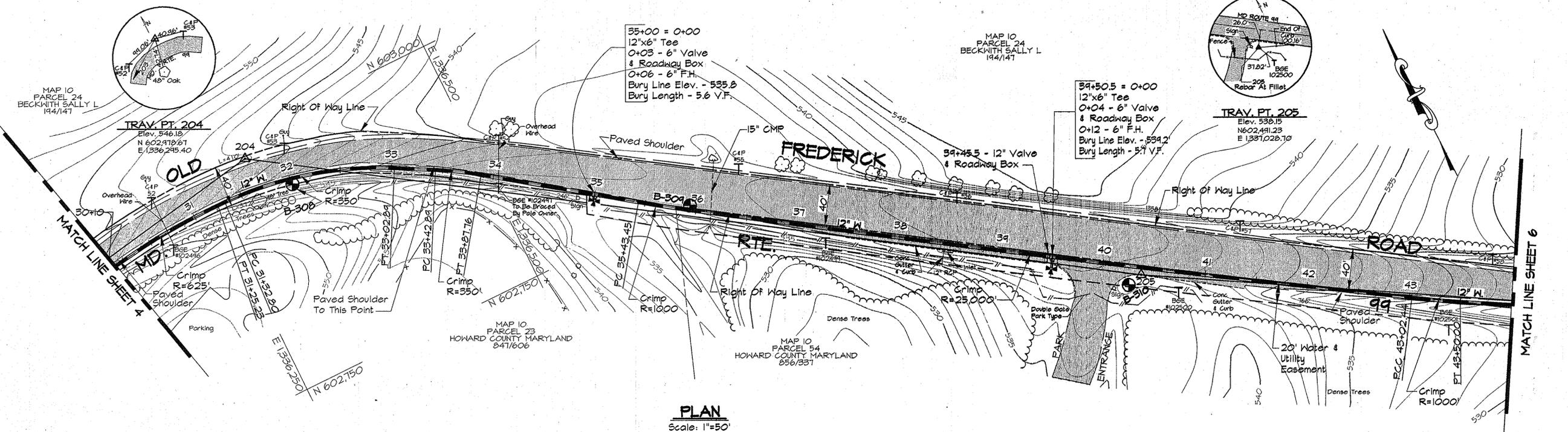


DES:	DWR				
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CHK:	SRK				
DATE:	3/96				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO.	BLOCK NO.

PLAN AND PROFILE - MD RTE. 99
STA. 14+50 TO 30+00

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 4 OF 31

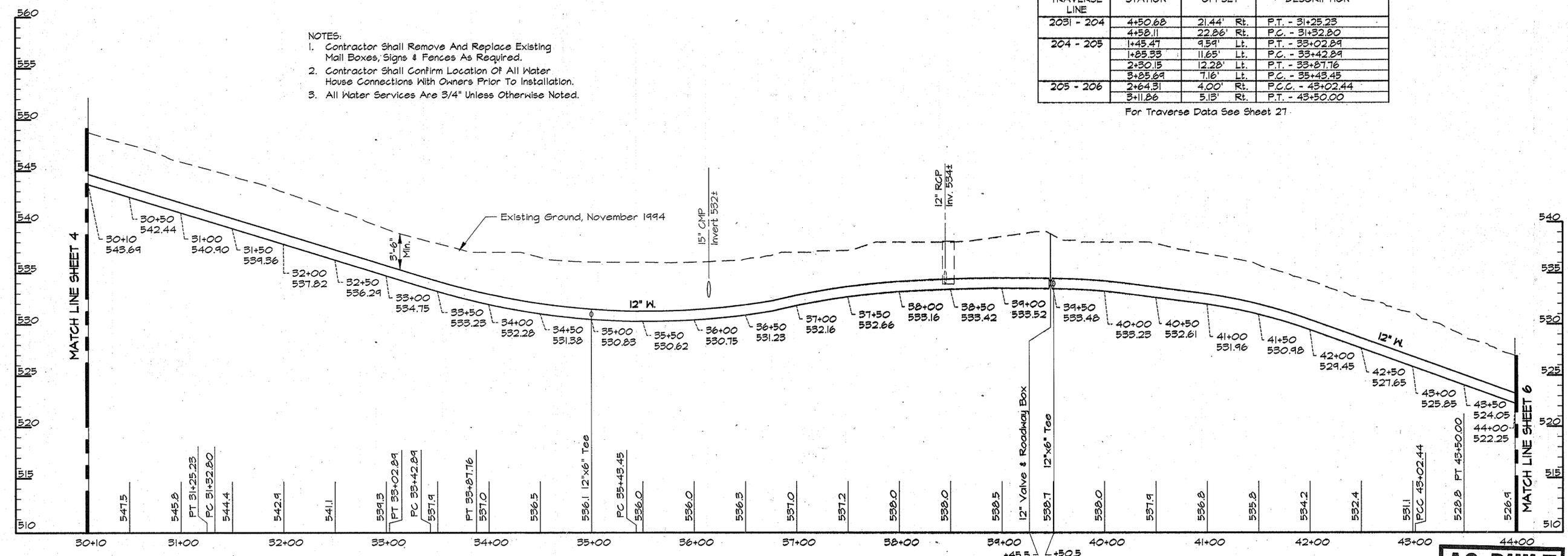


PLAN
Scale: 1"=50'

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
2031 - 204	4+50.68	21.44' Rt.	P.T. - 31+25.23
	4+58.11	22.86' Rt.	P.C. - 31+32.80
204 - 205	1+48.47	9.59' Lt.	P.T. - 33+02.89
	1+85.33	11.65' Lt.	P.C. - 33+42.89
	2+30.15	12.28' Lt.	P.T. - 33+87.76
205 - 206	3+28.69	7.16' Lt.	P.C. - 35+43.45
	2+64.31	4.00' Rt.	P.C.C. - 43+02.44
	3+11.86	5.13' Rt.	P.T. - 43+50.00

For Traverse Data See Sheet 27.

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.



PROFILE - MD. RT. 99
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Lewis 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Rainey 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
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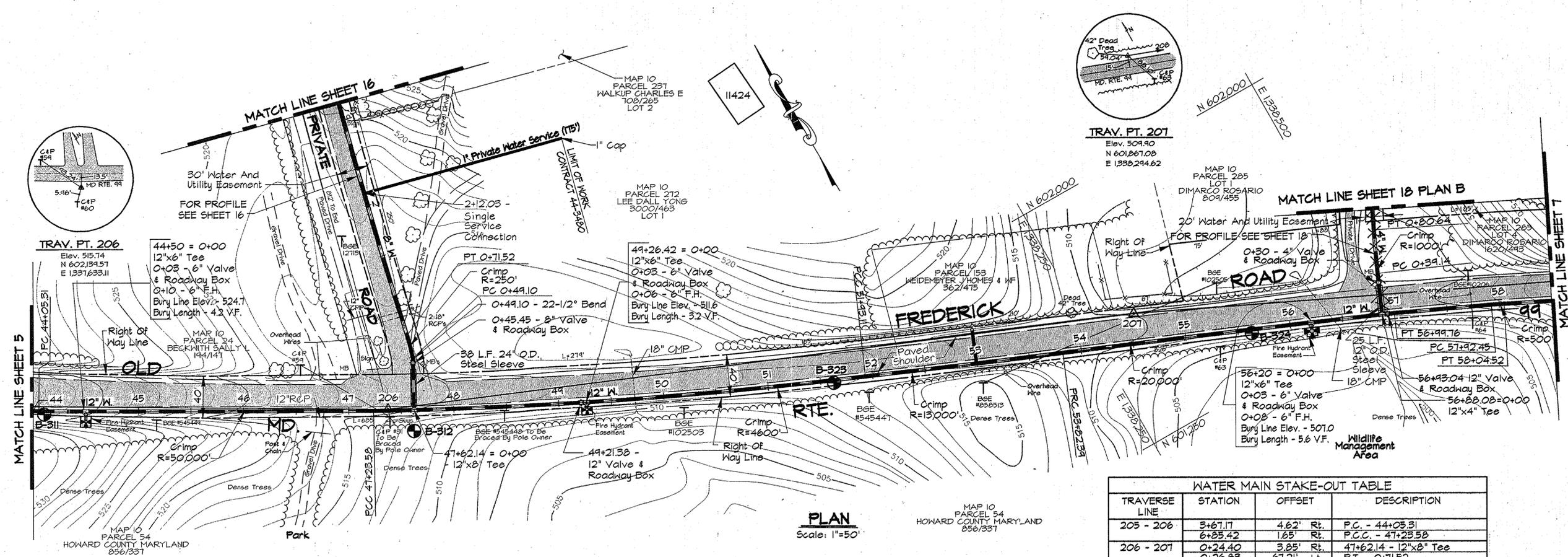
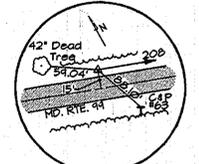
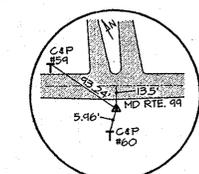
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CHK:	SRK				
DATE:	3/96	BY:	NO.	REVISION	DATE

PLAN AND PROFILE - MD RTE. 99
STA. 30+00 TO 44+00

600' SCALE MAP NO. 10 BLOCK NO. 20 & 21

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

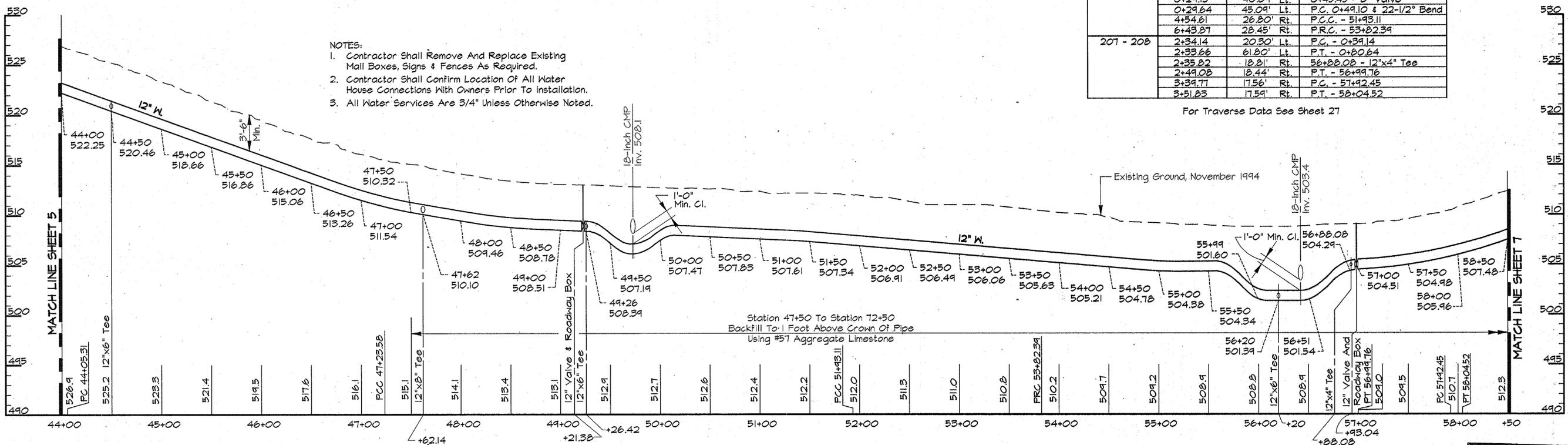
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SCALE AS SHOWN
SHEET 5 OF 31



WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
205 - 206	3+67.17	4.62' Rt.	P.C. - 44+05.31
	6+85.42	1.65' Rt.	P.C.C. - 47+23.58
206 - 207	0+24.40	3.85' Rt.	47+62.14 - 12"x8" Tee
	0+26.83	6.21' Lt.	P.T. - 0+71.52
	0+29.13	40.89' Lt.	0+45.45 - 8" Valve
	0+29.64	45.09' Lt.	P.C. 0+49.10 & 22-1/2° Bend
	4+54.61	26.80' Rt.	P.C.C. - 51+93.11
207 - 208	6+43.87	28.45' Rt.	P.R.C. - 53+82.39
	2+34.14	20.30' Lt.	P.C. - 0+39.14
	2+33.66	61.80' Lt.	P.T. - 0+80.64
	2+35.22	18.81' Rt.	56+88.08 - 12"x4" Tee
	2+49.08	18.44' Rt.	P.T. - 56+99.76
	3+39.77	17.56' Rt.	P.C. - 57+92.45
	3+51.83	17.59' Rt.	P.T. - 58+04.52

For Traverse Data See Sheet 27

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.



PROFILE - MD. RTE. 99
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Lee 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Robert W. Bevinger 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

Richard J. ... 3/29/96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK&K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



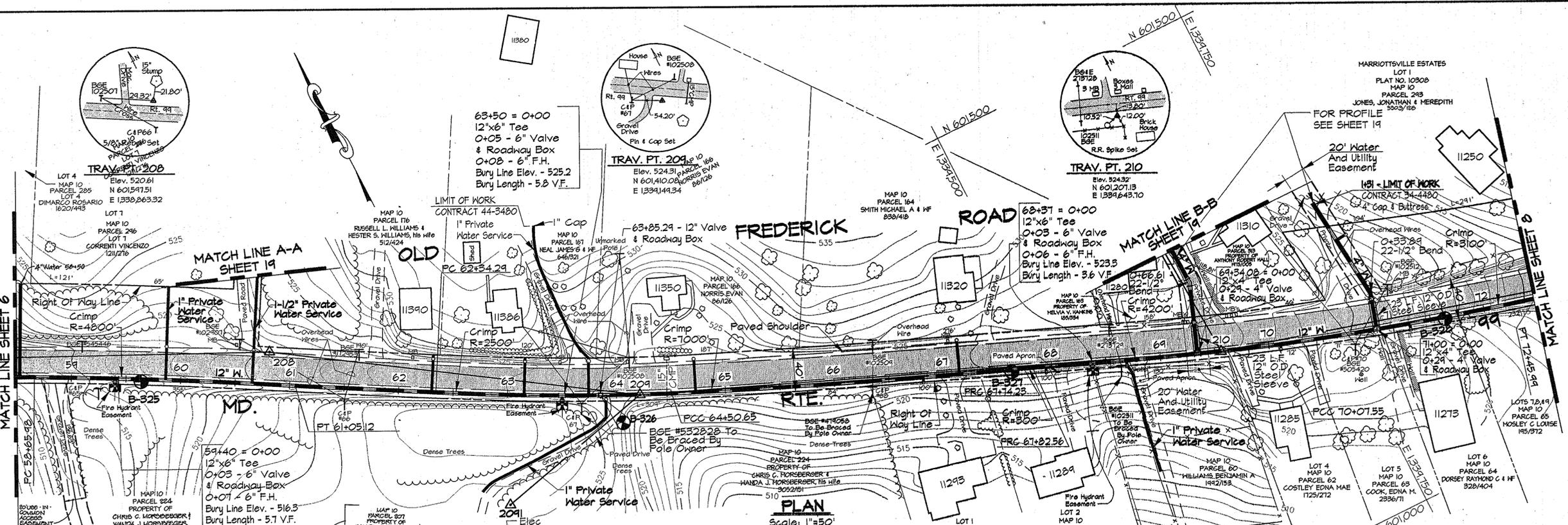
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CHK:	SRK			
DATE:	3/96			
BY:	NO.	REVISION	DATE	

PLAN AND PROFILE - MD. RTE. 99
STA. 44+00 TO STA. 58+50

600' SCALE MAP NO. 10 BLOCK NO. 21

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE
AS
SHOW
SHEET
6 OF 31



- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.
 - The Contractor Shall Work Only From 9:00am To 4:00pm When Constructing The 4" Water Main And House Connections Within The Private Driveways At Sta. 69+34 & 71+00 And The Private Water Services Within The Private Driveways At Sta. 60+65.68, 63+75, 63+90 & 68+69.
 - During Construction The Contractor Shall Maintain Ingress And Egress For The Residents And Emergency Vehicles At All Times.
 - Trenches Will Not Be Permitted To Remain Open After Working Hours Within The Private Driveways.
 - Stored Materials Will Not Be Permitted Within The Private Driveways Or Easement Area.

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
209 - 210	4+13.29	18.49' Rt.	P.C. - 58+65.98

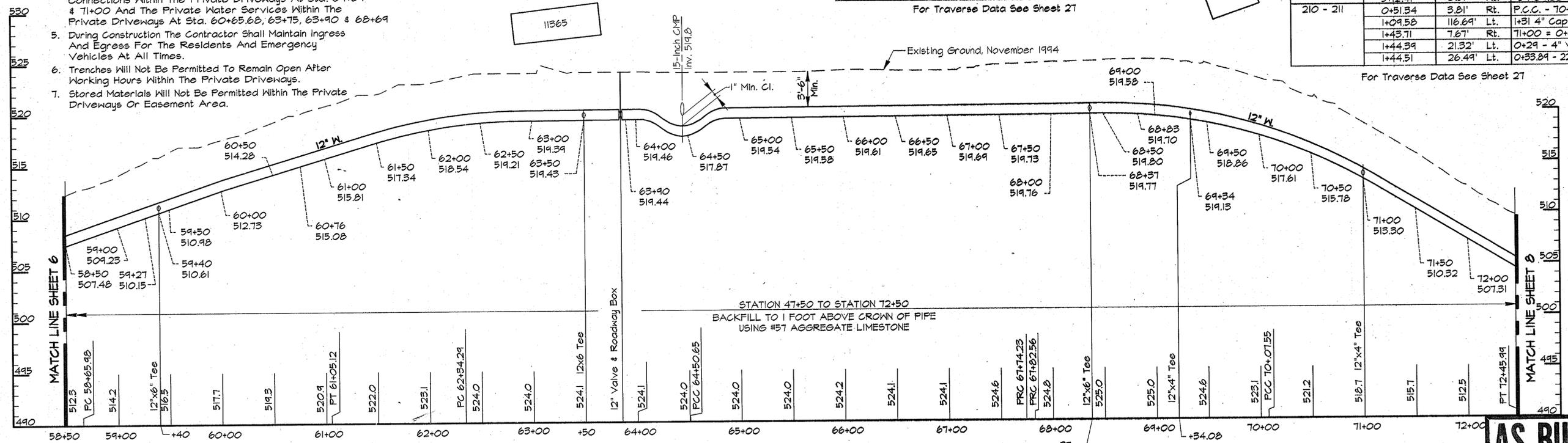
For Traverse Data See Sheet 27

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
208 - 209	0+26.81	28.27' Rt.	P.T. - 61+08.12
	1+55.67	19.54' Rt.	P.C. - 62+54.29

For Traverse Data See Sheet 27

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
209 - 210	0+29.02	0.98' Rt.	P.C.C. - 64+50.65
	3+52.57	1.99' Rt.	P.R.C. - 67+14.23
	3+60.90	1.94' Rt.	P.R.C. - 67+02.56
	5+10.24	66.06' Lt.	0+66.61 - 22-1/2" Horiz. Bend
	5+12.41	0.51' Rt.	69+34.08 - 12"x4" Tee
210 - 211	0+51.34	3.81' Rt.	P.C.C. - 70+07.55
	1+09.58	116.69' Lt.	1+31' 4" Cap & Buttress
	1+43.71	7.67' Rt.	71+00 = 0+00 - 4" Tee
	1+44.39	21.32' Lt.	0+29 - 4" Valve
	1+44.51	26.49' Lt.	0+33.89 - 22-1/2" Horiz. Bend

For Traverse Data See Sheet 27



PROFILE - MD. RTE. 99
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

RKK2 USR2:SDSKPROK\CM9473\DWG ALP-3-07.DWG 03/17/1996 14:46

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Lewis 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Robert W. Deinger 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

John H. Deinger 3/29/96
CHIEF, BUREAU OF ENGINEERING DATE

John H. Deinger 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
31 MOSHER ST.
BALTIMORE, MARYLAND 21217

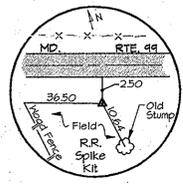


DES:	DCE				
DRN:	DCJ				
CHK:	SRK				
DATE:	3/96				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO.	10
				BLOCK NO.	21 & 22

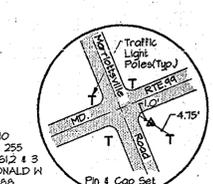
PLAN AND PROFILE - MD. RTE. 99
STA. 58+50 TO STA. 72+45.99

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

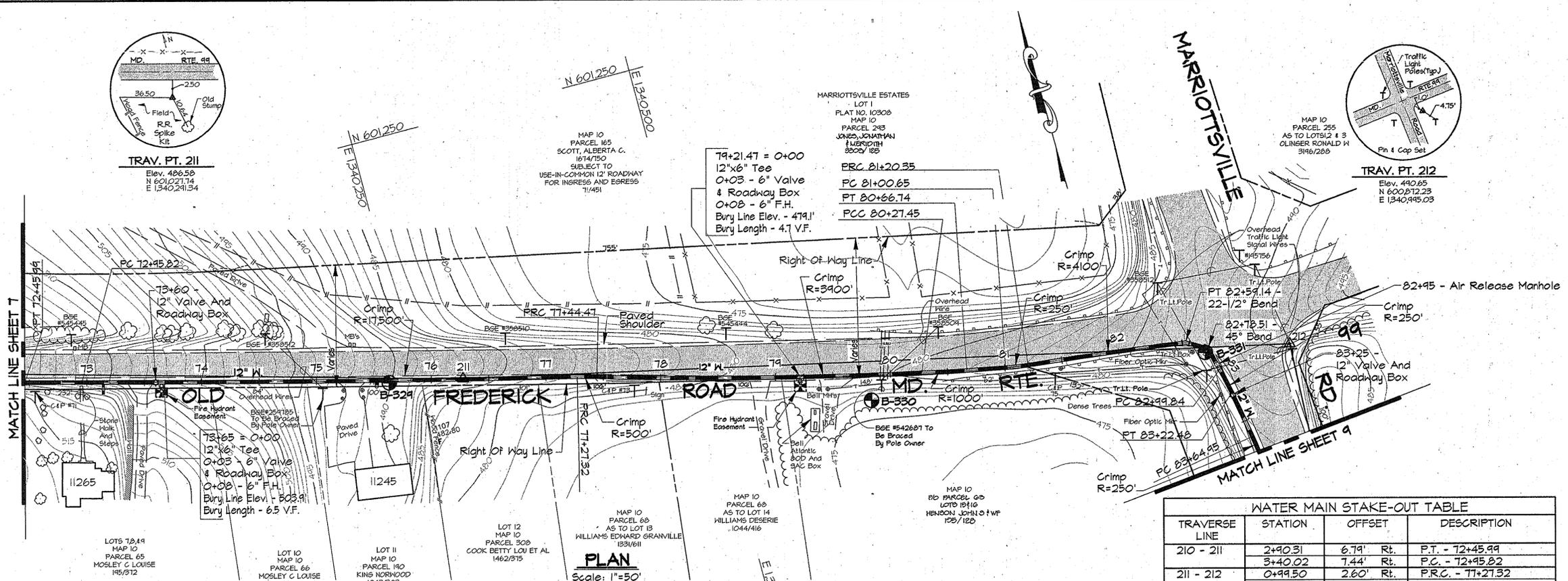
SCALE AS SHOWN
SHEET 7 OF 31



TRAV. PT. 211
Elev. 486.58
N 601.250
E 1340.241.34



TRAV. PT. 212
Elev. 490.65
N 600.812.23
E 1340.945.03



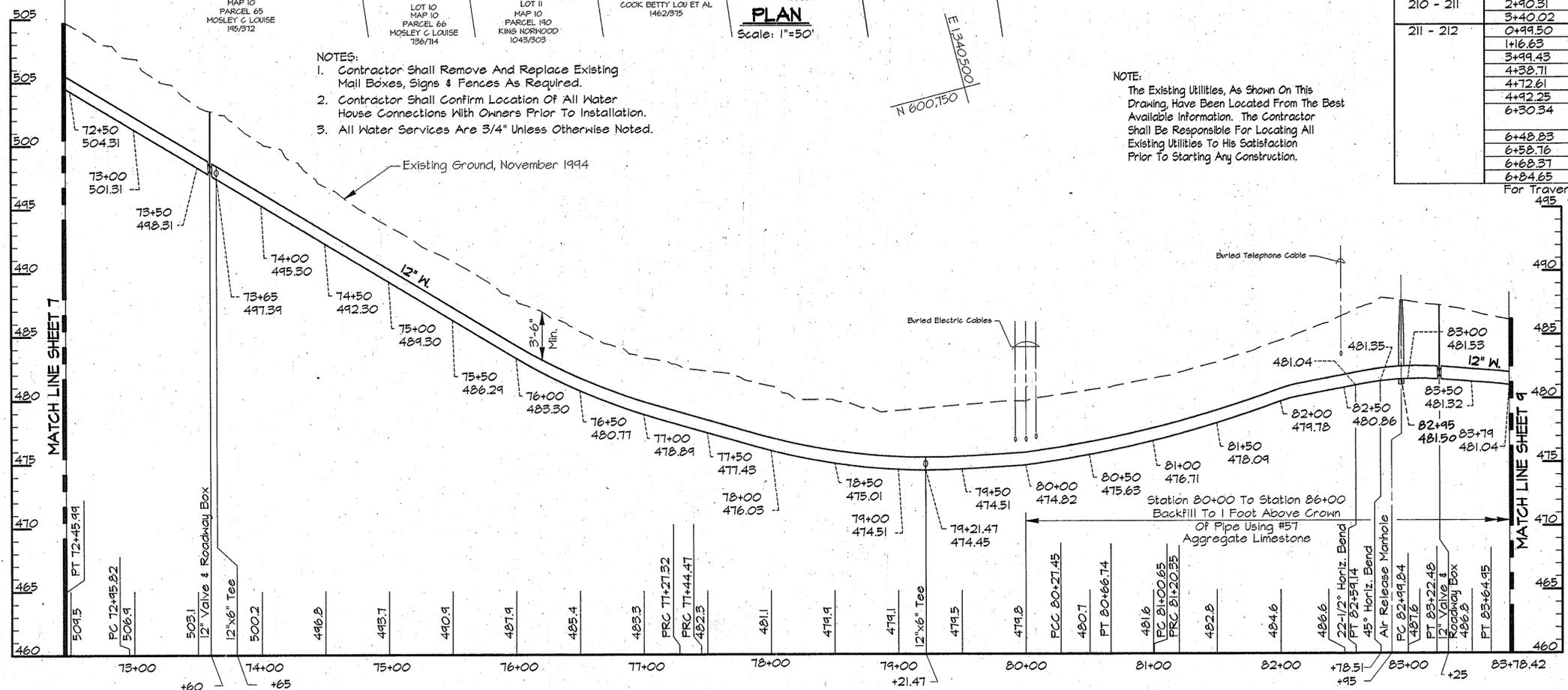
PLAN
Scale: 1"=50'

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.

NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
210 - 211	2+90.31	6.79' Rt.	P.T. - 72+45.99
	3+40.02	7.44' Rt.	P.C. - 72+45.92
211 - 212	0+99.50	2.60' Rt.	P.R.C. - 77+27.32
	1+16.63	3.29' Rt.	P.R.C. - 77+44.47
	3+99.43	11.69' Rt.	P.C.C. - 80+27.45
	4+38.71	11.31' Rt.	P.T. - 80+66.74
	4+72.61	10.31' Rt.	P.C. - 81+00.65
	4+92.25	8.96' Rt.	P.R.C. - 81+20.35
	6+30.34	4.96' Lt.	22-1/2° Bend - 82+59.14 And P.T. - 82+59.14
	6+48.83	0.79' Lt.	45° Bend - 82+78.51
	6+58.76	19.68' Rt.	P.C. - 82+99.84
	6+88.37	40.17' Rt.	P.T. - 83+22.48
6+84.65	79.39' Rt.	P.C. - 83+64.95	

For Traverse Data See Sheet 21



PROFILE - MD RTE 99
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

PK42\USER2\SDSK\PROJ\CM8473\DWG\ALP-3-08.DWG 03/21/1996 08:30

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Sam J. Shaw 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Paul J. Deegan 3/29/96
CHIEF, BUREAU OF ENGINEERS DATE

Robert J. Deegan 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

Paul J. Deegan 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217

DES:	DCE			
DRN:	DCJ			
CHK:	SRK			
DATE:	3/96	BY:	NO.	REVISION

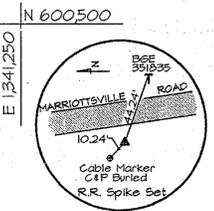
PLAN AND PROFILE - MD. RTE. 99
STA 72+45.99 TO 83+78.42

DATE: 600' SCALE MAP NO. 12 BLOCK NO. 22

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

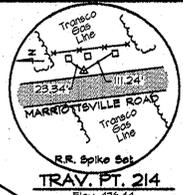
DWG. NO.
SCALE AS SHOWN
SHEET 8 OF 31

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.

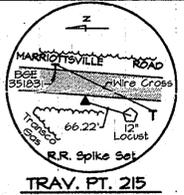


MAP 16
PARCEL 406
PROPERTY OF
GTW JOINT VENTURE
C/O IRVING J. TAYLOR
2221/288

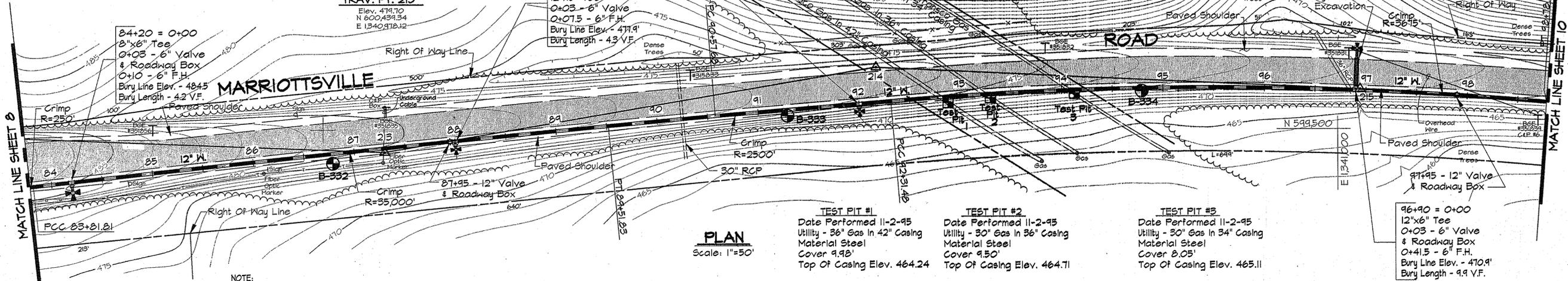
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N 600,434.34
E 134,078.12



TRAV. PT. 214
Elev. 476.44
N 594,454.41
E 134,106.19



TRAV. PT. 215
Elev. 471.53
N 594,471.12
E 134,138.38



PLAN
Scale: 1"=50'

TEST PIT #1
Date Performed 11-2-95
Utility - 36" Gas In 42" Casing
Material Steel
Cover 9.98'
Top Of Casing Elev. 464.24

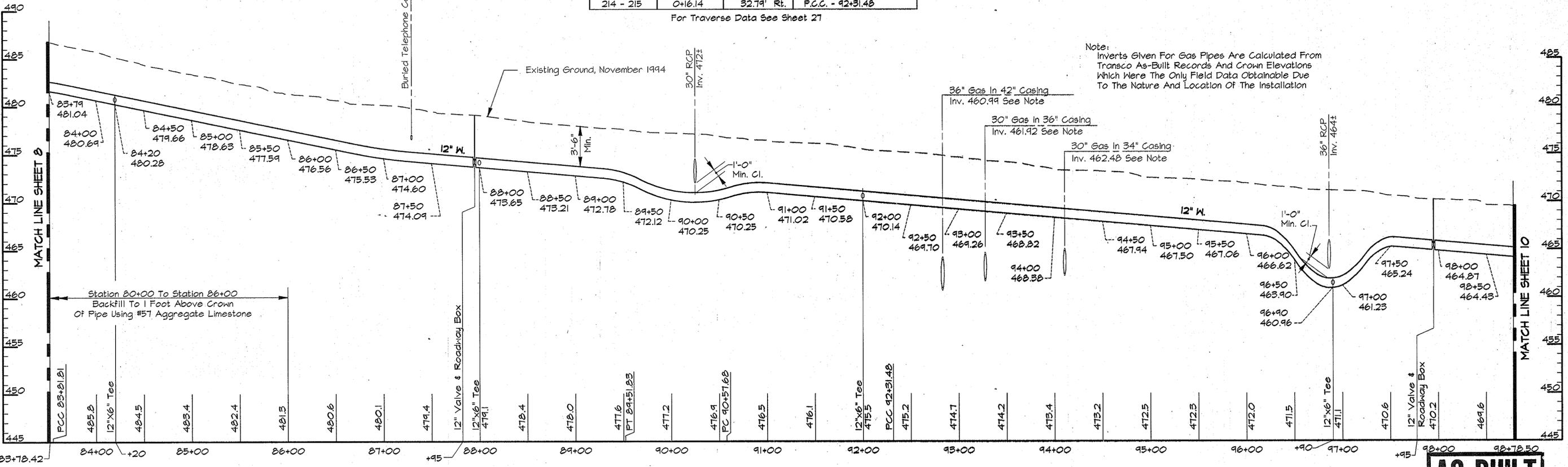
TEST PIT #2
Date Performed 11-2-95
Utility - 30" Gas In 36" Casing
Material Steel
Cover 9.50'
Top Of Casing Elev. 464.71

TEST PIT #3
Date Performed 11-2-95
Utility - 30" Gas In 34" Casing
Material Steel
Cover 8.05'
Top Of Casing Elev. 465.11

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
212 - 213	0+28.32	46.51' Rt.	P.C.C. - 83+81.81
213 - 214	2+21.71	12.02' Rt.	P.T. - 84+51.83
	3+27.24	20.35' Rt.	P.C. - 90+57.68
214 - 215	0+16.14	32.74' Rt.	P.C.C. - 92+31.48

For Traverse Data See Sheet 27

NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.



PROFILE - MARRIOTTVILLE ROAD

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

Note:
Inverts Given For Gas Pipes Are Calculated From Transco As-Built Records And Crown Elevations Which Were The Only Field Data Obtainable Due To The Nature And Location Of The Installation

AS BUILT

PK2\USER2\SDSKPROJ\CM9473\DWG ALP-3-09.DWG 03/15/1996 16:31

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Lewis 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Robert Bainger 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

Paul J. Szymon 3/29/96
CHIEF, BUREAU OF ENGINEERING DATE

Oliver Daneman 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



DES:	DCE			
DRN:	DCJ			
CHK:	SRK			
DATE:	3/96			
BY:	NO.	REVISION	DATE	

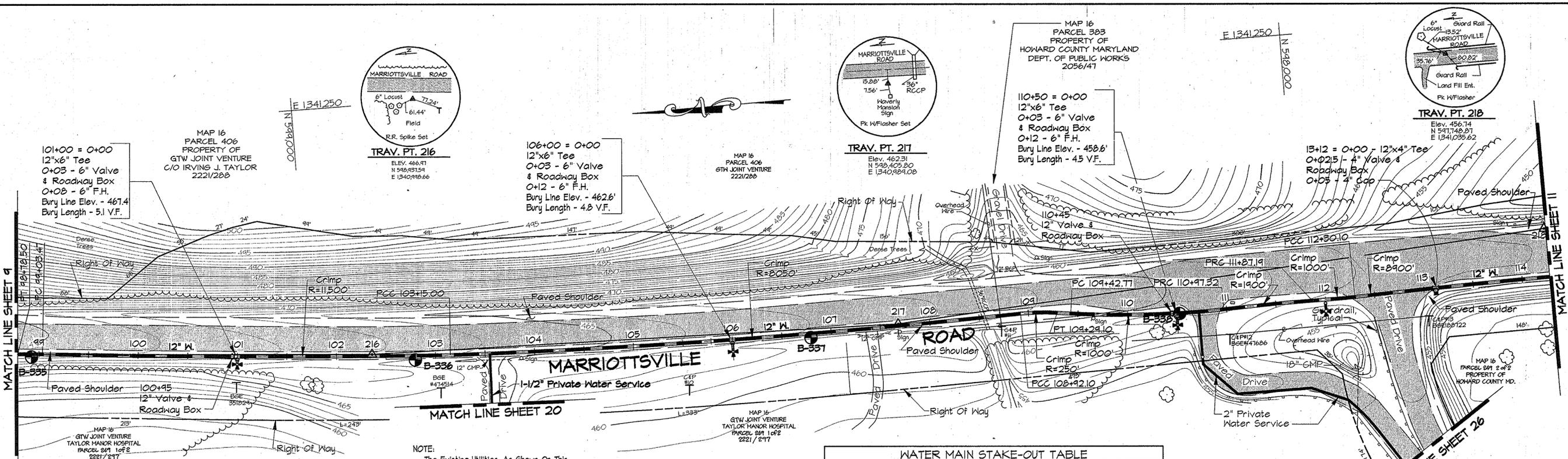
PLAN AND PROFILE - MARRIOTTVILLE RD.
STA. 83+78.42 TO STA. 98+78.50

600' SCALE MAP NO. 0.16 BLOCK NO. 22.4

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 9 OF 31

PK12\USER2\SDSK\PRO\CM6473\DWG\ALP-3-10.DWG 03/15/1996 12:39

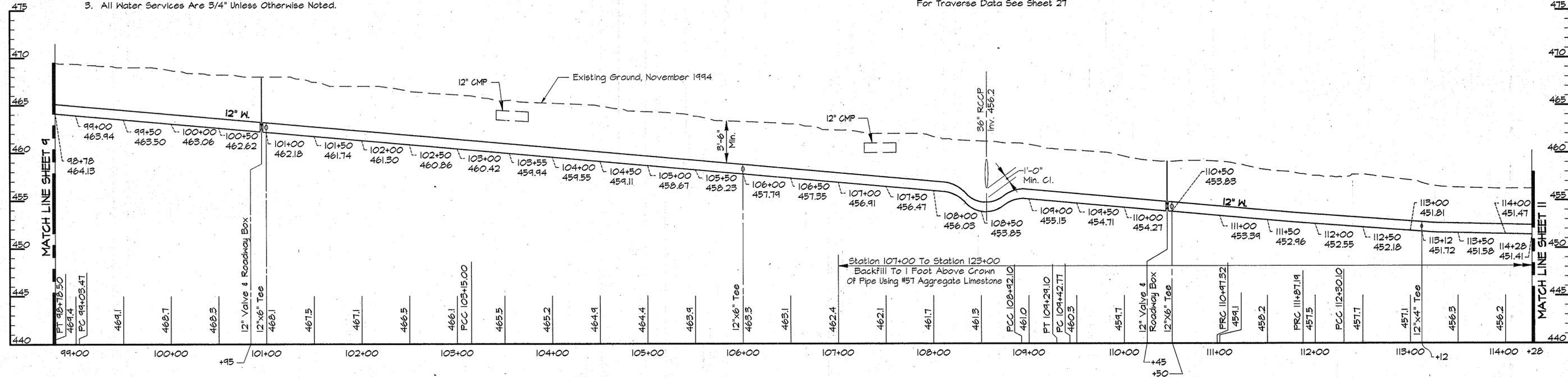


NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
215 - 216	1+24.22	0.45' Lt.	P.T. - 98+78.50
	2+09.18	0.46' Lt.	P.C. - 99+03.47
216 - 217	0+78.86	5.28' Rt.	P.C.C. - 103+15.00
	1+23.70	7.61' Rt.	P.C.C. - 108+92.10
217 - 218	1+60.39	12.15' Rt.	P.T. - 109+29.10
	1+73.80	14.83' Rt.	P.C. - 109+42.77
	3+27.09	33.30' Rt.	P.R.C. - 110+97.32
	4+16.84	37.61' Rt.	P.R.C. - 111+87.19
	4+59.66	40.20' Rt.	P.C.C. - 112+30.10

For Traverse Data See Sheet 21



PROFILE - MARRIOTTVILLE ROAD
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Slaw 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Danner 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
31 MOSHER ST.
BALTIMORE, MARYLAND 21217



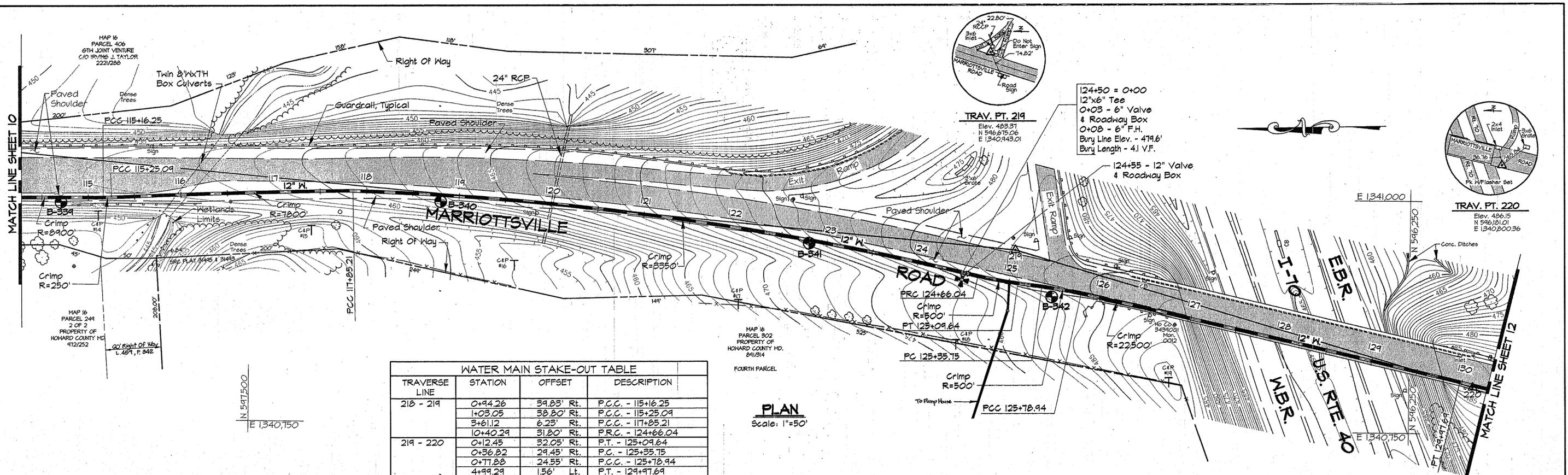
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DRN: DCJ			
CHK: SRK			
DATE: 3/96	BY: NO.	REVISION	DATE

PLAN AND PROFILE - MARRIOTTVILLE RD.
STA 98+78.50 TO 114+28

600' SCALE MAP NO. 16 BLOCK NO. 4

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 10 OF 31

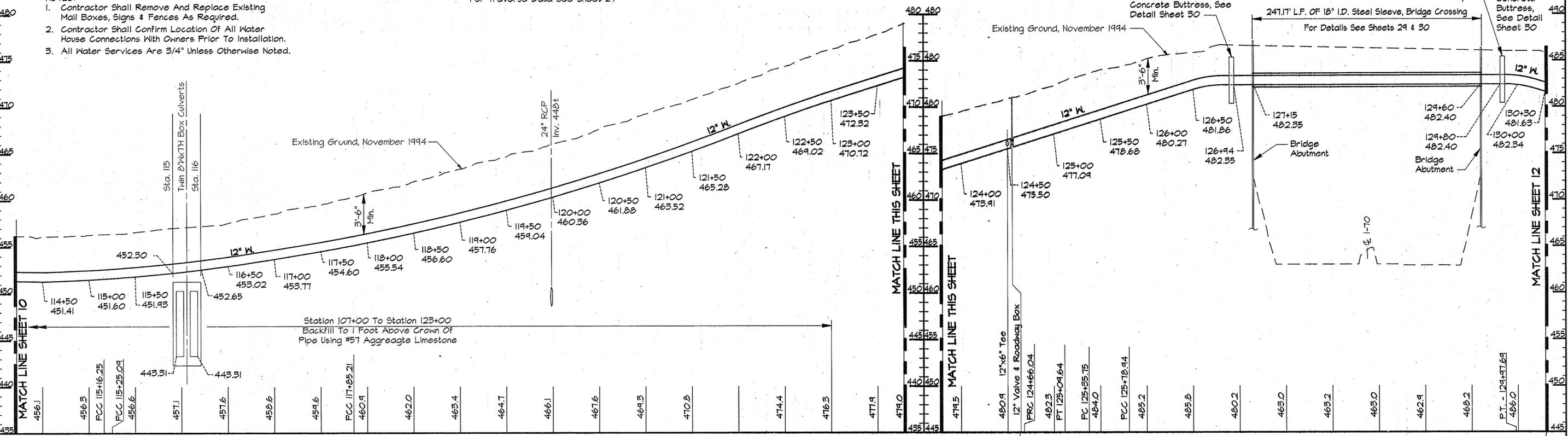


WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
218 - 219	0+94.26	39.83' Rt.	P.C.C. - 115+16.25
	1+03.05	38.80' Rt.	P.C.C. - 115+25.09
	3+61.12	6.23' Rt.	P.C.C. - 117+85.21
219 - 220	10+40.29	31.80' Rt.	P.R.C. - 124+66.04
	0+12.45	32.05' Rt.	P.T. - 125+09.64
	0+36.82	29.45' Rt.	P.C. - 125+35.75
	0+77.88	24.55' Rt.	P.C.C. - 125+78.94
	4+99.29	1.56' Lt.	P.T. - 129+97.69

For Traverse Data See Sheet 27

PLAN
Scale: 1"=50'

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.



PROFILE - MARRIOTTVILLE ROAD
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

PK2/USE2:SDSKPROJ/CN8473/DWG/ALP-3-11.DWG 03/12/1996 07:49

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James H. Lewis 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Robert A. Deane 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

Robert A. Deane 3/29/96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



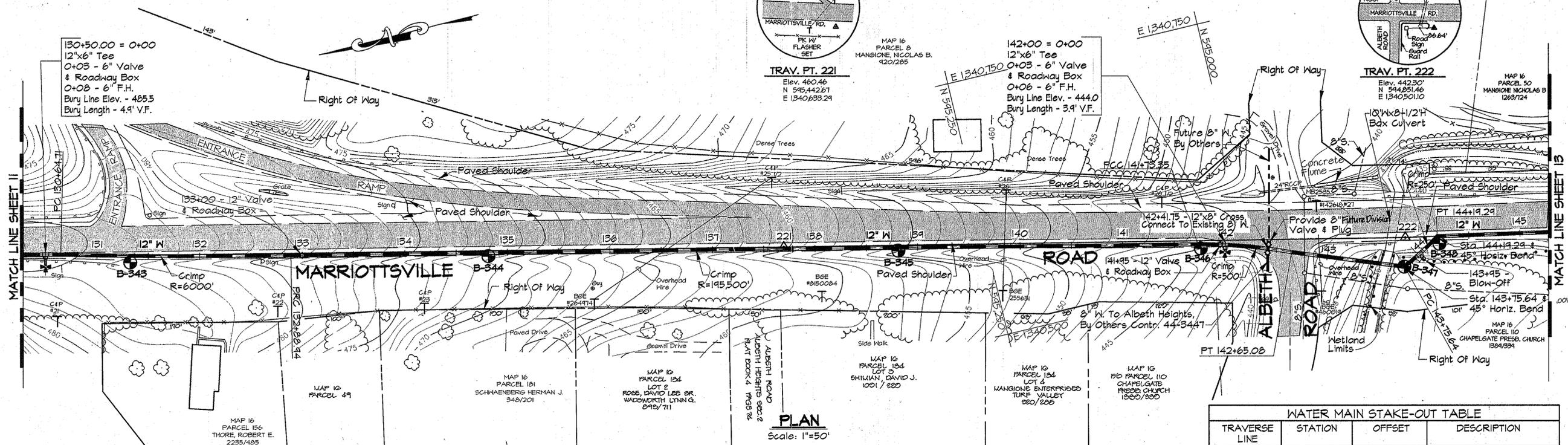
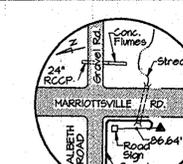
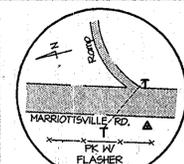
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DRN:	DCJ			
CHK:	SRK			
DATE:	3/96	BY:	NO.	REVISION

PLAN AND PROFILE - MARRIOTTVILLE RD.
STA. 114+28 TO STA. 130+28

DATE: 600' SCALE MAP NO. 16 BLOCK NO. 4 & 10

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO. SCALE AS SHOWN SHEET 11 OF 31

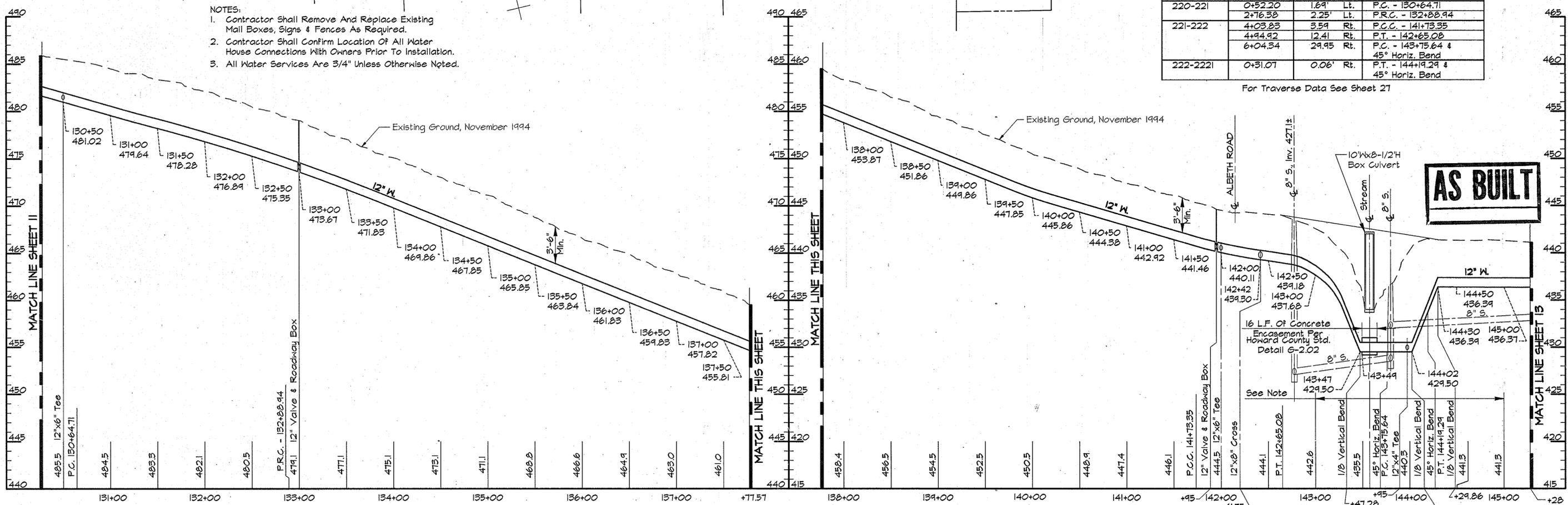


PLAN
Scale: 1"=50'

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
220-221	0+52.20	1.69' Lt.	P.C. - 130+64.71
	2+76.38	2.25' Lt.	P.R.C. - 132+88.94
221-222	4+03.83	3.59' Rt.	P.C.C. - 141+73.35
	4+94.92	12.41' Rt.	P.T. - 142+65.08
222-2221	6+04.34	29.95' Rt.	P.C. - 143+75.64 & 45° Horiz. Bend
	0+31.07	0.06' Rt.	P.T. - 144+19.29 & 45° Horiz. Bend

For Traverse Data See Sheet 27

- NOTES:**
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.



PROFILE - MARRIOTTVILLE ROAD

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

AS BUILT

Note:
Restrain All Joints Between
Stations 142+50 &
Station 145+00

RKK2/USR2:SDSKPROJ/CN9473/DWG/ ALP-3-12.DWG 03/15/1996 16:36

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Shaw 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Berman 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

Paul J. Johnson 3/29/96
BRIEF, BUREAU OF ENGINEERS DATE

Dr. Don Wynn 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



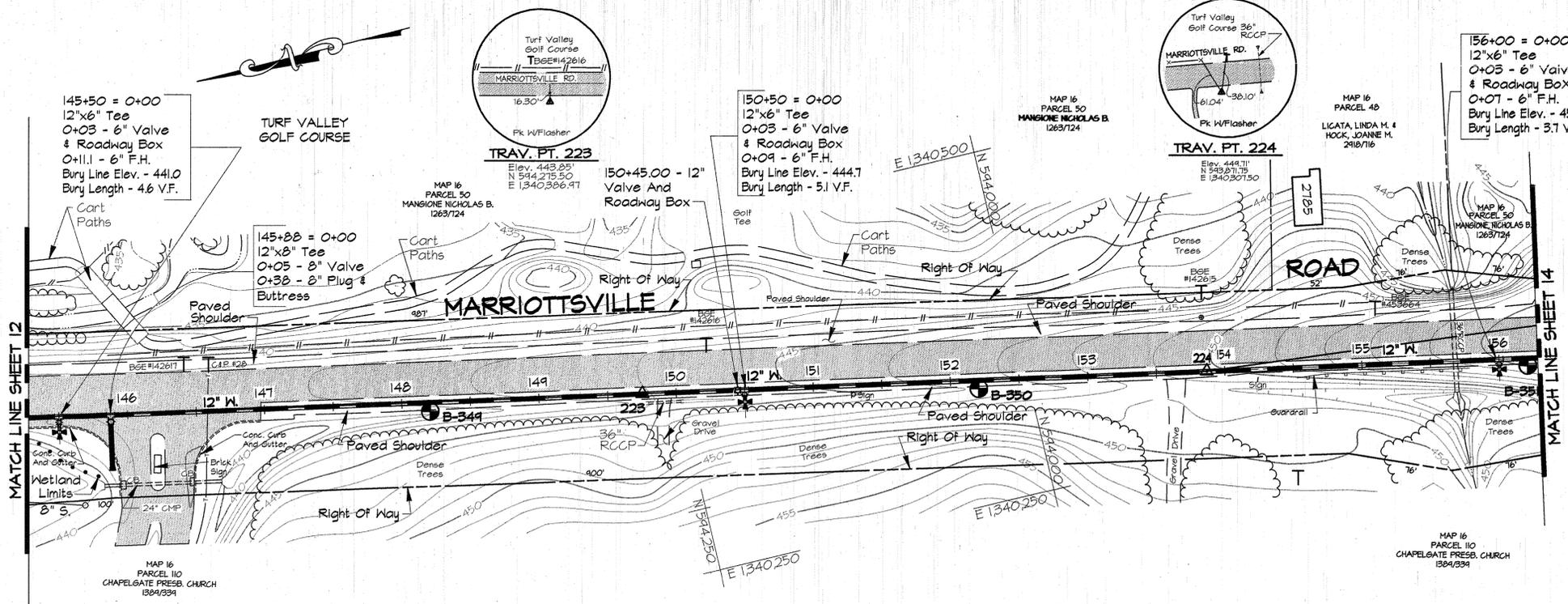
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DRN:	DCJ				
CHK:	SRK				
DATE:	3/96	BY:	NO.	REVISION	DATE

PLAN AND PROFILE - MARRIOTTVILLE RD.
STA. 130+28 TO STA. 145+28

DATE: 800' SCALE MAP NO. 16 BLOCK NO. 10

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 12 OF 31



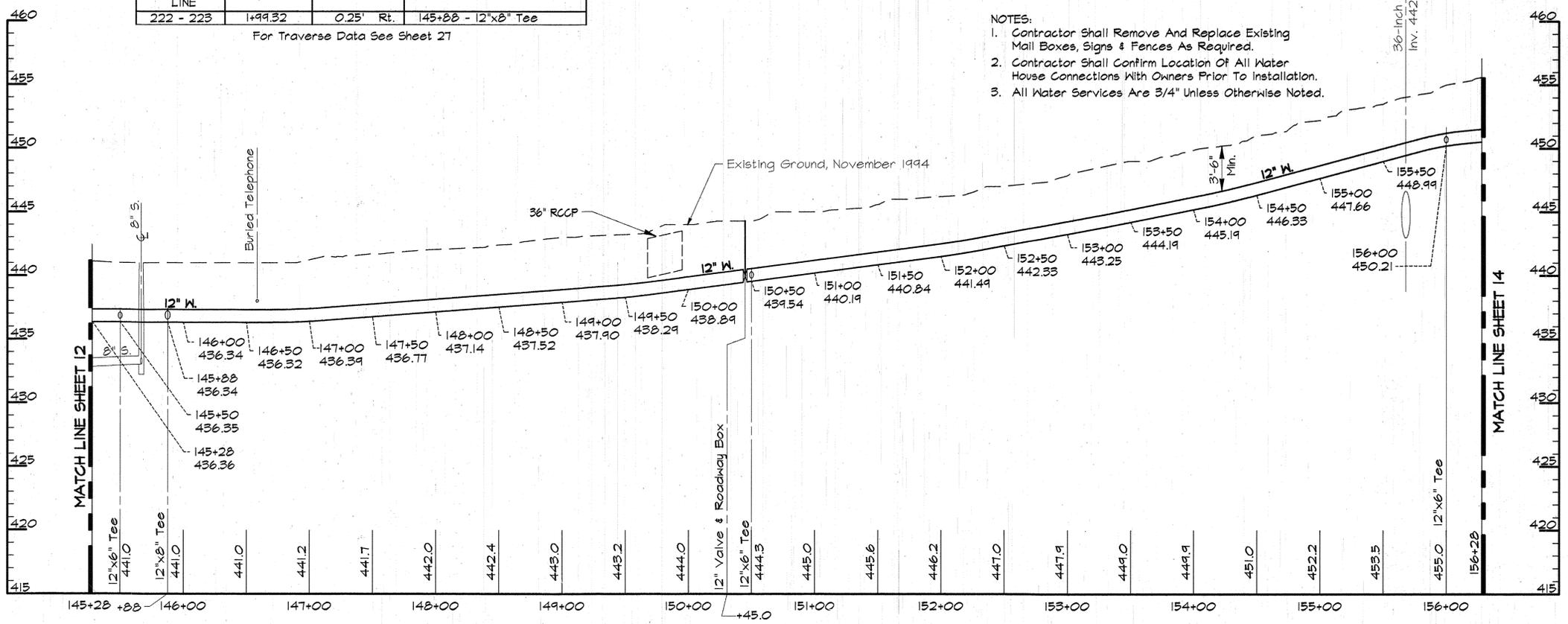
WATER MAIN STAKE-OUT TABLE

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
222 - 223	1+99.32	0.25' Rt.	145+88 - 12"x8" Tee

For Traverse Data See Sheet 27

PLAN
Scale: 1"=50'

- NOTES:**
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.



PROFILE - MARRIOTTVILLE ROAD
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

RKK2/USR2:SDSKPROJ/CM9473/DWG/ ALP-3-13.DWG 03/15/1996 16.43

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Lewis 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Paul J. Sporn 3/29/96
CHIEF, BUREAU OF ENGINEERING DATE

Raymond B. Smith 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

Oliver J. Smith 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



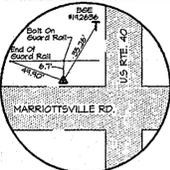
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DRN:	DCU			
CHK:	BSH			
DATE:	3/96			
BY:	NO.	REVISION	DATE	

PLAN AND PROFILE - MARRIOTTVILLE RD.
STA. 145+28 TO STA. 156+28

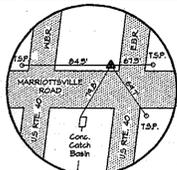
600' SCALE MAP NO. 16 BLOCK NO. 10 & 16

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 13 OF 31



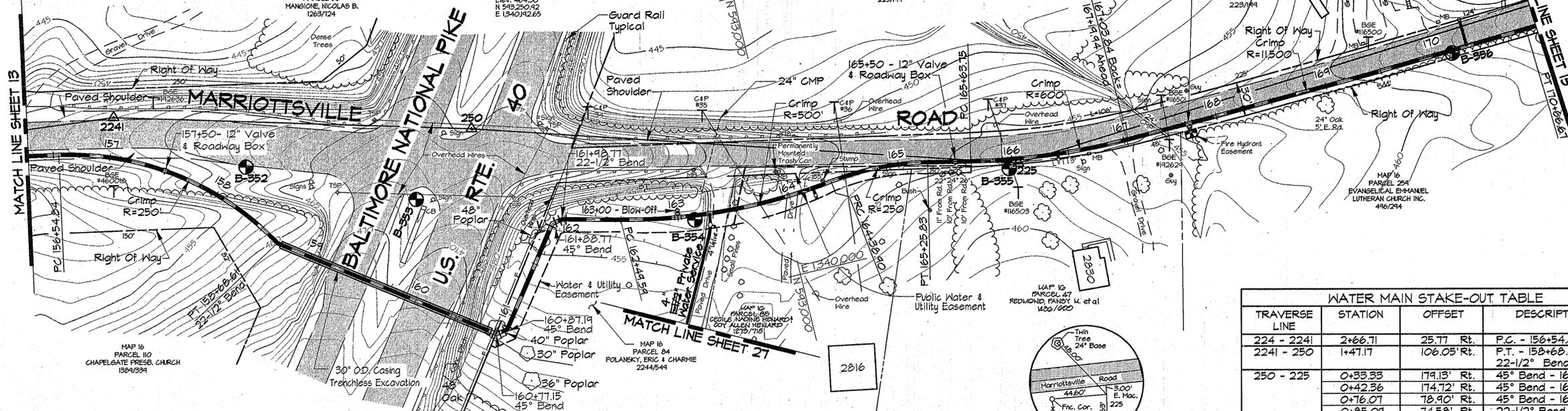
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TRAV. PT. 250
Elev. 464.30
N 543.250.42
E 1340.126.65

167+59 = 0+00
12"x6" Tee
0+03 - 6" Valve
& Roadway Box
0+08 - 6" F.H.
Bury Line Elev. = 456.3
Bury Length - 46 V.F.

Note: House #2865 Will
Be Served From The
Water Main Shown On
Sheet 28.

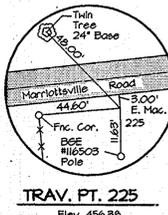


TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
224 - 2241	2+66.71	25.77' Rt.	P.C. - 156+54.84
2241 - 250	1+47.17	106.05' Rt.	P.T. - 158+68.61 & 22-1/2° Bend
250 - 225	0+33.33	179.13' Rt.	45° Bend - 160+77.15
	0+42.36	174.72' Rt.	45° Bend - 160+87.19
	0+76.07	78.90' Rt.	45° Bend - 161+88.77
	0+85.09	74.58' Rt.	22-1/2° Bend - 161+98.77
	1+35.84	71.81' Rt.	P.C. - 162+49.59
	3+18.46	26.42' Rt.	P.R.C. - 164+38.90
225 - 226	4+02.07	4.26' Rt.	P.T. - 165+25.23
	4+39.85	1.03' Rt.	P.C. - 165+63.75
	0+98.87	8.34' Rt.	P.C.C. - 167+03.84 Back = P.C.C. - 167+19.94 Ahead
	4+61.05	12.77' Rt.	P.T. - 170+66.67

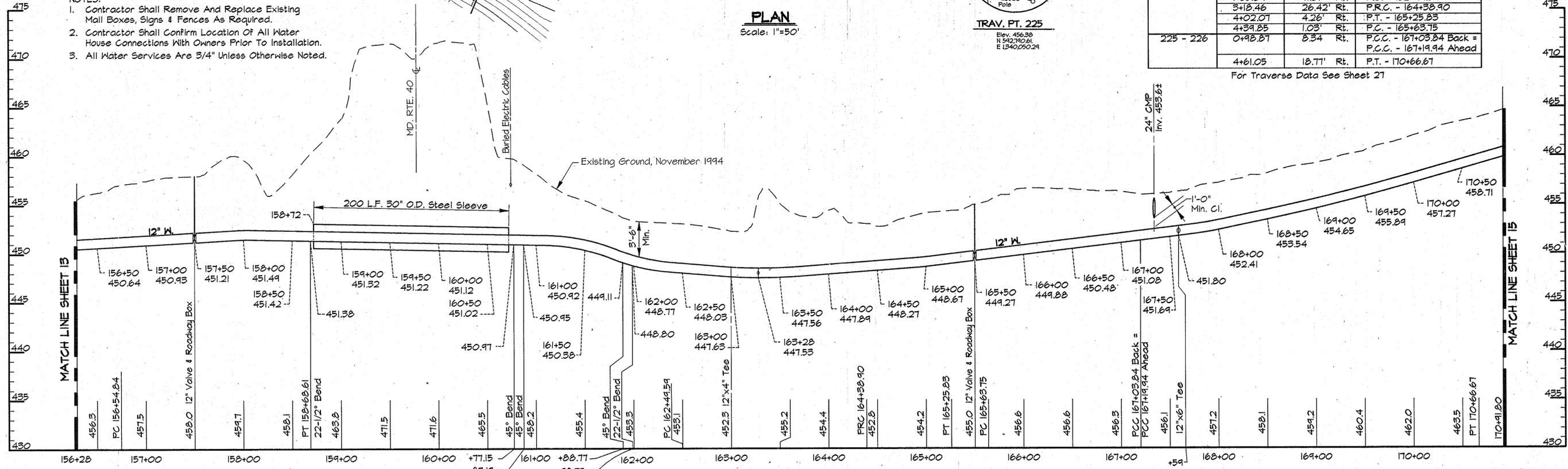
For Traverse Data See Sheet 27

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.

PLAN
Scale: 1"=50'



TRAV. PT. 225
Elev. 456.30
N 542.140.61
E 1340.020.21



PROFILE - MARIOTTVILLE ROAD
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

PK42/USE2:/SDSKPROJ/CM9473/DWG/ ALP-3-14.DWG 03/15/1996 16:53

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Slaw 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Richard J. Ryan 3/29/96
CHIEF, BUREAU OF ENGINEERING DATE

Robert J. Berry 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

D. J. Ryan 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217

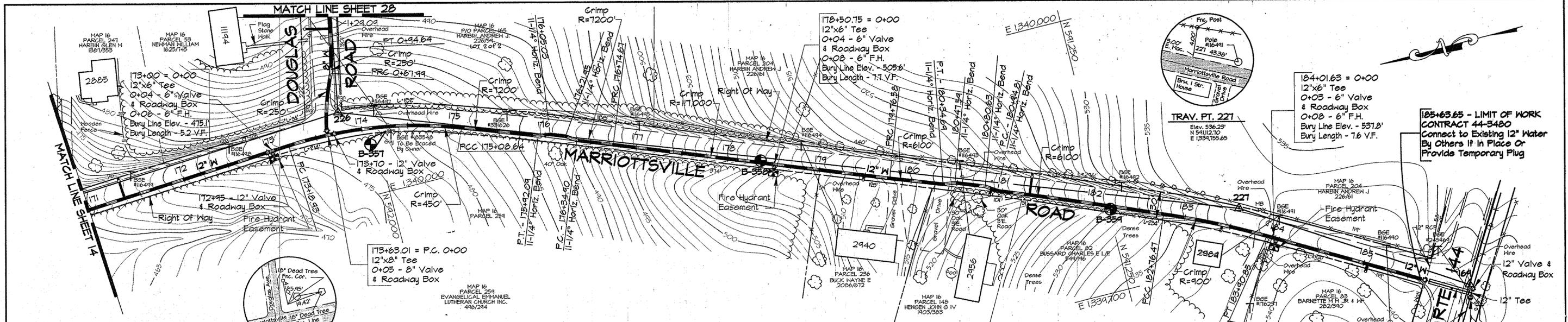


DES:	DWR				
DRN:	DCJ				
CHK:	SRK				
DATE:	3/96				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO.	BLOCK NO.

PLAN AND PROFILE - MARIOTTVILLE RD.
STA. 156+28 TO STA. 170+92

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 14 OF 31



WATER MAIN STAKE-OUT TABLE

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
226 - 227	1+34.87	2.37' Rt.	P.C.C. - 175+08.64
	2+18.33	2.35' Rt.	P.T. - 175+42.09
	2+30.94	0.57' Rt.	176+05.03 - 11-1/4° H. Bend
	2+47.86	0.43' Rt.	176+21.95 - 11-1/4° H. Bend
	2+60.42	2.71' Rt.	P.C. - 176+34.90
	3+00.18	3.28' Rt.	P.R.C. - 176+74.67
	6+02.05	7.94' Rt.	P.R.C. - 179+76.58
	6+60.17	8.17' Rt.	P.T. - 180+34.69
	6+72.73	5.26' Rt.	180+47.59 - 11-1/4° H. Bend
	7+05.77	5.54' Rt.	180+80.63 - 11-1/4° H. Bend
227 - 169	7+19.52	8.98' Rt.	P.C. - 180+94.81
	9+01.08	15.04' Rt.	11-1/4° H. Bend
	0+38.10	18.98' Rt.	P.T. - 183+90.85

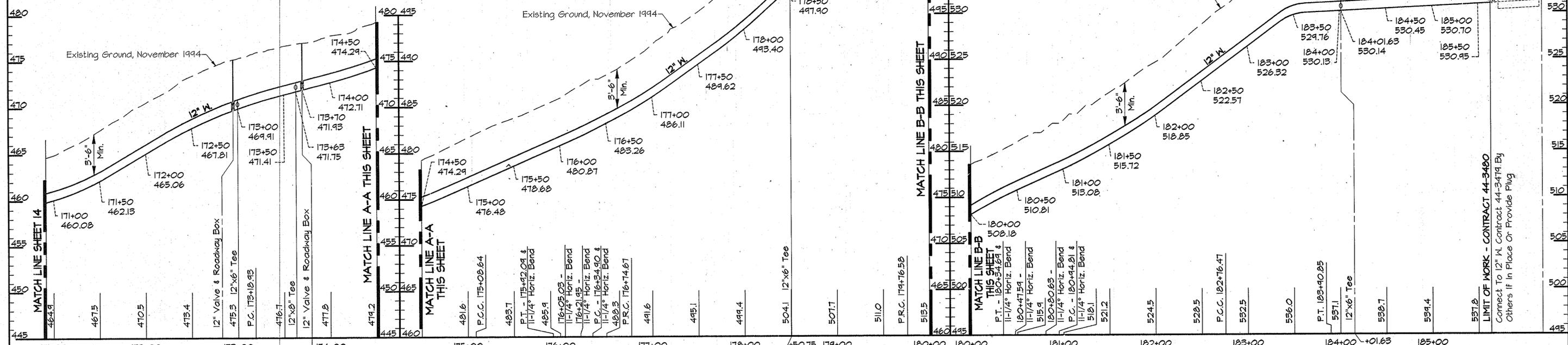
WATER MAIN STAKE-OUT TABLE

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
225 - 226	6+97.20	18.30' Rt.	P.C. - 173+18.93
	7+41.22	20.26' Rt.	173+63.01 - 12"x8" Tee = P.C. - 0+00
226 - 2261	0+43.13	4.64' Lt.	P.R.C. - 0+67.99
	0+69.68	2.47' Lt.	P.T. - 0+94.64

- NOTES:**
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.

PLAN
Scale: 1"=50'

For Traverse Data See Sheet 21



PROFILE - MARRIOTTVILLE ROAD

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

AS BUILT

R:\K2\USER2\CMS\KIPROJ\CM9473\DWG\ALP-3-15.DWG 17:13

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Lewis 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Richard P. Ryan 3/29/96
CHIEF, BUREAU OF ENGINEERING DATE

Robert Reimer 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

John D. ... 3-29-96
CHIEF WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
31 MOSHER ST.
BALTIMORE, MARYLAND 21217



DES:	DWR	BY:	NO.	REVISION	DATE:
DRN:	DCJ				
CHK:	SRK				
DATE:	3/96				

PLAN AND PROFILE MARRIOTTVILLE ROAD
STA. 170+92 TO STA. 185+63.65

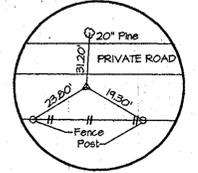
600' SCALE MAP NO. 16 BLOCK NO. 16 & 22

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 15 OF 31

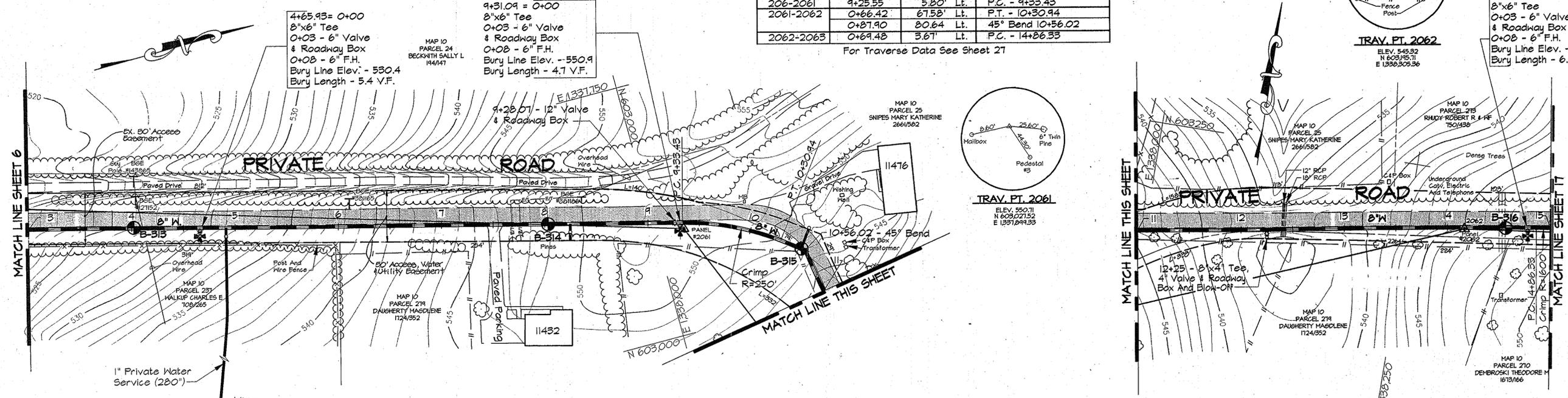
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
206-2061	9+25.55	5.80' Lt.	P.C. - 9+33.43
2061-2062	0+66.42	67.58' Lt.	P.T. - 10+30.94
	0+87.90	80.64' Lt.	45° Bend 10+56.02
2062-2063	0+89.48	3.67' Lt.	P.C. - 14+26.33

For Traverse Data See Sheet 27



TRAV. PT. 2062
ELEV. 548.32
N 603°15.71'
E 1338°205.36'

14+78.14 = 0+00
8"x6" Tee
0+03 - 6" Valve
& Roadway Box
0+08 - 6" F.H.
Bury Line Elev. - 548.2
Bury Length - 6.0 V.F.

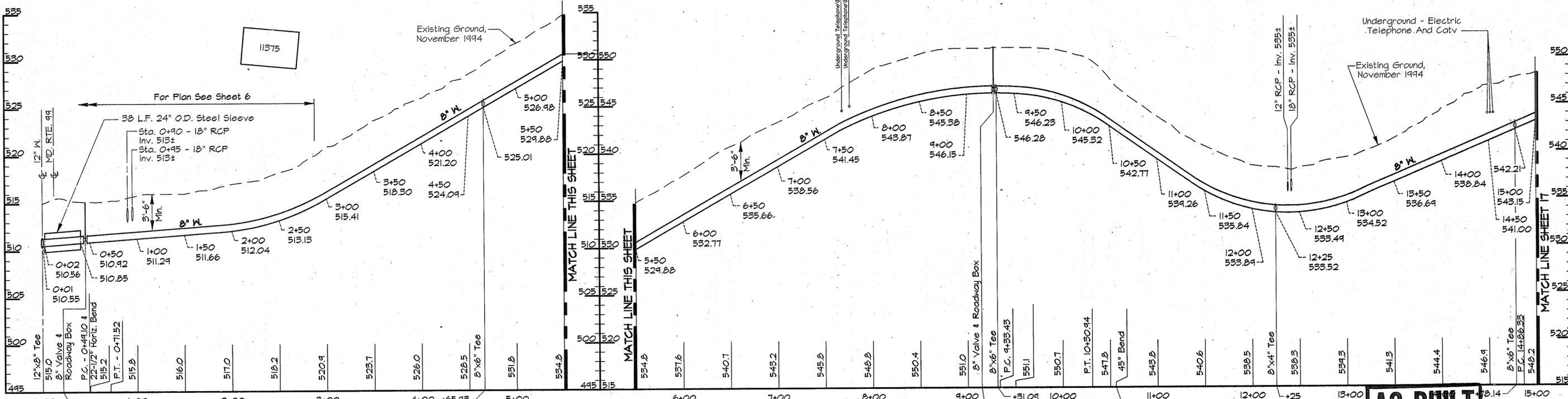


PLAN
Scale: 1"=50'

NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.

NOTES:
1. Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
2. Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
3. All Water Services Are 3/4" Unless Otherwise Noted.

PLAN
Scale: 1"=50'



PROFILE - PRIVATE ROAD

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

AS BUILT

RKK2 USR2: S0SKPROJ.A09473.DWG ALP-3-16.DWG 03/15/1996 17:20

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. ... 4/3/96
DIRECTOR OF PUBLIC WORKS

Robert ... 4-1-96
CHIEF, BUREAU OF UTILITIES

... 3/29/96
CHIEF, WATER AND SEWER DESIGN DIVISION

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



DES:	DWR				
DRN:	DCJ				
CHK:	SRK				
DATE:	3/96	BY	NO.	REVISION	DATE

PLAN AND PROFILE - PRIVATE ROAD
STA. 0+00 TO STA. 15+00

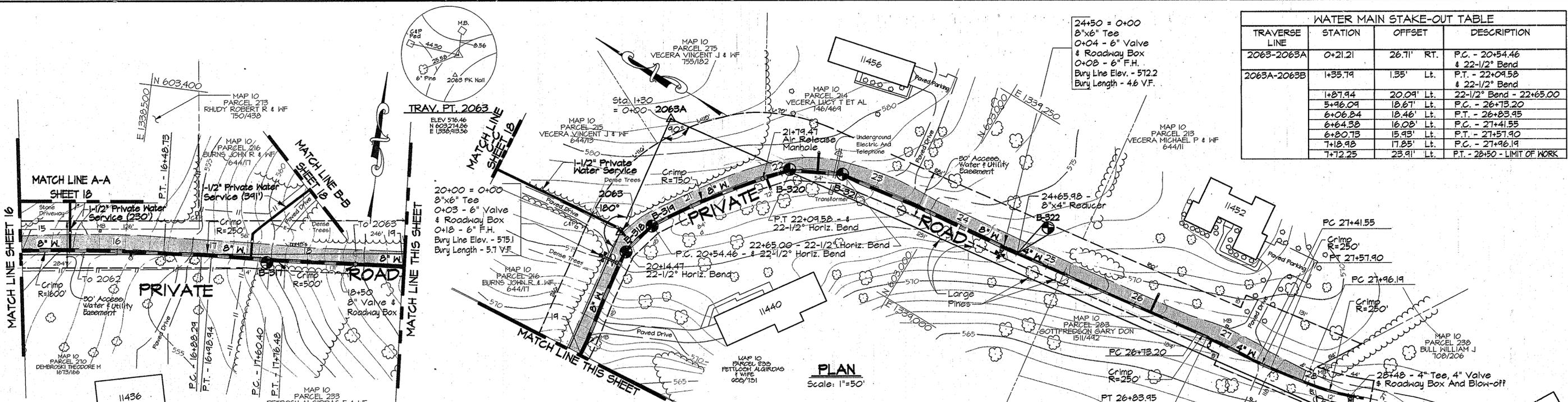
600' SCALE MAP NO. 10 BLOCK NO. 21

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 16 OF 31

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
2063-2063A	0+21.21	26.71' RT.	P.C. - 20+54.46 & 22-1/2° Bend
2063A-2063B	1+35.74	1.35' Lt.	P.T. - 22+09.58 & 22-1/2° Bend
	1+87.94	20.09' Lt.	22-1/2° Bend - 22+65.00
	5+96.04	18.67' Lt.	P.C. - 26+73.20
	6+06.84	18.46' Lt.	P.T. - 26+83.95
	6+64.38	16.08' Lt.	P.C. - 27+41.55
	6+80.73	15.93' Lt.	P.T. - 27+57.90
	7+18.98	17.85' Lt.	P.C. - 27+96.19
	7+72.25	23.91' Lt.	P.T. - 28+50 - LIMIT OF WORK

24+50 = 0+00
 8"x6" Tee
 0+04 - 6" Valve & Roadway Box
 0+08 - 6" F.H.
 Bury Line Elev. - 572.2
 Bury Length - 4.6 V.F.

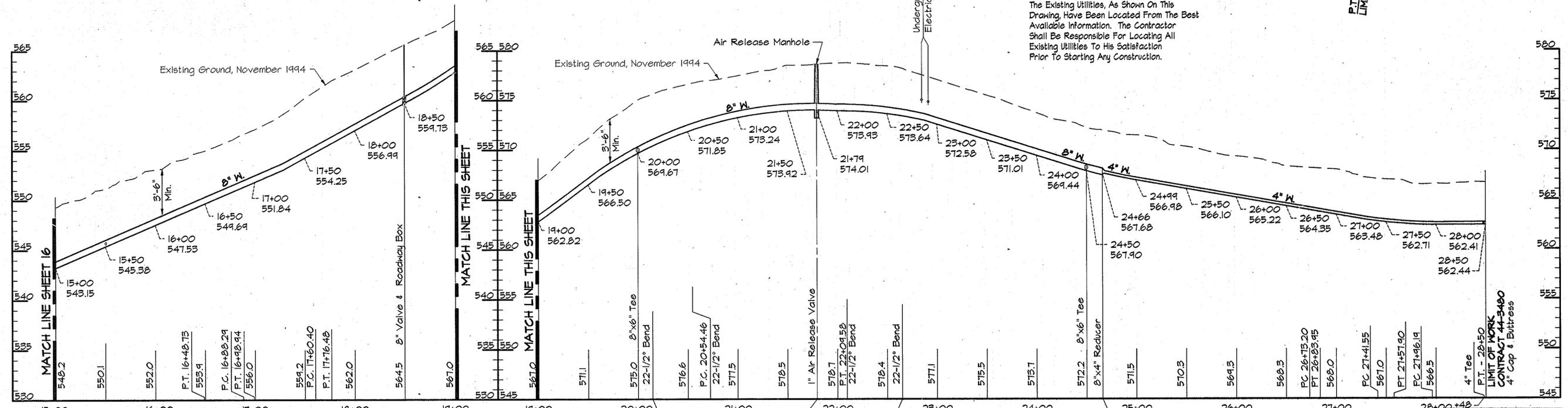


WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
2062-2063	1+33.53	4.57' Lt.	15+50.34 - Double Strap Service Connection
	2+31.78	0.84' Lt.	P.T. - 16+48.73
	2+71.32	0.68' Rt.	P.C. - 16+88.24
	2+81.94	1.32' Rt.	P.T. - 16+98.94
	3+23.22	4.68' Rt.	17+40.35 - Double Strap Service Connection
	3+43.20	6.30' Rt.	P.C. - 17+60.40
	3+59.25	7.35' Rt.	P.T. - 17+76.48
	5+46.10	14.47' Rt.	22-1/2° Bend - 20+14.47

PLAN
 Scale: 1"=50'

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.

NOTE:
 The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.



PROFILE - PRIVATE ROAD
 Scale: Horiz. 1"=50' Vert. 1"=5'

AS BUILT

BK2\USER2\SSK\PROJ\049472.DWG ALP-3-17.DWG
 03/15/1996 17:21

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *James M. Lee* 4/3/96
 Chief, Bureau of Engineering: *Robert J. Brown* 3/29/96
 Chief, Bureau of Utilities: *Robert J. Brown* 4-1-96
 Chief, Water And Sewer Design Division: *Robert J. Brown* 3-29-96

RK & K
 RUMMEL, KLEPPER & KAHL
 CONSULTING ENGINEERS
 81 MOSHER ST.
 BALTIMORE, MARYLAND 21217

DES:	DWR		
DRN:	DCJ		
CHK:	SRK		
DATE:	3/96		
BY:	NO.	REVISION	DATE

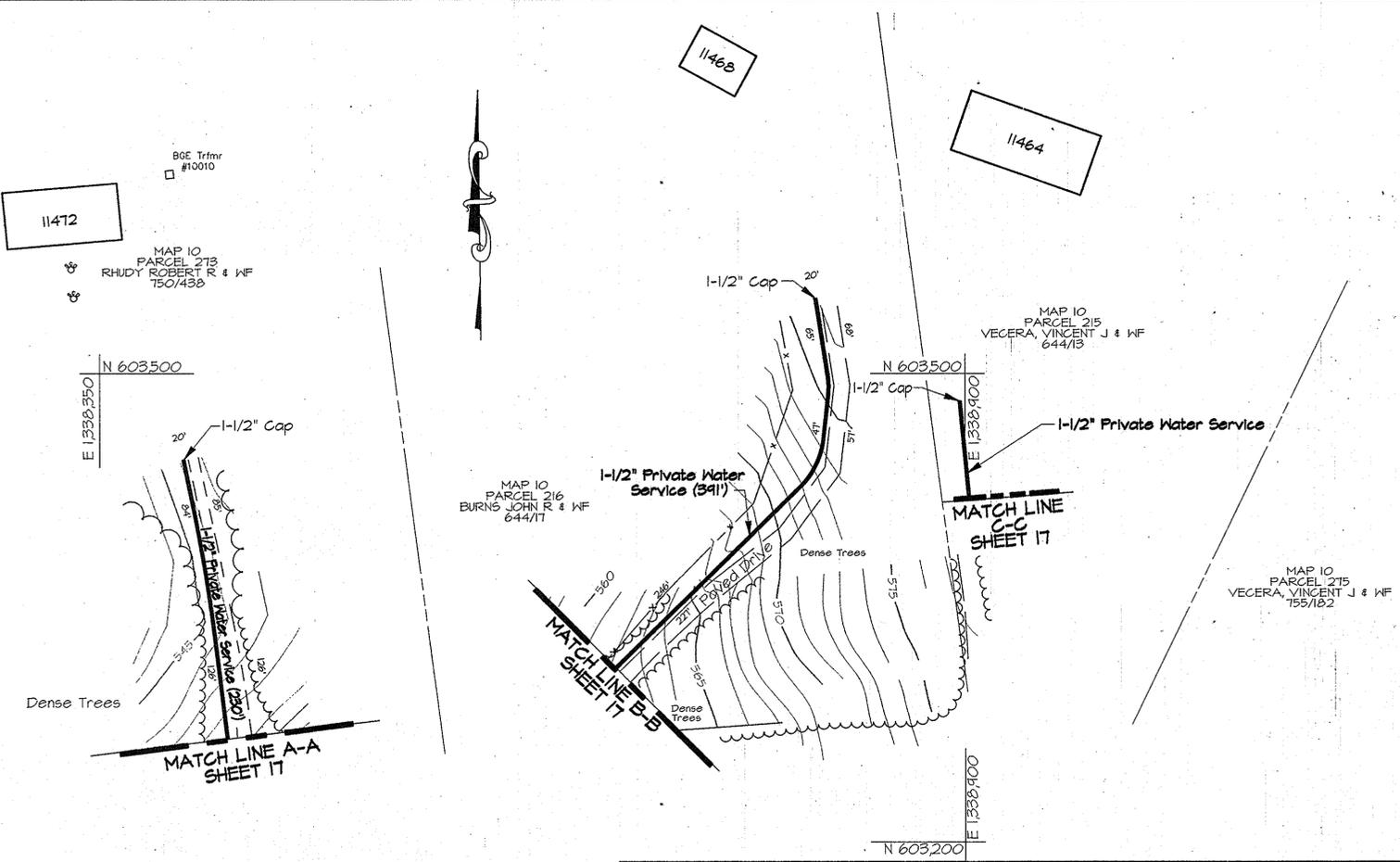
PLAN AND PROFILE - PRIVATE ROAD
 STA. 15+00 TO STA. 28+50
 600' SCALE MAP NO. 10 BLOCK NO. 21

ALPHA RIDGE WATER SUPPLY
 CAPITAL PROJECT W-8203
 CONTRACT NO. 44-3480
 ELECTION DISTRICT NO. 3
 HOWARD COUNTY, MARYLAND

DWG. NO.
 SCALE AS SHOWN
 SHEET 17 OF 31

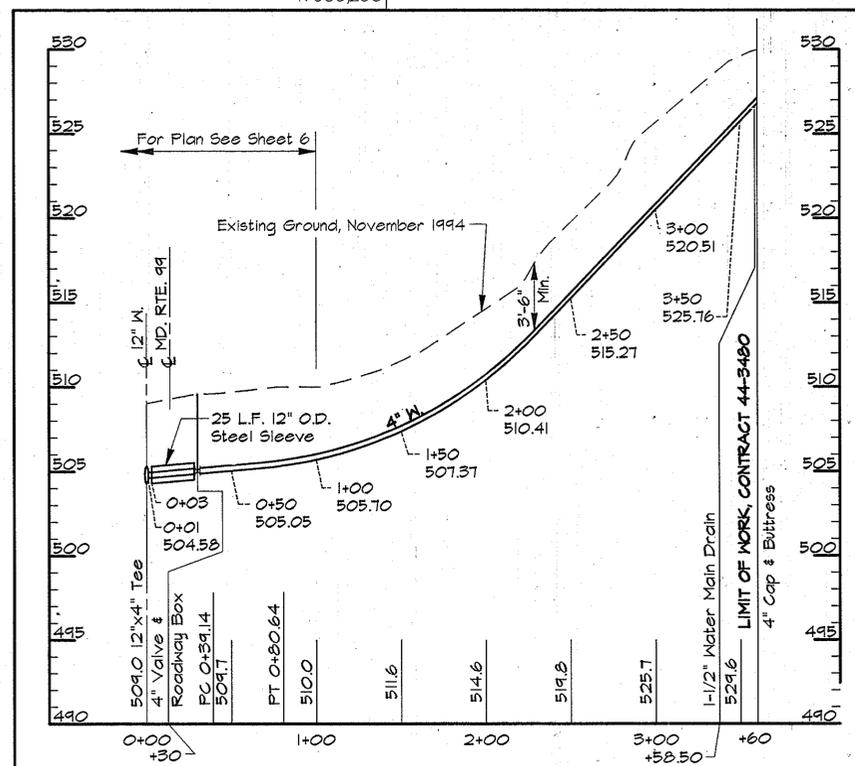
WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
.207-208	2+36.24	341.14' Lt.	3+60 - LIMIT OF WORK

For Traverse Data See Sheet 27

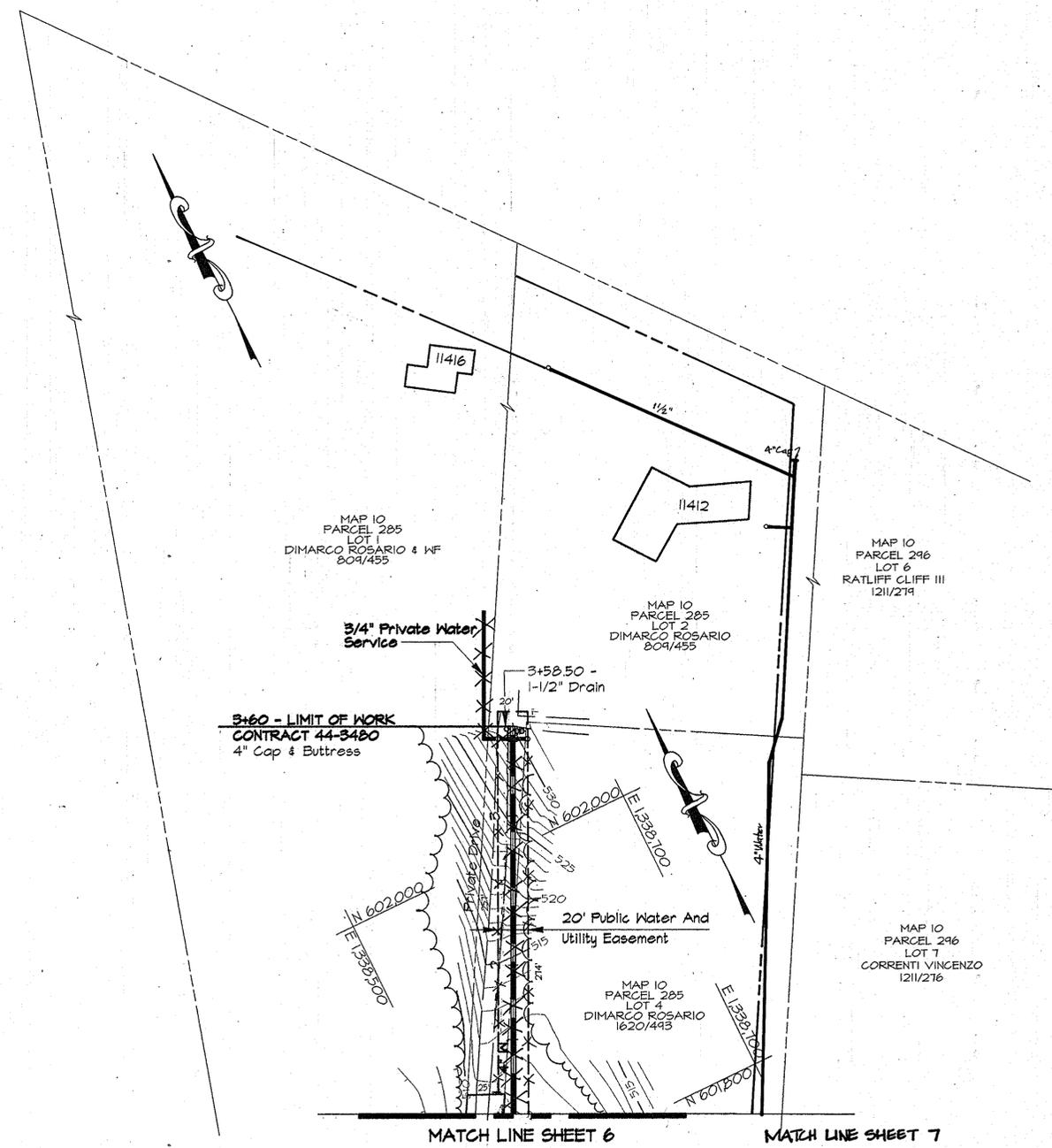


PLAN A
Scale: 1"=50'

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.



PROFILE - DIRT ROAD (PLAN B)
Scale: Horiz. 1"=50'
Vert. 1"=5'



PLAN B
Scale: 1"=50'

AS BUILT

DWG. NO.

SCALE AS SHOWN

SHEET 18 OF 31

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



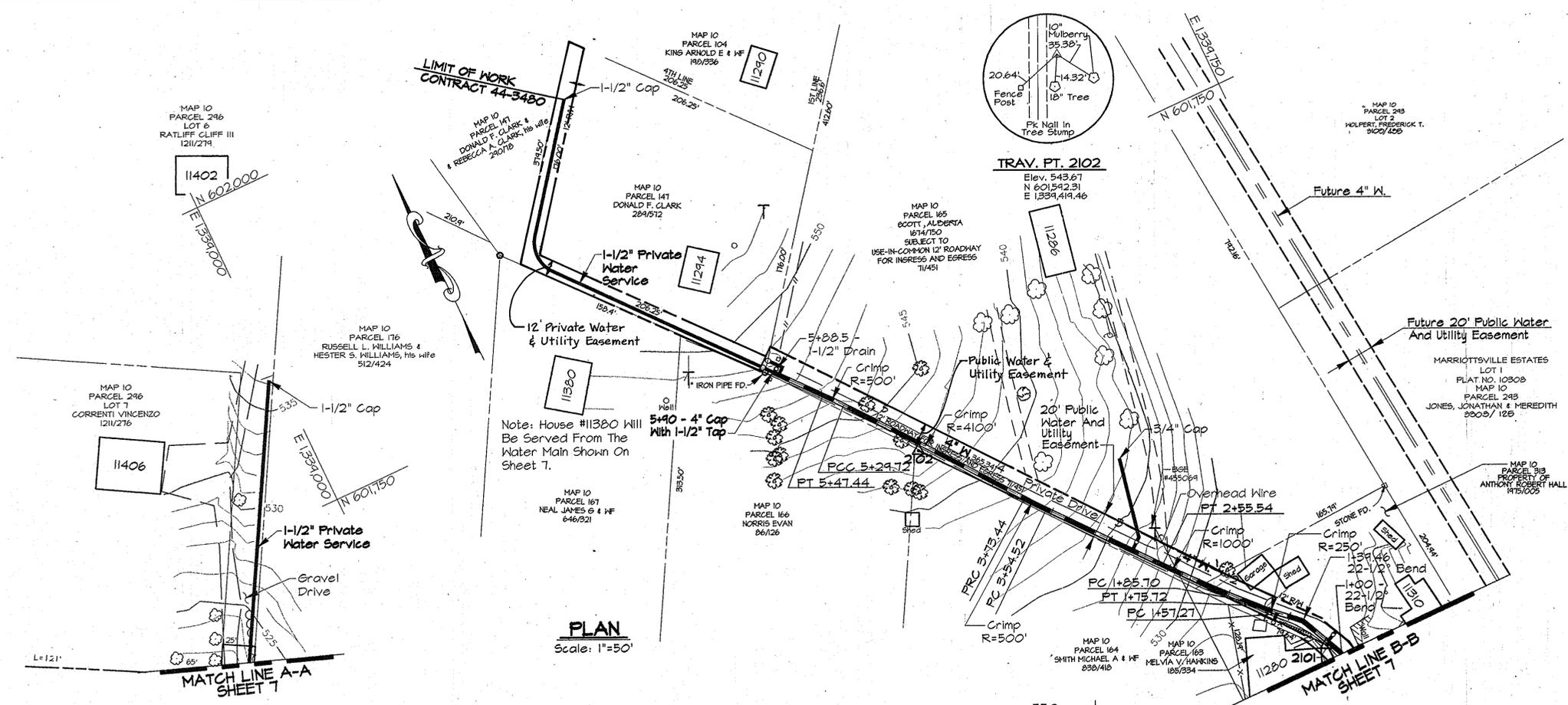
DES:	DWR				
DRN:	DCJ				
CHK:	SRK				
DATE:	3/96				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO.	BLOCK NO.

PLAN AND PROFILE - SERVICE MAIN
STA. 0+00 TO STA. 3+60
PLANS - WATER SERVICES

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

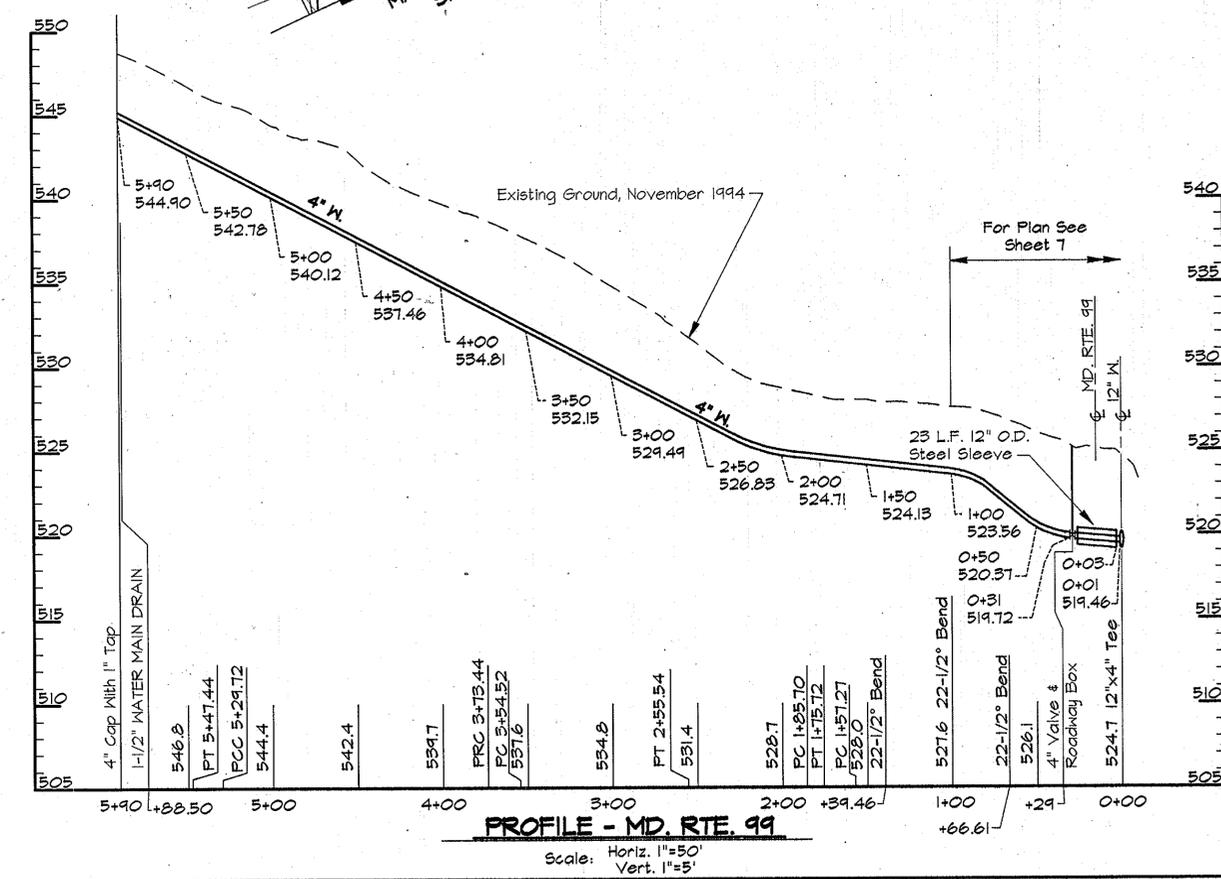
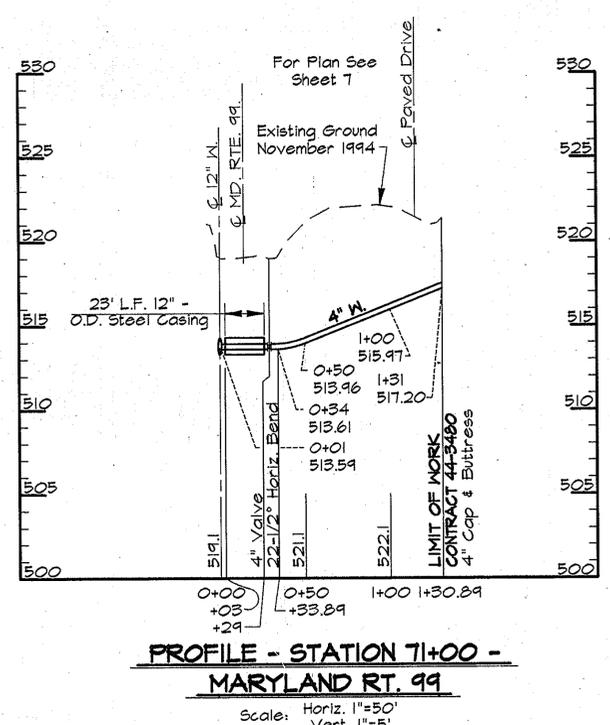
RK\2\USR2\SDSKPROJ\069473\DWG ALP-3-18.DWG 03:44

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.



WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
209 - 210	1+09.75	317.81' Lt.	P.T. - 5+47.44
	1+25.26	309.31' Lt.	P.C.C. - 5+29.72
	2+59.94	230.04' Lt.	P.R.C. - 5+73.44
	2+76.34	220.60' Lt.	P.C. - 3+54.52
	3+63.04	172.85' Lt.	P.T. - 2+55.54
	4+25.34	141.83' Lt.	P.C. - 1+89.70
	4+34.40	137.13' Lt.	P.T. - 1+75.72
	4+51.41	130.01' Lt.	P.C. - 1+57.27
	4+68.19	123.70' Lt.	22-1/2° Bend - 1+39.46
	4+96.49	96.31' Lt.	22-1/2° Bend - 1+00

For Traverse Data See Sheet 27



AS BUILT

RKK2\USR2\SDS\PROJ\CM9473\DWG 03/12/1996 ALP-3-19.DWG

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. ... 4/3/96
DIRECTOR OF PUBLIC WORKS

Robert ... 3/23/96
CHIEF, BUREAU OF ENGINEERING

Robert ... 4-1-96
CHIEF, BUREAU OF UTILITIES

Robert ... 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



DES:	DWR		
DRN:	DCJ		
CHK:	SRK		
DATE:	3/96	BY:	NO.
		REVISION	

PLANS AND PROFILE - SEVICE MAIN
STA. 0+00 TO 5+90
PLAN - WATER SERVICE
PROFILE - STA. 71+00. MARRIOTTVILLE RD.

DATE: 600' SCALE MAP NO. 10 BLOCK NO. 21

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 19 OF 31

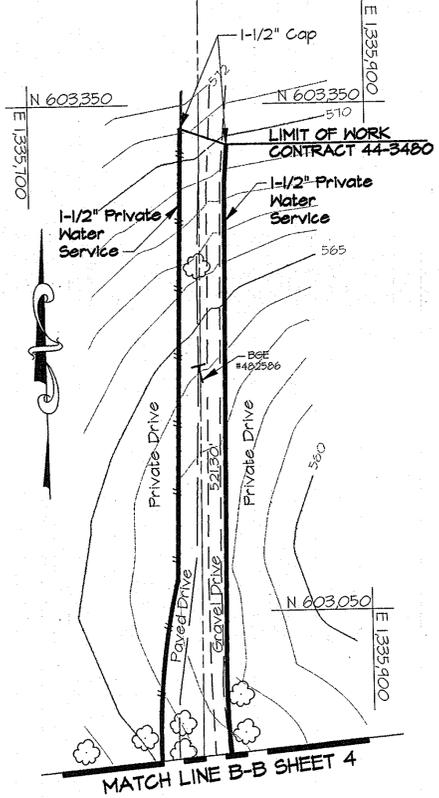
- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.

NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.

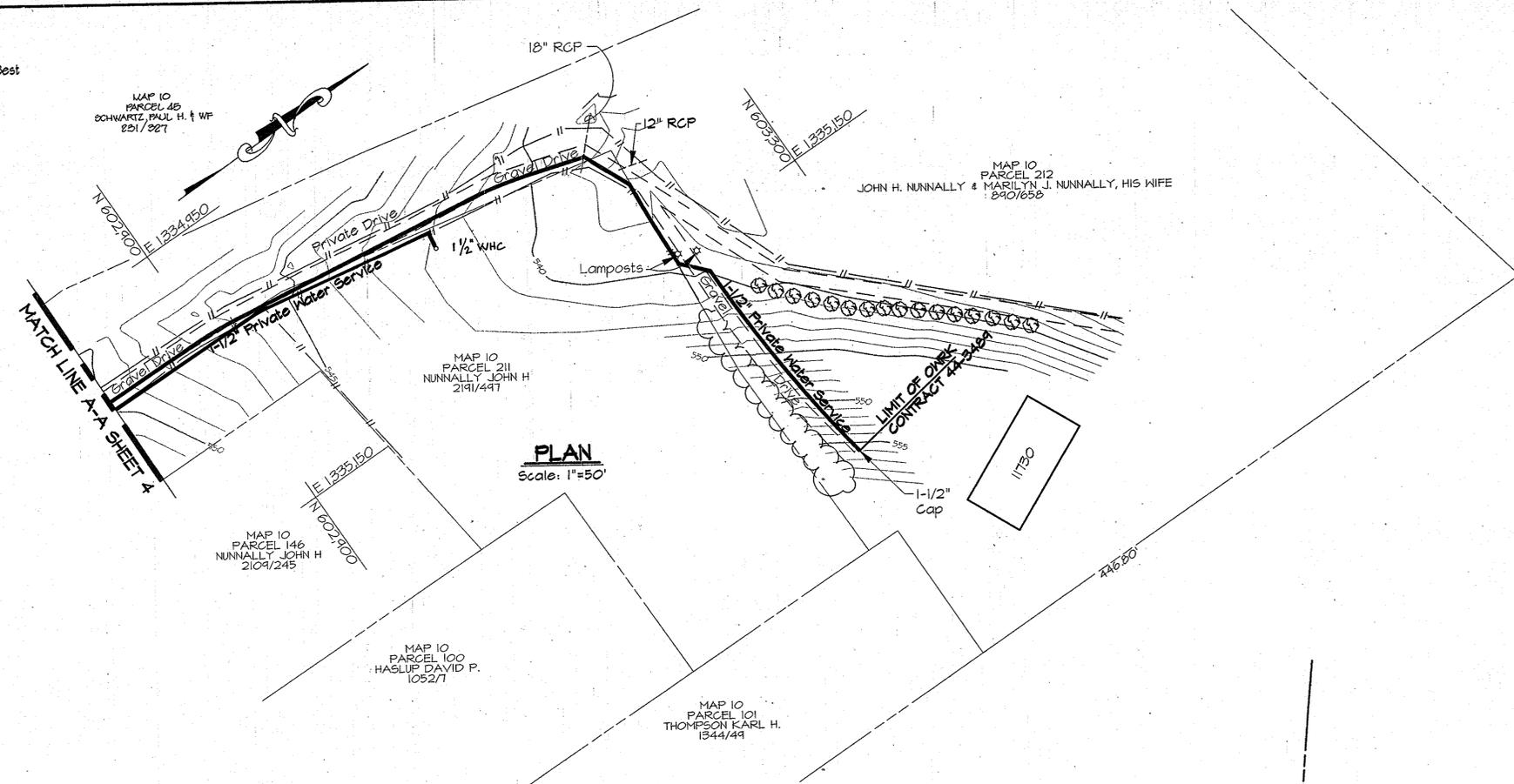
MAP 10
PARCEL 281
HAWKINS SANDRA L.
LOT 1
2160/512

11686

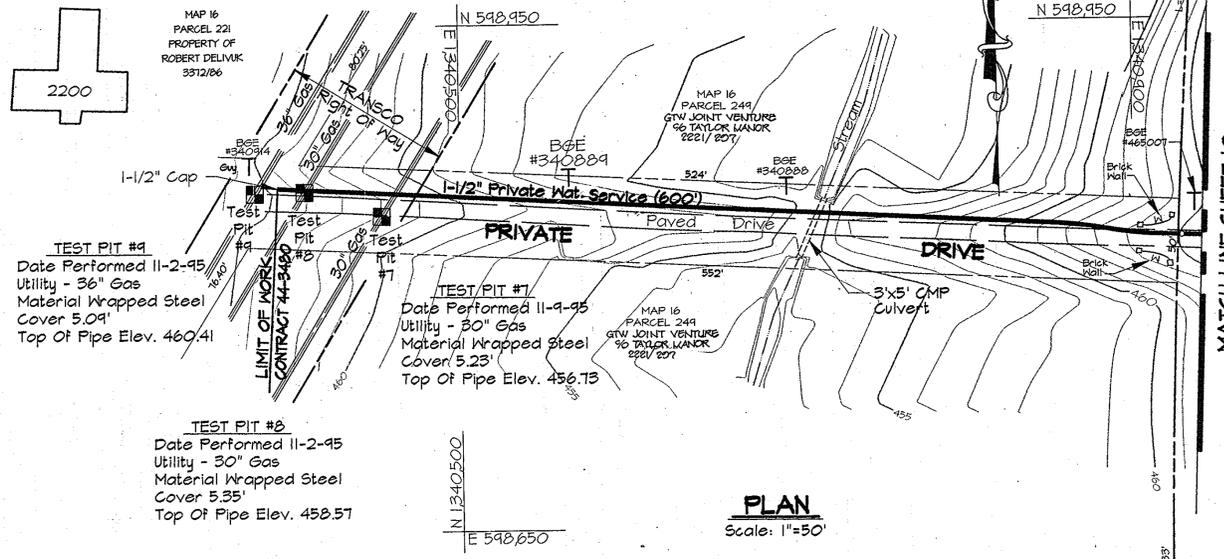
11680
MAP 10
PARCEL 197
CHASANT LLOYD J.
216/711



PLAN
Scale: 1"=50'



PLAN
Scale: 1"=50'



PLAN
Scale: 1"=50'

TEST PIT #4
Date Performed 11-2-95
Utility - 36" Gas
Material Wrapped Steel
Cover 5.04'
Top Of Pipe Elev. 460.41

TEST PIT #7
Date Performed 11-9-95
Utility - 30" Gas
Material Wrapped Steel
Cover 5.23'
Top Of Pipe Elev. 456.73

TEST PIT #2
Date Performed 11-2-95
Utility - 30" Gas
Material Wrapped Steel
Cover 5.35'
Top Of Pipe Elev. 458.57

AS BUILT

R:\K2\USR2\SDSKPROJ\CM9473\DWG\CONTR_3 ALP-3-20.DWG 03/18/1996 08:38

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James W. Clum 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Benner 4/1/96
CHIEF, BUREAU OF UTILITIES DATE

Keith Seppan 3/29/96
CHIEF, BUREAU OF ENGINEERS DATE

Oliver J. Seppan 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



DES:	DWR						
DRH:	DCJ						
CHK:	SRK						
DATE:	3/96	BY:	NO.	REVISION	DATE:	600' SCALE MAP NO. 10	BLOCK NO. 20

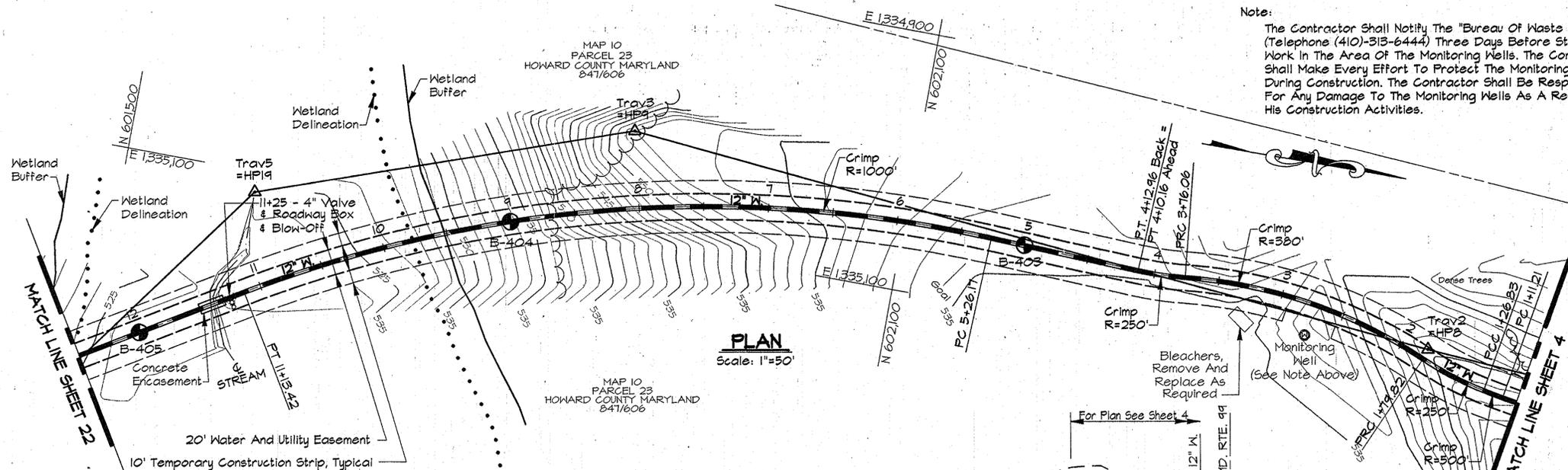
MISCELLANEOUS PLANS
WATER SERVICES

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

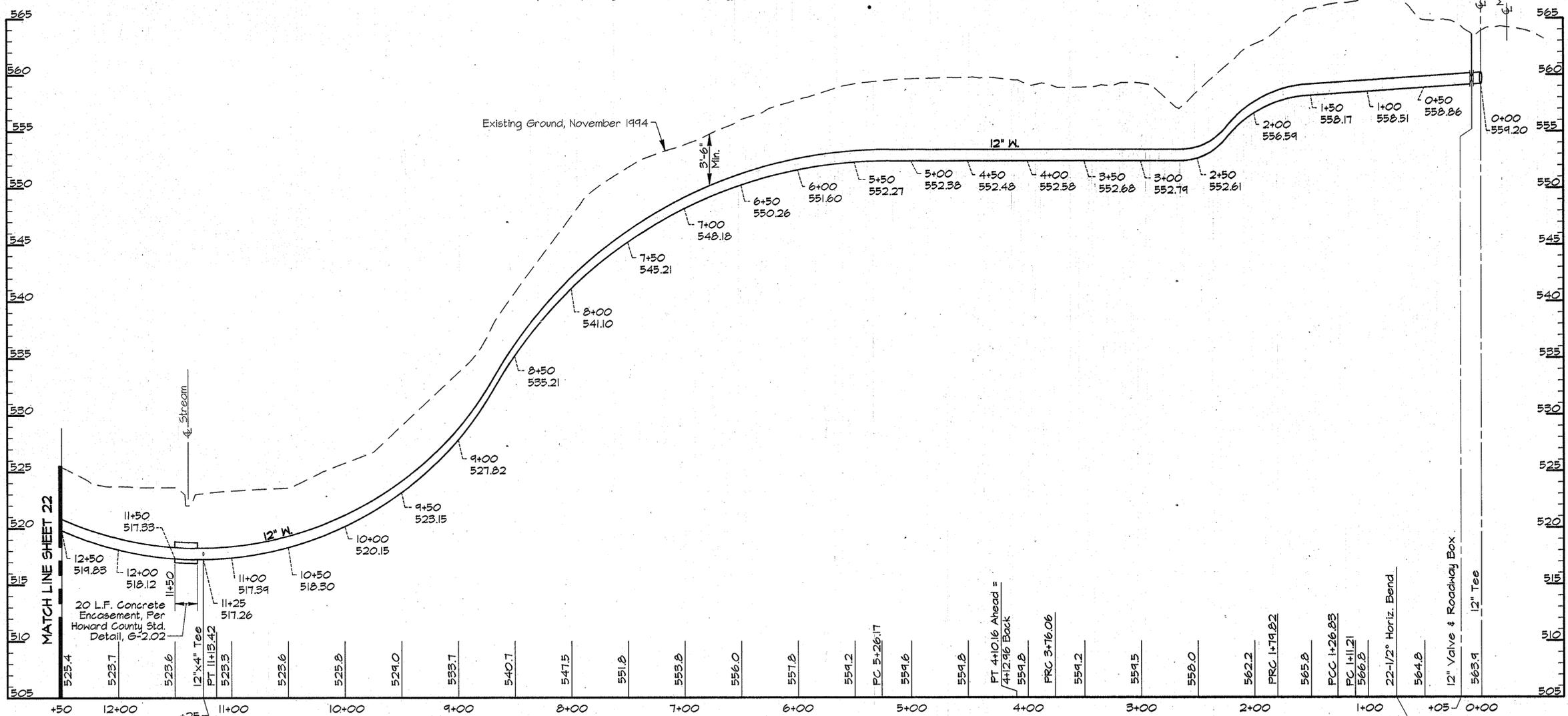
DWG. NO.
SCALE AS SHOWN
SHEET 20 OF 31

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
Trav1 - Trav2	1+04.73	22.78' Lt.	P.C. - 1+11.21
	1+20.23	20.86' Lt.	P.C.C. - 1+26.83
Trav2 - Trav3	0+02.27	9.46' Lt.	P.R.C. - 1+19.82
	1+45.49	3.97' Lt.	P.R.C. - 3+16.06
	2+32.09	0.54' Rt.	P.T. - 4+10.16 Ahead = 4+12.96 Back
Trav5 - Trav6	3+47.95	6.19' Lt.	P.C. - 5+26.17
	0+59.50	50.37' Lt.	P.T. - 11+13.42

For Traverse Data See Sheet 27



Note:
The Contractor Shall Notify The "Bureau Of Waste Management" (Telephone (410)-313-6444) Three Days Before Starting Work In The Area Of The Monitoring Wells. The Contractor Shall Make Every Effort To Protect The Monitoring Wells During Construction. The Contractor Shall Be Responsible For Any Damage To The Monitoring Wells As A Result Of His Construction Activities.



PROFILE - ELEVATED TANK MAIN

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

AS BUILT

BK2\US2-SDSK\PROJ\049473\DWG\CONTR_3 ALP-3-21.DWG 03/18/1996 08:41

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Lewis 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

John J. Ryan 3/29/96
CHIEF, BUREAU OF ENGINEERING DATE

John J. Ryan 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

John J. Ryan 3-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217

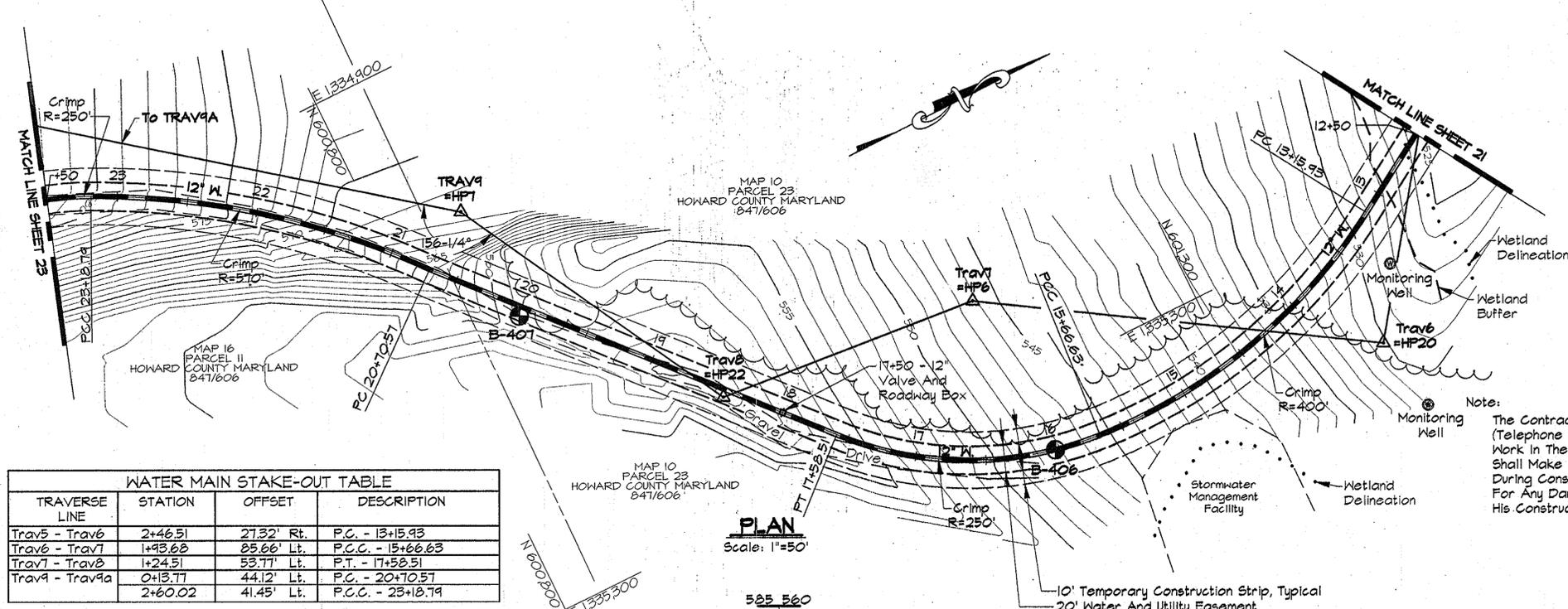


DES:	DWR				
DRN:	DCJ				
CHK:	SJR				
DATE:	3/96				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO.	BLOCK NO.

PLAN AND PROFILE
ELEVATED TANK MAIN
STA. 0+00 TO STA. 12+50

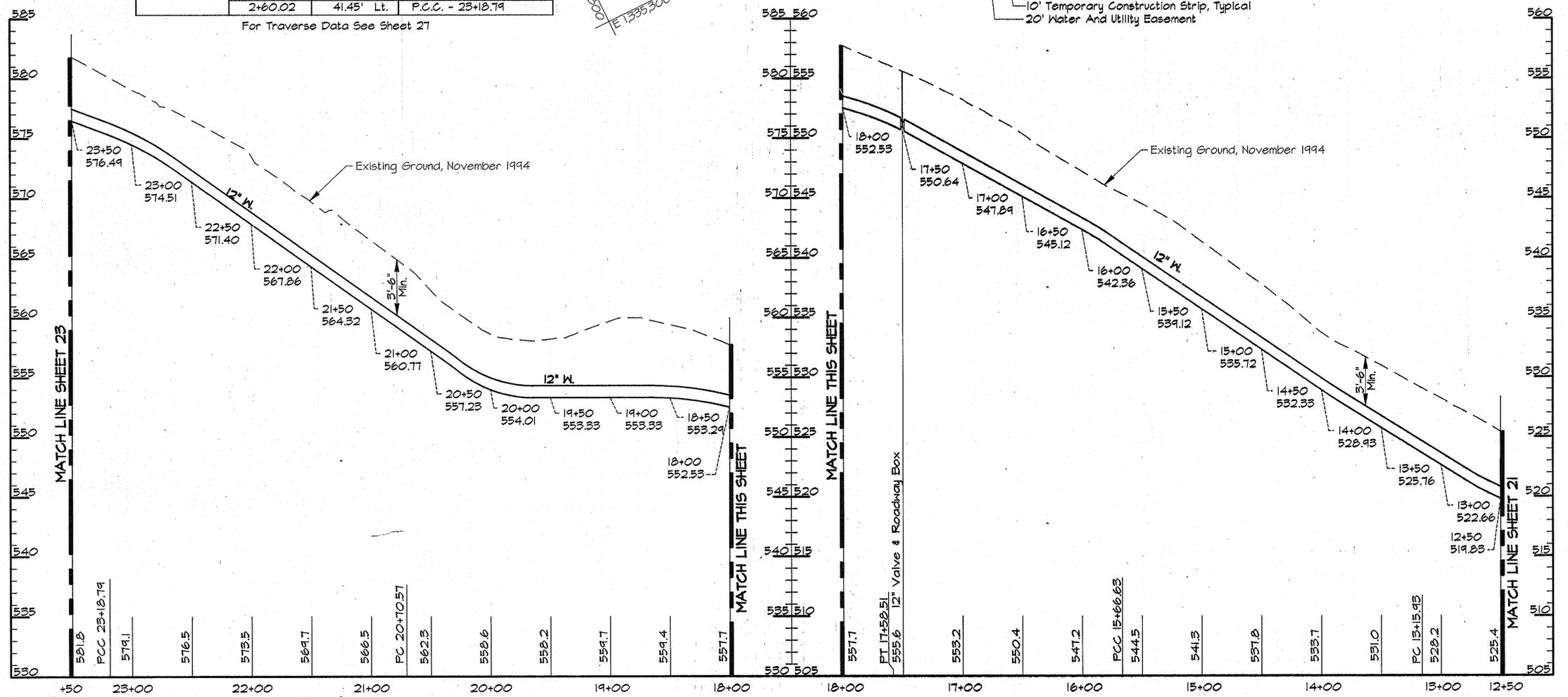
ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 21 OF 31



TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
Trav5 - Trav6	2+46.51	27.32' Rt.	P.C. - 13+15.93
Trav6 - Trav7	1+93.68	25.66' Lt.	P.C.C. - 15+66.63
Trav7 - Trav8	1+24.51	53.77' Lt.	P.T. - 17+52.51
Trav9 - Trav9a	0+13.77	44.12' Lt.	P.C. - 20+10.57
	2+60.02	41.45' Lt.	P.C.C. - 23+18.79

For Traverse Data See Sheet 21



PROFILE - ELEVATED TANK MAIN
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

BK\2\1552-SDSK\PROJ\CM9473\DWG\CONTR_3 ALP-3-22.DWG
 03/18/1996 08:42

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *James M. ...* 4/3/96
 Chief, Bureau of Engineering: *Richard ...* 3/23/96
 Chief, Bureau of Utilities: *Robert ...* 4-1-96
 Chief, Water and Sewer Design Division: *Di ...* 3-29-96

RK & K
RUMMEL, KLEPPER & KAHL
 CONSULTING ENGINEERS
 81 MOSHER ST.
 BALTIMORE, MARYLAND 21217

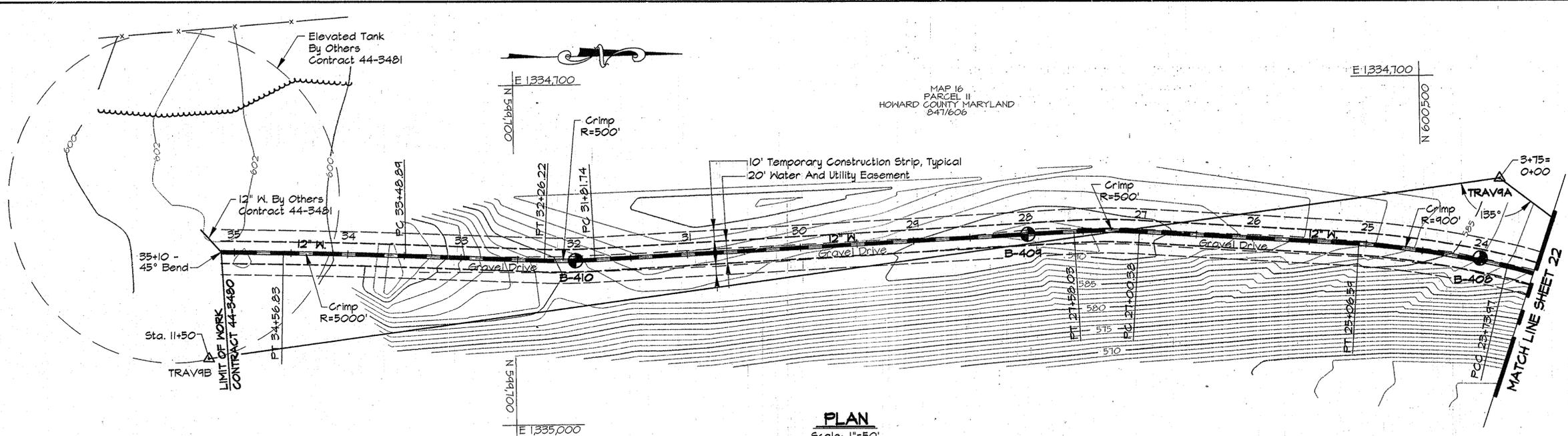


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DRN:	DCJ			
CHK:	SRK			
DATE:	3/96	BY:	NO.	REVISION

PLAN AND PROFILE - ELEVATED TANK
 STA. 12+50 TO 23+50
 600' SCALE MAP NO. 10.16 BLOCK NO. 20.2

ALPHA RIDGE WATER SUPPLY
 CAPITAL PROJECT W-8203
 CONTRACT NO. 44-3480
 ELECTION DISTRICT NO. 3
 HOWARD COUNTY, MARYLAND

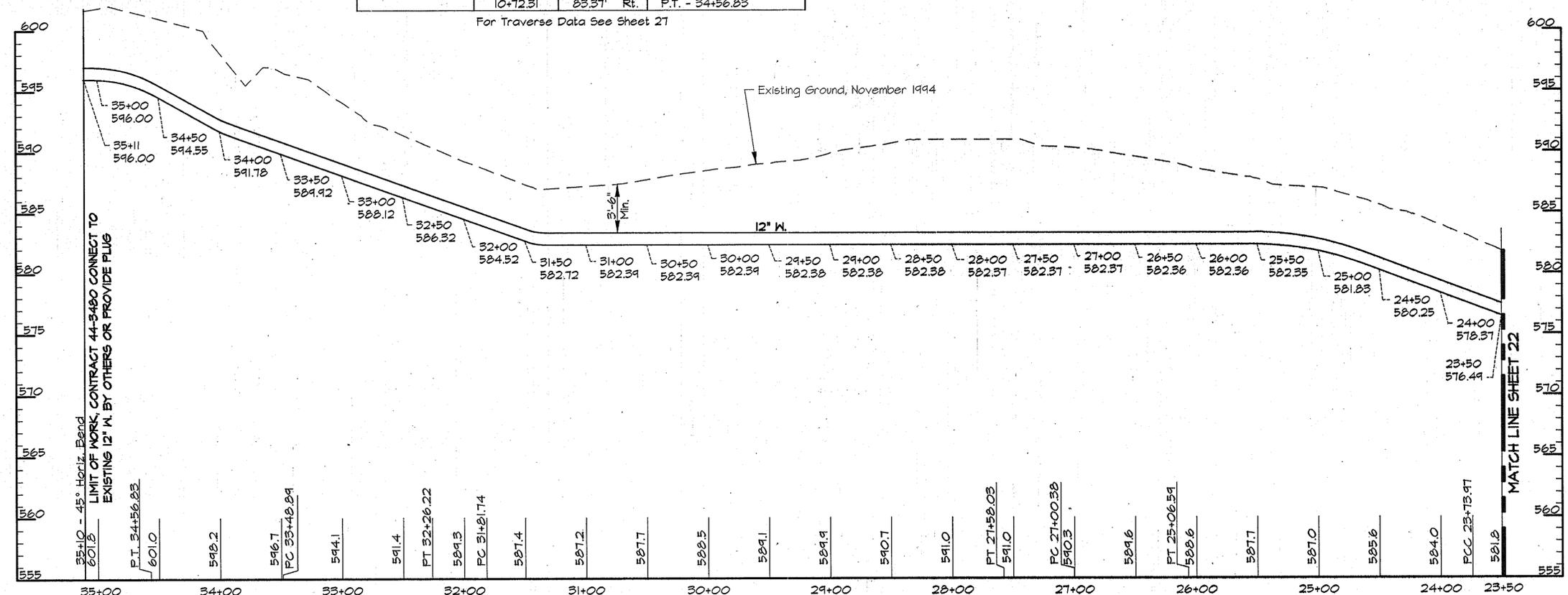
DWG. NO.
 SCALE AS SHOWN
 SHEET 22 OF 31



PLAN
Scale: 1"=50'

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
Trav9A - Trav9A	3+12.34	58.62' Lt.	P.C.C. - 23+73.97
Trav9A - Trav9B	1+31.32	40.19' Lt.	P.T. - 25+06.59
	3+21.43	2.61' Lt.	P.C. - 27+00.38
	3+78.51	5.28' Rt.	P.T. - 27+58.03
	8+00.86	39.06' Rt.	P.C. - 31+81.74
	8+44.99	44.57' Rt.	P.T. - 32+26.22
	9+65.80	65.82' Rt.	P.C. - 33+48.89
	10+72.31	83.37' Rt.	P.T. - 34+56.83

For Traverse Data See Sheet 27



PROFILE - ELEVATED TANK MAIN

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

AS BUILT

RK\2\US2\SOSKPRO\08473\DWG\CONTR_3 ALP-3-23.DWG 03/18/1996 08:43

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Lewis 3/29/96
DIRECTOR OF PUBLIC WORKS DATE

John P. ... 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



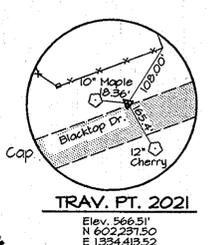
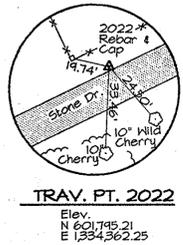
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DRN:	DCJ			
CHK:	SRK			
DATE:	3/96	BY:	NO.	REVISION

PLAN AND PROFILE - ELEVATED TANK
STA. 23+50 TO STA 35+11.26

600' SCALE MAP NO. 16 BLOCK NO. 2

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

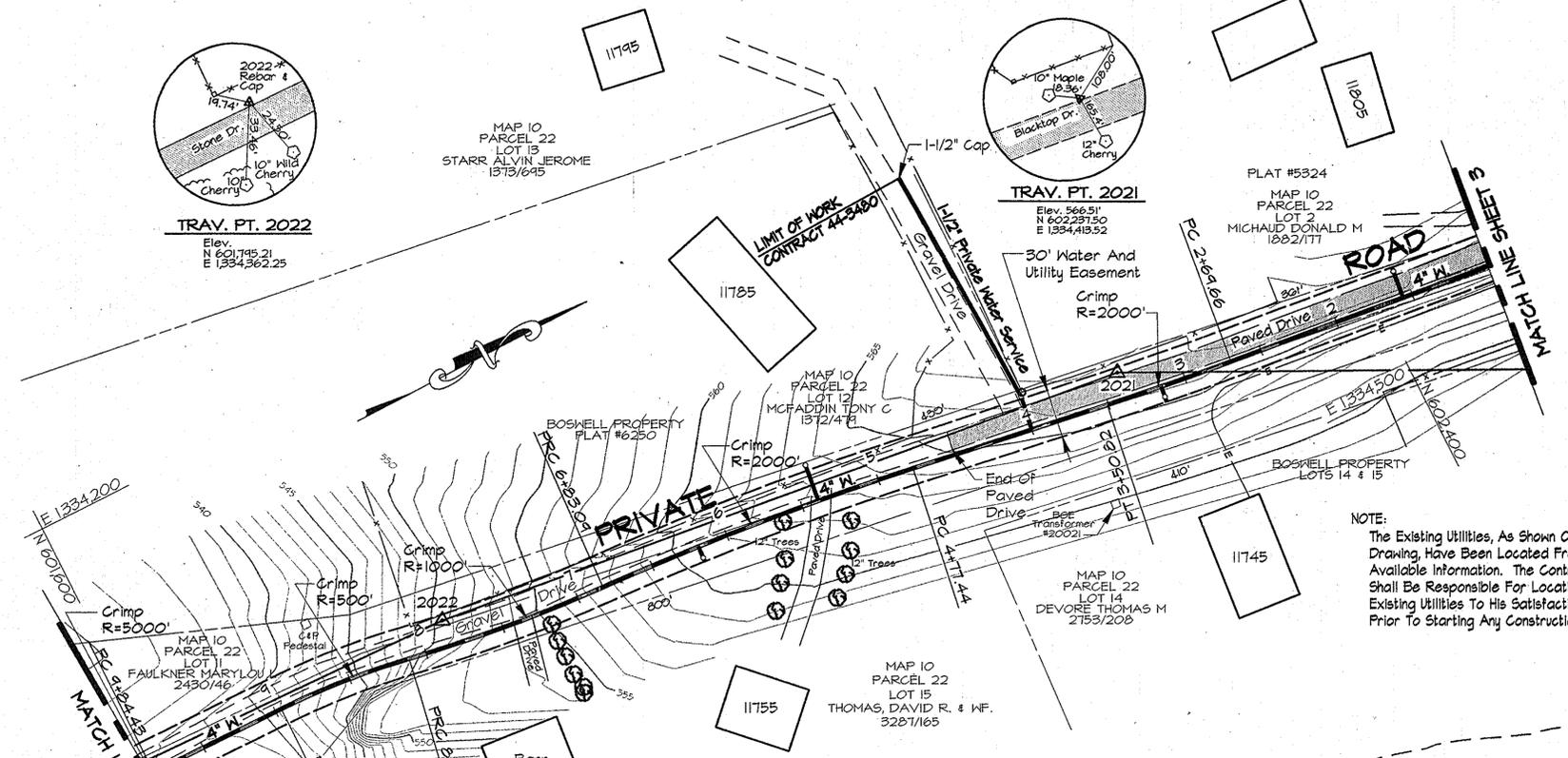
DWG. NO.
SCALE AS SHOWN
SHEET 23 OF 31



- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.

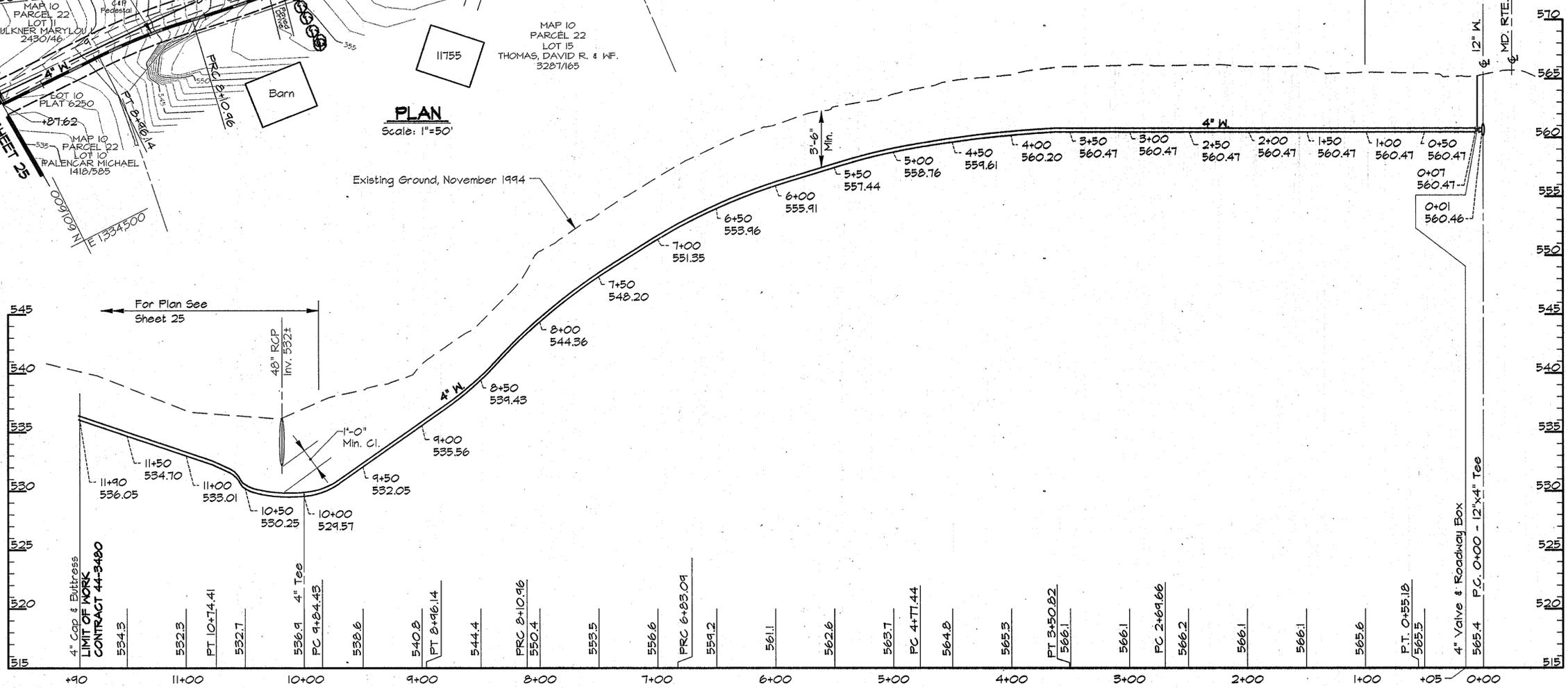
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
202 - 2021	3+10.07	6.28' Rt.	P.C. - 2+69.66
2021 - 2022	0+2.65	16.49' Lt.	P.T. - 3+50.82
	1+39.19	11.84' Lt.	P.C. - 4+71.44
2022 - 2023	3+44.73	14.84' Lt.	P.R.C. - 6+83.09
	0+28.51	12.59' Lt.	P.R.C. - 8+10.96
	1+13.39	6.88' Lt.	P.T. - 8+96.14
	2+01.67	8.47' Lt.	P.C. - 9+84.43

For Traverse Data See Sheet 27



NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.

PLAN
Scale: 1"=50'



PROFILE - ROAD
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

BK42\US2\SDSKPRO\CM9473\DWG\CONTR_3 ALP-3-24.DWG 03/18/1996 08:45

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
4/3/96
3/29/96

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



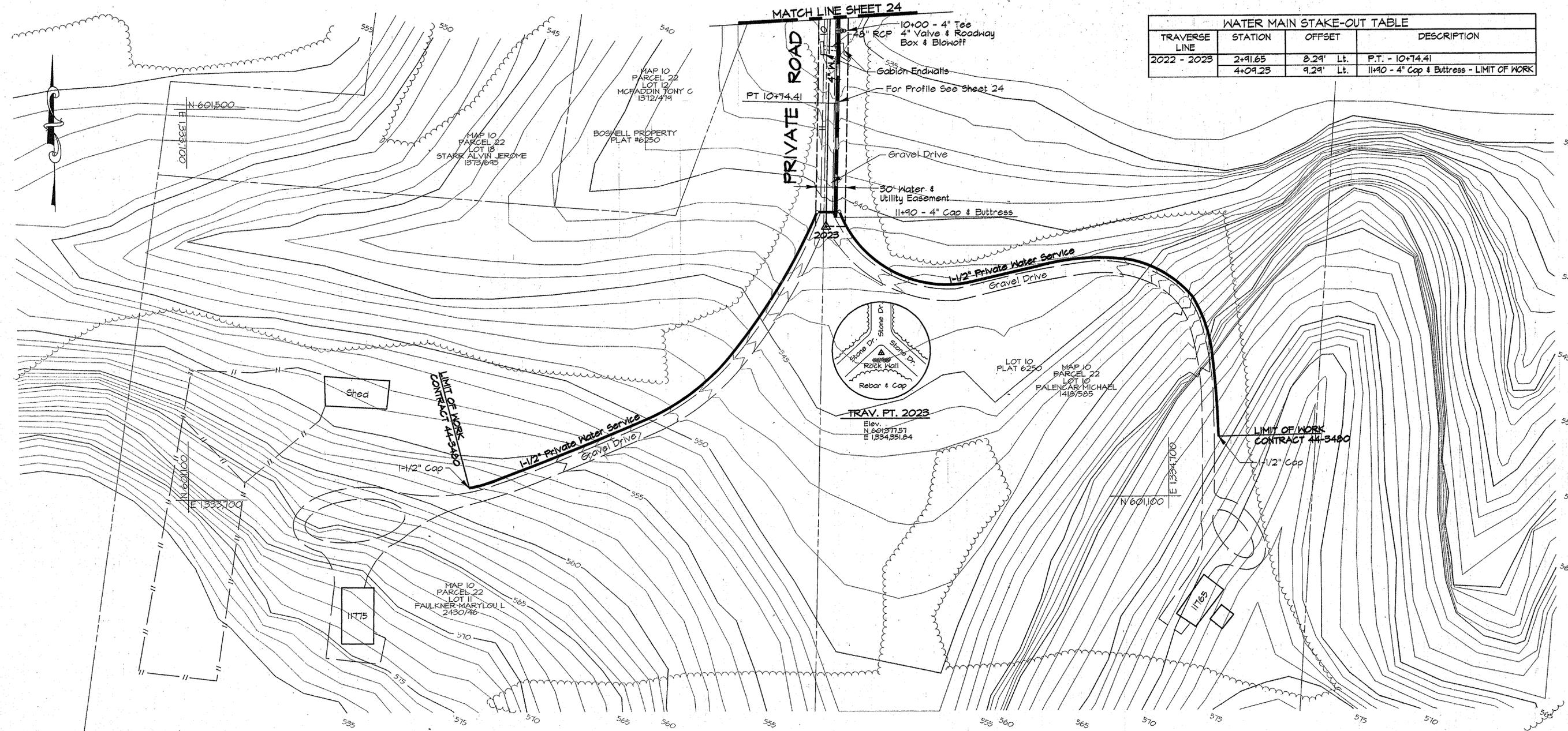
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CHK:	SRK			
DATE:	3/96			
BY:		NO.		REVISION
DATE:				

PLAN AND PROFILE - SERVICE MAIN
STA. 0+00 TO STA. 11+90

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 24 OF 31

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
2022 - 2023	2+91.65	8.29' Lt.	P.T. - 10+74.41
	4+09.23	9.29' Lt.	11+90 - 4" Cap & Buttress - LIMIT OF WORK



PLAN
Scale: 1"=50'

NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.

- NOTES:**
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.

AS BUILT

DWG. NO.

R:\K2\USK2\SDSKPROJ\CM9473\DWG\CONTR_3 ALP-3--25.DWG
 03/12/1996
 11:36

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *James P. Lane* 4/2/96
 Chief, Bureau of Engineering: *Paul H. Jernigan* 3/22/96
 Chief, Bureau of Utilities: *Robert W. Berman* 4-1-96
 Chief, Water and Sewer Design Division: *John D. Lane* 3-29-96

RK & K
RUMMEL, KLEPPER & KAHL
 CONSULTING ENGINEERS
 81 MOSHER ST.
 BALTIMORE, MARYLAND 21217



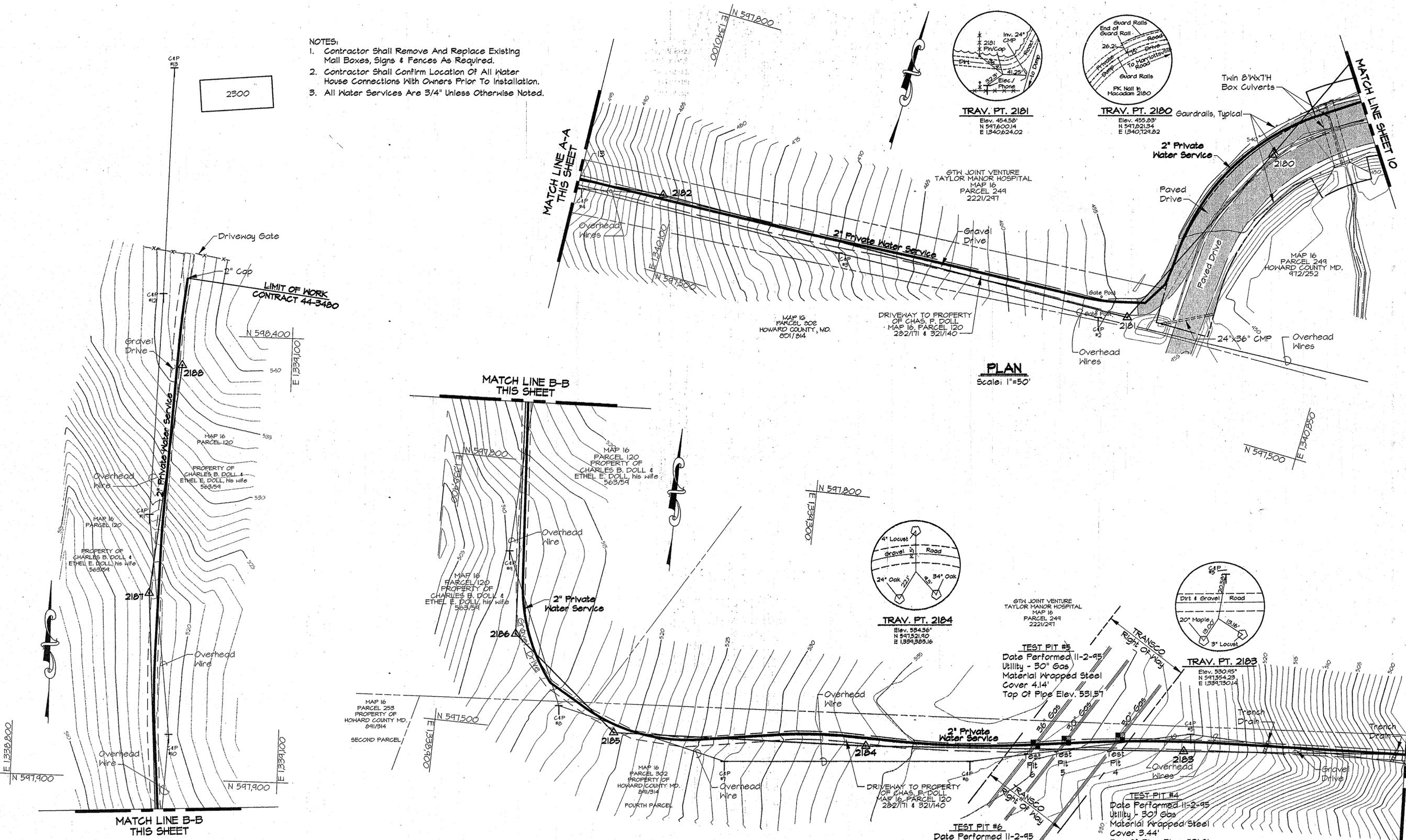
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CHK:	SRK				
DATE:	3/96	BY	NO.	REVISION	DATE

PLAN - SERVICE MAIN
 STA. 9+87.62 TO STA. 11+90
 600' SCALE MAP NO. 10 BLOCK NO. 20

ALPHA RIDGE WATER SUPPLY
 CAPITAL PROJECT W-8203
 CONTRACT NO. 44-3480
 ELECTION DISTRICT NO. 3
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 25 OF 31

- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 3/4" Unless Otherwise Noted.



PLAN
Scale: 1"=50'

PLAN
Scale: 1"=50'

AS BUILT

PK42\US2\SOSKIPRO\CM49473\DWG\CONTR_3 26-7-80.DWG 02/21/1996 13.56

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

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RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217



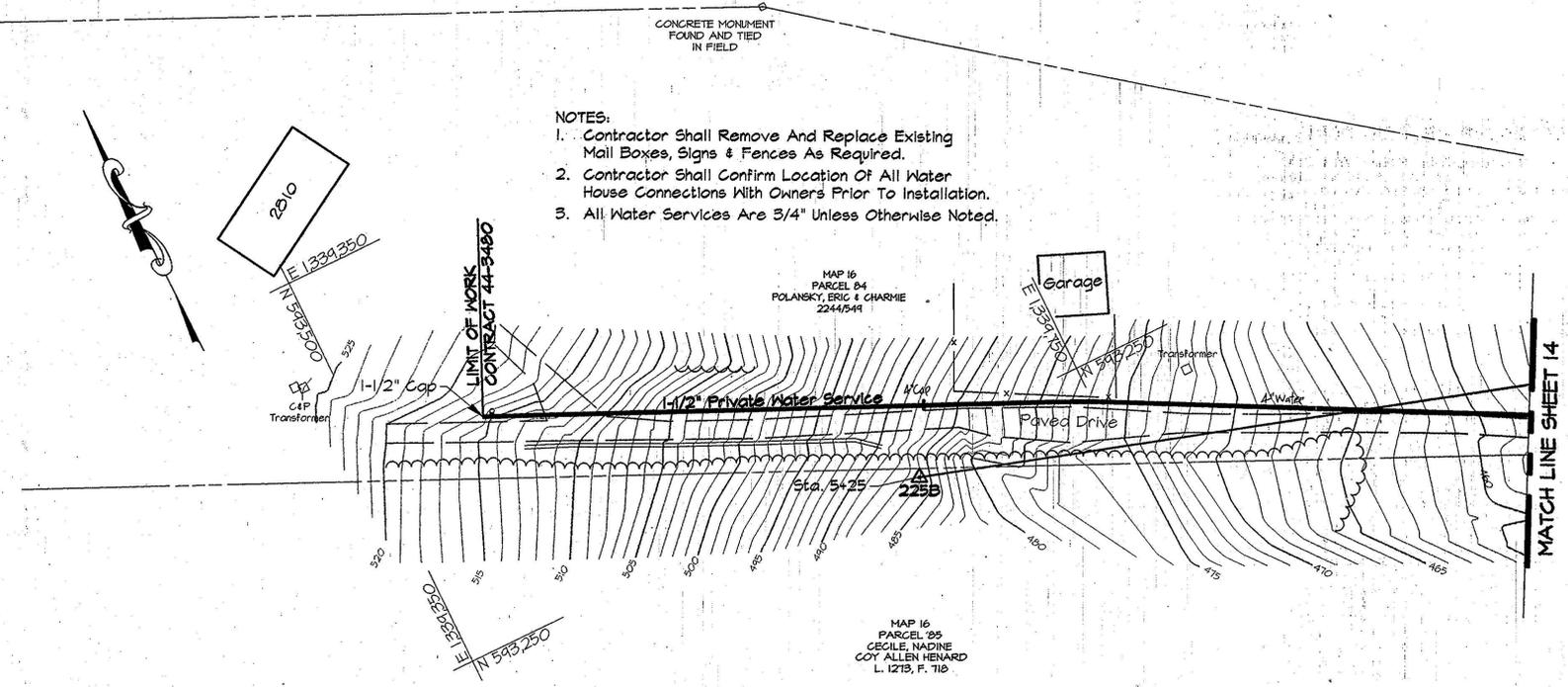
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CHK:	SRK				
DATE:	3/96				
BY:	NO.				
REVISION:					
DATE:					

PLAN AND PROFILE - ACCESS ROAD
STA. 0+00 TO STA. 13+00

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE
AS
SHOWN
SHEET
26 OF 31

- NOTES:
 1. Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 2. Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 3. All Water Services Are 3/4" Unless Otherwise Noted.



TRAVERSE DATA				
TRAVERSE NO.	NORTH	EAST	ELEVATION	BEARING & DISTANCE
212	600,872.2300	1,340,995.0340	490.65	
211	601,027.7370	1,340,291.3350	486.58	S 77°32'20" E 720.68'
210	601,207.1300	1,339,643.7000	524.32	S 74°31'03" E 672.02'
209	601,410.0820	1,339,149.3450	524.31	S 67°40'48" E 534.39'
208	601,597.5140	1,338,863.3240	520.61	S 56°45'46" E 341.96'
207	601,867.0880	1,338,294.6270	509.90	S 64°38'17" E 629.35'
206	602,139.5700	1,337,633.1100	515.74	S 67°36'47" E 715.44'
205	602,491.2290	1,337,028.7000	538.15	S 59°48'30" E 699.27'
204	602,978.6690	1,336,295.3960	546.18	S 56°23'14" E 880.53'
2031	602,891.9786	1,335,803.8723	559.68	N 79°59'51" E 499.11'
203	602,758.0590	1,335,384.8220	571.82	N 78°16'38" E 439.93'
206	602,139.5700	1,337,633.1100	515.74	
2061	603,027.5200	1,337,899.3300	550.71	S 16°41'22" W 927.00'
2062	603,195.7100	1,338,305.3600	545.32	S 67°29'56" W 439.49'
2063	603,274.8566	1,338,913.5573	576.46	S 82°35'08" W 613.33'
2063	603,274.8566	1,338,913.5573	576.46	
NAIL 1	603,269.9180	1,338,867.4044	574.23	S 83°53'32" W 46.42'
NAIL 2	603,157.1144	1,339,075.8982	579.49	S 61°35'05" E 237.05'
NAIL 3	602,657.0838	1,339,148.5856	568.00	S 08°16'15" E 505.29'
212	600,872.2300	1,340,995.0340	490.65	
213	600,439.3411	1,340,978.1245	479.70	S 02°14'13" W 433.22'
214	599,954.8120	1,341,061.1890	476.44	S 09°43'40" E 491.60'
215	599,477.7200	1,341,039.3830	471.53	S 02°37'01" W 477.59'
216	598,937.5930	1,340,998.6580	466.97	S 04°18'43" W 541.66'
217	598,405.7980	1,340,989.0800	462.31	S 01°01'55" W 531.88'
218	597,748.8670	1,341,035.6162	456.74	S 04°03'07" E 658.58'
2181	597,600.1413	1,340,624.0228	454.58	S 70°07'59" W 437.64'
2182	597,585.5077	1,340,084.8834	487.12	S 88°26'43" W 539.34'
2183	597,553.8222	1,339,741.0989	530.95	S 84°44'03" W 345.24'

PLAN
Scale: 1"=50'

TRAVERSE DATA				
TRAVERSE NO.	NORTH	EAST	ELEVATION	BEARING & DISTANCE
2183	597,553.8222	1,339,741.0989	530.95	
2184	597,521.9044	1,339,385.1662	534.56	S 84°52'33" W 357.36'
2185	597,506.7368	1,339,101.4686	519.52	S 86°56'23" W 284.10'
2186	597,605.1571	1,338,980.1810	511.72	N 50°56'31" W 156.20'
2187	598,108.3217	1,338,949.0359	517.63	N 03°32'31" W 504.13'
2188	598,365.7650	1,338,977.3301	536.93	N 06°16'19" E 258.99'
216	598,937.5930	1,340,998.6580	466.97	
2161	598,856.0724	1,340,609.1524		S 78°10'45" W 397.94'
2162	599,143.7542	1,340,043.1522		N 63°03'25" W 634.91'
2184	597,521.9044	1,339,385.1662	534.56	
2183	597,554.2285	1,339,730.1367	530.95	N 84°38'49" E 346.48'
2182	597,585.5077	1,340,084.8834	487.12	N 85°02'43" E 355.32'
2181	597,600.1413	1,340,624.0228	454.58	N 88°26'43" E 539.34'
2180	597,821.3453	1,340,729.8251	455.83	N 25°29'10" E 244.84'
218	597,748.8670	1,341,035.6162	456.74	S 76°43'07" E 314.66'
219	596,675.0644	1,340,943.0058	483.37	S 04°55'45" W 1077.79'
220	596,181.0056	1,340,800.3631	486.15	S 16°06'15" W 514.24'
221	595,442.6700	1,340,633.2876	460.46	S 12°45'02" W 757.00'
222	594,851.4623	1,340,501.0895	442.30	S 12°36'16" W 605.81'
223	594,275.4994	1,340,386.9661	443.85	S 11°12'27" W 587.16'
224	593,871.7472	1,340,307.4962	449.71	S 11°08'06" W 411.50'
2241	593,554.2280	1,340,275.9025	457.80	S 05°40'56" W 319.09'
250	593,250.9158	1,340,192.6456	464.30	S 15°20'57" W 314.53'
225	592,790.6102	1,340,050.2925	456.38	S 17°11'05" W 481.82'

TRAVERSE DATA				
TRAVERSE NO.	NORTH	EAST	ELEVATION	BEARING & DISTANCE
199	602,639.2548	1,332,775.5860	594.38	
200	602,586.6434	1,333,189.3595	602.60	N 82°45'13" W 417.10'
201	602,574.6853	1,333,793.9342	604.60	N 88°52'01" W 604.69'
202	602,578.6927	1,334,582.1121	561.91	S 89°42'31" W 788.19'
203	602,758.0592	1,335,384.8216	571.82	N 77°24'15" E 822.51'
204	602,978.6691	1,336,295.3959	546.18	N 76°22'52" E 936.92'
224	593,871.7472	1,340,307.4962	449.71	
225	592,790.6102	1,340,050.2925	456.38	S 13°22'55" W 1111.31'
226	592,032.7406	1,340,097.1932	478.05	S 03°32'28" E 759.32'
227	591,112.7035	1,339,755.6544	536.23	S 20°21'58" W 981.39'
169	590,890.8707	1,339,613.8620	537.25	S 32°35'10" W 263.38'
2021	602,237.5036	1,334,413.5234	566.51	
2022	601,795.2118	1,334,362.2499		S 06°36'45" W 445.25'
2023	601,377.5727	1,334,351.8417		S 01°25'39" W 417.77'
2024	601,210.4487	1,334,206.2028		S 41°04'13" W 221.68'
2025	600,874.9630	1,333,588.4905		S 61°29'35" W 702.94'
210	601,207.1300	1,339,643.7000	524.32	
2101	601,322.0310	1,339,638.0140	527.46	S 02°49'50" E 115.04'
2102	601,592.3090	1,339,419.4630	543.67	S 38°57'34" W 347.58'
2261	591,972.5020	1,340,435.7357	514.76	
2262	591,887.5733	1,340,836.2887	515.90	N 78°01'44" W 409.46'
2263	591,826.8015	1,341,131.4315	505.32	N 78°21'54" W 301.33'
2264	591,827.1439	1,341,297.9272	491.24	N 89°52'56" E 166.50'
2265	591,949.9897	1,341,423.1735	497.73	S 45°33'16" W 175.44'
1	602,684.5329	1,335,079.5294	563.76	
2	602,515.3067	1,335,070.3424	564.79	S 03°06'27" W 175.44'
3	601,882.4335	1,335,015.7560	553.01	S 04°55'47" W 635.22'
4	601,662.8706	1,334,910.7660	529.35	S 25°33'22" W 243.37'
5	601,602.2983	1,335,115.6128	524.49	S 73°31'38" E 213.61'
6	601,405.3511	1,335,387.3607	530.19	S 54°04'03" E 335.61'
7	601,156.9377	1,335,231.4958	546.17	S 32°06'21" W 293.26'
8	600,967.7230	1,335,214.2942	559.41	S 05°11'40" W 189.99'
9	600,826.8511	1,335,064.3825	562.43	S 46°46'50" W 205.71'
9A	0	0	0	0 0
9B	0	0	0	0 0
2063	603,274.8566	1,338,913.5573	576.46	
2063A	0	0	0	S 83°53'32" W 46.42'
2063B	0	0	0	0 0
TRAV1=HP3	602,684.533	1,335,079.529	563.76	0 0
TRAV2=HP8	602,515.302	1,335,070.342	564.79	0 0
TRAV3=HP9	601,882.433	1,335,015.756	553.01	0 0
TRAV4=HP18	602,662.871	1,334,910.766	529.35	0 0
TRAV5=HP19	601,602.298	1,335,115.613	524.49	0 0
TRAV6=HP20	601,405.351	1,335,387.361	530.19	0 0
TRAV7=HP6	601,170.167	1,335,213.597	546.17	0 0
TRAV8=HP22	600,983.659	1,335,177.367	559.40	0 0
TRAV9=HP7	600,858.654	1,335,013.989	562.43	0 0

AS BUILT

RKK2 USR2:SDSKPROJ\CM8473 DWG\CONTR_3 ALP-3-29.DWG 03/18/1996 09:22

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James J. Lewis 4/3/96
 DIRECTOR OF PUBLIC WORKS DATE

Robert J. Benson 4-1-96
 CHIEF, BUREAU OF UTILITIES DATE

Robert J. Benson 3/29/96
 CHIEF, BUREAU OF ENGINEERING DATE

Oliver J. Benson 3-29-96
 CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
 RUMMEL, KLEPPER & KAHL
 CONSULTING ENGINEERS
 81 MOSHER ST.
 BALTIMORE, MARYLAND 21217



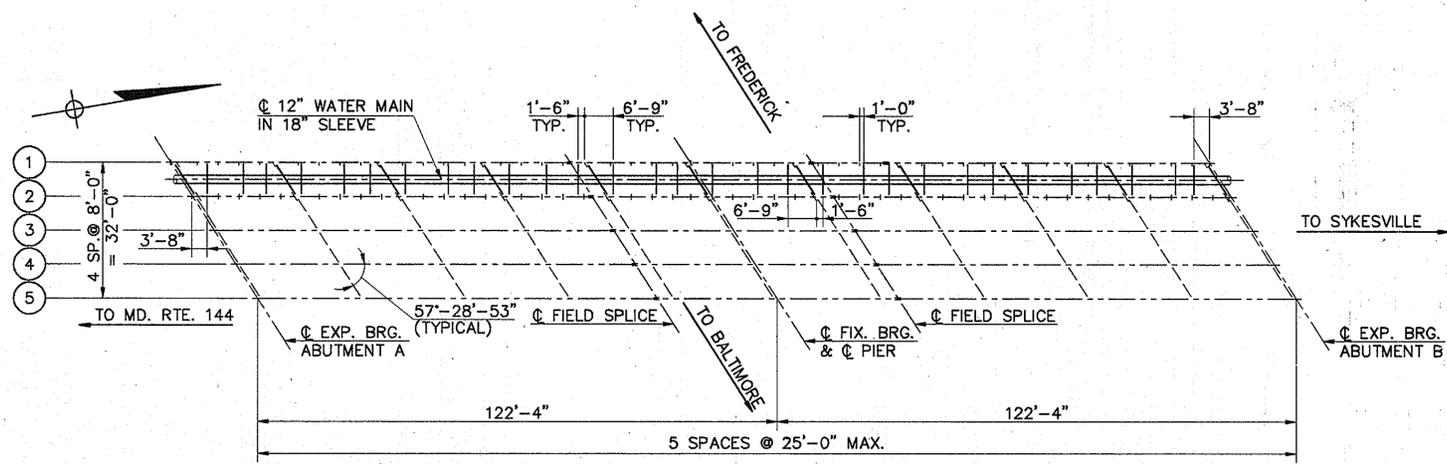
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CHK:	SRK		
DATE:	3/96		
BY:	NO.	REVISION	DATE

PLAN - PRIVATE ROAD AND TRAVERSE TABLES

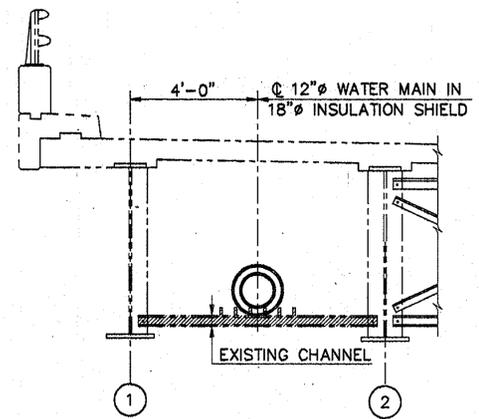
600' SCALE MAP NO. 16 BLOCK NO. 16

ALPHA RIDGE WATER SUPPLY
 CAPITAL PROJECT W-8203
 CONTRACT NO. 44-3480
 ELECTION DISTRICT NO. 3
 HOWARD COUNTY, MARYLAND

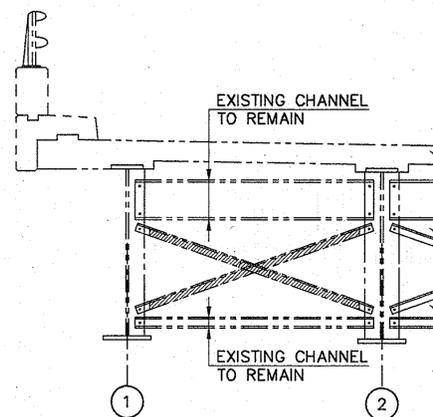
DWG. NO.
 SCALE AS SHOWN
 SHEET 27 OF 31



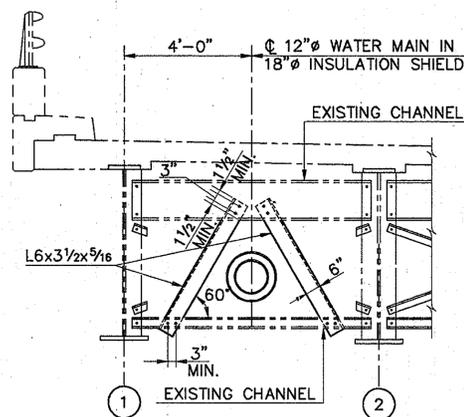
FRAMING PLAN
SCALE: 1"=20'



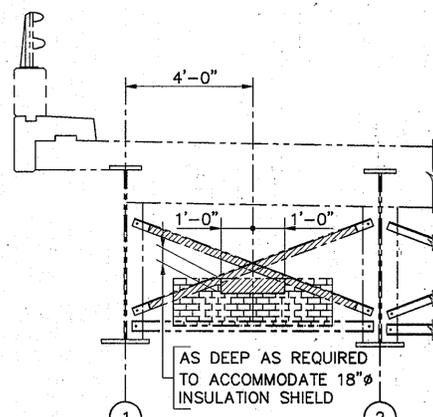
EXISTING SECTION AT INTERMEDIATE CROSS FRAME
SCALE: 3/8"=1'-0"



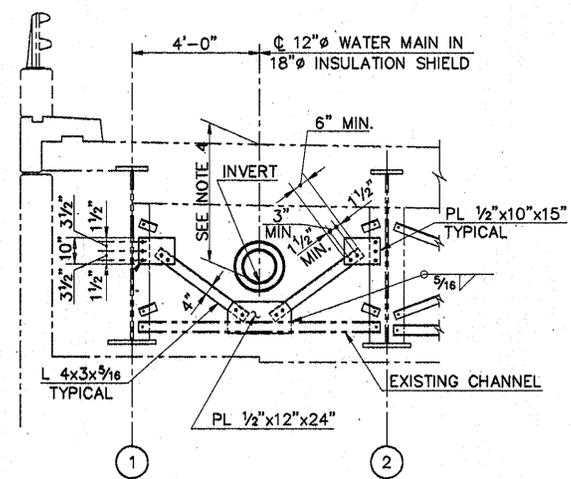
EXISTING SECTION AT PIER
SCALE: 3/8"=1'-0"



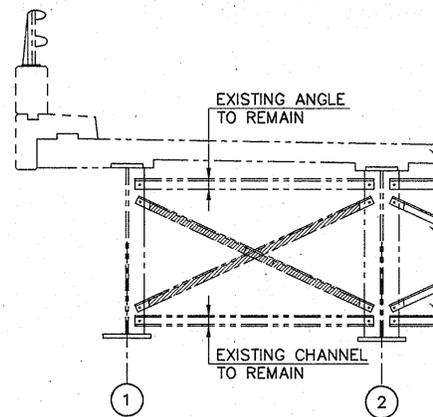
PROPOSED SECTION AT PIER
SCALE: 3/8"=1'-0"



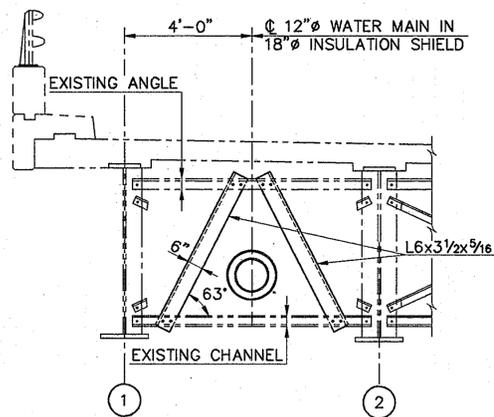
EXISTING SECTION AT ABUTMENTS
SCALE: 3/8"=1'-0"



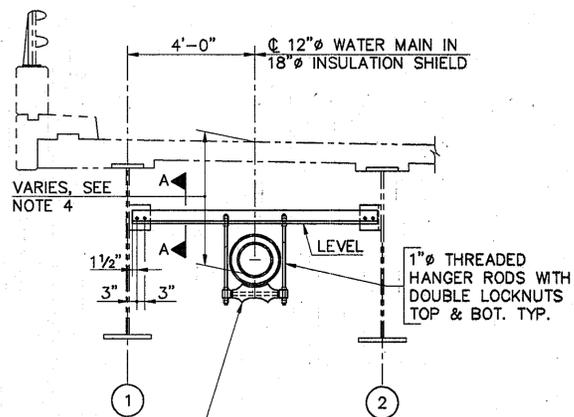
PROPOSED SECTION AT ABUTMENTS
SCALE: 3/8"=1'-0"



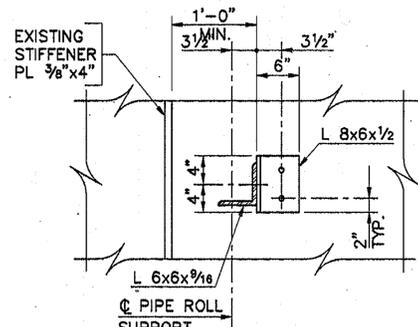
EXISTING SECTION AT INTERMEDIATE CROSS FRAME
SCALE: 3/8"=1'-0"



PROPOSED SECTION AT INTERMEDIATE CROSS FRAME
SCALE: 3/8"=1'-0"



TYPICAL SECTION AT INTERMEDIATE PIPE SUPPORT
SCALE: 3/8"=1'-0"



SECTION A-A
SCALE: 1"=1'-0"

- NOTES:**
- ALL CONNECTION BOLTS SHALL BE A-325N HIGH STRENGTH.
 - FIELD DRILLING IN EXISTING CROSS FRAME MEMBERS SHALL BE CARRIED OUT AS REQUIRED. AFFECTED AREA SHALL BE CLEANED WITH METAL WIRE BRUSH, ZINC COATED AND PAINTED TO MATCH EXISTING BRIDGE COLOR BEFORE INSTALLATION.
 - ALL BOLT HOLES IN EXISTING STEEL SHALL BE DRILLED NOT BURNED.
 - SEE TYPICAL SECTION THRU ABUTMENT, SHEET 30 OF 31.
 - NUMBER OF BOLTS REQUIRED PER CONNECTION ARE SHOWN IN THE CROSS FRAME DETAILS.
 - PLACE 3/8" LAYER OF SPONGE RUBBER MATERIAL BETWEEN 18" INSULATION SHIELD AND NEW BRICK.
 - APPROXIMATE WEIGHT OF DUCTILE IRON WATER MAIN AND INSULATION SYSTEM INCLUDING 20 GAGE STEEL SHIELD= 130 PL

AS BUILT

AUP-3-31 03/12/1996 PENSELUP, SUPPORT WORM 12:13

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Chew 4/3/96
DIRECTOR OF PUBLIC WORKS DATE

Paul J. Seaman 3/29/96
BRIEF, BUREAU OF ENGINEERING DATE

Shirley Berman 4-1-96
CHIEF, BUREAU OF UTILITIES DATE

Debra L. Lewis 2-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217

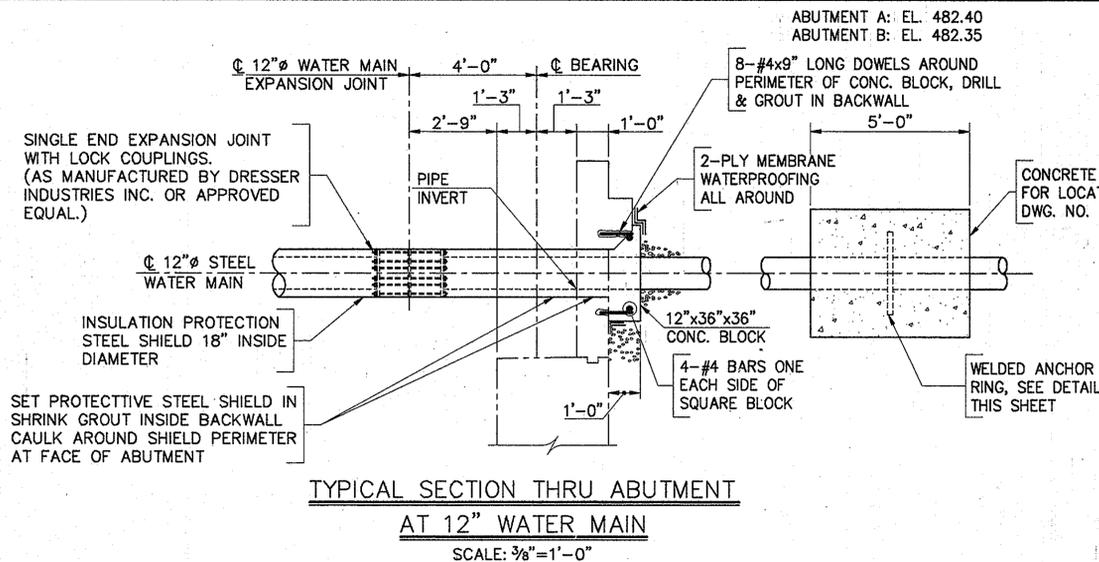


DES:	N.J.C.			
DRN:	J.C.E.			
CHK:	C.M.E.			
DATE:	3/96			
BY:	NO.			
REVISION:				
DATE:				

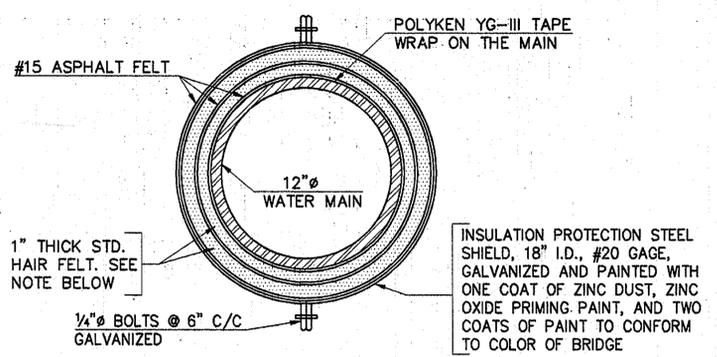
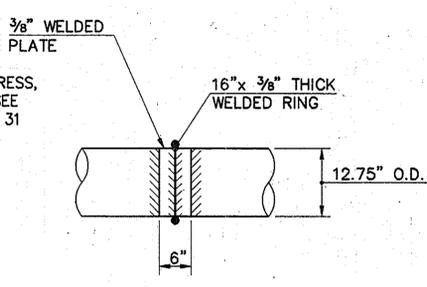
MARRIOTTVILLE ROAD OVER I-70
SECTIONS AND DETAILS
FOR INSTALLATION OF 12" WATER MAIN

ALPHA RIDGE WATER SUPPLY
CAPITOL PROJECT W-8203
CONTRACT NO. 24-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO. _____
SCALE AS SHOWN
SHEET 29 OF 31

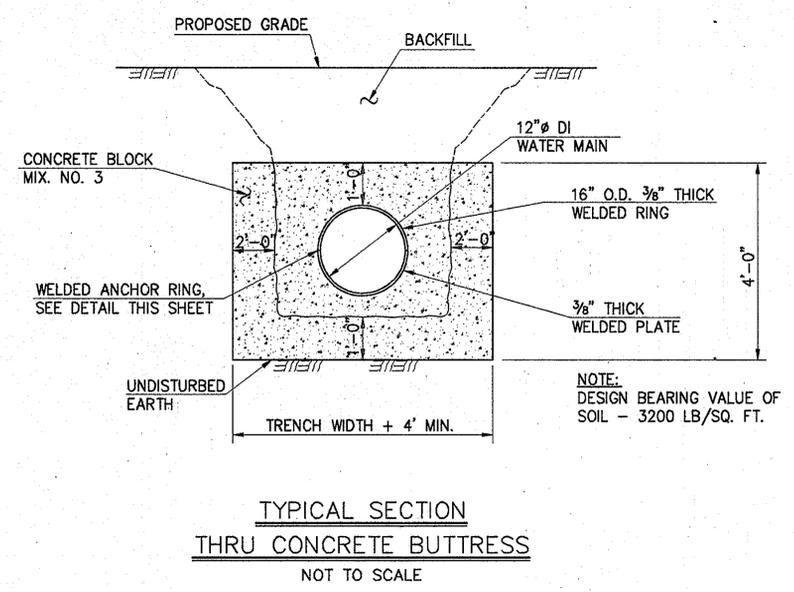


DETAIL - WELDED ANCHOR RING
SCALE: 3/4" = 1'-0"



NOTE:
INSULATION COVERING TO BE WRAPPED SPIRALLY AND STAGGERED. EACH LAYER SHALL BE FASTENED WITH WIRE.

INSULATION SHIELD DETAIL
N.T.S.



AS BUILT

ALP-3-32
03/12/1996 12:15
PENSUP: NORM

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

RK & K
RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
81 MOSHER ST.
BALTIMORE, MARYLAND 21217

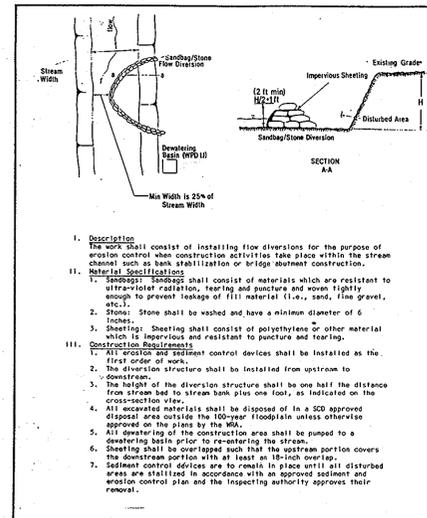
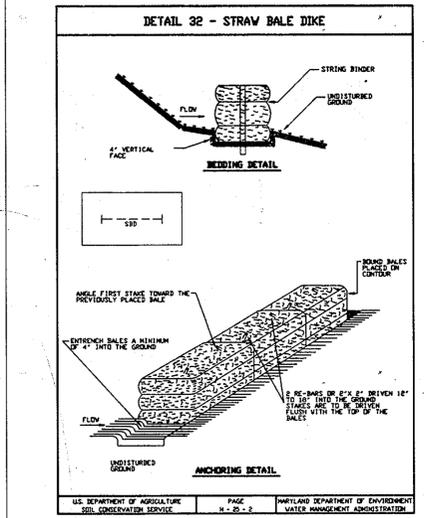
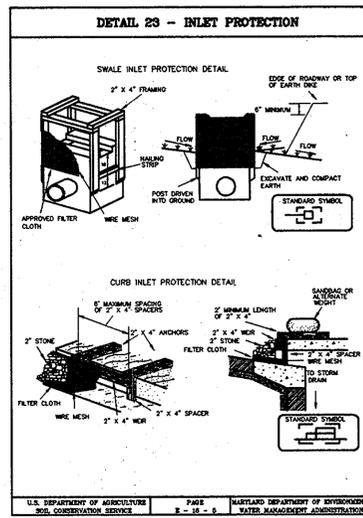
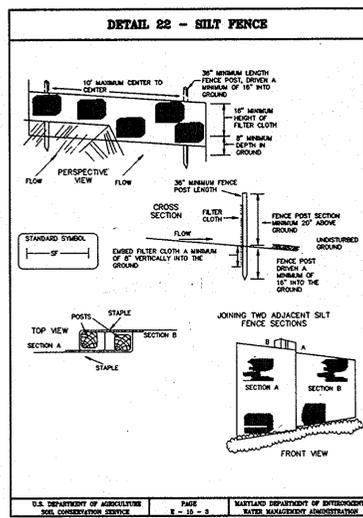


DES:	NJC				
DRN:	AGS				
CHK:	SAM				
DATE:	3/86				
BY:	NO.				
REVISION:					
DATE:					

MARRIOTTVILLE ROAD OVER I-70
SECTIONS AND DETAILS
FOR INSTALLATION OF 12" WATER MAIN

ALPHA RIDGE WATER SUPPLY
CAPITOL PROJECT W-8203
CONTRACT NO. 24-3480
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 30 OF 31



SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (880-3450)
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISION OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH SEC. 219 OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURE, DIKES, PERIMETER SLOPE AND ALL SLOPES GREATER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MUCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

WATER RESOURCES ADMINISTRATION	Sandbag/Stone Diversion	Approved On: 1/24/96 By: [Signature] Chris Waterway Permits	WPD 2.3
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SEQUENCE OF CONSTRUCTION

- NOTE: DOES NOT PRECLUDE CONCURRENT CONSTRUCTION OF ITEMS. PRIOR APPROVAL OF ENGINEER IS REQUIRED.
- CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS.
 - CONTRACTOR SHALL CONTACT HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS (313-1810) PRIOR TO STARTING WORK.
 - CONTRACTOR SHALL NOTIFY THE RESIDENTS IN THE CONSTRUCTION AREA AT LEAST 10 DAYS PRIOR TO START OF CONSTRUCTION.
 - INSTALL ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV.
 - NO TRENCHES ARE TO BE LEFT OPEN OVER NIGHT. JACKING PITS MUST BE COVERED WITH STEEL PLATES AND BARRICADED. TRENCHES LEFT OPEN DURING PERIODS WHEN THE CONTRACTOR'S FORCES ARE NOT PRESENT SHALL BE SO PROTECTED OR ENCLOSED AND MARKED AS TO CAUSE NO DANGER TO THE PUBLIC OR OTHERS. SILT FENCE IS TO BE PLACED DOWNSTREAM OF THE AREA TO BE WORKED, ON A DAILY BASIS.
 - WHEN WORKING AT STREAM CROSSINGS THE CONTRACTOR SHALL DIVERT STREAMS USING SANDBAG DIVERSION.
 - DURING CONSTRUCTION, AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON SEDIMENT AND EROSION CONTROL STRUCTURES.
 - UPON PERMISSION FROM THE HOWARD COUNTY SEDIMENT AND EROSION CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES.

SILT FENCE

Construction Specifications

- A detail of the silt fence shall be shown on the plan, and contain the following minimum requirements:
 - The type, size, and spacing of fence posts.
 - The type of filter cloth used.
 - The method of fastening the filter cloth to the fencing support.
 - Accumulated sediment must be removed when it reaches 50% of the height of the fabric.
- Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Design computations are not required.
- All silt fences shall be placed on a firm, level surface.
- The area below the fence must be underdrained or stabilized.
- Silt Fence Fabric: The fabric must meet the filter fabric specifications listed in Table 27.
- Fence Posts (for fabric attachment): The length shall be a minimum of 36 inches long. Round posts, 2" x 2", with a minimum cross sectional area of 3.0 square inches shall be used. Steel posts shall be galvanized. Steel posts shall be spaced 10' or 12' on center, depending on slope, but not less than 1.00 pound per linear foot.

Silt Fence Design Criteria

Slope Steepness	Silt Fence Length	
	(Maximum) Slope Length	(Minimum) Silt Fence Length
Fatter 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, see Class II) maximum slope length shall be unlimited. In these areas a silt fence may be the only perimeter control required.

CONSTRUCTION SPECIFICATIONS

A. Methods

- Wooden frame to be constructed of 2" x 4" construction grade lumber.
- Wire mesh size must be of sufficient strength to support filter fabric and stone for outer walls with water fully impounded against it.
- Filter cloth must be of a type approved for this purpose; resistant to ultraviolet light with an equivalent opening size 60 - 80 mesh. It shall allow sufficient passage of water and removal of sediment.
- Washed stone 3/4" to 1 1/2" in size is to be used.

B. Procedure

Soils, Ditches or Yard Inlet Protection

- Excavate completely around the inlet to a depth of 18 inches below the inlet elevation.
- Drive the 2" x 4" posts 1' into the ground at each corner of the inlet. Assemble top portion of the 2" x 4" frame using the overlap joint shown in the figure. The top of the frame (width) must be 8" below the edge of the roadway adjacent to the inlet.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
- Stretch the filter cloth tightly over the wire mesh. The cloth must extend from the top of the frame to 18" below the inlet notch elevation. Fasten the cloth firmly to the frame. The ends of the filter cloth must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet in compacted 8" layers until the top of earth is level with the notch elevation ends and top section on the slope.
- Place the assembly against the inlet throat and not (minimum 2' length of 2" x 4" in the top of the wall at lower locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by woodlogs or alternate logs.
- Form the 1/2" x 1/2" wire mesh and the filter cloth to the concrete gutter and support the base of the curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter cloth in back a manner to prevent water from entering the inlet under or around the filter cloth.
- This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- Ensure that storm flow does not bypass the inlet by installing a temporary storm or culvert due to direct flow to the inlet.

STRAW BALE DIKE

Construction Specifications

- Bales shall be placed at the top of a slope, on the contour, and in a row with the ends of each bale tightly abutting the adjacent bales.
- Each bale shall be entrenched in the soil a minimum of 4" and placed so the binders are horizontal.
- Bales shall be securely anchored in place by either two stakes or rebar driven through the bale 12" to 18" into the ground. The first stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stones shall be driven flush with the top of the bale.
- Strow bale dikes shall be inspected frequently and after each rain event and maintenance performed as necessary.
- All bales shall be removed when the site has been stabilized. The trench where the bales were located shall be graded flush and stabilized.

SITE ANALYSIS:

	ACRES
TOTAL AREA OF SITE	2.0
AREA DISTURBED	0.0
AREA TO BE ROOFED OR PAVED	2.0
AREA TO BE VEGETATIVELY STABILIZED	16,300
TOTAL CUT	16,300
TOTAL FILL	16,300
OFFSITE WASTE/BORROW AREA LOCATION	

- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- ALL TRENCH MATERIAL SHOULD BE PLACED ON THE HIGHER SIDE OF THE TRENCH, ABOVE THE TOP-OF-CURB.

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./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 THE TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ. FT.)

ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ. FT.) AND 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 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS./1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS. 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./1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL./1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL./1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

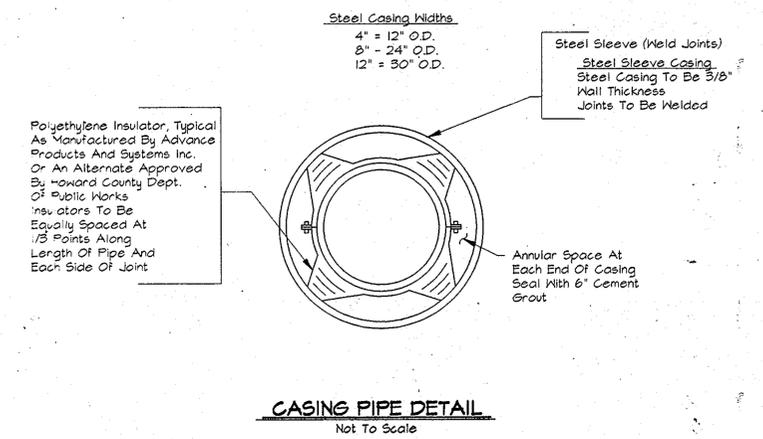
APPLY TO GRADED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 60 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ. FT.) SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE ANNUAL RYE (3.2 LBS./1000 SQ. FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ. FT.) FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNROTTED 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 SLOPE 58 FT. OR HIGHER, USE 348 GAL. PER ACRE (8 GAL./1000 SQ. FT.) FOR ANCHORING.

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



AS BUILT

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: [Signature] 4/1/96 Chief, Bureau of Engineering: [Signature] 3/29/96 Chief, Bureau of Utilities: [Signature] 4-1-96 Chief, Water and Sewer Design Division: [Signature] 3-29-96		RUMMEL, KLEPPER & KAHL CONSULTING ENGINEERS 81 MOSHER ST. BALTIMORE, MARYLAND 21217	DES: S.R.K. DRN: A.G.A. CHK: S.R.K. DATE: 3/96	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS	ALPHA RIDGE WATER SUPPLY CAPITAL PROJECT W-8203 CONTRACT NO. 44-3480 ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 31 OF 31
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