

SOUTH 5TH AVENUE WATER MAIN EXTENSION

FOR THE

OAK CREEK WATER AND SEWER UTILITY

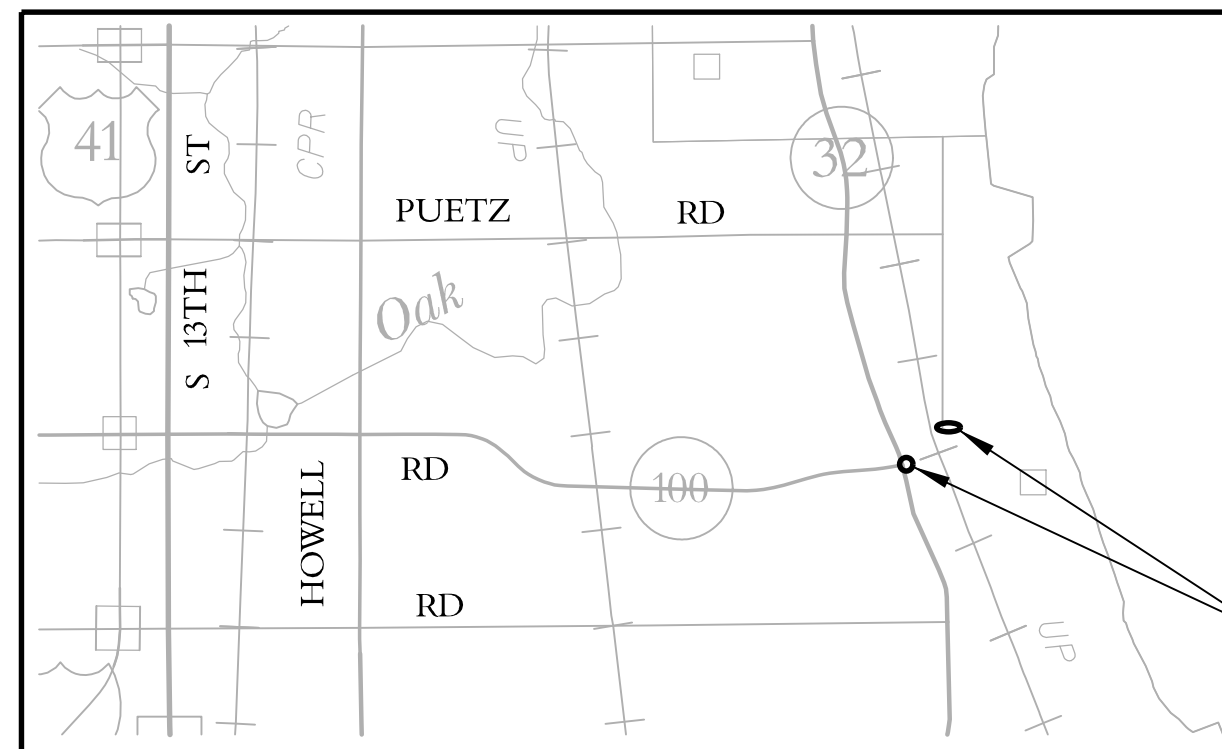
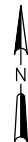
MILWAUKEE COUNTY, WISCONSIN

FEBRUARY, 2016



OAK CREEK, WI

PROJECT LOCATION MAP
NO SCALE



PROJECT LOCATIONS



Strand Associates, Inc.
126 N Jefferson Sreet
Suite 350
Milwaukee, WI 53202
414-271-0771
414-271-8312 fax
www.strand.com

PROJECT No. 16103

PROJECT LOCATION MAP

NO SCALE



DIGGERS HOTLINE

Call 811 3 Work Days Before You Dig
or Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

SA
STRAND
ASSOCIATES®

SHEET
1
FILE NO: 16103 - 1C - 2300

STANDARD SYMBOLS

-----	PROPERTY LINE AND/OR RIGHT OF WAY	▲	CONTROL POINT
-----	TEMPORARY EASEMENT	○GUY	GUY WIRE
-----	PERMANENT EASEMENT ON SEWER	■	INLET
⊙	SECTION CORNER	■	INLET SQUARE
IP	IRON PIPE	●	CATCH BASIN
■	PROPERTY IRON	○MH	MANHOLE
○MWEL	MONITORING WELL	○WV	FIRE HYDRANT
○BORE	SOIL BORING	○	WATER VALVE
●	BENCH MARK	○	CURB WATER BOX
✕	BURIED TELEPHONE CABLE PEDESTAL	○SEPC	SEPTIC
✕	EXISTING UTILITY POLE	○SEPV	SEPTIC VENT
✕	EXISTING LIGHT POLE	○WELL	WELL
✕	TELEPHONE POLE	⚠	NOTATION FOR COMBUSTIBLE FLUIDS
○	PROPANE TANK	NEW WATER MAIN AND FIRE HYDRANT WITH AUXILIARY VALVE	
□	MAIL BOX	NEW SANITARY SEWER AND MANHOLE	
□	SIGN	EXISTING SANITARY SEWER AND MANHOLE	
✕	OBJECTS TO BE REMOVED	WYE BRANCH	
☆	CONIFEROUS TREE	CASING PIPE	
☆	DECIDUOUS TREE	FIBER OPTIC	
♣	STUMP	STORM SEWER	
♣	BUSH	SANITARY SEWER	
♣	WETLAND	FORCE MAIN	
PAVED ROAD		ELECTRIC DUCT	
EXISTING CULVERT		STEAM PIPING	
EXISTING CULVERT IN PROFILE		CHILLED WATER RETURN	
ORIGINAL GROUND IN PROFILE		CHILLED WATER SUPPLY	
EXISTING CONTOUR		TV CABLE	
FENCE		TELEPHONE	
GUARD RAIL		GAS MAIN	
SILT FENCE		UNDERGROUND ELECTRIC CABLE	
		GRAVEL SHOULDER	
		FUTURE ROADWAY AND STORM SEWER	

REQUIRED LENGTH OF RESTRAINED PIPE BEYOND FITTINGS IN FEET	
FITTING	LENGTH
90° BEND	30' MINIMUM
45° BEND	25' MINIMUM
22 1/2° BEND	15' MINIMUM
11 1/4° BEND	10' MINIMUM
END OF LINE TEES	36' MINIMUM
IN LINE TEES	18' MINIMUM
FIRE HYDRANT LEADS	ALL JOINTS

BENCHMARKS

BM NO	LOCATION	DESCRIPTION	ELEV.
1	SW CORNER OF HWY 100/S. CHICAGO RD.	TOP/OPERATING NUT OF FIRE HYDRANT	128.58
2	NW CORNER OF HWY 100/S. CHICAGO RD.	TOP/OPERATING NUT OF FIRE HYDRANT	126.25
3	NW CORNER OF S. 5TH AVE./E. RYAN RD.	TOP/OPERATING NUT OF FIRE HYDRANT	125.66

GENERAL NOTES

EASEMENT, EXISTING UTILITIES, PROPERTY LINES, AND R.O.W. LINES SHOWN ARE APPROXIMATE. NOT ALL UTILITY MAINS AND SERVICES ARE SHOWN ON THE DRAWINGS. CONTRACTOR SHALL CONTACT DIGGERS HOTLINE FOR UTILITY LOCATES AND SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS OF THE UTILITY MAINS AND SERVICES DURING CONSTRUCTION.

CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS TO COMPLETE THE INSTALLATION OF THE WATER MAIN. THE COST FOR ALL FITTINGS AND RESTRAINED JOINTS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICES BID FOR WATER MAIN.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED WITH AT LEAST 3-INCHES OF TOPSOIL, SALT-TOLERANT GRASS SEED MIX, AND MULCH. EROSION CONTROL MAT SHALL BE PLACED AT SWALES AND WHEN MINIMUM SLOPE IS EXCEED.

MISCELLANEOUS REMOVAL ITEMS SHALL BE REMOVED TO AN EXISTING JOINT, SAWCUT WHERE SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

THE ASPHALTIC PAVEMENT ALONG EAST RYAN ROAD SHALL BE ONE LAYER OF 3-INCH HMA PAVEMENT TYPE E-1. THE BINDER SHALL USE 19.0 MM NOMINAL SIZE AGGREGATE AND THE ASPHALTIC MATERIAL SHALL BE PG 64-28.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, MULCH AND PLACE EROSION MAT IN AREAS WITHIN SEVEN CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL.

ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE MUST BE INSPECTED AT LEAST WEEKLY AND AFTER A RAINFALL OF 1/2-INCH OR MORE WITHIN 24 HOURS. NECESSARY MAINTENANCE SHOULD FOLLOW THE INSPECTIONS WITHIN 24 HOURS.

ANY SEDIMENT TRACKED ONTO ADJACENT ROADS SHALL BE CLEANED BY STREET SWEEPING (NOT FLUSHED) AT THE END OF EACH WORK DAY.

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. CONTRACTOR SHALL PROVIDE FLAGGERS WITH RADIOS AS NECESSARY TO MAINTAIN TWO-WAY TRAFFIC. AT THE END OF EACH WORK DAY, TWO LANES FOR TRAFFIC SHALL BE RESTORED UNTIL THE START OF THE NEXT WORK DAY.

NO DISTURBANCE SHALL OCCUR IN WETLAND AREAS.

THE OAK CREEK WATER AND SEWER UTILITY MAINTAINS THE FIRST RIGHT TO SALVAGED MATERIALS AS SPECIFIED.

PROJECT CONTACTS INFORMATION

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AT&T WISCONSIN

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CITY OF OAK CREEK
WATER AND SEWER UTILITY

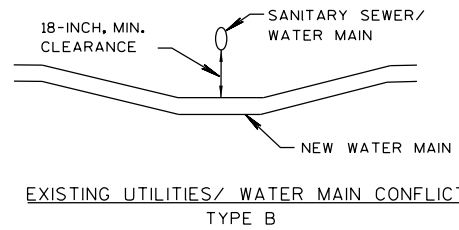
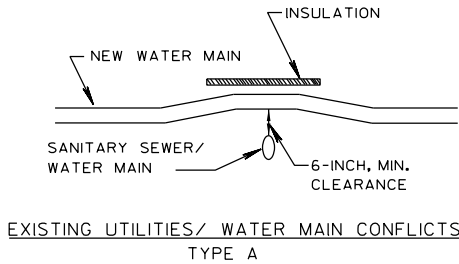
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CITY OF OAK CREEK
ENGINEERING DEPARTMENT

MATT SULLIVAN
DESIGN ENGINEER
80405 S. 6TH ST.
414-766-7029
MSULLIVAN@OAKCREEKWI.ORG



NOTE: ADDITIONAL BEND FITTINGS MAY BE NEEDED TO AVOID CONFLICT WITH EXISTING UTILITES.

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

2-2-2016
Utility Engineer Date

SA.
ST.
W.
G.
E.
T.
I.
TS.
PP.

CITY OF OAK CREEK, WISCONSIN

DESIGNED BY	DATE	DRAWN BY	DATE	CHECKED BY	DATE
B.W.	1/29/16	E.Y.	1/29/16	J.S.	1/29/16

STANDARD SYMBOLS, GENERAL NOTES AND DETAILS

APPROVED BY COUNCIL RESOLUTION NO.

APPROVED BY

2-2-2016
UTILITY ENGINEER DATE

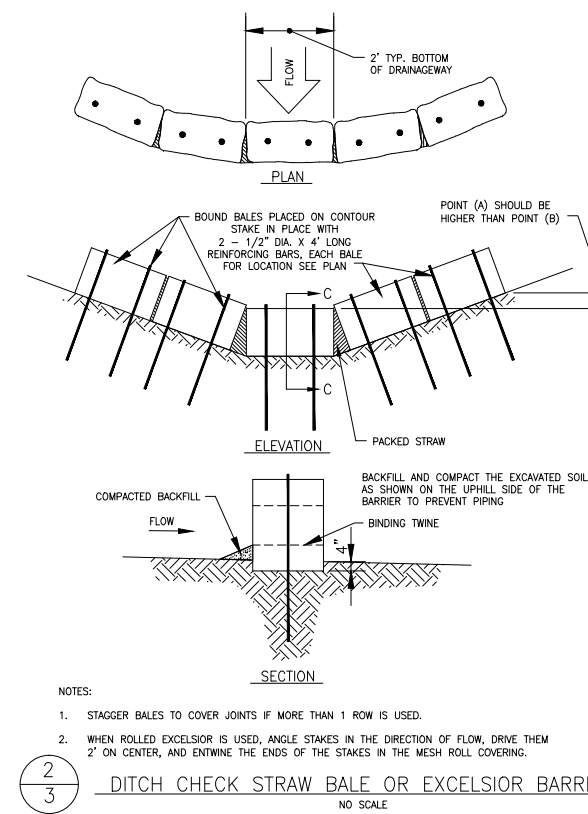
APPROVED BY

2/2/16
CITY ENGINEER DATE

SCALE SHEET

PLAN HOR. N/A 2
PROFILE OF
HOR. N/A
VER. N/A 6

FILE NO: 16103-2C-2301




- ### EROSION CONTROL NOTES
1. ALL PERMIT CONDITIONS SHALL BE MET DURING CONSTRUCTION OF THE PROJECT.
 2. CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF OAK CREEK, AND SHALL MEET OR EXCEED EROSION CONTROL METHODS AS SHOWN AND SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS".
 3. ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
 4. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION AFTER A RAINFALL OF 0.5 INCHES OR MORE, BUT NO LESS THAN ONCE EVERY WEEK. MAINTENANCE OF ALL EROSION CONTROL STRUCTURES SHALL BE PROVIDED TO INSURE INTENDED PURPOSE IS ACCOMPLISHED. REPAIRS AND MAINTENANCE SHALL BE COMPLETED WITHIN 24 HOURS OF INSPECTION. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL SEDIMENT WHEN LEAVING PROPERTY. EROSION CONTROL MEASURES MUST BE IN WORKING CONDITION AT END OF EACH WORK DAY.
 5. EROSION CONTROL MEASURES SHALL BE MAINTAINED ON A CONTINUING BASIS UNTIL SITE IS FULLY STABILIZED.
 6. FILTER FABRIC SHALL BE INSTALLED BENEATH INLET COVERS TO TRAP SEDIMENT AS PER INLET PROTECTION DETAIL IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.
 7. PERIODIC STREET SWEEPING SHALL BE COMPLETED TO MAINTAIN THE PUBLIC STREET FREE OF DUST AND DIRT.
 8. SILT FENCE SHALL BE INSTALLED IN HORSESHOE FASHION AROUND ALL TOPSOIL AND FILL STOCKPILES. NOTIFY THE CITY OF OAK CREEK OF ANY NEW STOCKPILE LOCATIONS.
 9. WASTE AND MATERIAL DISPOSAL. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
 10. ANY SOIL DISTURBANCE AND/OR SOIL OR DIRT STORAGE PILES SHALL BE LOCATED A MINIMUM OF TWENTY-FIVE FEET FROM ANY DOWNSLOPE ROAD, LAKE, STREAM, WETLAND, OR DRAINAGE CHANNEL. STRAW BALE OR FILTER FABRIC FENCES SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE PILE, IF REMAINING FOR MORE THAN THIRTY DAYS. PILES SHALL BE STABILIZED BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS.
 11. ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS SHALL BE STABILIZED BY TEMPORARY OR PERMANENT SEEDING, AND MULCHING SODDING, COVERING WITH TARPS, OR EQUIVALENT BEST MANAGEMENT PRACTICES. IF TEMPORARY SEEDING IS USED, A PERMANENT COVER SHALL ALSO BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION. SEEDING OR SODDING SHALL BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION.
 12. TRACKING. EACH SITE SHALL HAVE GRAVELED ROADS, ACCESS DRIVES AND PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING, TO THE SATISFACTION OF THE CITY, BEFORE THE END OF EACH WORKDAY. FLUSHING MAY NOT BE USED UNLESS SEDIMENT WILL BE CONTROLLED BY A SEDIMENT BASIN OR OTHER APPROPRIATE BEST MANAGEMENT PRACTICE SPECIFIED IN THE WDNR "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS". NOTIFY THE CITY OF OAK CREEK FOR CHANGES IN STABILIZED CONSTRUCTION ENTRANCE LOCATION.
 13. SEDIMENT CLEANUP. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF A STORM EVENT SHALL BE CLEANED UP BY THE END OF THE NEXT WORK DAY. ALL OTHER OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE CLEANED UP BY THE END OF THE WORK DAY.
 14. NOTIFY THE CITY WITHIN TWO WORKING DAYS OF COMMENCING ANY LAND DEVELOPMENT OR LAND DISTURBING ACTIVITY.
 15. NOTIFY THE CITY OF COMPLETION OF ANY BEST MANAGEMENT PRACTICES WITHIN THE NEXT WORKING DAY AFTER THEIR INSTALLATION.
 16. OBTAIN PERMISSION IN WRITING FROM THE CITY OF OAK CREEK WATER & SEWER UTILITY DEPARTMENT PRIOR TO MODIFYING THE EROSION CONTROL PLAN. NOTIFY WDNR AT LEAST FIVE WORKING DAYS PRIOR TO IMPLEMENTING CHANGES TO THE EROSION CONTROL PLAN.
 17. REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.
 18. KEEP A COPY OF THE EROSION CONTROL PLAN ON SITE.
 19. WHENEVER SOIL EXHIBITING OBVIOUS SIGNS OF CONTAMINATION IS ENCOUNTERED DURING EXCAVATION OR INSTALLATION, CEASE WORK IMMEDIATELY, TAKE APPROPRIATE IMMEDIATE PRECAUTIONS TO ENSURE WORKER HEALTH AND SAFETY, AND CONTACT OPERATIONS SUPERVISOR OR INSPECTOR.
 20. WATER PUMPED FROM THE SITE, INCLUDING BUT NOT LIMITED TO, PITS OR TRENCHES SHALL BE TREATED BY SEDIMENT BASINS, AN APPROVED SEDIMENT BAG, A STRAW BALE DEWATER BASIN, A COMBINATION OF BOTH, OR OTHER APPROPRIATE BEST MANAGEMENT PRACTICES SPECIFIED IN THE WDNR "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS". WATER SHALL NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE, ADJACENT SITES, OR RECEIVING CHANNELS.
 21. PRIOR TO INITIATING ANY LAND DISTURBANCE IN WETLANDS, CONFIRM THAT NECESSARY FEDERAL, STATE, AND LOCAL PERMITS HAVE BEEN OBTAINED.
 22. AS MUCH AS PRACTICABLE, THE MAJORITY OF WORK SHALL BE STAGED FROM THE PUBLIC ROADWAYS AND ROAD SHOULDERS, AND EQUIPMENT SHALL BE KEPT OUT OF WETLANDS. ALL WORK SHALL BE CONDUCTED TO MINIMIZE SOIL DISTURBANCE. NO RUTTING WILL BE ALLOWED IN WETLANDS.
 23. IF SOILS ARE NOT FROZEN OR STABLE TO A POINT THAT AVOIDS RUTTING, TIMBER MATS, MUD TRACKS, OR EQUIVALENT SHALL BE UTILIZED FOR ACCESS IN WETLANDS
 24. EXCAVATED SPOILS SHALL NOT BE STOCKPILED IN WETLANDS AND ALL EXCESS SPOILS SHALL BE REMOVED FROM WETLANDS AND PLACED IN A SUITABLE UPLAND LOCATION.
 25. TRENCHING AND PIT EXCAVATIONS WITHIN WETLANDS WILL INCLUDE SOIL SEGREGATION TO FACILITATE RESTORATION OF PRE-CONSTRUCTION SOIL STRATIFICATION, AND RESTORATION TO PRE-CONSTRUCTION ELEVATIONS.
 26. NO WORK SHALL BE PERFORMED WITHIN THE BANKS OR BELOW THE ORDINARY HIGH WATERMARK OF ANY NAVIGABLE WATERWAY OR STREAM AND NO CROSSING OF NAVIGABLE WATERWAYS WITH EQUIPMENT CAN OCCUR.
 27. ANY SOIL BEING DISTURBED WITHIN 75 FEET OF AN ORDINARY HIGHWATER MARK OF ANY NAVIGABLE WATERWAY OR STREAM SHALL BE STABILIZED WITHIN 24 HOURS OF CONSTRUCTION COMPLETION.


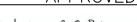
RESTORATION NOTES

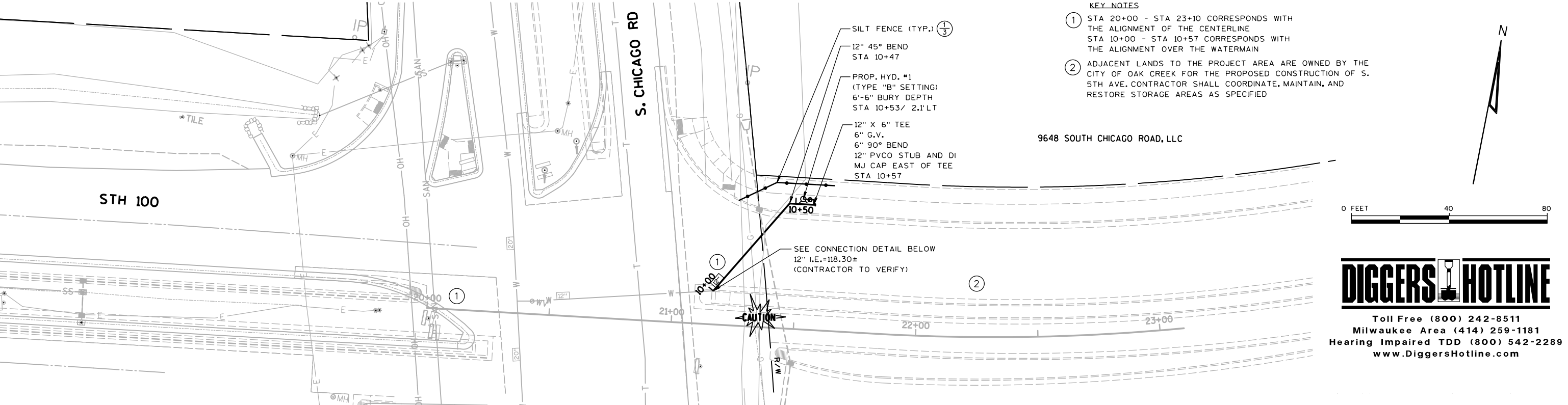
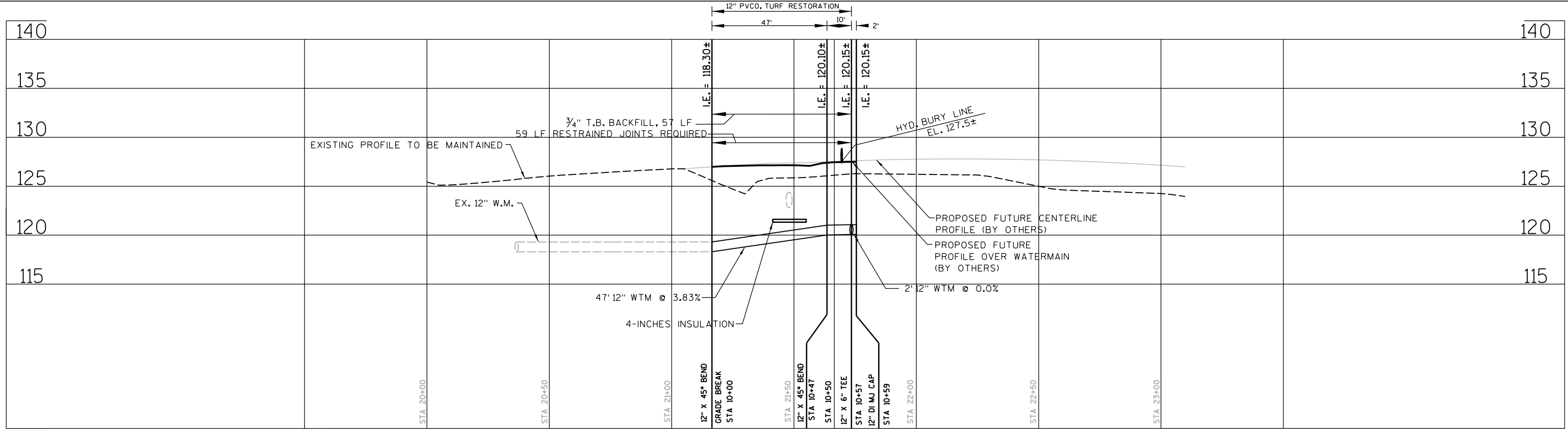
1. DITCH LINES TO BE RESTORED WITH 3" OF TOPSOIL, SEED, AND EROSION MATTING. CONTRACTOR SHALL INSURE POSITIVE DRAINAGE WITH LONGITUDINAL DITCH SLOPE MATCHING THE LONGITUDINAL GRADE OF THE ROAD CENTER LINE.

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

 2-2-2016

Utility Engineer Date

SA.	CITY OF OAK CREEK, WISCONSIN	APPROVED BY	
ST.		 2-2-2016 UTILITY ENGINEER DATE	
W.		APPROVED BY	
G.		 2/2/16 CITY ENGINEER DATE	
E.		DESIGNED BY DATE DRAWN BY DATE CHECKED BY DATE	SCALE SHEET
T.		B.W. 1/29/16 E.Y. 1/29/16 J.S. 1/29/16	PLAN HOR. N/A 3
I.		EROSION CONTROL NOTES AND DETAILS	PROFILE HOR. N/A OF
TS.			VER. N/A 6
PP.			
	APPROVED BY COUNCIL RESOLUTION NO.	FILE NO: 16103-3C-2302	



<p>BID ITEM NOS.</p> <p>2 12-INCH PVCO, TURF RESTORATION59 L.F.</p> <p>3 CONNECT TO EXISTING WATER MAIN1 EA.</p> <p>4 HYDRANT, LEAD, AND 6" AUX. VALVE1 EA.</p>		<p>ESTIMATE OF QUANTITIES</p> <p>12" X 45° BEND</p> <p>REMOVE 12" PLUG AND BUTTRESS</p> <p>EX. 12" W.M.</p> <p>ANODE BAG AS NECESSARY</p> <p>CONNECTION DETAIL (NON PRESSURE) NO SCALE</p>		<p>SA.</p> <p>ST.</p> <p>W.</p> <p>G.</p> <p>E.</p> <p>T.</p> <p>I.</p> <p>TS.</p> <p>PP.</p>		<p>CITY OF OAK CREEK, WISCONSIN</p> <p>DESIGNED BY DATE DRAWN BY DATE CHECKED BY DATE</p> <p>B.W. 1/29/16 E.Y. 1/29/16 J.S. 1/29/16</p> <p>PROPOSED WATER MAIN EXTENSION</p> <p>IN: S.T.H. 100</p> <p>FR: S. CHICAGO RD. (S.T.H. 32)</p> <p>TO: 57' E. OF S. CHICAGO RD. (S.T.H. 32)</p> <p>APPROVED BY COUNCIL RESOLUTION NO.</p>		<p>APPROVED BY</p> <p>UTILITY ENGINEER DATE</p> <p>APPROVED BY</p> <p>CITY ENGINEER DATE</p> <p>SCALE SHEET</p> <p>PLAN HOR. 1"=40' 5</p> <p>PROFILE HOR. 1"=40' OF</p> <p>VER. 1"=10' 6</p> <p>FILE NO: 16103-5C-2304</p>	
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