

Sta. 21+97.29 50.69' Lt.
=San. Sewer Sta. 0+00 Ahd.
Ex. Manhole

Sta. 23+64.36 9.08' Rt.
=San. Sewer Sta. 1+95.61 Bk.
Remove Cleanout/Connect

Sta. 25+51.77 12.75' Lt.
=San. Sewer Sta. 0+00 Ahd.
=San. Sewer Sta. 3+84.85 Bk.
Manhole No. 7

Sta. 27+61.38 CL
=San. Sewer Sta. 2+10.00 Bk.
Manhole No. 9

SCALE - 1"=50'

APPROXIMATE WYE LOCATIONS

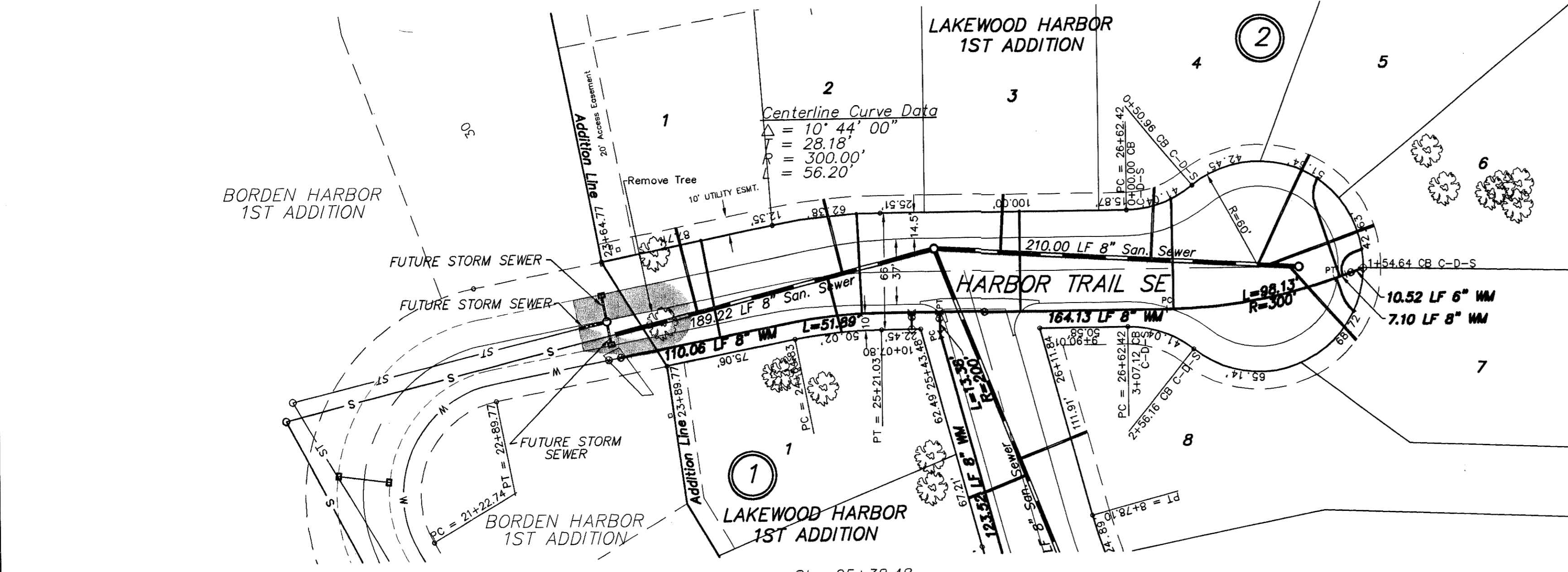
STATION	DIRECTION	LOT	BLOCK
FROM EX. MANHOLE TO MANHOLE NO. 7			
2+43	SE	1	2
3+20	NW	1	1
3+30	SE	2	2
FROM MANHOLE NO. 7 TO MANHOLE NO. 9			
0+38	SE	3	2
1+24	SE	4	2
1+86	SE	5	2
1+92	S	6	2
2+05	SW	7	2

CONSTRUCTION NOTES (THIS SHEET)

- BACKFILL SHALL BE CLASS 'A'.
- GRADING SHALL BE BY OTHERS, PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY THE ELEVATION OF THE GROUND WATER AT THE TIME OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DEWATERING OF THE CONSTRUCTION SITE AS REQUIRED TO INSTALL THE PROPOSED UTILITIES.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF OFFSITE THE EXISTING CLEANOUT AT STA. 23+64.36 AND CONNECT TO THE EXISTING SANITARY SEWER LINE. SAID WORK SHALL BE CONSIDERED INCIDENTAL TO THE "B" SANITARY SEWER" BID ITEM.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF OFFSITE ALL ASPHALT PAVEMENT AS REQUIRED TO MAKE THE CONNECTIONS TO THE EXISTING UTILITIES. SAID WORK SHALL BE CONSIDERED INCIDENTAL TO THE "REMOVE PAVEMENT" BID ITEM.
- RECORD DRAWINGS FOR BORDEN HARBOR 1ST ADD. SHOW A GATE VALVE AT APPROXIMATELY STA. 23+55. HOWEVER, THIS HAS NOT BEEN VERIFIED IN THE FIELD. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE CLOSEST GATE VALVE PRIOR TO SALVAGING THE HYDRANT AND TURNING OFF THE WATER IN BORDEN HARBOR 1ST ADD. IF THE CONTRACTOR LOCATES A GATE VALVE CLOSE TO THE HYDRANT AT STA. 23+64.77 THAT IS TO BE SALVAGED, A NEW GATE VALVE SHOULD NOT BE INSTALLED AT THE CONNECTION POINT.
- THE CONTRACTOR SHALL SALVAGE THE 6" HYDRANT FROM STA. 23+64.77 ON THE EAST END OF HARBOR TRAIL SE AND RESET IT AT STA. 11+44.48 BORDEN HARBOR DRIVE SE AS REQUIRED. ALL WORK AND MATERIALS REQUIRED TO SALVAGE AND RESET HYDRANT SHALL BE CONSIDERED INCIDENTAL TO THE "RESET HYDRANT" BID ITEM LISTED ON SHEET 2 OF THESE PLANS.
- THE STORM SEWER IS NOT PART OF THIS PROJECT.
- THE HYDRANT AT STA. 27+98.23 SHALL HAVE A 9.0' BURY DEPTH.
- EXERCISE CAUTION WHEN CROSSING THE SEWER SERVICES WITH THE WATERMAIN OR CROSSING THE WATERMAIN WITH THE SEWER SERVICES.

Lot	Block	4" Sewer Service	4" 45° Bend	4" 22 1/2° Bend	8" x 4" Wye Branch At The Cap	1" Copper Water Service Invert	1" Water Service Connection	1" Ball Valve Curb Stop & 1 1/4" Box
1	2	49	1	1	30.41	56	1	1
1	1	32	1	1	32.20	---	---	---
2	2	43	1	1	30.68	56	1	1
3	2	33	1	1	30.98	56	1	1
4	2	41	1	1	31.42	62	1	1
5	2	69	---	1	32.02	58	1	1
6	2	65	---	1	32.00	21	1	1
7	2	57	---	1	31.95	22	1	1
TOTAL		389	5	2	8	NA	331	7

Manhole Number	9
Casting Elev.	40.87
Top P.C. Section	39.87
Invert Elev. (a)	31.05
Invert Elev. (b)	
Invert Elev. (c)	
Length P.C. Section	8.82'



Sta. 23+64.77 Salvage Hydrant Connect 8" Gate Valve & Box

Sta. 25+51.77 8" x 6" Tee 3.00 LF 6" WM 6" Gate Valve & Box 7.00 LF 6" WM 6" Hydrant

Sta. 25+54.30 8" x 8" Tee

Sta. 25+80.14 8" Gate Valve & Box

Sta. 27+88.27 4.81' Rt. 8" x 6" Reducer

Sta. 27+91.11 3.85' Rt. 6" Gate Valve & Box

Sta. 27+98.23 1.43' Rt. 6" Hydrant

Begin Watermain Quantities Sta. 23+64.77

Begin San. Sewer Quantities Sta. 25+64.36

End Watermain Quantities Sta. 27+98.23

End San. Sewer Quantities Sta. 27+61.38

Station	1655	1650	1645	1640	1635	1630	1625	1620	1615	1610
21+00										
22+00										
23+00										
24+00										
25+00										
26+00										
27+00										
28+00										
0+00										
1+00										
2+00										
3+00										

APPROXIMATE QUANTITIES

San. Sewer Items	Quantity
8" Sanitary Sewer	399 LF
8" x 4" Wye Branch	8 EA
Pitrun Gravel	5 TON
Subcut Gravel	5 TON
Concrete Manhole	1 EA
4" Sewer Service Pipe	389 LF
4" 45° Bend	5 EA
4" 22 1/2° Bend	2 EA
Remove Tree	1 EA
Remove Pavement	1 LS

Watermain Items	Quantity
Pitrun Gravel	5 TON
6" PVC Watermain	21 LF
8" PVC Watermain	431 LF
6" Hydrant	2 EA
6" Gate Valve & Box	2 EA
8" Gate Valve & Box	2 EA
Ductile Iron Fittings (incidental)	
1" Water Copper Serv. Pipe	331 LF
1" Water Serv. Connection	7 EA
1" Ball Valve Curb Stop And 1 1/4" Box	7 EA

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HARBOR TRAIL SE
 FROM THE NORTH ADDITION LINE OF LAKEWOOD HARBOR 1ST ADDITION SOUTH TO THE CUL-DE-SAC

WATER AND SEWER IMPROVEMENT PROJECT 2002-04
 SHEET NO. 5 OF 5
 MANDAN, ND MAY 5, 2002

Record Drawing - July 2002

