

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

DEPARTMENT OF PUBLIC WORKS CONTRACT NO. 44-3478

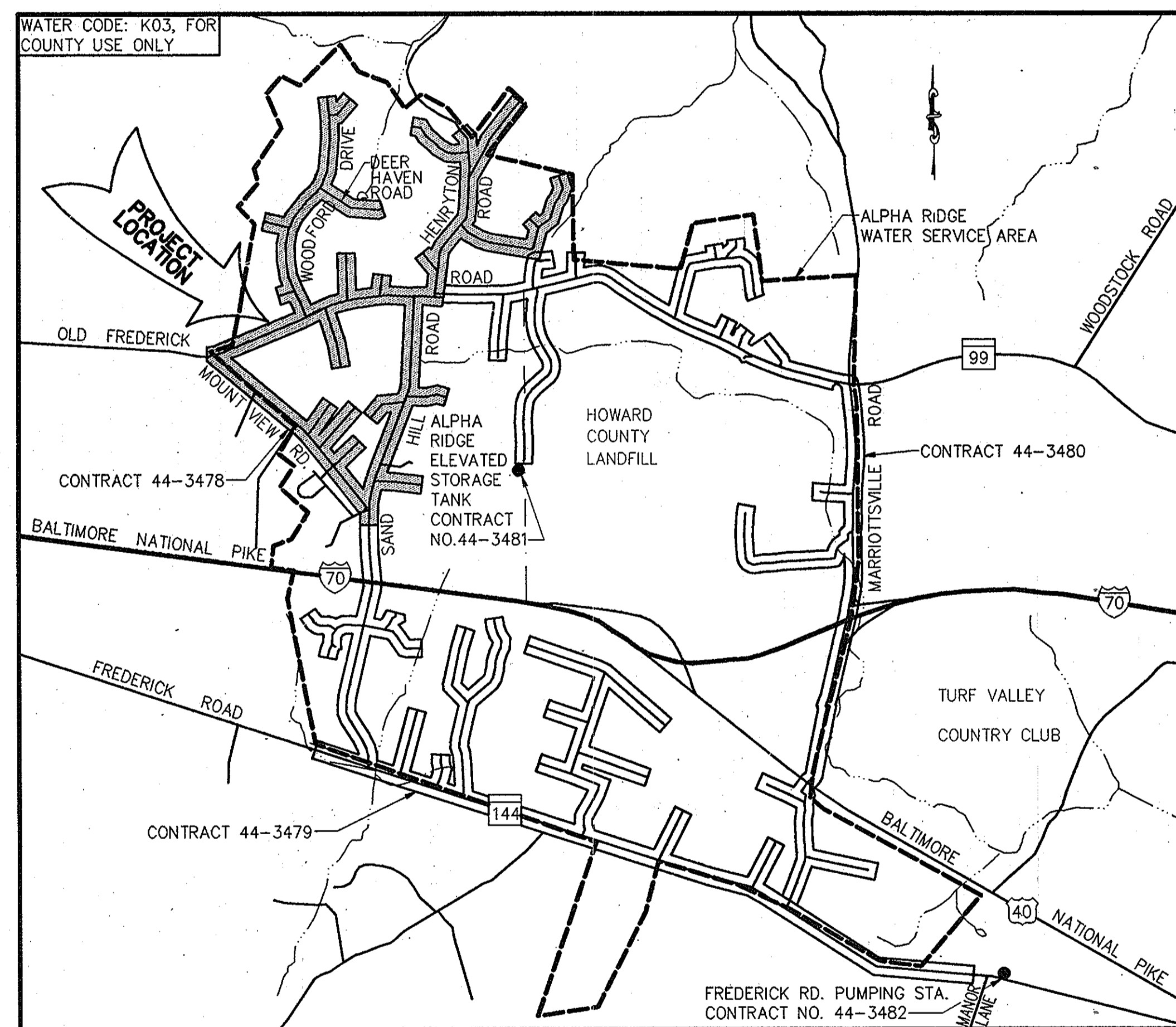
LIST OF MATERIALS

ITEM	UNIT	QUANTITIES		MATERIAL SUPPLIER
		ESTIMATE	AS-BUILT	
4" Water Main	L.F.	6,615	8044.0	
6" Water Main	L.F.	2,395	2261.0	
8" Water Main	L.F.	16,490	17,125.0	
12" Water Main	L.F.	8,420	8,424.0	
Blow Off	Each	8	7.0	
1" Air Release Valve 4 Manhole	Each	11	11	
4" Valve	Each	11	12	
6" Valve	Each	62	59	
8" Valve	Each	24	25	
12" Valve	Each	14	14	
Fire Hydrant	Each	59	54	
12" Steel Casing	L.F.	60	60.0	
24" Steel Casing	L.F.	46	240.0	
3/4" W.H.C.	L.F.	135	923.0	
1" W.H.C.	L.F.	2,110	4,122.0	
1 1/2" W.H.C.	L.F.	7,340	8,658.0	
2" W.H.C.	L.F.	2,050	1,942.0	
1-1/2" Water Main Drain	Each	10	10	

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.
- Spoil 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

LEGEND

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

GENERAL NOTES

- 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 - 313-4900
- 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.

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.

Keith L. Halls Date: 3/25/96

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.

Paul J. Spon Date: 5/29/96
BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS

AS BUILT

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. 91015 & 16 BLOCK NO.

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.

SCALE
AS
SHOWN

SHEET
1 OF 35

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

J. A. Wainwright Date: 4/18/96
NATURAL RESOURCE CONSERVATION SERVICE

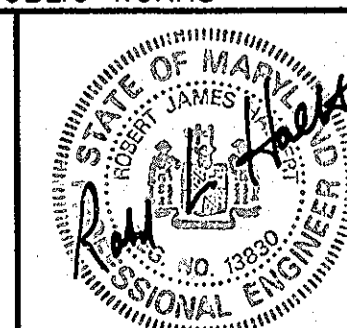
This development plan is approved for soil erosion and sediment control by The Howard County Soil Conservation District.

Approved: *John L. Clinton* Date: 4/18/96
HOWARD COUNTY SCD

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. Spon 5/31/96
DIRECTOR OF PUBLIC WORKS
Paul J. Spon 5-30-96
CHIEF, BUREAU OF UTILITIES

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. 91015 & 16 BLOCK NO.

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

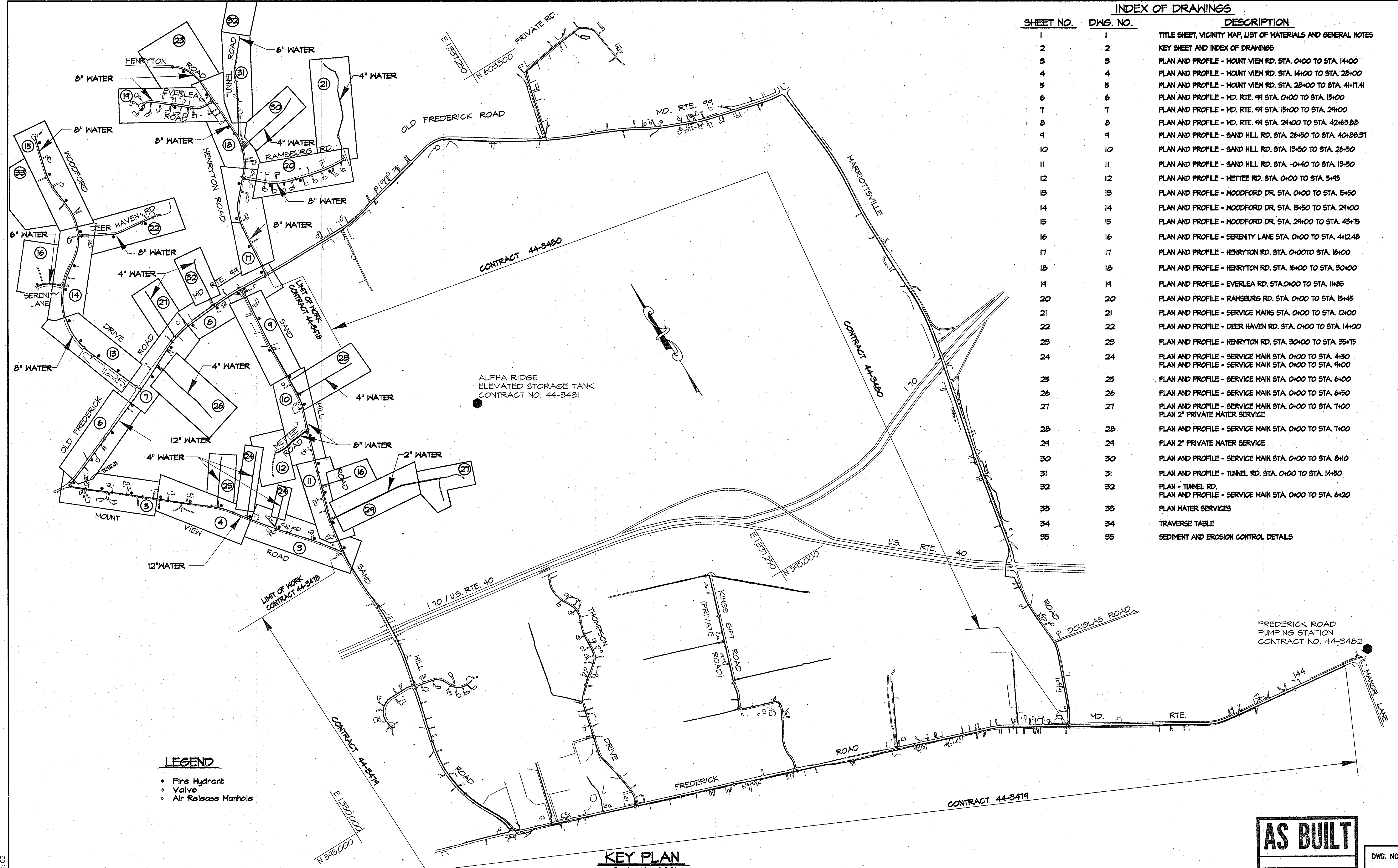
DWG. NO.

SCALE
AS
SHOWN

SHEET
1 OF 35

INDEX OF DRAWINGS

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2	2	KEY SHEET AND INDEX OF DRAWINGS
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4	4	PLAN AND PROFILE - MOUNT VIEW RD. STA. 14+00 TO STA. 28+00
5	5	PLAN AND PROFILE - MOUNT VIEW RD. STA. 28+00 TO STA. 41+71.41
6	6	PLAN AND PROFILE - MD. RTE. 99 STA. 0+00 TO STA. 15+00
7	7	PLAN AND PROFILE - MD. RTE. 99 STA. 15+00 TO STA. 24+00
8	8	PLAN AND PROFILE - MD. RTE. 99 STA. 24+00 TO STA. 42+65.88
9	9	PLAN AND PROFILE - SAND HILL RD. STA. 26+50 TO STA. 40+88.57
10	10	PLAN AND PROFILE - SAND HILL RD. STA. 13+50 TO STA. 26+50
11	11	PLAN AND PROFILE - SAND HILL RD. STA. 0+40 TO STA. 13+50
12	12	PLAN AND PROFILE - METTEE RD. STA. 0+00 TO STA. 5+45
13	13	PLAN AND PROFILE - WOODFORD DR. STA. 0+00 TO STA. 15+50
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18	18	PLAN AND PROFILE - HENRYTON RD. STA. 16+00 TO STA. 30+00
19	19	PLAN AND PROFILE - EVERLEA RD. STA. 0+00 TO STA. 11+85
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33	33	PLAN WATER SERVICES
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35	35	SEDIMENT AND EROSION CONTROL DETAILS



- LEGEND**
- Fire Hydrant
 - Valve
 - Air Release Manhole

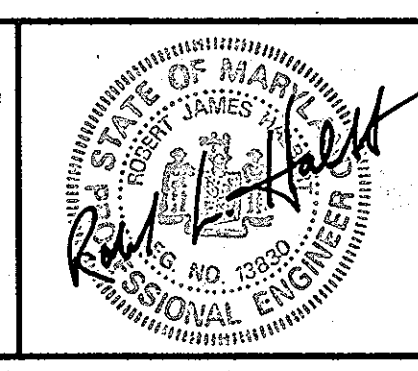
KEY PLAN
Scale: 1" = 600'

AS BUILT

RK\2\PROJECTS\COMMINGS\CH9473\CONTR_1\03/22/1996 ALP-1-02.DWG 11:03

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *Samuel J. ...* 5/31/96
 Chief, Bureau of Utilities: *Robert ...* 5-30-96
 Date: 5-30-96

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



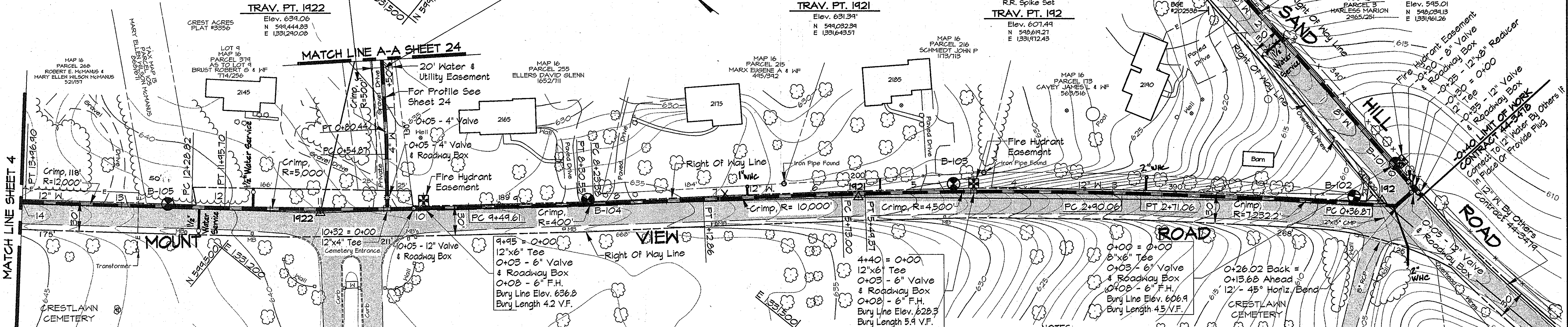
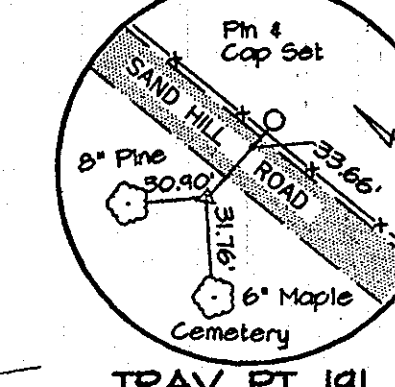
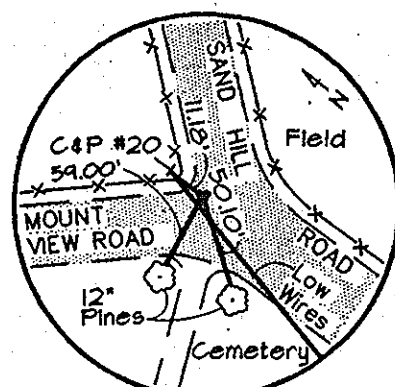
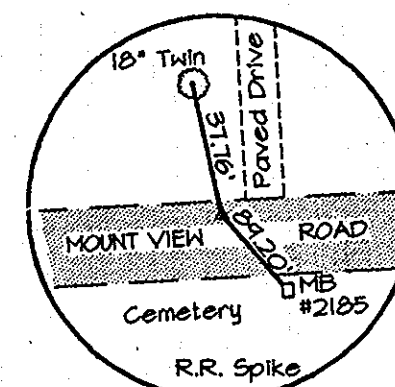
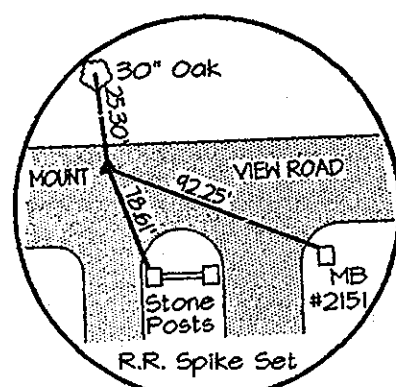
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KEY PLAN AND
 INDEX OF DRAWINGS
 600' SCALE MAP NO. 9, 10, 15 & 16 BLOCK NO.

ALPHA RIDGE WATER SUPPLY
 CAPITAL PROJECT W-8203
 CONTRACT NO. 44-3478
 ELECTION DISTRICT NO. 3
 HOWARD COUNTY, MARYLAND

DWG. NO.
 SCALE AS SHOWN
 SHEET 2 OF 35

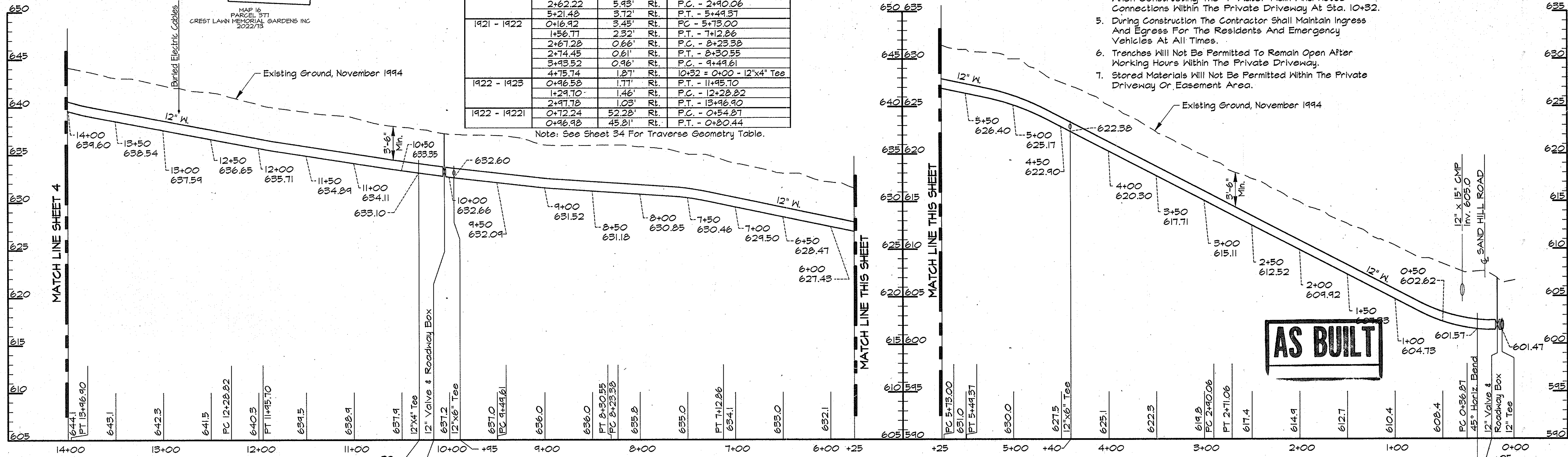
NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.



TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
191 - 192	5+62.26	30.60' Rt.	-0+30 = 0+00 - 12" Tee
	5+66.16	4.87' Rt.	0+26.02 - 45° Horiz. Bend
	0+04.25	3.42' Lt.	P.C. - 0+36.87
192 - 1921	2+43.22	5.55' Rt.	P.T. - 2+71.06
	2+62.22	5.93' Rt.	P.C. - 2+90.06
	5+21.48	3.72' Rt.	P.T. - 5+49.37
	0+16.92	3.45' Rt.	P.C. - 5+73.00
1921 - 1922	1+56.77	2.32' Rt.	P.T. - 7+12.86
	2+67.28	0.66' Rt.	P.C. - 8+23.38
	2+74.45	0.61' Rt.	P.T. - 8+30.55
	3+93.52	0.96' Rt.	P.C. - 9+49.61
	4+75.74	1.87' Rt.	10+32 = 0+00 - 12" x 4" Tee
1922 - 1923	0+96.58	1.77' Rt.	P.T. - 11+95.70
	1+29.70	1.46' Rt.	P.C. - 12+28.82
	2+97.78	1.03' Rt.	P.T. - 13+46.90
1922 - 19221	0+72.24	52.28' Rt.	P.C. - 0+54.87
	0+96.98	45.81' Rt.	P.T. - 0+80.44

Note: See Sheet 34 For Traverse Geometry Table.

- 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 1" 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 Driveway At Sta. 10+32.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.



PROFILE - MOUNT VIEW ROAD
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

AS BUILT

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03/14/1996
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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Lawrence J. ... 5/19/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. ... 5/29/96
CHIEF, BUREAU OF ENGINEERING DATE

... 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

... 5-29-96
CHIEF WATER AND SEWER DESIGN DIVISION DATE

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

DES:	DWR		
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BY:	NO.	REVISION	DATE

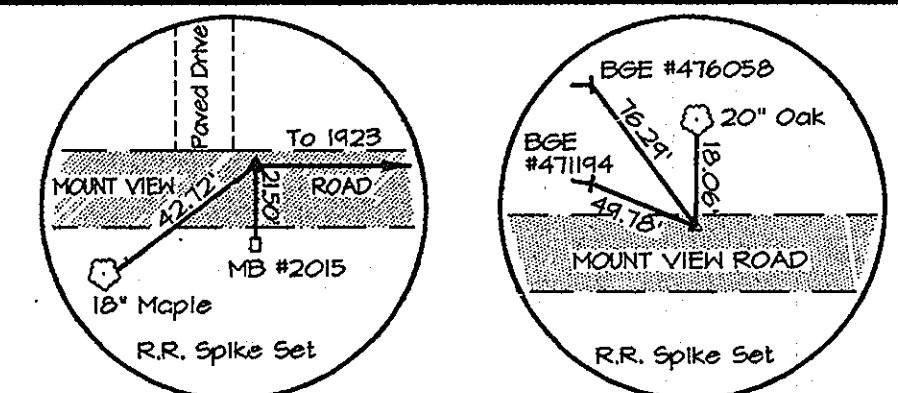
PLAN AND PROFILE MOUNT VIEW ROAD
STA. 0+00 TO STA. 14+00

600' SCALE MAP NO. 16 BLOCK NO. 1

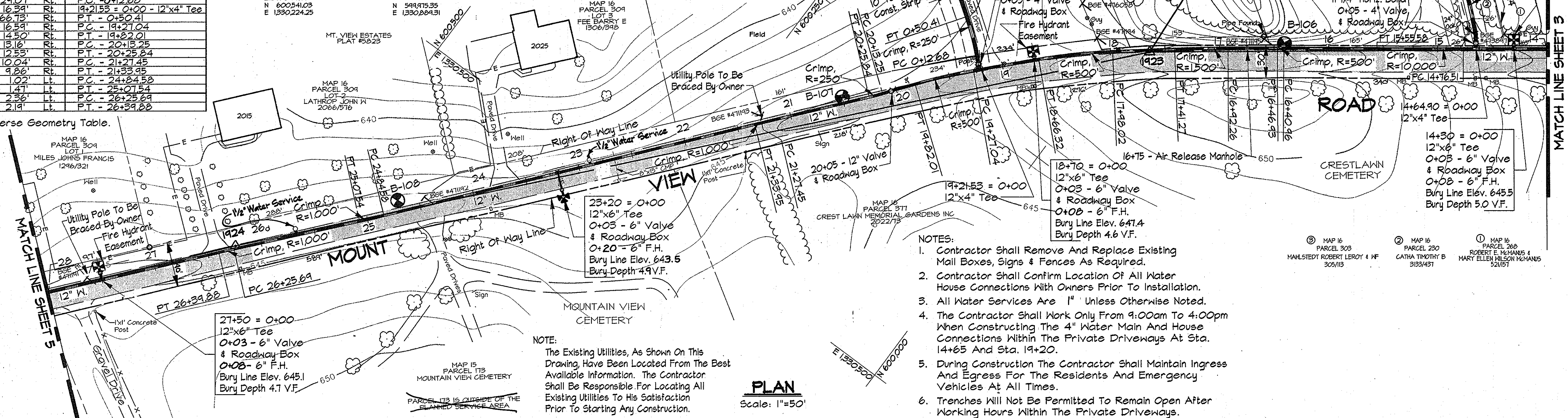
ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 3 OF 35

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
1922 - 1923	3+65.69	15.99'	RT. 0+12.65 - 4' 11-1/4" Horiz. Bend
	3+65.71	1.33'	RT. 14+24.90 - 12' x 4" Tee
	3+71.34	1.91'	RT. P.C. - 14+76.51
	4+56.41	2.05'	RT. P.C. - 15+55.58
	5+41.78	3.11'	RT. P.C. - 16+40.96
	5+47.75	3.15'	RT. P.T. - 16+46.93
	5+43.08	3.17'	RT. P.C. - 16+42.26
	6+42.08	2.39'	RT. P.T. - 17+41.27
	0+33.14	7.42'	RT. P.C. - 17+98.02
	0+01.03	14.46'	RT. P.T. - 18+66.52
1923 - 1924	+55.16	24.01'	RT. P.C. - 2+12.65
	+56.20	16.94'	RT. 19+21.53 - 0+00 - 12' x 4" Tee
	+57.28	66.75'	RT. P.T. - 0+50.41
	+61.71	16.59'	RT. P.C. - 19+27.04
	2+16.57	14.50'	RT. P.T. - 19+82.01
	2+47.80	13.16'	RT. P.C. - 20+13.25
	2+60.37	12.53'	RT. P.T. - 20+25.24
	3+61.95	10.24'	RT. P.C. - 21+27.45
	3+62.45	4.82'	RT. P.T. - 21+33.95
	+12.91	1.02'	RT. P.C. - 24+84.58
1924 - 1925	7+41.26	1.47'	RT. P.T. - 25+07.54
	0+02.10	2.36'	RT. P.C. - 26+25.69
	0+16.30	2.19'	RT. P.T. - 26+39.88



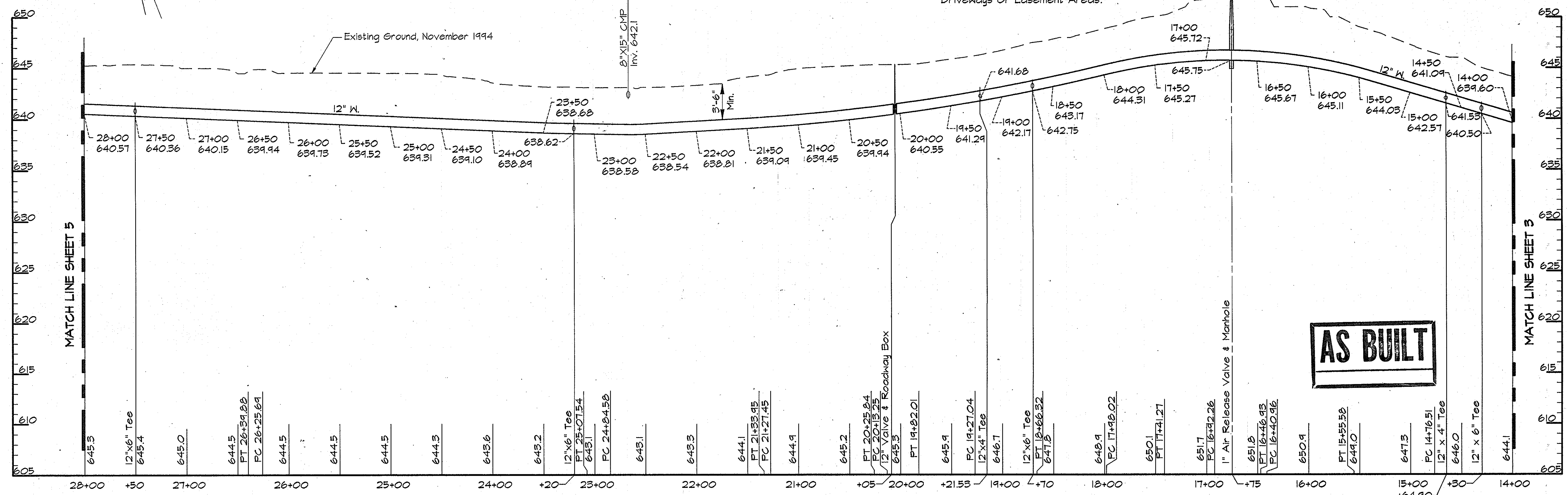
Note: See Sheet 34 For Traverse Geometry Table.



- 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 1" 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. 14+65 And Sta. 19+20.
 - 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 Areas.

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 - MOUNT VIEW ROAD

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

AS BUILT

RK&K/PROJECTS: COMMONS/CM9473/CONTR_1 ALP-1-04.DWG 07:55

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

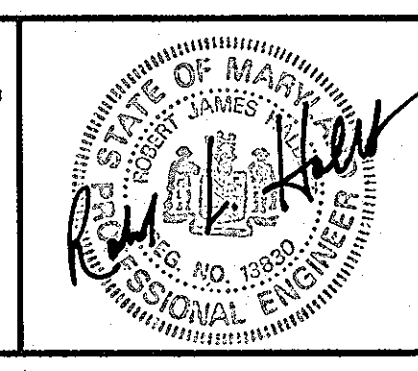
John J. Lewis 5/31/96
DIRECTOR OF PUBLIC WORKS

Richard J. Sporn 5/29/96
CHIEF, BUREAU OF ENGINEERS

Robert J. Sporn 5-30-96
CHIEF, BUREAU OF UTILITIES

Ch. Dan Linn 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION

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



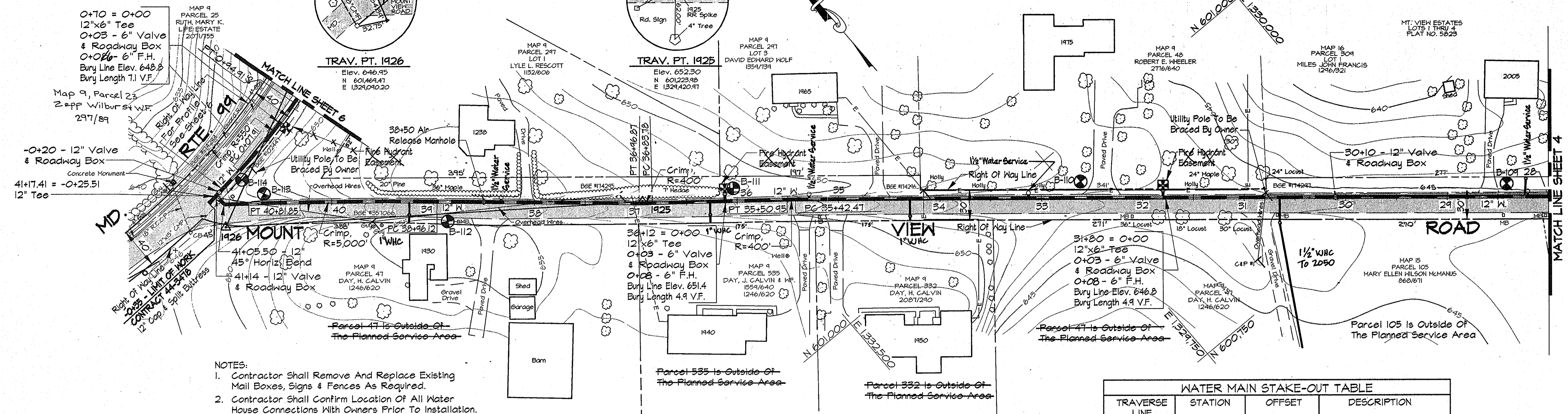
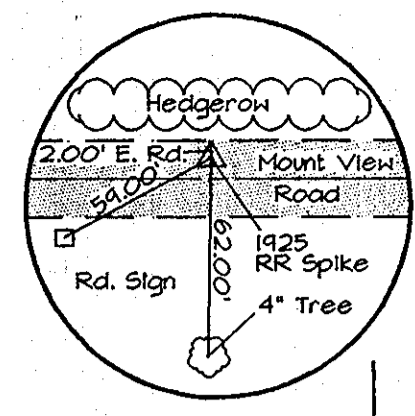
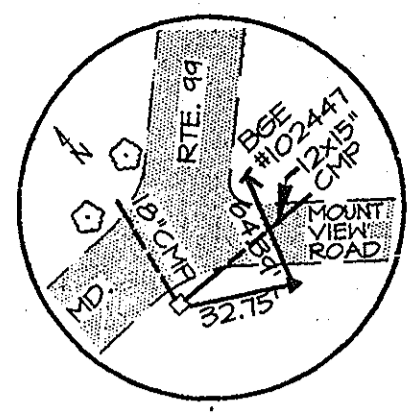
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CHK:	SRK			
DATE:	3/96			
BY:	NO.	REVISION	DATE	

PLAN AND PROFILE MOUNT VIEW ROAD
STA. 14+00 TO STA. 28+00

600' SCALE MAP NO. 15.16 BLOCK NO. 21

ALPHA RIDGE WATER SUPPLY
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HOWARD COUNTY, MARYLAND

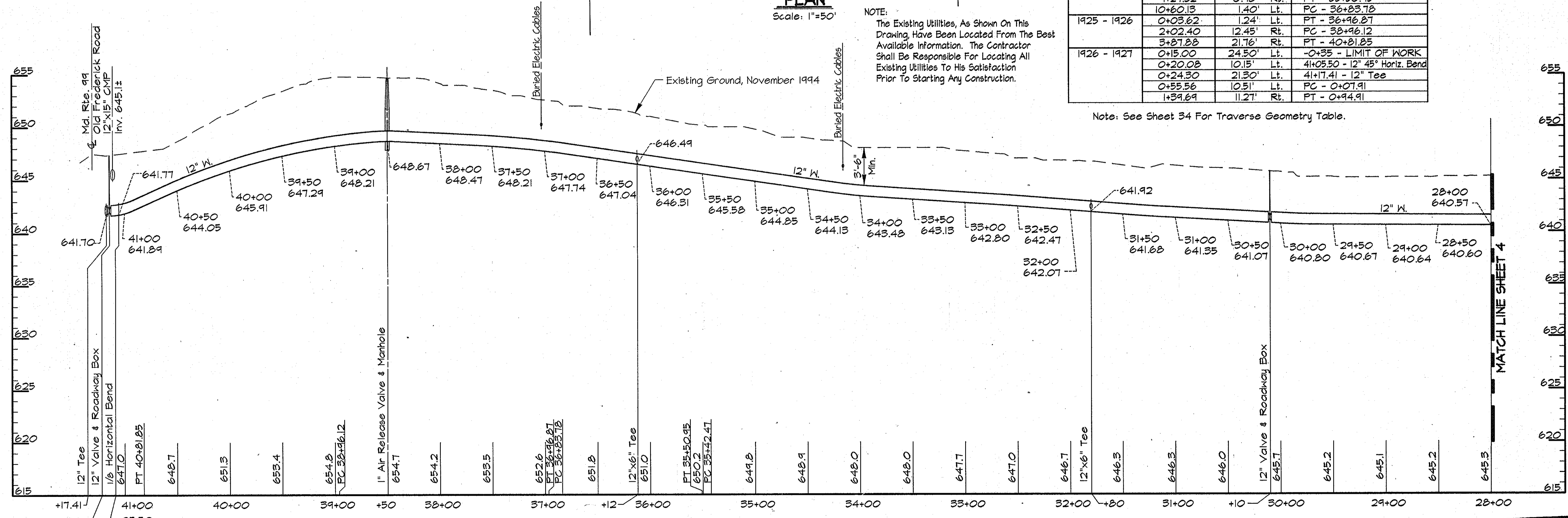
DWG. NO.
SCALE AS SHOWN
SHEET 4 OF 35



- 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 "1" Unless Otherwise Noted.

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
1924 - 1925	9+18.85	1.04' Rt.	PC - 35+42.47
	9+27.32	0.98' Rt.	PT - 35+50.95
	10+60.13	1.40' Lt.	PC - 36+83.78
1925 - 1926	0+03.62	1.24' Lt.	PT - 36+96.87
	2+02.40	12.45' Rt.	PC - 38+96.12
	3+27.88	21.76' Rt.	PT - 40+81.85
1926 - 1927	0+15.00	24.50' Lt.	-0+35 - LIMIT OF WORK
	0+20.08	10.15' Lt.	41+05.50 - 12" 45° Horiz. Bend
	0+24.30	21.30' Lt.	41+17.41 - 12" Tee
	0+55.56	10.51' Lt.	PC - 0+07.91
	1+39.69	11.27' Rt.	PT - 0+44.91

Note: See Sheet 34 For Traverse Geometry Table.



PROFILE - MOUNT VIEW ROAD

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

AS BUILT

RKK2/PROJECTS/COMMONS/CM9473/CONTR_1_ALP-1-05.DWG 03/17/1996 08:39 GENSETUP.PCP

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

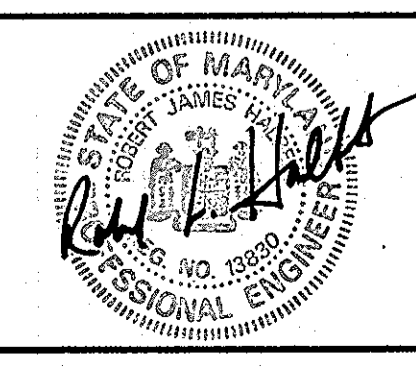
James J. ... 5/2/96
DIRECTOR OF PUBLIC WORKS

Paul H. ... 5/29/96
CHIEF, BUREAU OF ENGINEERING

... 5-30-96
CHIEF, BUREAU OF UTILITIES

... 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION

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



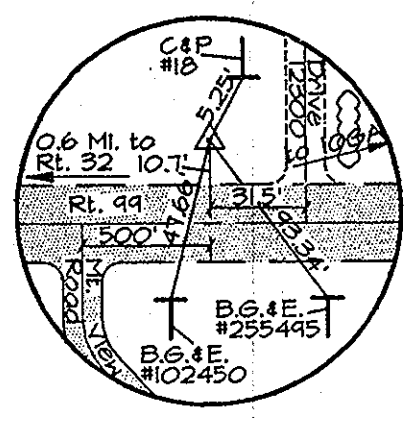
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DRN:	DCJ/DCE				
CHK:	SRK				
DATE:	3/96				
BY:	NO.				
REVISION:					
DATE:					

PLAN AND PROFILE MOUNT VIEW ROAD
STA. 28+00 TO 41+17.41

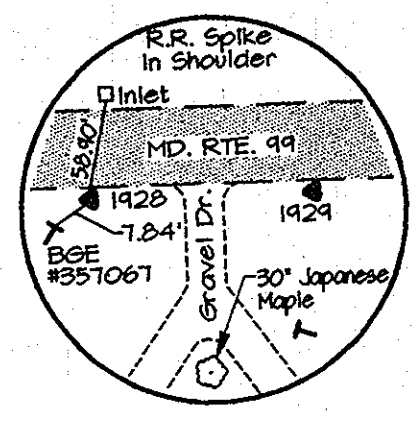
600' SCALE MAP NO. 9 & 15 BLOCK NO. 24 & 6

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

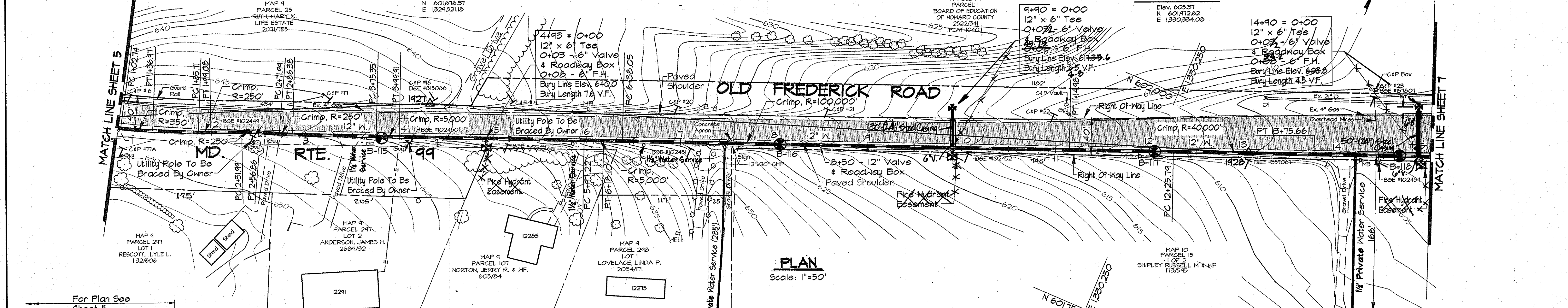
DWG. NO.
SCALE AS SHOWN
SHEET 5 OF 35



WATER MAIN STAKE-OUT TABLE							
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION	TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
1926 - 1927	1+47.41	12.62' Rt.	P.C. - 1+02.74	1927 - 1928	4+19.13	32.78' Rt.	P.C. - 3+75.35
	1+81.36	16.90' Rt.	P.T. - 1+36.97		4+43.94	54.31' Rt.	P.T. - 3+99.91
	2+24.96	20.61' Rt.	P.C. - 1+85.71		1+66.41	29.32' Rt.	P.C. - 5+97.22
	2+43.31	21.28' Rt.	P.T. - 1+99.08		1+87.28	28.48' Rt.	P.T. - 6+18.10
	2+76.21	22.03' Rt.	P.C. - 2+31.99		2+07.21	27.73' Rt.	P.C. - 6+38.05
1928 - 1929	3+01.00	23.83' Rt.	P.T. - 2+56.86	6+33.75	8.48' Rt.	P.T. - 11+14.98	
	3+16.02	25.68' Rt.	P.C. - 2+71.99	7+94.46	3.75' Rt.	P.T. - 12+25.79	
	3+30.34	27.02' Rt.	P.T. - 2+86.38	0+89.63	1.68' Rt.	P.T. - 13+75.66	



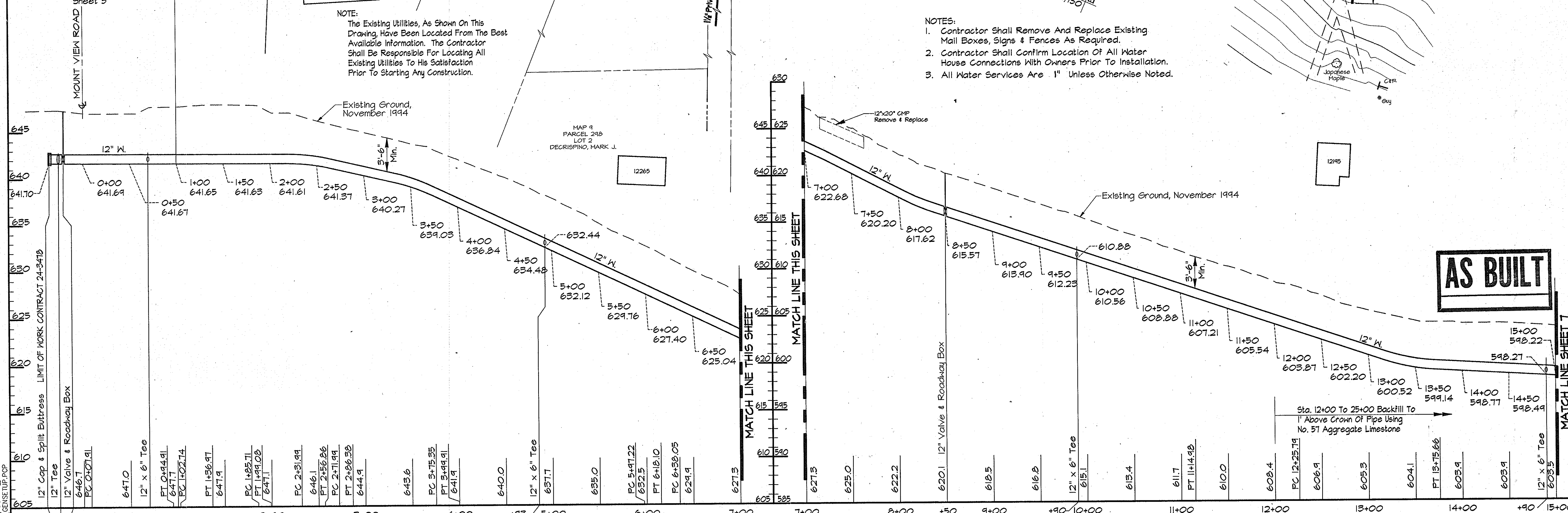
Note: See Sheet 34 For Traverse Geometry Table.



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 1" Unless Otherwise Noted.



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

DWG. NO.	
SCALE AS SHOWN	
SHEET 6 OF 35	

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

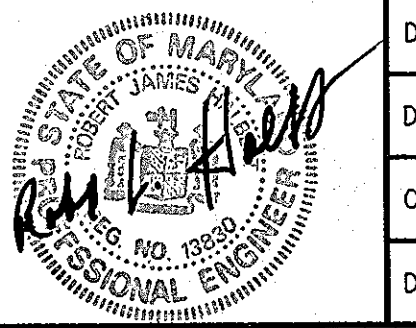
James P. Lewis 5/23/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Bennett 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

Paul J. Seaton 5/23/96
CHIEF, BUREAU OF ENGINEERING DATE

Myron J. Bennett 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



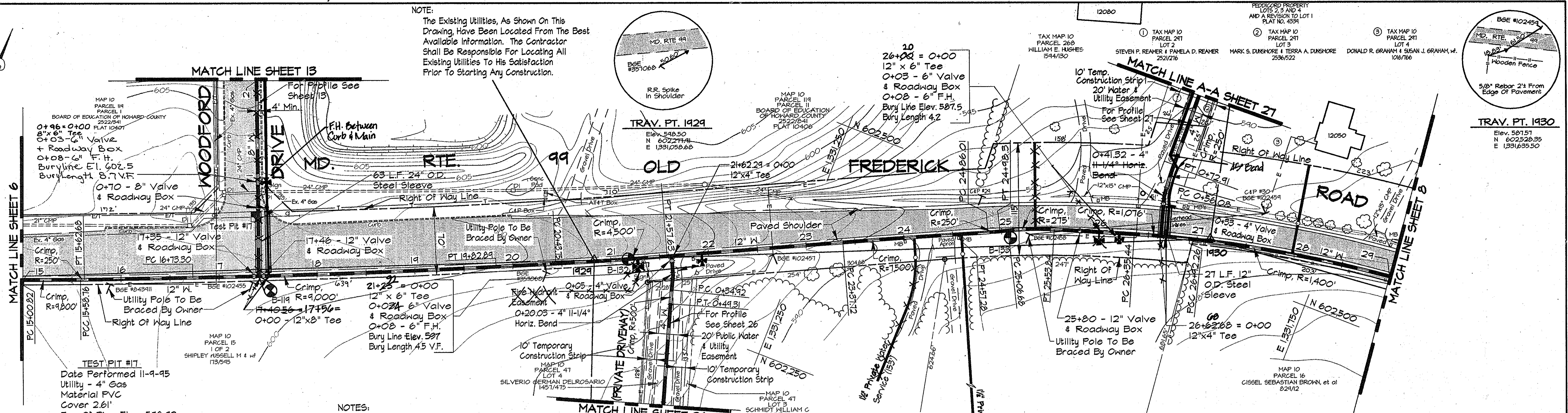
DES:	DWR		
DRN:	DCJ/DCE		
CHK:	SRK		
DATE:	3/96	BY:	NO.
		REVISION	

PLAN AND PROFILE MD. RTE. 99
STA. 0+00 TO STA. 15+00

DATE: 600' SCALE MAP NO. 9 & 10 BLOCK NO. 24 & 19

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

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.

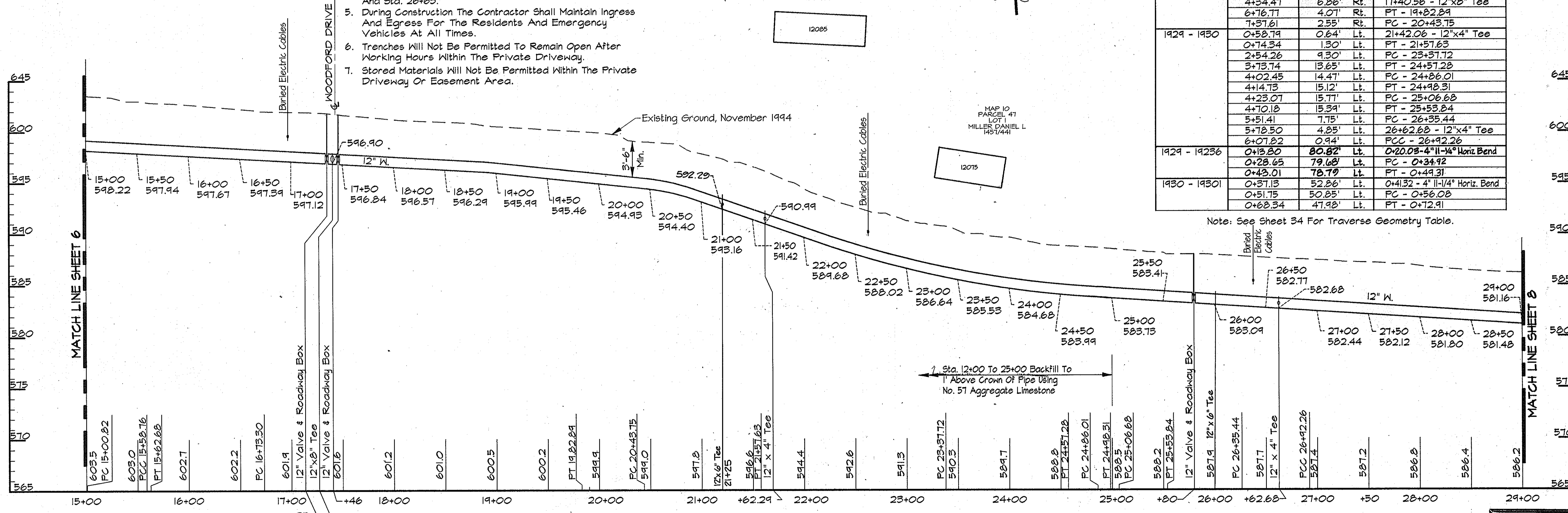


- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House, Connections With Owners Prior To Installation.
 - All Water Services Are 1" Unless Otherwise Noted.
 - The Contractor Shall Work Only From 9:00am to 4:00pm When Constructing The 4" Water Main And House Connections Within The Private Driveways At Sta. 21+42 And Sta. 26+63.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.

PLAN
Scale: 1"=50'

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
1928 - 1929	1+94.76	4.08' Rt.	PC - 15+00.82
	2+52.68	5.36' Rt.	PCC - 15+58.76
	2+56.60	5.43' Rt.	PT - 15+62.68
	3+67.21	6.47' Rt.	PC - 16+73.30
	4+34.47	6.86' Rt.	17+40.56 - 12"x8" Tee
	6+76.77	4.07' Rt.	PT - 19+82.89
1929 - 1930	7+37.61	2.55' Rt.	PC - 20+43.75
	0+58.79	0.64' Lt.	21+42.06 - 12"x4" Tee
	0+74.34	1.30' Lt.	PT - 21+57.63
	2+54.26	9.30' Lt.	PC - 23+37.72
	3+73.74	13.65' Lt.	PT - 24+57.28
	4+02.45	14.47' Lt.	PC - 24+86.01
	4+14.73	15.12' Lt.	PT - 24+98.31
	4+23.07	15.77' Lt.	PC - 25+06.68
	4+70.18	15.39' Lt.	PT - 25+53.84
	5+51.41	7.75' Lt.	PC - 26+35.44
1929 - 19236	5+78.50	4.85' Lt.	26+62.68 - 12"x4" Tee
	6+07.82	0.94' Lt.	PCC - 26+92.26
	0+18.80	80.82' Lt.	0+20.08-4" 11-1/4" Horiz. Bend
1930 - 19301	0+28.65	79.68' Lt.	PC - 0+34.92
	0+43.01	78.79' Lt.	PT - 0+49.31
	0+37.13	52.86' Lt.	0+41.32 - 4" 11-1/4" Horiz. Bend
1930 - 19301	0+51.75	50.85' Lt.	PC - 0+56.08
	0+68.34	47.98' Lt.	PT - 0+72.91

Note: See Sheet 34 For Traverse Geometry Table.



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

AS BUILT

RK&K PROJECTS: COMMING'S (CM9473) CONTR. 1 ALP-1-07.DWG 03/14/1996 GENSETOP.PCP 08:00

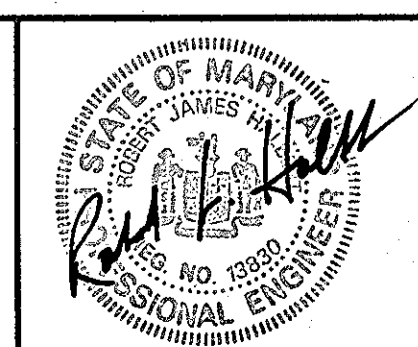
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James H. ... 5/29/96
DIRECTOR OF PUBLIC WORKS DATE

Paul D. ... 5/29/96
CHIEF, BUREAU OF ENGINEERING DATE

... 5/29/96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



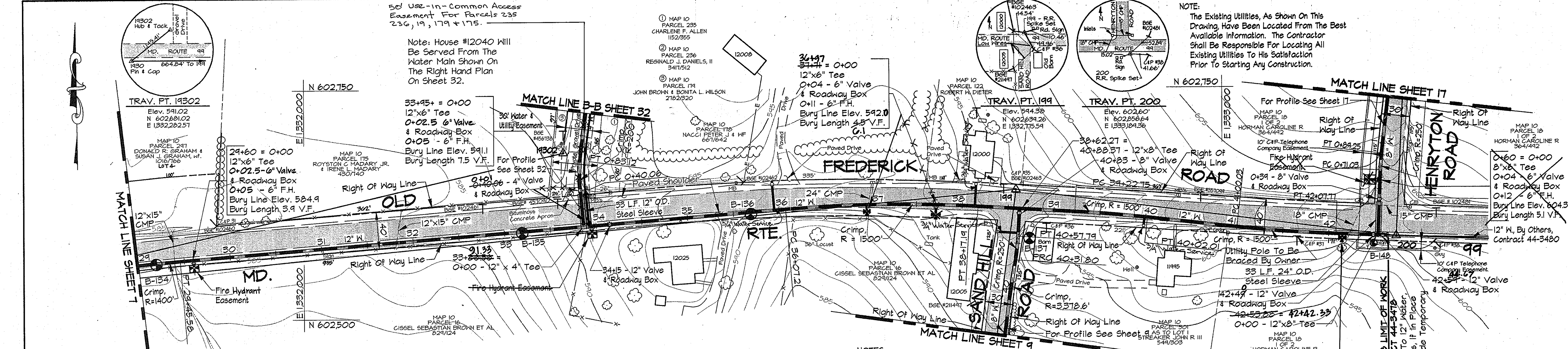
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DRN:	DCJ/DCE				
CHK:	SRK				
DATE:	3/96				

PLAN AND PROFILE MD. RTE. 99
STA. 15+00 TO STA. 29+00

600' SCALE MAP NO. 10 BLOCK NO. 19

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 7 OF 35



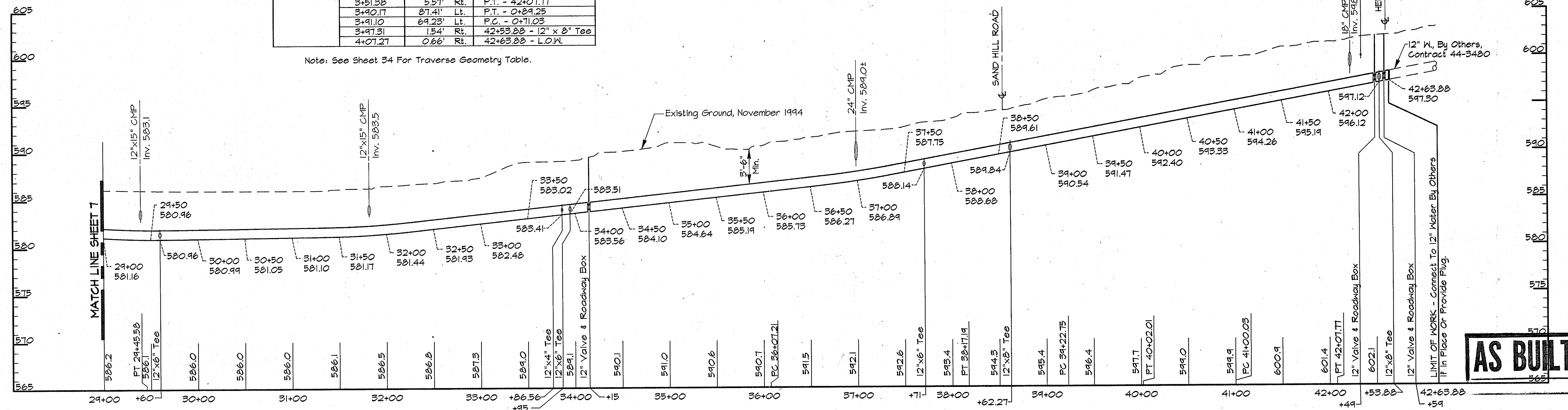
WATER MAIN STAKE-OUT TABLE

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
1930 - 199	2+51.97	13.51' Lt.	P.T. - 29+45.58
	6+72.90	6.96' Lt.	33+86.56 - 12" x 4" Tee
	6+73.19	47.02' Lt.	P.C. - 0+40.06
	6+78.12	89.71' Lt.	P.T. - 0+83.12
	8+93.53	3.68' Lt.	P.C. - 36+07.21
199 - 200	11+02.58	14.10' Rt.	P.T. - 38+17.19
	0+06.33	20.16' Rt.	38+62.27 - 12" x 8" Tee
	0+08.49	50.81' Rt.	P.T. - 40+57.79
	0+08.92	76.78' Rt.	P.R.C. - 40+51.80
	0+66.62	16.02' Rt.	P.C. - 39+22.75
	1+45.80	12.68' Rt.	P.T. - 40+02.01
	2+43.81	11.13' Rt.	P.C. - 41+00.03
	3+51.38	5.57' Rt.	P.T. - 42+07.77
	3+90.17	87.41' Lt.	P.T. - 0+89.25
	3+91.10	69.23' Lt.	P.C. - 0+71.03
	3+97.51	1.54' Rt.	42+53.88 - 12" x 8" Tee
	4+07.27	0.66' Rt.	42+63.88 - L.O.W.

Note: See Sheet 34 For Traverse Geometry Table.

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 1". 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 Driveway At Sta. 33+85.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.



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

AS BUILT

RK&K PROJECTS: COMMONS: CM9473 CONTR. 1 ALP-1-08.DWG 03/12/1996 GENSETUP.PCP 13.51

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Cam... 5/22/96
DIRECTOR OF PUBLIC WORKS DATE

... 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

... 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
No. 10,000

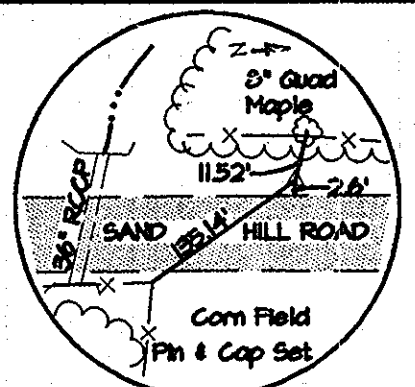
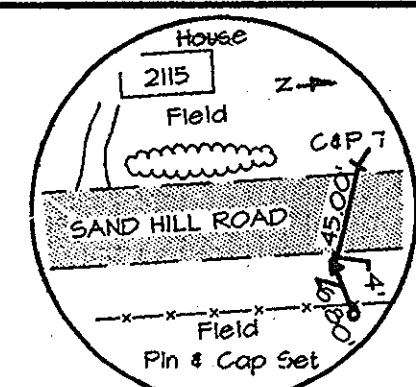
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DRN:	DCJ/DCE				
CHK:	SRK				
DATE:	3/96				

PLAN AND PROFILE MD. RTE. 99
STA. 00+00 TO STA. 42+63.88

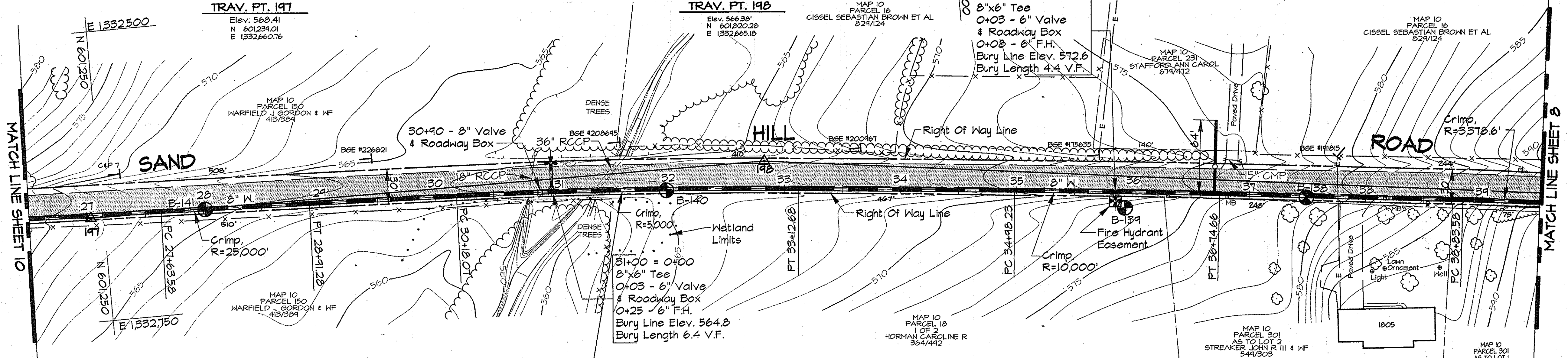
600' SCALE MAP NO. 10 BLOCK NO. 19

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO. SCALE AS SHOWN SHEET 8 OF 35



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.



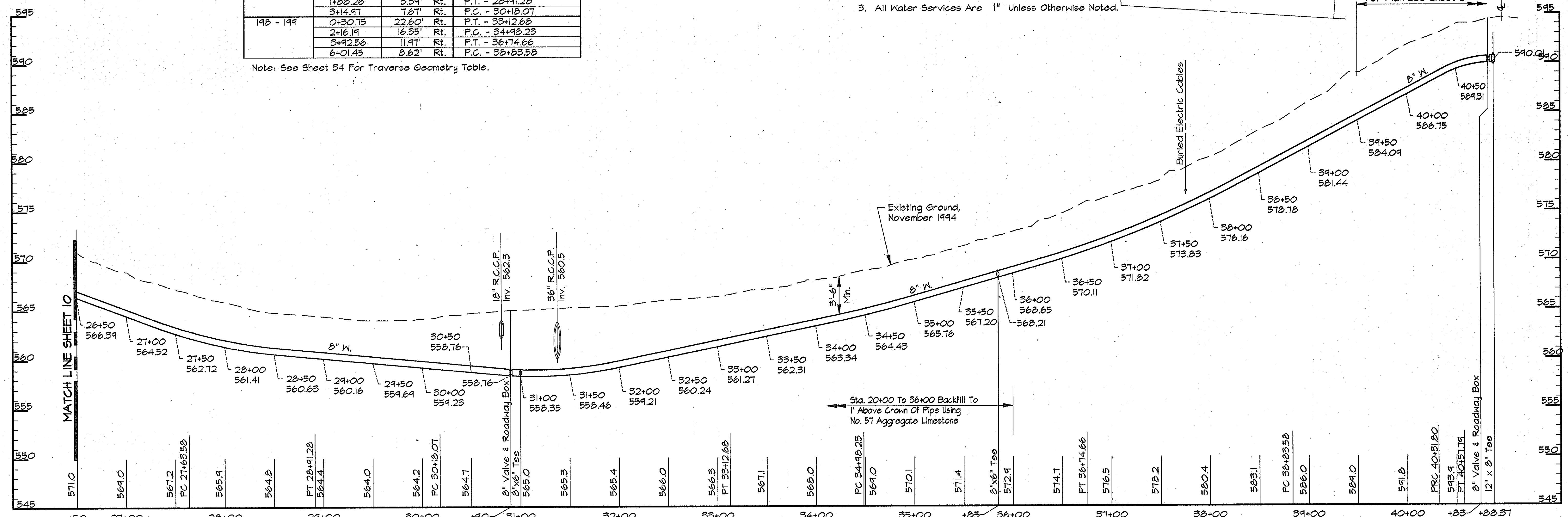
WATER MAIN STAKE-OUT TABLE

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
197 - 198	0+80.62	0.60' Lt.	P.C. - 27+63.58
	1+88.26	3.34' Rt.	P.T. - 28+91.28
	3+14.97	7.67' Rt.	P.C. - 30+18.07
198 - 199	0+30.75	22.60' Rt.	P.T. - 33+12.68
	2+16.19	16.35' Rt.	P.C. - 34+98.23
	3+92.56	11.97' Rt.	P.T. - 36+74.66
	6+01.45	8.62' Rt.	P.C. - 38+83.58

Note: See Sheet 34 For Traverse Geometry Table.

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 1" Unless Otherwise Noted.



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

AS BUILT

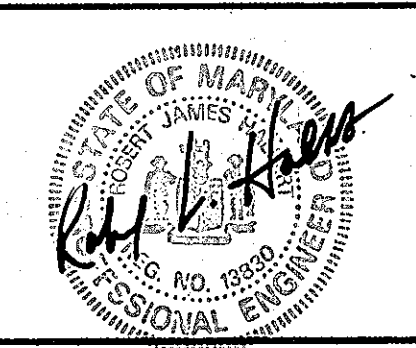
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03/27/1996 GENSETUP.PCP 10:27

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

5/31/96
5/29/96

5-30-94
5-29-96

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



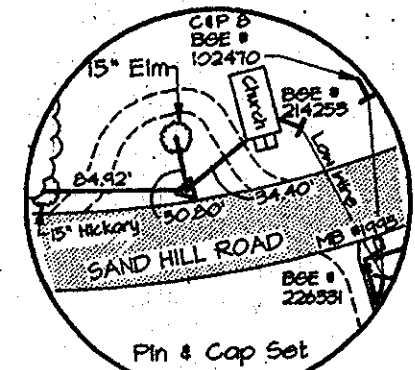
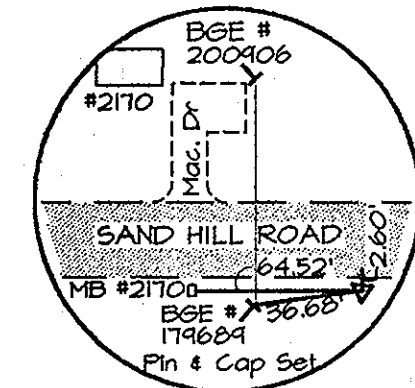
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DRN:	DCJ/DCE				
CHK:	SRK				
DATE:	3/96	BY:	NO.	REVISION	DATE

PLAN AND PROFILE SAND HILL ROAD
STA. 26+50 TO STA. 40+88.37

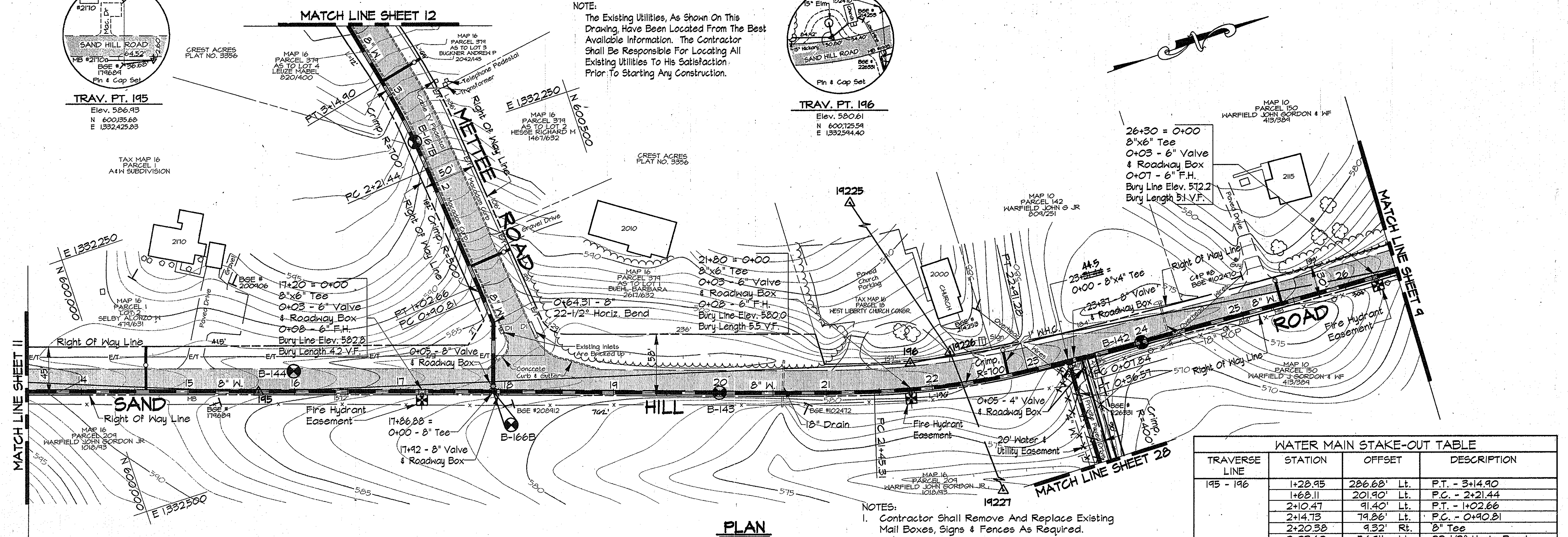
600' SCALE MAP NO. 10 BLOCK NO. 19

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 9 OF 35



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.

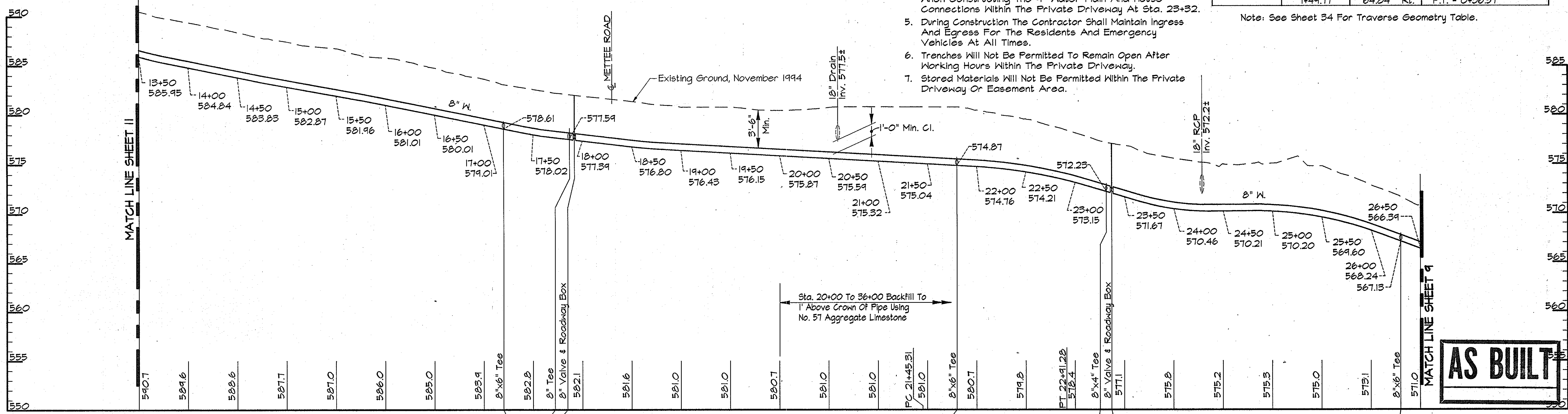


TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
195 - 196	1+28.95	286.68' Lt.	P.T. - 3+14.90
	1+68.11	201.90' Lt.	P.C. - 2+21.44
	2+10.47	91.40' Lt.	P.T. - 1+02.66
	2+14.73	79.86' Lt.	P.C. - 0+90.81
	2+20.88	9.32' Rt.	8" Tee
196 - 197	2+23.62	54.91' Lt.	22-1/2" Horiz. Bend
	5+78.44	25.28' Rt.	P.C. - 2+145.31
	1+06.97	28.63' Rt.	P.T. - 22+91.28
	1+47.09	26.88' Rt.	8" x 4" Tee
	1+47.50	36.21' Rt.	P.C. - 0+07.84
1+49.77	64.84' Rt.	P.T. - 0+36.57	

Note: See Sheet 34 For Traverse Geometry Table.

- 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 1" 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 Driveway At Sta. 23+32.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.

PLAN
Scale: 1"=50'



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

AS BUILT

RK&K PROJECTS: COMMINSOS\CM9473\CONTR_1 ALP-1-10.DWG 03/21/1996

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. Lee 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

Paul J. Roman 5/29/96
CHIEF, BUREAU OF ENGINEERS DATE

John A. Roman 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

John A. Roman 5-29-96
CHIEF WATER AND SEWER DESIGN DIVISION DATE

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



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

PLAN AND PROFILE SAND HILL ROAD
STA. 13+50 TO STA. 26+50

600' SCALE MAP NO. 10 & 16 BLOCK NO. 19 & 1

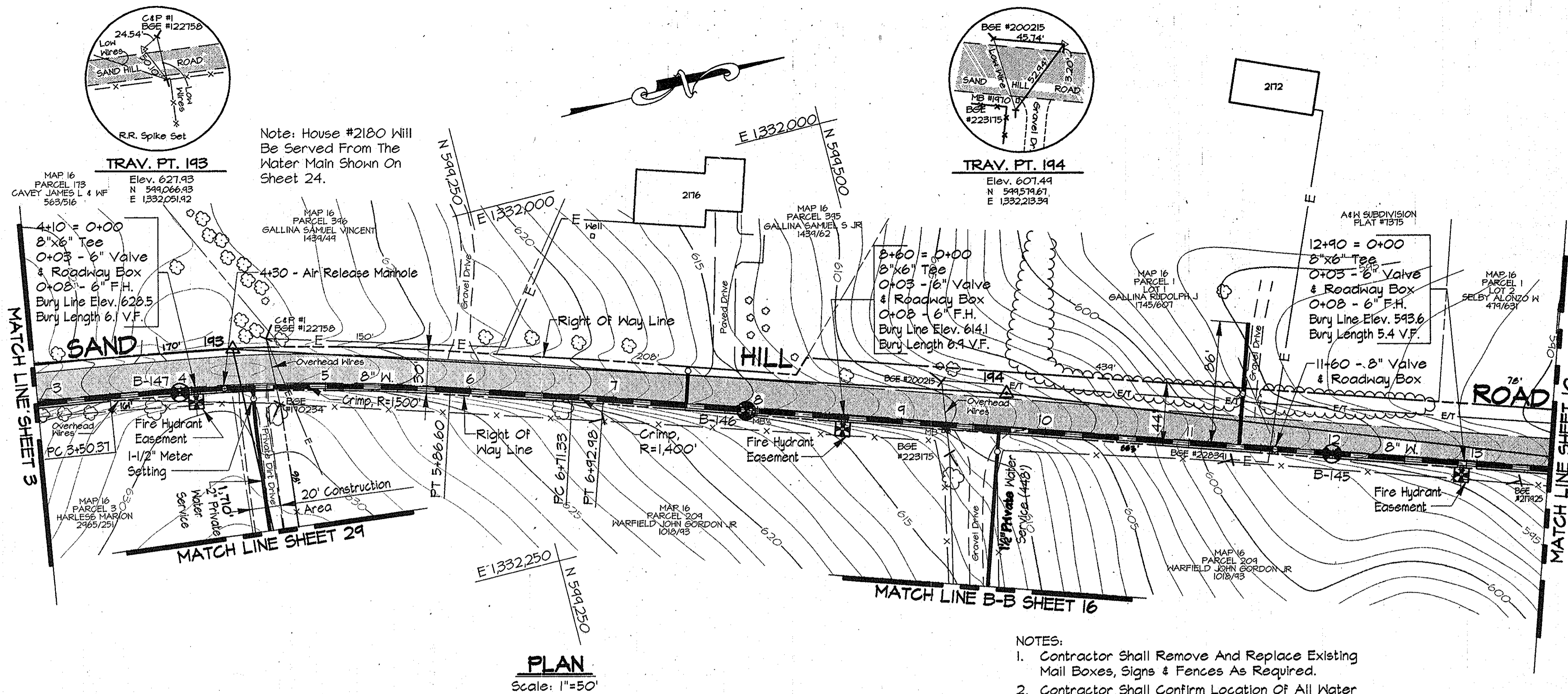
ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 10 OF 35

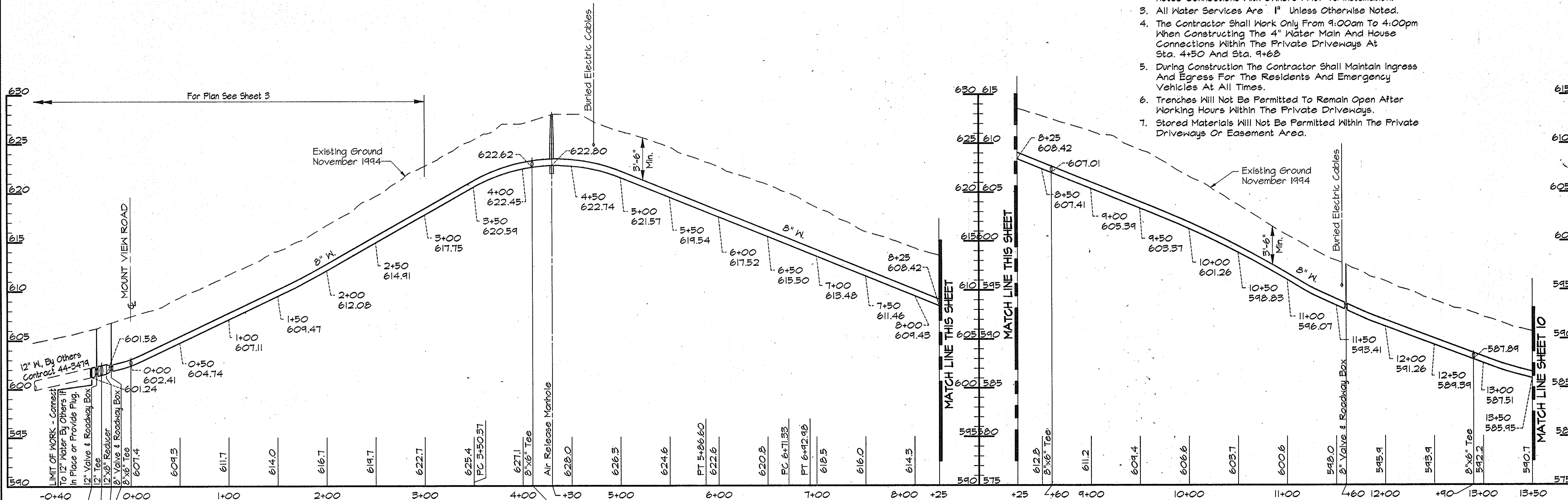
NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
192 - 193	3+67.35	26.85' Rt.	P.C. - 3+50.37
193 - 194	1+52.18	19.80' Rt.	P.T. 5+86.60
	2+36.91	19.97' Rt.	P.C. 6+71.33
	2+58.56	20.18' Rt.	P.T. - 6+92.98

Note: See Sheet 34 For Traverse Geometry Table.



- 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 1" 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. 4+50 And Sta. 9+68
 - 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.



PROFILE - SAND HILL ROAD

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

AS BUILT Dwg. No.

RK&K PROJECTS: COMMONS\CM9473\CONTR_1 ALP-1-11.DWG 03/22/1996 09:27

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Slaw 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

Richard J. Seaton 5/29/96
CHIEF, BUREAU OF ENGINEERS DATE

John A. Smith 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

John A. Smith 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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

Roll H. Hall

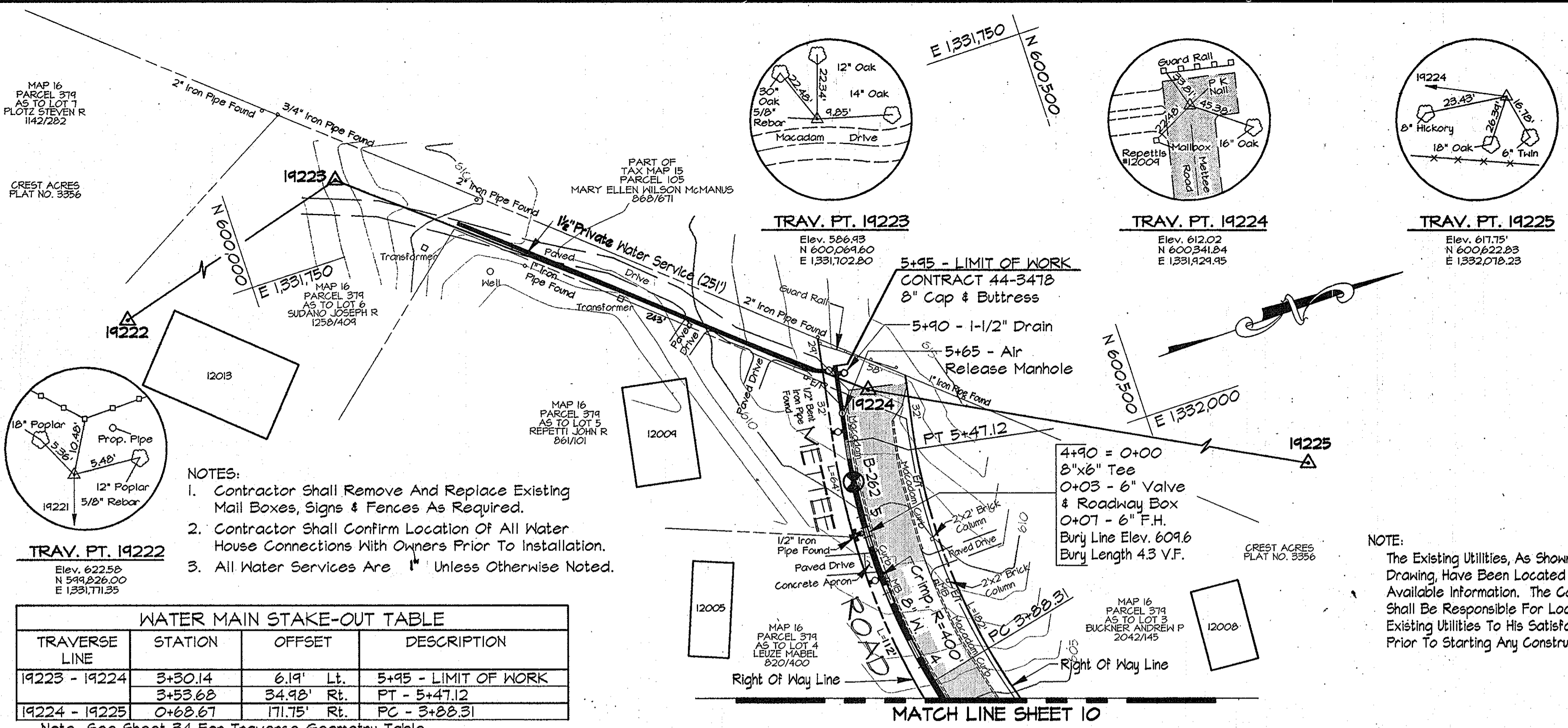
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DRN:	DCJ/DCE
CHK:	SRK
DATE:	3/96
BY:	NO.
REVISION:	
DATE:	

PLAN AND PROFILE SAND HILL ROAD
STA. -0+40 TO STA. 13+50

600' SCALE MAP NO. 16 BLOCK NO.

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 11 OF 35



- 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 1" Unless Otherwise Noted.

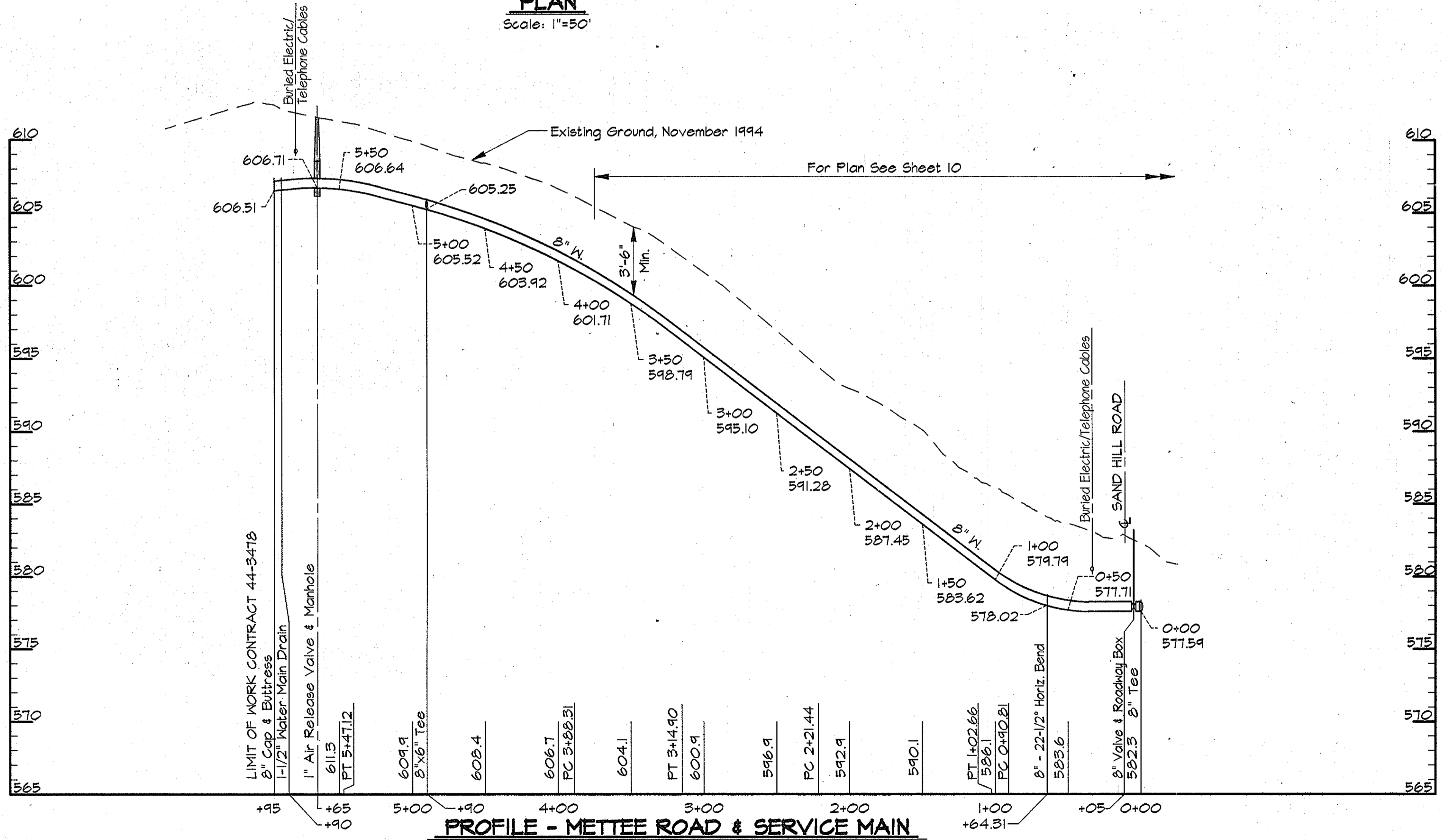
NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.

WATER MAIN STAKE-OUT TABLE

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
19223 - 19224	3+30.14	6.19' Lt.	5+95 - LIMIT OF WORK
	3+53.68	34.98' Rt.	PT - 5+47.12
19224 - 19225	0+68.67	171.75' Rt.	PC - 3+88.31

Note: See Sheet 34 For Traverse Geometry Table.

PLAN
Scale: 1"=50'



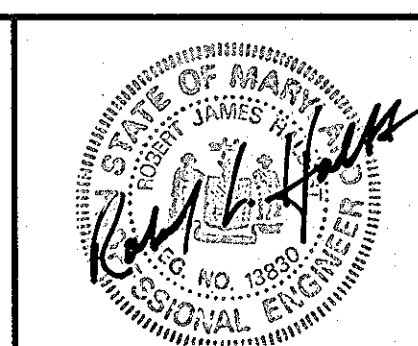
PROFILE - METTEE ROAD & SERVICE MAIN
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

RUMMEL, KLEPPER & KAHL
 PROJECTS: COMMINGA/CMP473/CONTR_1 ALP-1-12.DWG
 03/21/1996 10:48

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *[Signature]* 5/31/96
 Chief, Bureau of Engineering: *[Signature]* 5/27/96
 Chief, Bureau of Utilities: *[Signature]* 5-30-96
 Chief, Water and Sewer Design Division: *[Signature]* 5-29-96

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

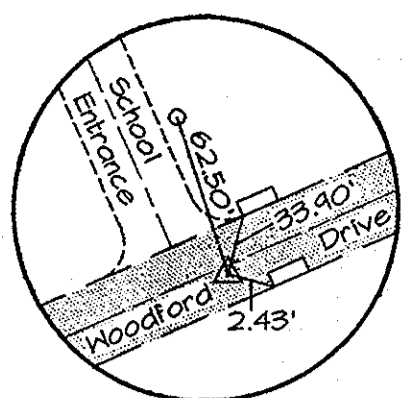


DES:	DWR			
DRN:	DCJ/DCE			
CHK:	SRK			
DATE:	3/96			
BY:	NO.	REVISION	DATE	

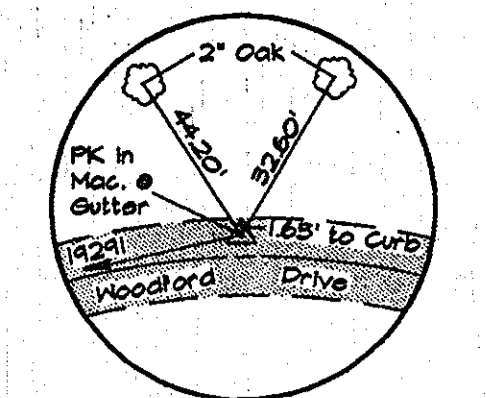
PLAN AND PROFILE METTEE ROAD
 STA. 0+00 TO STA. 5+95

ALPHA RIDGE WATER SUPPLY
 CAPITAL PROJECT W-8203
 CONTRACT NO. 44-3478
 ELECTION DISTRICT NO. 3
 HOWARD COUNTY, MARYLAND

DWG. NO.
 SCALE AS SHOWN
 SHEET 12 OF 35



TRAV. PT. 19291
Elev. 62112
N 602,715
E 1330,505.63



TRAV. PT. 19292
Elev. 63713
N 603,414.46
E 1330,306.18

4+30 = 0+00
8"x6" Tee
0+02.5 - 6" Valve
& Roadway Box
0+08 - 6" F.H.
Bury Line Elev. 614.2
Bury Length 4.8 V.F.

7+80 = 0+00
8"x6" Tee
0+02.5 - 6" Valve
& Roadway Box
0+08 - 6" F.H.
Bury Line Elev. 624.2
Bury Length 5.0 V.F.

11+30 = 0+00
8"x6" Tee
0+02.5 - 6" Valve
& Roadway Box
0+08 - 6" F.H.
Bury Line Elev. 633.4
Bury Length 5.2 V.F.

14+80 = 0+00
8"x6" Tee
0+02.5 - 6" Valve
& Roadway Box
0+08 - 6" F.H.
Bury Line Elev. 436.0
Bury Length 5.5 V.F.

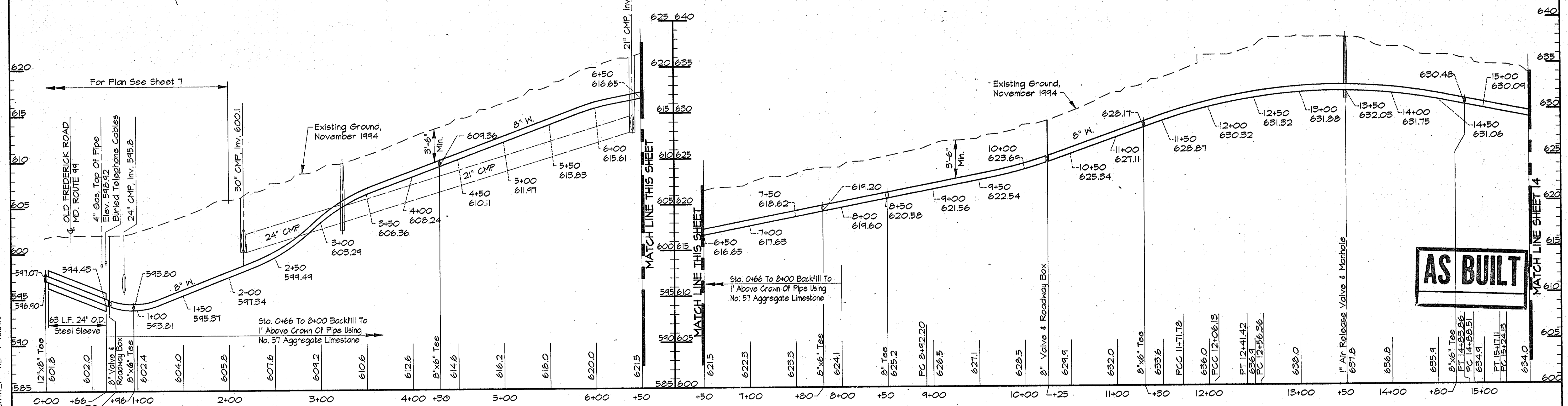
- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 1" Unless Otherwise Noted.

8" Water Main Located Behind Curb @ Property Line. Fire Hydrants Located Between Curb And Water Main.

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
19291 - 19292	2+53.20	28.23' Lt.	PC - 8+92.20
	5+31.69	19.67' Lt.	PCC - 11+71.70
	5+65.44	13.30' Lt.	PCC - 12+06.13
	5+99.79	5.24' Lt.	PT - 12+41.42
	6+14.23	1.37' Lt.	PC - 12+56.36
19292 - 19293	1+33.74	0.22' Lt.	PT - 14+83.06
	1+38.32	1.01' Lt.	PC - 14+88.51
	1+66.16	7.48' Lt.	PT - 15+17.11
	1+72.90	9.46' Lt.	PC - 15+24.13

Note: See Sheet 34 For Traverse Geometry Table.

PLAN
Scale: 1"=50'



PROFILE - WOODFORD DRIVE

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

AS BUILT

RKK2 PROJECTS: COMMOS\CM9473\CONTR_1 ALP-1-13.DWG 08:51 03/14/1996

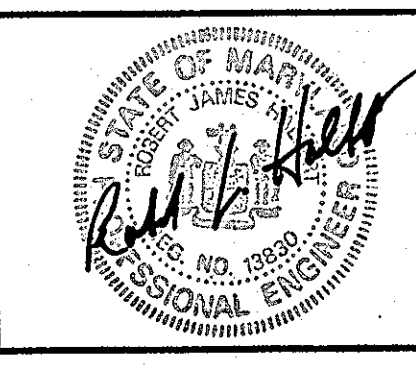
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Sam A. Shaw 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

Paul J. Sporn 5/29/96
CHIEF ENGINEER DATE

Paul J. Sporn 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



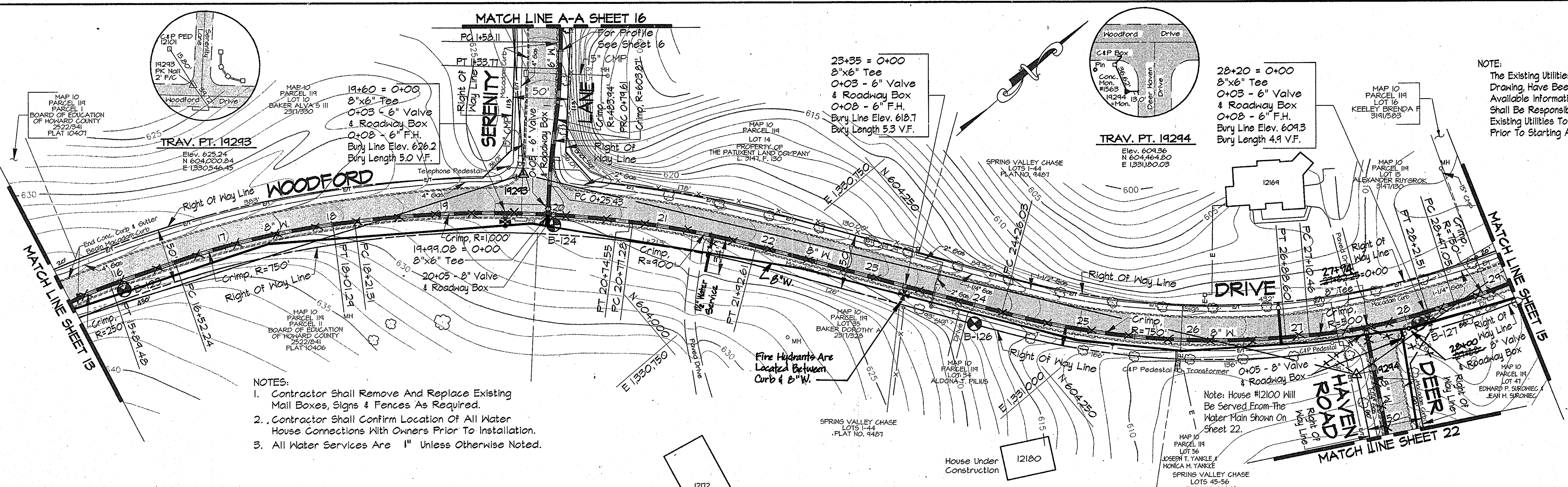
DES:	DWR				
DRN:	DCJ/DCE				
CHK:	SRK				
DATE:	3/96				
BY:	NO.	REVISION	DATE		

PLAN AND PROFILE WOODFORD DRIVE
STA. 0+00 TO STA. 15+50

600' SCALE MAP NO. 9 & 10 BLOCK NO. 24 & 19

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

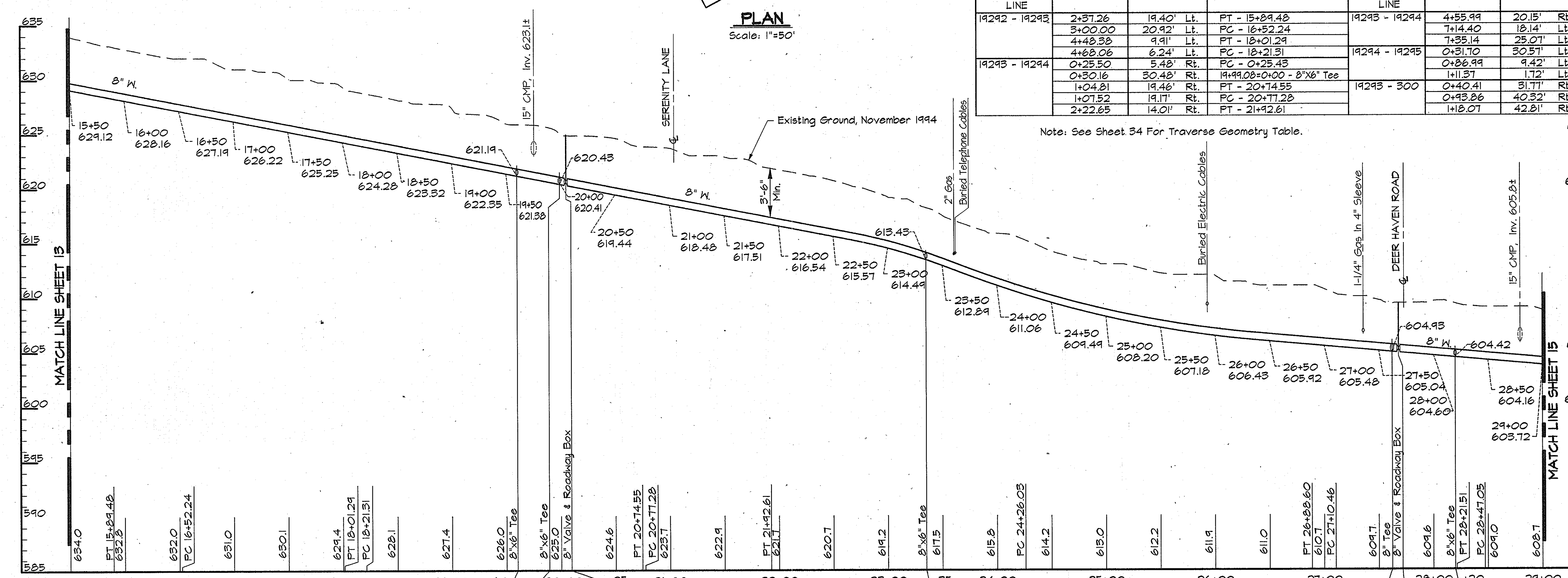
DWG. NO.
SCALE AS SHOWN
SHEET 13 OF 35



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 1" Unless Otherwise Noted.

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION	TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
19292 - 19293	2+37.26	19.40' Lt.	PT - 15+89.48	19293 - 19294	4+55.99	20.15' Rt.	PC - 24+26.03
	3+00.00	20.92' Lt.	PC - 16+52.24		7+14.40	18.14' Lt.	PT - 26+88.60
	4+48.38	9.91' Lt.	PT - 18+01.29		7+35.14	25.07' Lt.	PC - 27+10.46
	4+68.06	6.24' Lt.	PC - 18+21.51		19294 - 19295	0+31.70	30.57' Lt.
19293 - 19294	0+25.50	5.48' Rt.	PC - 0+25.43	0+86.99	9.42' Lt.	PT - 28+21.51	
	0+30.16	30.48' Rt.	19+99.08=0+00 - 8"x6" Tee	1+11.37	1.72' Lt.	PC - 28+47.05	
	1+04.81	19.46' Rt.	PT - 20+74.55	19293 - 300	0+40.41	31.77' Rt.	PRC - 0+79.61
	1+07.52	19.17' Rt.	PC - 20+77.28	0+93.86	40.32' Rt.	PT - 1+33.77	
	2+22.65	14.01' Rt.	PT - 21+92.61	1+8.07	42.81' Rt.	PC - 1+58.11	



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

AS BUILT

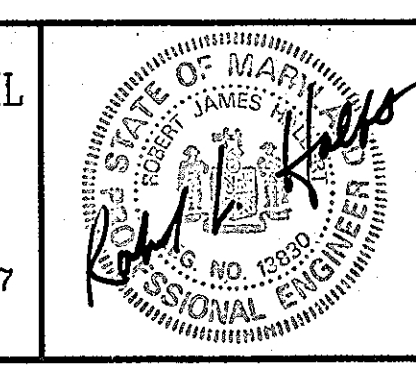
R:\K\2\PROJECTS\COMMONS\CM9473\CONTR_1 ALP-1-14.DWG 03/14/1996 14:03

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Lewis 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Brown 5-29-96
CHIEF, BUREAU OF UTILITIES DATE

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

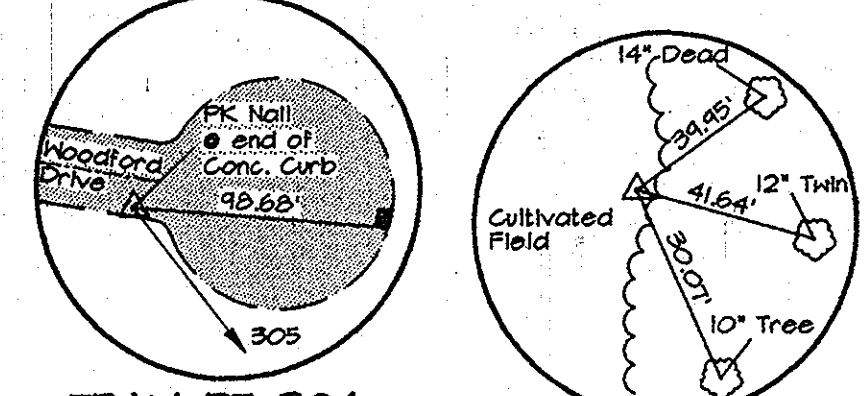
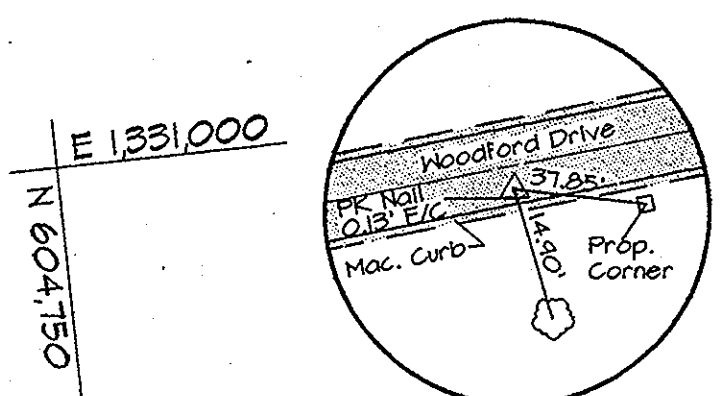


DES:	DWR				
DRN:	DCJ/DCE				
CHK:	SRK				
DATE:	3/96				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO. 9, 10	BLOCK NO. 18, 24, 13

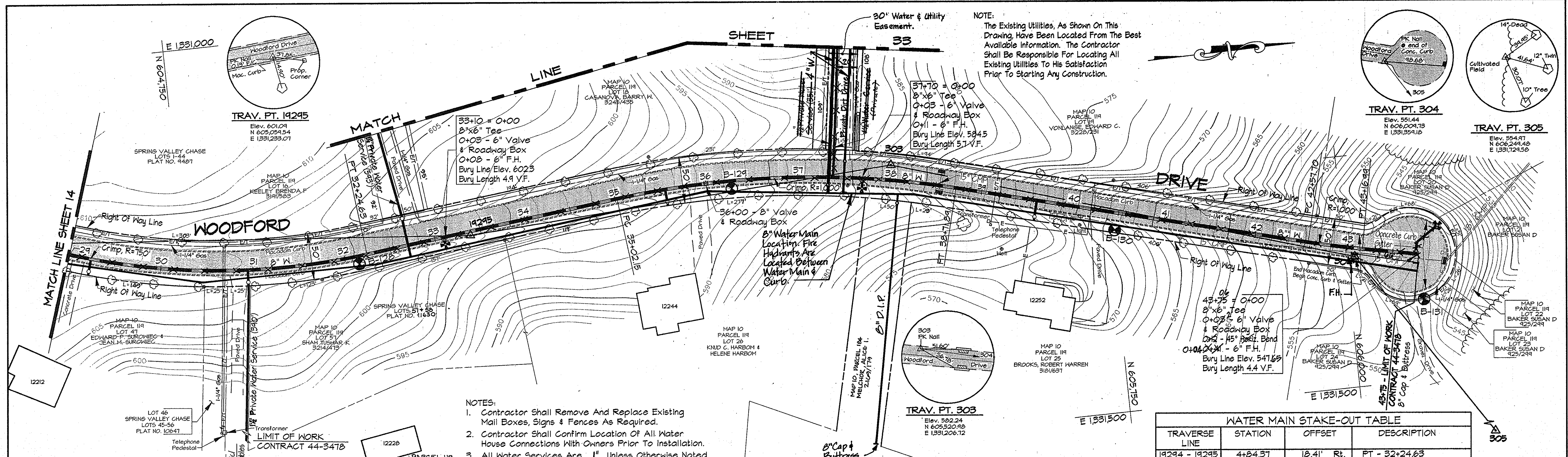
PLAN AND PROFILE WOODFORD DRIVE
STA. 15+50 TO STA. 29+00

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 14 OF 35



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.

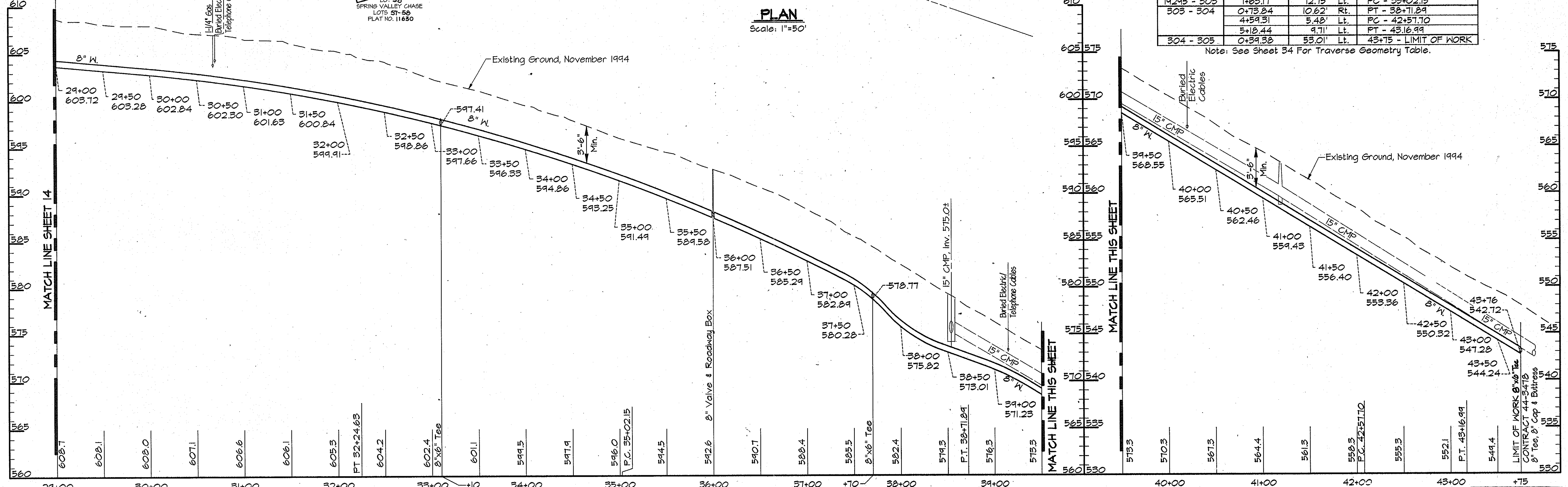


- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are 1" Unless Otherwise Noted.

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
19294 - 19295	4+84.37	12.41' Rt.	PT - 32+24.63
19295 - 303	1+63.17	12.75' Lt.	PC - 35+02.15
303 - 304	0+73.84	10.62' Rt.	PT - 38+71.84
	4+59.31	5.48' Lt.	PC - 42+51.70
304 - 305	5+18.44	9.71' Lt.	PT - 43+16.99
	0+39.38	53.01' Lt.	43+75 - LIMIT OF WORK

Note: See Sheet 34 For Traverse Geometry Table.

PLAN
Scale: 1"=50'



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

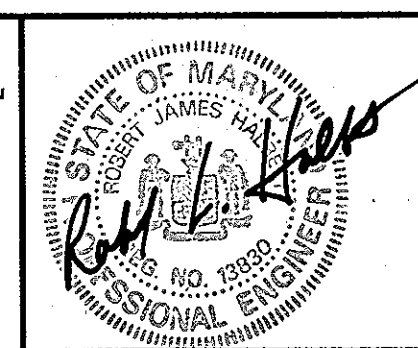
RK&K PROJECTS: COMMUNOS\CM9473\CONTR_1 ALP-1-15-DWG 03/22/1996 11:45

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Lewis 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

John J. Brown 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

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



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

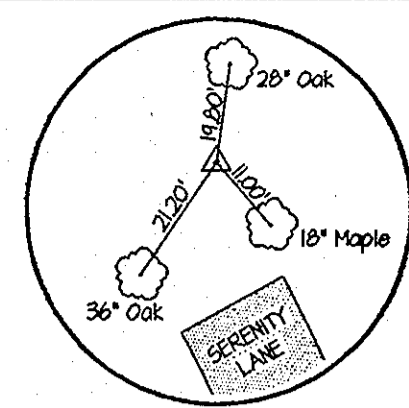
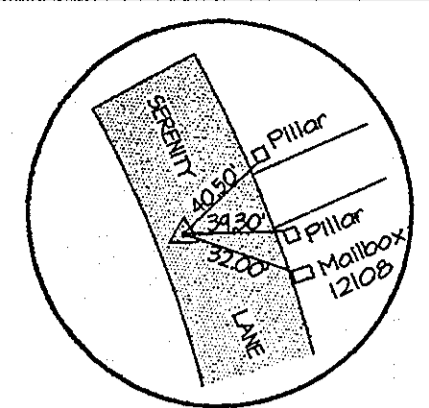
PLAN AND PROFILE WOODFORD DRIVE
STA. 29+00 TO STA. 43+75

600' SCALE MAP NO. 10 BLOCK NO. 13

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

AS BUILT

SCALE AS SHOWN
SHEET 15 OF 35

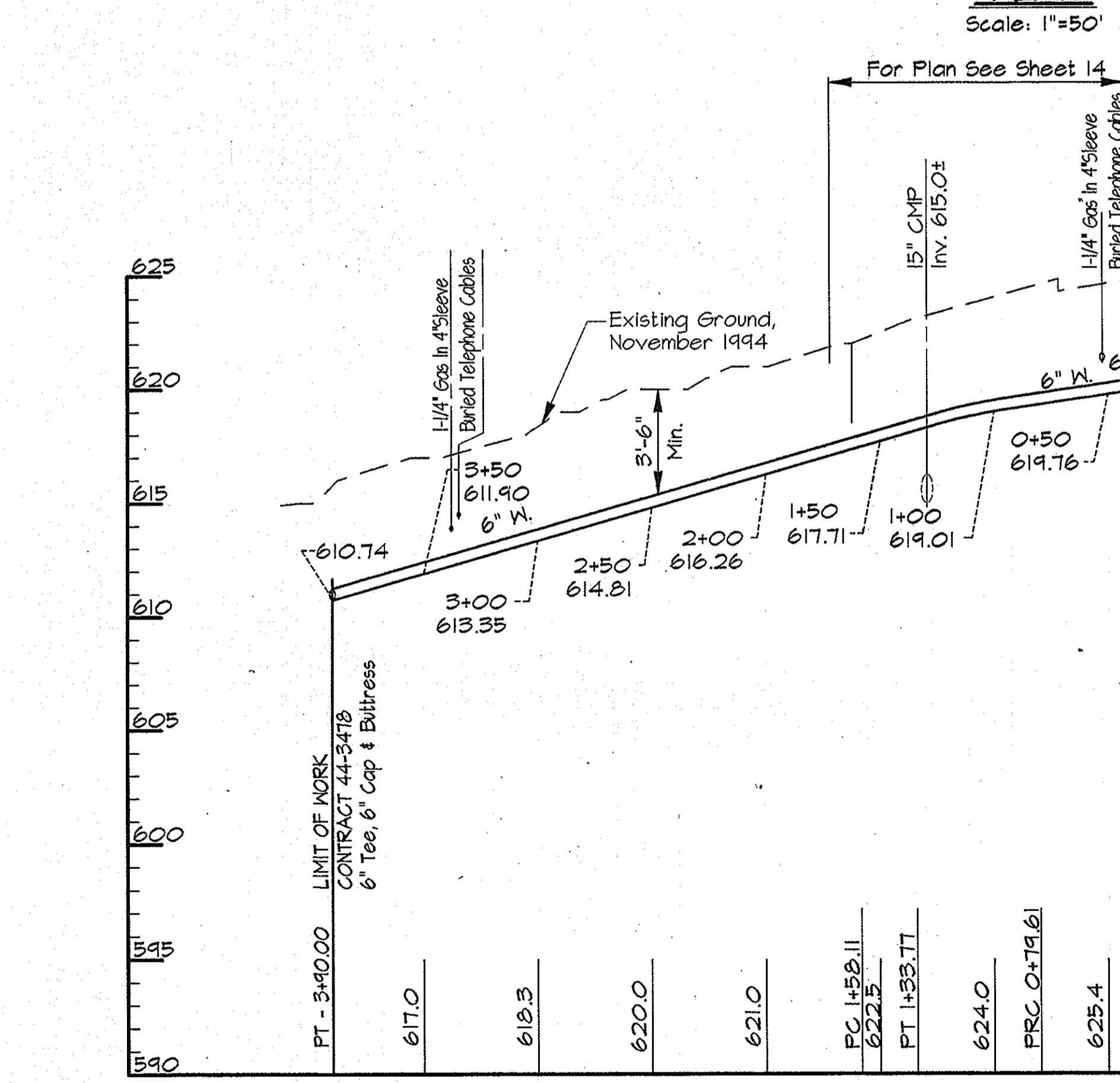


TRAV. PT. 300
Elev. 618.72
N 604152.26
E 1330238.56

TRAV. PT. 3014
N 604209.15
E 1330116.22

PT 3+90 = 0+00
6" Tee
0+05 - 6" Valve
& Roadway Box
0+07 - 6" F.H.
Bury Line Elev. 615.40
Bury Length 4.7 V.F.

PLAN
Scale: 1"=50'



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

STATION	ELEVATION	DESCRIPTION
PT. 3+90.00	617.0	6" Tee, 6' Cap & Buttress
3+00	618.3	
2+50	620.0	
2+00	621.0	
1+50	622.5	
1+00	623.7	
0+50	624.0	
0+05	625.4	
0+00	625.4	6" Valve & Roadway Box

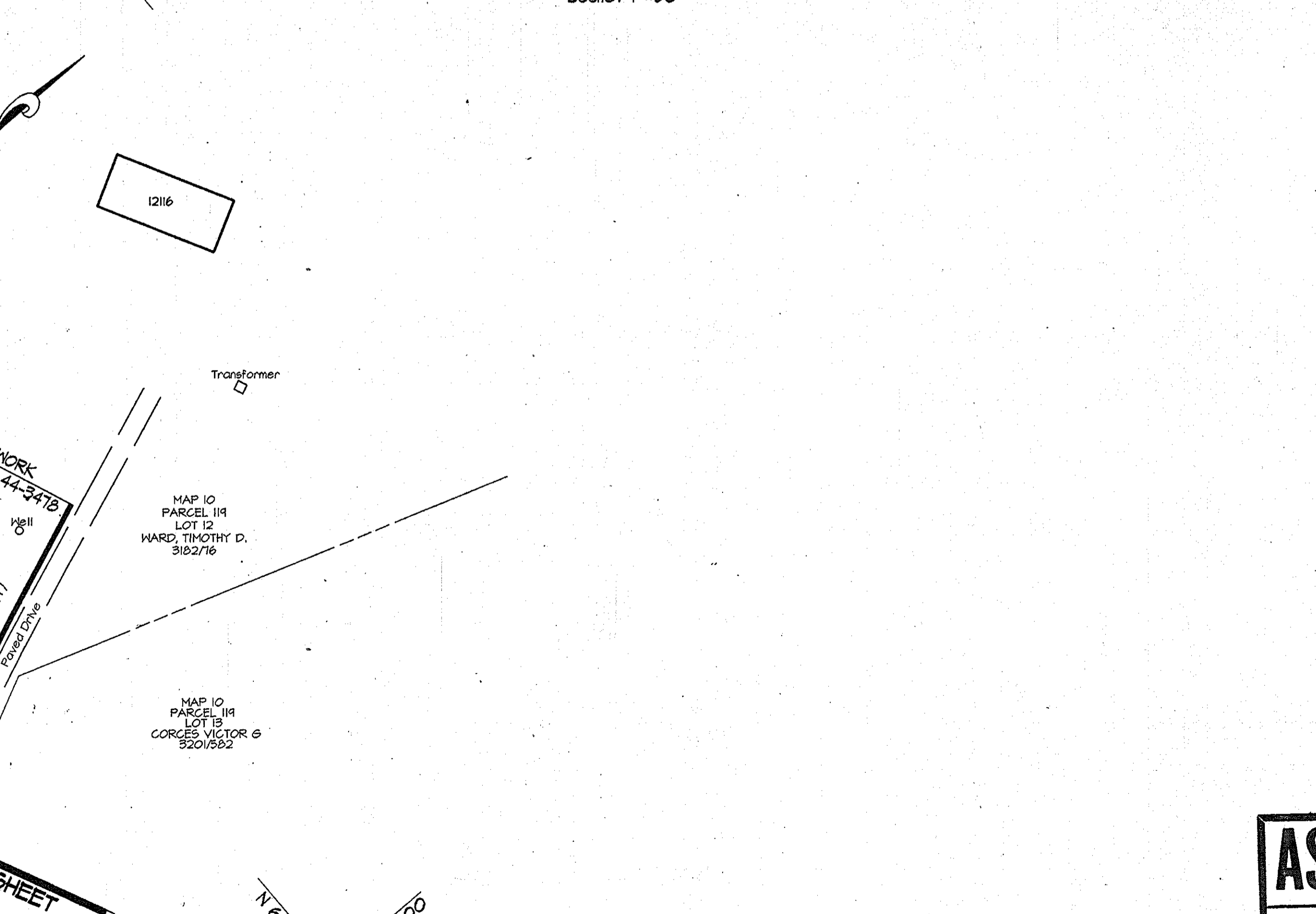
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
300 - 3014	0+82.26	17.75' Rt.	P.T. - 3+90.00, 6" Tee & L.O.W.

Note: See Sheet 34 For Traverse Geometry Table.

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 1" Unless Otherwise Noted.

PLAN
Scale: 1"=50'



PLAN
Scale: 1"=50'

AS BUILT

RK&K PROJECTS: COMMING'S CM9473 CONTR. 1 ALP-1-16.DWG 03/22/1996 14:38

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

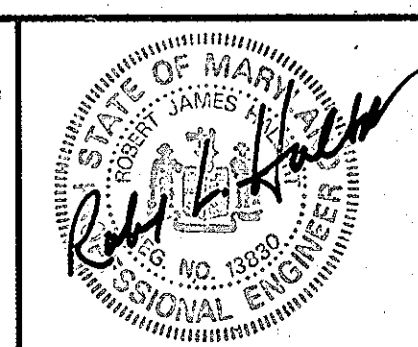
James P. Shaw 3/31/96
DIRECTOR OF PUBLIC WORKS DATE

Richard J. Sporn 5/23/96
CHIEF, BUREAU OF ENGINEERING DATE

Richard J. Sporn 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

Debra A. Kiser 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



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

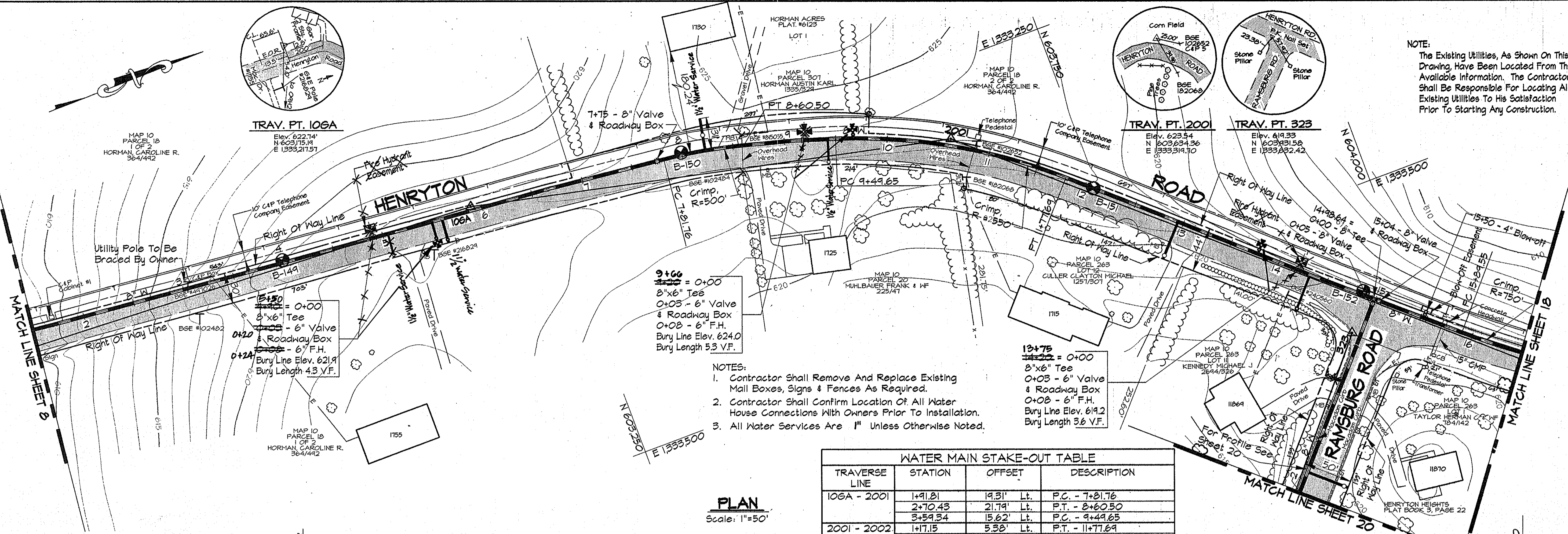
PLAN AND PROFILE SERENITY LANE
STA. 0+00 TO STA. 4+12.48
PLAN WATER SERVICE

600' SCALE MAP NO. 9 & 16 BLOCK NO. 15 & 1

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 16 OF 35

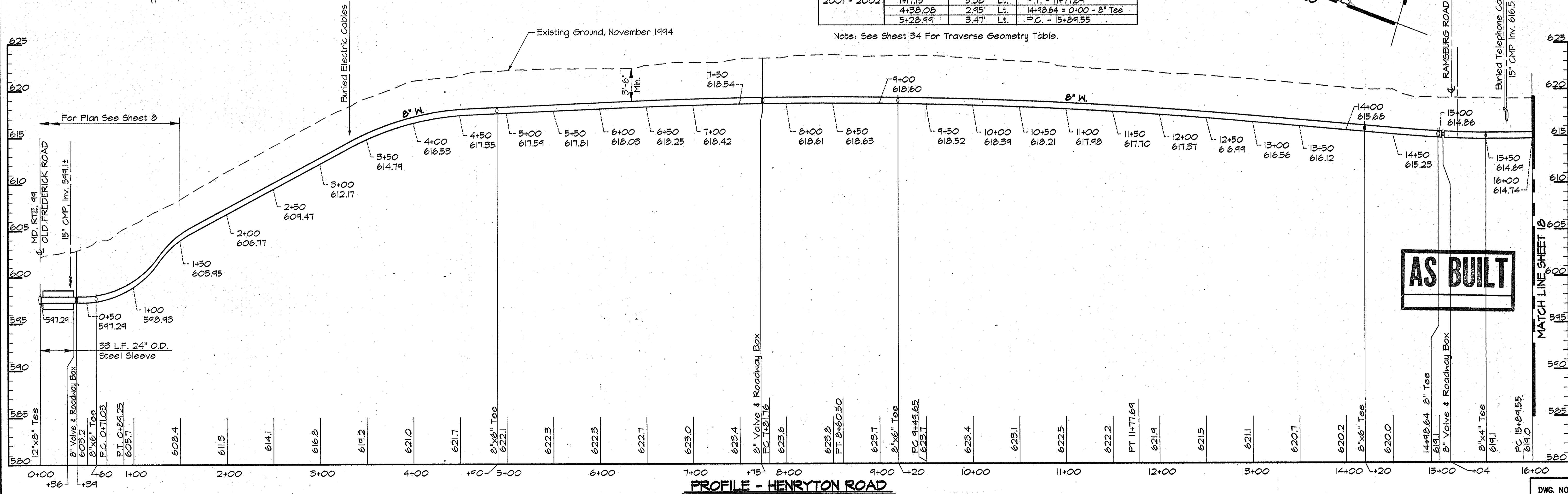
NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.



PLAN
Scale: 1"=50'

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
106A - 2001	1+91.81	19.31' Lt.	P.C. - 7+21.76
	2+70.43	21.74' Lt.	P.T. - 8+60.50
	3+59.34	15.62' Lt.	P.C. - 9+49.65
2001 - 2002	1+71.15	5.33' Lt.	P.T. - 11+77.69
	4+38.08	2.95' Lt.	14+98.64 = 0+00 - 8" Tee
	5+28.99	3.47' Lt.	P.C. - 15+89.55

Note: See Sheet 34 For Traverse Geometry Table.



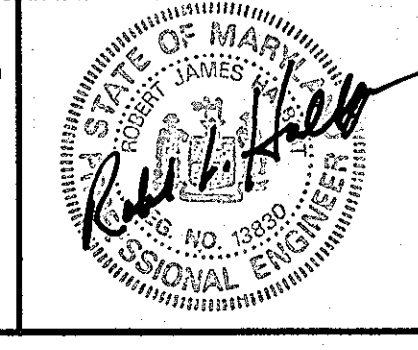
PROFILE - HENRYTON ROAD
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

RK&K PROJECTS: COMMINGS (CM9473) CONTR. 1 ALP-1-17.DWG
 03/22/1996 13:55

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *James J. Lewis* 5/31/96
 Chief, Bureau of Engineering: *Robert J. Sporn* 5/29/96
 Chief, Bureau of Utilities: *Robert J. Sporn* 5-29-96
 Chief, Water and Sewer Design Division: *Robert J. Sporn* 5-29-96

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

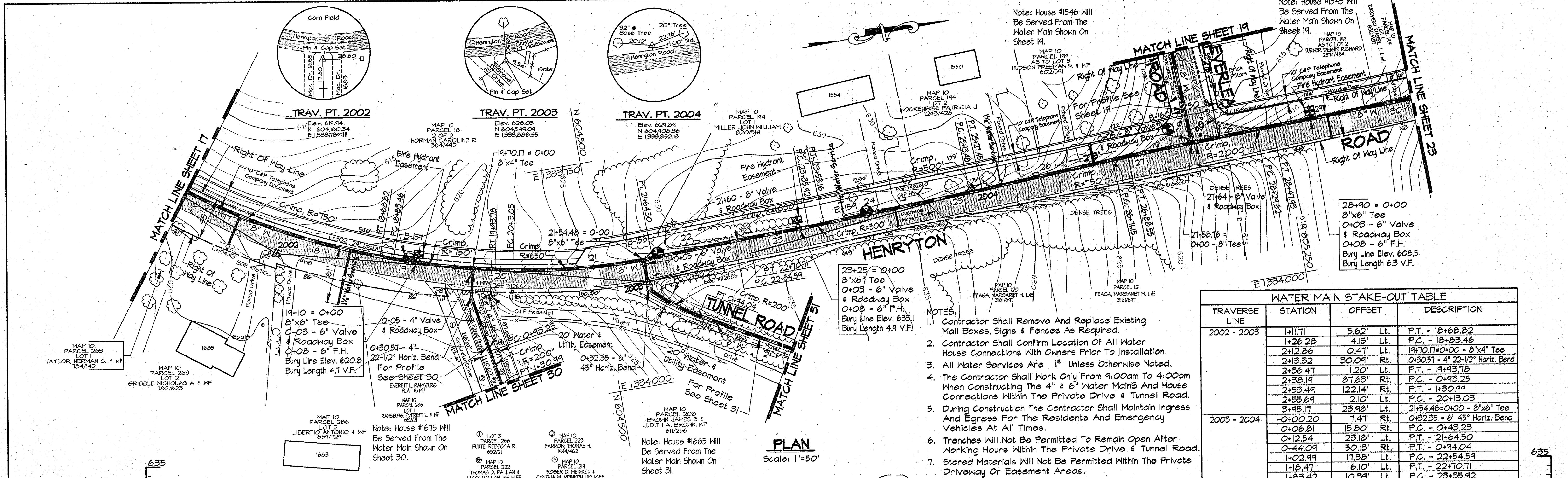


DES:	DWR				
DRN:	DCJ/DCE				
CHK:	SRK				
DATE:	3/96				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO. 10	BLOCK NO. 13, 14, 19, & 20

PLAN AND PROFILE HENRYTON ROAD
 STA. 0+00 TO STA. 16+00

ALPHA RIDGE WATER SUPPLY
 CAPITAL PROJECT W-8203
 CONTRACT NO. 44-3478
 ELECTION DISTRICT NO. 3
 HOWARD COUNTY, MARYLAND

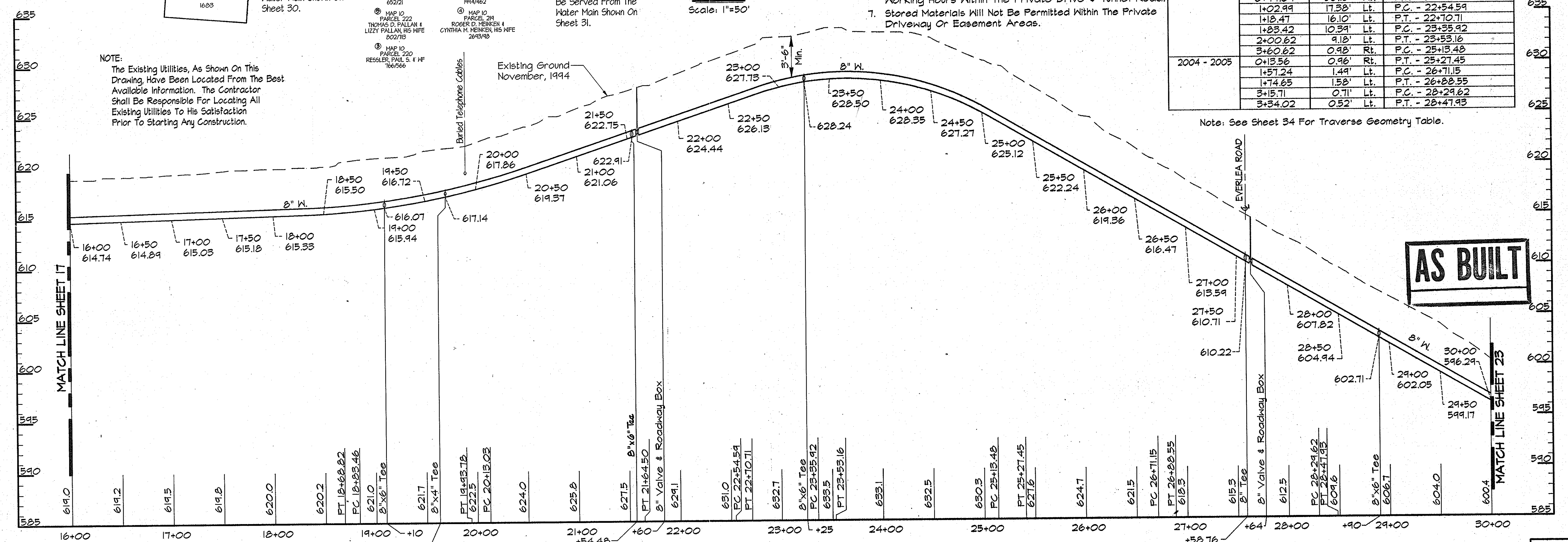
DWG. NO.
 SCALE AS SHOWN
 SHEET 17 OF 35



WATER MAIN STAKE-OUT TABLE

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
2002 - 2003	+11.71	5.62' Lt.	P.T. - 18+68.82
	+12.28	4.15' Lt.	P.C. - 18+83.46
	+12.86	0.47' Lt.	19+70.17=0+00 - 8"x4" Tee
	+13.32	30.09' Rt.	0+30.51 - 4" 22-1/2" Horiz. Bend
	+13.47	1.20' Lt.	P.T. - 19+93.78
	+13.94	87.63' Rt.	P.C. - 0+93.25
2003 - 2004	+14.41	122.14' Rt.	P.T. - 1+30.99
	+15.69	2.10' Lt.	P.C. - 20+13.03
	+16.17	23.98' Lt.	21+54.48=0+00 - 8"x6" Tee
	+17.20	7.47' Rt.	0+32.35 - 6" 45" Horiz. Bend
	+18.81	15.80' Rt.	P.C. - 0+43.23
	+19.54	23.18' Lt.	P.T. - 21+64.50
2004 - 2005	+20.09	50.13' Rt.	P.T. - 0+94.04
	+20.99	17.38' Lt.	P.C. - 22+54.59
	+21.47	16.10' Lt.	P.T. - 22+70.71
	+21.83	10.39' Lt.	P.C. - 23+35.92
	+22.62	9.18' Lt.	P.T. - 23+53.16
	+23.60	0.98' Rt.	P.C. - 25+13.48
2004 - 2005	+24.56	0.96' Rt.	P.T. - 25+27.45
	+25.24	1.49' Lt.	P.C. - 26+71.15
	+26.65	1.58' Lt.	P.T. - 26+88.55
	+27.71	0.71' Lt.	P.C. - 28+29.62
+28.02	0.52' Lt.	P.T. - 28+47.93	

- 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 1" Unless Otherwise Noted.
 - The Contractor Shall Work Only From 9:00am To 4:00pm When Constructing The 4" & 6" Water Mains And House Connections Within The Private Drive & Tunnel Road.
 - 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 Drive & Tunnel Road.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Areas.



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

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.

Note: See Sheet 34 For Traverse Geometry Table.

AS BUILT

RKK2/PROJECTS:COMMNOS/CH9473/CONTR./1/ALP-1-18.DWG 03/22/1996 14:27

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert J. Smith 5/3/96
DIRECTOR OF PUBLIC WORKS

Richard J. Smith 5/29/96
CHIEF, BUREAU OF ENGINEERING

Richard J. Smith 5-30-96
CHIEF, BUREAU OF UTILITIES

Richard J. Smith 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION

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

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

PLAN AND PROFILE HENRYNTON ROAD
STA. 16+00 TO STA. 30+00

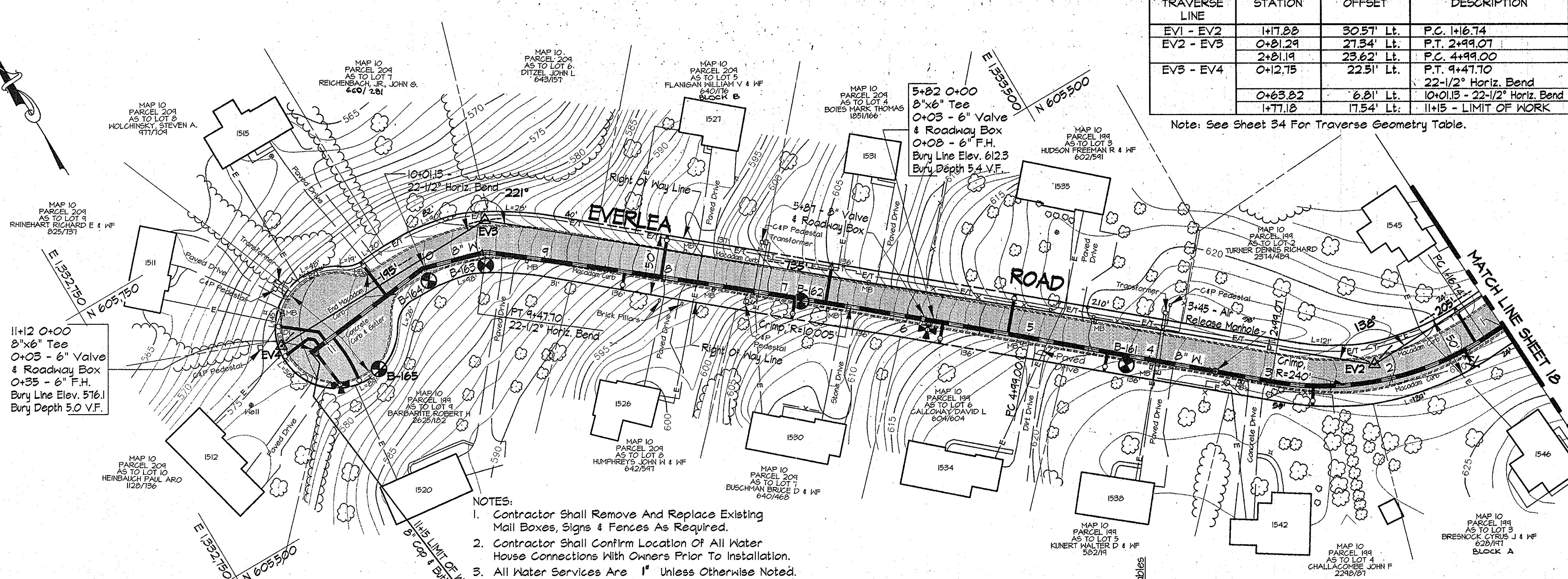
600' SCALE MAP NO. 10 BLOCK NO. 14

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 18 OF 35

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
EV1 - EV2	1+17.88	30.57' Lt.	P.C. 1+16.74
EV2 - EV3	0+81.29	27.34' Lt.	P.T. 2+49.07
	2+81.19	23.62' Lt.	P.C. 4+49.00
EV3 - EV4	0+12.75	22.51' Lt.	P.T. 4+47.70
	0+63.82	6.81' Lt.	10+01.13 - 22-1/2° Horiz. Bend
	1+77.13	17.54' Lt.	11+15 - LIMIT OF WORK

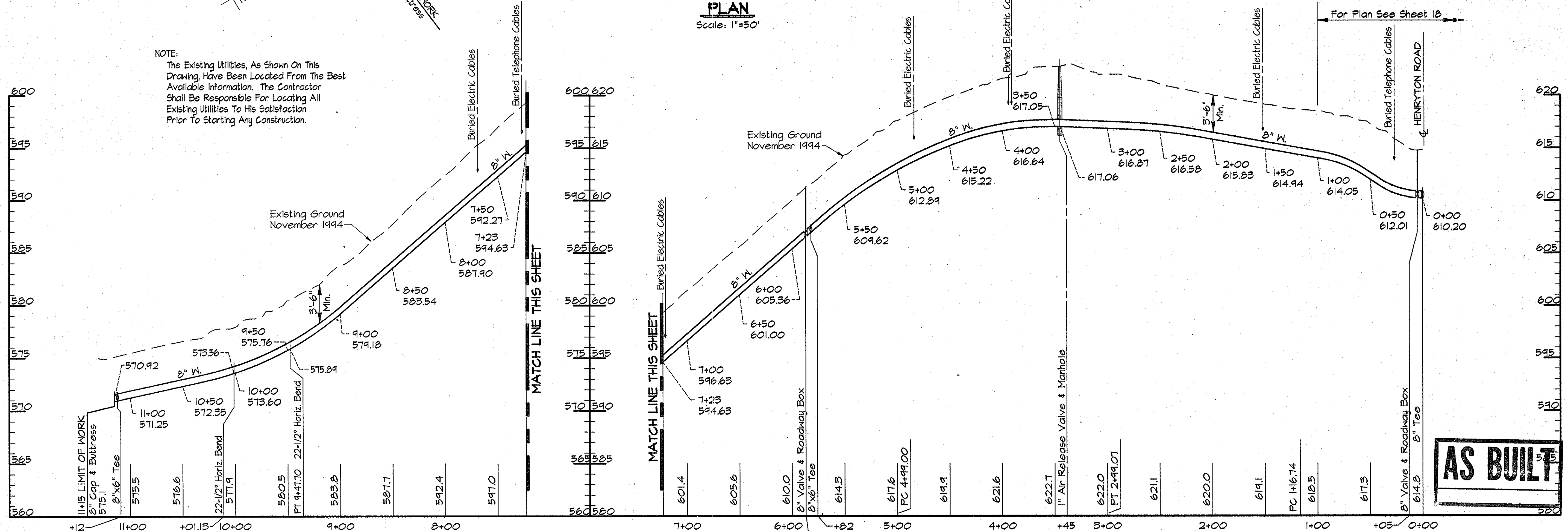
Note: See Sheet 34 For Traverse Geometry Table.



- 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 1" Unless Otherwise Noted.

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.



PROFILE - EVERLEA ROAD

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

RKK2/RKK2: COMMINS/048473/CONTR. 1 ALP-1-19.DWG 03/14/1996 10:31

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Alve 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

Richard J. Seaman 5/29/96
CHIEF, BUREAU OF ENGINEERS DATE

Richard J. Seaman 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

Richard J. Seaman 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



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

PLAN AND PROFILE EVERLEA ROAD
STA. 0+00 TO STA. 11+85

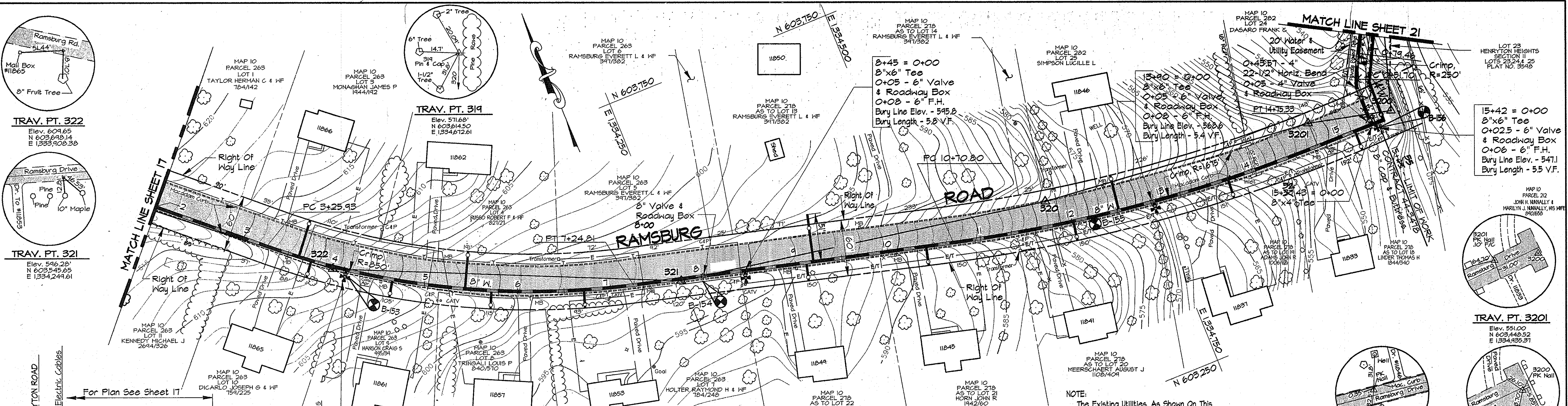
600' SCALE MAP NO. 10 BLOCK NO. 13, 14

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.

SCALE AS SHOWN

SHEET 19 OF 35



WATER MAIN STAKE-OUT TABLE

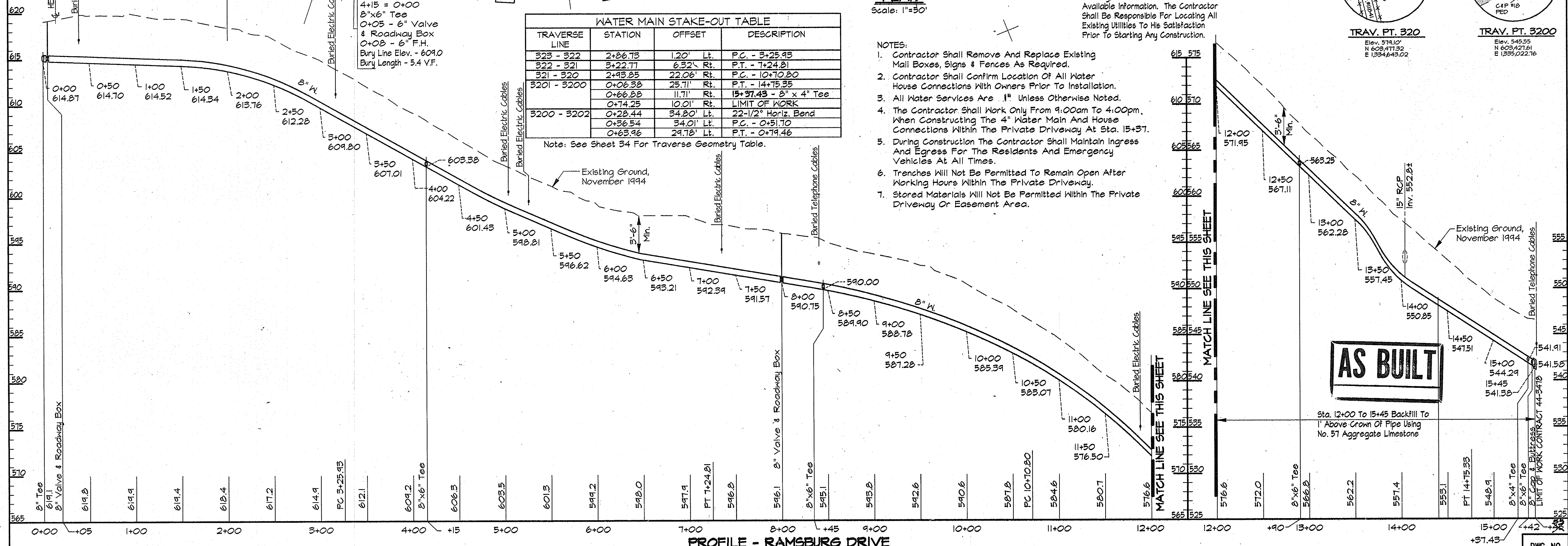
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
323 - 322	2+86.73	1.20' Lt.	P.C. - 3+25.43
322 - 321	3+22.77	6.32' Rt.	P.T. - 7+24.81
321 - 320	2+93.85	22.06' Rt.	P.C. - 10+70.80
3201 - 3200	0+06.38	25.71' Rt.	P.T. - 14+75.35
	0+68.88	11.71' Rt.	15+37.43 - 8" x 4" Tee
3200 - 3202	0+74.25	10.01' Rt.	LIMIT OF WORK
	0+28.44	34.80' Lt.	22-1/2" Horiz. Bend
	0+36.54	34.01' Lt.	P.C. - 0+51.70
	0+63.96	24.78' Lt.	P.T. - 0+74.46

Note: See Sheet 34 For Traverse Geometry Table.

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 1" 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 Driveway At Sta. 15+37.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.



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

RJK/PROJECTS/COMMING/CM9473/CONTR-1 ALP-1-20.DWG
 03/22/1996 14:40

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Chew 5/29/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Bannan 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

Paul D. Sappan 5/29/96
CHIEF, BUREAU OF ENGINEERING DATE

W. J. Donagan 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



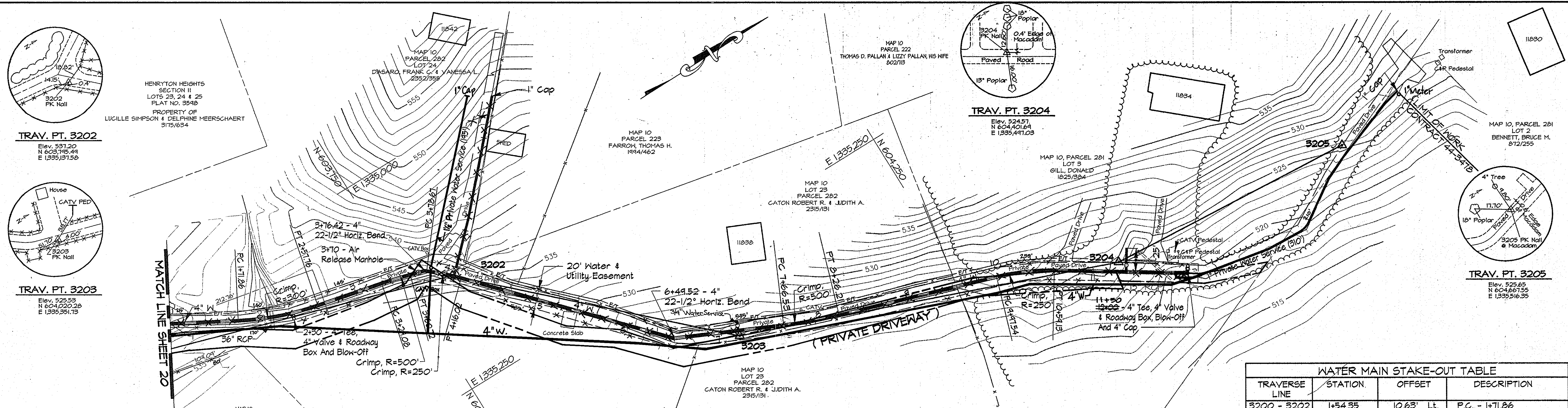
DES:	DWR	BY:	NO.	REVISION	DATE:
DRN:	DCJ/DCE				
CHK:	SRK				
DATE:	3/96				

PLAN AND PROFILE RAMSBURG DRIVE
STA. 0+00 TO STA. 15+45

600' SCALE MAP NO. 10 BLOCK NO. 14 & 20

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 20 OF 35

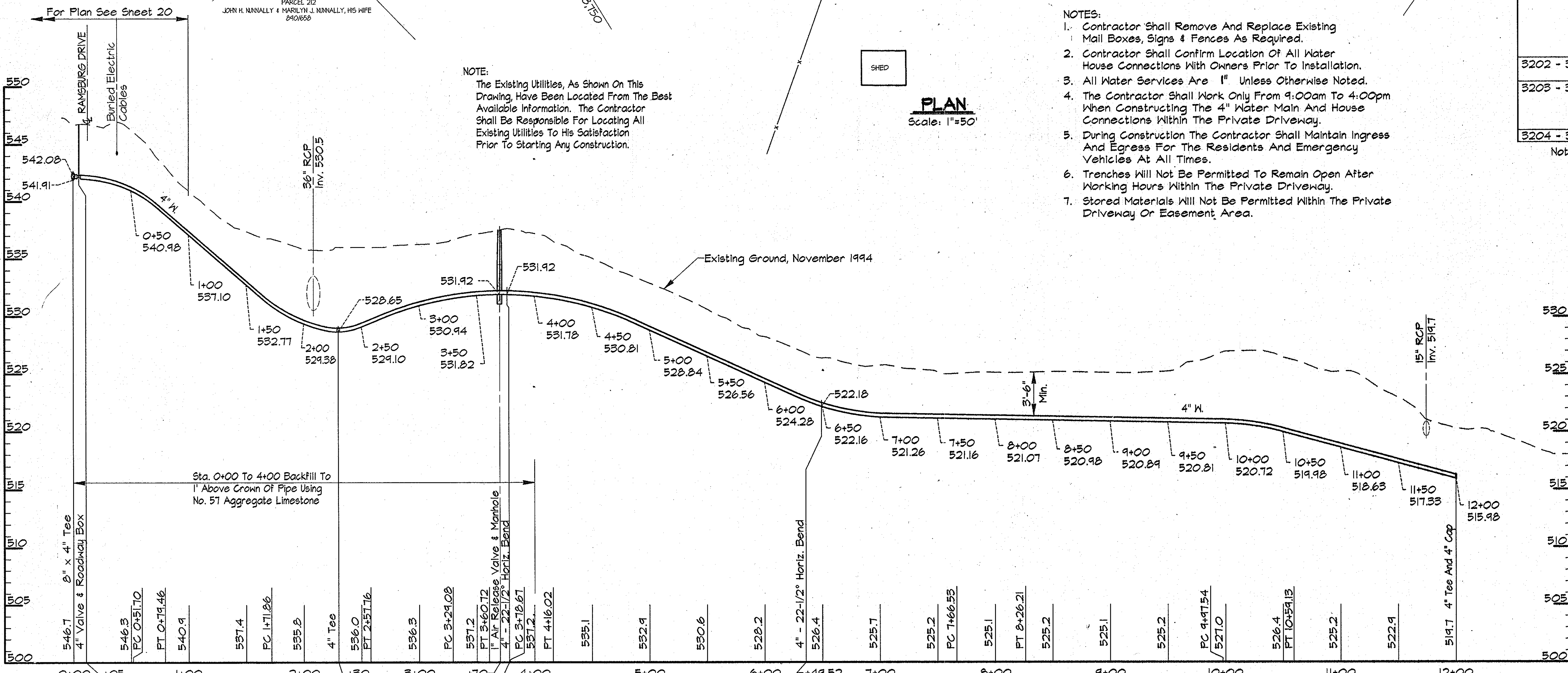


WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
3200 - 3202	1+54.35	10.63' Lt.	P.C. - 1+71.86
	2+39.78	5.03' Lt.	P.T. - 2+51.76
	3+10.88	10.56' Lt.	P.C. - 3+29.08
	3+42.48	12.02' Lt.	P.T. - 3+60.72
	3+58.18	12.24' Lt.	3+76.42 - 22-1/2° Horiz. Bend
3202 - 3203	3+60.27	11.41' Lt.	P.C. - 3+78.67
	0+09.74	0.68' Rt.	P.T. - 4+16.02
	2+42.72	16.81' Rt.	6+49.52 - 22-1/2° Horiz. Bend
3203 - 3204	0+47.67	2.10' Lt.	P.C. - 7+66.53
	1+07.31	1.27' Lt.	P.T. - 8+26.21
	2+78.47	9.11' Lt.	P.C. - 9+97.54
	3+39.71	4.36' Lt.	P.T. - 10+59.13
3204 - 3205	0+60.01	44.61' Rt.	12+00 - L.O.W.

Note: See Sheet 34 For Traverse Geometry Table.

- 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 1" 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 Driveway.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.

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.



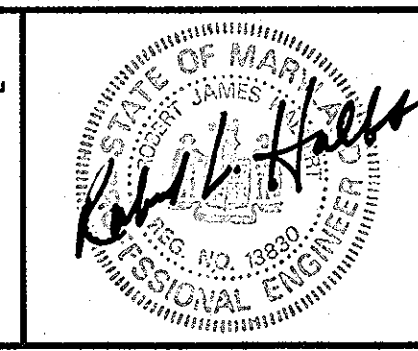
PROFILE SERVICE MAIN
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

RUMMEL, KLEPPER & KAHL
 PROJECTS: COMMINGS/CAR9473/CONTR_1
 03/14/1996 11:02 ALP-1-1-21.dwg

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *James A. Lewis* 5/31/96
 Chief, Bureau of Engineering: *Robert E. Brown* 5/29/96
 Chief, Bureau of Utilities: *Robert E. Brown* 5-29-96
 Chief, Water and Sewer Design Division: *Robert E. Brown* 5-29-96

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

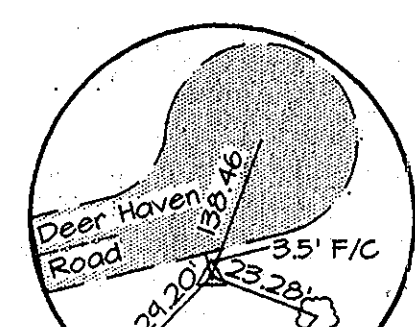
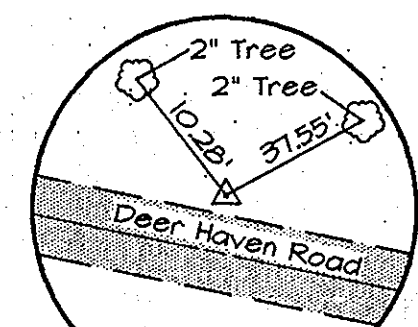


DES:	DWR				
DRN:	DCE/DWR				
CHK:	SRK				
DATE:	3/96	BY:	NO.	REVISION	DATE

PLAN AND PROFILE SERVICE MAINS
 STA. 0+00 TO STA. 12+00
 600' SCALE MAP NO. 10 BLOCK NO. 14 & 20

ALPHA RIDGE WATER SUPPLY
 CAPITAL PROJECT W-8203
 CONTRACT NO. 44-3478
 ELECTION DISTRICT NO. 3
 HOWARD COUNTY, MARYLAND
 DWG. NO. SCALE AS SHOWN SHEET 21 OF 35

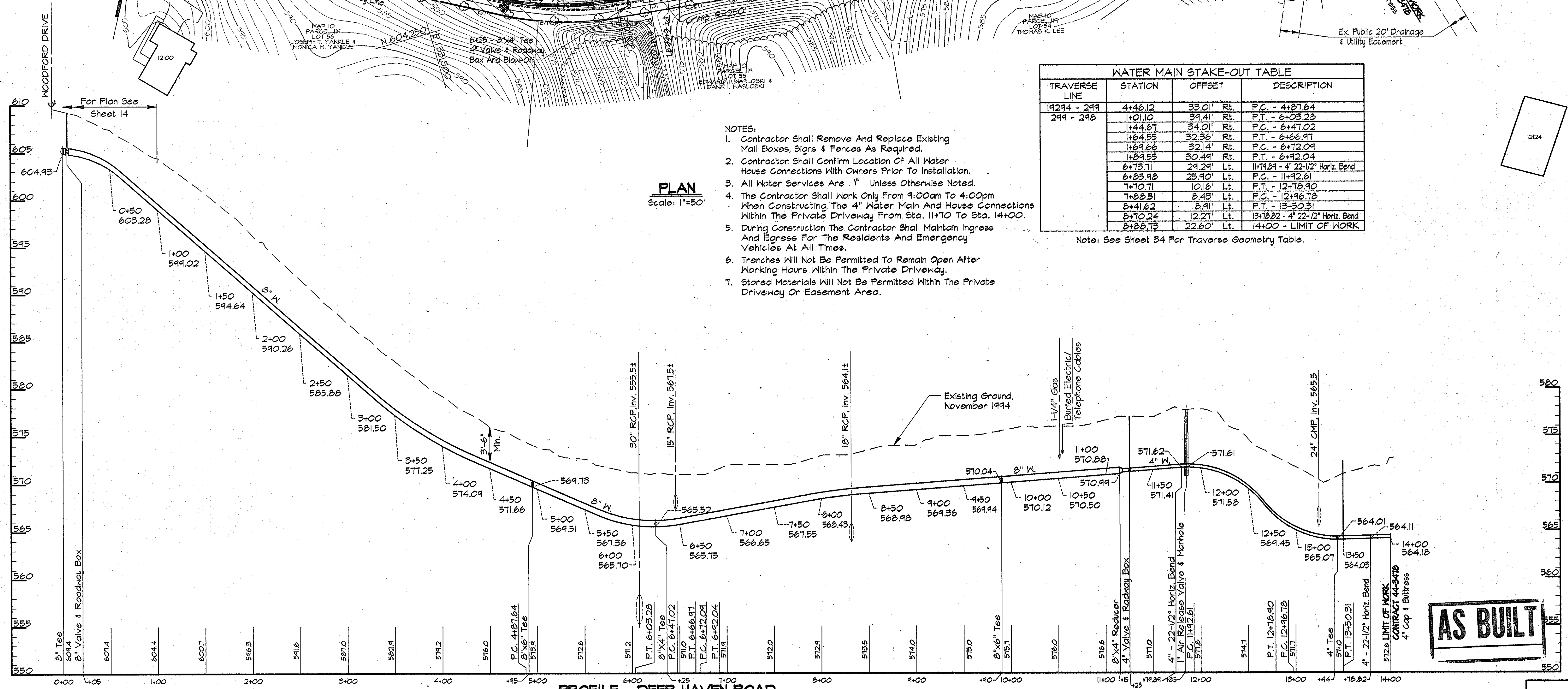
NOTE:
The Existing Utilities, As Shown On This Drawing, Have Been Located From The Best Available Information. The Contractor Shall Be Responsible For Locating All Existing Utilities To His Satisfaction Prior To Starting Any Construction.



TRAV. PT. 299
Elev. 575.22
N 604,291.83
E 1331,600.45

TRAV. PT. 298
Elev. 576.62
N 604,174.51
E 1332,082.31

4+45 = 0+00
8"x6" Tee
0+04 - 6" Valve
& Roadway Box
0+07 - 6" F.H.
Bury Line Elev. 574.6
Bury Length 4.9 V.F.



TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
19294 - 299	4+46.12	33.01' Rt.	P.C. - 4+27.64
299 - 298	+01.10	39.41' Rt.	P.T. - 6+03.28
	+44.67	34.01' Rt.	P.C. - 6+47.02
	+64.55	32.36' Rt.	P.T. - 6+66.97
	+69.66	32.14' Rt.	P.C. - 6+72.09
	+89.55	30.49' Rt.	P.T. - 6+92.04
	6+73.71	29.29' Lt.	11+74.89 - 4' 22-1/2" Horiz. Bend
	6+85.98	25.90' Lt.	P.C. - 11+92.61
	7+70.71	10.16' Lt.	P.T. - 12+78.90
	7+88.51	8.43' Lt.	P.C. - 12+96.78
	8+41.62	8.91' Lt.	P.T. - 13+50.31
	8+70.24	12.27' Lt.	13+78.82 - 4' 22-1/2" Horiz. Bend
	8+88.73	22.60' Lt.	14+00 - LIMIT OF WORK

Note: See Sheet 34 For Traverse Geometry Table.

- 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 1" 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 Driveway From Sta. 11+70 To Sta. 14+00.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.

PLAN
Scale: 1"=50'

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

AS BUILT

RHZ/PROJECTS/COMMUNITY/04/12/2016/ALP-1-22 03/22/1996 15:16

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Shaw 5/16/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Bennett 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

Richard J. Depam 5/29/96
CHIEF, BUREAU OF ENGINEERING DATE

Op. On. Jim 5-29-96
CHIEF WATER AND SEWER DESIGN DIVISION DATE

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

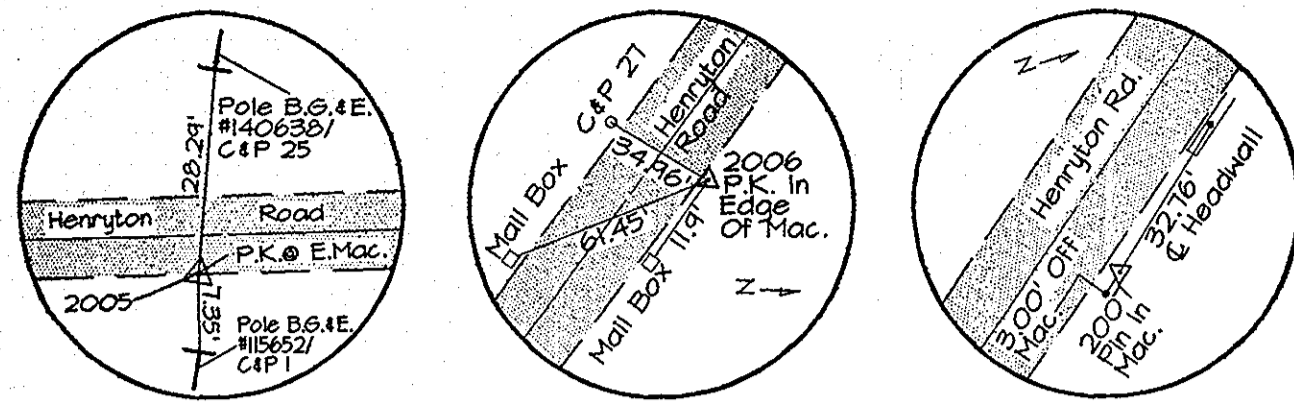


DES:	DWR				
DRN:	DCE				
CHK:	SRK				
DATE:	3/96				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO. 10	BLOCK NO. 19

PLAN AND PROFILE DEER HAVEN ROAD
STA. 0+00 TO STA. 14+00

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 22 OF 35



TRAV. PT. 2005
Elev. 588.32
N 605,611.56
E 1,333,225.85

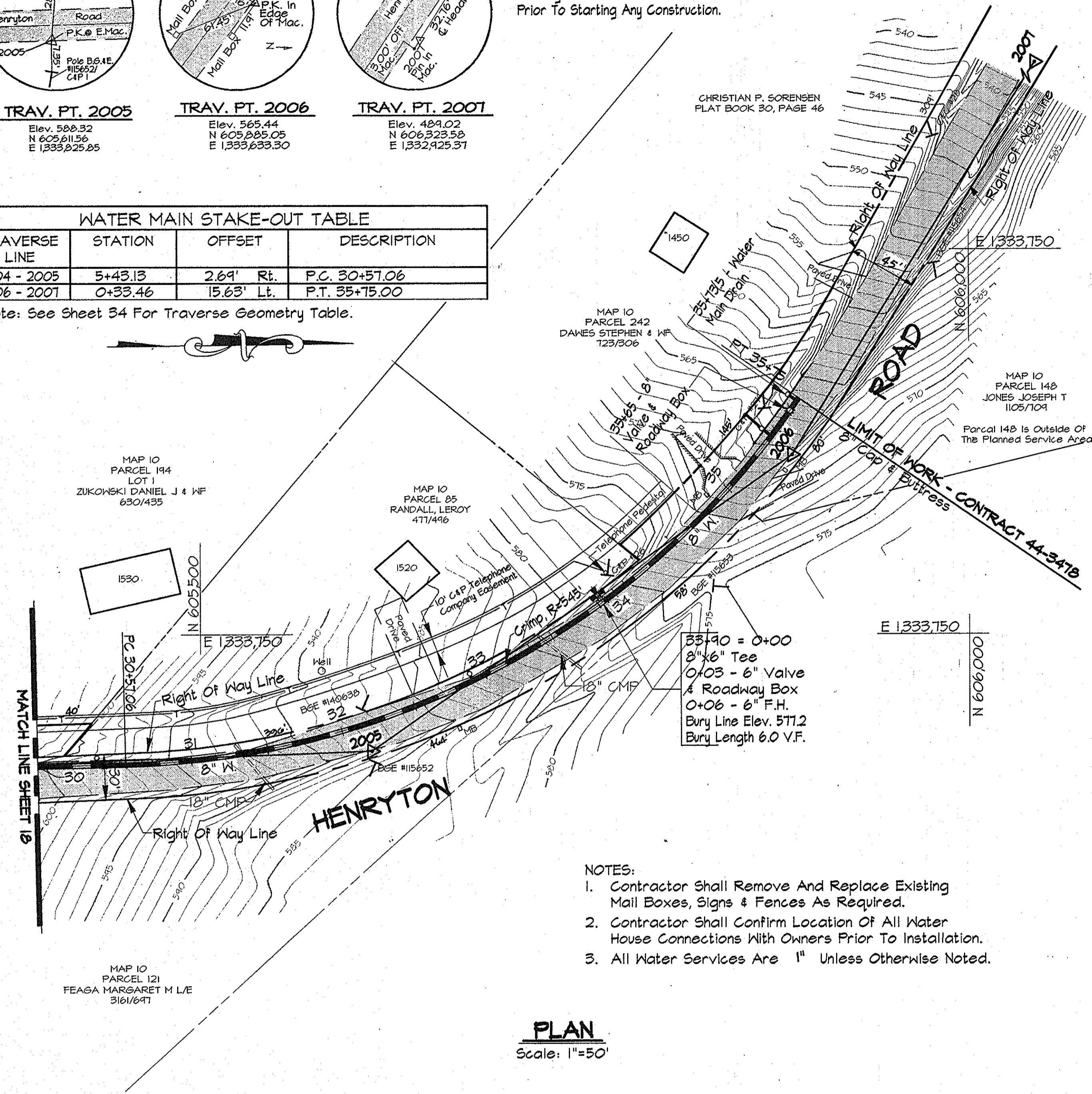
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Elev. 565.44
N 605,285.05
E 1,333,633.30

TRAV. PT. 2007
Elev. 489.02
N 606,323.58
E 1,332,425.37

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.

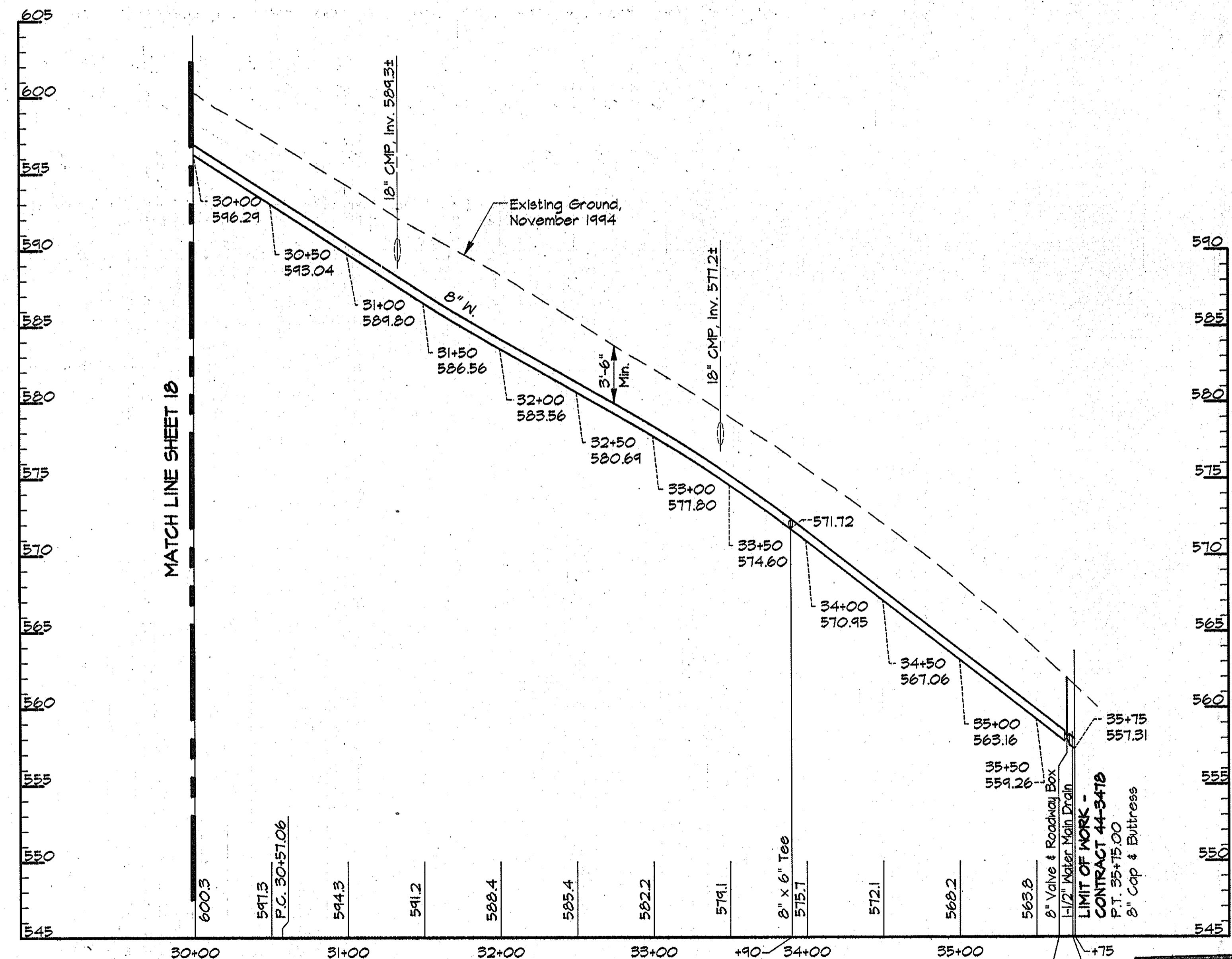
WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
2004 - 2005	5+43.13	2.69' Rt.	P.C. 30+57.06
2006 - 2007	0+33.46	15.63' Lt.	P.T. 35+75.00

Note: See Sheet 34 For Traverse Geometry Table.



- 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 1" Unless Otherwise Noted.

PLAN
Scale: 1"=50'



PROFILE - HENRYNTON ROAD

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

AS BUILT

13-42 03/21/96 40-1-23

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

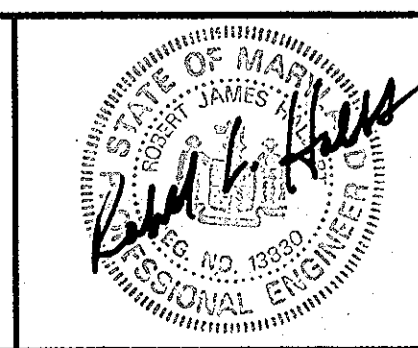
James H. Lewis 5-31-96
DIRECTOR OF PUBLIC WORKS DATE

Robert S. Johnson 5/29/96
CHIEF, BUREAU OF ENGINEERING DATE

R. L. ... 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

... 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



DES:	JRK		
DRN:	IDN		
CHK:	JRK		
DATE:	3/96		
BY:	NO.	REVISION	DATE

PLAN AND PROFILE HENRYNTON ROAD
STA. 30+00 TO STA. 35+75

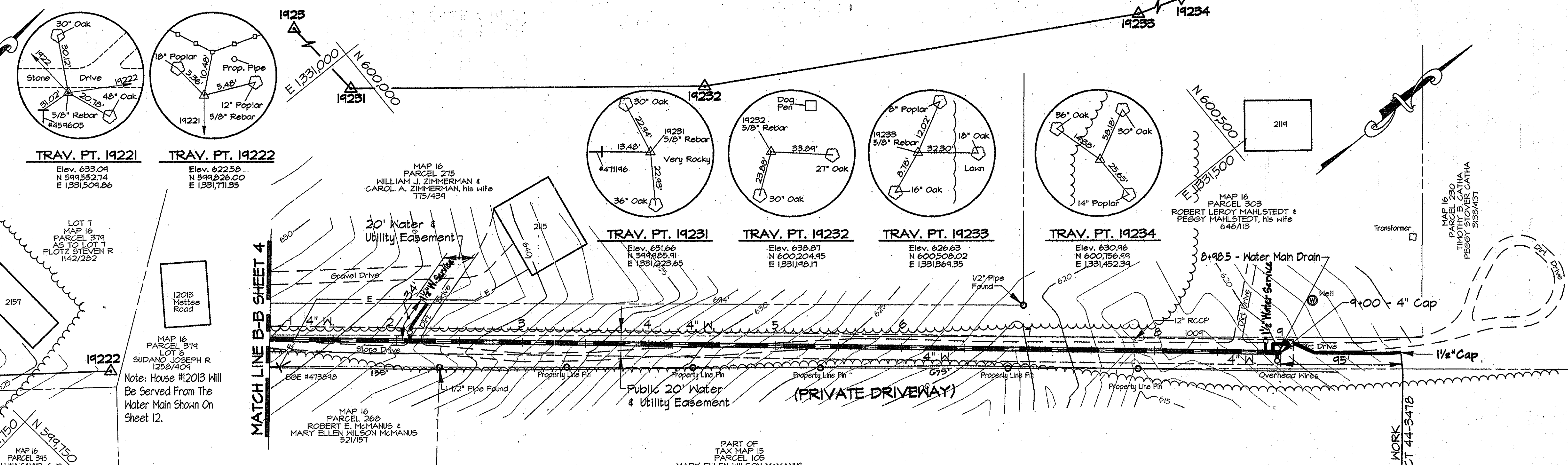
600' SCALE MAP NO. 10 BLOCK NO. 13 & 14

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 23 OF 35

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
1922 - 19221	1+68.92	24.99' Rt.	P.C. - 1+55.33
	2+14.79	10.51' Rt.	P.T. 2+03.44
1922 - 19222	2+14.68	3.37' Rt.	4+50 - 4" Cap

Note: See Sheet 34 For Traverse Geometry Table.



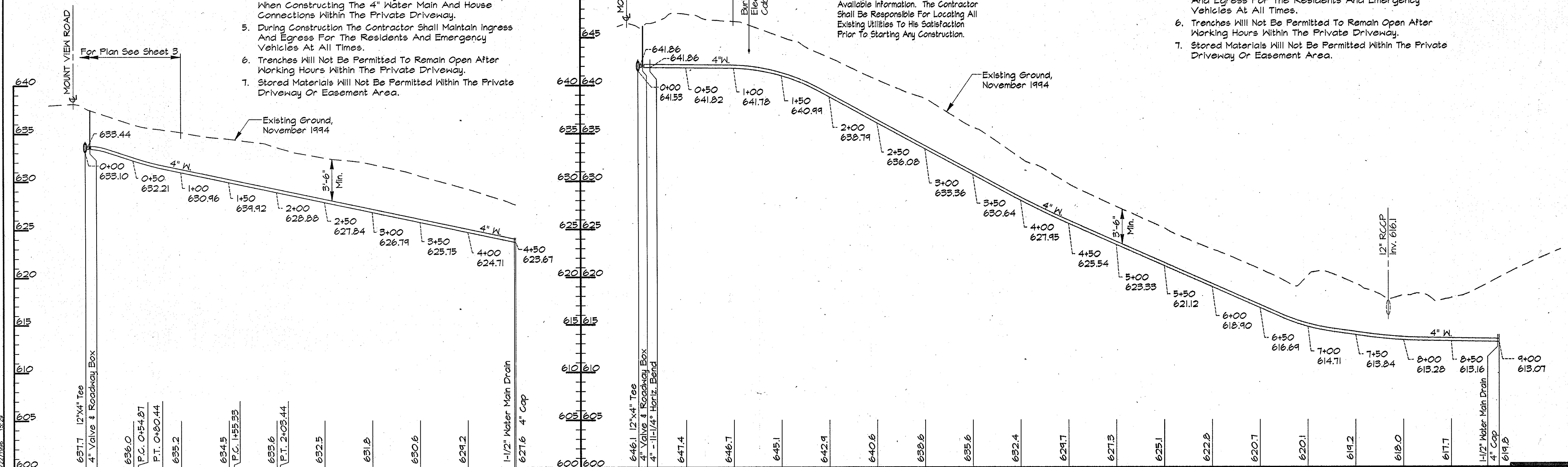
WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
19233 - 19234	0+11.56	290.25' Rt.	9+00 - 4" Cap

Note: See Sheet 34 For Traverse Geometry Table.

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 1" 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 Driveway.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.

- 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 1" 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 Driveway.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.



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

AS BUILT

DATE PLOTTED: 05/29/96 11:24 AM - 1:24 PM - 05/29/96 11:24 AM

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

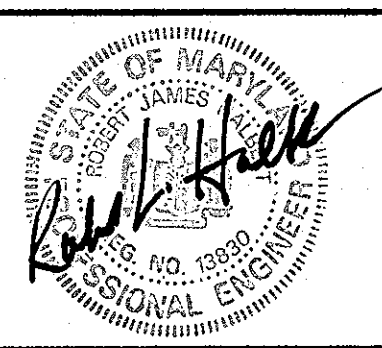
James H. ... 5/19/96
DIRECTOR OF PUBLIC WORKS DATE

Robert ... 5-29-96
CHIEF, BUREAU OF ENGINEERING DATE

... 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

... 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



DES:	DWR				
DRN:	DCE				
CHK:	SRK				
DATE:	3/96				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO. 16	BLOCK NO.

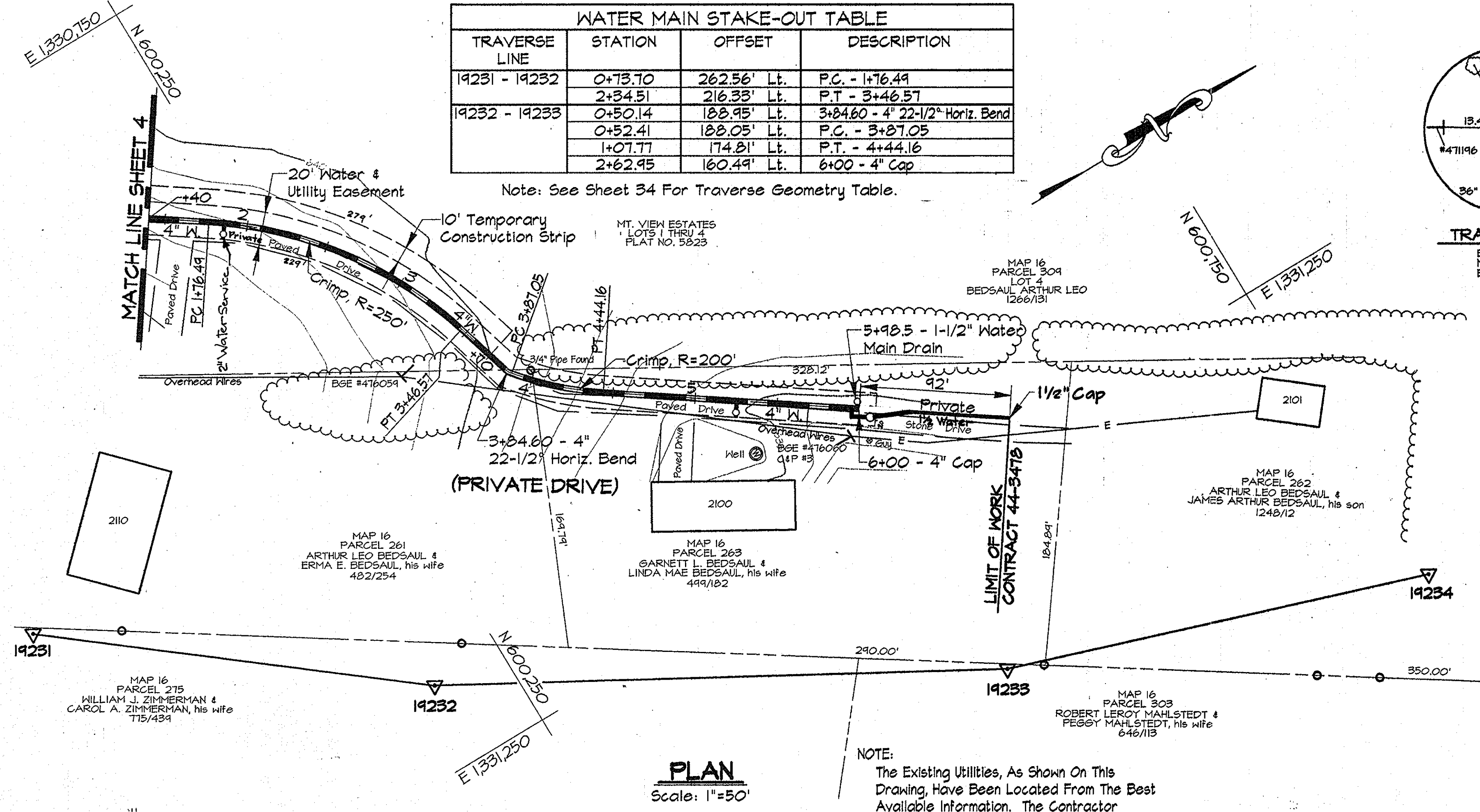
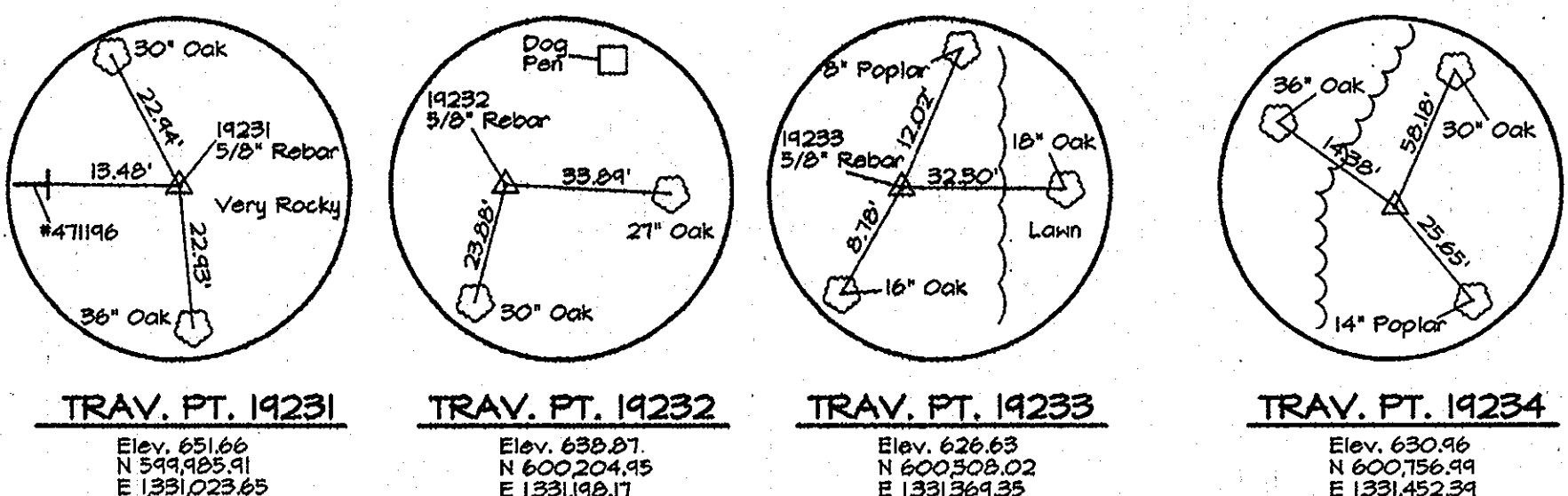
PLAN AND PROFILE SERVICE MAIN
STA. 0+00 TO STA. 4+50
PLAN AND PROFILE SERVICE MAIN
STA. 0+00 TO STA. 9+00

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

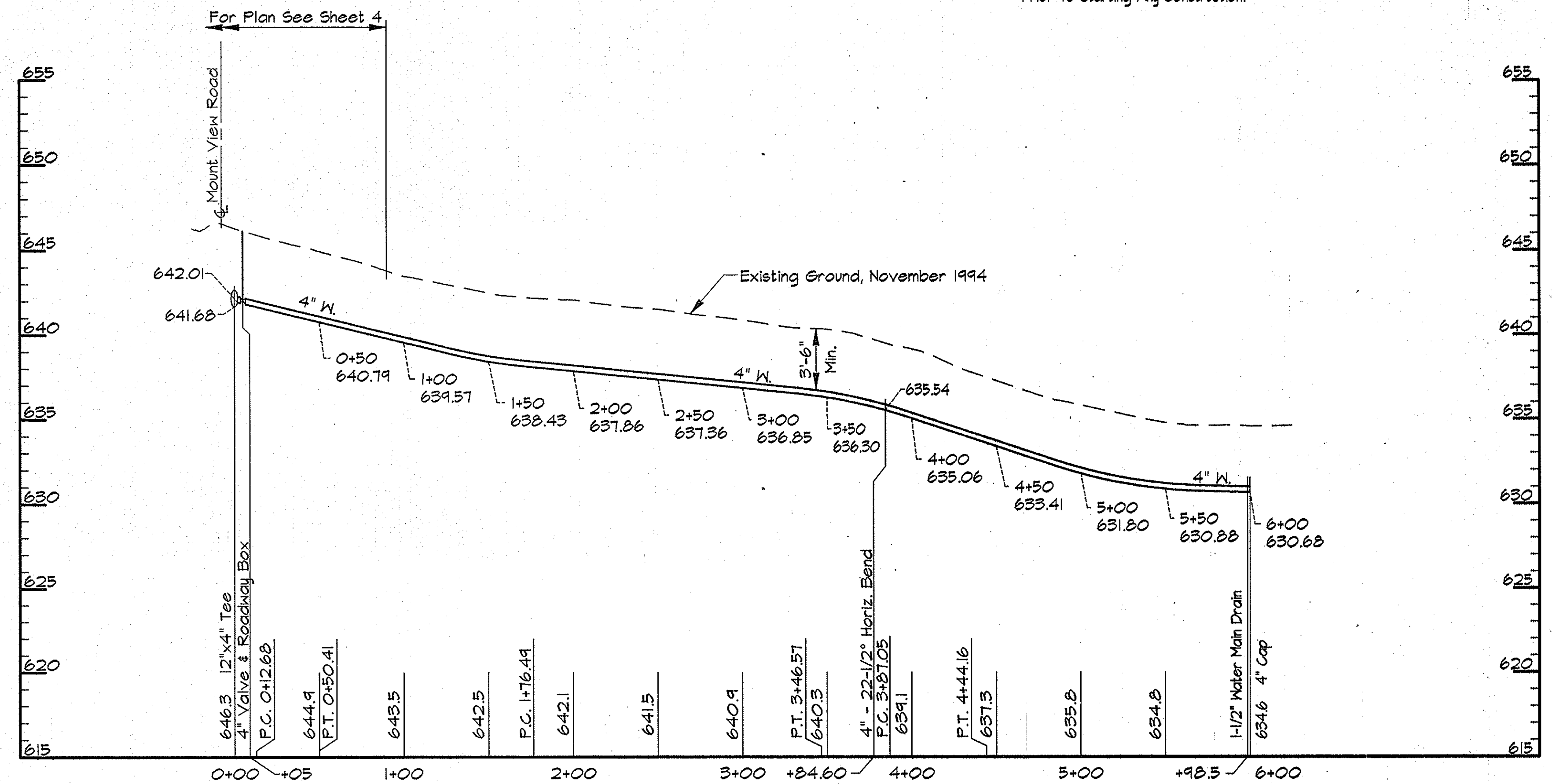
SCALE AS SHOWN
SHEET 24 OF 35

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
19231 - 19232	0+73.70	262.56' Lt.	P.C. - 1+16.49
	2+34.51	216.33' Lt.	P.T. - 3+46.57
19232 - 19233	0+50.14	188.95' Lt.	3+84.60 - 4" 22-1/2° Horiz. Bend
	0+52.41	188.05' Lt.	P.C. - 3+87.05
	1+07.77	174.81' Lt.	P.T. - 4+44.16
	2+62.95	160.44' Lt.	6+00 - 4" Cap

Note: See Sheet 34 For Traverse Geometry Table.



- 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 1" 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 Driveway.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.



AS BUILT

RK&K/PROJECTS: COMMONS/CM9473/CONTR. 1 03/14/1996 11:15 ALP-1--25.dwg

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James H. Lewis 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Seppan 5/29/96
CHIEF, BUREAU OF ENGINEERING DATE

John A. Berman 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

Oliver D. ... 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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

DES:	DWR				
DRN:	DCE				
CHK:	SRK				
DATE:	3/96				
BY:	NO.	REVISION	DATE	600' SCALE MAP NO. 16	BLOCK NO. 1

PLAN AND PROFILE SERVICE MAIN
STA. 0+00 TO 6+00

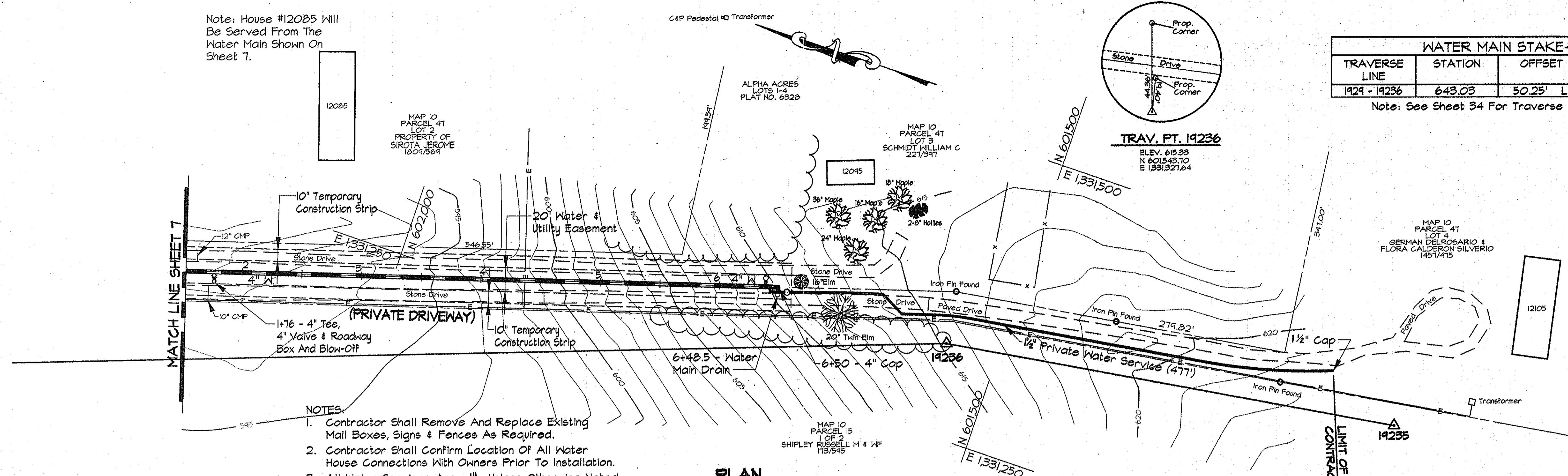
ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 25 OF 35

Note: House #12085 Will Be Served From The Water Main Shown On Sheet 7.

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
1924 - 19236	643.05	50.25' Lt.	6+50 - 4" Cap With 1" Tap

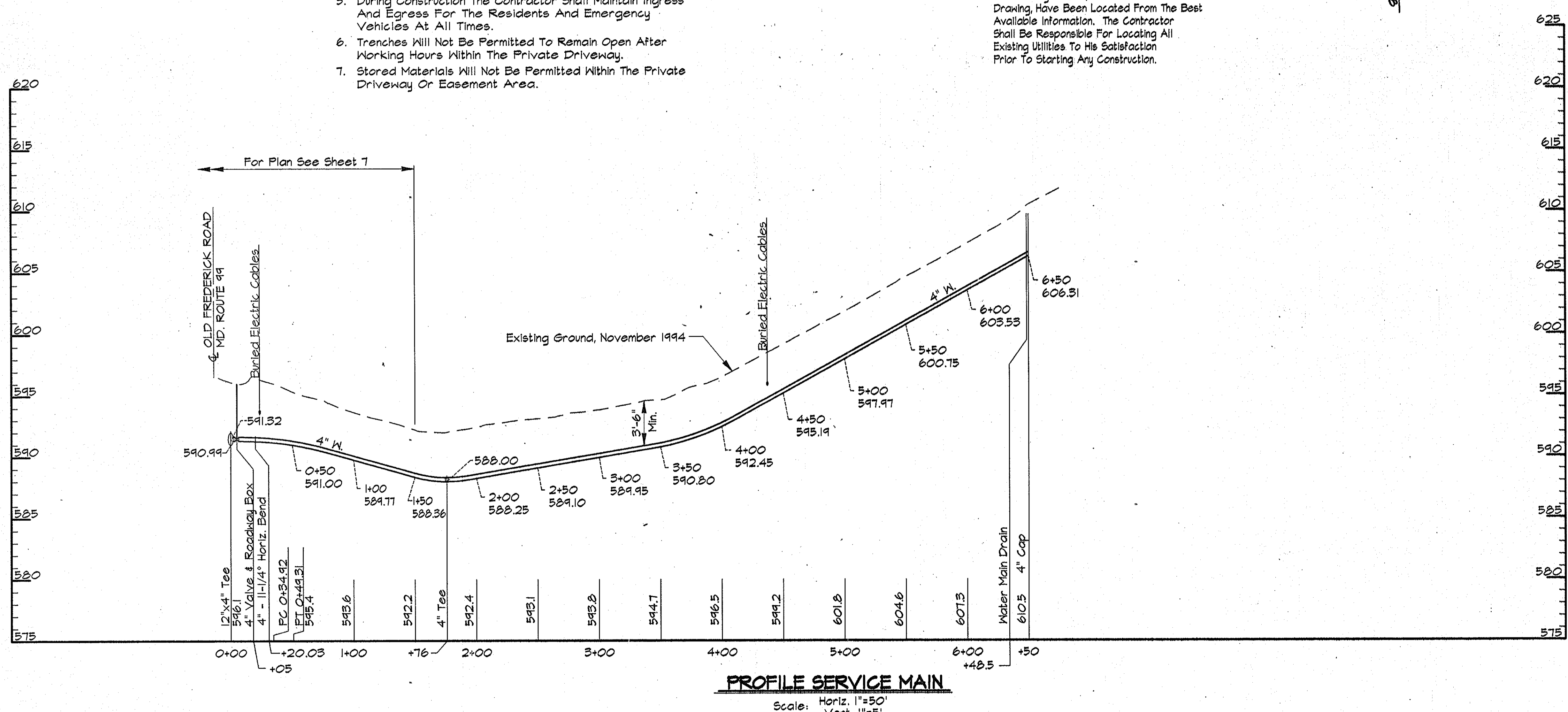
Note: See Sheet 34 For Traverse Geometry Table.



- 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 1" 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 Driveway.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.

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.



PROFILE SERVICE MAIN
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

R:\K2\PROJECTS\COMMONS\CM9473\CONTR_1 ALP-2-26.DWG 03/14/1996 13.41

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. Lewis 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

Paul D. Spang 5/22/96
CHIEF, BUREAU OF ENGINEERING DATE

Rita A. Bann 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

Oliver J. ... 5-28-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



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

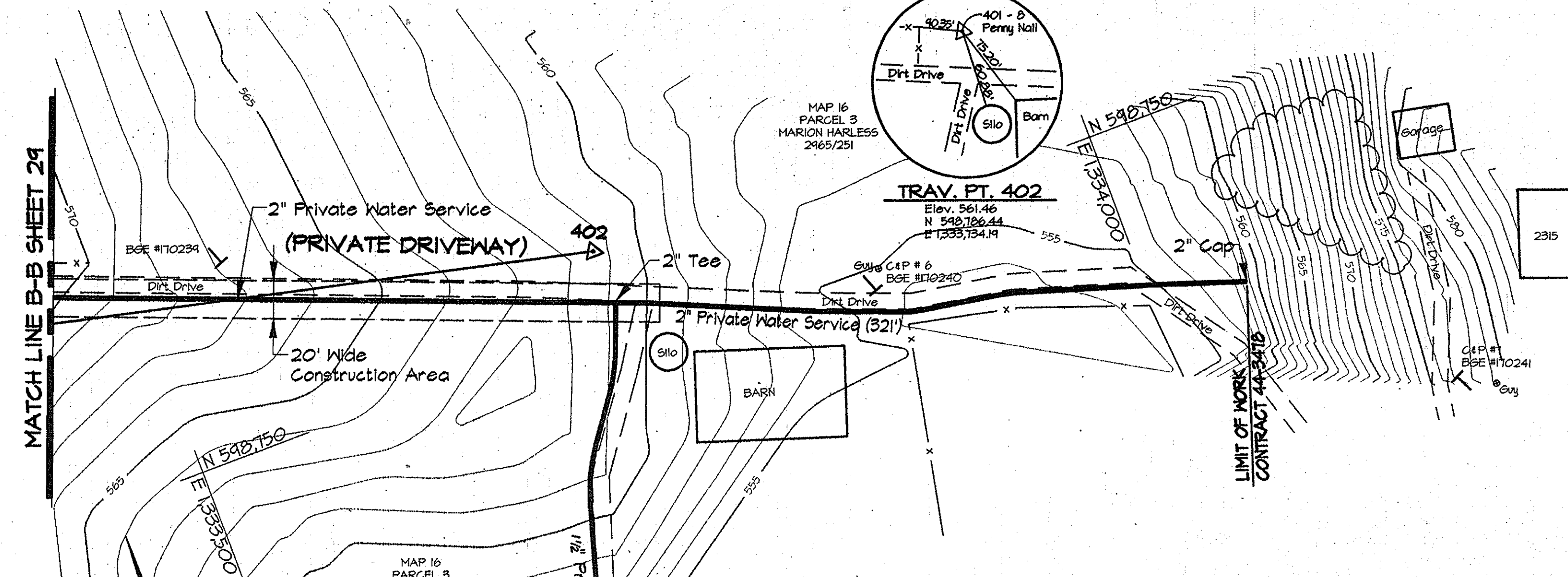
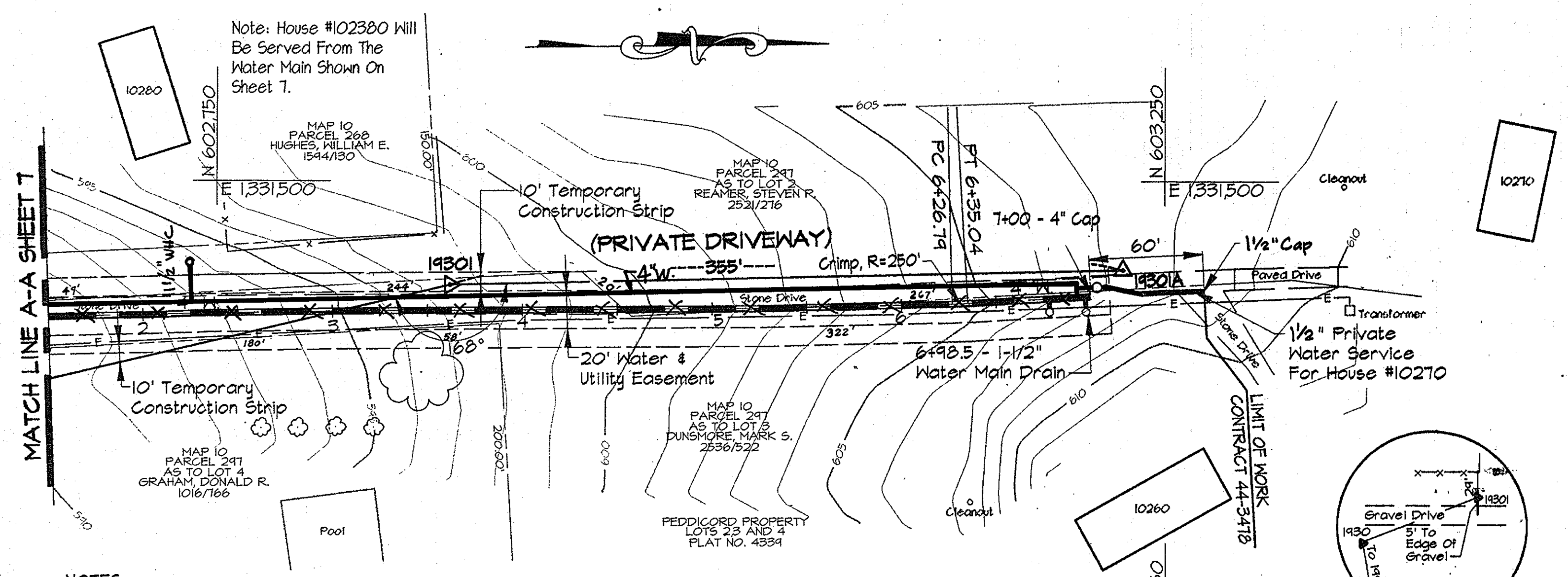
PLAN AND PROFILE SERVICE MAIN
STA. 0+00 TO STA. 6+50

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.

SCALE AS SHOWN

SHEET 26 OF 35



- 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 1" 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 Driveway.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.

PLAN
Scale: 1"=50'

WATER MAIN STAKE-OUT TABLE

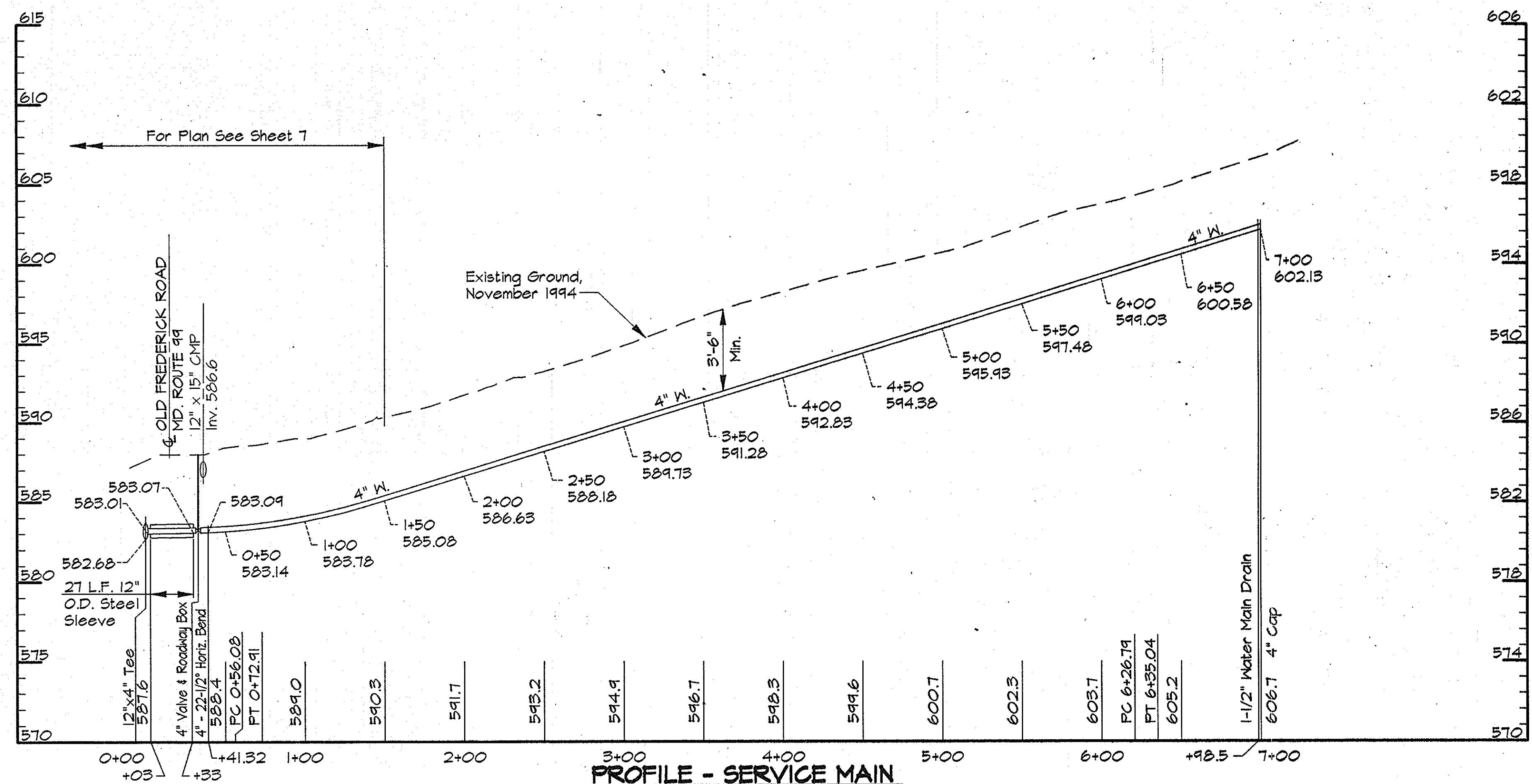
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
19301 - 19301A	2+64.40	15.84' Lt.	P.C. - 6+26.79
	2+72.65	15.68' Lt.	P.T. - 6+35.04
	3+31.56	13.42' Lt.	7+00 - 4" Cap

Note: See Sheet 34 For Traverse Geometry Table.

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 1" Unless Otherwise Noted.
 - The Contractor Shall Work Only From 9:00am To 4:00pm When Constructing The 2" Private Water Service Connections Within The Private Driveway.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Construction Area.

PLAN
Scale: 1"=50'



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

AS BUILT

R102/PROJECTS/COMMUNIS/049473/CONTR_1 03/22/1996 15:38

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

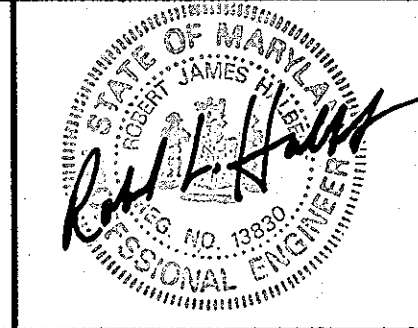
James A. Lewis 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

Paul J. Soper 5/29/96
CHIEF, BUREAU OF ENGINEERING DATE

Ralph Soper 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

Dr. Dan Soper 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



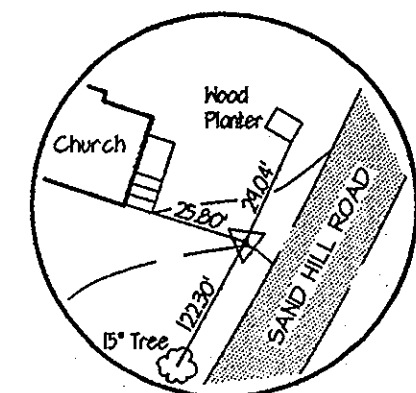
DES:	DWR			
DRN:	DCE			
CHK:	SRK			
DATE:	3/96			
BY:	NO.	REVISION	DATE	600' SCALE MAP NO. 10, 16 BLOCK NO. 19, 2

PLAN AND PROFILE SERVICE MAIN
STA. 0+00 TO STA. 7+00
PLAN 2" PRIVATE WATER SERVICE

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

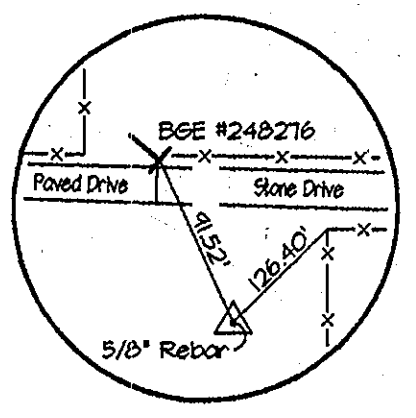
DWG. NO.
SCALE AS SHOWN
SHEET 27 OF 35

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.



TRAV. PT. 19226
Elev. 580.61
N 600.725.54
E 1332544.40

- 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 1". 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 Driveway.
 - 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 Driveway.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.

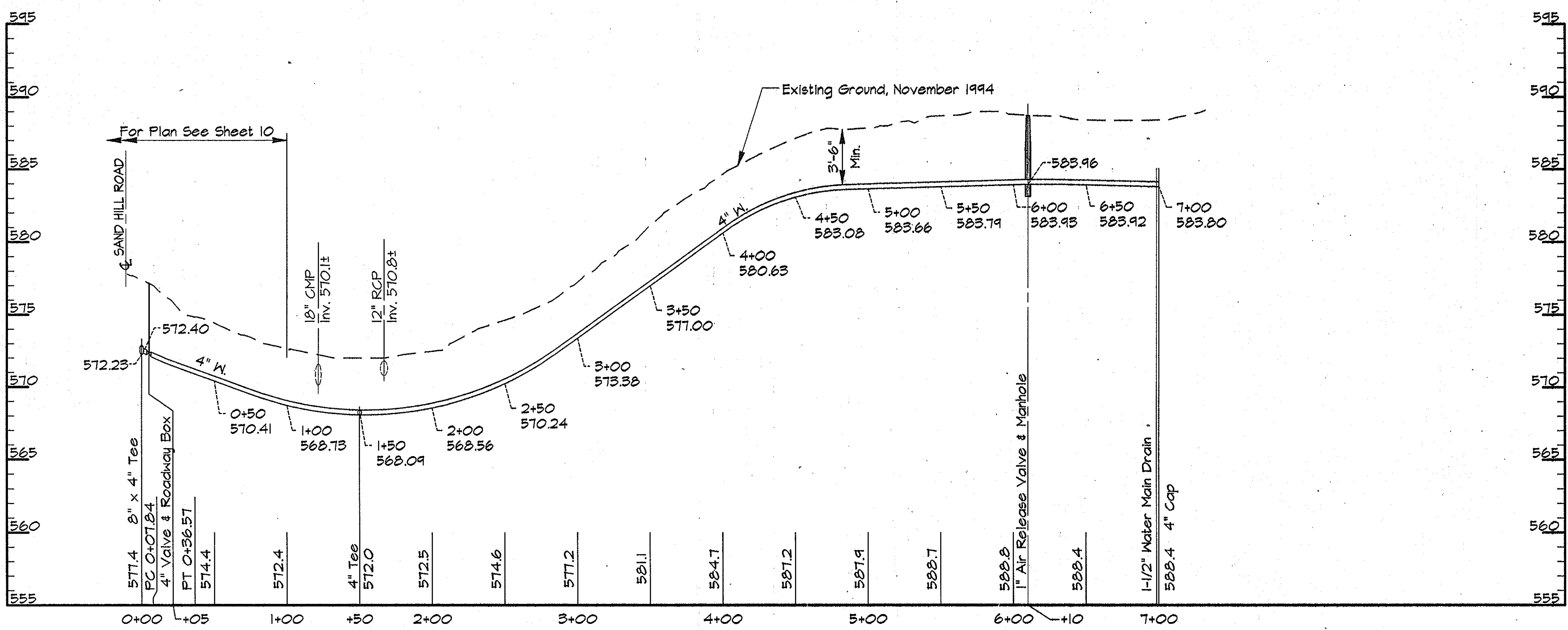


TRAV. PT. 19227
N 600.781.19
E 1333110.27

PLAN
Scale: 1"=50'

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
19227 - 2025	2+37.93	24.82' Lt.	7+00 - 4" Cap

Note: See Sheet 34 For Traverse Geometry Table.



PROFILE SERVICE MAIN
Scale: Horiz. 1"=50'
Vert. 1"=5'

AS BUILT

PRK2 PROJECTS: COMMINS/049473/CONTR. 1 AUP-L-28.DWG 03/21/1996 14:44

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

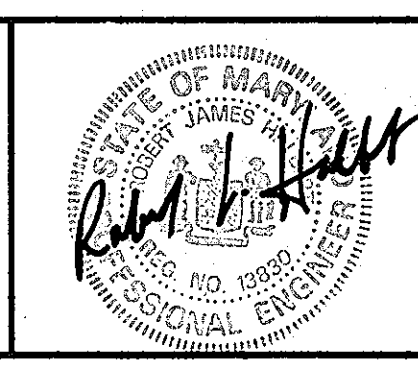
James A. Lewis 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

Paul D. Sporn 5/29/96
CHIEF, BUREAU OF ENGINEERING DATE

John S. Bump 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

John P. ... 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



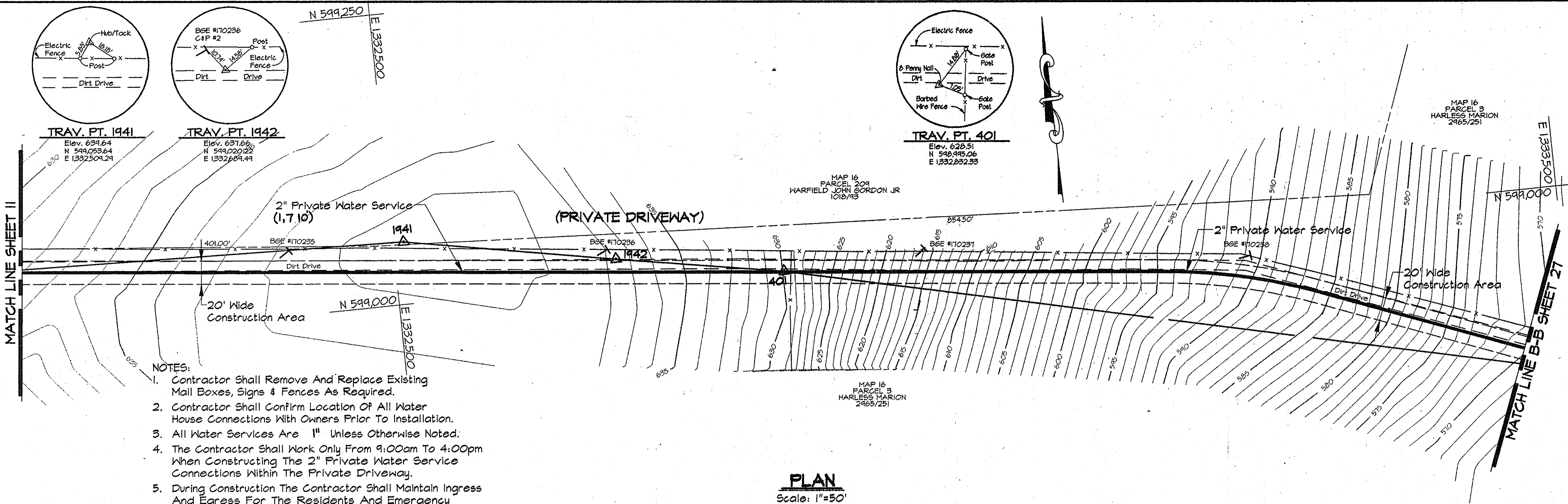
DES:	DWR				
DRN:	DCE				
CHK:	SRK				
DATE:	3/96				
BY:	NO.				
REVISION:					
DATE:					

PLAN AND PROFILE SERVICE MAIN
STA. 0+00 TO STA. 7+00

600' SCALE MAP NO. 10 BLOCK NO. 19 & 20

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.
SCALE AS SHOWN
SHEET 28 OF 35



- 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 1" Unless Otherwise Noted.
 4. The Contractor Shall Work Only From 9:00am To 4:00pm When Constructing The 2" Private Water Service Connections Within The Private Driveway.
 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 Construction Area.

PLAN
Scale: 1"=50'

HWY PROJECTS/CONV/CONV/CONV - ALP-1-29 03/22/1996 10:55

AS BUILT
DWG. NO.

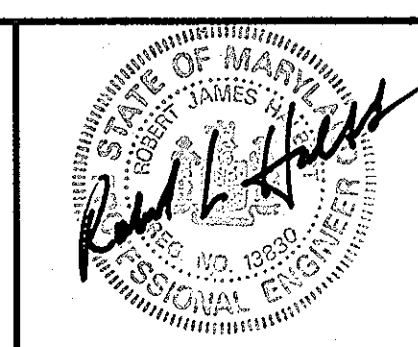
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. Lee 5/3/96
DIRECTOR OF PUBLIC WORKS DATE

Paul H. Johnson 5/29/96
CHIEF, BUREAU OF ENGINEERING DATE

Debra J. Quinn 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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

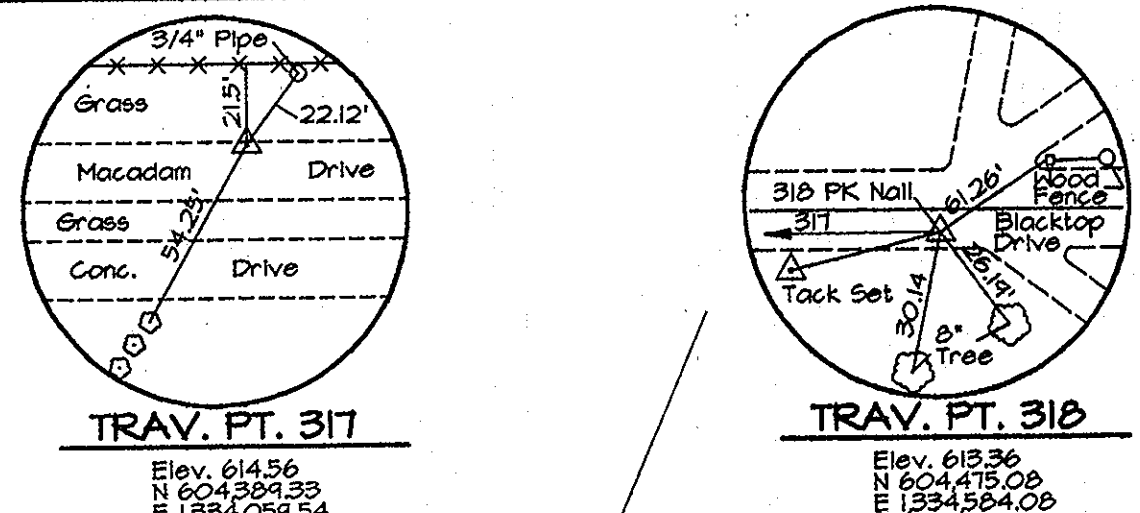


DES:	DWR				
DRN:	DCE				
CHK:	SRK				
DATE:	3/96				
BY	NO.	REVISION	DATE	60' SCALE MAP NO. 16	BLOCK NO. 1 & 2

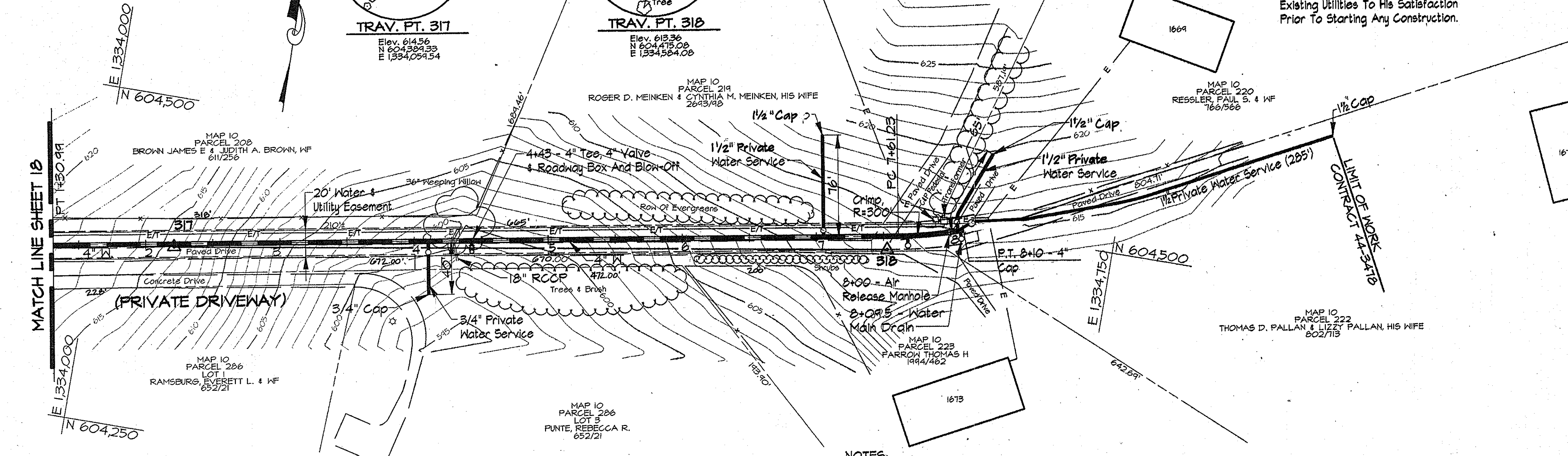
PLAN 2" PRIVATE WATER SERVICE

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 29 OF 35



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.

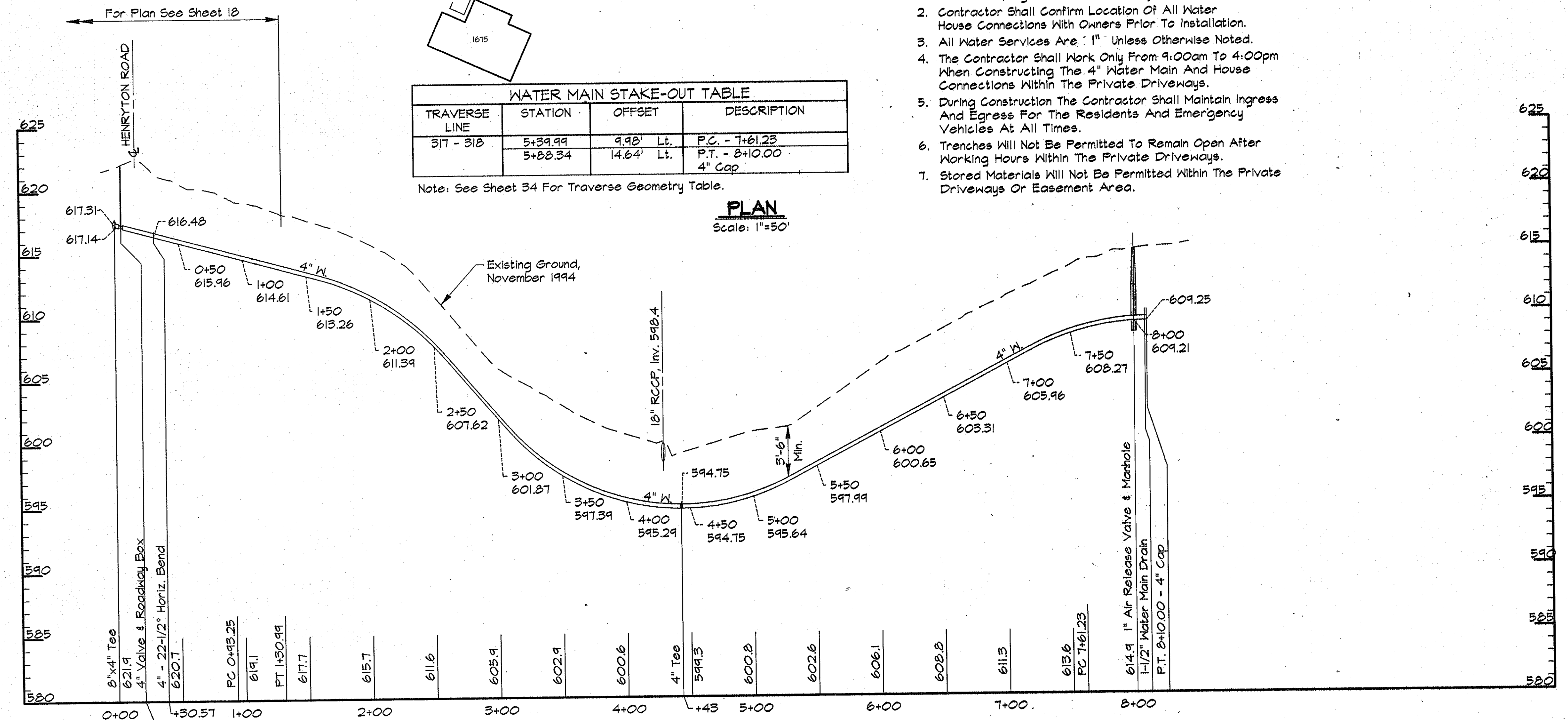


- NOTES:
1. Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 2. Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 3. All Water Services Are 1" Unless Otherwise Noted.
 4. The Contractor Shall Work Only From 9:00am To 4:00pm When Constructing The 4" Water Main And House Connections Within The Private Driveways.
 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 Driveways.
 7. Stored Materials Will Not Be Permitted Within The Private Driveways Or Easement Area.

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
317 - 318	5+39.99	9.98' Lt.	P.C. - 7+61.23
	5+88.34	14.64' Lt.	P.T. - 8+10.00 4" Cap

Note: See Sheet 34 For Traverse Geometry Table.

PLAN
Scale: 1"=50'



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

AS BUILT

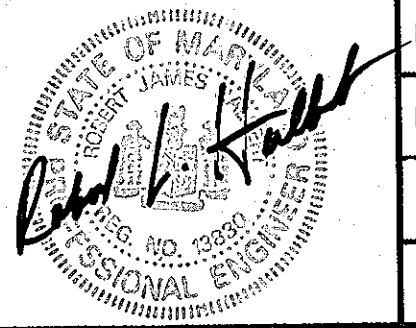
DWG. NO.
SCALE AS SHOWN
SHEET 30 OF 35

8002 PROJECTS/COMMINS/CHART/DRAWING ALP-1-30 05/27/09 11:56

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *[Signature]* 5/31/96
 Chief, Bureau of Engineering: *[Signature]* 5/29/96
 Chief, Bureau of Utilities: *[Signature]* 5-30-96
 Chief, Water and Sewer Design Division: *[Signature]* 5-29-96

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

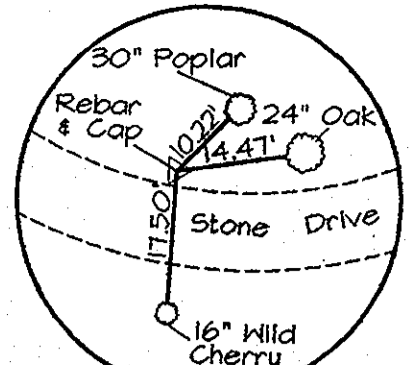


DES:	DWR		
DRN:	DCE		
CHK:	SRK		
DATE:	3/96	BY:	NO.
		REVISION	

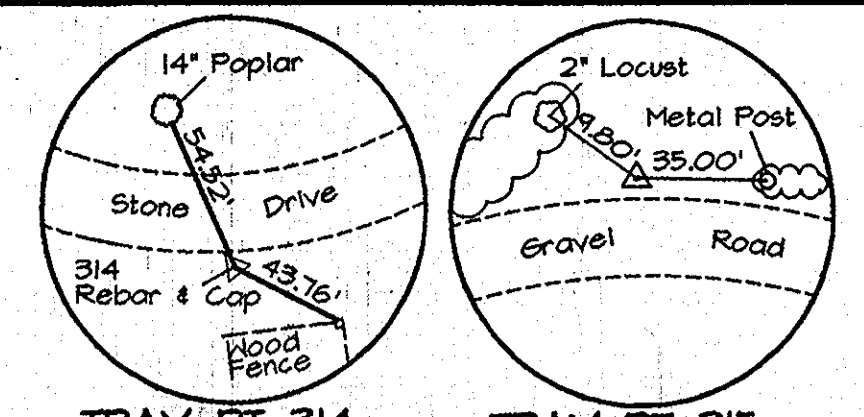
PLAN AND PROFILE SERVICE MAIN
STA. 0+00 TO STA. 8+10

DATE: 600' SCALE MAP NO. 10 BLOCK NO. 14

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND



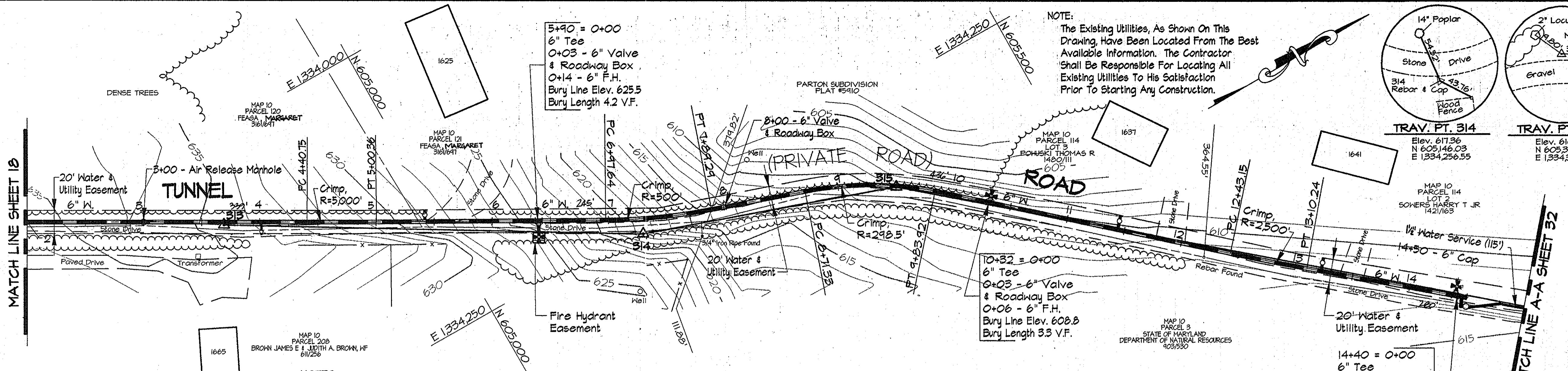
TRAV. PT. 313
Elev. 524.31
N 604.236.11
E 1334.071.26



TRAV. PT. 314
Elev. 617.36
N 605.146.03
E 1334.236.55

TRAV. PT. 315
Elev. 610.31
N 605.255.46
E 1334.326.82

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.

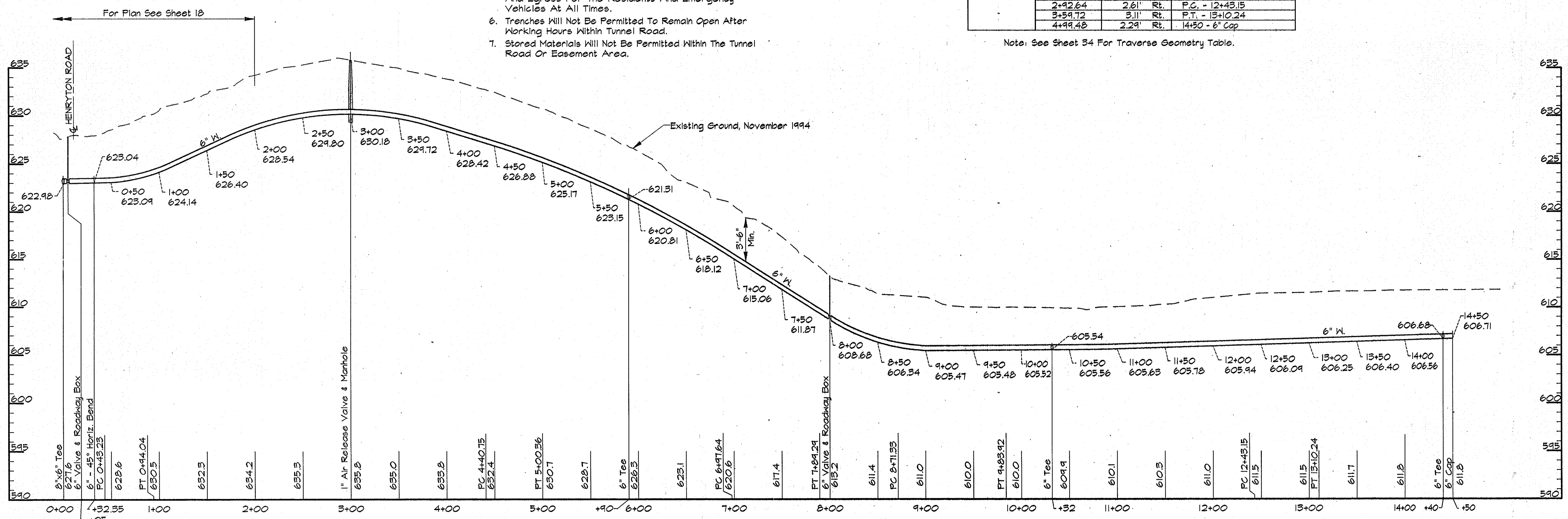


- NOTES:
- Contractor Shall Remove And Replace Existing Mail Boxes, Signs & Fences As Required.
 - Contractor Shall Confirm Location Of All Water House Connections With Owners Prior To Installation.
 - All Water Services Are "1" Unless Otherwise Noted.
 - The Contractor Shall Work Only From 9:00am To 4:00pm When Constructing The 4" Water Main And House Connections Within Tunnel Road (Private Road).
 - 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 Tunnel Road.
 - Stored Materials Will Not Be Permitted Within The Tunnel Road Or Easement Area.

PLAN
Scale: 1"=50'

WATER MAIN STAKE-OUT TABLE			
TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
313 - 314	0+71.41	3.91' Lt.	P.C. - 4+40.75
	1+31.01	5.31' Lt.	P.T. - 5+00.56
	3+28.21	11.11' Lt.	P.C. - 6+47.64
314 - 315	0+61.58	9.82' Lt.	P.T. - 7+29.29
	1+43.62	10.45' Lt.	P.C. - 8+71.33
315 - 316	0+33.46	2.82' Lt.	P.T. - 9+23.92
	2+42.64	2.61' Rt.	P.C. - 12+43.15
	3+59.72	3.11' Rt.	P.T. - 13+10.24
	4+49.48	2.29' Rt.	14+50 - 6" Cap

Note: See Sheet 34 For Traverse Geometry Table.



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

AS BUILT

15-08
 05/14/1996
 ALP-1-31

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Swan 5-31-96
DIRECTOR OF PUBLIC WORKS

Paul J. Sporn 5/29/96
CHIEF, BUREAU OF ENGINEERS

R. L. Bunn 5-30-96
CHIEF, BUREAU OF UTILITIES

O. J. ... 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION

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



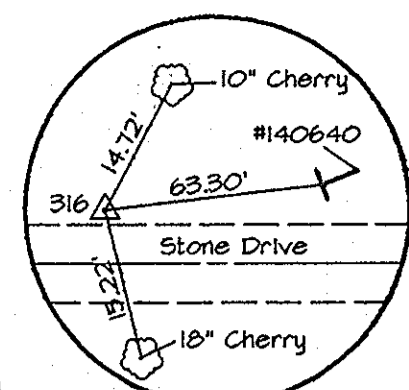
DES:	DWR		
DRN:	IDN		
CHK:	SRK		
DATE:	3/96		
BY:	NO.	REVISION	DATE

PLAN AND PROFILE TUNNEL ROAD
STA. 0+00 TO STA. 14+50

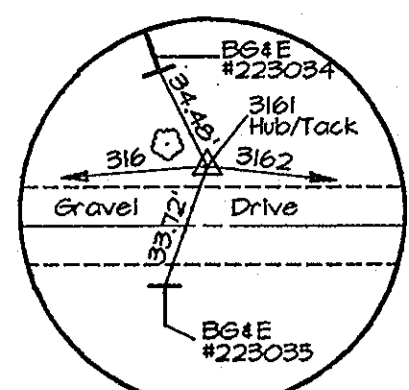
600' SCALE MAP NO. 10 BLOCK NO. 14

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

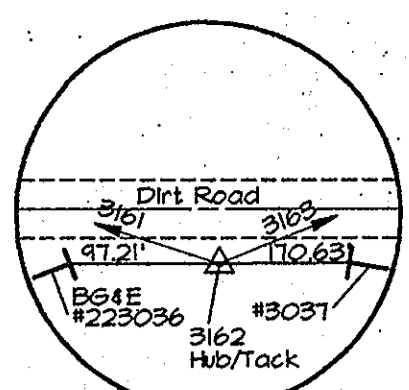
DWG. NO.
SCALE AS SHOWN
SHEET 31 OF 35



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Elev. 607.64
N 606,000
E 1334,110.2

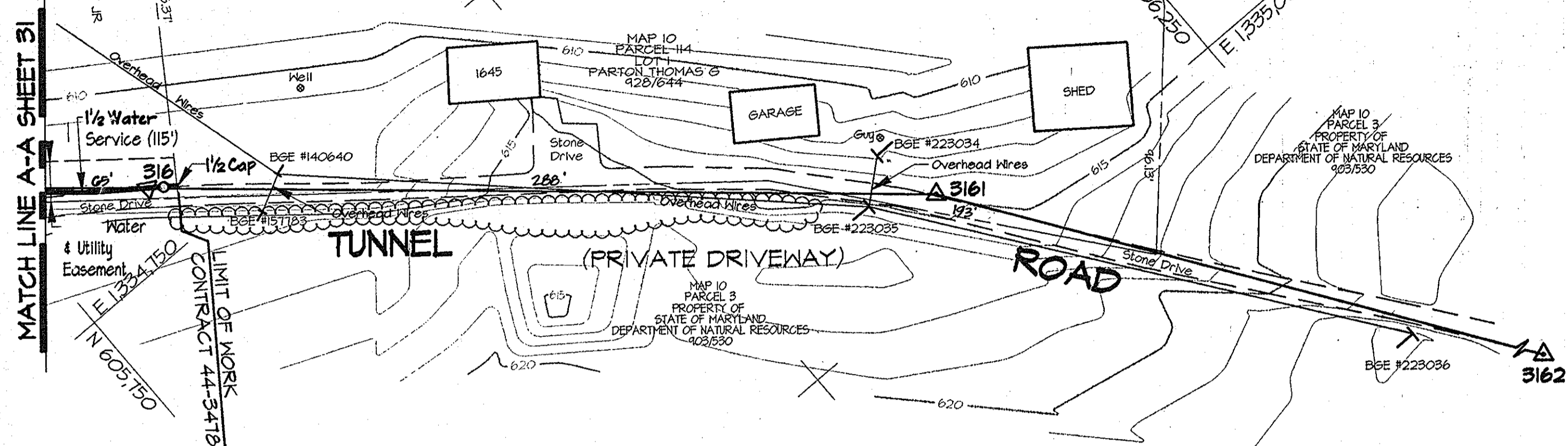


TRAV. PT. 3161
Elev. 614.81
N 606,122.83
E 1334,169.52



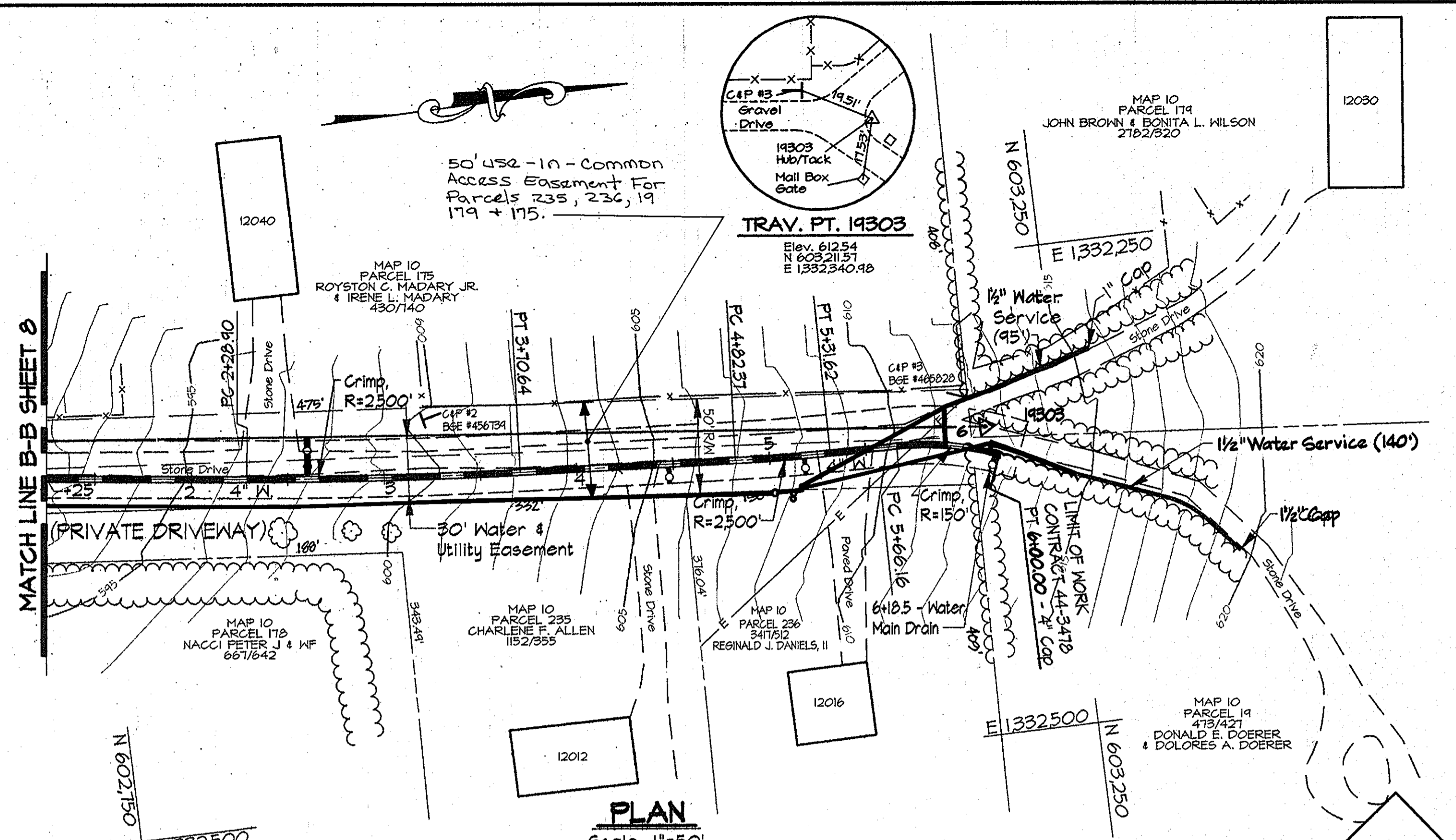
TRAV. PT. 3162
Elev. 614.11
N 606,246.50
E 1335,247.19

Note: See Sheet 34 For Traverse Geometry Table.



- 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 1" Unless Otherwise Noted.
 - The Contractor Shall Work Only From 9:00am To 4:00pm When Constructing The 4" Water Main And House Connections Within Tunnel Road.
 - 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 Tunnel Road Or Private Driveways.
 - Stored Materials Will Not Be Permitted Within Tunnel Road, Private Driveways Or Easement Areas.

PLAN
Scale: 1"=50'

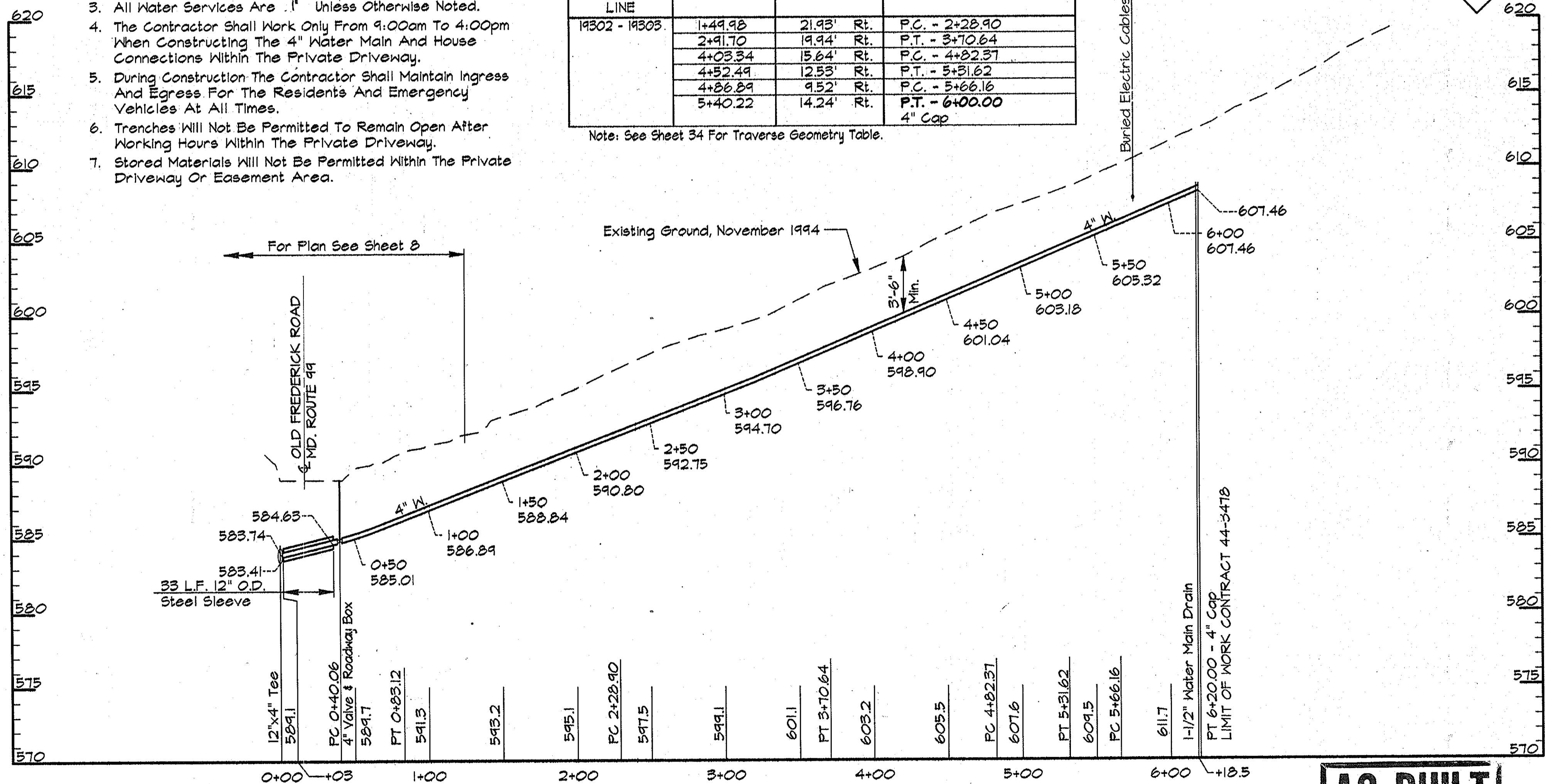


PLAN
Scale: 1"=50'

- 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 1" 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 Driveway.
 - 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 Driveway Or Easement Area.
 - Stored Materials Will Not Be Permitted Within The Private Driveway Or Easement Area.

TRAVERSE LINE	STATION	OFFSET	DESCRIPTION
19302 - 19303	1+44.98	21.93' RT.	P.C. = 2+28.90
	2+91.70	19.94' RT.	P.T. = 3+70.64
	4+03.34	15.64' RT.	P.C. = 4+82.37
	4+52.49	12.53' RT.	P.T. = 5+31.62
	4+86.89	9.52' RT.	P.C. = 5+66.16
	5+40.22	14.24' RT.	P.T. = 6+00.00 4" Cap

Note: See Sheet 34 For Traverse Geometry Table.



PROFILE - SERVICE MAIN

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

AS BUILT

DWG. NO.

BOK/PROJECTS/COMMISSIONS/QUALITY CONTROL/ALP-1-32 03/14/1995 14-47

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. Shaw 5/23/96
DIRECTOR OF PUBLIC WORKS DATE

Paul W. Szymon 5/23/96
CHIEF, BUREAU OF ENGINEERING DATE

R. D. ... 5-29-96
CHIEF, BUREAU OF UTILITIES DATE

O. D. ... 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



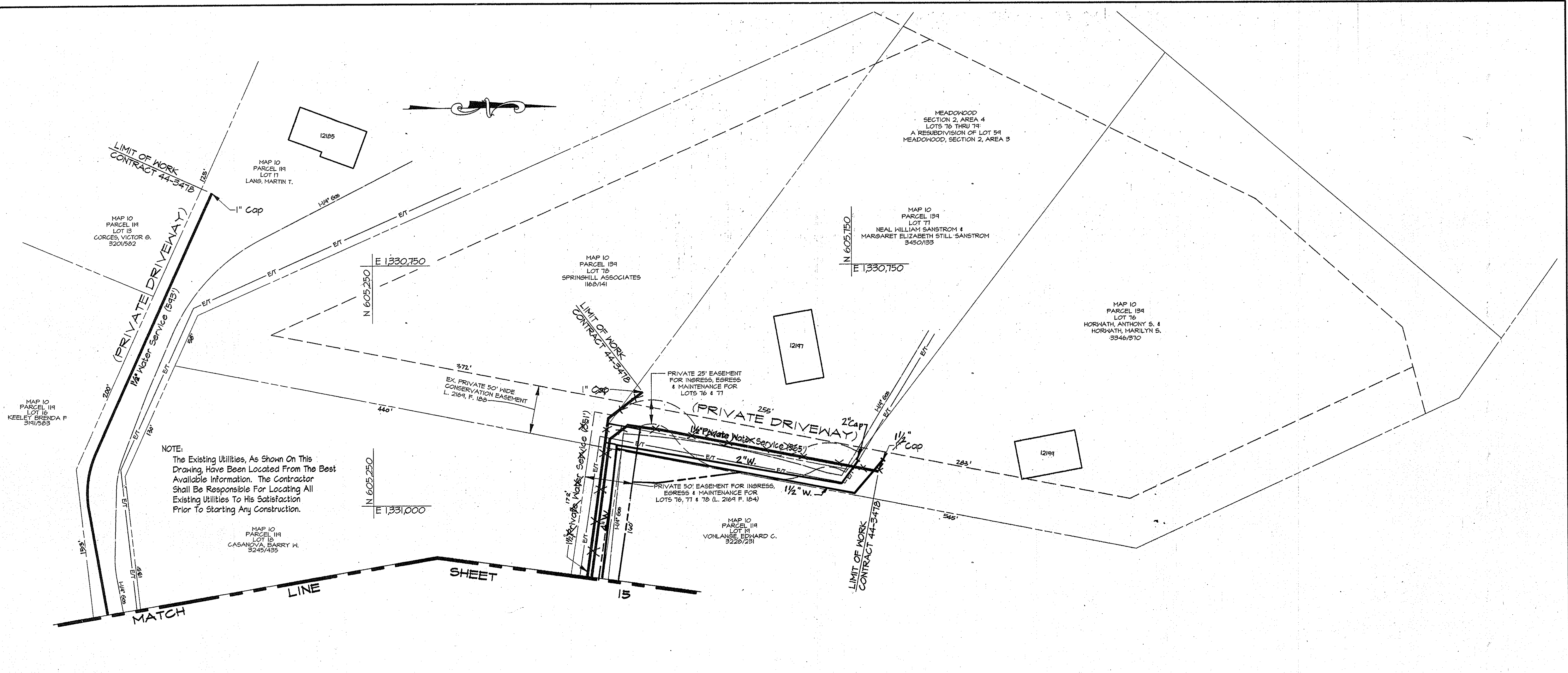
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DATE:	3/96	BY:	NO.	
		REVISION		

PLAN TUNNEL ROAD
PLAN AND PROFILE SERVICE MAIN
STATION 0+00 TO STA. 6+20

600' SCALE MAP NO. 10 BLOCK NO. 14, 19

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 32 OF 35



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'

AS BUILT

BRK/PROJECTS/COMINGS/04/17/09R-1 ALP-1-1-33 03/21/1995 12:08

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

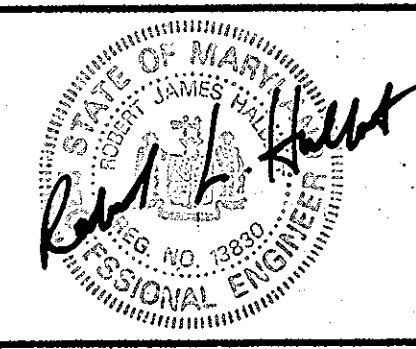
Robert W. Berry 5/31/96
DIRECTOR OF PUBLIC WORKS DATE

Robert W. Berry 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

Robert W. Berry 5/29/96
CHIEF, BUREAU OF ENGINEERING DATE

Robert W. Berry 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



DES:	JRK				
DRN:	IDN				
CHK:	JRK				
DATE:	3/96				
BY	NO.	REVISION	DATE		

PLAN - WATER SERVICES

600' SCALE MAP NO. 10 BLOCK NO. 13

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO.

SCALE AS SHOWN

SHEET 33 OF 35

TRAVERSE DATA

TRAVERSE NO.	NORTH	EAST	ELEVATION	BEARING & DISTANCE
191	598,039.1310	1,331,961.2645	595.01	N 01°06'09" W 580.24'
192	598,619.2660	1,331,972.4290	607.49	N 38°31'14" W 528.03'
1921	599,032.3921	1,331,643.5727	631.39	N 40°55'58" W 543.20'
1922	599,444.8305	1,331,290.0711	639.06	N 37°04'05" W 664.88'
1923	599,915.3507	1,330,889.3125	650.02	N 48°45'05" W 857.96'
1924	600,541.0289	1,330,244.2491	644.77	N 50°19'22" W 1069.68'
1925	601,223.9770	1,329,420.9664	652.35	N 53°25'05" W 411.91'
1926	601,469.4662	1,329,090.1982	646.95	N 64°02'20" E 478.07'
1927	601,676.3690	1,329,521.1797	641.23	N 70°12'02" E 874.60'
1928	601,972.6234	1,330,344.0811	605.37	N 66°52'00" E 771.08'
1929	602,277.9140	1,331,058.6746	598.50	N 66°31'53" E 628.85'
1930	602,528.3492	1,331,635.5007	587.57	N 84°26'58" E 1145.45'
199	602,639.2548	1,332,775.5860	594.38	N 82°45'13" W 417.10'
200	602,586.6434	1,333,189.3595	602.60	N 88°52'01" W 604.69'
201	602,574.6253	1,333,793.9342	604.60	N 89°42'31" E 788.19'
202	602,578.6927	1,334,582.1121	561.91	
192	598,619.2660	1,331,972.4290	607.49	N 10°04'07" E 454.66'
193	599,066.9257	1,332,051.9165	627.93	N 17°28'50" E 537.57'
194	599,579.6734	1,332,213.3945	607.49	N 20°54'39" E 595.21'
195	600,135.6789	1,332,425.8318	586.93	N 15°56'51" E 613.52'
196	600,725.5853	1,332,594.4001	580.61	N 07°21'54" E 317.69'
197	601,239.0091	1,332,660.7628	568.41	N 00°26'08" E 581.29'
198	601,820.2844	1,332,665.1824	566.38	N 07°40'39" E 828.38'
199	602,639.2548	1,332,775.5860	594.38	
193	599,066.9257	1,332,051.9165	627.93	N 85°20'12" W 437.57'
1941	599,053.6437	1,332,509.2926	639.64	N 79°29'30" W 183.27'
1942	599,020.2182	1,332,689.4931	637.66	N 80°00'41" W 145.03'
401	598,995.0616	1,332,832.3281	628.51	N 76°58'30" W 925.67'
402	598,786.4360	1,333,734.1854	561.46	
197	601,239.0091	1,332,660.7628	568.41	N 44°51'09" W 637.34'
19227	600,787.1852	1,333,110.2655		N 79°35'57" E 488.21'
2025	600,874.9630	1,333,588.4905		
200	602,586.6434	1,333,189.3595	602.60	S 02°44'42" W 589.22'
106A	603,175.1922	1,333,217.5780	622.74	S 12°32'22" W 470.41'
2001	603,634.3782	1,333,319.7087	623.54	S 41°44'52" W 704.97'
2002	604,160.3423	1,333,789.1129	619.94	S 14°21'26" W 330.24'
312	604,480.3012	1,333,871.0208		S 14°18'00" W 70.99'
2003	604,549.0876	1,333,888.5541	628.05	S 05°47'20" E 361.11'
2004	604,908.3568	1,333,852.1313	629.89	S 02°08'25" E 703.69'
2005	605,611.5594	1,333,825.8309	588.32	S 35°07'19" E 334.58'
2006	605,885.0530	1,333,633.3010	565.44	S 58°14'20" E 832.84'
2007	606,323.5840	1,332,925.3730	489.02	
2002	604,160.3423	1,333,789.1129	619.94	N 34°24'36" E 277.32'
323	603,931.5823	1,333,632.4149	619.33	S 49°46'21" E 361.46'
322	603,698.1411	1,333,908.3869	609.65	S 65°55'13" E 373.75'
321	603,545.6485	1,334,249.6101	596.28	S 80°08'54" E 399.31'
320	603,477.3277	1,334,643.0286	579.10	S 82°32'24" E 382.97'
3200	603,427.6050	1,335,022.7567	545.55	S 17°20'06" W 385.39'
3202	603,795.4901	1,335,137.5889	537.20	S 43°36'36" W 310.47'
3203	604,020.2877	1,335,351.7339	525.53	S 20°51'16" W 408.15'
3204	604,401.6986	1,335,497.0335	524.57	S 04°09'26" W 286.55'
3205	604,667.3506	1,335,516.3370	525.65	

TRAVERSE DATA

TRAVERSE NO.	NORTH	EAST	ELEVATION	BEARING & DISTANCE
312	604,480.3012	1,333,871.0208		
314	603,146.0344	1,334,256.5519	617.36	S 29°26'45" W 408.59'
315	603,335.4640	1,334,328.8204	610.31	S 19°02'17" W 221.55'
316	603,812.4081	1,334,717.0261	607.64	S 40°21'01" W 599.58'
3161	606,102.8342	1,334,968.5290	614.81	S 40°53'31" W 384.19'
3162	606,296.5090	1,335,247.1350	619.83	S 55°11'41" W 339.31'
19303	603,211.5740	1,332,540.9880	612.54	
19302	602,681.0200	1,332,282.5740	591.02	S 06°16'58" W 533.76'
1930	602,528.3492	1,331,635.5007	587.57	
19301	602,272.9591	1,331,554.2464	597.69	S 13°16'02" E 354.06'
1929	602,277.9140	1,331,058.6746	598.50	S 50°53'22" E 712.75'
19291	602,727.5297	1,330,303.8320	621.12	S 16°04'49" E 720.11'
19292	603,419.4626	1,330,306.1746	637.13	S 22°27'16" W 629.07'
19293	604,000.8430	1,330,546.4300	625.54	S 33°41'07" W 785.30'
19294	604,464.8072	1,331,880.0358	609.36	S 05°03'04" W 597.28'
19295	605,039.5476	1,331,233.0761	601.09	S 03°16'05" E 462.19'
303	605,520.9824	1,331,206.7290	582.24	S 17°19'25" W 511.98'
304	606,009.7375	1,331,339.1814	551.44	S 37°05'13" W 441.22'
305	606,249.4871	1,331,729.5879	554.97	
1922	599,444.8305	1,331,290.0711	639.06	S 63°50'58" W 244.85'
19221	599,552.7455	1,331,509.8671	633.09	S 43°44'21" W 378.21'
19222	599,826.0027	1,331,771.3560	622.58	
1923	599,975.3307	1,330,889.3125	650.02	S 85°30'23" W 134.75'
19231	599,985.9081	1,331,023.6488		S 38°32'48" W 280.07'
19232	600,204.9498	1,331,981.7399	638.87	S 29°27'31" W 348.07'
19233	600,508.0197	1,331,369.3536	628.63	S 18°26'46" W 262.46'
19234	600,756.9920	1,331,452.3982		
1929	602,277.9140	1,331,058.6746	598.50	N 20°07'10" W 781.93'
19236	601,343.6996	1,331,327.6397	615.33	N 08°33'16" W 380.55'
19235	601,167.452	1,331,384.501	624.58	N 09°23'54" W 416.01'
19234	600,756.9920	1,331,452.3982		
19293	604,000.8430	1,330,546.4300	625.54	S 55°55'35" E 237.18'
300	604,152.2770	1,330,338.5820	618.72	S 70°41'43" E 172.03'
3014	604,209.1498	1,330,176.2205		
19294	604,464.8072	1,331,880.0358	609.36	N 67°38'10" W 454.61'
299	604,291.8324	1,331,800.4347	575.22	N 76°19'00" W 493.94'
298	604,174.5137	1,332,082.3140	576.62	
19227	600,787.1852	1,333,110.2655	0	N 87°26'40" E 514.58'
19226	600,725.5853	1,332,594.4001	580.61	N 74°43'49" E 536.92'
19225	600,822.8366	1,332,078.2300	617.75	N 27°49'10" E 317.71'
19224	600,341.8425	1,331,929.9571	612.02	N 39°50'28" E 334.56'
19223	600,069.3999	1,331,702.8019	612.43	N 15°43'04" W 233.06'
19222	599,826.0027	1,331,771.3560	622.58	
312	604,480.3012	1,333,871.0208		N 64°14'32" W 209.32'
317	604,389.3381	1,334,059.5415	614.56	N 80°42'37" E 513.51'
318	604,475.8883	1,334,584.0847	613.36	N 05°52'26" W 863.12'
319	603,614.3059	1,334,672.6187		N 12°10'21" E 140.33'
320	603,477.3277	1,334,643.0286	579.10	

TRAVERSE DATA

TRAVERSE NO.	NORTH	EAST	ELEVATION	BEARING & DISTANCE
3200	603,427.6050	1,335,022.7567	545.55	N 76°52'34" W 89.86'
3201	603,448.5166	1,334,935.3662	551.00	

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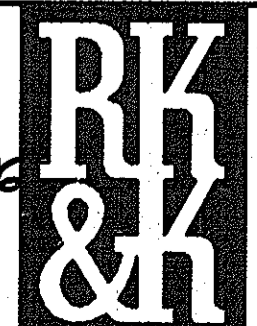
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DWG. NO.
SCALE AS SHOWN
SHEET 34 OF 35

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Stewart 5/6/96
DIRECTOR OF PUBLIC WORKS
Robert M. Benjamin 5/30/96
CHIEF, BUREAU OF UTILITIES

Paul J. Seppan 5/23/96
CHIEF, BUREAU OF ENGINEERING
Debra J. King 5/29/96
CHIEF, WATER AND SEWER DESIGN DIVISION



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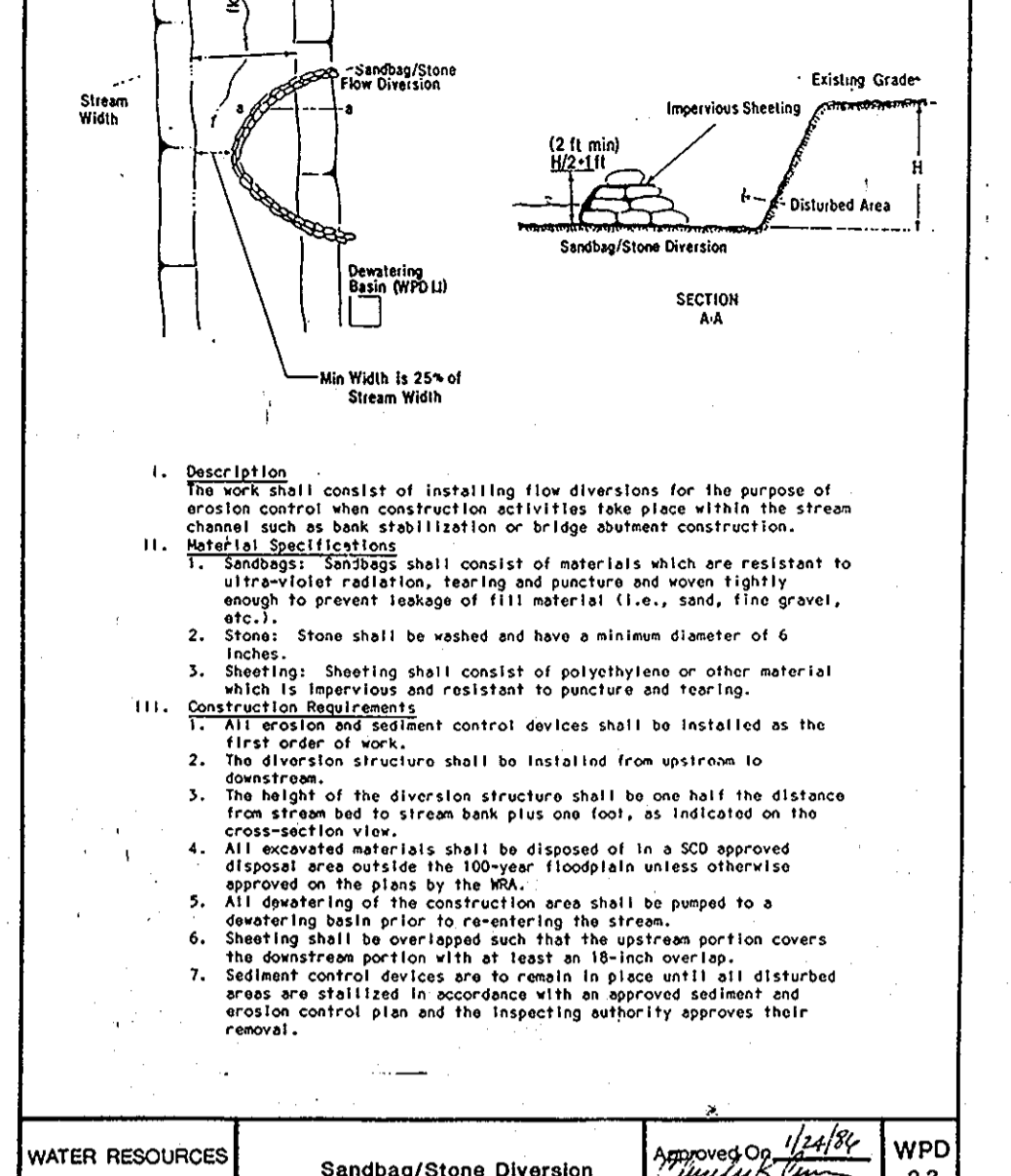
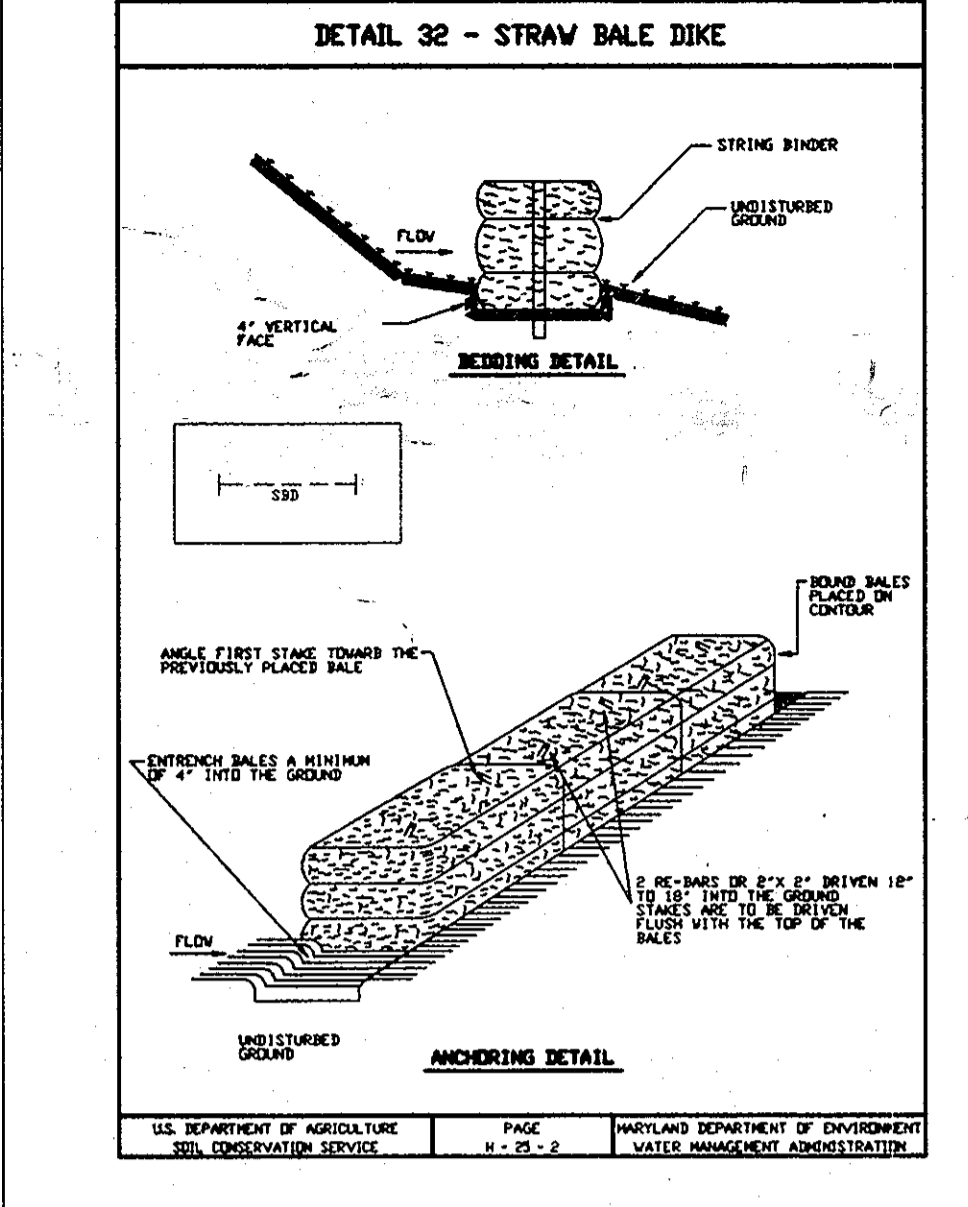
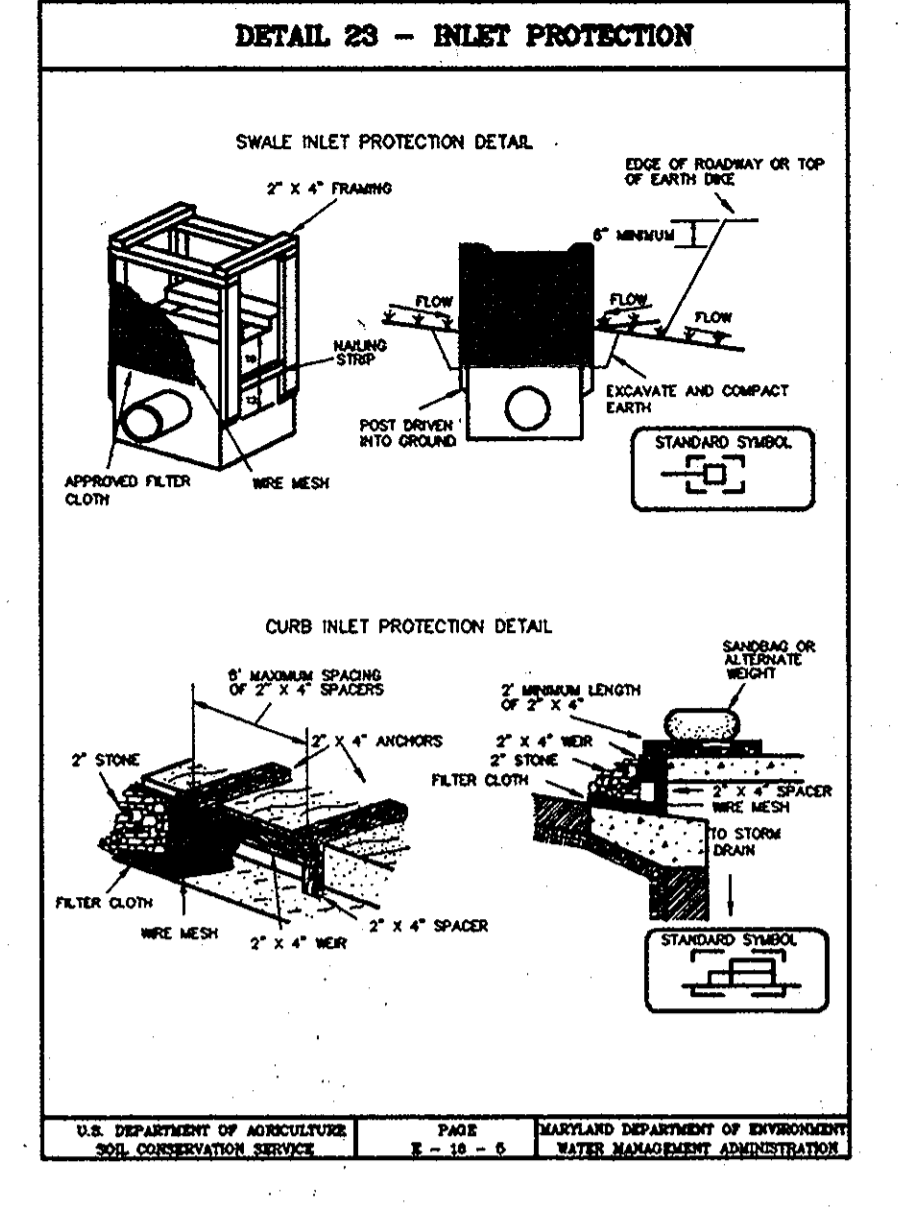
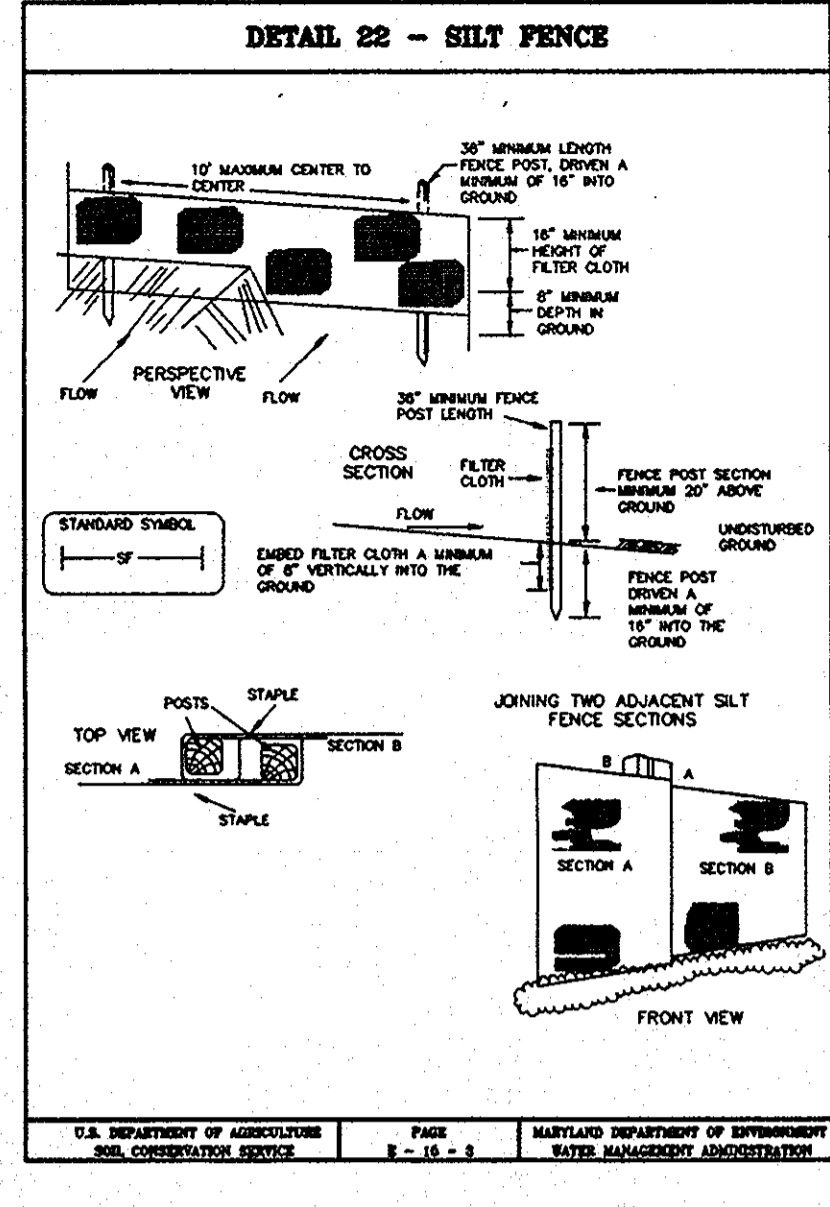


DES:	CJR				
DRN:	DAM				
CHK:	JRK				
DATE:	3/96	BY:	NO.	REVISION	DATE

TRAVERSE TABLE

600' SCALE MAP NO. 910216 BLOCK NO.

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND



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 PROVISIONS 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.
- SITE ANALYSIS:

TOTAL AREA OF SITE	N/A ACRES
AREA DISTURBED	2.4 ACRES
AREA TO BE ROOFED OR PAVED	0 ACRES
AREA TO BE VEGETATIVELY STABILIZED	2.4 ACRES
TOTAL CUT	19,200 CU. YDS.
TOTAL FILL	19,200 CU. YDS.
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.

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 site plan 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 filter.
- Where ends of filter cloth come together, they shall be overlapped, folded or stapled to prevent sediment bypass.
- Design considerations are not required.
- All silt fences shall be placed on level to the contour or as feasible.
- The area below the fence must be undisturbed or stabilized.
- Silt Fence Fabric: The fabric shall meet the Silt Fence specifications listed in Table 27.
- Fence Posts (for fabricated units): 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 will be of sound quality material. Steel posts will be aluminum 1" or 1 1/2" section weighing not less than 100 pound per linear foot.

Silt Fence Design Criteria

Slope Steepness	Silt Fence Length	
	(Minimum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil class U) minimum slope lengths and silt fence lengths will be unlimited, in these areas a silt fence may be the only perimeter control required.

SWALE INLET PROTECTION

Construction Specifications

- Materials
 - Wooden frame is 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 curb vents 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 40 - 60 microns, to allow sufficient passage of water and removal of sediment.
 - Warning stone 3/4" to 1 1/2" in size to be used.
- Procedure
 - Excavate completely around the inlet to a depth of 18 inches below the curb 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 (curb) must be 4" 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 curb 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 to compacted 8" layers until the top of earth is level with the curb elevation and top elevation on the slope.
 - Secure the storm flow does not bypass the inlet by installing a temporary earth or asphalt curb to direct the flow to the inlet.
 - Form the 1/2" x 1/2" wire mesh and the filter cloth to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter cloth in such a manner to prevent water from entering the inlet under or around the filter cloth.
 - The type of protection must be repeated frequently and the filter cloth and stone replaced when clogged with sediment.
 - Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt curb to direct the flow to the inlet.

STRAW BALE DIKE

Construction Specifications

- Bales shall be placed at the toe 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 anchored in the soil a minimum of 4" and placed so the bindings are horizontal.
- Bales shall be securely anchored in place by either two stakes or re-bar 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. Stakes shall be driven from 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.

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 SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

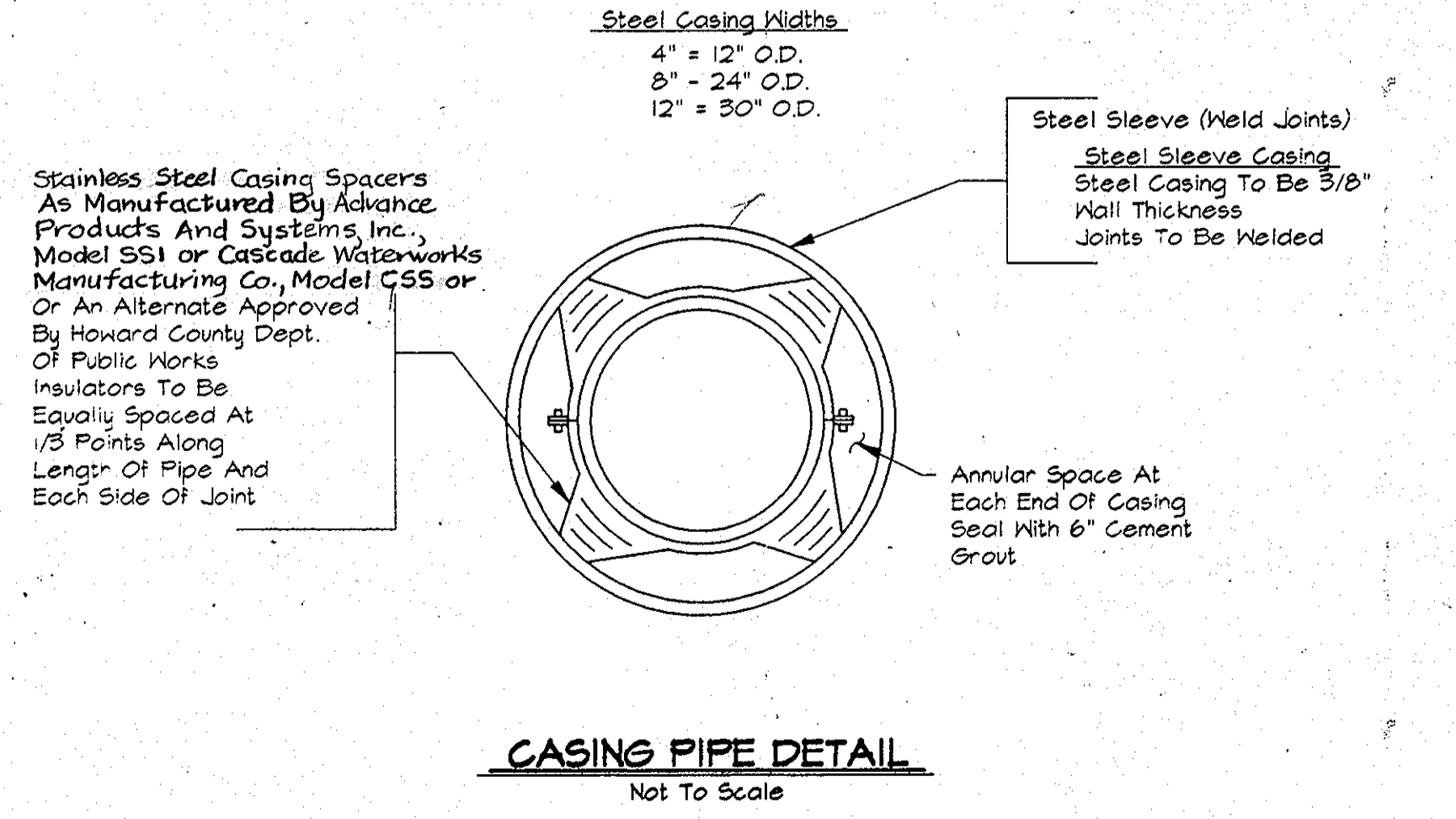
APPLY TO GRADED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

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.



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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

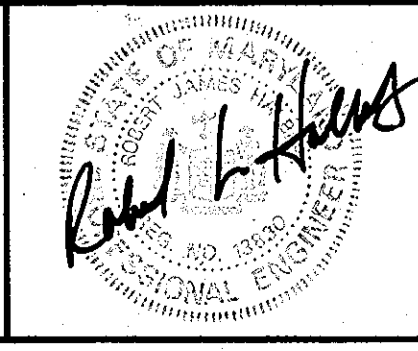
James H. ... 5/23/96
DIRECTOR OF PUBLIC WORKS DATE

Paul J. ... 5/23/96
CHIEF, BUREAU OF ENGINEERS DATE

Robert ... 5-30-96
CHIEF, BUREAU OF UTILITIES DATE

Dr. Dan ... 5-29-96
CHIEF, WATER AND SEWER DESIGN DIVISION DATE

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



DES: J.R.K.					
DRN: M.J.S.					
CHK: J.R.K.					
DATE: 3/96					
BY NO.		REVISION		DATE	

SEDIMENT AND EROSION CONTROL
NOTES AND DETAILS

600' SCALE MAP NO. _____ BLOCK NO. _____

ALPHA RIDGE WATER SUPPLY
CAPITAL PROJECT W-8203
CONTRACT NO. 44-3478
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

DWG. NO. _____
SCALE AS SHOWN
SHEET 35 OF 35