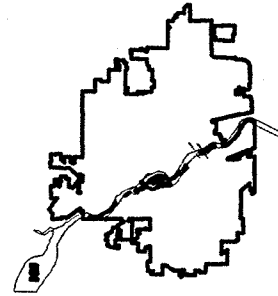
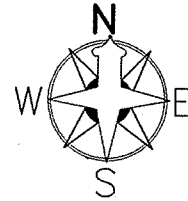


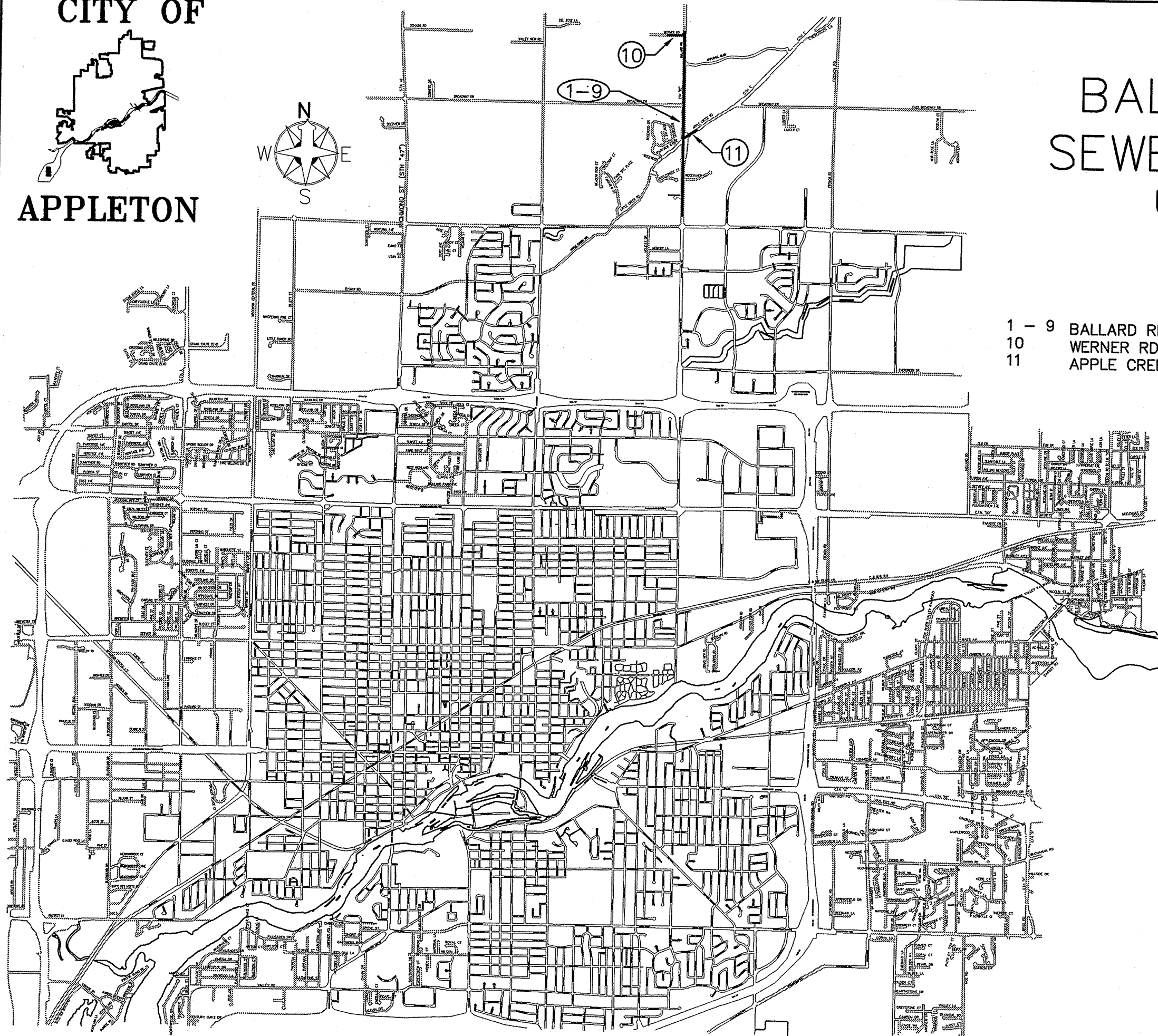
CITY OF



APPLETON



2003 BALLARD ROAD SEWER & WATER UNIT NO FF-03

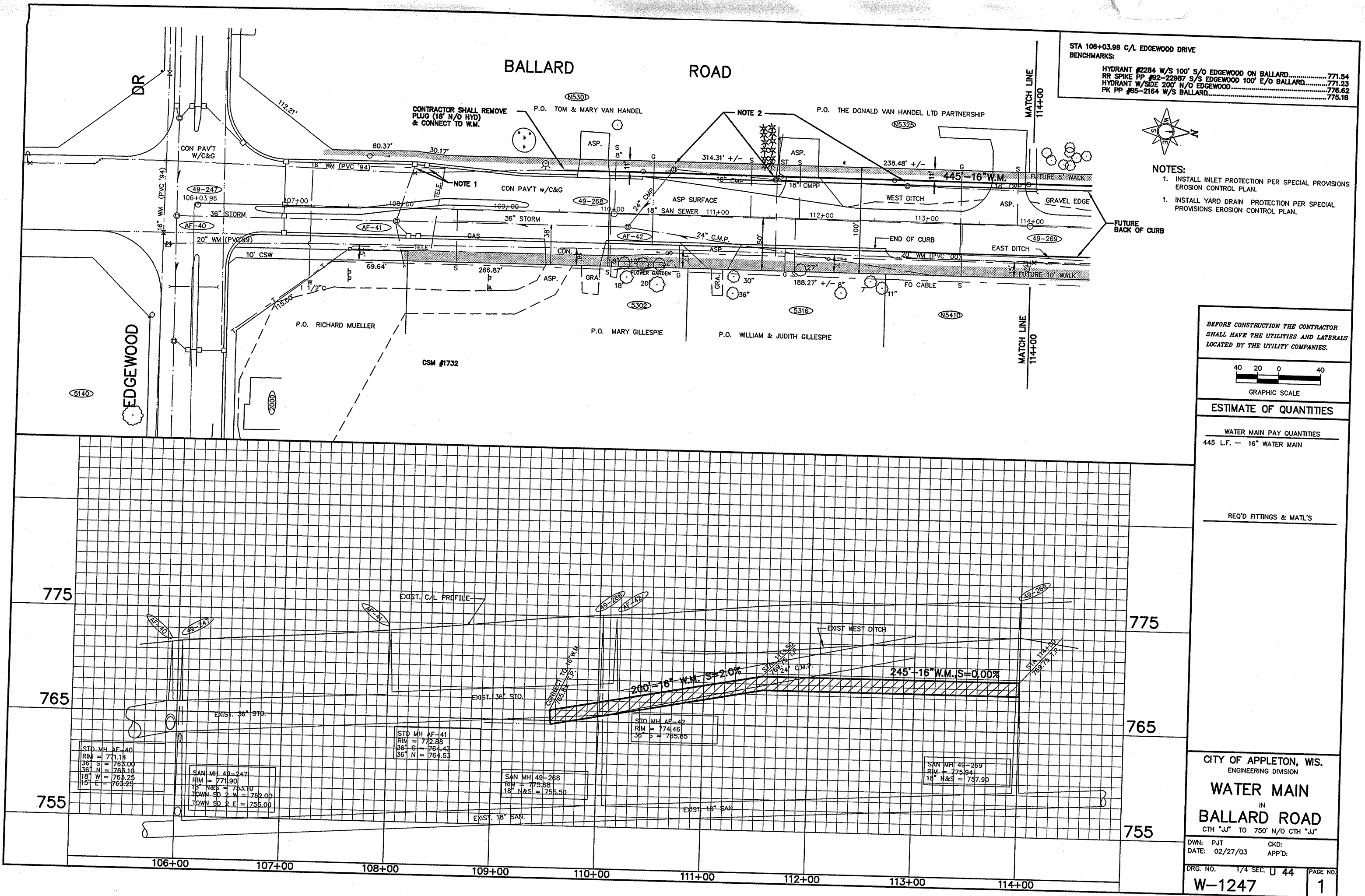


- 1 - 9 BALLARD RD, EDGEWOOD DR TO WERNER RD
- 10 WERNER RD, FROM BALLARD RD TO 300' W/OFF BALLARD RD
- 11 APPLE CREEK RD, FROM BALLARD RD TO 400' E/O BALLARD RD

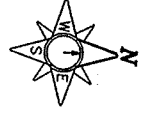
CONVENTIONAL SYMBOLS

EXIST. PROP.		EXIST. PROP.	
SANITARY SEWER MANHOLES	○	HEDGE	○
FENCE CHAIN LINK	○	LIGHT POLE	○
FENCE WOOD	○	MAIL BOX	○
GUARDRAIL	○	METAL POST	○
CULVERT	○	OVERHEAD SIGN BRIDGE	○
ELECTRIC MANHOLE	○	OVERHEAD SIGN POST	○
GAS VALVE	○	ORNAMENTAL STREET LIGHT	○
INLET	○	OVERHEAD TRAFFIC SIGNAL	○
LIFT STATION	○	PARKING METER	○
STORM MANHOLE	○	POWER POLE	○
TELEPHONE MANHOLE	○	PULL BOX	○
WATER MANHOLE	○	SIGN	○
WATER VALVE	○	TELEPHONE PED.	○
RIP RAP	○	TELEPHONE POLE	○
EROSION CONTROL	○	TRAFFIC SIGNAL	○
BUILDING	○	TRAFFIC SIGNAL CONTROLLER	○
BUSH	○	TREE (DECIDUOUS)	○
CABLE TV PED.	○	TREE (EVERGREEN)	○
ELECTRIC PED.	○	GRADES IN PLAN	○
ELECTRIC TRANSFORMER	○	STUMP	○
HYDRANT	○	TREE TO BE REMOVED	○
FLAG POLE	○	VERIFY ELEVATION	○
GATE	○		
GUY WIRE	○		

E-22

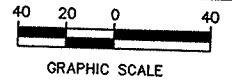


STA 106+03.98 C/L EDGEWOOD DRIVE
 BENCHMARKS:
 HYDRANT #2284 W/S 100' S/O EDGEWOOD ON BALLARD.....771.54
 RR SPIKE PP #92-22987 S/S EDGEWOOD 100' E/O BALLARD.....771.23
 HYDRANT W/SIDE 200' N/O EDGEWOOD.....776.82
 PK PP #85-2164 W/S BALLARD.....775.18



- NOTES:
1. INSTALL INLET PROTECTION PER SPECIAL PROVISIONS EROSION CONTROL PLAN.
 1. INSTALL YARD DRAIN PROTECTION PER SPECIAL PROVISIONS EROSION CONTROL PLAN.

BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



ESTIMATE OF QUANTITIES

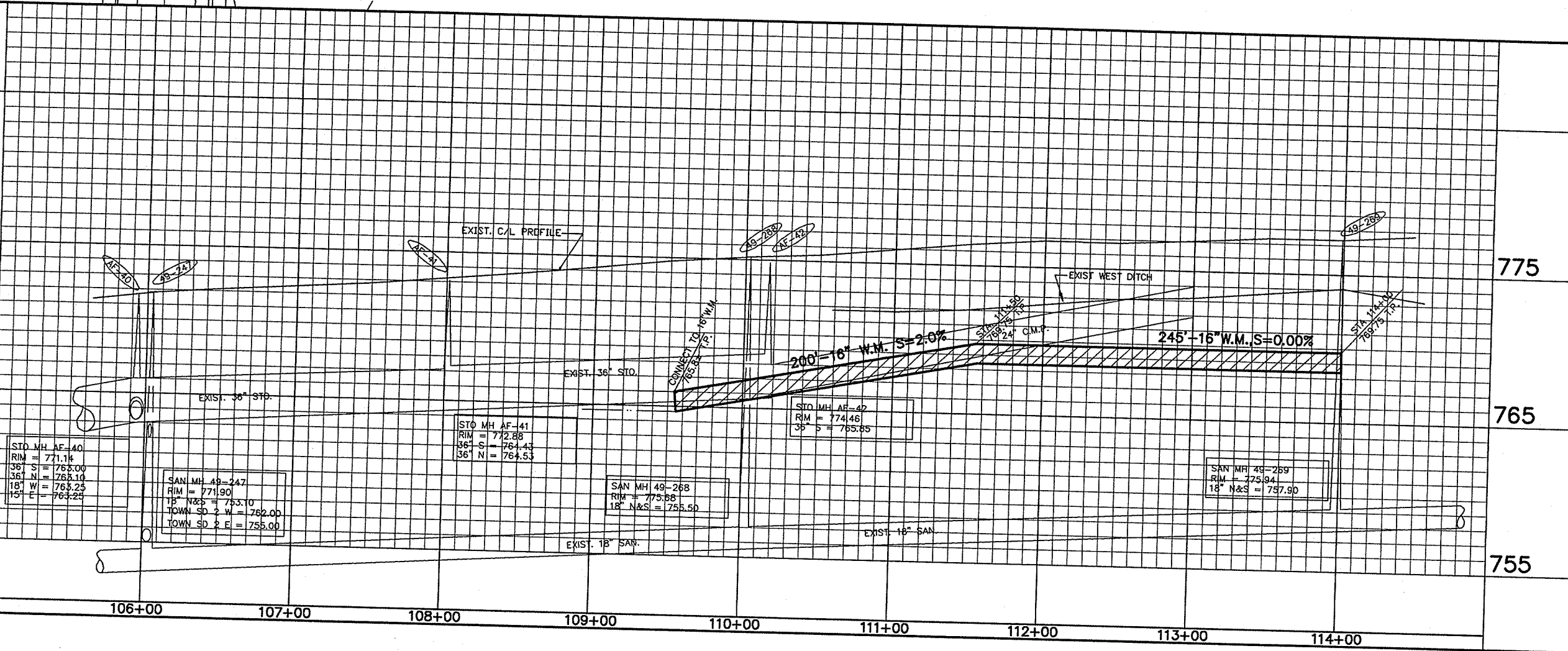
WATER MAIN PAY QUANTITIES
 445 LF. - 16" WATER MAIN

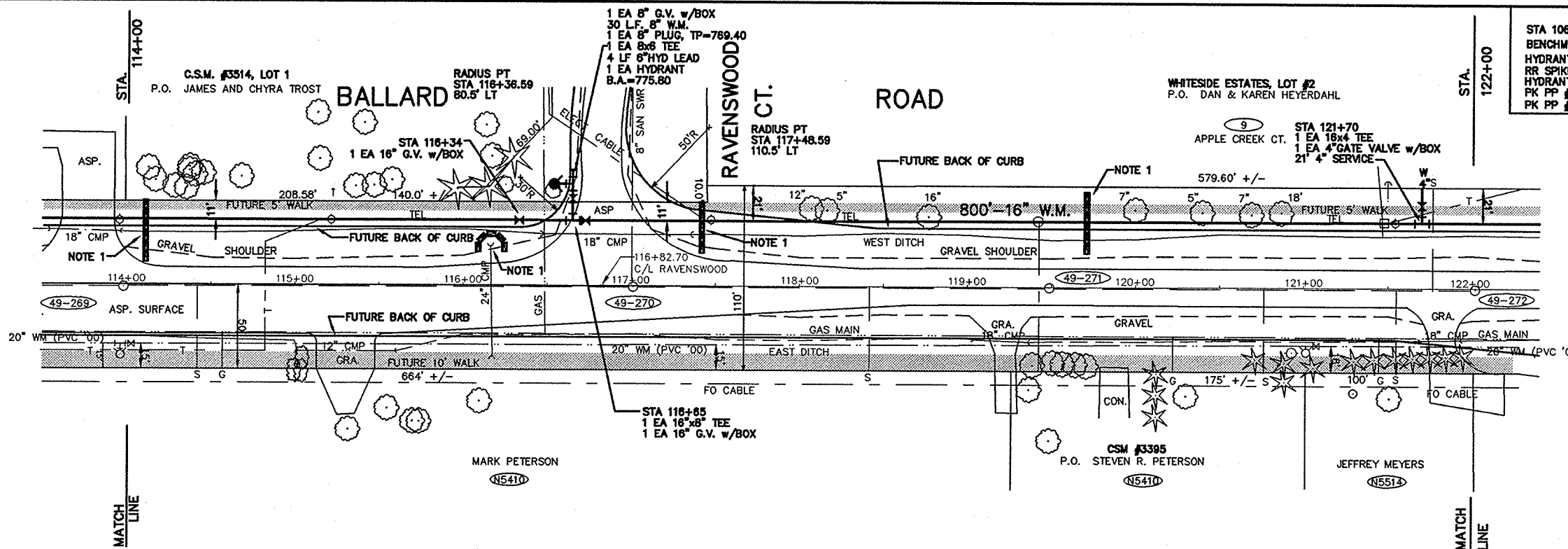
REQ'D FITTINGS & MAT'L'S

CITY OF APPLETON, WIS.
 ENGINEERING DIVISION
WATER MAIN
 IN
BALLARD ROAD
 CTH "J" TO 750' N/O CTH "J"

DWN: PJT CKD:
 DATE: 02/27/03 APP'D:

DRG. NO. 1/4 SEC. U 44 PAGE NO.
W-1247 1





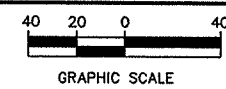
STA 106+03.96 C/L EDGEWOOD DRIVE
BENCHMARKS:

HYDRANT #2284 W/S 100' S/O EDGEWOOD ON BALLARD	773.53
RR SPIKE PP 92-22857 S/S EDGEWOOD 100' E/O BALLARD	771.23
HYDRANT W/SIDE 200' N/O EDGEWOOD 100' E/O BALLARD	778.81
PK PP #85-2184 W/S BALLARD	775.18
PK PP #68-2940 W/S BALLARD	775.68



NOTES:
1. INSTALL DITCH CHECK PER SPECIAL PROVISIONS EROSION CONTROL PLAN.

BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



ESTIMATE OF QUANTITIES

WATER MAIN PAY QUANTITIES

800 LF	- F&I 16" WATER MAIN
30 LF	- F&I 8" WATER MAIN
4 LF	- F&I 6" HYDRANT LEAD
2 EA	- F&I 16" GV w/BOX
21 LF	- F&I 4" W.M. (SERVICE)
1 EA	- F&I 8" GATE VALVE w/BOX
1 EA	- F&I 4" GATE VALVE w/BOX

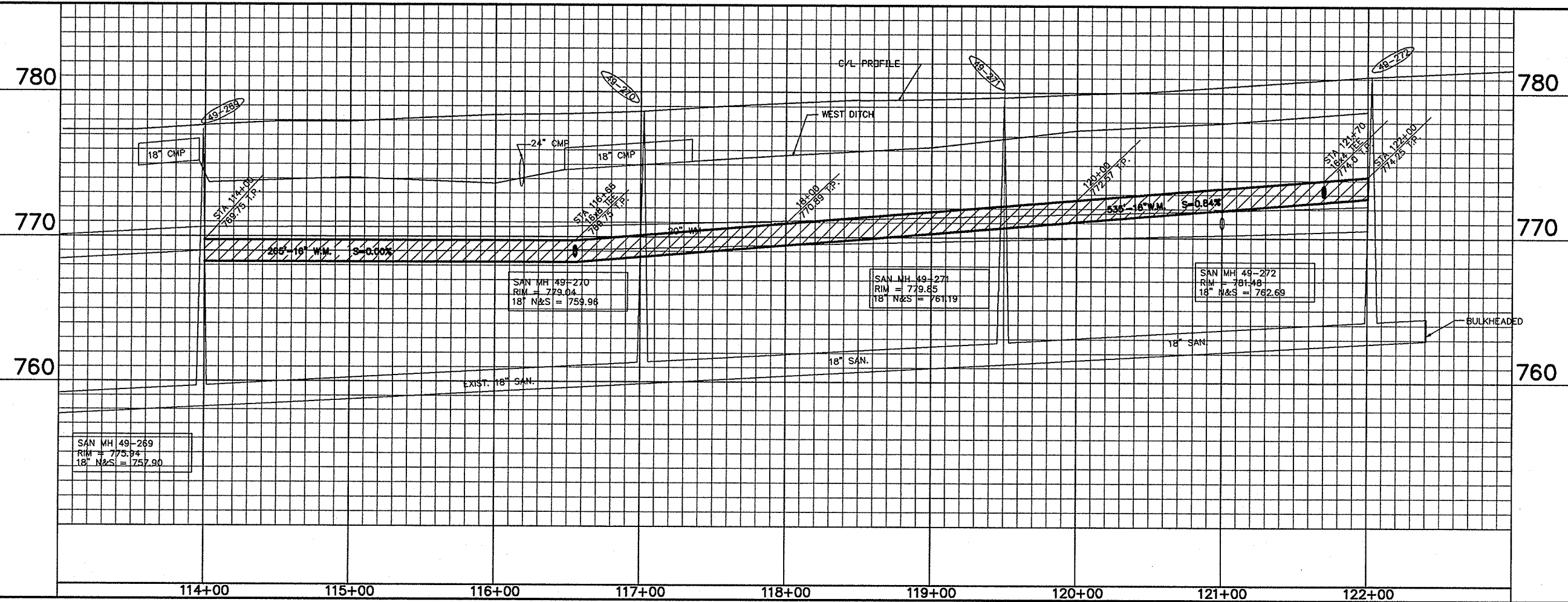
REQ'D FITTINGS & MAT'L'S

1 EA	- 16x8 TEE
1 EA	- 16x4 TEE
1 EA	- 8x6 TEE
1 EA	- 8" PLUG

CITY OF APPLETON, WS.
ENGINEERING DIVISION
WATER
IN
BALLARD RD
950' N/O EDGEWOOD DRIVE TO
450' N/O RAVENSWOOD CT

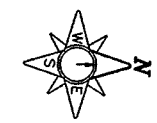
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DATE: 02/27/03 APP'D:

DRG. NO. 1/4 SEC. U44 PAGE NO.
W-1248 **2**



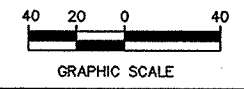
BALLARD ROAD

STA 108+03.96 C/L EDGEWOOD DRIVE
 BENCHMARKS:
 HYDRANT W/SIDE 200' N/O EDGEWOOD776.62
 PK PP #85-2164 W/S BALLARD775.18
 PK PP #88-2940 W/S BALLARD775.68
 PK PP #58-3374 W/S BALLARD780.27



- NOTES:**
- 12" W.M. GRADE-LINE SHALL DROP 12" FROM 16" W.M. TO 24" OFFSET.
 - INSTALL DITCH CHECK PER SPECIAL PROVISIONS EROSION CONTROL PLAN.
 - INSTALL SILT FENCE w/ADDITIONAL SUPPORT WHERE FENCE CROSSES THE DITCH

BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



ESTIMATE OF QUANTITIES

SANITARY SEWER PAY QUANTITIES

762 L.F. - F&I 18" SANITARY SEWER
 36.1 V.F. - F&I STD MANHOLE
 2 EA. - F&I SANITARY MH CASTING
 2 EA. - F&I INTERNAL SEAL

WATER MAIN PAY QUANTITIES

800 L.F. - F&I 16" WATER MAIN
 72 L.F. - F&I 12" WATER MAIN
 2 EA. - F&I 16" GATE VALVE w/BOX
 1 EA. - F&I 12" GATE VALVE w/BOX
 1 EA. - F&I 6" GATE VALVE w/BOX
 1 EA. - F&I 12" DIA. 24" OFFSET
 4 L.F. - F&I 6" HYD. LEAD
 1 EA. - F&I HYDRANT

REQ'D FITTINGS & MAT'L'S

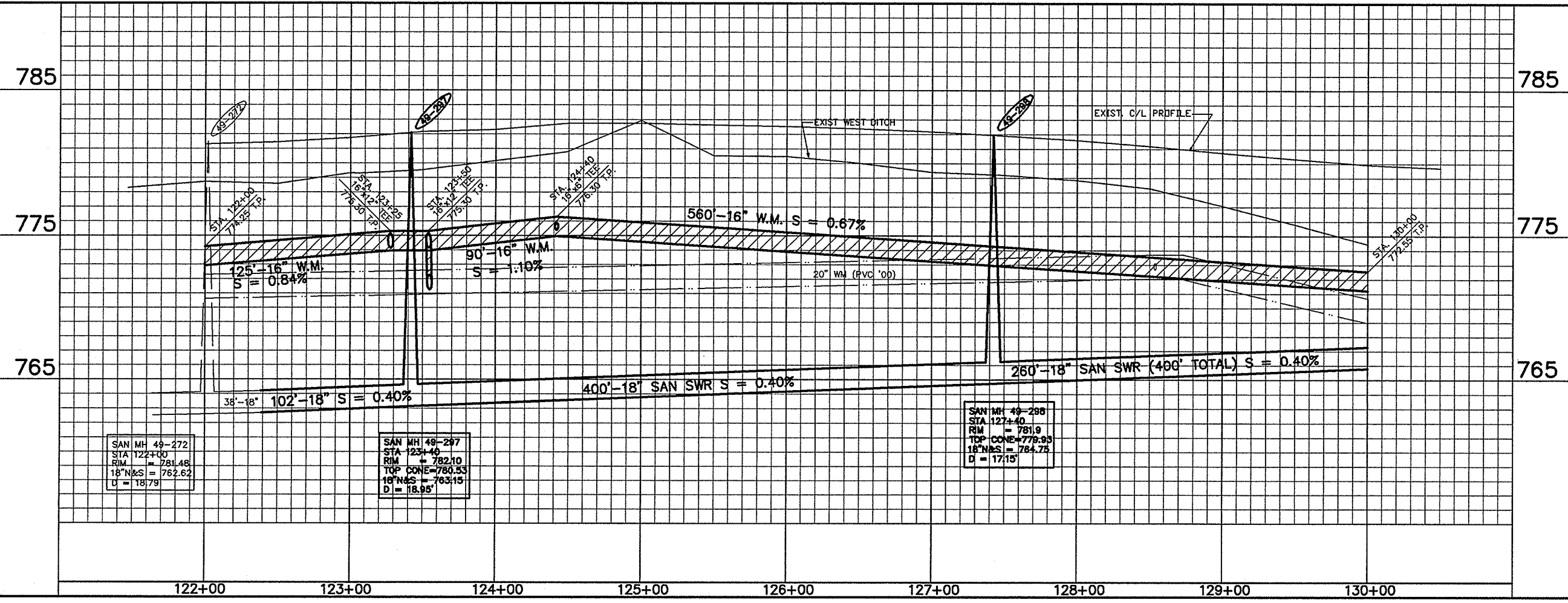
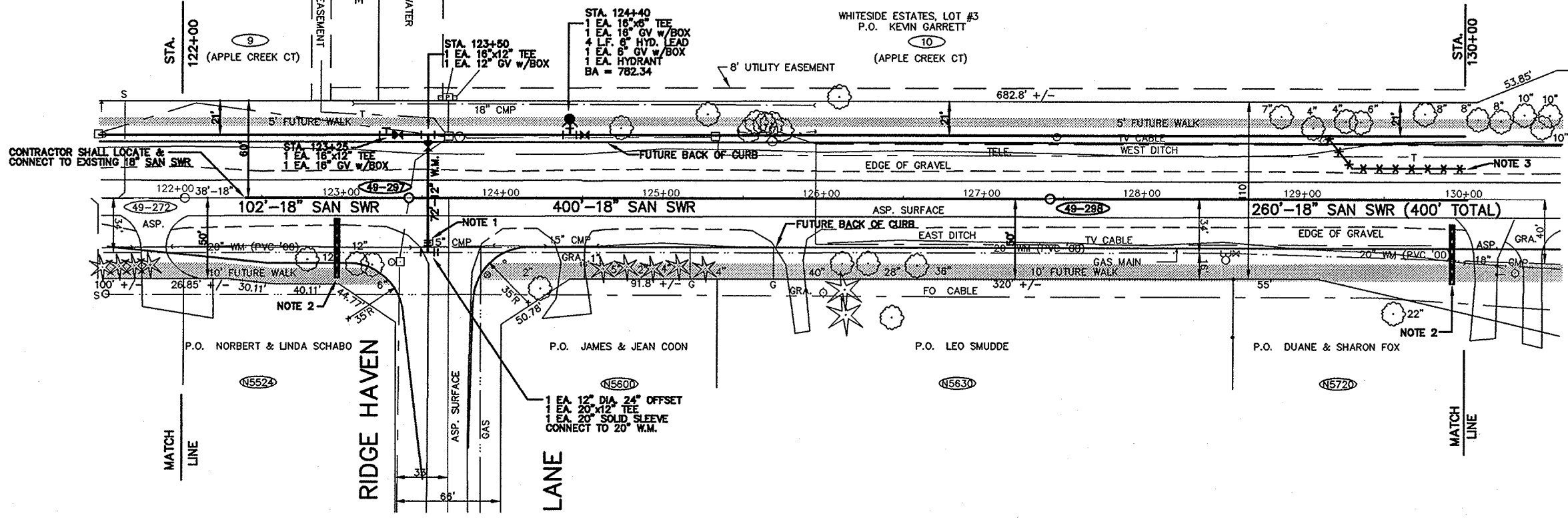
1 EA. - 20"x12" TEE
 2 EA. - 16"x12" TEE
 1 EA. - 16"x6" TEE
 1 EA. - 20" SLEEVE
 1 EA. - 12" PLUG

CITY OF APPLETON, WIS.
 ENGINEERING DIVISION
SEWER & WATER
 IN
BALLARD ROAD
 450' N/O RAVENSWOOD CT TO
 600' N/O RIDGE HAVEN LANE

DWN: PJT CKD:
 DATE: 2/27/03 APP'D:

DRG. NO. 1/4 SEC. U 44 PAGE NO.

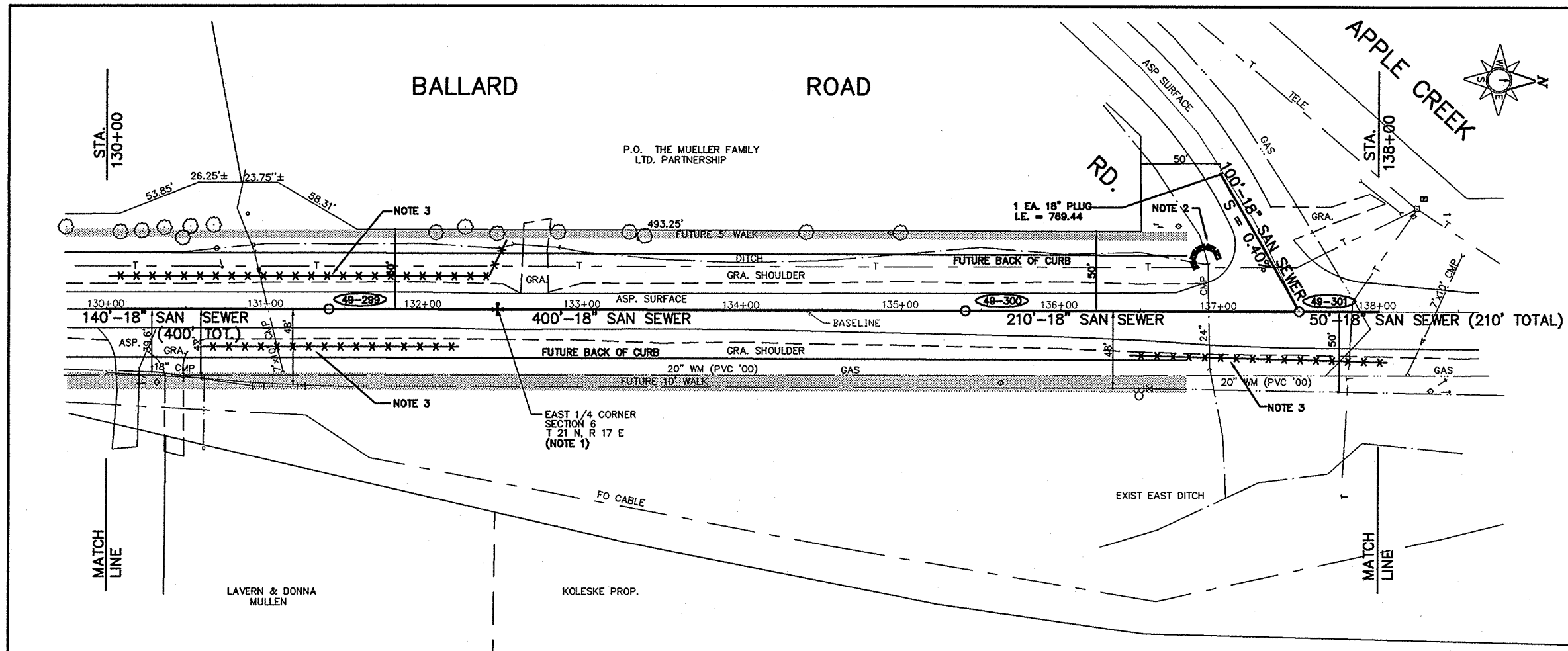
SA-1735 3



SAN MH 49-272
 STA 122+00
 RIM = 781.48
 18" N&S = 762.62
 D = 18.79

SAN MH 49-297
 STA 123+40
 RIM = 782.10
 TOP CONE = 780.53
 18" N&S = 763.15
 D = 18.95

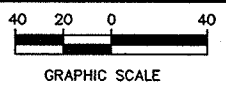
SAN MH 49-288
 STA 127+40
 RIM = 781.9
 TOP CONE = 779.93
 18" N&S = 764.75
 D = 17.15



STA 106+03.86 C/L EDGEWOOD DRIVE
 BENCHMARKS:
 HYDRANT - #2588 E/S 200' S/O APPLE CREEK 782.24
 MAG NAIL E/FACE PP #01-10912, W/S 100' N/O APPLE CREEK 778.12
 HYDRANT - #2589 E/S 250' S/O APPLE CREEK RD. 775.84
 RR SPIKE NW /FACE PP #88-03493, NE COR APPLE CREEK RD 785.31

- NOTES:
1. CONTRACTOR SHALL NOTIFY CITY DEPT. OF PUBLIC WORKS SURVEY CREW AT LEAST 2 HOURS BEFORE REACHING STA. 132+40. CONTRACTOR SHALL AT HIS EXPENSE, USE EXTREME CARE EXCAVATING BELOW ROAD SUBGRADE. WHEN ORIGINAL STONE SURVEY MONUMENT IS LOCATED CITY SURVEY CREW WILL TIE LOCATION FOR FUTURE. MONUMENT SHALL BE REMOVED WITH CARE AND REMOVED BY CITY. MONUMENT IS APPROX. 7" W X 7" L X 30" TALL.
 2. INSTALL DITCH CHECK PER SPECIAL PROVISIONS EROSION CONTROL PLAN.
 3. INSTALL SILT FENCE W/ADDITIONAL SUPPORT WHERE FENCE CROSSES THE DITCH

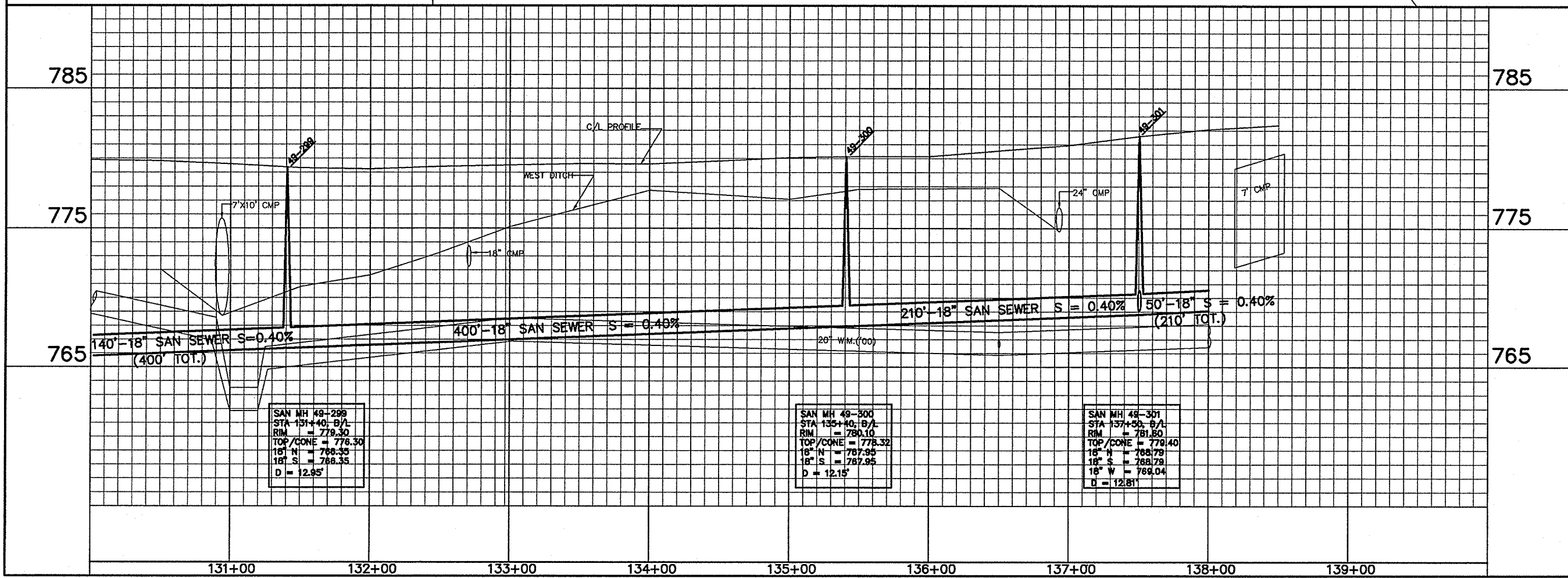
BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



ESTIMATE OF QUANTITIES

SANITARY SEWER QUANTITIES

900 L.F.	-	F&I 18" SAN SEWER
37.9 V.F.	-	F&I STD. SAN MANHOLE
3 EA.	-	F&I SANITARY CASTINGS
3 EA.	-	F&I INTERNAL SEALS

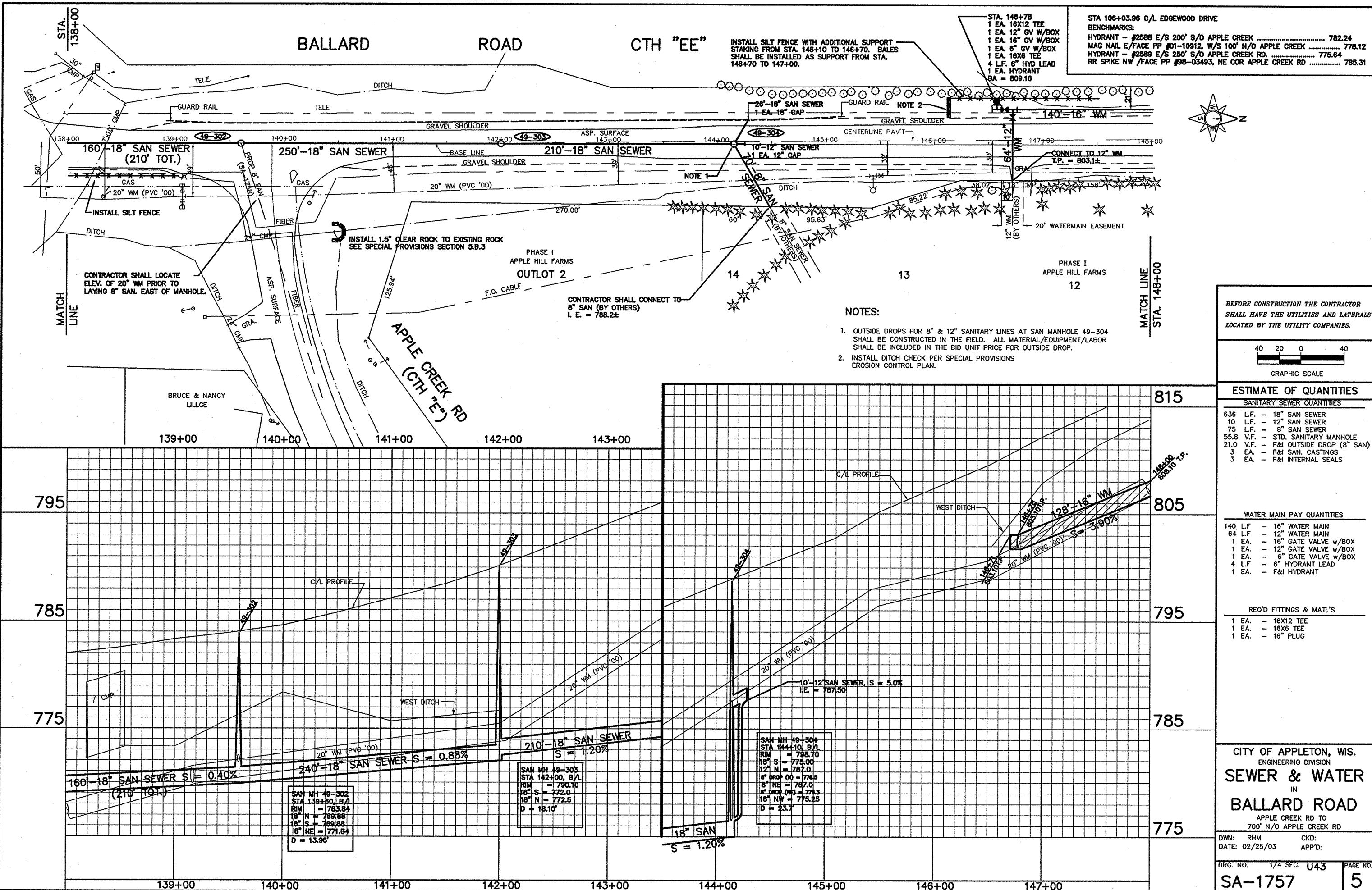


SAN MH 49-299
 STA 131+40.8/L
 RIM = 779.30
 TOP/CONE = 778.30
 18" N = 788.35
 18" S = 788.35
 D = 12.95'

SAN MH 49-300
 STA 135+40.8/L
 RIM = 780.10
 TOP/CONE = 778.32
 18" N = 787.95
 18" S = 787.95
 D = 12.15'

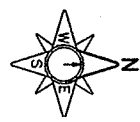
SAN MH 49-301
 STA 137+30.8/L
 RIM = 781.80
 TOP/CONE = 779.40
 18" N = 788.79
 18" S = 788.79
 18" W = 789.04
 D = 12.81'

CITY OF APPLETON, WIS.
 ENGINEERING DIVISION
SEWER & WATER
 IN
BALLARD ROAD
 600' N/O RIDGE HAVEN TO APPLE CREEK RD
 DWN: RHM CKD:
 DATE: 02/21/03 APP'D:
 DRG. NO. 1/4 SEC. U43 PAGE NO.
SA-1756 **4**



STA 146+78
 1 EA. 16X12 TEE
 1 EA. 12\"/>

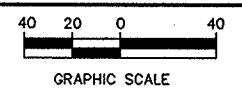
STA 108+03.96 C/L EDGEWOOD DRIVE
 BENCHMARKS:
 HYDRANT - #2588 E/S 200' S/O APPLE CREEK 782.24
 MAG NAIL E/FACE PP #01-10812, W/S 100' N/O APPLE CREEK 778.12
 HYDRANT - #2589 E/S 250' S/O APPLE CREEK RD. 775.64
 RR SPIKE NW /FACE PP #98-03493, NE COR APPLE CREEK RD 785.31



NOTES:

1. OUTSIDE DROPS FOR 8" & 12" SANITARY LINES AT SAN MANHOLE 49-304 SHALL BE CONSTRUCTED IN THE FIELD. ALL MATERIAL/EQUIPMENT/LABOR SHALL BE INCLUDED IN THE BID UNIT PRICE FOR OUTSIDE DROP.
2. INSTALL DITCH CHECK PER SPECIAL PROVISIONS EROSION CONTROL PLAN.

BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



ESTIMATE OF QUANTITIES

SANITARY SEWER QUANTITIES

636	L.F.	-	18" SAN SEWER
10	L.F.	-	12" SAN SEWER
75	L.F.	-	8" SAN SEWER
55.8	V.F.	-	STD. SANITARY MANHOLE
21.0	V.F.	-	F&I OUTSIDE DROP (8" SAN)
3	EA.	-	F&I SAN. CASTINGS
3	EA.	-	F&I INTERNAL SEALS

WATER MAIN PAY QUANTITIES

140	L.F.	-	16" WATER MAIN
64	L.F.	-	12" WATER MAIN
1	EA.	-	16" GATE VALVE w/BOX
1	EA.	-	12" GATE VALVE w/BOX
1	EA.	-	6" GATE VALVE w/BOX
4	L.F.	-	6" HYDRANT LEAD
1	EA.	-	F&I HYDRANT

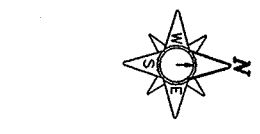
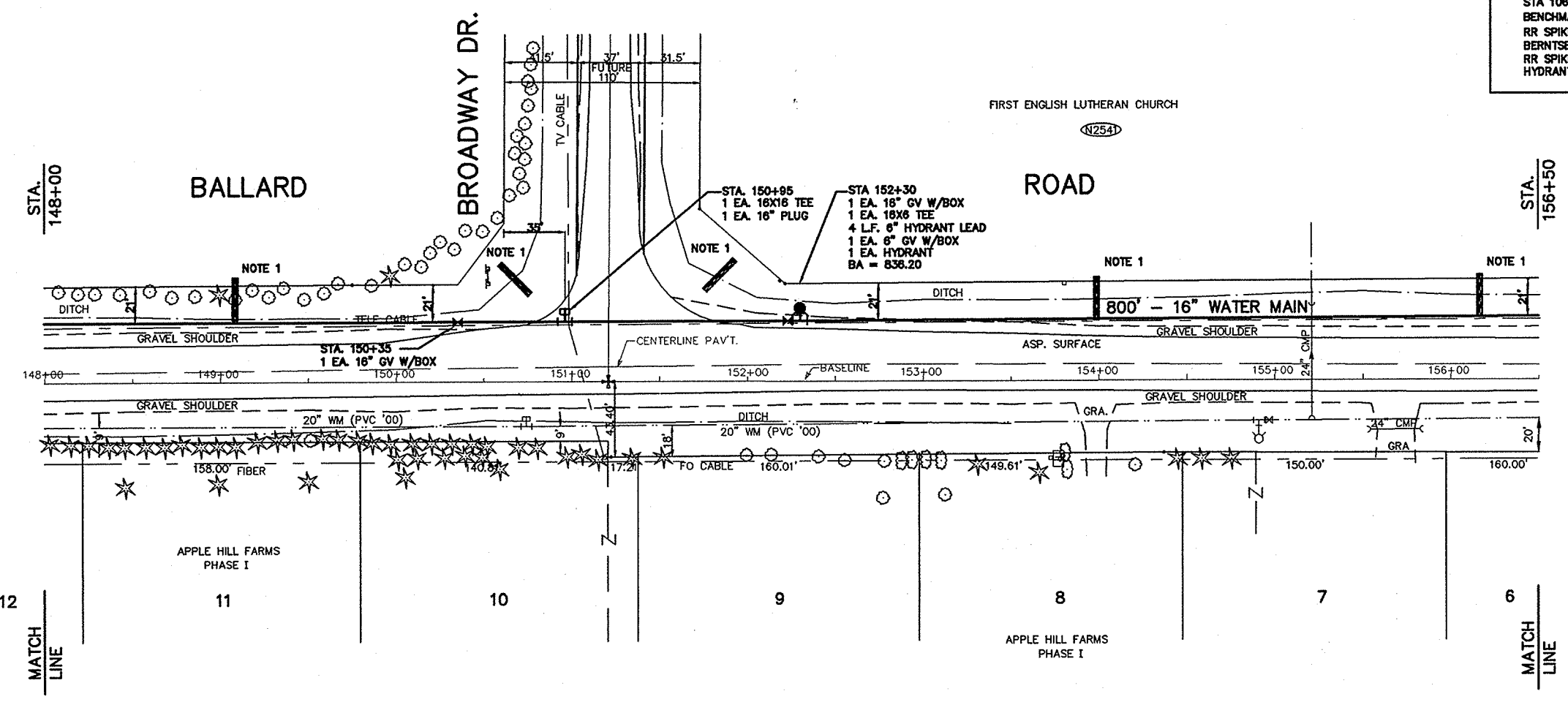
REQ'D FITTINGS & MAT'L'S

1	EA.	-	16X12 TEE
1	EA.	-	16X6 TEE
1	EA.	-	16" PLUG

CITY OF APPLETON, WIS.
 ENGINEERING DIVISION
SEWER & WATER
 IN
BALLARD ROAD
 APPLE CREEK RD TO
 700' N/O APPLE CREEK RD

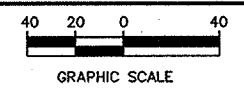
DWN: RHM CKD:
 DATE: 02/25/03 APP'D:

STA 106+03.96 C/L EDGEWOOD DRIVE
 BENCHMARKS:
 RR SPIKE, NE/FACE PP #01-00151, W/S 150' S/O BROADWAY 828.97
 BERNITSEN MONUMENT CORNER WITNESS, NE COR BROADWAY 836.04
 RR SPIKE W/FACE PP#78-23778 E/S STA.153+80,150' N/O BROADWAY 847.40
 HYDRANT #2591 E/S 250' N/O BROADWAY 844.83



NOTES
 1. INSTALL DITCH CHECK PER SPECIAL PROVISIONS EROSION CONTROL PLAN.

BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



ESTIMATE OF QUANTITIES

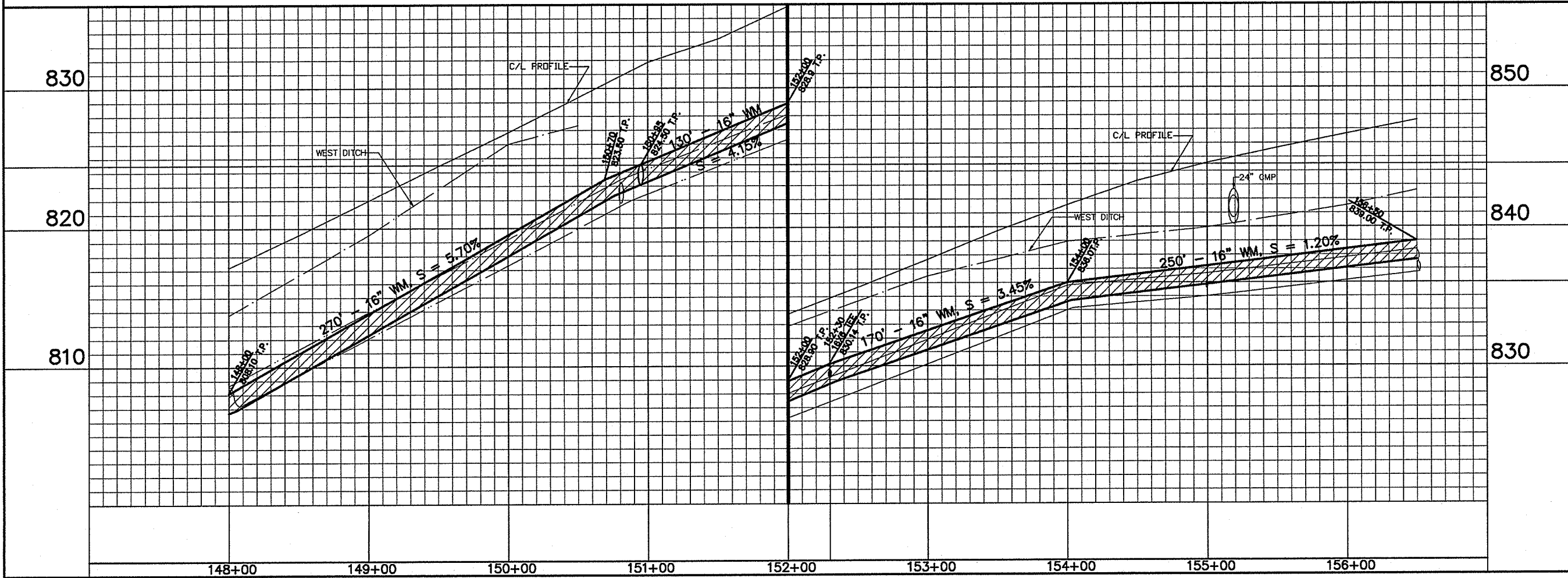
WATER MAIN PAY QUANTITIES	
800 LF	- F&I 16" WATER MAIN
2 EA.	- 16" GATE VALVE w/BOX
1 EA.	- 6" GATE VALVE w/BOX
4 LF	- 6" HYDRANT LEAD
1 EA.	- F&I HYDRANT

REQ'D FITTINGS & MATL'S	
1 EA.	- 16X16 TEE
1 EA.	- 16X6 TEE
1 EA.	- 16" PLUG

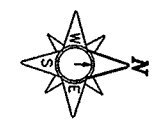
CITY OF APPLETON, WIS.
 ENGINEERING DIVISION
WATER MAIN
 IN
BALLARD ROAD
 700' N/O APPLE CREEK RD
 500' N/O BROADWAY DRIVE

DWN: RHM CKD:
 DATE: 02/24/03 APP'D:

DRG. NO. 1/4 SEC U42,43 PAGE NO.
W-1249 **6**

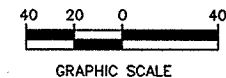


STA 108+03.98 C/L EDGEWOOD DRIVE
 BENCHMARKS:
 RR SPIKE, NE/FACE PP #01-00151, W/S 150' S/O BROADWAY 826.97
 BERNTSEN MONUMENT CORNER WITNESS, NE COR BROADWAY 838.04
 RR SPIKE W/FACE PP#78-23778 E/S STA.153+80,150' N/O BROADWAY 847.40
 HYDRANT #2591 E/S 250' N/O BROADWAY 844.63



NOTES:
 1. INSTALL DITCH CHECK PER SPECIAL PROVISIONS EROSION CONTROL PLAN.

BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



ESTIMATE OF QUANTITIES

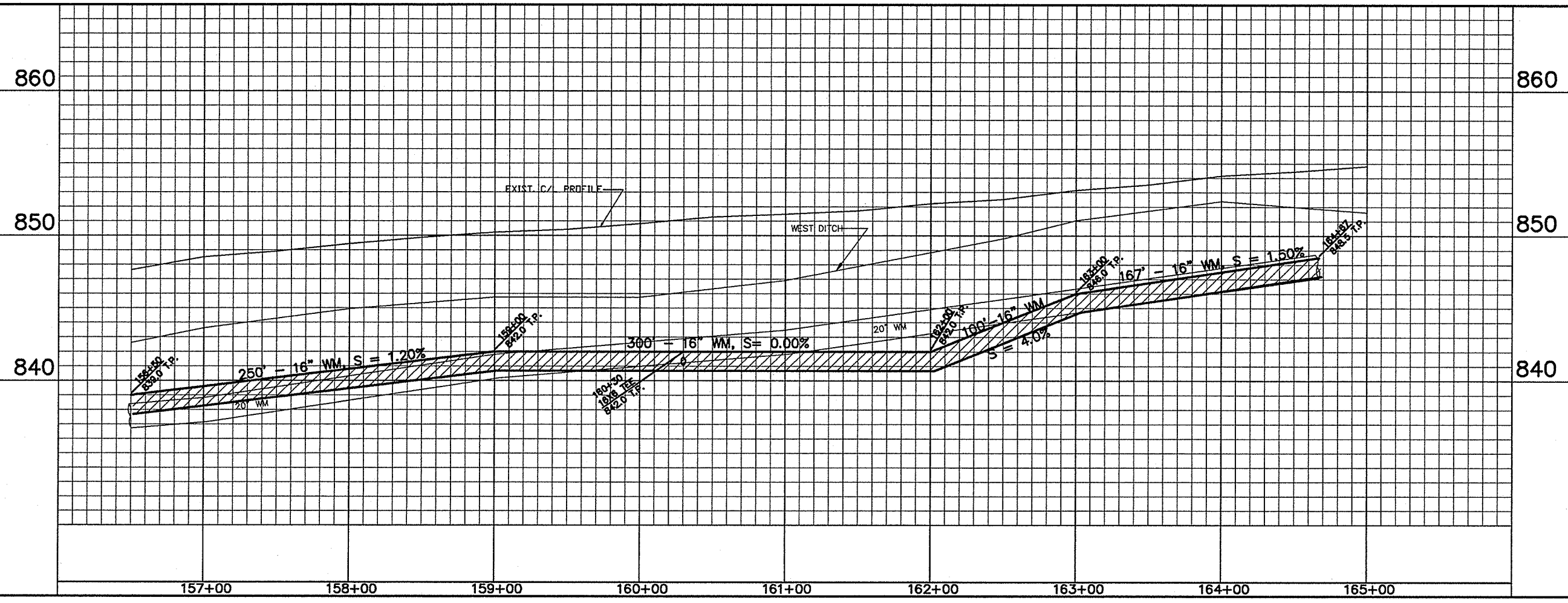
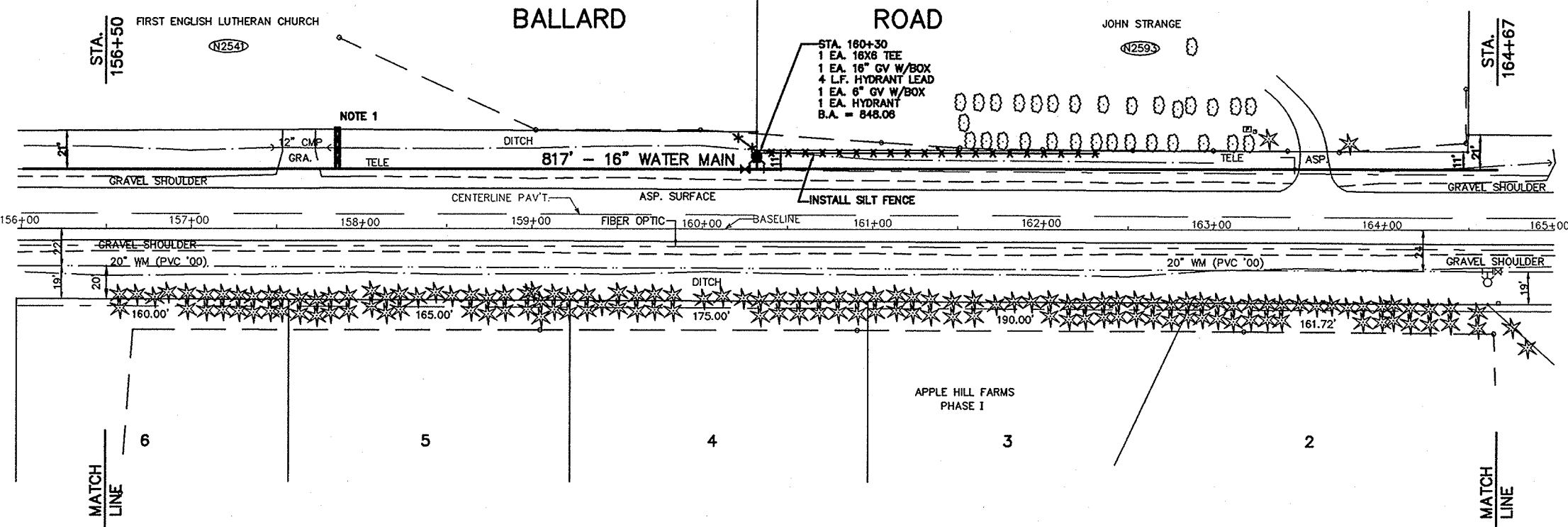
WATER MAIN PAY QUANTITIES	
817 L.F.	- F&I 16" WATER MAIN
1 EA.	- 16" GATE VALVE w/BOX
1 EA.	- 6" GATE VALVE w/BOX
4 L.F.	- 6" HYDRANT LEAD
1 EA.	- F&I HYDRANT

REQ'D FITTINGS & MAT'L'S
 1 EA. - 16X6 TEE

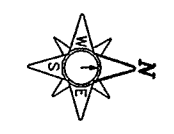
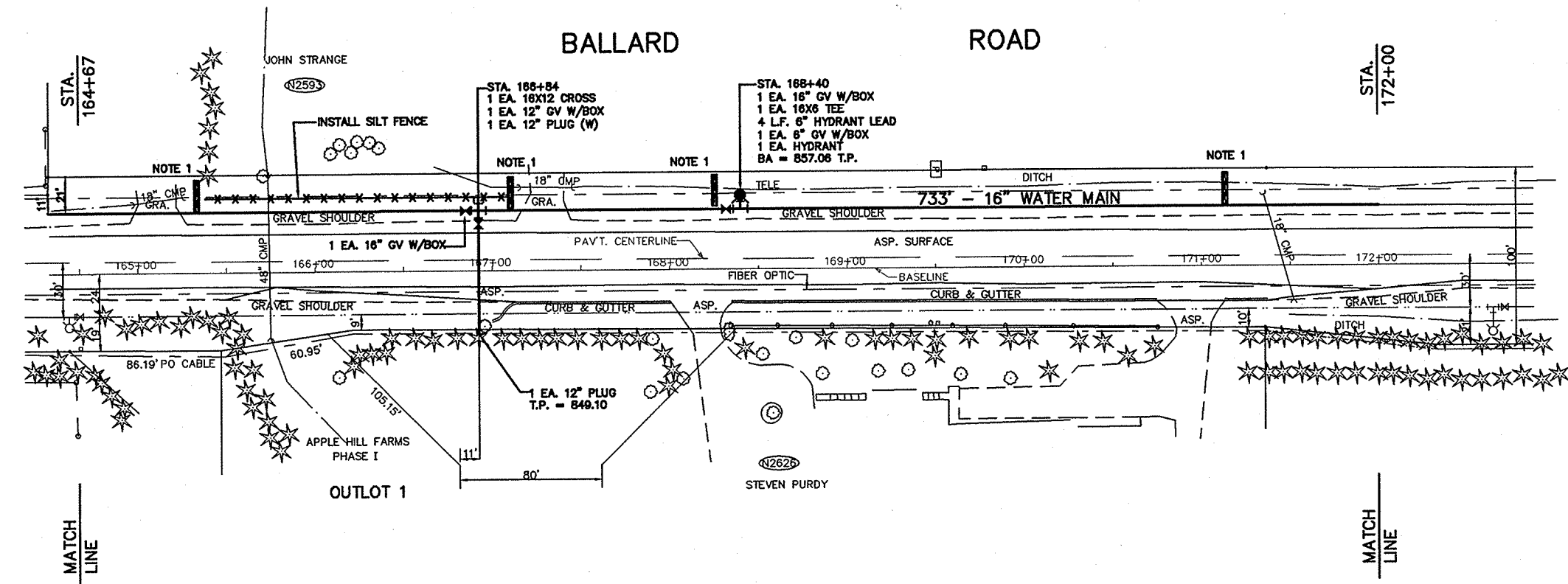
CITY OF APPLETON, WS.
 ENGINEERING DIVISION
WATER MAIN
 IN
BALLARD ROAD
 500' N/O BROADWAY DR
 TO 1350' N/O BROADWAY DR

DWN: RHM CKD:
 DATE: 02/26/03 APP'D:

DRG. NO. 1/4 SEC. U42 PAGE NO.
W-1250 **7**

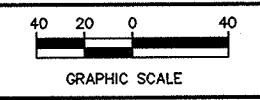


STA 108+03.96 C/L EDGEWOOD DRIVE
 BENCHMARKS:
 RR SPIKE, NE/FACE PP #01-00151, W/S 150' S/O BROADWAY 826.97
 BERTSEN MONUMENT CORNER WITNESS, NE COR BROADWAY 836.04
 RR SPIKE W/FACE PP#78-23776 E/S STA.153+80,150' N/O BROADWAY 847.40
 HYDRANT #2591 E/S 250' N/O BROADWAY 844.63



NOTES:
 1. INSTALL DITCH CHECK PER SPECIAL PROVISIONS EROSION CONTROL PLAN.

BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



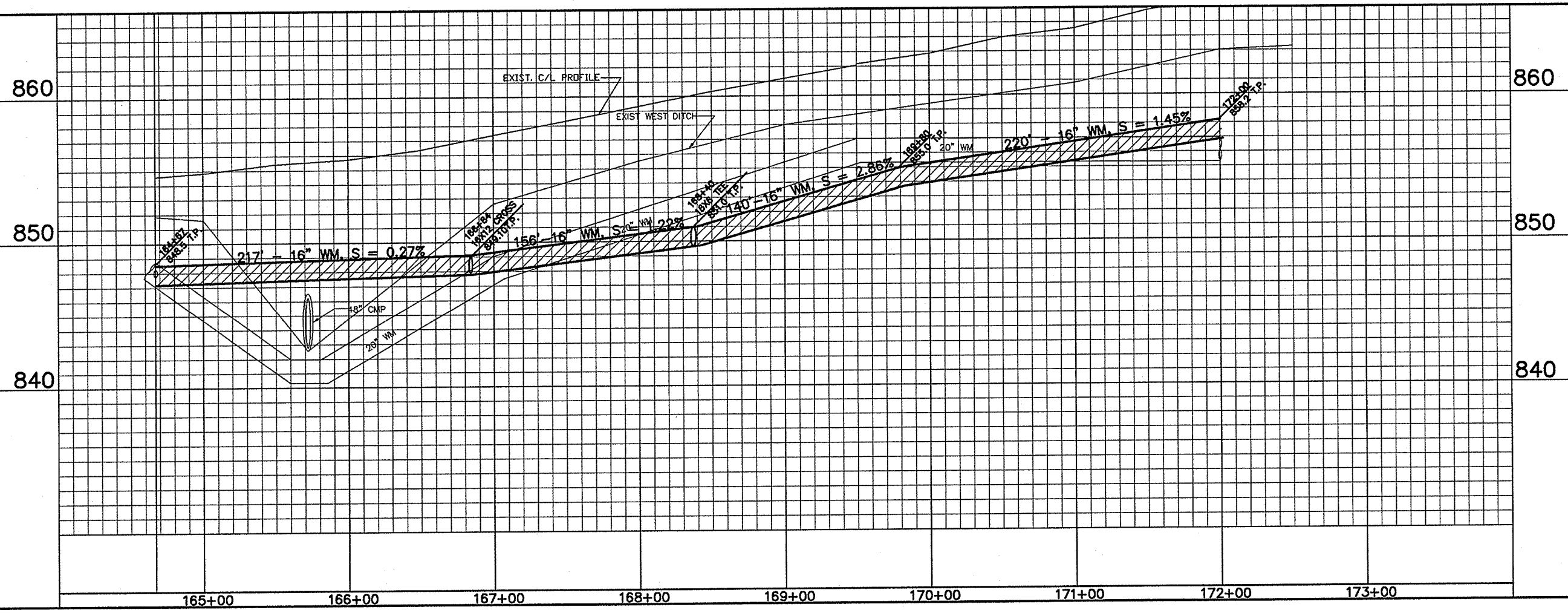
ESTIMATE OF QUANTITIES

WATER MAIN PAY QUANTITIES

733 L.F.	-	F&I 16" WATER MAIN
70 L.F.	-	F&I 12" WATER MAIN
2 EA.	-	16" GATE VALVE w/BOX
1 EA.	-	12" GATE VALVE w/BOX
1 EA.	-	6" GATE VALVE w/BOX
4 L.F.	-	6" HYDRANT LEAD
1 EA.	-	F&I HYDRANT

REQ'D FITTINGS & MAT'L'S

1 EA.	-	16X12 CROSS
1 EA.	-	16X6 TEE
2 EA.	-	12" PLUG

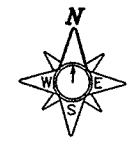


CITY OF APPLETON, WIS.
 ENGINEERING DIVISION
WATER MAIN
 IN
BALLARD ROAD
 1350' N/O S. BROADWAY DR
 TO 550' N/O WERNER RD

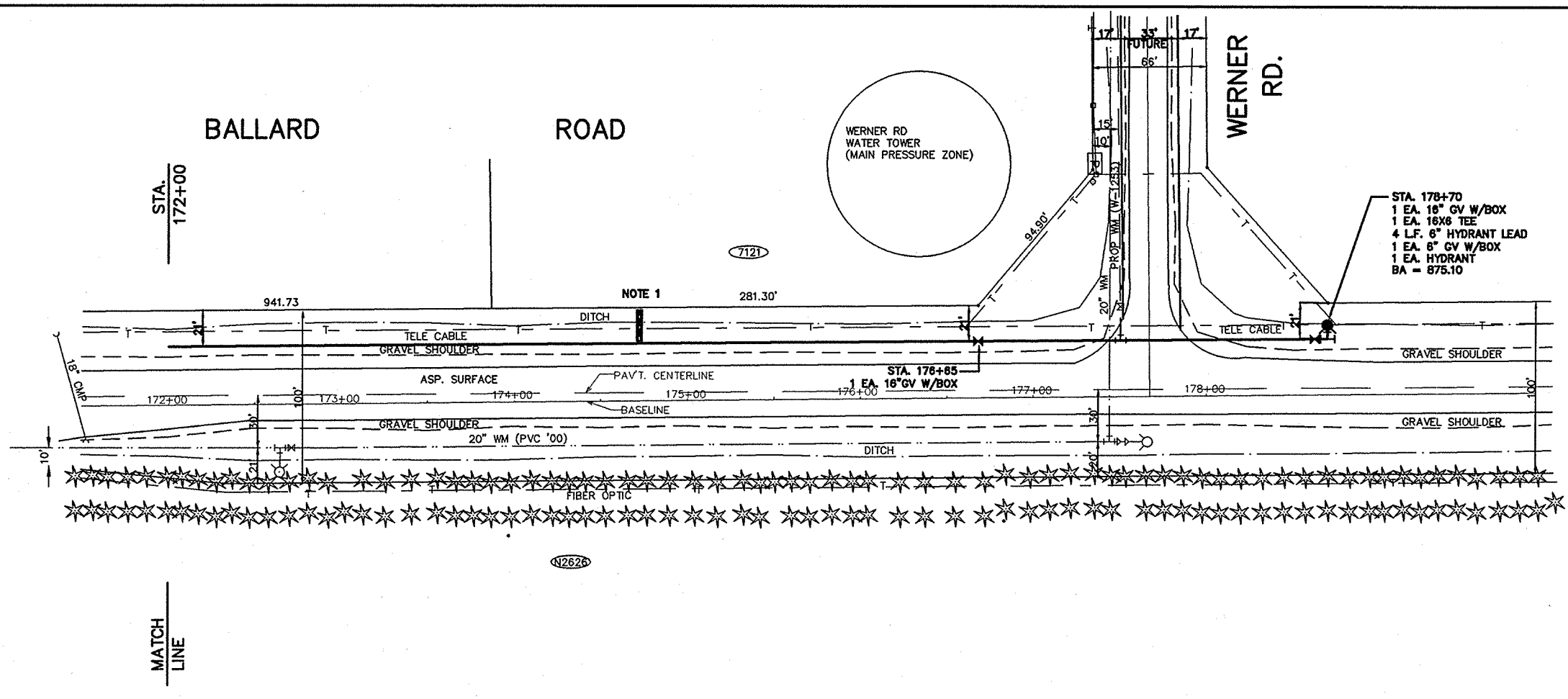
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 DATE: 02/27/03 APP'D:

DRG. NO. 1/4 SEC. U42 PAGE NO.
W-1251 **8**

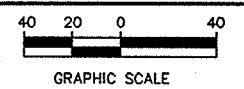
STA 106+03.96 C/L EDGEWOOD DRIVE
 BENCHMARKS:
 HYDRANT #2591 E/S 250' N/O BROADWAY 844.63
 HYDRANT #2592 E/S 1300' S/O WERNER RD. 844.67
 HYDRANT #2593 E/S 500' S/O WERNER RD. 865.38
 RR SPIKE SW/FACE OF SHORT TELEPHONE POLE SW COR
 WERNER RD. 30' S/O & 120' W/O 1/4 SEC LINES 875.71



NOTES:
 1. INSTALL DITCH CHECK PER SPECIAL PROVISIONS EROSION CONTROL PLAN.



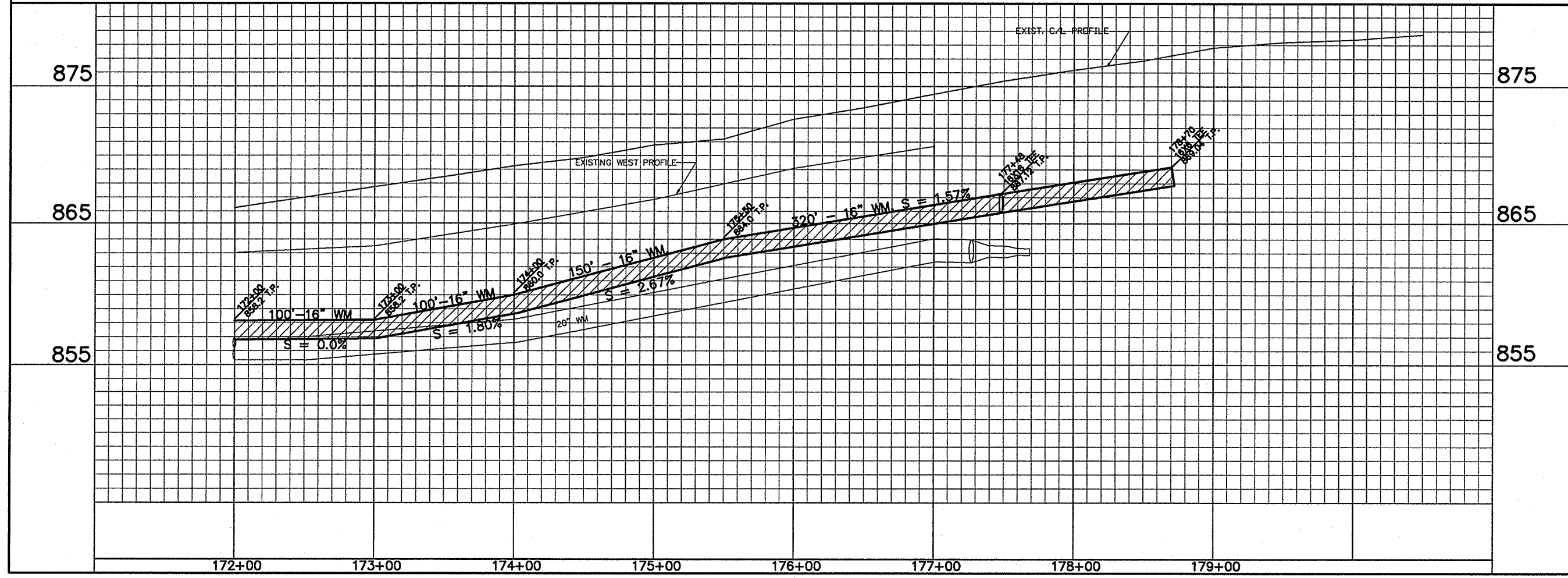
BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



ESTIMATE OF QUANTITIES

WATER MAIN PAY QUANTITIES	
670 LF	- F&I 16" WATER MAIN
2 EA.	- 16" GATE VALVE w/BOX
1 EA.	- 6" GATE VALVE w/BOX
4 LF	- 6" HYDRANT LEAD
1 EA.	- F&I HYDRANT

REQ'D FITTINGS & MATL'S	
1 EA.	- 16X6 TEE
1 EA.	- 16" PLUG

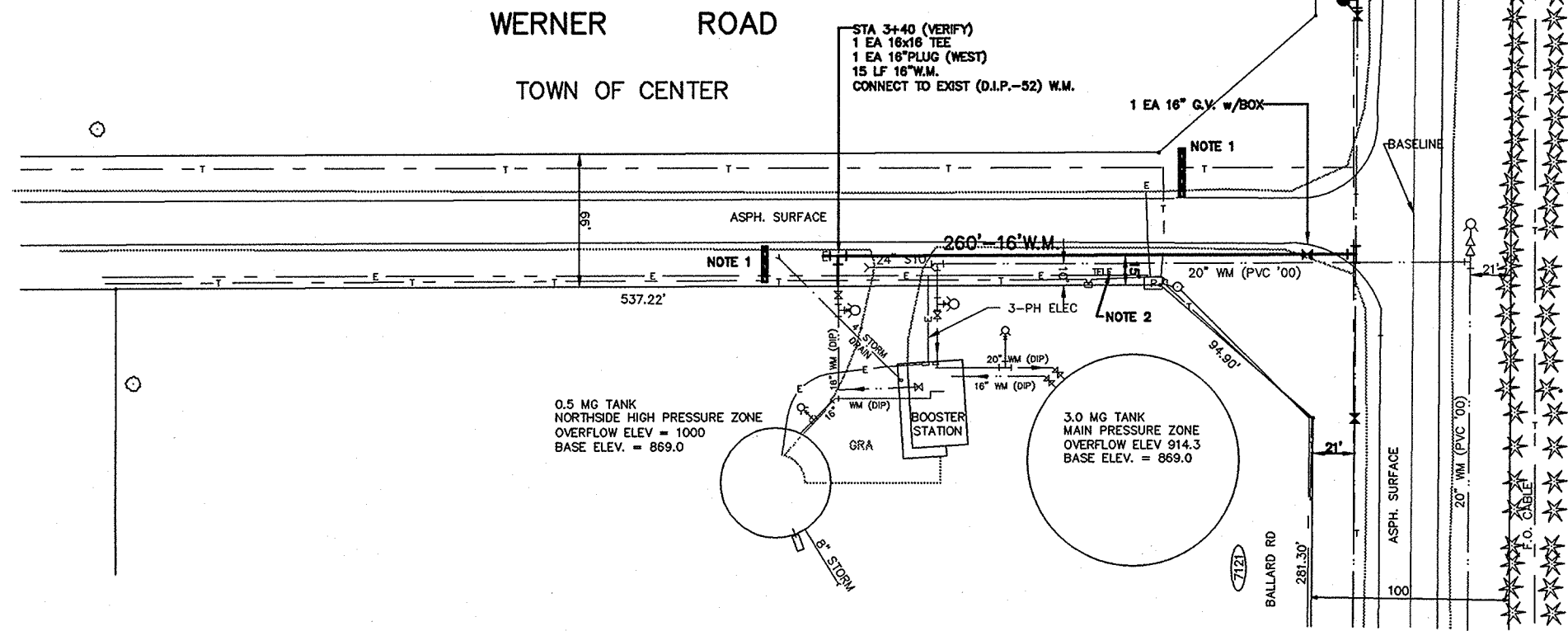


CITY OF APPLETON, WIS.
 ENGINEERING DIVISION
WATER MAIN
 IN
BALLARD ROAD
 550' S/O WERNER RD TO WERNER RD

DWN: RHM CKD:
 DATE: 02/27/03 APP'D:

DRG. NO. 1/4 SEC. U42 PAGE NO.
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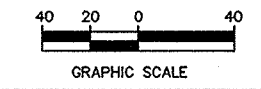
STA 1+00.00 W/ROW BALLARD RD
 BENCHMARKS:
 RR SPIKE SW/FACE PP #70-23785 E/SIDE HOUSE #N2828.....863.11
 RR SPIKE SW/FACE SHORT TELE POLE SW/COR WERNER875.67



- NOTES:
1. INSTALL DITCH CHECK PER SPECIAL PROVISIONS EROSION CONTROL PLAN.
 2. INSTALL NORTH AMERICAN GREEN S-150 EROSION CONTROL BLANKET IN THE DITCH FLOW LINE AT FINAL RESTORATION.



BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



ESTIMATE OF QUANTITIES

WATER MAIN PAY QUANTITIES	
275 L.F.	- 16" WATER MAIN
1 EA.	- 16" GATE VALVE w/BOX

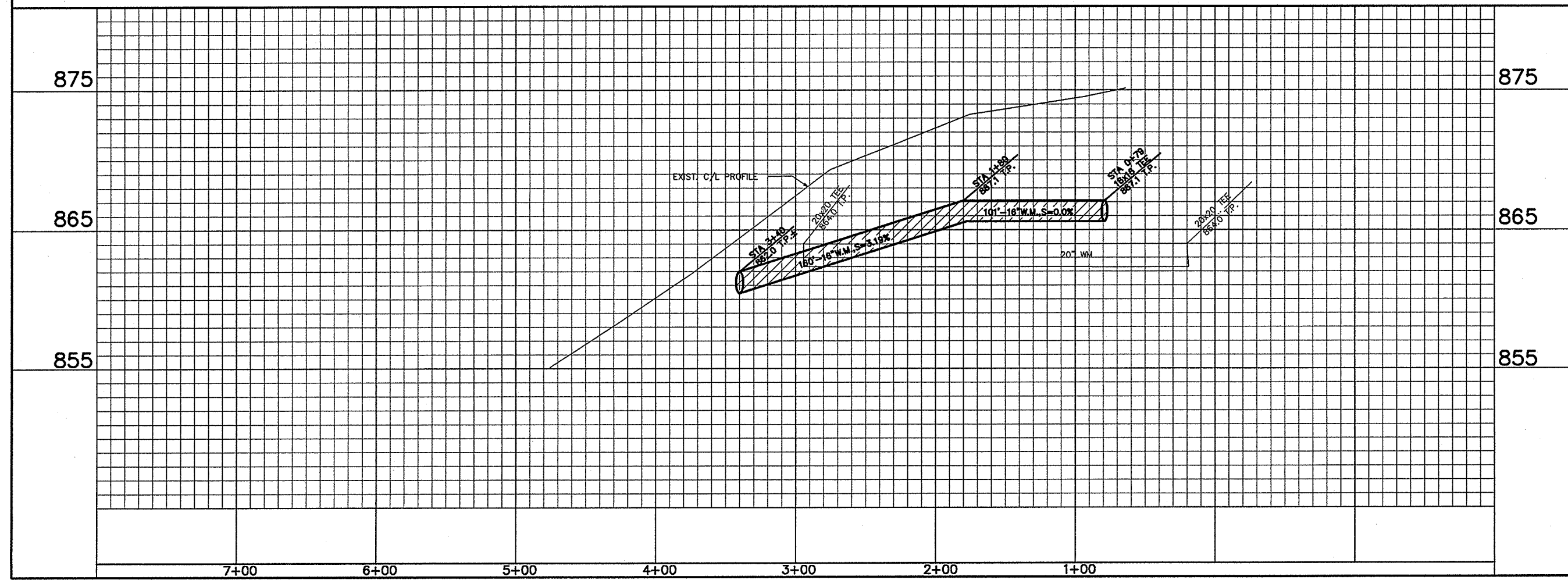
REQ'D FITTINGS & MAT'L'S	
2 EA.	- 16x16 TEE
1 EA.	- 16" PLUG

CITY OF APPLETON, WIS.
 ENGINEERING DIVISION

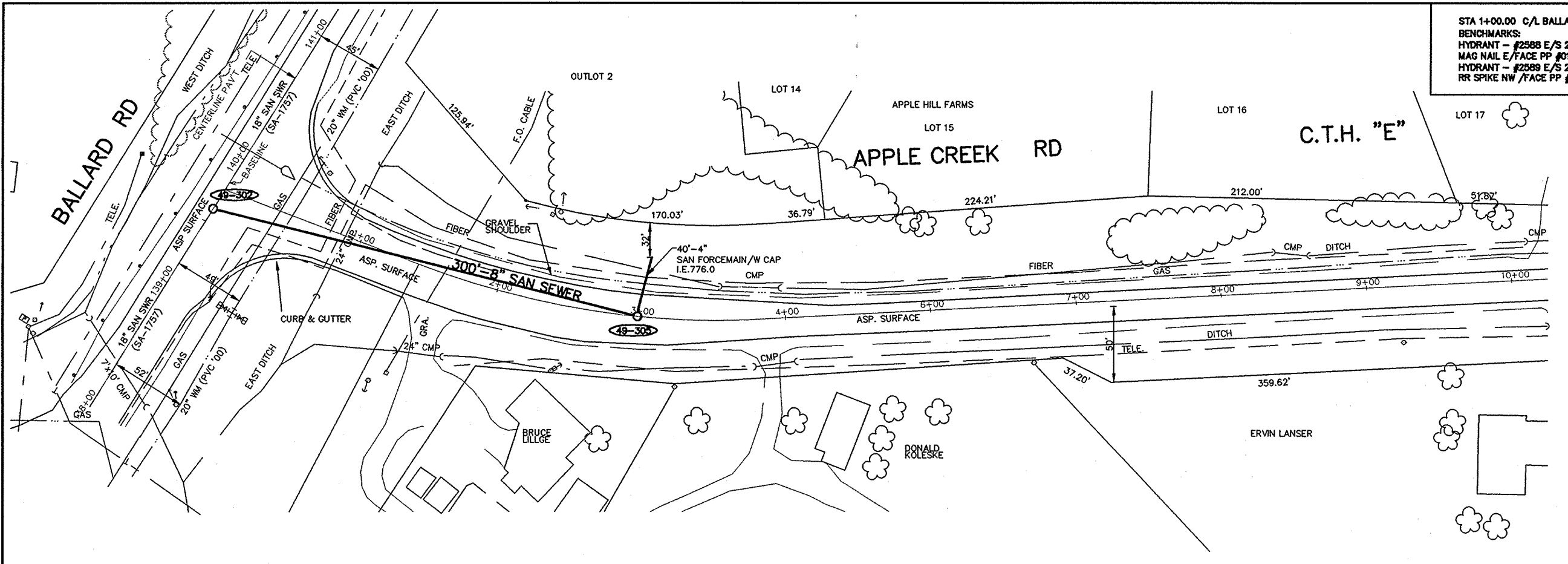
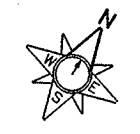
WATER MAIN
 IN
WERNER RD
 BALLARD RD TO 300' W/O BALLARD RD

DWN: NAP CKD:
 DATE: 02/26/03 APP'D:

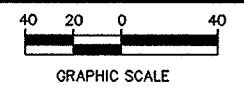
DRG. NO. 1/4 SEC. U 42 PAGE NO.
W-1253 **10**



STA 1+00.00 C/L BALLARD ROAD
 BENCHMARKS:
 HYDRANT - #2588 E/S 200' S/O APPLE CREEK 782.24
 MAG NAIL E/FACE PP #01-10812, W/S 100' N/O APPLE CREEK 778.12
 HYDRANT - #2589 E/S 250' S/O APPLE CREEK RD. 775.64
 RR SPIKE NW /FACE PP #98-03493, NE COR APPLE CREEK RD 785.31

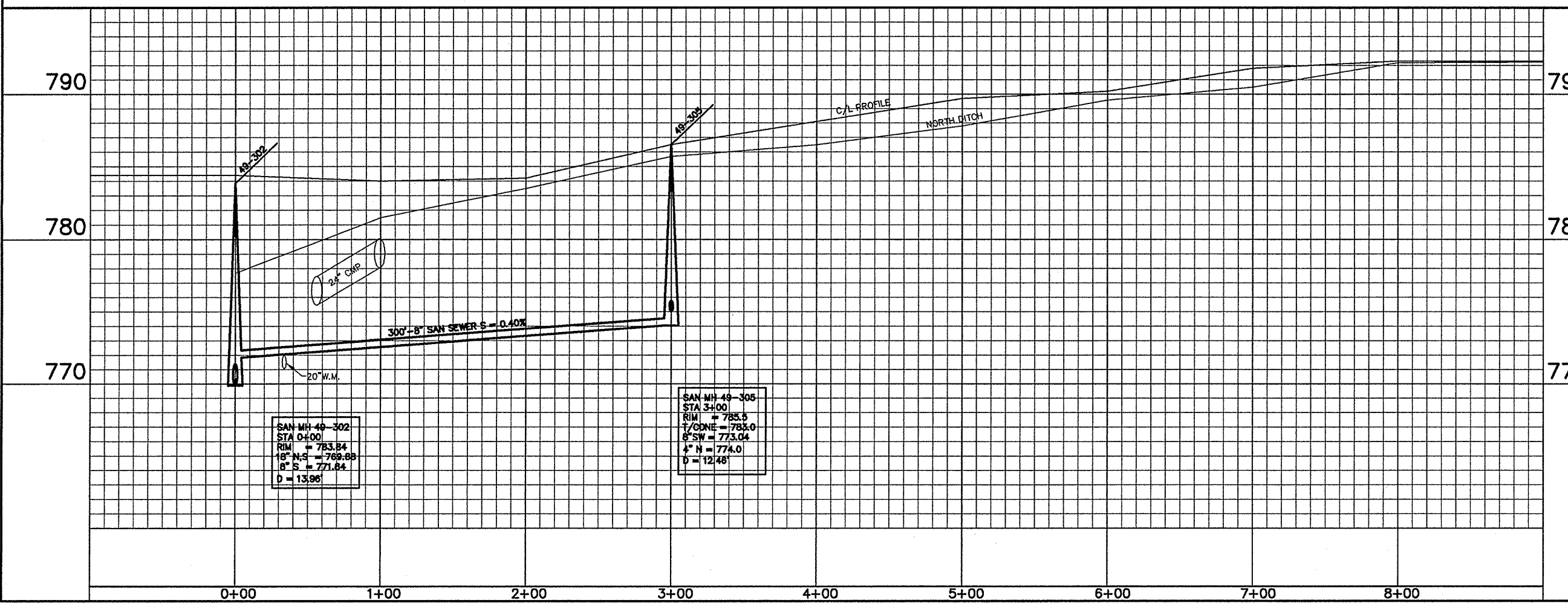


BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.



ESTIMATE OF QUANTITIES

SANITARY PAY QUANTITIES	
300 LF	- F&I 8" SANITARY SEWER
40 LF	- F&I 4" SANITARY FORCEMAIN
12.5 V.F.	- STD SANITARY MANHOLE
1 EA.	- F&I SANITARY CASTING
1 EA.	- F&I INTERNAL SEAL



SAN MH 40-302
 STA 0+00
 RIM = 783.84
 18" N.S. = 789.88
 8" S. = 771.84
 D = 13.96'

SAN MH 49-305
 STA 3+00
 RIM = 785.5
 17" ODNE = 783.0
 8" SW = 773.04
 4" N = 774.0
 D = 12.48'

CITY OF APPLETON, WIS.
 ENGINEERING DIVISION
SEWER
 IN
APPLE CREEK RD
 BALLARD ROAD TO 300' EAST

DWN: NAP CKD:
 DATE: 02/27/03 APP'D:

DRG. NO. 1/4 SEC. U43 PAGE NO.
SA-1758 11