

QUANTITIES	
ITEM	QUANTITY
8" Water	4,600 L.F.
6" Water	260 L.F.

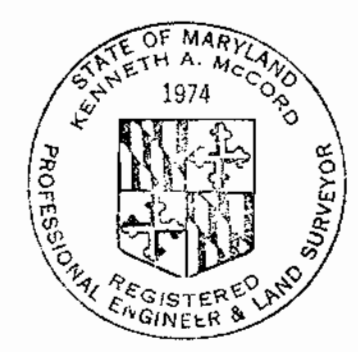
AS BUILT  
 Stake out book No. 5487  
 Diary book No. 5488

# CONTRACT C-311-W

## WATER MAIN EXTENSIONS

### DEPARTMENT OF PUBLIC WORKS

### HOWARD COUNTY, MARYLAND



*Kenneth A. McCord*  
 Project W.P. 8023 B  
 Contract No. C-311-W

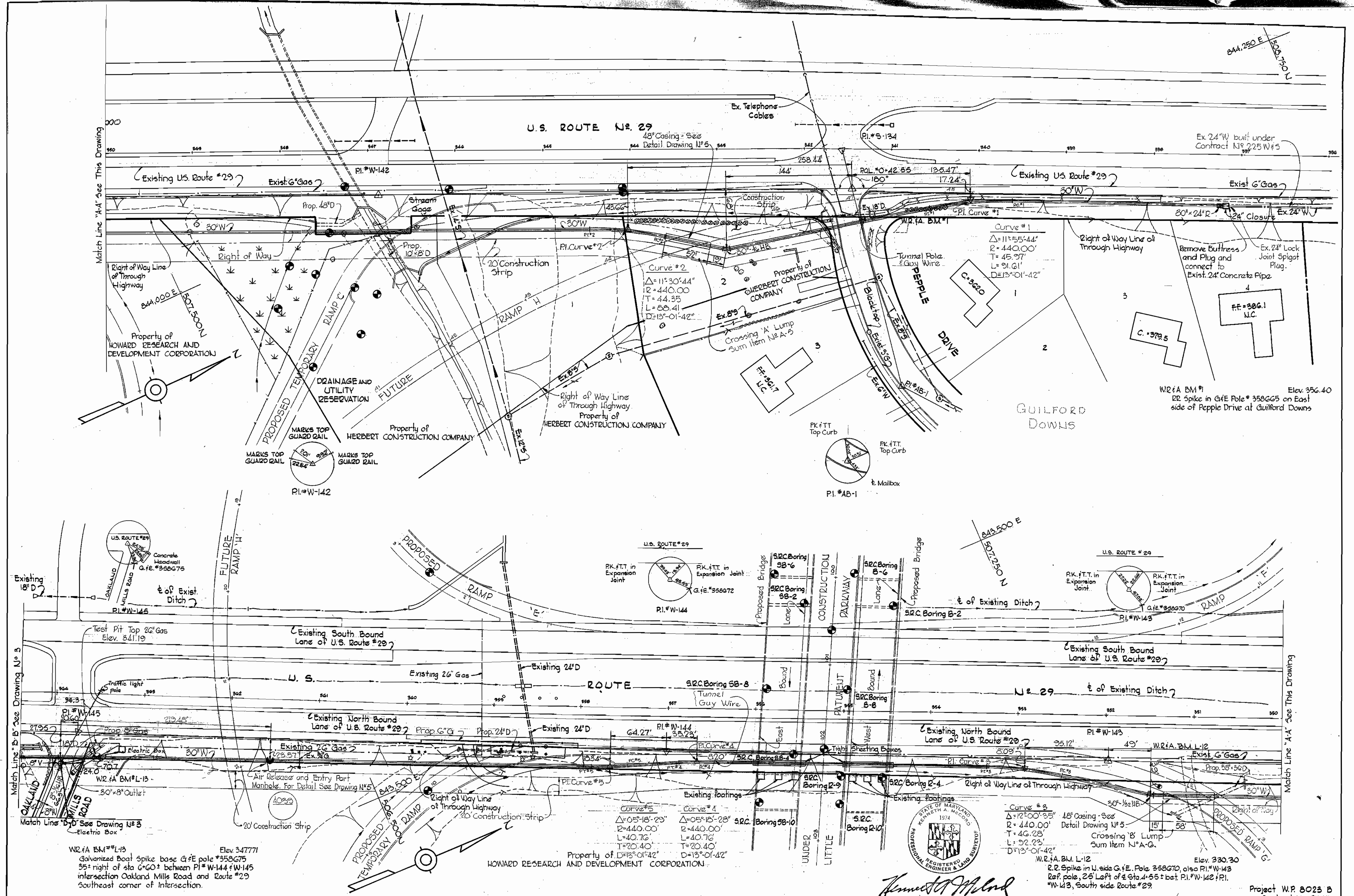
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 12-21-72 <i>W.O. Falbert</i> CHIEF - BUREAU OF WATER AND SEWER	CONTRACT NO. C-311-W LOCATION MAP OF WATER MAIN EXTENSIONS	COLUMBIA U.S. ROUTE 29 WATER MAIN ELECTION DISTRICT GUILFORD NO. 6 DRAWING NO. 1 OF 5 SCALE AS SHOWN
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W.O. 8023-B HC Columbia 7/6

Nov. 13, 1974 AS BUILT

WS 311-W/1





<b>WHITMAN, REQUARDT &amp; ASSOCIATES</b> ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	<b>DEPARTMENT OF PUBLIC WORKS</b> HOWARD COUNTY, MARYLAND DATE: 12-21-72 <i>W O Libert</i> CHIEF - BUREAU OF WATER AND SEWER	<b>CONTRACT NO. C-311-W</b>	<b>PLAN OF WATER MAINS</b>	<b>COLUMBIA</b> <b>U.S. ROUTE 29 WATER MAIN</b> <b>ELECTION DISTRICT GUILFORD NO. 6</b>	<b>DRAWING NO. 2 OF 5</b> <b>SCALE 1" = 50'</b> Project W.P. 8023 B Contract No. 311-W
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W. O. 0023-2

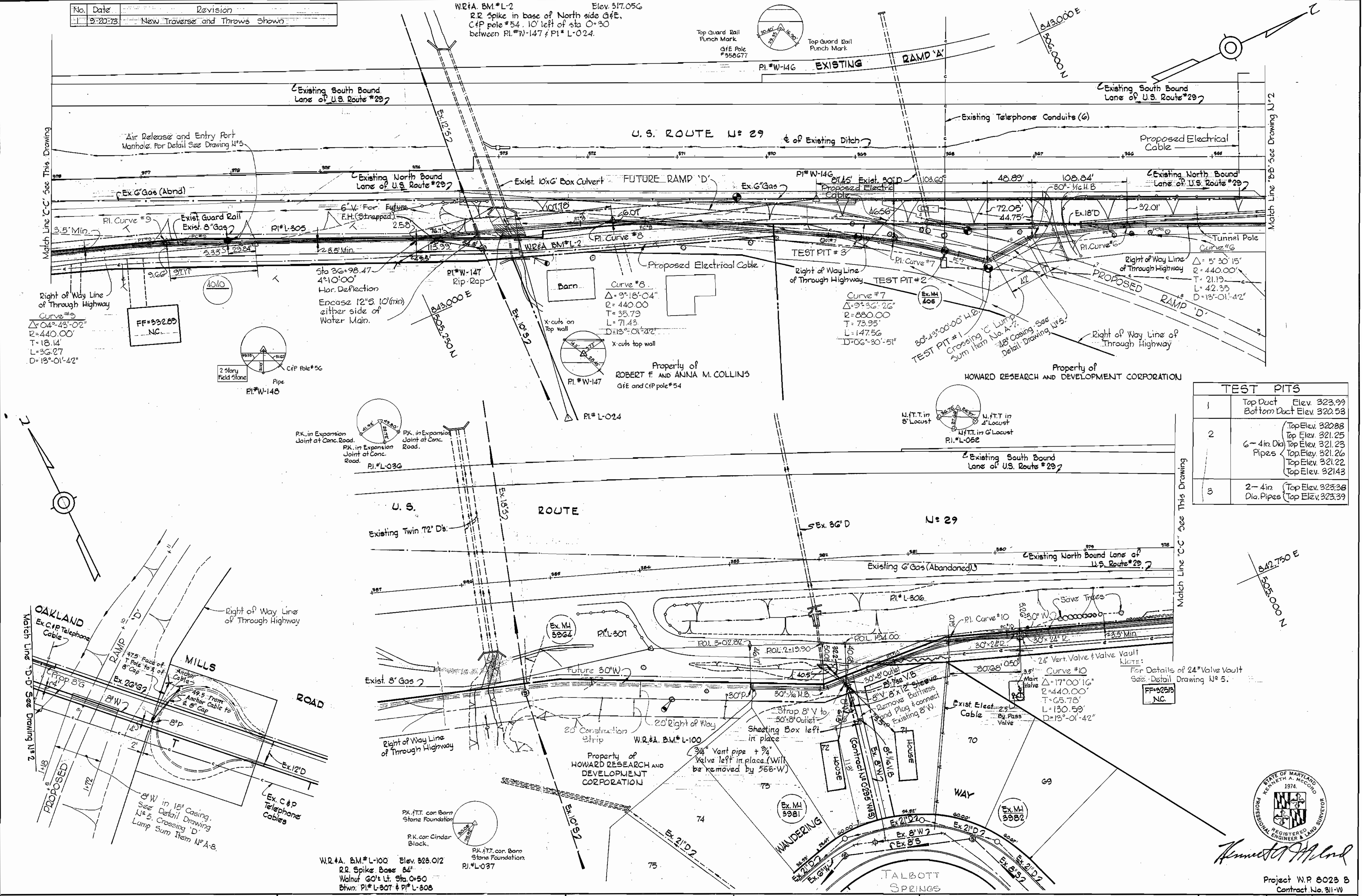
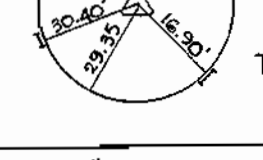
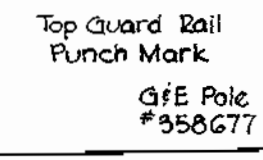
Nov. 13, 1974  
 F.B. 4372 AS BUILT  
 F.B. 4418

7/M-116 CM

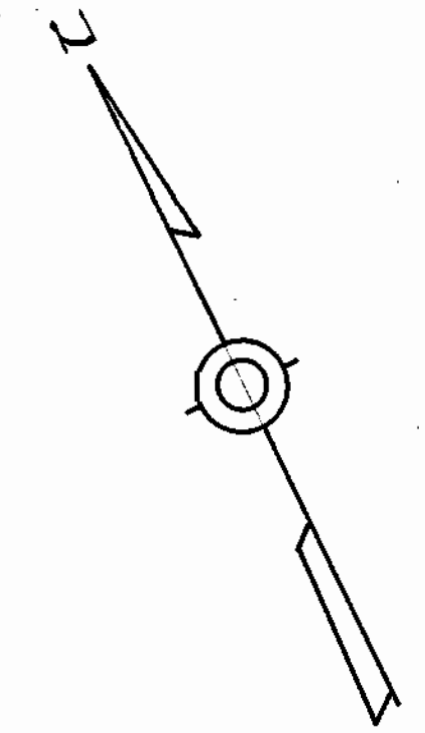


No.	Date	Revision
1	9-20-73	New Traverse and Throws Shown

W.R.A. BM#L-2 Elev. 517.056  
 R.R. Spike in base of North side G&E.  
 C&P pole #54. 10' left of sta 0+30  
 between PI#W-147 & PI#L-024.



TEST PITS		
1	Top Duct Elev. 323.99 Bottom Duct Elev. 320.53	
2	Top Elev. 320.88 Top Elev. 321.25 6-4 in. Dia. Pipes Top Elev. 321.23 Top Elev. 321.26 Top Elev. 321.22 Top Elev. 321.43	
3	2-4 in. Dia. Pipes Top Elev. 323.38 Top Elev. 323.39	



Match Line 'C-C' See This Drawing

Match Line 'B-B' See Drawing U/2

Match Line 'D-D' See Drawing U/2



*Kenneth A. McLeod*  
 Project W.P. 8023 B  
 Contract No. 311-W

<b>WHITMAN, REQUARDT &amp; ASSOCIATES</b> ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	<b>DEPARTMENT OF PUBLIC WORKS</b> HOWARD COUNTY, MARYLAND DATE: 12-21-72 <i>W. O. Falbert</i> CHIEF - BUREAU OF WATER AND SEWER	<b>CONTRACT NO. C-311-W</b>	<b>PLAN OF WATER MAINS</b>	<b>COLUMBIA</b> U.S. ROUTE 29 WATER MAIN ELECTION DISTRICT GUILFORD NO. 6	<b>DRAWING NO. 3 OF 5</b>	<b>SCALE 1" = 50'</b>
					Nov. 13, 1974	AS BUILT

WS 311-W/3

W. O. G023-2

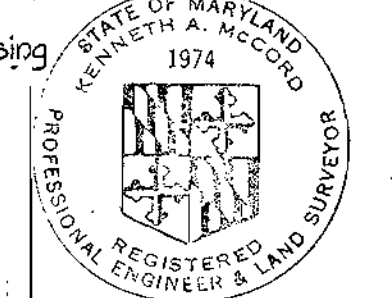
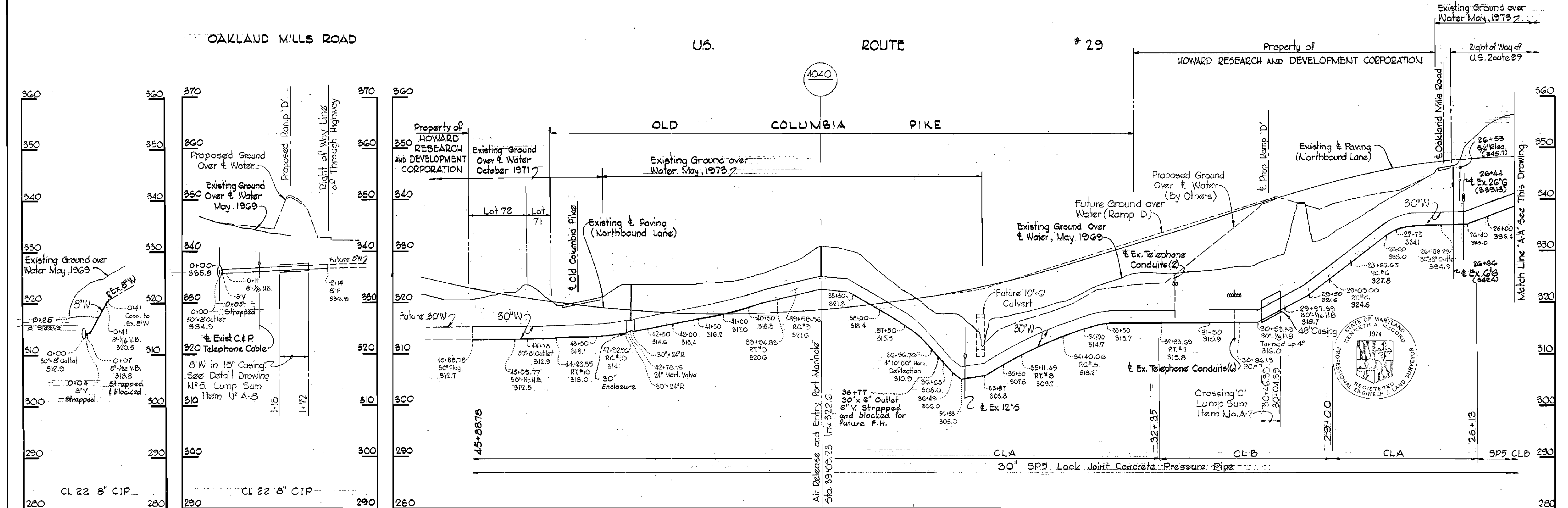
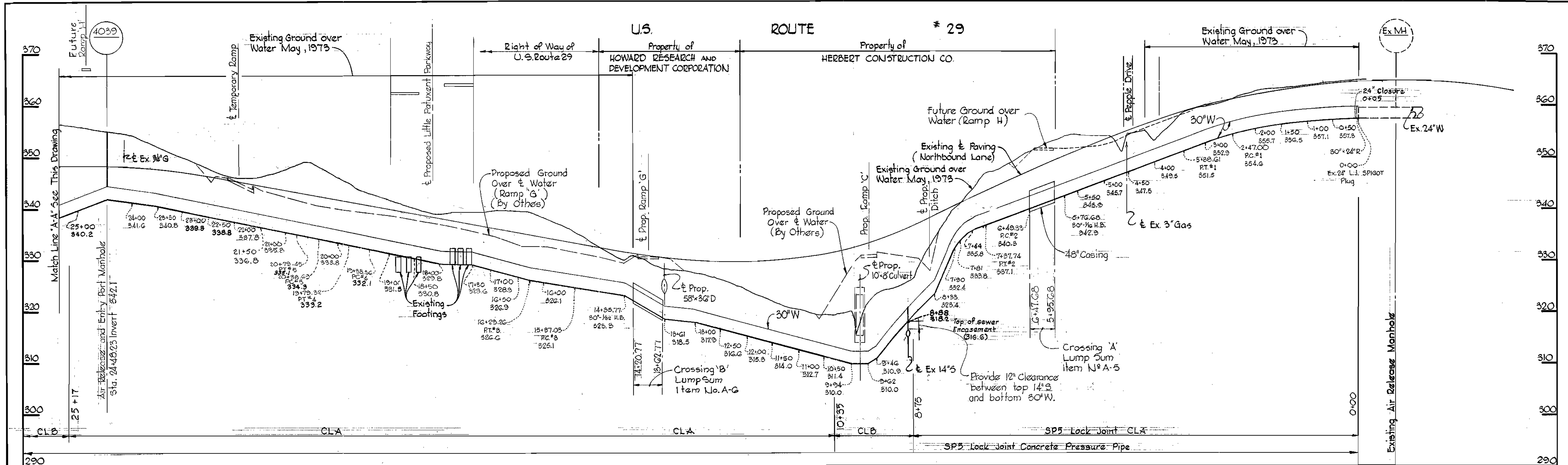
Nov. 13, 1974



Suspense

Suspense

Suspense



*Kenneth A. McCord*

Project W.P. 8023-B  
Contract N.C. 311-W

**WHITMAN, REQUARDT & ASSOCIATES**  
ENGINEERS  
1304 ST. PAUL ST.  
BALTIMORE, MARYLAND

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND  
12-21-72  
W.O. Fallick  
CHIEF - BUREAU OF WATER AND SEWER

CONTRACT NO. C-311-W

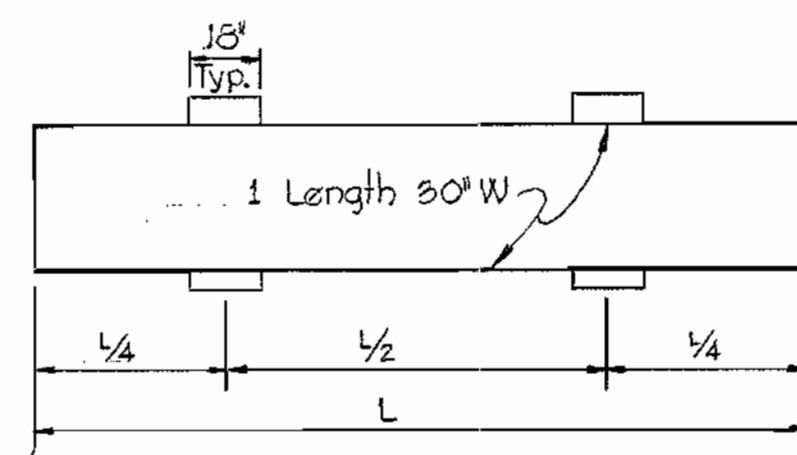
PROFILES OF  
WATER MAINS

**COLUMBIA**  
U.S. ROUTE 29 WATER MAIN  
ELECTION DISTRICT GUILFORD NO. 6

DRAWING NO. 4 OF 5  
SCALE H:V = 1" = 100'  
V:1" = 10'

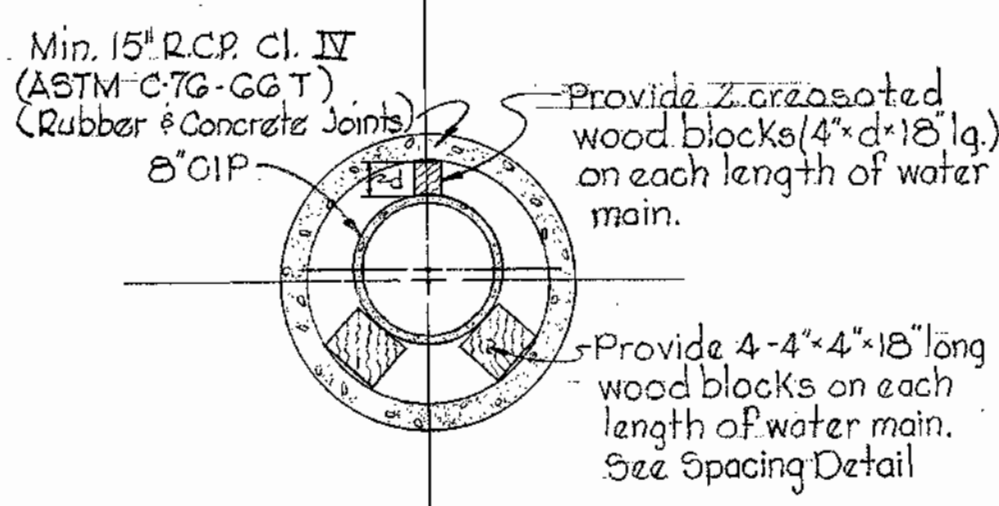
W. O. 6023-2

Nov. 13, 1974 AS BUILT



WOOD BLOCK SPACING

Scale: 1/4" = 1'-0"



15" CASING DETAIL

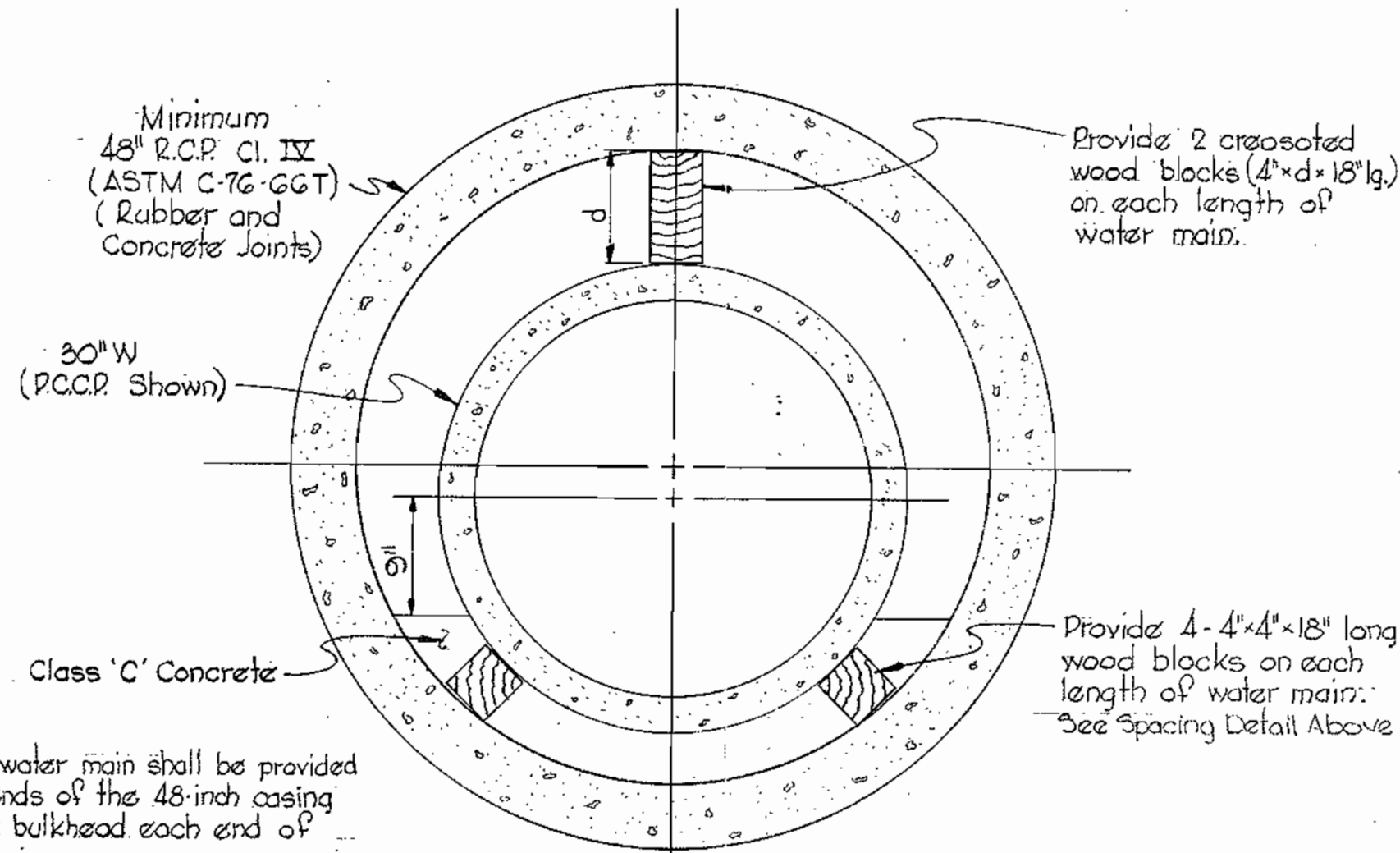
Scale: 1" = 1'-0"

NOTES:

1. A joint in the water main shall be provided within 2'-0" of ends of the 15-inch casing.
2. Build 8" brick bulkhead each end of 15-inch casing.
3. Strap wood blocks to water main w/ 1"-1/2" steel bands. Paint w/ 2 coats Mobile Asphalt 35-J-11 paint or approved equal.

NOTE:

All exposed steel to be coated with 2 coats Mobile Asphalt 35-J-11 or approved equal.

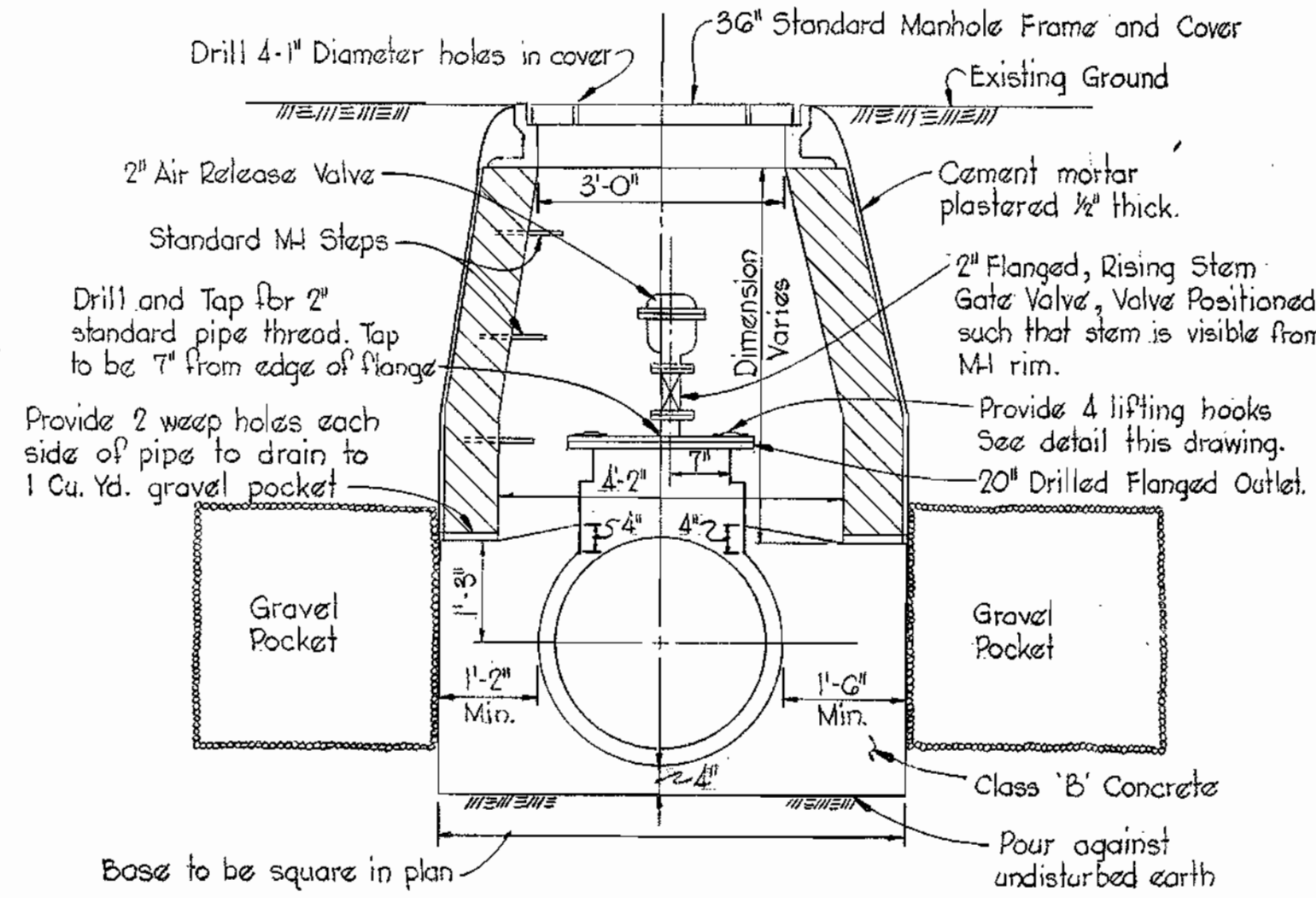


48" CASING DETAIL

Scale: 1" = 1'-0"

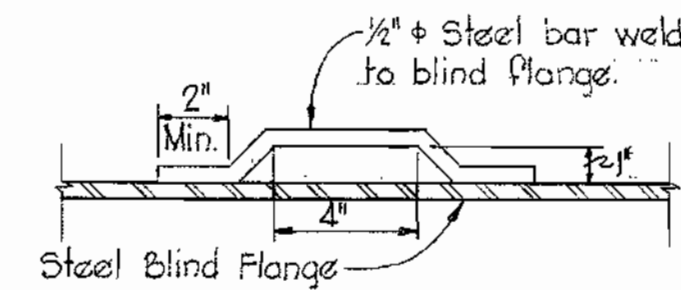
NOTES:

1. A joint in the water main shall be provided within 2'-0" of ends of the 48-inch casing.
2. Build 8" brick bulkhead each end of 48-inch casing.
3. Strap wood blocks to water main w/ 1"-1/2" steel bands. Paint w/ 2 coats Mobile Asphalt 35-J-11 paint or approved equal.



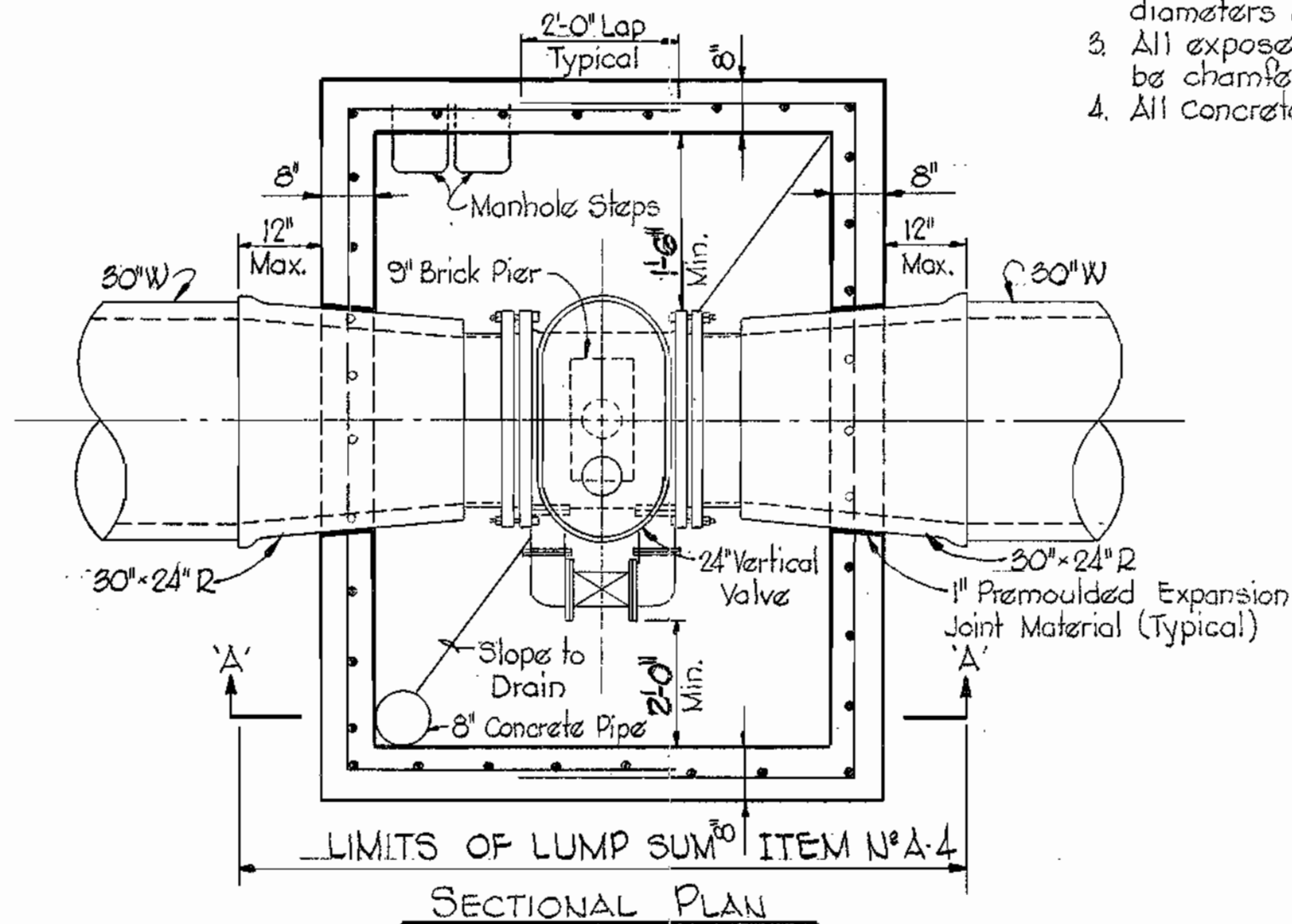
DETAIL OF AIR RELEASE AND ENTRY PORT MANHOLE

Scale: 1/2" = 1'-0"



LIFTING HOOK DETAIL

Scale: 3/8" = 1"

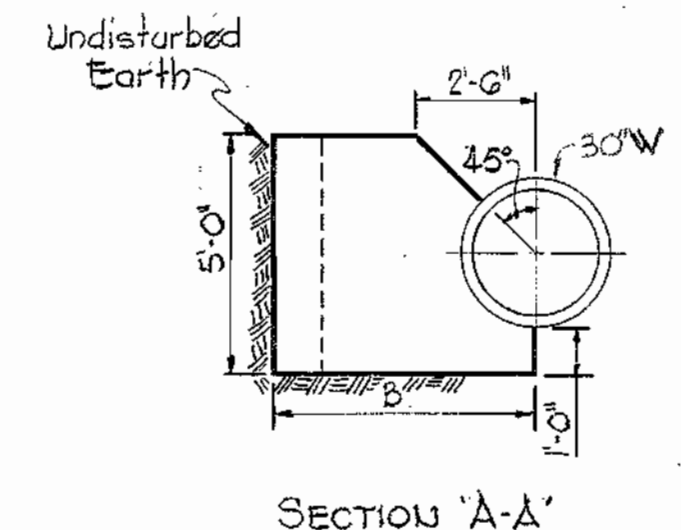
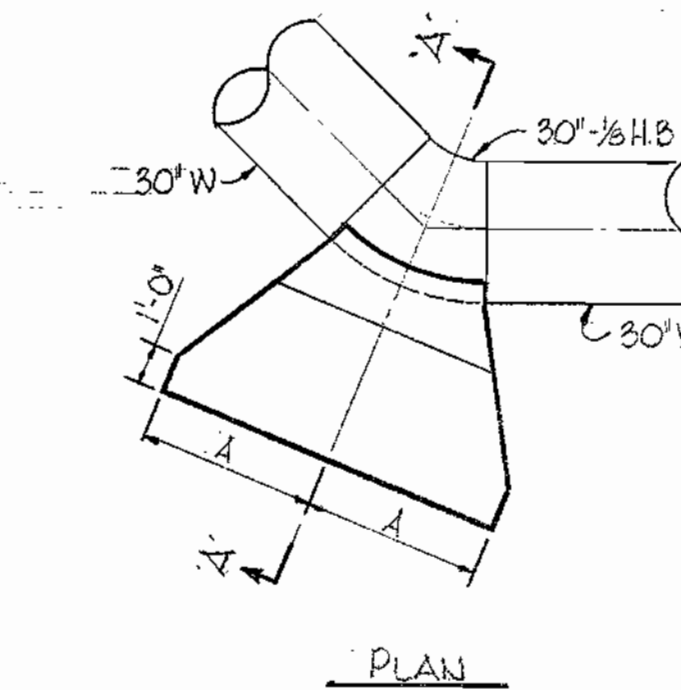
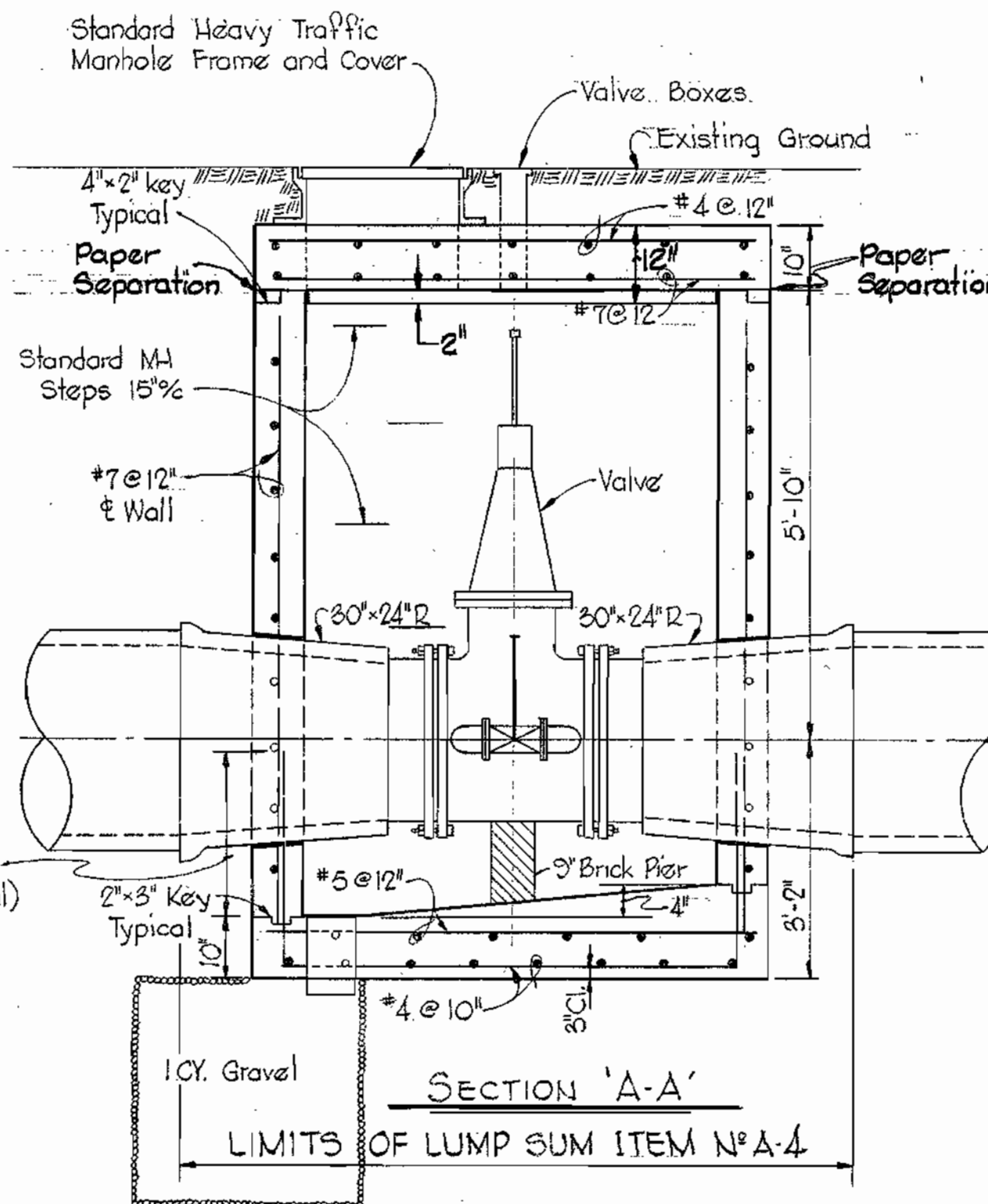


DETAILS OF 24" VERTICAL VALVE VAULT

Scale: 1/2" = 1'-0"

NOTES:

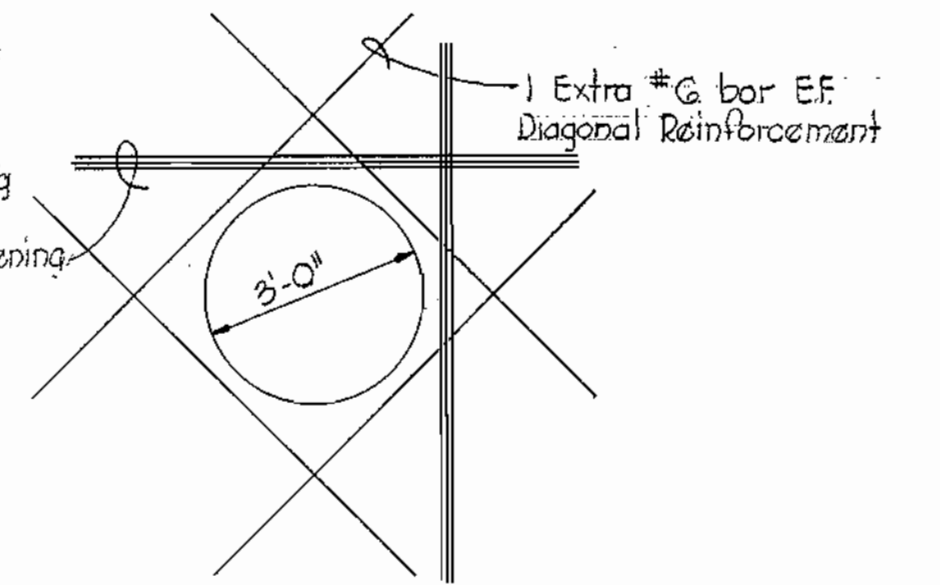
1. Reinforcing steel shall conform to A.S.T.M. A-615-70 Grade 40.
2. Reinforcing Bar Laps and Dowel projections shall be 30 Bar diameters unless otherwise noted.
3. All exposed concrete edges shall be chamfered 3/4".
4. All concrete shall be Class 'A'.



BUTTRISS DETAILS FOR HORIZONTAL BENDS

Scale: 1/4" = 1'-0"

Additional Reinforcement E.F.E.W. Minimum of 1/2 the principle Reinforcing Bars interrupted by the opening shall be provided on each side of each face of the opening.



DETAIL OF ADDITIONAL REINFORCEMENT AROUND OPENINGS IN SLABS AND WALLS

Scale: 3/8" = 1'-0"

Buttriss Schedule for Horizontal Bends		
	A	B
1/2" Hor. Bend	2'-0"	4'-0"
3/4" Hor. Bend	3'-0"	5'-0"



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ENGINEERS  
1304 ST. PAUL ST.  
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

12-21-72  
DATE

*W. O. F. W. W.*  
CHIEF - BUREAU OF WATER AND SEWER

CONTRACT NO. C-311-W

DETAILS OF  
30" WATER MAIN

COLUMBIA  
U.S. ROUTE 29 WATER MAIN  
ELECTION DISTRICT GUILFORD NO. 6

DRAWING NO. 5 OF 5  
SCALE AS SHOWN

Project W.P. 8023 B  
Contract No. C-311-W

WS 311-W/5