

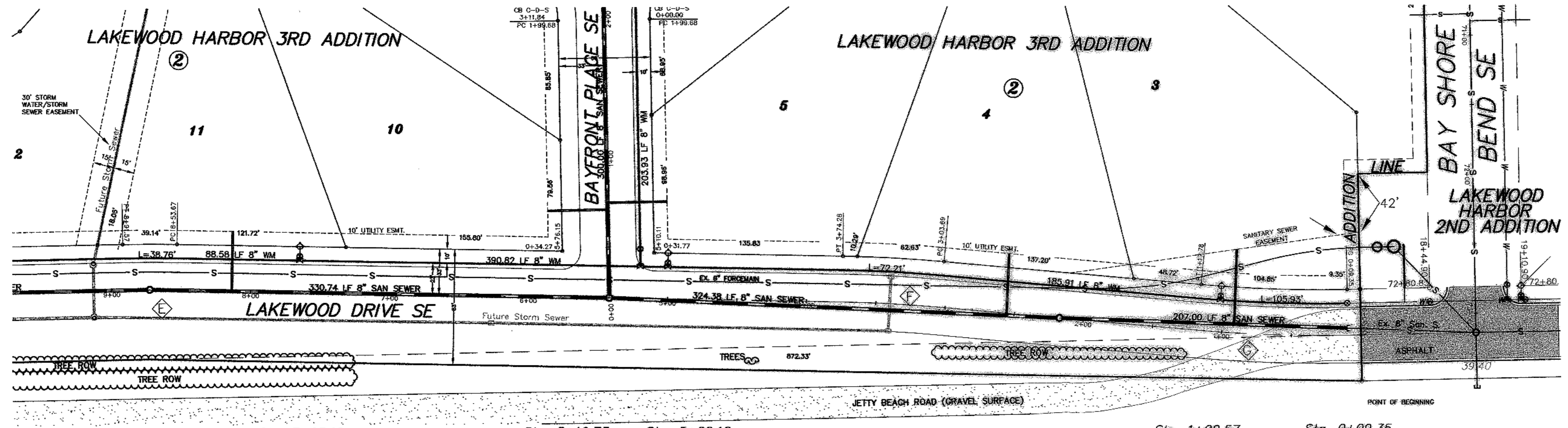
SCALE - 1"=50'

Sta. 8+72.62 0.18' Rt.  
=San. Sewer Sta. 3+30.74 Bk.  
=San. Manhole No. 3 Sta. 0+00.00 Ahd.

Sta. 5+41.88 CL  
=San. Sewer Sta. 3+24.38 Bk.  
=San. Manhole No. 2 Sta. 0+00.00 Ahd.

Sta. 2+17.33 CL  
=San. Sewer Sta. 2+07.00 Bk.  
=San. Manhole No. 1 Sta. 0+00.00 Ahd.

Sta. 0+09.86 5.16' Rt.  
=San. Sewer Sta. 0+00.00 Ahd.  
=Cap



Sta. 7+65.10  
8" x 6" Tee  
3.00 LF 6" WM  
6" Gate Valve & Box  
7.00 LF 6" WM  
6" Hydrant

Sta. 5+19.73  
8" x 8" Tee

Sta. 5+00.10  
8" x 6" Tee  
3.00 LF 6" WM  
6" Gate Valve & Box  
7.00 LF 6" WM  
6" Hydrant

Sta. 1+02.57  
8" x 6" Tee  
3.00 LF 6" WM  
6" Gate Valve & Box  
7.00 LF 6" WM  
6" Hydrant

Sta. 0+09.35  
Remove & Salvage  
6" Hydrant  
1 LF 6" WM  
8" x 6" Reducer  
Connect 8" Gate Valve & Box

End Watermain Quantities  
Sta. 7+65.10

End San. Sewer Quantities  
Sta. 8+72.62 0.18' Rt.

Begin Watermain Quantities  
Sta. 0+09.35  
Begin San. Sewer Quantities  
Sta. 0+09.86 5.16' Rt.

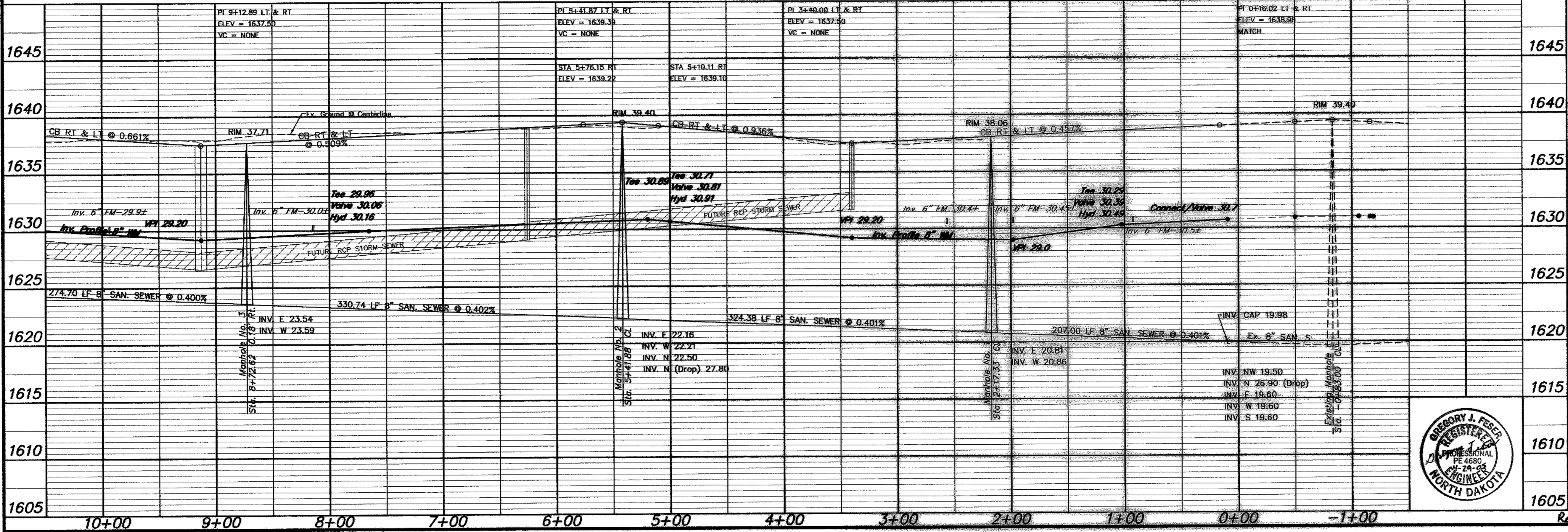
APPROXIMATE WYE LOCATIONS

STATION	DIRECTION	LOT	BLOCK
FROM EX. PLUG TO MANHOLE NO. 1	N	3	2
FROM MANHOLE NO. 1 TO MANHOLE NO. 2	N	4	2
FROM MANHOLE NO. 2 TO MANHOLE NO. 3	N	11	2

Lot	Block	4" Sewer Service	4" 45° Bend	8" x 4" Wye Branch	8" x 4" Tee	6" Cap	6" Water Service Pipe	6" Drop Manhole	6" Curb Stop & 1 1/2" Box
3	2	53.9	1	1	28.00				
4	2	44.7	1	1	28.00				
11	2	43.0	1	1	28.00				
TOTAL		141.6	3	3					

Manhole Number	1	2	3
Casting Elev.	38.06	39.40	37.71
Top P.C. Section	37.02	38.36	36.67
Invert Elev. (a)	20.81	22.16	23.54
Invert Elev. (b)	20.86	22.21	23.59
Invert Elev. (c)	---	22.50	---
Invert Elev. (drop)	16.21	16.20	---
Length P.C. Section	16.21	16.20	13.13

NOTE:  
ALL WATER MAIN IS 24.00' RIGHT OF CENTERLINE UNLESS OTHERWISE STATED



CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	DELTA
E	1000.00'	37.89'	18.95'	02°10'16"
F	1000.00'	70.59'	35.31'	04°02'40"
G	1000.00'	108.43'	54.27'	06°12'45"

APPROXIMATE QUANTITIES

San. Sewer Items	Quantity
8" Sanitary Sewer	862 LF
8" x 4" Wye Branch	3 EA
Subcut Gravel	500 TON
Concrete Manhole	2 EA
4" Sewer Service Pipe	142 LF
4" 45° Bend	3 EA
Concrete Drop Manhole	1 EA
Watermain Items	Quantity
6" PVC Watermain	30 LF
8" PVC Watermain	755 LF
6" Hydrant	3 EA
6" Gate Valve & Box	3 EA
8" Gate Valve & Box	1 EA
Ductile Iron Fittings	(incidental)

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**LAKWOOD DRIVE SE**  
 FROM THE INTERSECTION OF BAY SHORE BEND SE  
 WEST TO 330' WEST OF BAYFRONT PLACE SE  
 WATER AND SEWER IMPROVEMENT PROJECT 2005-17  
 SHEET NO. 2 OF 8  
 MANDAN, ND APRIL 22, 2005  
 Record Drawing COPYRIGHT 2005 SWENSON, HAGEN & CO.