

LEGEND AND ABBREVIATIONS

	TRAVERSE POINT		TILE		DRAIN TILE		EDGE OF BRUSH
	POWER POLE		PVC P		PVC PIPE		EDGE OF WOODS
	LIGHT POLE		CO		CLEANOUT		HEDGE ROW
	FLAG POLE		R BAR		REBAR		RIP RAP
	MANHOLE		BM.		BENCH MARK		CHAIN LINK FENCE
	STORM INLET		TMH		TELEPHONE MANHOLE		GUARD RAIL
	WATER VALVE		GSV		GAS SERVICE VALVE		BURIED CABLE TV
	GAS VALVE		WSV		WATER SERVICE VALVE		BURIED ELECTRIC LINE
	FIRE HYDRANT				CATCH BASIN		OVERHEAD ELECTRIC LINE
	MAIL BOX				CONIFEROUS TREE		BURIED GAS MAIN
	TELEPHONE PEDESTAL				STUMP		BURIED FORCE MAIN
	CONTROL BOX				BUSH		BURIED STREET LIGHTING
	TRAFFIC SIGNAL		METAL		METAL POST		BURIED SANITARY SEWER
	GUY WIRE				HANDHOLE		BURIED MIS SEWER
	MONUMENT				MISCELLANEOUS METER		BURIED STORM SEWER
	1" IRON PIPE		WOOD		WOOD POST		BURIED TELEPHONE LINE
	2" IRON PIPE				ABANDONED POLE		BURIED WATER MAIN
	VENT PIPE		YL		YARD LIGHT		EXISTING PROPERTY LINE
	PULL BOX				SIGN		EXISTING RIGHT OF WAY
	A/C				INLET PROTECTION		
	DECIDUOUS TREE				CULVERT PIPE DITCH CHECK		

ASPH.	ASPHALT	I.E.	INVERT ELEVATION
BSM'T.	BASEMENT	I.P.	IRON PIPE
BIT.	BITUMINOUS	LAT.	LATERAL
CB.	CATCHBASIN	MH.	MANHOLE
C/L	CENTERLINE	M.J.	MECHANICAL JOINT
CIPP	CURED-IN-PLACE PIPE	PAV'T.	PAVEMENT
CONC.	CONCRETE	PROP.	PROPOSED
CMP	CORRUGATED METAL PIPE	PVC	POLYVINYL CHLORIDE
CMPA	CORRUGATED METAL PIPE ARCH	PVC P.	PVC PIPE
C. & G.	CURB & GUTTER	R. BAR	REBAR
DRAIN T.	DRAIN TILE	REQ'D.	REQUIRED
D.I.P.	DUCTILE IRON PIPE	R.J.	RESTRAINED JOINT
DWY.	DRIVEWAY	SAN.	SANITARY
ECC.	ECCENTRIC	S.	SLOPE
EXIST.	EXISTING	STL.	STEEL
F.F.	FIRST FLOOR	STM.	STORM
FM.	FORCE MAIN	SUMP D.	SUMP DISCHARGE
G.V.	GAS VALVE	TYP.	TYPICAL
GR.	GRAVEL	VENT P.	VENT PIPE
G.W.	GUY WIRE	WM.	WATER MAIN
HYD.	HYDRANT	W.V.	WATER VALVE
INL.	INLET	W/	WITH

SHEET INDEX

Sheet No.	01	COVER SHEET
Sheet No.	02	INDEX SHEET
Sheet No.	03-23	PROPOSED WATER MAIN RELAY
Sheet No.	24-26	TRAFFIC CONTROL
TOTAL SHEETS = 26		

SURFACE RESTORATION

- LAWN RESTORATION
- DRIVEWAY REPLACEMENT
- ROADWAY REPLACEMENT
- SIDEWALK REPLACEMENT

BACKFILL LEGEND

- 3/4-INCH TRAFFIC BOND BACKFILL
- SPOIL BACKFILL

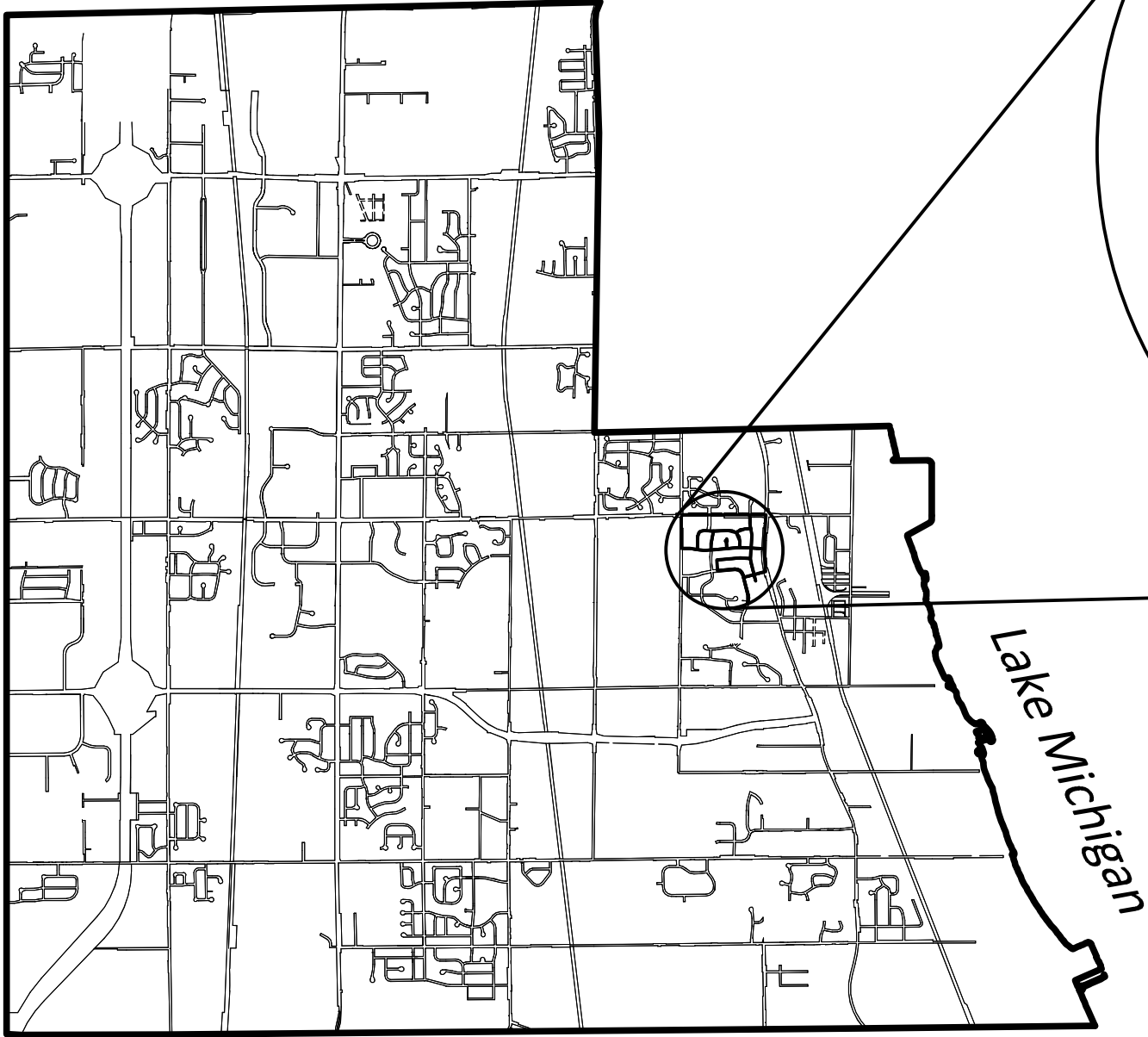
CITY OF OAK CREEK

WATER AND SEWER UTILITY

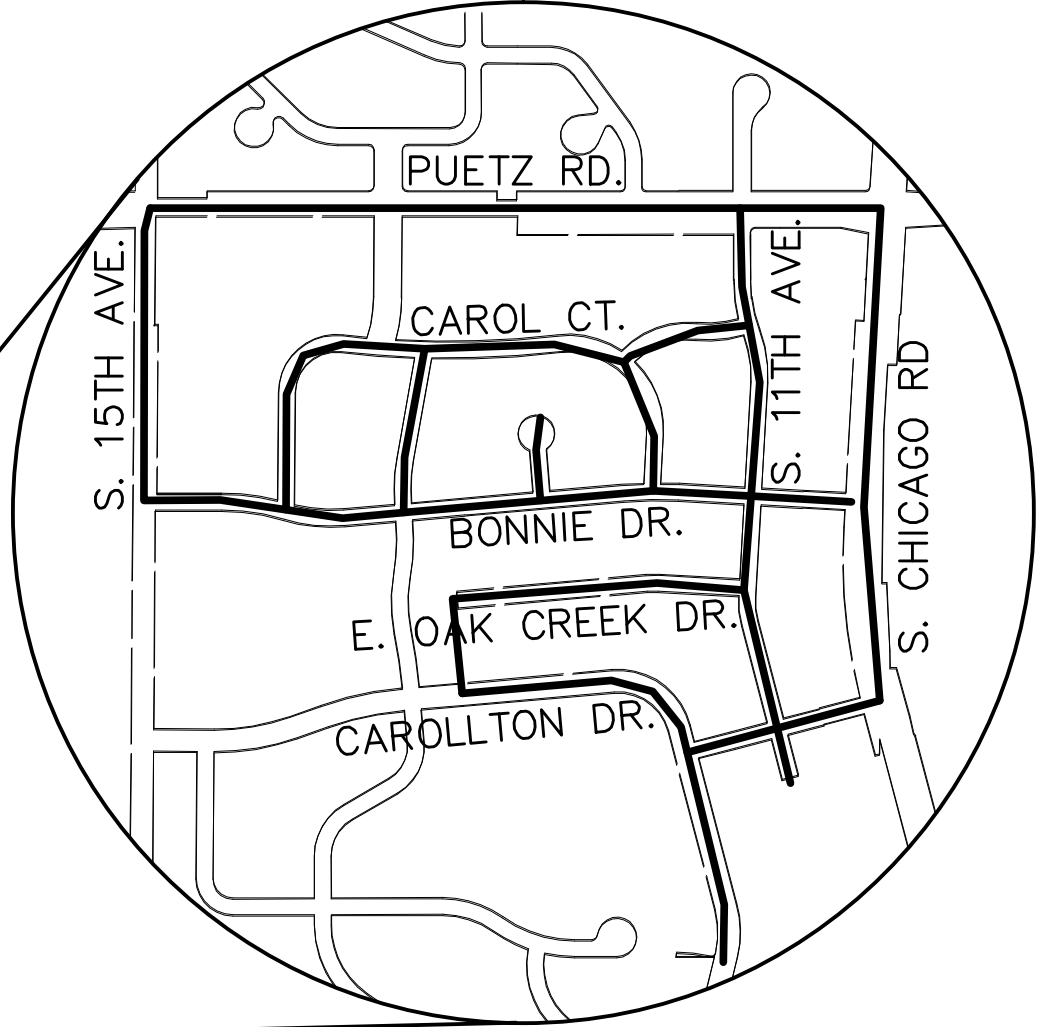
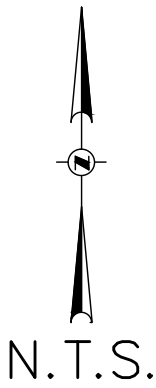
ROWAN ESTATES
WATER MAIN RELAY

PROJECT NUMBER
13105

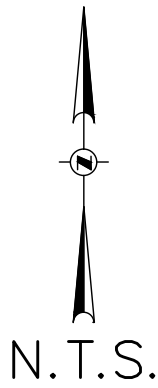
OCT 17, 2013



CITY OF OAK CREEK
VICINITY MAP

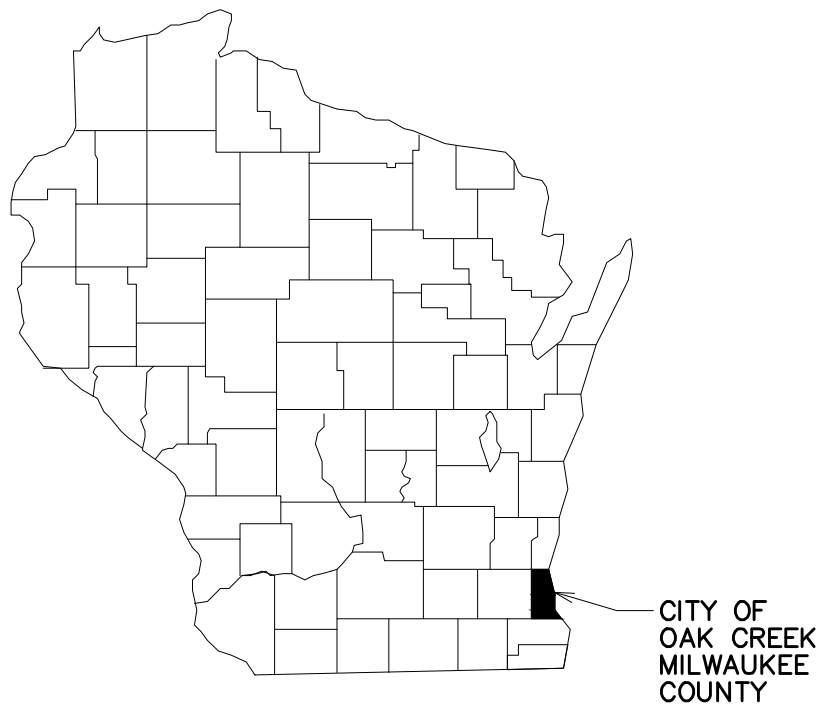


PROJECT LOCATION MAP
ROWAN ESTATES

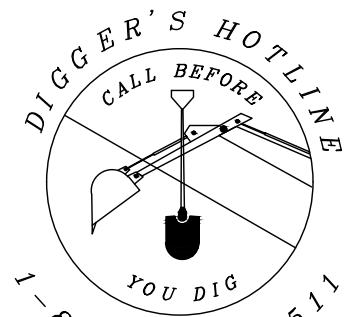


WATER and SEWER UTILITY

A COMMITMENT TO WATER QUALITY



CITY OF
OAK CREEK
MILWAUKEE
COUNTY



GRAEF

One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

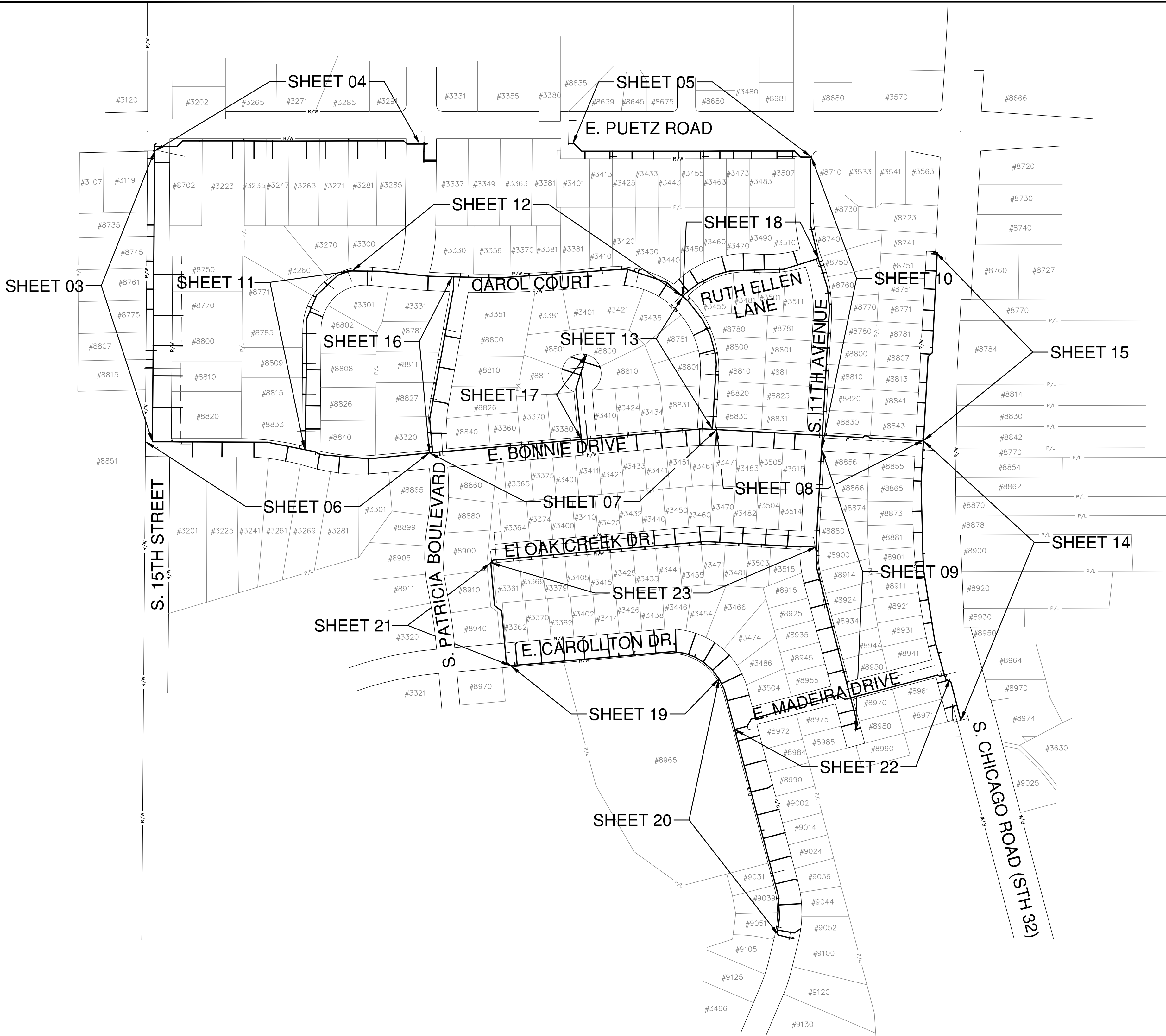
L:\bas2013\20130326\CAD\Sheet\g00C_00_01_Rowan_Creek_350.dwg, 10/16/2013 12:05:41 PM, 1500, DWG to PDF.pc3

NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

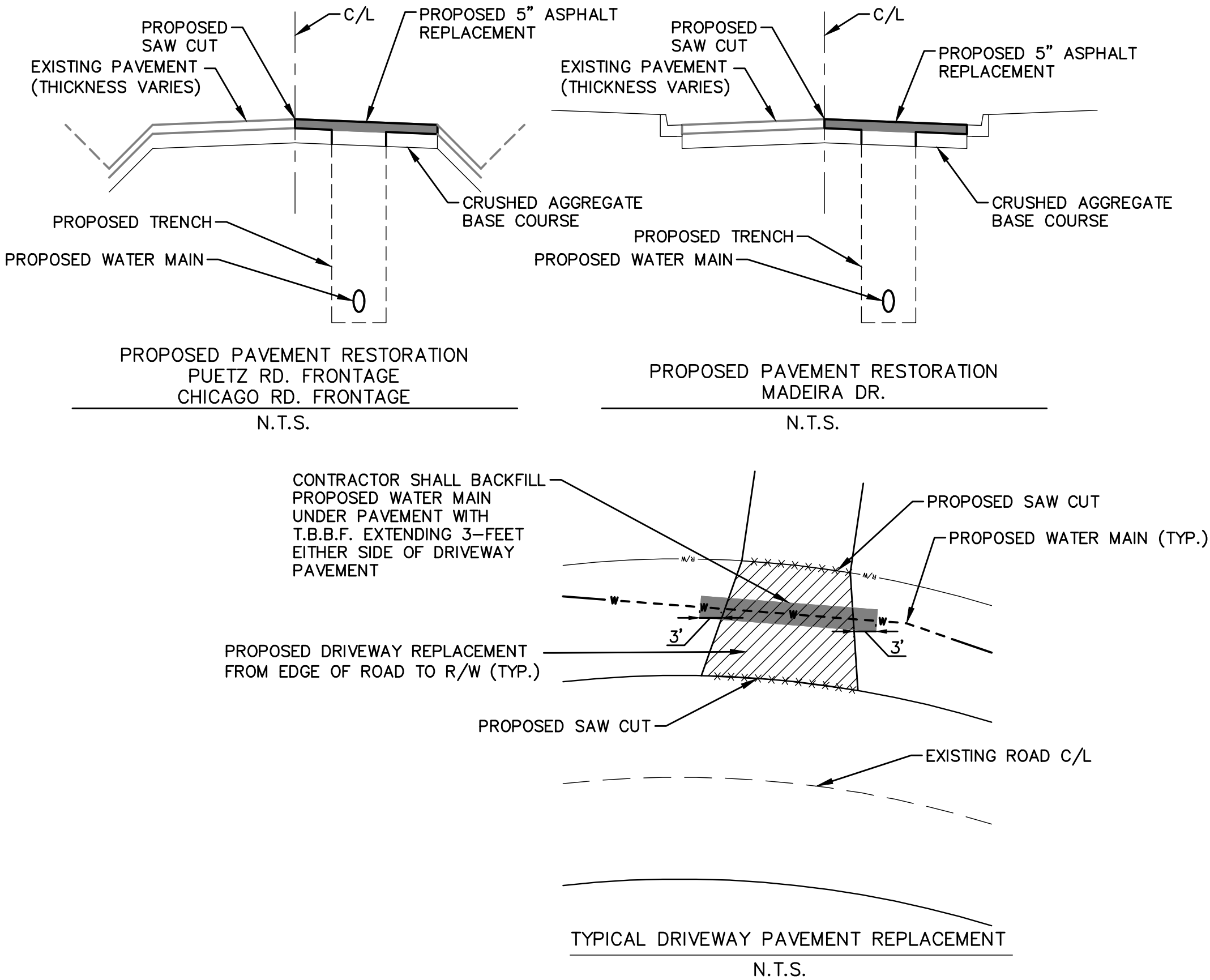
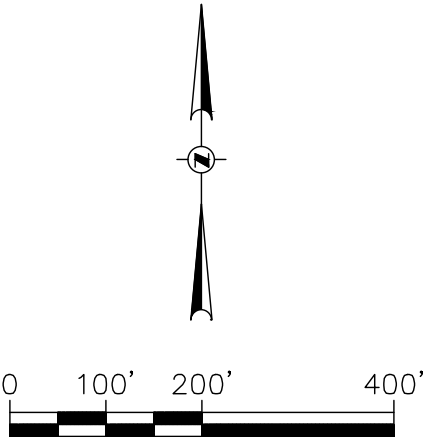
GRAEF
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

BID ITEM NOS.	ESTIMATE OF QUANTITIES	WATER MAIN	SA.FKO	CITY OF OAK CREEK, WISCONSIN	APPROVED BY				
		CONTRACTOR:	ST.FKO						
		MAINLINE INSPECTED BY:	W. FKO		UTILITY ENGINEER DATE				
		LATERALS INSPECTED BY:	G. FKO		APPROVED BY				
		DATE COMPLETED:	E. FKO		DESIGNED BY DATE	DRAWN BY DATE	CHECKED BY DATE		
		TYPE OF PIPE, ASTM NO.	T. FKO		AS 10-17-13	FKO 10-17-13	MNP 10-17-13		
		TYPE OF PIPE, ASTM NO.	I. FKO		ROWAN ESTATES PROPOSED WATER MAIN RELAY				
		AS-BUILTS BY: DATE:	TS.FKO						
		This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.	PP.					IN:	
								FR:	
	TO:								
	Utility Engineer Date		REVISION BY DATE	FILE NO: 13105-2C-2171					
				CITY ENGINEER DATE					
				SCALE	SHEET				
				PLAN HOR. 1"=40'	02				
				PROFILE HOR. 1"=40'	OF				
				VER. 1"=4'	26				

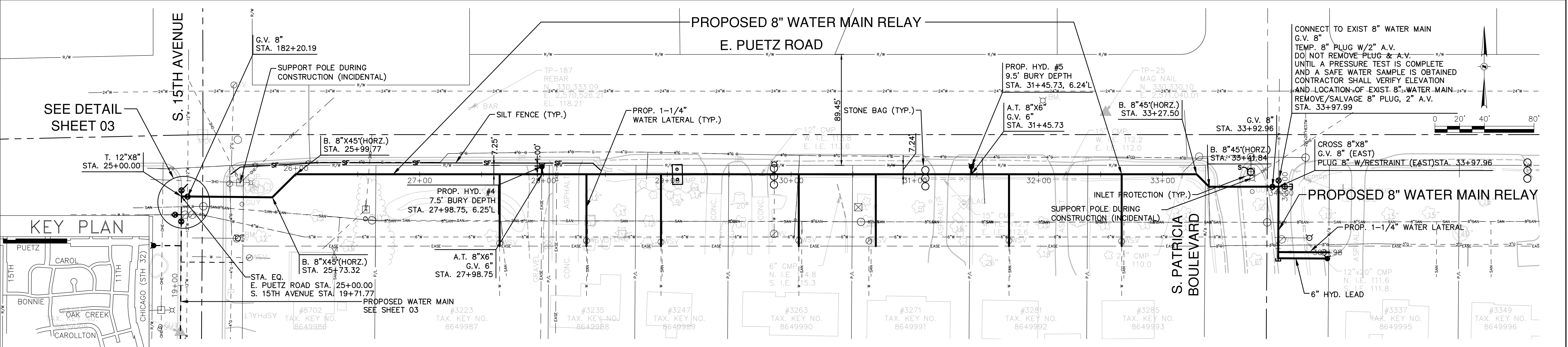
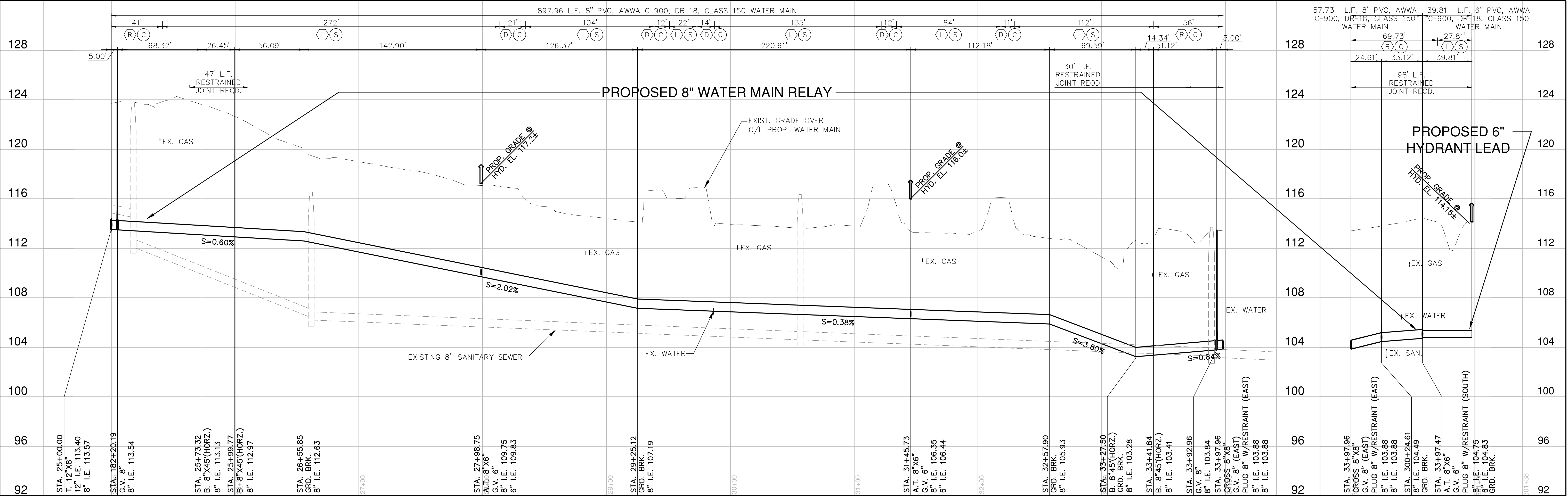


GENERAL NOTES:

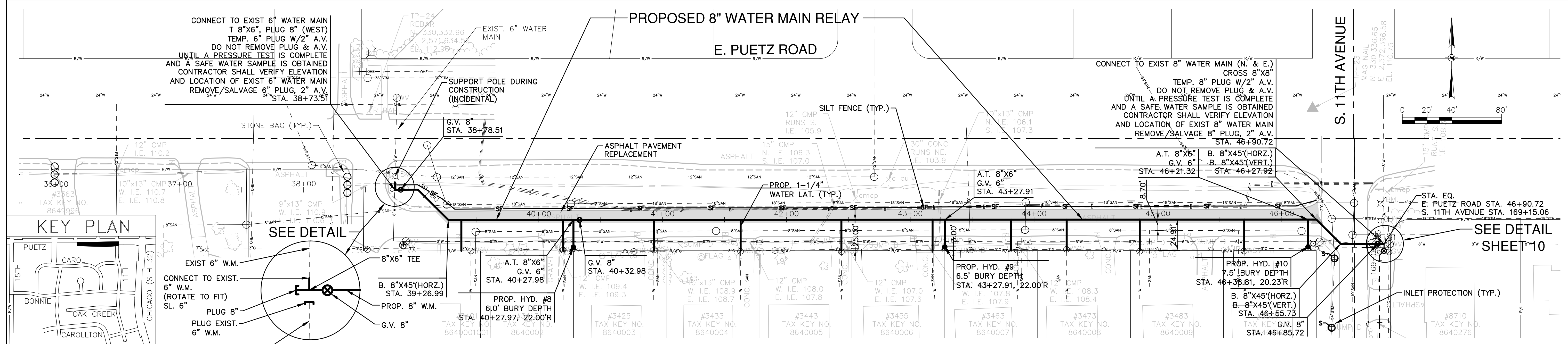
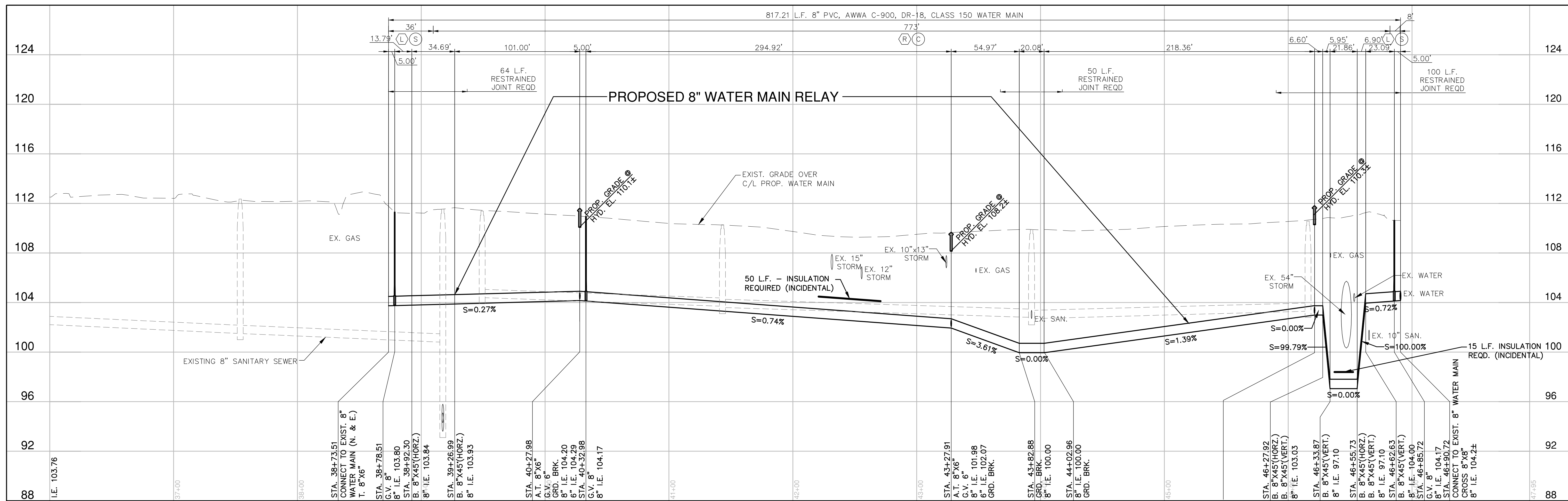
- CONTRACTOR SHALL REMOVE SIGNS, MAILBOXES, ETC. DURING CONSTRUCTION. IMMEDIATELY AFTER PIPE INSTALLATION AND BACKFILL OCCURS, ALL SIGNS, MAILBOXES, ETC. SHALL BE RETURNED TO THEIR PREVIOUS LOCATION. ALL STOP SIGNS MUST BE DISPLAYED AT ALL TIMES.
- INSULATION IS REQUIRED WHEREVER COVER OVER THE TOP OF WATER MAIN AND/OR WATER LATERAL IS LESS THEN 6 FT. OR WHERE SHOWN ON PLANS. (INCIDENTAL TO PROPOSED WATER MAIN)
- JOINT RESTRAINT OF PROPOSED WATER MAIN IS INCIDENTAL TO WATER MAIN CONSTRUCTION.
- SUPPORTING OF POWER/LIGHT POLES ALONG THE ENTIRE PROJECT LIMITS FOR PROPOSED WATER MAIN IS INCIDENTAL TO PROPOSED WATER MAIN CONSTRUCTION.
- LOCATION OF PROPOSED WATER LATERALS ON PLANS ARE APPROXIMATE. FINAL LOCATION SHALL BE DETERMINED IN FIELD DURING CONSTRUCTION. ALL EXISTING WATER SERVICE LATERALS ARE COPPER, 1-INCH DIAMETER.
- CONTRACTOR SHALL SALVAGE ALL EXISTING HYDRANTS CONNECTED TO EXISTING WATER MAIN TO BE ABANDONED BY DISASSEMBLING THE CONNECTION TO THE EXISTING 6" HYDRANT LEAD AT THE HYDRANT SHOE, AND SALVAGING THE HYDRANT, BARREL, SHOE, AND NOZZLE CAPS TO THE CITY OF OAK CREEK WATER AND SEWER UTILITY LOCATED AT 170 W. DREXEL AVE. OAK CREEK, WI 53154 BETWEEN THE HOURS OF 7:00 AM AND 3:00 PM.
- CONTRACTOR SHALL INSTALL ALL WATER SERVICE LATERALS CROSSING UNDER PAVEMENT AND ALL WATER SERVICE LATERALS ON PRIVATE PROPERTY USING TRENCHLESS METHODS. ANY DAMAGE TO PRIVATE PROPERTY SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
- CONTRACTOR SHALL REINSTATE ALL SUMP PUMP DISCHARGES DAMAGED DURING CONSTRUCTION OR EXTEND EXISTING DISCHARGES AS REQUIRED WITHIN THE PROJECT LIMITS. CONTRACTOR SHALL FURNISH NEW PIPE MATERIAL TO MATCH EXISTING PIPE, AND JOIN WITH A WATERTIGHT SEAL. (INCIDENTAL TO PROPOSED WATER MAIN)



L:\042013\2013035\CAD\Sheet\00C_00_03-08_Power_350.dwg, 10/16/2013 12:28:05 PM, 1500, DWG to PDF, p23



<div>NOTICE:</div> <div>In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.</div> <div>DISCLAIMER:</div> <div>The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.</div>	<div><div>GRÄEF</div><div>One Honey Creek Corporate Center</div><div>125 South 84th Street, Suite 401</div><div>Milwaukee, WI 53214-1469</div><div>414 / 259 1500</div><div>414 / 259 0037 fax</div><div>www.graef-usa.com</div></div>	<div>BID ITEM NOS.</div> <div>ESTIMATE OF QUANTITIES</div> <table><tr><td>1</td><td>8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.</td><td>168 L.F.</td></tr><tr><td>3</td><td>8" PVC Water Main, Spoil B.F., Surf. Rest.</td><td>730 L.F.</td></tr><tr><td>6</td><td>Connect to Existing 8" Water Main</td><td>1 EA.</td></tr><tr><td>8</td><td>Hydrant, Lead and 6-Inch Gate Valve</td><td>2 EA.</td></tr><tr><td>10</td><td>8" Gate Valve</td><td>3 EA.</td></tr><tr><td>12</td><td>1-1/4" Water Service Laterals (Polyethylene) Open Cut</td><td>7 EA.</td></tr><tr><td>17</td><td>17" x 13" CMP Driveway Culverts</td><td>1 EA.</td></tr><tr><td>19</td><td>12" CMP Driveway Culverts</td><td>1 EA.</td></tr><tr><td>20</td><td>15" CMP Driveway Culverts</td><td>2 EA.</td></tr></table>	1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	168 L.F.	3	8" PVC Water Main, Spoil B.F., Surf. Rest.	730 L.F.	6	Connect to Existing 8" Water Main	1 EA.	8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.	10	8" Gate Valve	3 EA.	12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	7 EA.	17	17" x 13" CMP Driveway Culverts	1 EA.	19	12" CMP Driveway Culverts	1 EA.	20	15" CMP Driveway Culverts	2 EA.	<div>WATER MAIN</div> <div>CONTRACTOR:</div> <div>MAINLINE INSPECTED BY:</div> <div>LATERALS INSPECTED BY:</div> <div>DATE COMPLETED:</div> <div>TYPE OF PIPE, ASTM NO.</div> <div>TYPE OF PIPE, ASTM NO.</div> <div>AS-BUILTS BY:</div> <div>DATE:</div> <div>This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.</div> <div>Utility Engineer</div> <div>Date</div>	<div>SA.FKO</div> <div>ST.FKO</div> <div>W. FKO</div> <div>G. FKO</div> <div>E. FKO</div> <div>T. FKO</div> <div>I. FKO</div> <div>TS.FKO</div> <div>PP.</div> <div></div> <div></div> <div></div> <div>REVISION BY</div> <div>DATE</div>	<div>CITY OF OAK CREEK, WISCONSIN</div> <table><tr><td>DESIGNED BY</td><td>DATE</td><td>DRAWN BY</td><td>DATE</td><td>CHECKED BY</td><td>DATE</td></tr><tr><td>AS</td><td>10-17-13</td><td>FKO</td><td>10-17-13</td><td>MNP</td><td>10-17-13</td></tr></table> <div>ROWAN ESTATES PROPOSED WATER MAIN RELAY</div> <div>IN: E. PUETZ ROAD</div> <div>FR: S. 15TH AVE.</div> <div>TO: PATRICIA BLVD.</div>	DESIGNED BY	DATE	DRAWN BY	DATE	CHECKED BY	DATE	AS	10-17-13	FKO	10-17-13	MNP	10-17-13	<div>APPROVED BY</div> <table><tr><td>UTILITY ENGINEER</td><td>DATE</td></tr><tr><td colspan="2">APPROVED BY</td></tr><tr><td>CITY ENGINEER</td><td>DATE</td></tr><tr><td>SCALE</td><td>SHEET</td></tr><tr><td>PLAN HOR. 1"=40'</td><td>04</td></tr><tr><td>PROFILE HOR. 1"=40'</td><td>OF</td></tr><tr><td>VER. 1"=4'</td><td>26</td></tr></table> <div>FILE NO: 13105-4C-2173</div>	UTILITY ENGINEER	DATE	APPROVED BY		CITY ENGINEER	DATE	SCALE	SHEET	PLAN HOR. 1"=40'	04	PROFILE HOR. 1"=40'	OF	VER. 1"=4'	26
		1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	168 L.F.																																																							
		3	8" PVC Water Main, Spoil B.F., Surf. Rest.	730 L.F.																																																							
		6	Connect to Existing 8" Water Main	1 EA.																																																							
		8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.																																																							
		10	8" Gate Valve	3 EA.																																																							
		12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	7 EA.																																																							
		17	17" x 13" CMP Driveway Culverts	1 EA.																																																							
		19	12" CMP Driveway Culverts	1 EA.																																																							
		20	15" CMP Driveway Culverts	2 EA.																																																							
DESIGNED BY	DATE	DRAWN BY	DATE	CHECKED BY	DATE																																																						
AS	10-17-13	FKO	10-17-13	MNP	10-17-13																																																						
UTILITY ENGINEER	DATE																																																										
APPROVED BY																																																											
CITY ENGINEER	DATE																																																										
SCALE	SHEET																																																										
PLAN HOR. 1"=40'	04																																																										
PROFILE HOR. 1"=40'	OF																																																										
VER. 1"=4'	26																																																										



NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER: The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

GRÄEF

One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

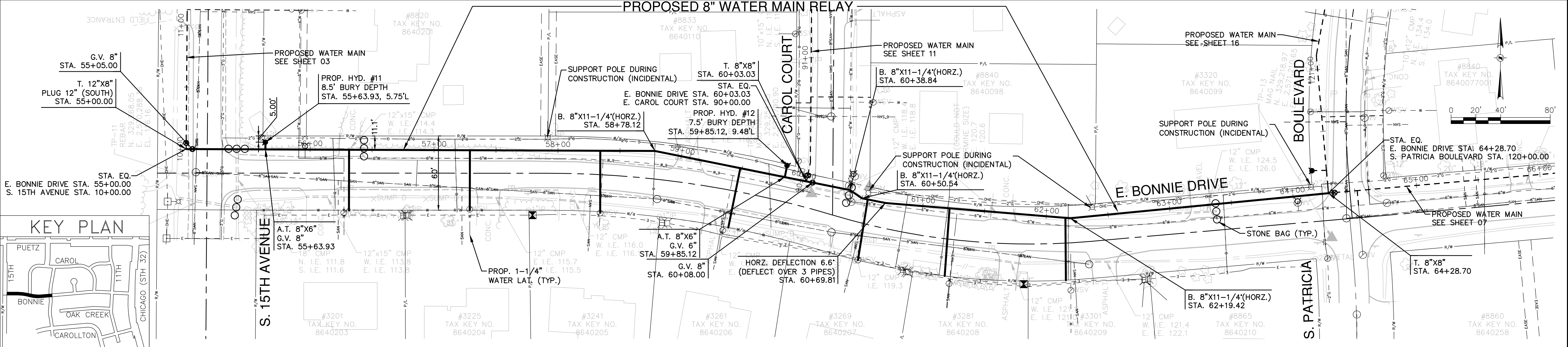
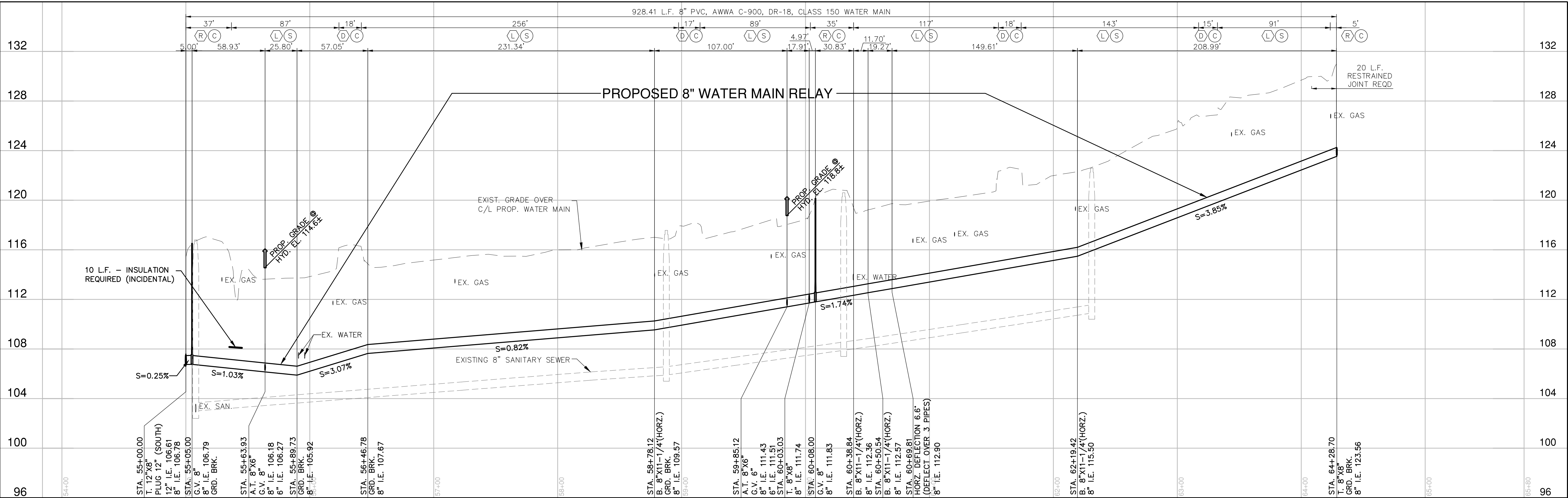
ESTIMATE OF QUANTITIES		
BID ITEM NOS.		
1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	773 L.F.
3	8" PVC Water Main, Spoil B.F., Surf. Rest.	44 L.F.
5	Connect to Existing 6" Water Main	1 EA.
6	Connect to Existing 8" Water Main	1 EA.
8	Hydrant, Lead and 6-Inch Gate Valve	3 EA.
10	8" Gate Valve	3 EA.
12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	10 EA.
23	Asphalt Concrete Pavement Removal	838 S.Y.
24	5-Inch Asphalt Concrete Pavement	241 TONS

WATER MAIN	SA.FKC
CONTRACTOR:	ST.FKC
MAINLINE INSPECTED BY:	W. FKC
LATERALS INSPECTED BY:	G. FKC
DATE COMPLETED:	E. FKC
TYPE OF PIPE, ASTM NO.	T. FKC
TYPE OF PIPE, ASTM NO.	I. FKC
AS-BUILTS BY:	DATE:
<p>This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.</p> <p>_____ Utility Engineer</p>	PP.

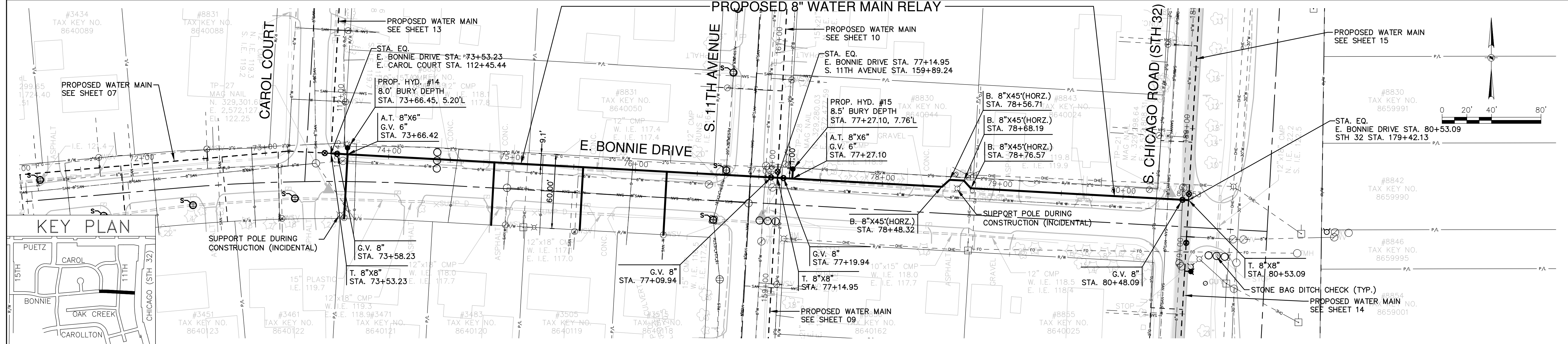
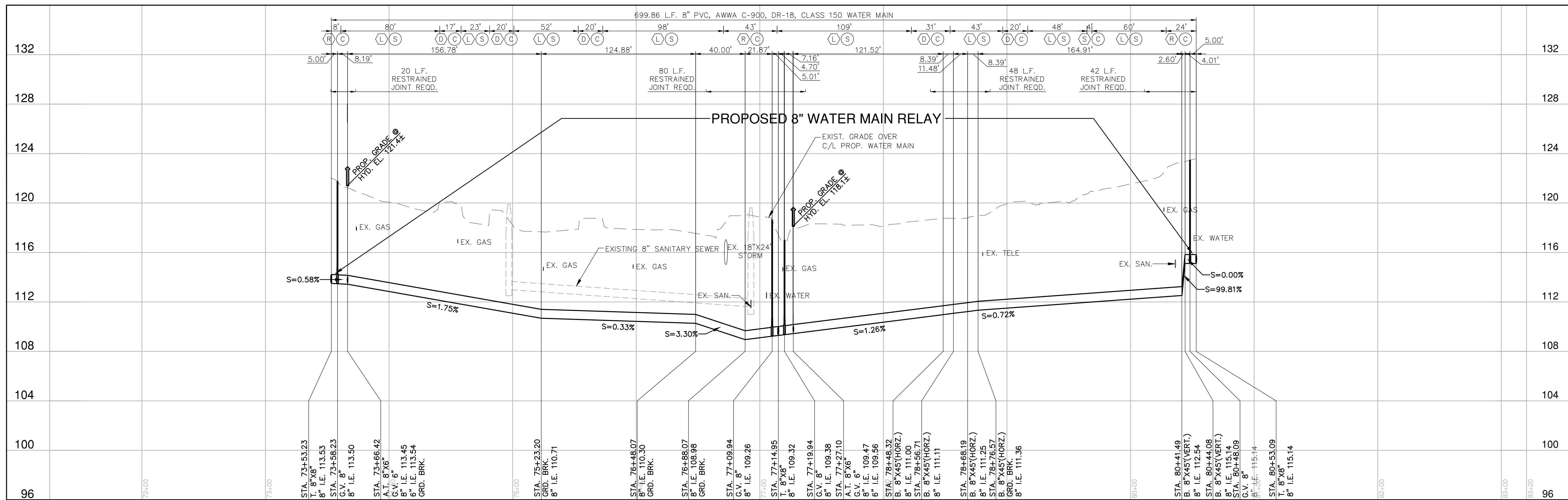
[illegible]

CITY OF OAK CREEK, WISCONSIN					APPROVED BY _____			
					UTILITY ENGINEER _____	DATE _____		
DESIGNED BY _____	DATE _____	DRAWN BY _____	DATE _____	CHECKED BY _____	DATE _____	APPROVED BY _____		
AS _____	10-17-13	FKO _____	10-17-13	MNP _____	10-17-13	APPROVED BY _____		
ROWAN ESTATES PROPOSED WATER MAIN RELAY IN: E. PUETZ ROAD FR: 1100 FT. WEST OF S. 11TH AVE. TO: S. 11TH AVE.						CITY ENGINEER _____		DATE _____
						SCALE _____		SHEET _____
						PLAN HOR. 1"=40'		05
						PROFILE HOR. 1"=40'		OF
						VER. 1"=4'		26
FILE NO: 13105-5C-2174								

L:\042013\20130350\CAD\Sheet\00C_00_03-08_Rowan_350.dwg, 10/16/2013 12:29:35 PM, 1500, DWG To PDF, p23



<div>NOTICE:</div> <div>In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.</div> <div>DISCLAIMER:</div> <div>The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.</div>	<div><div>GRÄEF</div><div>One Honey Creek Corporate Center</div><div>125 South 84th Street, Suite 401</div><div>Milwaukee, WI 53214-1469</div><div>414 / 259 1500</div><div>414 / 259 0037 fax</div><div>www.graef-usa.com</div></div>	<div>BID ITEM NOS.</div> <div>ESTIMATE OF QUANTITIES</div> <table><tr><td>1</td><td>8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.</td><td>146 L.F.</td></tr><tr><td>3</td><td>8" PVC Water Main, Spoil B.F., Surf. Rest.</td><td>783 L.F.</td></tr><tr><td>8</td><td>Hydrant, Lead and 6-Inch Gate Valve</td><td>2 EA.</td></tr><tr><td>10</td><td>8" Gate Valve</td><td>2 EA.</td></tr><tr><td>13</td><td>1-1/4" Water Service Laterals (Polyethylene) Directional Drill</td><td>7 EA.</td></tr><tr><td>16</td><td>13" x 9" CMP Driveway Culverts</td><td>2 EA.</td></tr><tr><td>19</td><td>12" CMP Driveway Culverts</td><td>2 EA.</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	146 L.F.	3	8" PVC Water Main, Spoil B.F., Surf. Rest.	783 L.F.	8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.	10	8" Gate Valve	2 EA.	13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	7 EA.	16	13" x 9" CMP Driveway Culverts	2 EA.	19	12" CMP Driveway Culverts	2 EA.										<div>WATER MAIN</div> <div>CONTRACTOR:</div> <div>MAINLINE INSPECTED BY:</div> <div>LATERALS INSPECTED BY:</div> <div>DATE COMPLETED:</div> <div>TYPE OF PIPE, ASTM NO.</div> <div>TYPE OF PIPE, ASTM NO.</div> <div>AS-BUILTS BY:</div> <div>This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.</div> <div>Utility Engineer</div> <div>Date</div> <div>SA.FKO</div> <div>ST.FKO</div> <div>W. FKO</div> <div>G. FKO</div> <div>E. FKO</div> <div>T. FKO</div> <div>I. FKO</div> <div>TS.FKO</div> <div>PP.</div> <div></div> <div></div> <div></div> <div>REVISION BY</div> <div>DATE</div>	<div>CITY OF OAK CREEK, WISCONSIN</div> <table><tr><td>DESIGNED BY</td><td>DATE</td><td>DRAWN BY</td><td>DATE</td><td>CHECKED BY</td><td>DATE</td></tr><tr><td>AS</td><td>10-17-13</td><td>FKO</td><td>10-17-13</td><td>MNP</td><td>10-17-13</td></tr></table> <div>ROWAN ESTATES PROPOSED WATER MAIN RELAY</div> <div>IN: E. BONNIE DRIVE</div> <div>FR: S. 15TH AVE.</div> <div>TO: PATRICIA BLVD.</div>	DESIGNED BY	DATE	DRAWN BY	DATE	CHECKED BY	DATE	AS	10-17-13	FKO	10-17-13	MNP	10-17-13	<div>APPROVED BY</div> <div>UTILITY ENGINEER</div> <div>DATE</div> <div>APPROVED BY</div> <div>CITY ENGINEER</div> <div>DATE</div> <div>SCALE</div> <div>SHEET</div> <div>PLAN HOR. 1"=40'</div> <div>06</div> <div>PROFILE HOR. 1"=40'</div> <div>OF</div> <div>VER. 1"=4'</div> <div>26</div> <div>FILE NO: 13105-6C-2175</div>
		1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	146 L.F.																																											
		3	8" PVC Water Main, Spoil B.F., Surf. Rest.	783 L.F.																																											
		8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.																																											
		10	8" Gate Valve	2 EA.																																											
		13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	7 EA.																																											
		16	13" x 9" CMP Driveway Culverts	2 EA.																																											
		19	12" CMP Driveway Culverts	2 EA.																																											
DESIGNED BY	DATE	DRAWN BY	DATE	CHECKED BY	DATE																																										
AS	10-17-13	FKO	10-17-13	MNP	10-17-13																																										



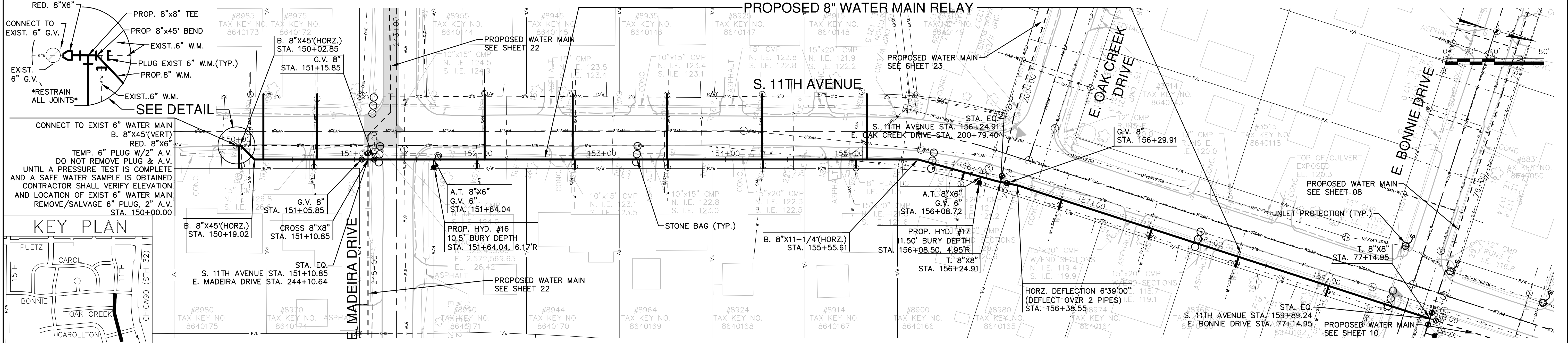
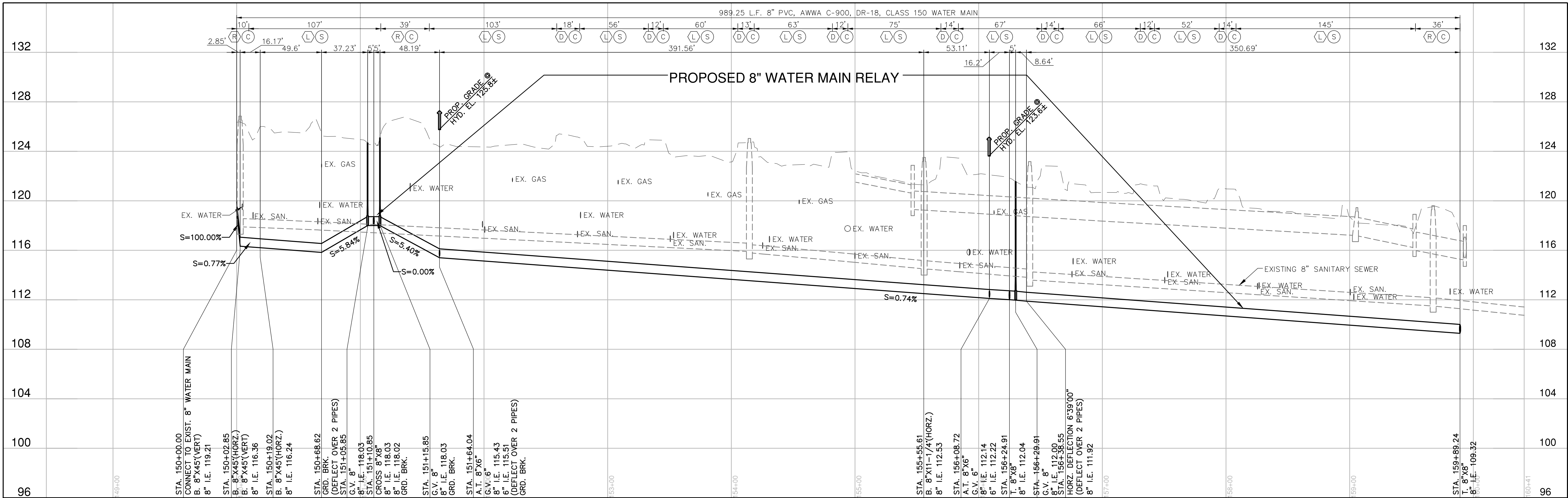
NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER: The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

GRAEF
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

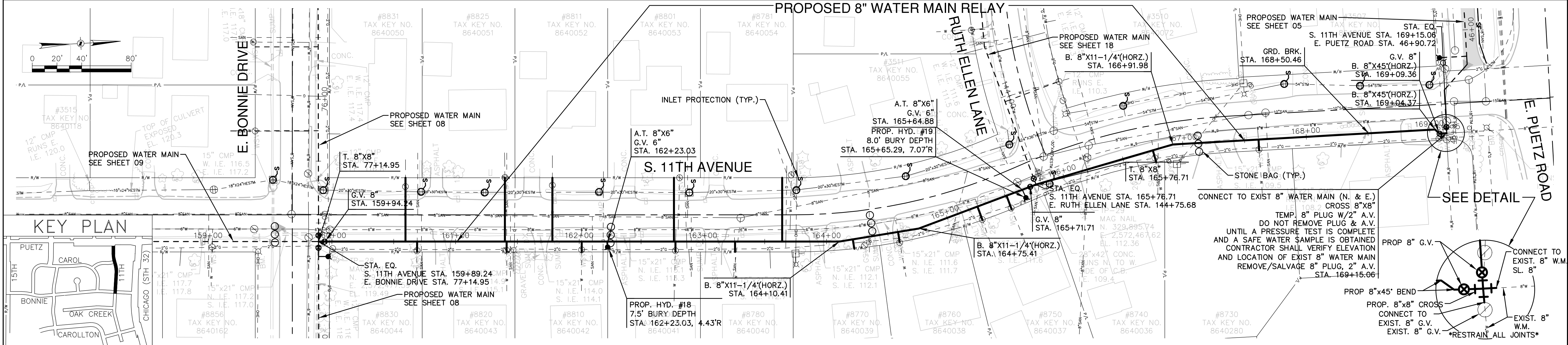
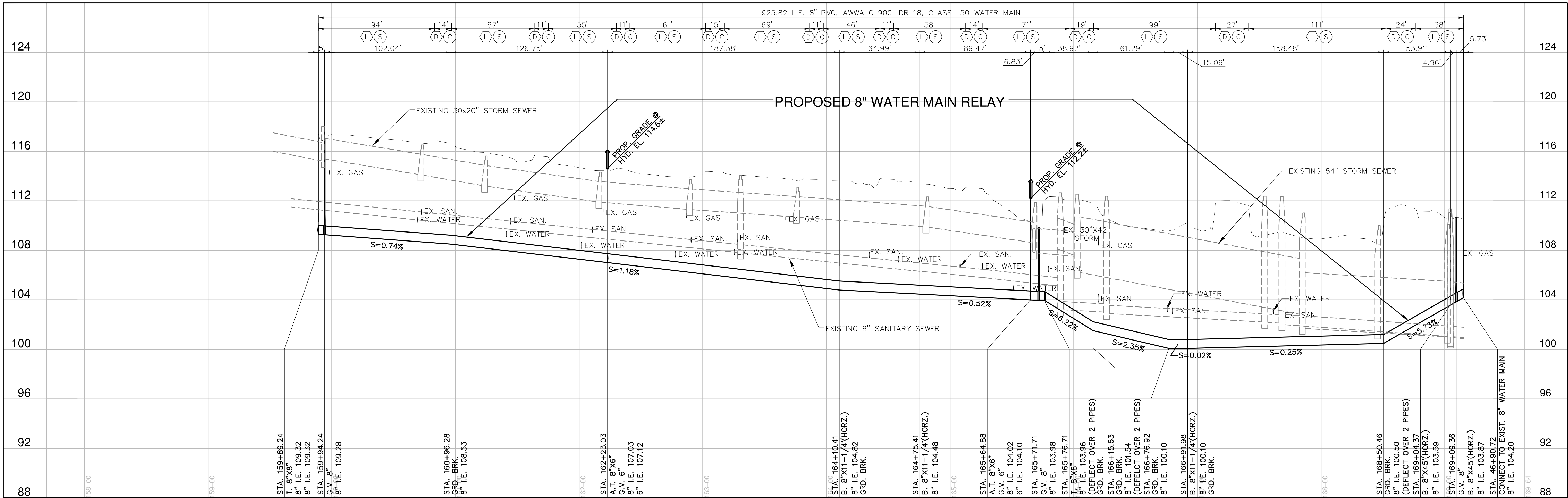
BID ITEM NOS.		ESTIMATE OF QUANTITIES		WATER MAIN		SA.FKO		CITY OF OAK CREEK, WISCONSIN				APPROVED BY						
				CONTRACTOR:		ST.FKO						UTILITY ENGINEER		DATE				
1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	187 L.F.	MAINLINE INSPECTED BY:		W. FKO		DESIGNED BY		DATE	DRAWN BY	DATE	APPROVED BY						
3	8" PVC Water Main, Spoil B.F., Surf. Rest.	513 L.F.	LATERALS INSPECTED BY:		G. FKO		AS		10-17-13	FKO	10-17-13	MNP 10-17-13						
8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.	DATE COMPLETED:		E. FKO		ROWAN ESTATES PROPOSED WATER MAIN RELAY						CITY ENGINEER		DATE			
10	8" Gate Valve	4 EA.	TYPE OF PIPE, ASTM NO.		T. FKO								SCALE		SHEET			
13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	4 EA.	TYPE OF PIPE, ASTM NO.		I. FKO								PLAN		1"=40'		08	
16	13" x 9" CMP Driveway Culverts	1 EA.	AS-BUILTS BY:		TS.FKO								HOR.		1"=40'		OF	
17	17" x 13" CMP Driveway Culverts	1 EA.	This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.		PP.		IN:		E. BONNIE DRIVE		VER.		1"=4'		26			
19	12" CMP Driveway Culverts	2 EA.					FR:		CAROL COURT									
							TO:		S. CHICAGO RD. (STH 32)									
			Utility Engineer		Date		REVISION BY		DATE		FILE NO: 13105-8c-2177							

L:\042013020130350\CAD\Sheet\0420130350.dwg, 10/16/2013 12:24:09 PM, 1500, DWG to PDF, p23



<div><div></div><div>NOTICE: In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.</div><div>DISCLAIMER: The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.</div></div>	<div><div><div></div><div>GRAEF</div></div><div>One Honey Creek Corporate Center 125 South 84th Street, Suite 401 Milwaukee, WI 53214-1469 414 / 259 1500 414 / 259 0037 fax www.graef-usa.com</div></div>	<div><div>BID ITEM NOS.</div><div>ESTIMATE OF QUANTITIES</div><div><table><tr><td>1</td><td>8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.</td><td>196 L.F.</td></tr><tr><td>3</td><td>8" PVC Water Main, Spoil B.F., Surf. Rest.</td><td>794 L.F.</td></tr><tr><td>5</td><td>Connect to Existing 6" Water Main</td><td>1 EA.</td></tr><tr><td>8</td><td>Hydrant, Lead and 6-Inch Gate Valve</td><td>2 EA.</td></tr><tr><td>10</td><td>8" Gate Valve</td><td>3 EA.</td></tr><tr><td>12</td><td>1-1/4" Water Service Laterals (Polyethylene) Open Cut</td><td>12 EA.</td></tr><tr><td>13</td><td>1-1/4" Water Service Laterals (Polyethylene) Directional Drill</td><td>7 EA.</td></tr><tr><td>16</td><td>13" x 9" CMP Driveway Culverts</td><td>2 EA.</td></tr><tr><td>18</td><td>21" x 15" CMP Driveway Culverts</td><td>7 EA.</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table></div></div>	1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	196 L.F.	3	8" PVC Water Main, Spoil B.F., Surf. Rest.	794 L.F.	5	Connect to Existing 6" Water Main	1 EA.	8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.	10	8" Gate Valve	3 EA.	12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	12 EA.	13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	7 EA.	16	13" x 9" CMP Driveway Culverts	2 EA.	18	21" x 15" CMP Driveway Culverts	7 EA.							<div><div>WATER MAIN</div><div>CONTRACTOR:</div><div>MAINLINE INSPECTED BY:</div><div>LATERALS INSPECTED BY:</div><div>DATE COMPLETED:</div><div>TYPE OF PIPE, ASTM NO.</div><div>TYPE OF PIPE, ASTM NO.</div><div>AS-BUILTS BY:</div><div>DATE:</div><div>This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.</div><div>Utility Engineer</div><div>Date</div></div>	<div><div>SA.FKO</div><div>ST.FKO</div><div>W. FKO</div><div>G. FKO</div><div>E. FKO</div><div>T. FKO</div><div>I. FKO</div><div>TS.FKO</div><div>PP.</div><div></div><div></div><div></div></div>	<div><div>CITY OF OAK CREEK, WISCONSIN</div><div>DESIGNED BY DATE DRAWN BY DATE CHECKED BY DATE</div><div>AS 10-17-13 FKO 10-17-13 MNP 10-17-13</div><div>ROWAN ESTATES PROPOSED WATER MAIN RELAY</div><div>IN: S. 11TH AVENUE</div><div>FR: 120 FT. S. OF E. MADEIRA DR.</div><div>TO: E. BONNIE DRIVE</div><div>REVISION BY DATE</div></div>	<div><div>APPROVED BY</div><div>UTILITY ENGINEER DATE</div><div>APPROVED BY</div><div>CITY ENGINEER DATE</div><div>SCALE SHEET</div><div>PLAN HOR. 1"=40' 09</div><div>PROFILE HOR. 1"=40' OF</div><div>VER. 1"=4' 26</div><div>FILE NO: 13105-9C-2178</div></div>
		1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	196 L.F.																																			
		3	8" PVC Water Main, Spoil B.F., Surf. Rest.	794 L.F.																																			
		5	Connect to Existing 6" Water Main	1 EA.																																			
		8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.																																			
		10	8" Gate Valve	3 EA.																																			
		12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	12 EA.																																			
		13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	7 EA.																																			
		16	13" x 9" CMP Driveway Culverts	2 EA.																																			
		18	21" x 15" CMP Driveway Culverts	7 EA.																																			

L:\042013\20130350\CAD\Sheet\010C_00_09-15_Power_350.dwg, 10/16/2013 12:13:46 PM, 1500, DWG to PDF, p23



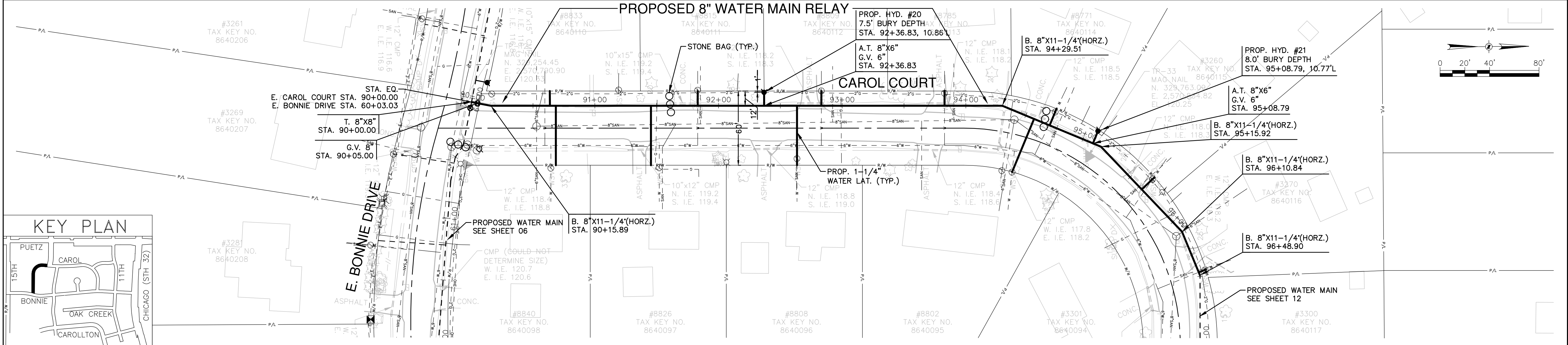
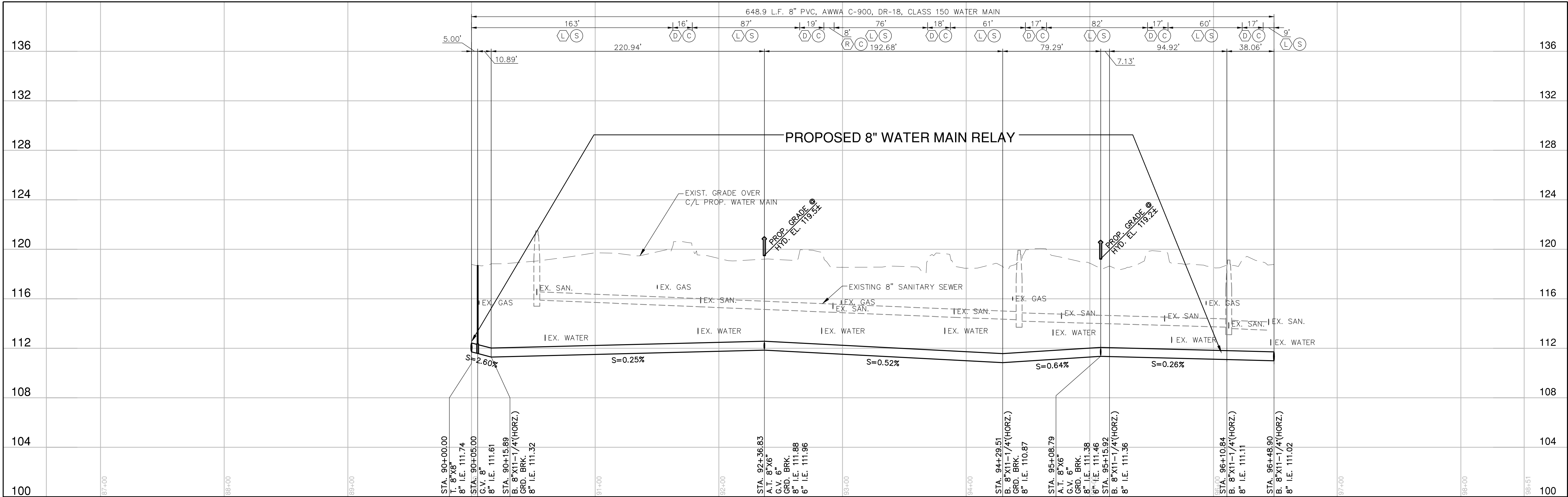
<div>NOTICE:</div> <div>In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.</div>		<div>DISCLAIMER:</div> <div>The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.</div>		<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div>One Honey Creek Corporate Center 125 South 84th Street, Suite 401 Milwaukee, WI 53214-1469 414 / 259 1500 414 / 259 0037 fax www.graef-usa.com</div></div>				<div><div><div><div><div>BID ITEM NOS.</div><div>ESTIMATE OF QUANTITIES</div></div><div><table><tr><td>1</td><td>8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.</td><td>157</td><td>L.F.</td></tr><tr><td>3</td><td>8" PVC Water Main, Spoil B.F., Surf. Rest.</td><td>769</td><td>L.F.</td></tr><tr><td>6</td><td>Connect to Existing 8" Water Main</td><td>1</td><td>EA.</td></tr><tr><td>8</td><td>Hydrant, Lead and 6-Inch Gate Valve</td><td>2</td><td>EA.</td></tr><tr><td>10</td><td>8" Gate Valve</td><td>3</td><td>EA.</td></tr><tr><td>12</td><td>1-1/4" Water Service Laterals (Polyethylene) Open Cut</td><td>11</td><td>EA.</td></tr><tr><td>13</td><td>1-1/4" Water Service Laterals (Polyethylene) Directional Drill</td><td>5</td><td>EA.</td></tr><tr><td>18</td><td>21" x 15" CMP Driveway Culverts</td><td>10</td><td>EA.</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><</table></div></div></div></div>				1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	157	L.F.	3	8" PVC Water Main, Spoil B.F., Surf. Rest.	769	L.F.	6	Connect to Existing 8" Water Main	1	EA.	8	Hydrant, Lead and 6-Inch Gate Valve	2	EA.	10	8" Gate Valve	3	EA.	12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	11	EA.	13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	5	EA.	18	21" x 15" CMP Driveway Culverts	10	EA.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	157	L.F.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
3	8" PVC Water Main, Spoil B.F., Surf. Rest.	769	L.F.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
6	Connect to Existing 8" Water Main	1	EA.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
8	Hydrant, Lead and 6-Inch Gate Valve	2	EA.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
10	8" Gate Valve	3	EA.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	11	EA.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	5	EA.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
18	21" x 15" CMP Driveway Culverts	10	EA.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				


NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

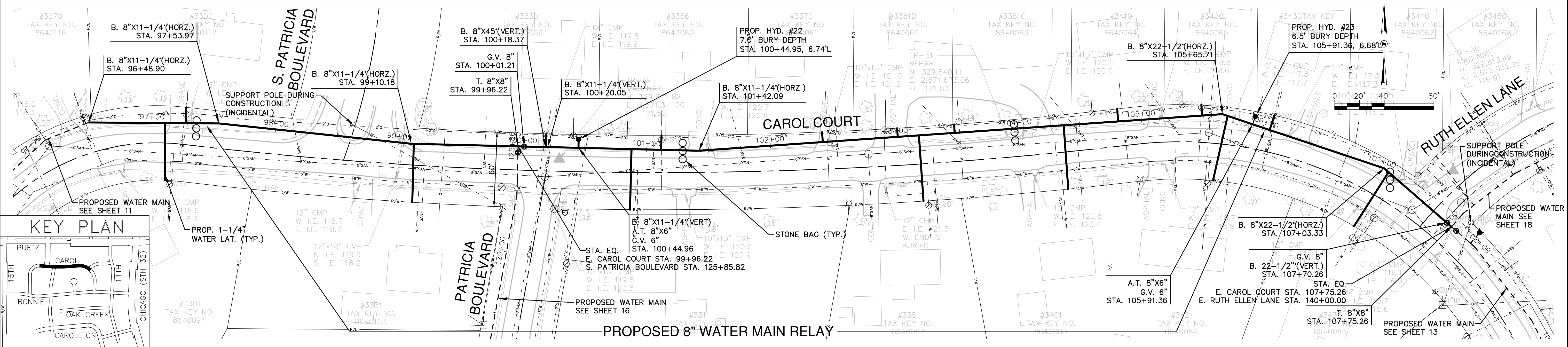
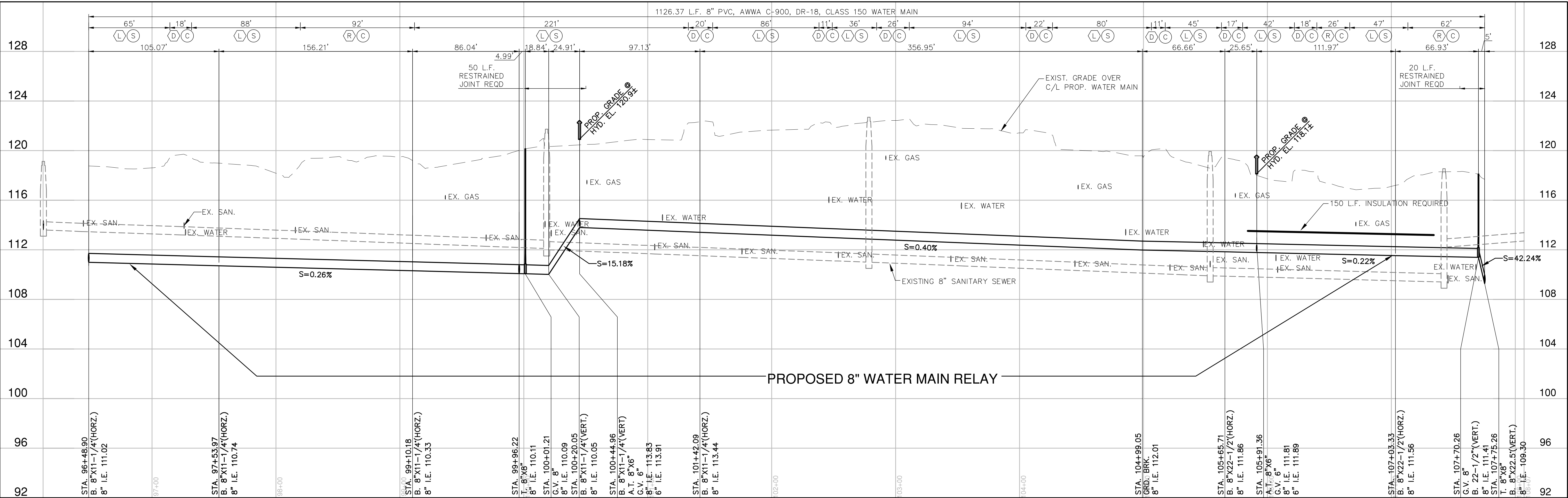
GRAEF
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

L:\Jobs\2013\20130330CAD\Sheet\DWG_00_09-15_Rowan_350.dwg, 10/16/2013 12:44:47 PM, 1500, DWG to PDF, p23



<div>NOTICE:</div> <div>In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.</div> <div>DISCLAIMER:</div> <div>The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.</div>	<div></div> <div>One Honey Creek Corporate Center</div> <div>125 South 84th Street, Suite 401</div> <div>Milwaukee, WI 53214-1469</div> <div>414 / 259 1500</div> <div>414 / 259 0037 fax</div> <div>www.graef-usa.com</div>	ESTIMATE OF QUANTITIES		WATER MAIN		SA.FKO		CITY OF OAK CREEK, WISCONSIN				APPROVED BY										
		CONTRACTOR:		MAINLINE INSPECTED BY:		ST.FKO						UTILITY ENGINEER		DATE								
		1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	111 L.F.	LATERALS INSPECTED BY:		W. FKO		DESIGNED BY		DATE		DRAWN BY		DATE		CHECKED BY		DATE			
		3	8" PVC Water Main, Spoil B.F., Surf. Rest.	538 L.F.	DATE COMPLETED:		G. FKO		AS		10-17-13		FKO		10-17-13		MNP		10-17-13			
		8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.	TYPE OF PIPE, ASTM NO.		E. FKO		ROWAN ESTATES PROPOSED WATER MAIN RELAY		IN: CAROL COURT		FR: E. BONNIE DR.		TO: 650 FT. NORTH OF E. BONNIE DR.		CITY ENGINEER		DATE			
		10	8" Gate Valve	1 EA.	TYPE OF PIPE, ASTM NO.		T. FKO										SCALE		SHEET			
		12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	7 EA.	AS-BUILTS BY:		L. FKO										PLAN		HOR. 1"=40'		11	
		13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	4 EA.	DATE:		TS.FKO										PROFILE		HOR. 1"=40'		OF	
		16	13" x 9" CMP Driveway Culverts	1 EA.	This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.		PP.		REVISION BY		DATE											
		19	12" CMP Driveway Culverts	5 EA.	Utility Engineer		Date															
																	FILE NO:13105-11C-2180					

L:\042013020130350CAD\Sheet\0420130350.dwg, 10/16/2013 12:15:39 PM, 1500, DWG To PDF, p23



NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

ESTIMATE OF QUANTITIES

BID ITEM NOS.	DESCRIPTION	QUANTITY
1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	323 L.F.
3	8" PVC Water Main, Spoil B.F., Surf. Rest.	804 L.F.
8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.
10	8" Gate Valve	2 EA.
12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	9 EA.
13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	6 EA.
16	13" x 9" CMP Driveway Culverts	6 EA.
19	12" CMP Driveway Culverts	3 EA.

WATER MAIN
CONTRACTOR:
MAINLINE INSPECTED BY:
LATERALS INSPECTED BY:
DATE COMPLETED:
TYPE OF PIPE, ASTM NO.
TYPE OF PIPE, ASTM NO.
AS-BUILTS BY: DATE:
This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.
Utility Engineer Date

SAFKO
ST.FKO
W. FKO
G. FKO
E. FKO
T. FKO
J. FKO
TS.FKO
PP.

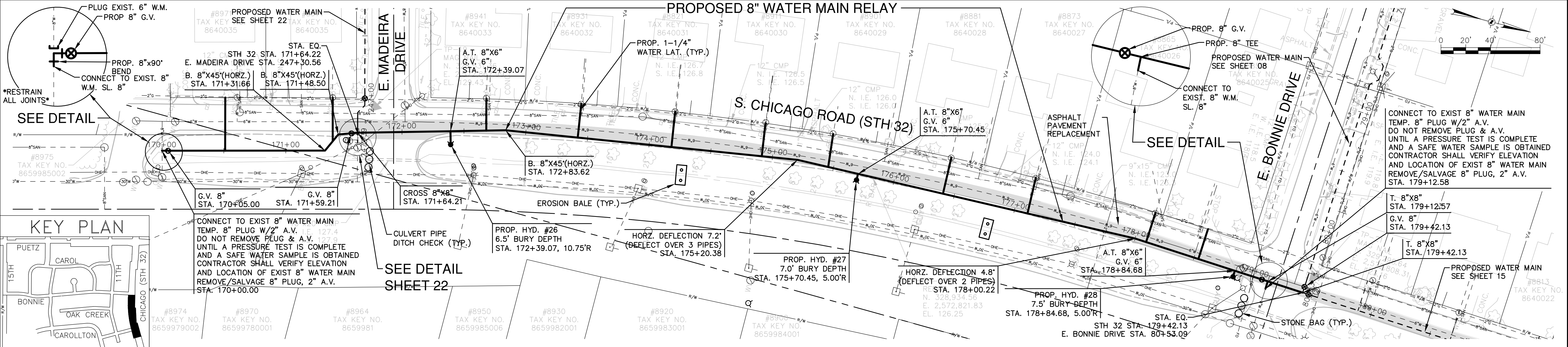
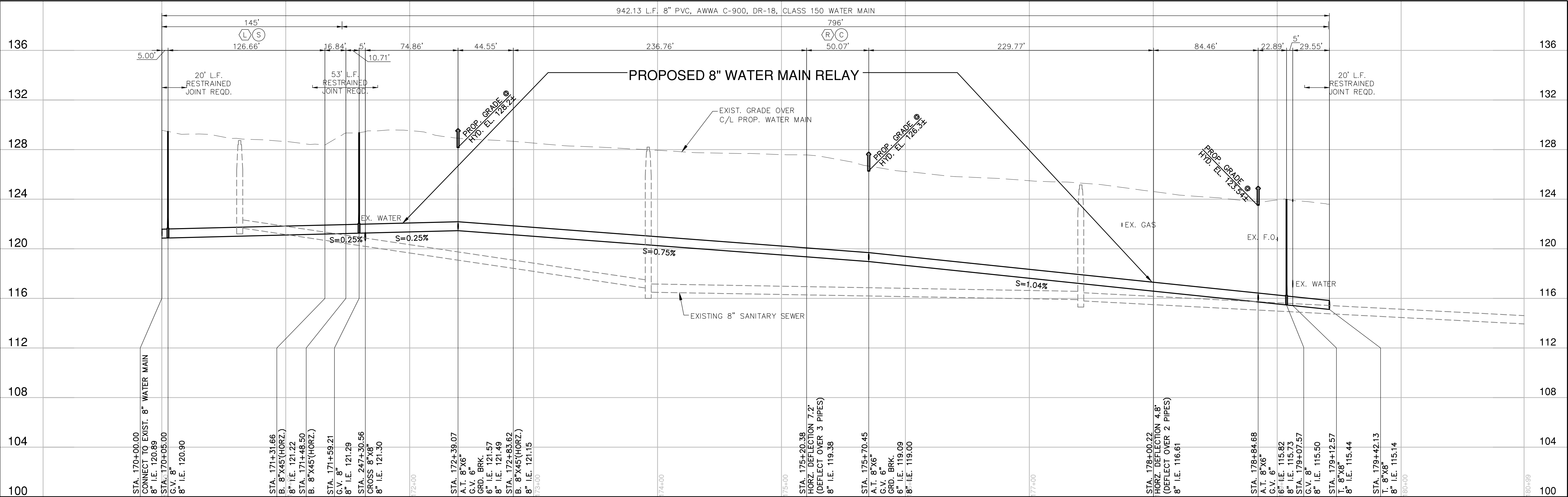
CITY OF OAK CREEK, WISCONSIN
DESIGNED BY: DATE: DRAWN BY: DATE: CHECKED BY: DATE: AS 10-17-13 FKO 10-17-13 MNP 10-17-13
ROWAN ESTATES PROPOSED WATER MAIN RELAY
IN: **CAROL COURT**
FR: 200 FT. W. OF S. PATRICIA BLVD.
TO: RUTH ELLEN LN.

APPROVED BY
UTILITY ENGINEER DATE:
APPROVED BY:
CITY ENGINEER DATE:
SCALE: SHEET: 12 OF 26
PLAN HOR. 1"=40'
PROFILE HOR. 1"=40'
VER. 1"=4'

FILE NO:13105-12C-2181

Gräef
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

L:\0420130201\0420130201\0420130201.dwg, 10/16/2013 12:17:36 PM, 1500, DWG TO PDF, p23



NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

KEY PLAN

ESTIMATE OF QUANTITIES

BID ITEM NOS.	DESCRIPTION	QUANTITY
1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	798 L.F.
3	8" PVC Water Main, Spoil B.F., Surf. Rest.	145 L.F.
6	Connect to Existing 8" Water Main	2 EA.
8	Hydrant, Lead and 6-Inch Gate Valve	3 EA.
10	8" Gate Valve	3 EA.
13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	11 EA.
23	Asphalt Concrete Pavement Removal	928 S.Y.
24	5-Inch Asphalt Concrete Pavement	267 TONS

WATER MAIN CONTRACTOR:

MAINLINE INSPECTED BY:

LATERALS INSPECTED BY:

DATE COMPLETED:

TYPE OF PIPE, ASTM NO.

TYPE OF PIPE, ASTM NO.

AS-BUILTS BY:

DATE:

This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.

Utility Engineer Date

SAFKO ST.FKO W. FKO G. FKO E. FKO T. FKO I. FKO TS.FKO PP.

CITY OF OAK CREEK, WISCONSIN

DESIGNED BY DATE DRAWN BY DATE CHECKED BY DATE

AS 10-17-13 FKO 10-17-13 MNP 10-17-13

ROWAN ESTATES PROPOSED WATER MAIN RELAY

IN: S. CHICAGO ROAD (STH 32)

FR: 200 FT. SOUTH OF E. MADEIRA DR.

TO: E. BONNIE DR.

REVISION BY DATE

APPROVED BY

UTILITY ENGINEER DATE

APPROVED BY

CITY ENGINEER DATE

SCALE SHEET

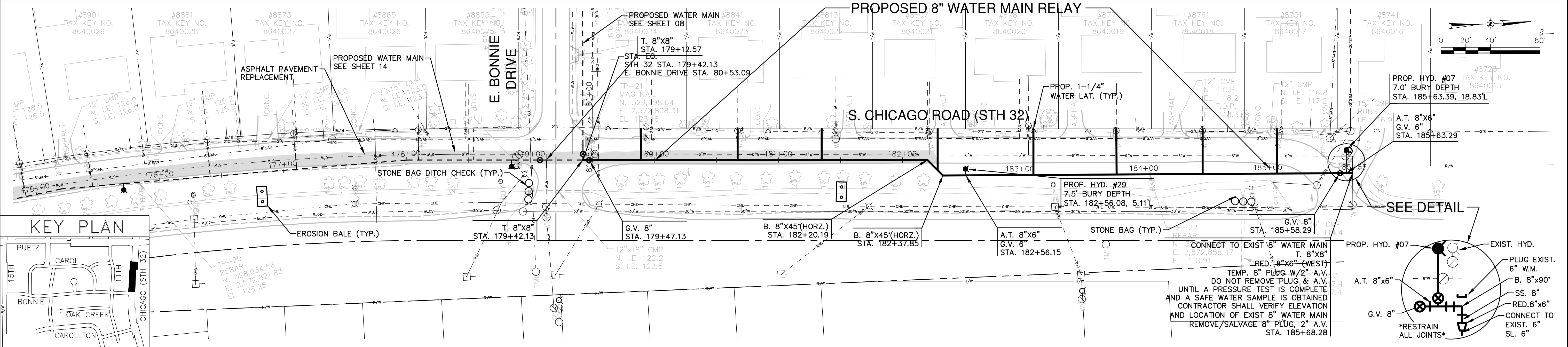
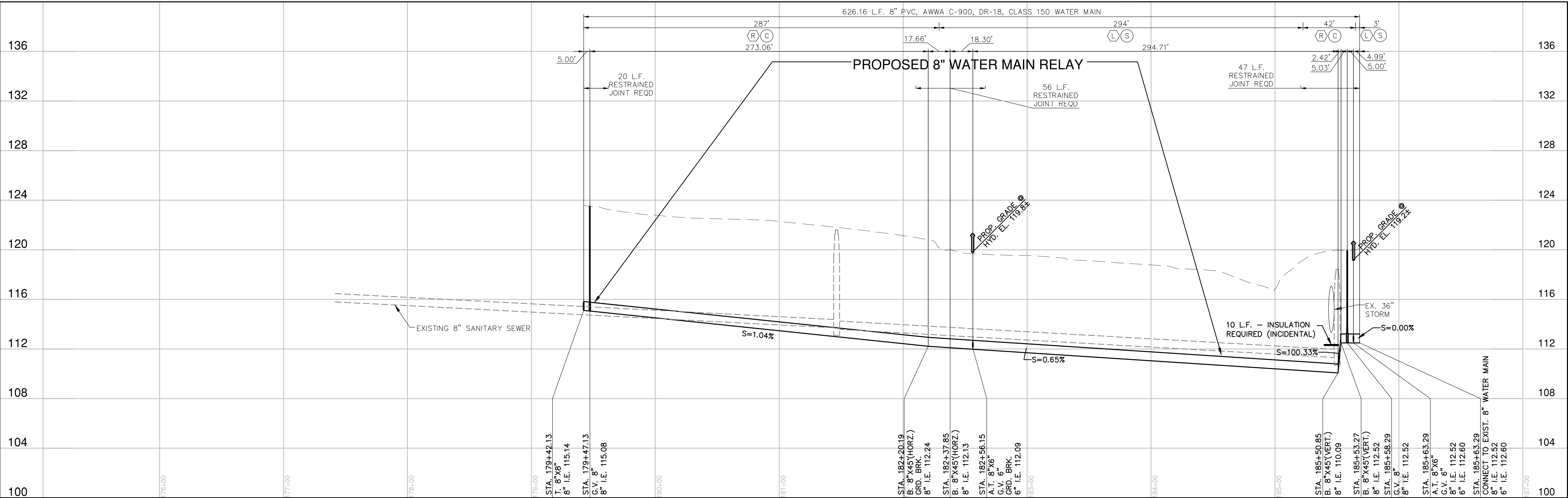
PLAN HOR. 1"=40' 14

PROFILE HOR. 1"=40' OF

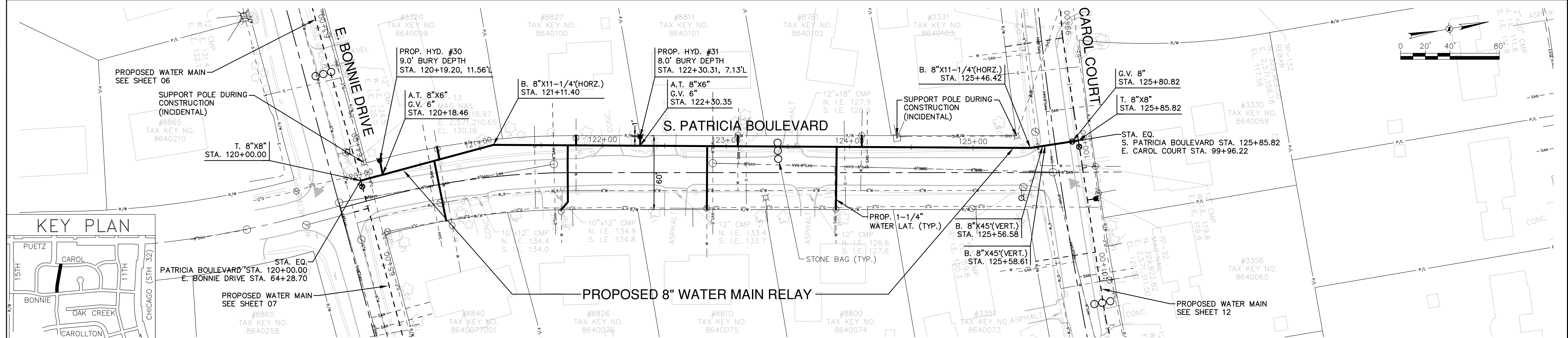
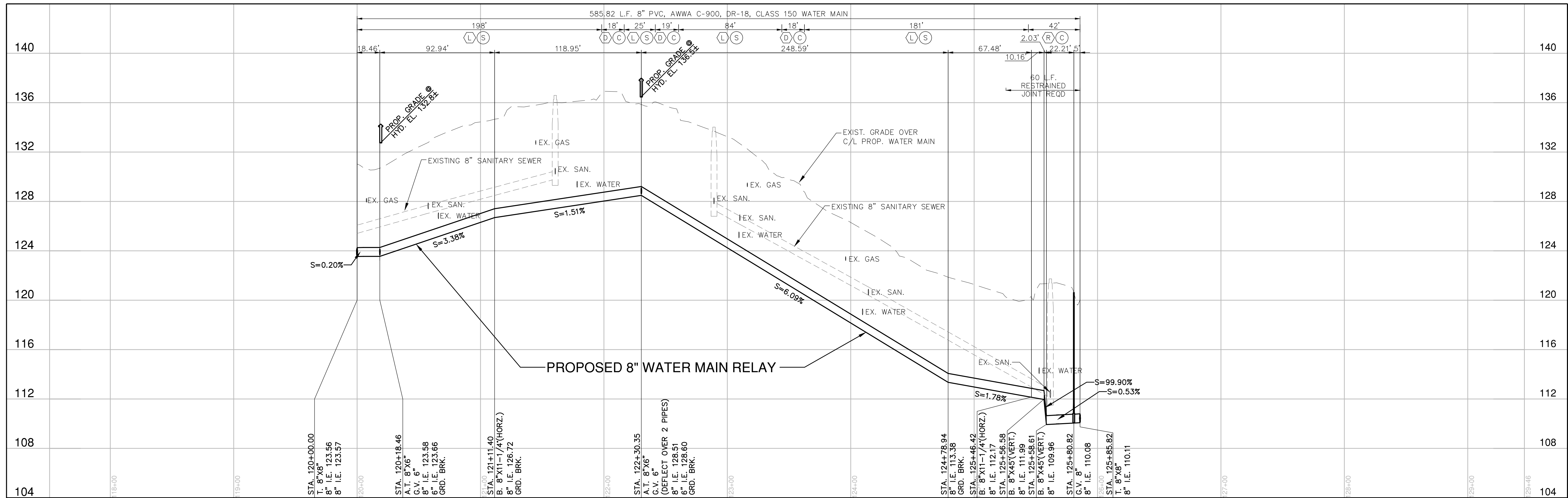
VER. 1"=4' 26

FILE NO:13105-14C-2183

L:\042013\20130350\0420130350.dwg, 10/16/2013 12:18:36 PM, 1500, DWG To PDF, p23



<div>NOTICE:</div> <div>In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.</div> <div>DISCLAIMER:</div> <div>The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.</div>	<div><div>GRÄEF</div><div>One Honey Creek Corporate Center</div><div>125 South 84th Street, Suite 401</div><div>Milwaukee, WI 53214-1469</div><div>414 / 259 1500</div><div>414 / 259 0037 fax</div><div>www.graef-usa.com</div></div>	<div>BID ITEM NOS.</div>	<div>ESTIMATE OF QUANTITIES</div>	<div>WATER MAIN</div>	<div>SA.FKO</div>	<div>CITY OF OAK CREEK, WISCONSIN</div> <div>DESIGNED BY DATE DRAWN BY DATE CHECKED BY DATE</div> <div>AS 10-17-13 FKO 10-17-13 MNP 10-17-13</div> <div>ROWAN ESTATES PROPOSED WATER MAIN RELAY</div> <div>IN: S. CHICAGO ROAD (STH 32)</div> <div>FR: E. BONNIE DR.</div> <div>TO: 650 FT. NORTH OF E. BONNIE DR.</div> <div>REVISION BY DATE</div>	
		1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	330 L.F.	ST.FKO		
		3	8" PVC Water Main, Spoil B.F., Surf. Rest.	297 L.F.	W. FKO		
		6	Connect to Existing 8" Water Main	2 EA.	G. FKO		
		8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.	E. FKO		
		10	8" Gate Valve	2 EA.	T. FKO		
		13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	8 EA.	I. FKO		
		23	Asphalt Concrete Pavement Removal	327 S.Y.	TS.FKO		
		24	5-Inch Asphalt Concrete Pavement	95 TONS	PP.		
				Utility Engineer Date			
<div>APPROVED BY</div> <div>UTILITY ENGINEER DATE</div> <div>APPROVED BY</div> <div>CITY ENGINEER DATE</div> <div>SCALE SHEET</div> <div>PLAN HOR. 1"=40' 15</div> <div>PROFILE HOR. 1"=40' OF</div> <div>VER. 1"=4' 26</div> <div>FILE NO:13105-15C-2184</div>							

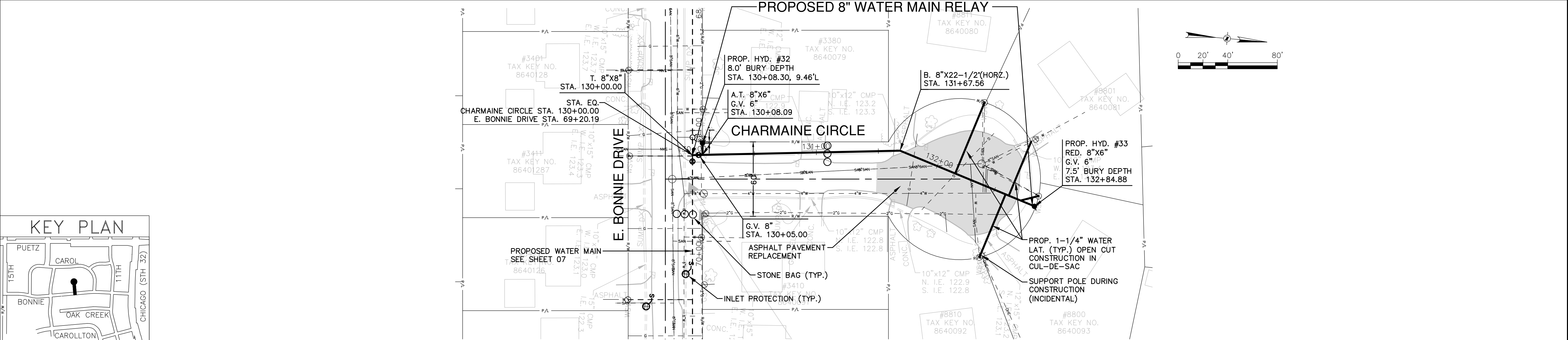
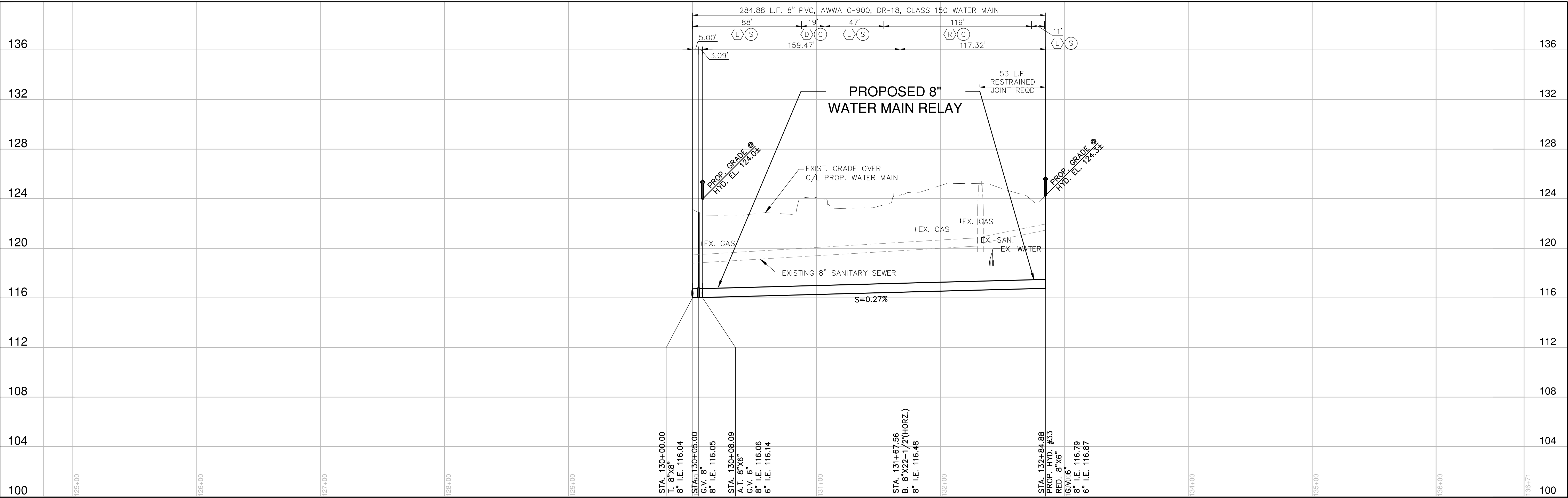


NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER: The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

GRAEF
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

BID ITEM NOS.	ESTIMATE OF QUANTITIES		WATER MAIN		SA.FKO	CITY OF OAK CREEK, WISCONSIN				APPROVED BY			
			CONTRACTOR:		ST.FKO					UTILITY ENGINEER		DATE	
1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	98 L.F.	MAINLINE INSPECTED BY:		W. FKO	DESIGNED BY	DATE	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	
3	8" PVC Water Main, Spoil B.F., Surf. Rest.	488 L.F.	LATERALS INSPECTED BY:		G. FKO	AS	10-17-13	FKO	10-17-13	MNP	10-17-13		
8	Hydrant, Lead and 6-Inch Gate Valve	2 EA.	DATE COMPLETED:		E. FKO	ROWAN ESTATES PROPOSED WATER MAIN RELAY				CITY ENGINEER		DATE	
10	8" Gate Valve	1 EA.	TYPE OF PIPE, ASTM NO.		T. FKO					SCALE		SHEET	
12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	4 EA.	TYPE OF PIPE, ASTM NO.		I. FKO					PLAN		1"=40'	16
13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	4 EA.	AS-BUILTS BY:		TS.FKO	IN: S. PATRICIA BOULEVARD				PROFILE		1"=40'	OF
17	17" x 13" CMP Driveway Culverts	1 EA.	DATE:		PP.	TO: CAROL COURT				VER.		1"=4'	26
			This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.			REVISION BY		DATE	FILE NO:13105-16C-2185				
			Utility Engineer		Date								



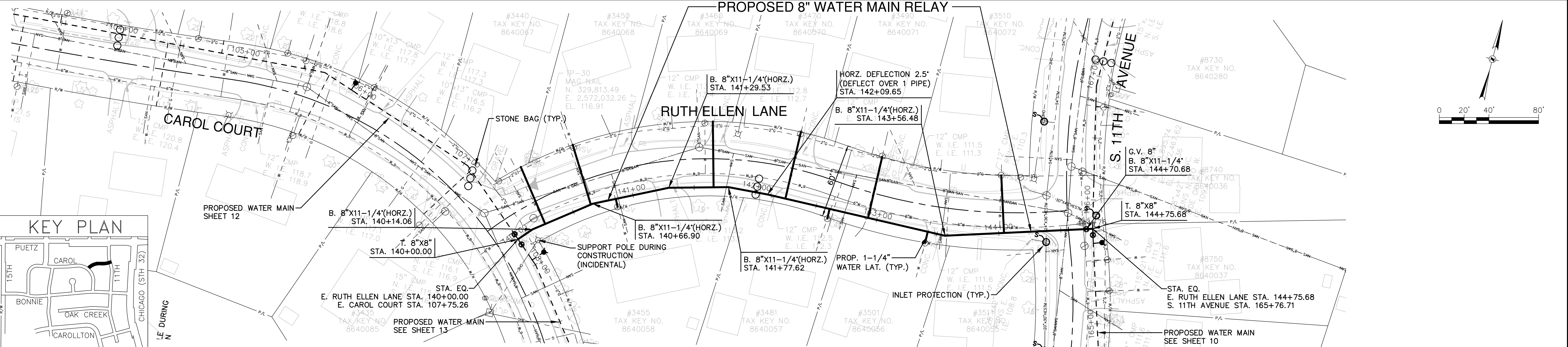
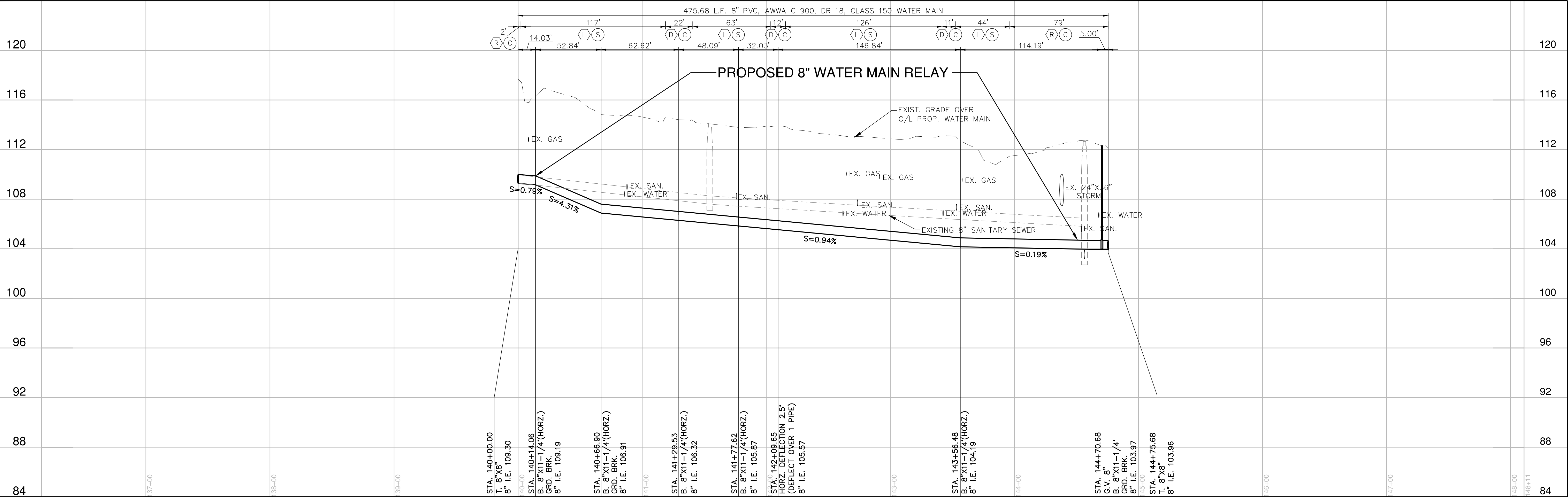
<div>NOTICE:</div> <div>In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.</div> <div>DISCLAIMER:</div> <div>The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.</div>	<div><div>GRAEF</div><div>One Honey Creek Corporate Center</div><div>125 South 84th Street, Suite 401</div><div>Milwaukee, WI 53214-1469</div><div>414 / 259 1500</div><div>414 / 259 0037 fax</div><div>www.graef-usa.com</div></div>	ESTIMATE OF QUANTITIES		WATER MAIN		SA.FKO		CITY OF OAK CREEK, WISCONSIN			
		BID ITEM NOS.		CONTRACTOR:		ST.FKO					
		1 8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.		139 L.F.		W. FKO					
		3 8" PVC Water Main, Spoil B.F., Surf. Rest.		146 L.F.		G. FKO					
		8 Hydrant, Lead and 6-Inch Gate Valve		2 EA.		E. FKO					
		10 8" Gate Valve		1 EA.		T. FKO					
		12 1-1/4" Water Service Laterals (Polyethylene) Open Cut		4 EA.		L. FKO					
		16 13" x 9" CMP Driveway Culverts		2 EA.		TS.FKO					
		23 Asphalt Concrete Pavement Removal		749 S.Y.		PP.					
		24 5-Inch Asphalt Concrete Pavement		216 TONS							
				This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.							
				Utility Engineer		Date					
								REVISION BY DATE			

DESIGNED BY				DATE		DRAWN BY		DATE		CHECKED BY		DATE	
AS				10-17-13		FKO		10-17-13		MNP		10-17-13	
ROWAN ESTATES PROPOSED WATER MAIN RELAY													
IN:				CHARMAINE CIRCLE									
FR:				E. BONNIE DR.									
TO:				CUL DE SAC									

APPROVED BY	
UTILITY ENGINEER	DATE
APPROVED BY	
CITY ENGINEER	DATE
SCALE	SHEET
PLAN	
HOR. 1"=40'	17
PROFILE	OF
HOR. 1"=40'	
VER. 1"=4'	26

FILE NO:13105-17C-2186

L:\042013\20130325\CAD\Sheet\DWG\00_16-18_Rowan_350.dwg, 10/16/2013 12:20:58 PM, 1500, DWG to PDF, p.3



NOTICE:

In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:

The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

KEY PLAN

PUETZ

CAROL

BONNIE

OAK CREEK

CARROLLTON

CHICAGO (STH 32)

LE DURING

ESTIMATE OF QUANTITIES

BID ITEM NOS.	DESCRIPTION	QUANTITY
1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	126 L.F.
3	8" PVC Water Main, Spoil B.F., Surf. Rest.	350 L.F.
10	8" Gate Valve	1 EA.
12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	6 EA.
13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	3 EA.
19	12" CMP Driveway Culverts	3 EA.

WATER MAIN

CONTRACTOR:

MAINLINE INSPECTED BY:

LATERALS INSPECTED BY:

DATE COMPLETED:

TYPE OF PIPE, ASTM NO.

TYPE OF PIPE, ASTM NO.

AS-BUILTS BY:

DATE:

This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.

Utility Engineer

Date

SA.FKO

ST.FKO

W. FKO

G. FKO

E. FKO

T. FKO

I. FKO

TS.FKO

PP.

CITY OF OAK CREEK, WISCONSIN

DESIGNED BY

DATE

DRAWN BY

DATE

CHECKED BY

DATE

AS

10-17-13

FKO

10-17-13

MNP

10-17-13

ROWAN ESTATES PROPOSED WATER MAIN RELAY

IN:

RUTH ELLEN LANE

FR:

CAROL CT.

TO:

S. 11TH AVE.

APPROVED BY

UTILITY ENGINEER

DATE

APPROVED BY

CITY ENGINEER

DATE

SCALE

SHEET

PLAN

HOR. 1"=40'

18

PROFILE

HOR. 1"=40'

OF

VER. 1"=4'

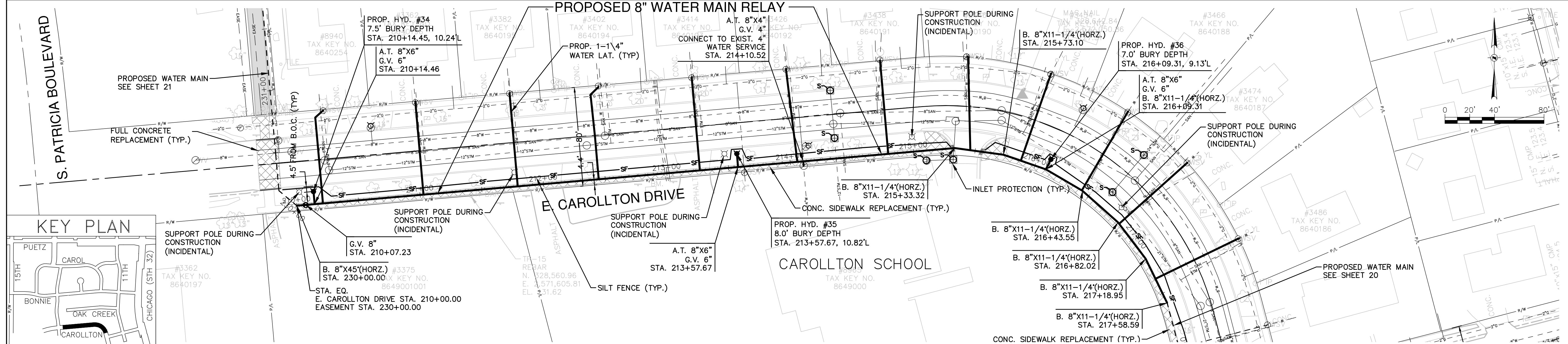
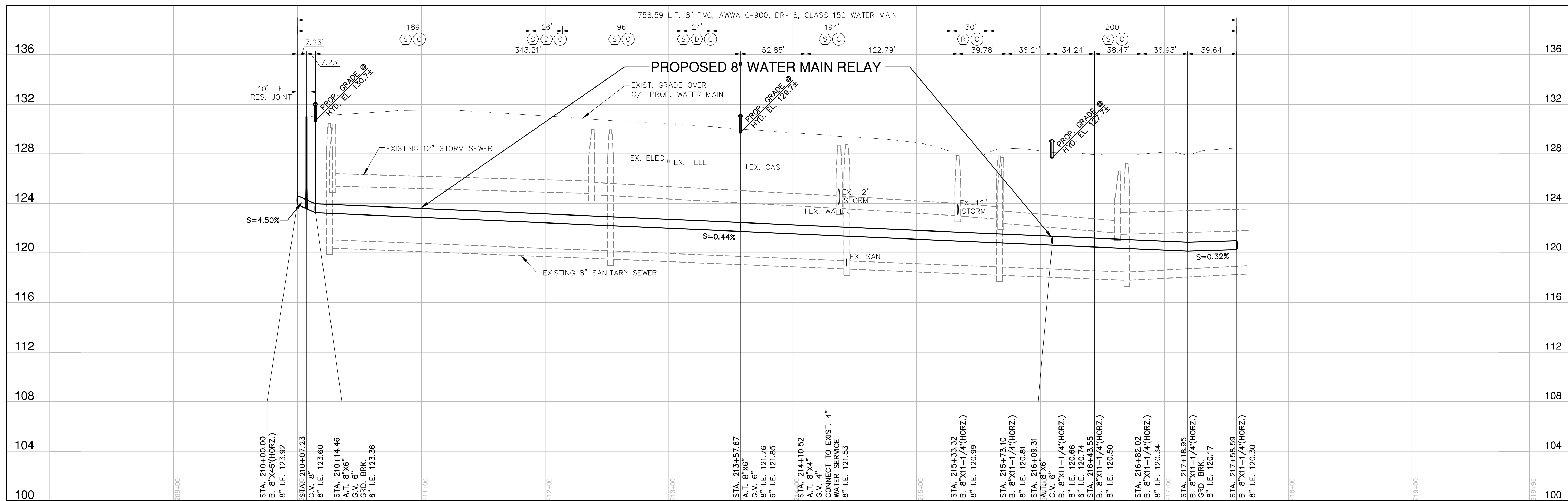
26

REVISION BY

DATE

FILE NO:13105-18C-2187

L:\042013\20130350\0420130350.dwg, 01/16/2013 12:21:49 PM, 1500, DWG To PDF, p23



NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

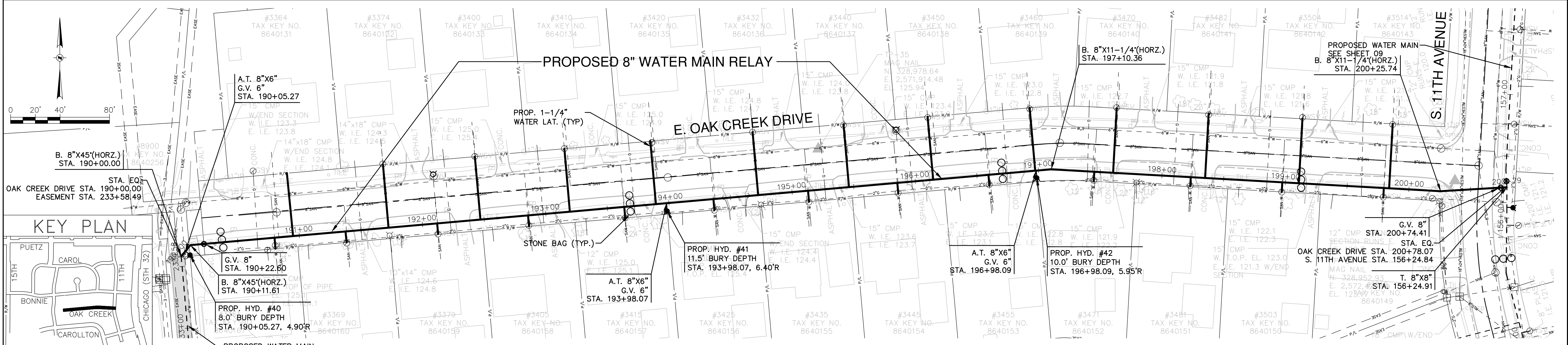
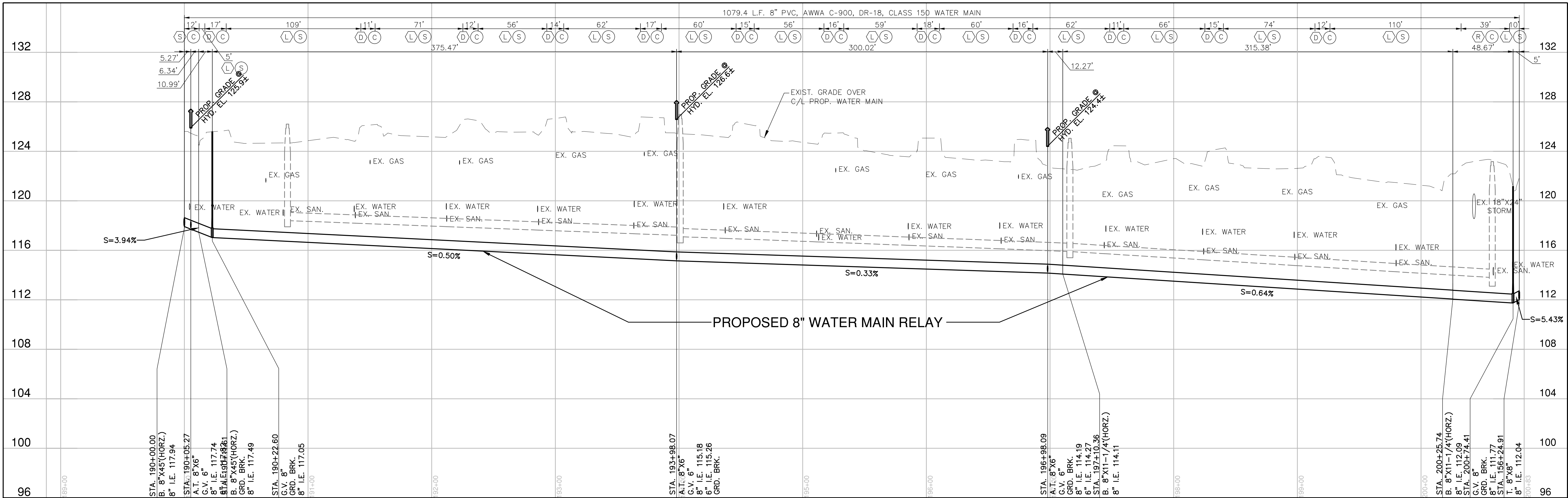
DISCLAIMER: The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.


GRÄEF

One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

ESTIMATE OF QUANTITIES			WATER MAIN		SA.FKO		CITY OF OAK CREEK, WISCONSIN				APPROVED BY _____			
			CONTRACTOR:		ST.FKO						UTILITY ENGINEER _____ DATE _____			
1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	759 L.F.	MAINLINE INSPECTED BY:		W. FKO		DESIGNED BY _____ DATE _____		DRAWN BY _____ DATE _____		CHECKED BY _____ DATE _____		APPROVED BY _____	
8	Hydrant, Lead and 6-Inch Gate Valve	3 EA.	LATERALS INSPECTED BY:		G. FKO		AS 10-17-13		FKO 10-17-13		MNP 10-17-13			
10	8" Gate Valve	1 EA.	DATE COMPLETED:		E. FKO		ROWAN ESTATES PROPOSED WATER MAIN RELAY IN: E. CAROLLTON DRIVE FR: 175 FT. OF S. PATRICIA BLVD. TO: 100 FT. N. OF MADEIRA DR.							
13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	12 EA.	TYPE OF PIPE, ASTM NO.		T. FKO									
26	4" Water Service Lateral	1 EA.	TYPE OF PIPE, ASTM NO.		I. FKO									
			AS-BUILTS BY: _____ DATE: _____		TS.FKO		REVISION BY _____ DATE _____							
			This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting. _____ Utility Engineer											

L:\042013\20130350\CAD\Sheet\00C_00_19-23_Power_350.dwg, 10/16/2013 12:27:05 PM, 1500, DWG to PDF, p23










<div>NOTICE:</div> <div>In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.</div> <div>DISCLAIMER:</div> <div>The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.</div>	<div></div> <div>One Honey Creek Corporate Center 125 South 84th Street, Suite 401 Milwaukee, WI 53214-1469 414 / 259 1500 414 / 259 0037 fax www.graef-usa.com</div>	ESTIMATE OF QUANTITIES		WATER MAIN		SA.FKO		CITY OF OAK CREEK, WISCONSIN			
		BID ITEM NOS.			CONTRACTOR:	ST.FKO					
		1	8" PVC Water Main, 3/4" T.B.B.F., Surf. Rest.	225 L.F.	MAINLINE INSPECTED BY:	W. FKO					
		3	8" PVC Water Main, Spoil B.F., Surf. Rest.	855 L.F.	LATERALS INSPECTED BY:	G. FKO					
		8	Hydrant, Lead and 6-Inch Gate Valve	3 EA.	DATE COMPLETED:	E. FKO					
		10	8" Gate Valve	2 EA.	TYPE OF PIPE, ASTM NO.	T. FKO					
		12	1-1/4" Water Service Laterals (Polyethylene) Open Cut	13 EA.	TYPE OF PIPE, ASTM NO.	I. FKO					
		13	1-1/4" Water Service Laterals (Polyethylene) Directional Drill	13 EA.	AS-BUILTS BY:	TS.FKO					
		19	12" CMP Driveway Culverts	3 EA.	DATE:	PP.					
		20	15" CMP Driveway Culverts	8 EA.	This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.						
			Utility Engineer	Date							
								REVISION BY	DATE		

DESIGNED BY				DATE	DRAWN BY		DATE	CHECKED BY		DATE
AS		10-17-13			FKO		10-17-13	MNP		10-17-13
ROWAN ESTATES PROPOSED WATER MAIN RELAY										
IN:		E. OAK CREEK DRIVE								
FR:		1050 FT. W. OF S. 11TH AVE..								
TO:		S. 11TH AVE.								

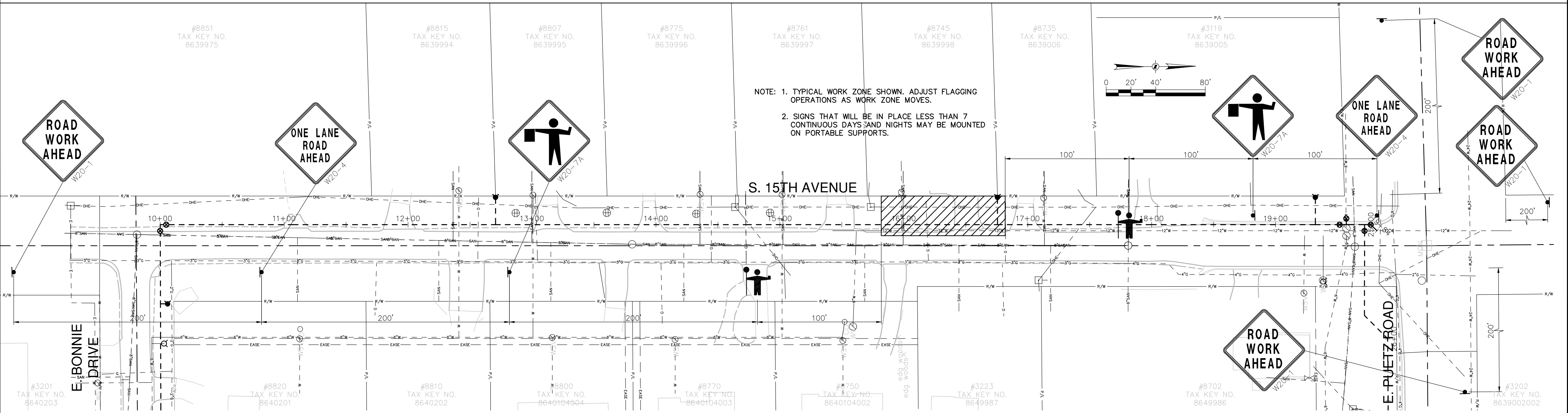
APPROVED BY	
UTILITY ENGINEER	DATE
APPROVED BY	
CITY ENGINEER	DATE
SCALE	SHEET
PLAN HOR. 1"=40'	23
PROFILE HOR. 1"=40'	OF
VER. 1"=4'	26

FILE NO:13105-23C-2192

LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  POST MOUNTED SIGN
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

THE DRAWINGS ARE INFORMATIONAL ONLY AND PROVIDE GUIDANCE TO TRAFFIC CONTROL LEVEL OF QUALITY NECESSARY. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING A TRAFFIC CONTROL PLAN AND OBTAINING APPROVAL OF THAT PLAN FROM THE CITY OF OAK CREEK. THESE DRAWINGS CANNOT BE USED AS PART OF THE CONTRACTORS TRAFFIC CONTROL SUBMITTAL.



NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

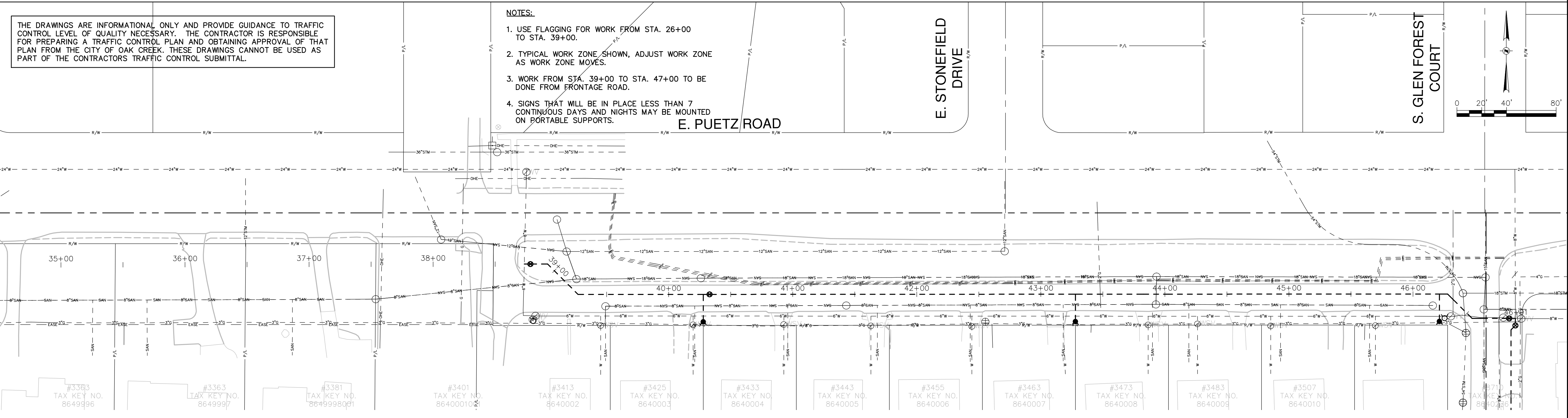
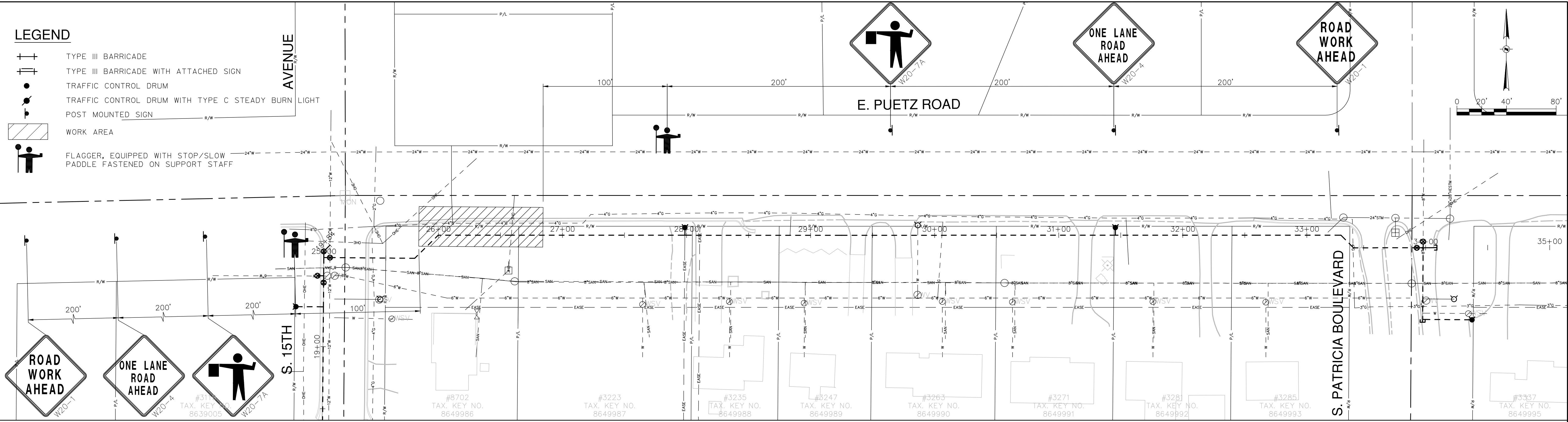
DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.



One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

BID ITEM NOS.	ESTIMATE OF QUANTITIES	WATER MAIN	SA.FKO	CITY OF OAK CREEK, WISCONSIN	APPROVED BY						
		CONTRACTOR:	ST.FKO								
		MAINLINE INSPECTED BY:	W. FKO		UTILITY ENGINEER	DATE					
		LATERALS INSPECTED BY:	G. FKO		APPROVED BY						
		DATE COMPLETED:	E. FKO								
		TYPE OF PIPE, ASTM NO.	T. FKO								
		TYPE OF PIPE, ASTM NO.	L. FKO								
		AS-BUILTS BY: DATE:	TS.FKO								
		This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.			PP.						
		Utility Engineer Date									
				REVISION BY	DATE	FILE NO:13105-24C-2193					
			DESIGNED BY		DATE	DRAWN BY	DATE	CHECKED BY	DATE		
			AS		10-17-13	FKO	10-17-13	MNP	10-17-13		
			ROWAN ESTATES PROPOSED WATER MAIN RELAY						CITY ENGINEER		DATE
			IN: S. 15TH AVENUE						SCALE		SHEET
			FR: E. BONNIE DR.						PLAN HOR. 1"=40'		24
			TO: E. PUETZ RD.						PROFILE HOR. 1"=40'		OF
									VER. 1"=4'		26

L:\Users\130210356\OneDrive\DWG\00_24-46_Tc\Rowan_356.dwg, 10/16/2013 12:29:19 PM, 1500, DWG To PDF.pc3



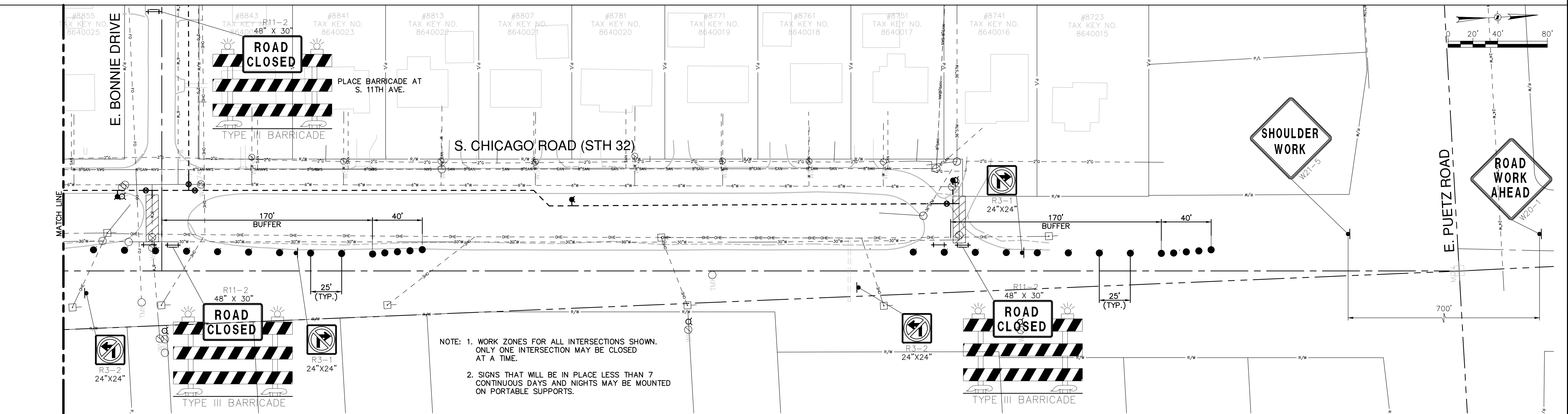
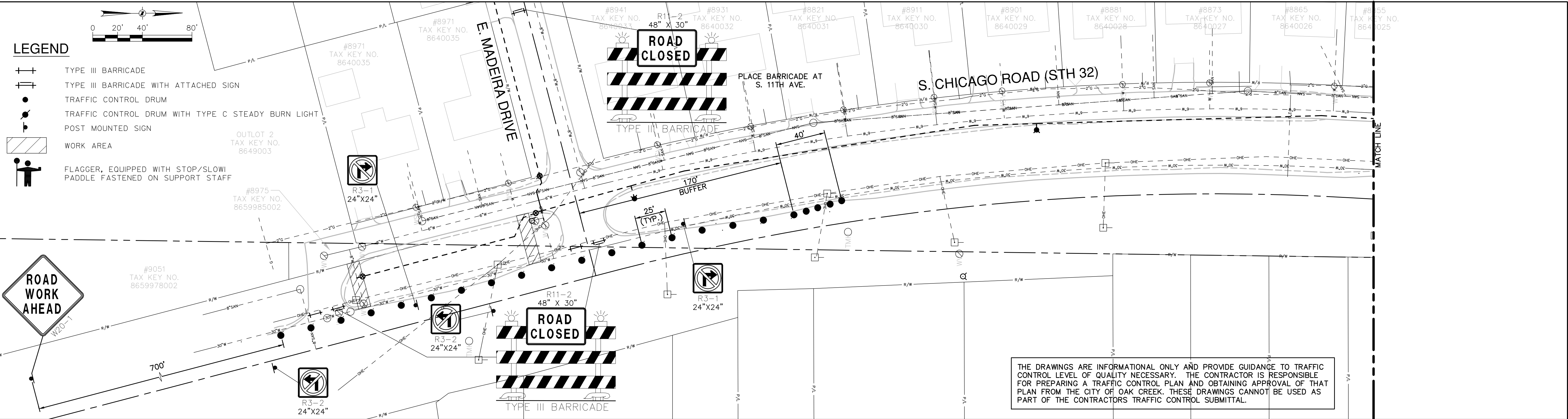
NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

GRAEF
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

BID ITEM NOS.	ESTIMATE OF QUANTITIES		WATER MAIN		SA.FKO	CITY OF OAK CREEK, WISCONSIN			APPROVED BY	
			CONTRACTOR:		ST.FKO	DESIGNED BY DATE DRAWN BY DATE CHECKED BY DATE AS 10-17-13 FKO 10-17-13 MNP 10-17-13			UTILITY ENGINEER	DATE
			MAINLINE INSPECTED BY:		W. FKO				APPROVED BY	
			LATERALS INSPECTED BY:		G. FKO	ROWAN ESTATES PROPOSED WATER MAIN RELAY IN: E. PUETZ ROAD FR: S. 15TH AVE. TO: S. 11TH AVE.			CITY ENGINEER	DATE
			DATE COMPLETED:		E. FKO				SCALE	SHEET
			TYPE OF PIPE, ASTM NO.		T. FKO	PLAN HOR. 1"=40' PROFILE HOR. 1"=40' VER. 1"=4'			25	OF
			TYPE OF PIPE, ASTM NO.		L. FKO				26	
			AS-BUILTS BY:	DATE:	TS.FKO	REVISION BY DATE			FILE NO:13105-25C-2194	
			This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.		PP.					
			Utility Engineer	Date						

L:\Jobs\2013\20130350\CAD\Sheet\DWG\00_24-36_Tc_Rover_356.dwg, 10/16/2013 12:30:04 PM, 1500, DWG To PDF.pc3



NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

GRAEF
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

BID ITEM NOS.	ESTIMATE OF QUANTITIES	WATER MAIN	SA.FKO	CITY OF OAK CREEK, WISCONSIN	APPROVED BY		
		CONTRACTOR:	ST.FKO				
		MAINLINE INSPECTED BY:	W. FKO		UTILITY ENGINEER	DATE	
		LATERALS INSPECTED BY:	G. FKO		APPROVED BY		
		DATE COMPLETED:	E. FKO				
		TYPE OF PIPE, ASTM NO.	T. FKO		CITY ENGINEER	DATE	
		TYPE OF PIPE, ASTM NO.	I. FKO		SCALE	SHEET	
		AS-BUILTS BY: DATE:	TS.FKO		PLAN HOR. 1"=40'	26	
		This is to certify that this plan was approved by the Water Works and Sewer Utility Commission of Oak Creek at a regular meeting.	PP.		FR: E. MADEIRA DR.	PROFILE HOR. 1"=40'	OF
					TO: E. PUETZ RD.	VER. 1"=4'	26
Utility Engineer Date	REVISION BY DATE		FILE NO:13105-26C-2195				