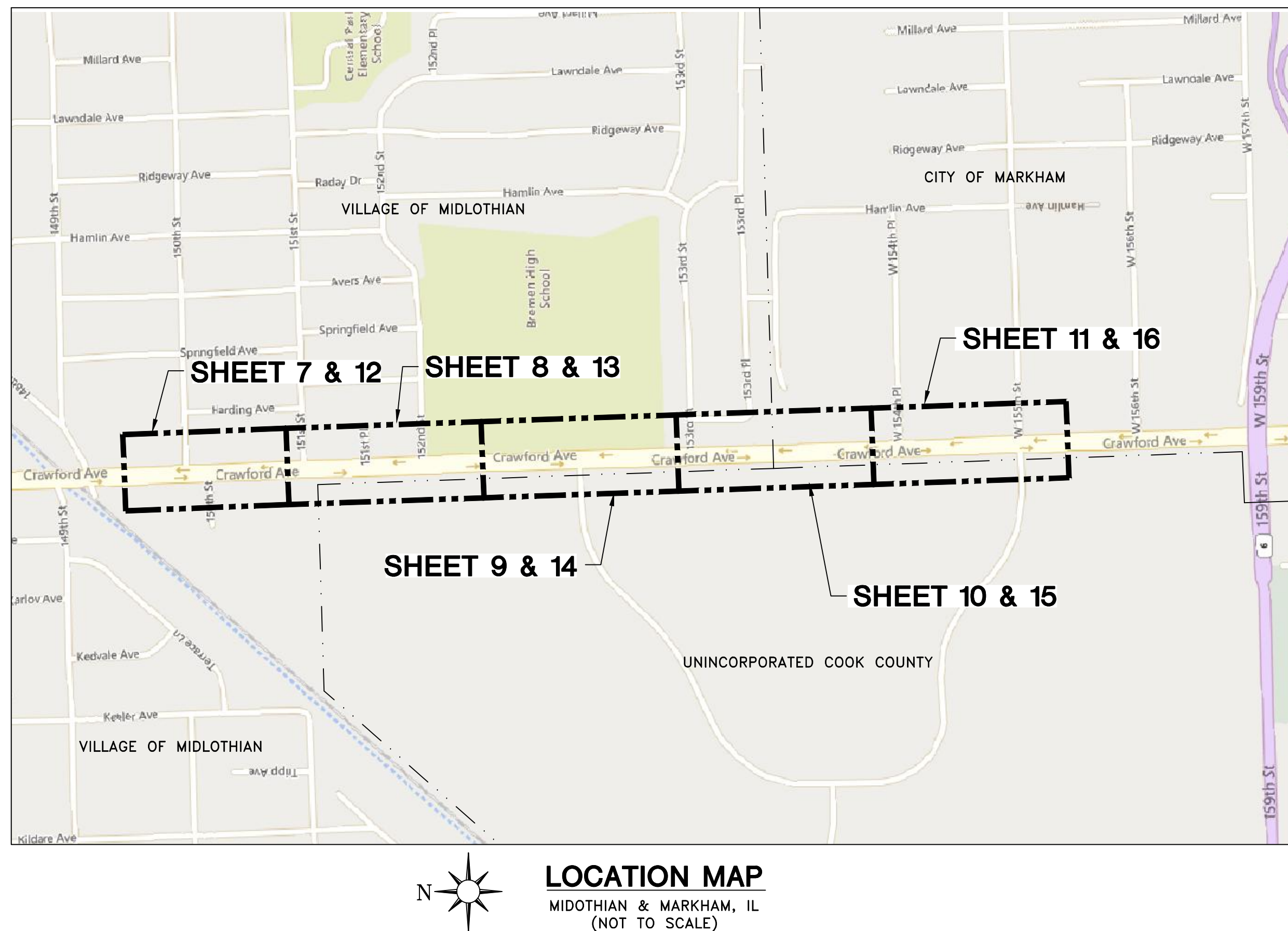


**NICOR GAS - CONSTRUCTION  
TRANSMISSION CENTRAL  
TC266 - CRAWFORD LINE REPLACEMENT  
PHASE 3  
MIDLOTHIAN & MARKHAM, IL  
W.O.# 120378/320378  
PROJECT I.D.# 11013014**



MIDLOTHIAN & MARKHAM, ILLINOIS - MAIN REPLACEMENT		
DRAWING	SHEET	DESCRIPTION
E15143N-	1	COVER SHEET & LOCATION MAP
E15143N-	2	GENERAL NOTES & SPECIFICATIONS
E15143N-	3	CCDOTH CONSTRUCTION NOTES
E15143N-	4	MWRD CONSTRUCTION NOTES
E15143N-	5	RETIREMENT SITE PLAN & SYMBOL LEGEND
E15143N-	6	INSTALLATION SITE PLAN & TEST DATA TABLE
E15143N-	7	RETIREMENT ALIGNMENT SHEET - PULASKI RD (CO HWY W43) & 150TH ST (STA 100+00 TO STA 105+50)
E15143N-	8	RETIREMENT ALIGNMENT SHEET - PULASKI RD (CO HWY W43), 151ST ST, 151ST PL & 152ND ST (STA 105+50 TO STA 116+50)
E15143N-	9	RETIREMENT ALIGNMENT SHEET - PULASKI RD (CO HWY W43) (STA 116+50 TO STA 127+50)
E15143N-	10	RETIREMENT ALIGNMENT SHEET - PULASKI RD (CO HWY W43) & 153RD ST (STA 127+50 TO STA 138+50)
E15143N-	11	RETIREMENT ALIGNMENT SHEET - CRAWFORD AVE (CO HWY W43), 154TH PL & 155TH ST (STA 138+50 TO STA 149+72)
E15143N-	12	INSTALLATION ALIGNMENT SHEET - PULASKI RD (CO HWY W43) & 150TH ST (STA 100+00 TO STA 105+50)
E15143N-	13	INSTALLATION ALIGNMENT SHEET - PULASKI RD (CO HWY W43), 151ST ST, 151ST PL & 152ND ST (STA 105+50 TO STA 116+50)
E15143N-	14	INSTALLATION ALIGNMENT SHEET - PULASKI RD (CO HWY W43) (STA 116+50 TO STA 127+50)
E15143N-	15	INSTALLATION ALIGNMENT SHEET - PULASKI RD (CO HWY W43) & 153RD ST (STA 127+50 TO STA 138+50)
E15143N-	16	INSTALLATION ALIGNMENT SHEET - CRAWFORD AVE (CO HWY W43), 154TH PL & 155TH ST (STA 138+50 TO STA 149+72)
E15143N-	17	TIE-IN DETAILS, DETAIL "A" TO "B" & ELEVATIONS "A-A" TO "D-D"
E15143N-	18	TECHNICAL SPECIFICATIONS
E15143N-	19	TEST DATA SHEETS
E15143N-	20	TEST HEADER DETAILS, BLOWOFF DETAIL & BILL OF MATERIAL
E15143N-	21	HYDROSTATIC TEST PROFILE
E15143N-	22	WORKSPACE MAPS (STA 100+00 TO STA 108+50)
E15143N-	23	WORKSPACE MAPS (STA 108+50 TO STA 117+50)
E15143N-	24	WORKSPACE MAPS (STA 117+50 TO STA 126+50)
E15143N-	25	WORKSPACE MAPS (STA 126+50 TO STA 135+50)
E15143N-	26	WORKSPACE MAPS (STA 135+50 TO STA 144+50)
E15143N-	27	WORKSPACE MAPS (STA 144+50 TO STA 149+80)
E15143N-	27A	FPDCC DROP GATE DETAILS
E15143N-	27B	FPDCC SIGN DETAILS
E15143N-	28	ENVIRONMENTAL DETAILS
E15143N-	29	ENVIRONMENTAL DETAILS
E15143N-	30	ENVIRONMENTAL DETAILS
E15143N-	31	SOIL BORE LOGS
E15143N-	32	TYPICAL RESTORATION DETAILS
E15143N-	33	TYPICAL RESTORATION DETAILS
E15143N-	34	TYPICAL RESTORATION DETAILS
E15143N-	35	RESTORATION SHEET (STA 100+00 TO STA 117+50)
E15143N-	36	RESTORATION SHEET (STA 117+50 TO STA 126+50)
E15143N-	37	RESTORATION SHEET (STA 126+50 TO STA 144+50)
E15143N-	38	RESTORATION SHEET (STA 144+50 TO STA 149+80)
E15143N-	39	TRAFFIC CONTROL GENERAL NOTES, SYMBOL LEGEND & TYPICAL MOT CROSS SECTION
E15143N-	40	MAINTENANCE OF TRAFFIC SHEET (STA 100+00 TO STA 114+50)
E15143N-	41	MAINTENANCE OF TRAFFIC SHEET (STA 114+50 TO STA 133+50)
E15143N-	42	MAINTENANCE OF TRAFFIC SHEET (STA 133+50 TO STA 149+80)
E15143N-	43	TRAFFIC CONTROL STANDARDS
E15143N-	44	TRAFFIC CONTROL STANDARDS
E15143N-	45	TRAFFIC CONTROL STANDARDS
E15143N-	46	TRAFFIC CONTROL STANDARDS
E15143N-	47	TRAFFIC CONTROL STANDARDS
E15143N-	48	TRAFFIC CONTROL STANDARDS
E15143N-	49	TRAFFIC CONTROL STANDARDS
E15143N-	50	TRAFFIC CONTROL STANDARDS
E15143N-	51	TRAFFIC CONTROL STANDARDS
E15143N-	52	TRAFFIC CONTROL STANDARDS
E15143N-	53	TRAFFIC CONTROL STANDARDS

TOTAL WORK ORDER QUANTITIES								
TOTAL PIPE INSTALLATION	ESTIMATED	ACTUAL	TOTAL PIPE RETIREMENT & REMOVAL	ESTIMATED	ACTUAL	TOTAL PIPE BORING	ESTIMATED	ACTUAL
4"Ø PIPE X52 CS FBE+IC 0.237" W.T.	50'		2" W 1963	5'		4"Ø PIPE X52 CS FBE+IC 0.237" W.T.	—	
20"Ø PIPE X52 CS FBE+IC 0.375" W.T.	4980'		4" W 1979	10'		20"Ø PIPE X52 CS FBE+IC 0.375" W.T.	—	
			20" W 1950	4970'				
			20" W 1963	5'				

**CAUTION: EXISTING 20" STEEL 230# MOP SYSTEM GAS MAINS ARE CATHODICALLY PROTECTED BY AN IMPRESSED CURRENT SYSTEM. CONTACT NICOR GAS CORROSION (815) 754-3386 TO TEMPORARILY SHUT OFF RECTIFIER(S) IF NEEDED.**

**RECTIFIER LOCATION:  
#610: 41.619551, -87.717988 (MIDLOTHIAN)**



[illegible]

**NOTE:** NICOR UTILITY INSPECTOR TO IDENTIFY TEST LOCATIONS BASED UPON THE CRITERION OF ONE TEST FOR EACH "CUT AND CAP" ON PIPE THAT MEASURES FOUR INCHES IN DIAMETER OR GREATER. NICOR GAS UNDERSTANDS THAT FIELD PERSONNEL MAY DECIDE TO MOVE "CUT AND CAP" LOCATIONS, DELETE "CUT AND CAPS", OR CONDUCT ADDITIONAL "CUT AND CAPS". NICOR GAS WILL INCLUDE WIPE TESTS AS PART OF THEIR ROUTINES TO COMPLETE A "CUT AND CAP" AND IT IS THE RESPONSIBILITY OF NICOR GAS TO ASSURE THAT NECESSARY WIPE TESTS ARE CONDUCTED AS REQUIRED BY FEDERAL REGULATIONS.

ELECTRICAL DRAWING SET TO FOLLOW	YES	NO
		X
REQUIRED PERMITS APPROVAL BEFORE CONSTRUCTION	REQUIRED	APPROVED
LAND SERVICES—APPROVAL		
RAILROAD		
HIGHWAY, STATE		
HIGHWAY, COUNTY		
FOREST PRESERVE		
SANITARY DIST.		
PRIVATE PROP. EASEMENT		
FRONTAGE		
OTHER GOV. AGENCY		
ENVIRONMENTAL—APPROVAL		
WATERWAYS		
WETLANDS		
CONTAMINATED SOIL		
STORM WATER		

**OUT OF SERVICE TIMEFRAME FOR 20"  
MAIN AND VAULT #2301122 IS FROM  
5/1 TO 10/15 PER SYSTEM PLANNING**

SEALED BY:	SEALED ON:  _____
SIGNATURE _____	LICENSE EXPIRATION:  _____

IDENTIFIED BY NICOR GAS REPRESENTATIVE					COMPLETED BY NICOR GAS REPRESENTATIVE		PREPARED BY:				PREPARED FOR:				CRAWFORD LINE REPLACEMENT - PHASE 3 COVER SHEET & LOCATION MAP MIDLOTHIAN & MARKHAM, IL												
WIPE TEST #	WORK ORDER PAGE	TEST LOCATION	PIPE SIZE	PIPE MATERIAL	TEST DATE COMPLETED								Nicor Gas™														
							333 South Wabash Avenue, Suite 2901 Chicago, Illinois 60604 T 312.987.0061 F 312.987.0071																				
DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPCT GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.							1	2/24/2023	JV	ISSUE FOR BID		LS	DK	1844 FERRY RD. NAPERVILLE, IL 60563 (888) 642-6748				COUNTY	TOWNSHIP	TOWN	TIER	RANGE	1/4 SECTION	PROJECT ID	WORK ORDER NO.	NICOR JOB NO.	
							REV	DATE	BY	DESCRIPTION		CK.	APP.					COOK	BREMEN	MIDLOTHIAN, MARKHAM	36N	13E 3PM	143	120378/320378	TC266		
							REVISIONS													SCALE	ENGINEER	DRAWN BY	CORROSION	CHECKED BY	APPROVED BY	DRAWING FILE NO.	SHEET NO.
																				N.T.S.	J. VOTAVA	L. RUFFOLO	A. GERVASIO	D. SOJA	D. KOWALEWSKI	E15143N--	1 of 53



GENERAL NOTES:

- IT IS THE RESPONSIBILITY OF THE NICOR GAS INSPECTOR, CONTRACTOR, AND ANYONE INVOLVED IN THE CONSTRUCTION OF THE FACILITIES TO FOLLOW THE LATEST NICOR GAS GMS AND GCS SPECIFICATIONS. CONTACT NICOR TECHNICAL SERVICES DEPARTMENT, GERALD GRAYER, SENIOR CODES AND STANDARDS ENGINEER, AT (630) 388-2776 TO OBTAIN A COPY OF THE LATEST EDITION.
- CONTACT NICOR PROJECT MANAGER, CHRISTOPHER HECKERT, AT (224) 388-2584 PRIOR TO COMMENCING WORK.
- APPROVED FOR CONSTRUCTION DRAWING PACKAGE SHALL BE ACCOMPANIED BY NICOR'S CONSTRUCTION SPECIFICATIONS AND SCOPE/WORK DOCUMENTS FOR CONSTRUCTION.
- COORDINATE WITH NICOR GAS INSPECTOR FOR LOCATION OF UNDERGROUND UTILITIES PRIOR TO STARTING ANY EXCAVATION. EXERCISE CARE WHEN EXCAVATING NEAR EXISTING STRUCTURES.
- UTILITY LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. CONTRACTOR SHALL CONTACT J.U.I.I.E. AND LOCAL GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION FOR ALL UTILITY LOCATIONS.
- TO SCHEDULE X-RAYS, NOTIFY QUALITY ASSURANCE 72 HOURS PRIOR TO WELD INSPECTION. NICOR'S CON-OPS REPRESENTATIVE CONTACT TO BE PROVIDED.
- CONTACT NICOR'S CORROSION CONTROL DEPARTMENT AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO COORDINATE CORROSION WORK.
- PROPOSED ELEVATIONS AND DIMENSIONS INDICATE TOP OF PIPE, UNLESS OTHERWISE NOTED. UNLESS SPECIFICALLY NOTED, DEPTHS OF EXISTING FACILITIES ARE ESTIMATED ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING DEPTH AND LOCATION OF ALL FACILITIES PRIOR TO COMMENCING WORK.
- ALL CONCRETE FORM WORK, REINFORCING STEEL AND CONCRETE PLACEMENT SHALL COMPLY WITH REQUIREMENTS AND RECOMMENDATIONS OF THE ACE, LATEST EDITION.
- ALL MECHANICAL AND STRUCTURAL INFORMATION AND DRAWINGS SHOWN SHALL BE CONSIDERED PRELIMINARY UNTIL CERTIFIED VENDOR DRAWINGS HAVE BEEN RELEASED, AS APPLICABLE.
- IF ASBESTOS COAL WRAP IS IDENTIFIED, REFER TO ASBESTOS COAL TAR WRAP REMOVAL GUIDELINES. REMOVAL MUST BE COMPLETED BY A TRAINED EMPLOYEE. FOR ANY QUESTIONS OF PROCEDURE OR TRAINED EMPLOYEES, CALL RICHARD DOMBROSKI (224-353-3406) IN SAFETY DEPARTMENT.

CONTRACTOR NOTES:

- CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS IN THE FIELD PRIOR TO COMMENCING WORK.
- ALL RIGHTS-OF-WAY, PERMANENT EASEMENTS, TEMPORARY WORKSPACES, AND PROPOSED ALIGNMENT SHALL BE STAKED PRIOR TO COMMENCING WORK.
- ALL WELDS ARE TO BE RADIOGRAPHICALLY TESTED, UNLESS OTHERWISE NOTED.
- ALL WELDING IS TO BE PERFORMED IN COMPLIANCE WITH NICOR'S JOINING MANUAL WELDING (OCTOBER, 2016).
- FIELD BEND RATE IS 1.5 DEGREES PER ONE PIPE DIAMETER LENGTH, PER GCS 881. FIELD BENDS MAY NOT EXCEED 16 DEGREES.
- CONTRACTOR TO ALTERNATE THE LONGITUDINAL SEAMS OF ALL PIPING BETWEEN THE 10 O'CLOCK AND 2 O'CLOCK POSITIONS UNLESS DEVIATION FROM SUCH IS APPROVED BY NICOR GAS PRIOR TO INSTALLATION OF PIPE SECTION(S).
- INSTALL ALL MAIN WITH A MINIMUM COVER OF FIVE FEET (5'), UNLESS OTHERWISE NOTED.
- ANY PROPOSED DIRECTIONALLY BORED PIPE TO BE INSTALLED PER NICOR GAS DIRECTIONAL BORING GUIDELINES, DATED DECEMBER 15, 2005.
- ALL 8" AND LARGER STEEL PIPE THAT IS BORED MUST BE DUAL COATED.
- CONTRACTOR TO PROTECT PIPELINES PER T.S. 30.104.128, 30.104.138, 30.104.148, & 30.104.150 WHEN CROSSING EXISTING NICOR FACILITIES WITH CONSTRUCTION EQUIPMENT, AND WHEN WORKING AND/OR STORING SPOILS ON TOP OF EXISTING NICOR FACILITIES.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL CAPS AND OTHER FITTINGS NECESSARY FOR TESTING THE MAIN.
- CONTRACTOR TO STAY WITHIN NICOR PROPERTY AND IDENTIFIED WORKSPACE AND APPROVED ACCESS ROUTES, UNLESS SPECIFICALLY INSTRUCTED BY A NICOR REPRESENTATIVE.
- CONTRACTOR TO CLEAR, REMOVE, AND PROPERLY DISPOSE OF TREES, TRIMMINGS, BRUSH, AND STUMPS IDENTIFIED BY NICOR REPRESENTATIVE WITHIN NICOR PROPERTY LIMITS FOR SITE ACCESS AND CONSTRUCTION WORKSPACE.
- PERMANENT FENCE RESTORATION TO BE COORDINATED BY CONTRACTOR. CONTRACTOR WILL REMOVE AND SECURE ANY FENCING AS INSTRUCTED BY NICOR GAS.
- INSTALL PIPELINE MARKERS PER GCS 249. SEE SPECIFICATION FOR ALL REQUIREMENTS. VERIFY FINAL PIPELINE MARKER LOCATIONS WITH NICOR'S WATCH AND PROTECT DEPARTMENT PRIOR TO INSTALLATION.
- CONTRACTOR SHALL SUFFICIENTLY SUPPORT PIPE DURING CONSTRUCTION AND BACKFILL ACTIVITIES. CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY BUOYANCY CONTROL TO PROTECT THE PIPE DURING CONSTRUCTION.
- PLUG AND/OR CAP RETIRED 6" AND LARGER MAINS EVERY 660' PER GCS 849.
- RETIRE OLD MAIN PER GCS 849.
- ALL MAINS AND CASINGS TO BE RETIRED IN PLACE ARE TO BE COMPLETELY GROUTED, UNLESS OTHERWISE NOTED.
- CONTRACTOR TO REMOVE ALL CASING VENTS AND TEST STATIONS ON EXISTING PIPELINES THAT ARE TO BE RETIRED. CONTRACTOR SHALL COORDINATE REMOVAL/RECOVERY OF ANY CASING VENTS AND TEST STATIONS LOCATED ON OR IMMEDIATELY ADJACENT TO WISCONSIN CENTRAL LTD (WCL/CN) RIGHT-OF-WAY WITH MATT ERICKSON, NICOR GAS LAND MANAGEMENT AGENT, AT (630) 388-2969.
- FOR ALL EXISTING VALVES TO BE RETIRED IN PLACE, REMOVE TOP SECTION OF VALVE BOX, BACKFILL WITH SAND, AND MATCH EXISTING PAVEMENT, IF APPLICABLE.
- CONTRACTOR SHALL TAKE NECESSARY STEPS TO PREVENT SPILLS AND LEAKS DURING CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL AVOID TRACKING DEBRIS INTO PUBLIC ROW. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC ROUTE CLEANLINESS DAILY.
- IF DEBRIS IS BEING TRACKED ON STREETS BY EQUIPMENT AND/OR VEHICLES, DAILY STREET SWEEPING WILL BE REQUIRED.
- CONTRACTOR SHALL PROTECT SIDEWALKS AND PATHS FROM VEHICLE TRAFFIC UTILIZING STEEL PLATING, TIMBER MATTING, OR SIMILAR. EXISTING SIDEWALK, BITUMINOUS SHOULDER, CURB & GUTTER, AND/OR ROADWAY PAVEMENT DISTURBED OR DAMAGED DUE TO THE PERMITTED WORK SHALL BE REPLACED IN KIND UP TO THE LIMITS AS DETERMINED AND DIRECTED BY THE APPROPRIATE REPRESENTATIVE FOR THE CITY IN WHICH DAMAGE WAS DONE.
- PAVEMENT THAT IS OPEN CUT TO BE BACKFILLED AND GRADED TO MATCH EXISTING CONDITIONS. RESTORATION TO BE COMPLETED BY CONTRACTOR. SUB-GRADE COMPACTION UNDER PAVED SURFACES IS TO BE A MINIMUM OF 95%.
- BACKFILL WITH SAND WHERE PIPE TRENCH IS UNDER OR WITHIN 2' OF PAVEMENT, CURB, OR SIDEWALK.
- ALL DISTURBED SIDEWALK MUST BE REINSTALLED WITHIN 30 DAYS OF COMPLETION OF PROPOSED WORK IN ANY ONE AREA. AFTER PROPOSED WORK IS COMPLETED, ANY MISSING SIDEWALK MUST BE REPLACED WITH COMPACTED STONE UNTIL THE FINAL SIDEWALK IS POURED.
- CONTRACTOR SHALL INSTALL ALL TEMPORARY PAVEMENT PATCHES PER NICOR GAS CONSTRUCTION SPECIFICATIONS FOR CONTRACTORS.
- CONTRACTOR TO REDRESS ALL DISTURBED GRAVEL AREAS WITH CA-6 GRAVEL. DISTURBED GRAVEL AREAS TO BE RESTORED TO ORIGINAL CONDITIONS.
- STOCKPILES ARE NOT PERMITTED WITHIN THE PUBLIC RIGHT-OF-WAY. ALL SPOILS MUST BE REMOVED AT THE END OF EACH CONSTRUCTION DAY.

GENERAL UTILITY NOTES:

- CONTRACTOR SHALL CONTACT THE STATE OF ILLINOIS ONE CALL SYSTEM (JULIE 811) TO VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO COMMENCING WORK. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE RESULTING FROM CONTRACTOR'S EXCAVATION AND BORING OPERATIONS.
- CONTRACTOR IS REQUIRED TO ADJUST DEPTH OF PROPOSED PIPE TO PROVIDE A MINIMUM OF 12-INCH SEPARATION PER 49 CFR 129.325 AND NICOR GCS 800. CONTRACTOR IS REQUIRED TO POTHOLE EXISTING UTILITIES AT EACH UTILITY CROSSING

GENERAL UTILITY NOTES (CONTINUED):

- CONTRACTOR IS REQUIRED TO POTHOLE EITHER BY HAND OR VACUUM EXCAVATION, EXPOSE BY EXCAVATING 18-INCHES ON BOTH SIDES (36-INCH WIDTH PLUS DIAMETER) OF MARKED FACILITIES, TO A POINT A MINIMUM OF 6-INCHES BELOW PROPOSED WORK ELEVATION. CONTRACTOR SHALL NOT LEAVE ANY POTHOLE UNATTENDED AT ANY POINT. CONTRACTOR TO BARRICADE OR BACKFILL ALL POTHOLES.
- "BLIND BORES" ARE NOT PERMITTED.
- A JOINT MEETING IS REQUIRED IF WORK IS GREATER THAN 500 FEET, AND/OR WORK ZONE IS COMPLEX/CONGESTED WITH UTILITIES.
- CONTRACTOR SHALL NOT BLOCK/IMPEDE ACCESS TO WATER AND/OR WASTEWATER STRUCTURES, SUCH AS VALVE BOXES, VALVE VAULTS, SANITARY SEWER MANHOLES, FIRE HYDRANTS, ETC.
- IT IS THE RESPONSIBILITY OF THE CREW (INTERNAL OR CONTRACTOR) INSTALLING THE GAS FACILITIES TO LOCATE ALL SEWER MAINS AND LATERALS WITHIN THE SCOPE OF THE PROJECT. NO BORING, DIRECTIONAL DRILLING OR OTHER TRENCH LESS CONSTRUCTION METHODS SHALL BE EMPLOYED WITHOUT EITHER LOCATING SEWERS OR OBTAINING PROOF OF SEPTIC SYSTEMS. THE USE OF A SONDE DEVICE (CALIBRATED DAILY) IS RECOMMENDED FOR LOCATING THE SEWER FACILITIES. SPOTTING OF SEWER FACILITIES IS REQUIRED IF A SONDE DEVICE IS NOT USED (HOWEVER, SPOTTING OF FACILITIES MAY STILL BE REQUIRED WHEN USING A SONDE DEVICE). PROPER CLEARANCE OF GAS FACILITIES AND SEWER MAINS/LATERALS SHALL BE MAINTAINED PER GCS 800, SECTION 8.
- CONTRACTOR TO IMMEDIATELY REPORT ANY DAMAGES TO UTILITIES.

CONTACT INFORMATION:

NICOR GAS PROJECT MANAGER CHRIS HECKERT PHONE: (224) 388-2584 EMAIL: CHECKERT@SOUTHERNCO.COM	ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT 1 AREA UTILITY COORDINATOR EDWARD KANTHACK PHONE: (847) 705-4209 EMAIL: EDWARD.KANTHACK@ILLINOIS.GOV
NICOR GAS PROJECT ENGINEER KRISTI SPARBANIE PHONE: (224) 237-4859 EMAIL: KSPARBAN@SOUTHERNCO.COM	NICOR GAS CONSTRUCTION SUPERVISOR JOSH KENNINGTON PHONE: (630) 675-0610 EMAIL: JKENNIN@SOUTHERNCO.COM
NICOR GAS LAND MANAGEMENT SUPERVISOR MATT ERICKSON PHONE: (630) 388-2969 EMAIL: MERICKS@SOUTHERNCO.COM	MILHOUSE ENGINEERING DESIGN ENGINEER JAKE VOTAVA PHONE: (312) 924-4529 EMAIL: JVVOTAVA@MILHOUSEINC.COM
NICOR GAS LAND MANAGEMENT AGENT (FOREST PRESERVE LIAISON) ED ZAENGLE PHONE: (224) 217-0063 EMAIL: EZAENGLE@SOUTHERNCO.COM	CITY OF MARKHAM PUBLIC WORKS SUPERINTENDENT TODD CLAYTON PHONE: (708) 331-4905 x256 EMAIL: TCLAYTON@CITYOFMARKHAM.NET
COOK COUNTY DEPARTMENT OF TRANSPORTATION PERMITS DIVISION HEAD MIKE STERR PHONE: (312) 603-1670 EMAIL: MICHAEL.STERR@COOKCOUNTYIL.GOV	COOK COUNTY FOREST PRESERVE DEPARTMENT OF PLANNING & DEVELOPMENT PHONE: (708) 771-1192 EMAIL: MICHAEL.SCHECHTMAN@COOKCOUNTYIL.GOV
VILLAGE OF MIDLOTHIAN PUBLIC WORKS SUPERINTENDENT JOE SPARREY PHONE: (708) 389-9658 EMAIL: JSPARREY@VILLAGEOFMIDLOTHIAN.COM	

GENERAL ENVIRONMENTAL NOTES:

- PCB WIPE SAMPLES, PERFORMED BY NICOR GAS EMPLOYEES, ARE REQUIRED FOR ALL 4" AND LARGER PIPE THAT IS ABANDONED OR REMOVED ON THIS WORK ORDER. DIRECT QUESTIONS ON PCB WIPE SAMPLE PROCEDURES TO THE SYSTEM OPERATIONS DEPARTMENT OR KEITH BODGER (630-514-7589) IN ENVIRONMENTAL AFFAIRS (EA).
- COLLECT AND PROPERLY DISPOSE OF ALL LIQUIDS FROM PIPELINES BEING RETIRED.
- IN THE EVENT OF A SPILL, PLEASE IMMEDIATELY CALL DISPATCH (630-317-9111) AND ASK FOR THE ON-CALL ENVIRONMENTAL REPRESENTATIVE.
- ANY RETIRED PIPE THAT MUST BE REMOVED FROM THE SITE SHOULD HAVE THE ENDS COVERED WITH PLASTIC OR SIMILAR MATERIAL UNTIL THE PCB WIPE SAMPLE LAB RESULTS ARE KNOWN. INDICATE ON THE 'NICOR GAS PCB SAMPLE INFORMATION FORM' WHERE ANY PIPE REMOVED FROM THE SITE IS BEING TEMPORARILY LOCATED.
- IF CONTAMINATED SOIL IS SUSPECTED, CALL KEITH BODGER (630-514-7589) IN EA FOR REGULATORY COMPLIANCE INSTRUCTION.
- ALL WETLANDS, STREAMS, RIPARIAN AREAS, BUFFERS, FLOODPLAIN AND FLOODWAY (SPECIAL MANAGEMENT AREAS/SMA's) SHOULD BE IDENTIFIED ON THESE WORK ORDER DRAWINGS. IF THERE IS A QUESTION ABOUT SMA BOUNDARIES, PLEASE CALL EA (ALICIA BISHOP AT 630-388-2388).
- THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COMPLYING WITH THE PROJECT-SPECIFIC "GREEN BINDER" ISSUED BY ENVIRONMENTAL AFFAIRS, WHICH INCLUDES ENVIRONMENTAL PERMITS/CLEARANCES AND PLANS, SUCH AS THE STORMWATER POLLUTION PREVENTION PLAN (SWPP). CONTRACTOR SHALL INSTALL THE EROSION CONTROL DEVICES AS SHOWN ON THE ALIGNMENT SHEETS AND DESCRIBED IN THE SWPP. IF THERE ARE QUESTIONS, PLEASE CALL EA (ALICIA BISHOP AT 630-388-2388).
- IF AN INADVERTENT RETURN (IR) OCCURS DURING DIRECTIONAL DRILLING, THE CONTRACTOR MUST REFER TO THE NICOR GAS HORIZONTAL DIRECTIONAL DRILLING: MONITORING AND RESPONSE PLAN FOR INADVERTENT RETURNS. THE CONTRACTOR IS RESPONSIBLE FOR STOPPING DRILLING, CONTAINING THE IR MATERIAL, AND IMMEDIATELY CONTACTING EA (ALICIA BISHOP AT 630-388-2388).
- VEHICLE AND EQUIPMENT FUELING TO COMPLETED AT LEAST 100 FEET AWAY FROM WETLANDS AND WATERBODIES OR WITH OR WITH ENVIRONMENTAL COMPLIANCE INSPECTOR (ECI) APPROVAL.
- FOLLOW THE ILLINOIS URBAN MANUAL DEWATERING PRACTICE STANDARD NO. 813 FOR ALL DEWATERING. NO SEDIMENT LADEN WATER IS ALLOWED TO ENTER INLETS, WETLANDS, WATERBODIES, ETC. FOR HIGH VOLUME AND HIGH SEDIMENT LADEN WATER DISCHARGE, SEE NICOR-BMP-9 WHEN NECESSARY.
- IF MUD IS BEING TRACKED ON THE STREETS BY EQUIPMENT AND/OR VEHICLES, DAILY STREET SWEEPING WILL BE REQUIRED.
- ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL CONTOURS AND CONDITIONS. RESTORATION MUST BE INITIATED WITHIN 1 DAY DEPENDING ON PERMIT CONDITIONS.
- FOR HYDROSTATIC TEST WATER REMOVAL, CONTACT ALICIA BISHOP AT 630-388-2388.
- SEE NICOR-BMP-23 FOR EXCAVATION WORK. MINIMUM 12-INCH TOPSOIL SEGREGATION REQUIRED. STOCKPILE THE WETLAND UPLAND TOPSOIL SEPARATELY. BACKFILL AND RESTORE STOCKPILED OR SIDECAST TOPSOIL IN THE WETLANDS DURING RESTORATION. TOPSOIL SHALL NOT BE USED AS PADDING MATERIALS. DO NOT IMPORT NON-WETLAND SOIL INTO WETLANDS.

GENERAL ENVIRONMENTAL NOTES (CONTINUED):

- SEE NICOR-BMP-23 FOR EXCAVATION WORK. MINIMUM 12-INCH TOPSOIL SEGREGATION REQUIRED. STOCKPILE THE WETLAND UPLAND TOPSOIL SEPARATELY. BACKFILL AND RESTORE STOCKPILED OR SIDECAST TOPSOIL IN THE WETLANDS DURING RESTORATION. TOPSOIL SHALL NOT BE USED AS PADDING MATERIALS. DO NOT IMPORT NON-WETLAND SOIL INTO WETLANDS.
- ALL HYDROSTATIC AND TRENCH DEWATERING ACTIVITIES, MEANS AND METHODS MUST BE SUBMITTED, REVIEWED AND APPROVED BY NICOR EA (ALICIA BISHOP AT 630-388-2388) BEFORE COMMENCEMENT OF DISCHARGE.
- WORK IN A WATERWAY SHOULD BE TIMED TO TAKE PLACE DURING LOW OR NO- FLOW CONDITIONS. LOW FLOW CONDITIONS ARE THOSE AT OR BELOW THE NORMAL WATER ELEVATION. F BYPASS PUMPING IS NECESSARY, THE INTAKE HOSE SHALL BE PLACED ON A STABLE SURFACE OR FLOATED TO PREVENT SEDIMENT FROM ENTERING THE HOSE. THE BYPASS DISCHARGE SHALL BE PLACED ON A NON-ERODIBLE, ENERGY DISSIPATING SURFACE PRIOR TO REJOINING THE STREAM FLOW AND SHALL NOT CAUSE EROSION. FILTERING OF BYPASS WATER IS NOT NECESSARY UNLESS THE BYPASS WATER HAS BECOME SEDIMENT- LADEN AS A RESULT OF THE CURRENT CONSTRUCTION ACTIVITIES. ALL AREAS DISTURBED DUE TO CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO PRECONSTRUCTION CONDITIONS AND FULLY STABILIZED PRIOR TO ACCEPTING FLOWS.
- SILT FENCE INSTALLATION SEE NRCS IUM CODE 620A AND 620B. EROSION CONTROL LOG INSTALLATION SEE DETAIL E1-B, DETAIL E1-C, DETAIL E1-H, DETAIL E2-A, DETAIL E2-B, AND DETAIL E2-C.
- INITIATE THE LENGTH OF TIME THAT TOPSOIL IS SEGREGATED AND THE TRENCH IS OPEN. DO NOT TRENCH THE WETLAND UNTIL THE PIPELINE IS ASSEMBLED AND READY FOR LOWERING IN.
- UPON COMPLETION OF CONSTRUCTION, REMOVE ALL PROJECT RELATED MATERIAL FROM WETLAND, SUCH AS MATS OR MATERIAL USED TO SUPPORT EQUIPMENT WITHIN THE CONSTRUCTION WORKSPACE.
- FOR EACH WETLAND CROSSED, INSTALL A TRENCH BREAKER AT THE BASE OF SLOPES NEAR THE BOUNDARY BETWEEN THE WETLAND AND ADJACENT UPLAND AREAS TO MAINTAIN PRECONSTRUCTION WETLAND HYDROLOGY.
- TRENCH DEWATERING ACTIVITIES, STAGING AREAS, AND EQUIPMENT AND VEHICLE STORAGE TO BE KEPT OUTSIDE OF SMA'S OR COMPLETED WITH ECI APPROVAL.

RESTORATION



STREETS TO BE RESTORED TO ORIGINAL CONDITIONS. HERE IS A LIST OF CURRENT ROADWAY MATERIALS AS PROVIDED BY THE VILLAGES:

VILLAGE OF MIDLOTHIAN:  
THE ROADS WILL HAVE TO BE BACKFILLED WITH STONE TO NO LESS THAN 6" BELOW FINAL GRADE AND AT LEAST 6" OF ASPHALT LAID IN 2 LIFTS.

CITY OF MARKHAM:  
CONTRACTOR TO RESTORE TO EXISTING CONDITIONS USING IDOT'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". WHEN EXCAVATED MATERIAL IS HAULED AWAY OR IS UNSUITABLE FOR BACKFILL, GRANULAR MATERIAL CA-6 OR CA-10 MAY BE USED. ALL CUTS ARE TO BE FULL DEPTH. ANY EXCAVATION UNDER PAVEMENTS SHALL BE BACKFILLED AND COMPACTED AS SOON AS PRACTICABLE.

MWRD SOIL EROSION AND SEDIMENT CONTROL NOTES:

- THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBENCE OF THE SITE.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
  - UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBENCE.
  - ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
- SOIL DISTURBENCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, ORLANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS IRBAN MANIAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INCIVING CONCRETE.
- DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN (7) DAYS.
- ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).
- VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREAS HAS BEEN STABILIZED.
- SOIL STOCKPILES SHALL, AT A MINIMUM, BE PROTECTED WITH PERIMETER SEDIMENT CONTROLS.
- EARTHERN EMBANKMENT SIDE SLOPS SHALL BE STABILIZED WITH APPROPRIATE EROSION BLANKET.
- STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.
- THE CONTRACTOR SHALL EITHER REMOVE OR REPLACE ANY EXISTING DRAIN TILES AND INCORPORATE THEM INTO THE DRAINAFE PLAN FOR THE DEVELOPMENT. DRAIN TILES CANNOT BE TRIBUTARY TO A SANITARY OR COMBINED SEWER. DRAIN TILES ALLOWED IN COMBINED SEWER FOR GREEN INFRASTRUCTURE PRACTICES.
- IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DEWATERING SYSTEMS SHOULD NE ONSPECTED DAILY DURING OPERATIONAL PERIODS. THE SITE INSPECTOR MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMAINS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGE TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM.
- ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPELTEITON OF SOIL DISTURBING ACTIVITIES.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED ON A YEAR-ROUND BASIS DURING CONSTRUCTION AND ANY PERIODS OF CONSTRUCTION SHUTDOWN UNTIL PERMANENT STABILIZATION IS ACHIEVED.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.
- THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, SITE INSPECTOR, OR MWRD.

PREPARED BY:								PREPARED FOR:		CRAWFORD LINE REPLACEMENT - PHASE 3 GENERAL NOTES & SPECIFICATIONS MIDLOTHIAN & MARKHAM, IL									
 333 South Wabash Avenue, Suite 2901 Chicago, Illinois 60604 T 312.987.0061 F 312.987.0071								 Nicor Gas™											
DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.								1844 FERRY RD. NAPERVILLE, IL 60563 (888) 642-6748											
1	2/24/2023	JV	ISSUE FOR BID				LS	DK											
REV	DATE	BY	DESCRIPTION				CK.	APP.											
REVISIONS																			
COUNTY	TOWNSHIP	TOWN	TIER	RANGE	1/4 SECTION	PROJECT ID	WORK ORDER NO.	NICOR JOB NO.											
COOK	BREMEN	MIDLOTHIAN, MARKHAM	36N	13E 3PM	143	11013014	120378/320378	TC266											
DATE	SCALE	ENGINEER	DRAWN BY	CORROSION	CHECKED BY	APPROVED BY	DRAWING FILE NO.	SHEET NO.											
	N.T.S.	J. VOTAVA	J. RUFFOLO	A. GERVASIO	L. SOJA	D. KOWALEWSKI	E15143N-	2 of 53											



COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS CONSTRUCTION NOTES:

DRAINAGE

- 1. THE DRAINAGE SYSTEMS SHALL BE KEPT CLEAN AND FREE OF DEBRIS AT ALL TIMES.
- 2. THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE.
- 3. CCDOTH RESERVES THE RIGHT TO MAKE CONNECTIONS TO THE PROPOSED STORM SEWER FOR THE PURPOSE OF DRAINING THE HIGHWAY.
- 4. AS A CONDITION OF GRANTING THIS PERMIT, WHICH INCLUDES THE POINT DISCHARGE OF STORM WATER ONTO THE COOK COUNTY TRANSPORTATION AND HIGHWAYS RIGHT OF WAY, THE OWNER HEREBY GRANTS PERMISSION TO THE COOK COUNTY TRANSPORTATION AND HIGHWAYS DEPARTMENT TO ENTER ONTO PRIVATE PROPERTY TO INSPECT THE DETENTION CONTROL STRUCTURE.

EROSION CONTROL AND LANDSCAPING

- 5. THE PARKWAY SHALL BE KEPT CLEAN AND FREE OF DEBRIS AT ALL TIMES.
- 6. ANY DISTURBED AREAS WITHIN COOK COUNTY ROW REQUIRE EROSION CONTROL BLANKET PRIOR TO FINAL LANDSCAPING PER CURRENT ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) STANDARDS.
- 7. COOK COUNTY RIGHT-OF-WAY TO BE RESTORED WITH 4"TOPSOIL, FERTILIZER AND SOD. THIS NOTE SUPERSEDES ANY NOTE IN THE PLANS.

EXCAVATION AND BACKFILL

- 8. THE OWNER SHALL MANAGE THE EXCAVATION, TRANSPORT AND DISPOSAL OF ALL EXCAVATED MATERIALS (I.E. SOIL, DEBRIS, ETC.) IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
- 9. AS A CONDITION OF THIS PERMIT, THE OWNER SHALL REQUEST CCDOTH TO IDENTIFY SITES IN THE RIGHT-OF-WAY WHERE A HIGHWAY AUTHORITY AGREEMENT GOVERNS ACCESS TO SOIL THAT EXCEEDS THE TIER 1 RESIDENTIAL REMEDIATION OBJECTIVES OF 35 ILL. ADM. CODE 742. THE OWNER SHALL TAKE ALL MEASURES NECESSARY TO PROTECT HUMAN HEALTH (INCLUDING WORKER SAFETY) AND THE ENVIRONMENT DURING AND AFTER ANY ACCESS TO SUCH SOIL.
- 10. THAT ALL EXCAVATION WORK WITHIN THREE (3) FEET OF THE PAVEMENT EDGE WILL BE DONE MANUALLY.
- 11. ALL TRENCHES WITHIN COOK COUNTY ROW SHALL BE TRENCH BACKFILLED WITH FA-6 SAND IN ACCORDANCE WITH METHOD 1 IN ACCORDANCE WITH ARTICLE 550.07 OF THE (IDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

MEDIAN, AND CURB AND GUTTER (PCC)

- 12. IN THE REMOVAL OF MEDIANS AND CURB AND GUTTER THE USE OF ANY TYPE OF CONCRETE BREAKER THAT WILL DAMAGE THE UNDERGROUND STRUCTURES WILL NOT BE PERMITTED.
- 13. SAW CUT THE FULL DEPTH OF MEDIAN, AND CURB AND GUTTER AT THE LIMITS OF REMOVAL.

PAVEMENT, ALL

- 14. IN THE REMOVAL OF PAVEMENT, THE USE OF ANY TYPE OF CONCRETE BREAKER THAT WILL DAMAGE THE UNDERGROUND STRUCTURES WILL NOT BE PERMITTED.
- 15. THE PAVEMENT SHALL BE KEPT CLEAN AND FREE OF DEBRIS AT ALL TIMES.
- 16. UNLESS SPECIFIED IN THE PERMIT, NO EQUIPMENT OTHER THAN PNEUMATIC-TIRED EQUIPMENT USED DURING THE INSTALLATION SHALL BE PERMITTED TO STOP OR OPERATE ON THE PAVEMENT NOR SHALL ANY EXCAVATED MATERIALS BE STORED TEMPORARILY OR OTHERWISE ON THE CCDOTH PAVEMENT.
- 17. SAW CUT THE FULL DEPTH OF PAVEMENT, MEDIAN, SIDEWALK AND CURB AND GUTTER AT THE LIMITS OF REMOVAL.
- 18. ALL PAVEMENT PATCH OPENINGS THAT ARE OPEN TO TRAFFIC SHALL BE IMMEDIATELY SURFACED WITH A TEMPORARY BITUMINOUS PATCH AT LEAST THREE INCHES IN THICKNESS. THIS PATCH THEN MUST BE INSPECTED DAILY AND ADDITIONAL BITUMINOUS PATCH MATERIAL MUST BE PLACED, DAILY IF NECESSARY, TO MAINTAIN THE PATCHED AREA AT THE SAME ELEVATION AS THE ADJACENT UNDISTURBED PAVEMENT FOR A PERIOD OF NOT LESS THAN 30 DAYS. AFTER 30 DAYS, PERMANENT REPLACEMENT IN KIND SHALL BE MADE TO THE BASE COURSE AND PAVEMENT SURFACE.

PAVEMENT, ENTRANCE (DRIVEWAYS, SIDE STREETS)

- 19. FOR ENTRANCE INSTALLATIONS, THE OWNER SHALL REMOVE EARTH TO ITS FULL DEPTH, STARTING AT THE EDGE OF THE PAVEMENT, FOR THE FULL DIMENSIONS OF THE PROPOSED ENTRANCE, AND REPLACE WITH MATERIALS TO BE USED IN THE CONSTRUCTION OF THE ENTRANCE.
- 20. THE ENTRANCE RADIUS MEETING THE EDGE OF SHOULDER OR THE BACK OF CURB MUST TERMINATE 3' FROM THE PROPERTY LINE EXTENDED TO THE EDGE OF SHOULDER OR THE BACK OF CURB. IF THIS CRITERIA CANNOT BE MET, A LETTER FROM THE NEIGHBORING PROPERTY AUTHORIZING THE ENCROACHMENT MUST BE SUBMITTED.
- 21. THE CCDOTH RESERVES THE RIGHT TO RESTRICT ACCESS TO PERMITTED ENTRANCES ON FUTURE ROADWAY IMPROVEMENTS.
- 22. THE OWNER ACKNOWLEDGES THAT IF OR WHEN THE COUNTY OF COOK IMPROVES THE HIGHWAY THE PAVEMENT COMPOSITION AT THE ABOVE MENTIONED ENTRANCE(S) MAY BE SUBSTITUTED.

PAVEMENT, HOT MIX ASPHALT (HMA) PAVEMENT, PATCHING, AND RESURFACING

- 23. HMA FULL DEPTH PAVEMENT THICKNESS SHALL BE 12-INCH ON A 12-INCH THICK SUB BASE GRANULAR MATERIAL CONSISTING OF 3 INCH TOP LIFT OF CA 06 AND 9 INCH BOTTOM LIFT OF POROUS GRANULAR EMBANKMENT (PGE). HMA PAVEMENT SHALL BE BUILT PER THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ART 407. THE PGE SUB BASE SHALL BE BUILT PER THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ART 207 AND 1004.05.
- 24. HMA MILL AND RESURFACE PAVEMENT THICKNESS SHALL BE PER THE APPROVED PERMIT PLANS. HMA RESURFACING SHALL BE BUILT PER THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ART 406.
- 25. HMA PATCHING SHALL MATCH THE EXISTING PAVEMENT THICKNESS. THE PATCH LENGTH SHALL BE A MINIMUM OF 6 FEET. THE PATCH WIDTH SHALL BE EITHER 6 FEET (FROM EDGE TO CENTER OF LANE OR, FROM CENTER OF LANE TO CENTERLINE) OR 12 FEET (FULL LANE WIDTH). THE PAVEMENT OPENING SHALL BE SAW-CUT TO THE FULL DEPTH OF THE PAVEMENT AT THE LIMITS OF REMOVAL AND MUST EXTEND 1 FOOT BEYOND EACH SIDE OF THE TRENCH EXCAVATION. HMA PAVEMENT PATCH SHALL BE BUILT PER THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ART 407.
- 26. THE TOP LIFT FOR ALL ABOVE HMA PAVEMENTS SHALL BE HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 AT A THICKNESS OF 2 INCH.
- 27. BELOW THE TOP LIFT FOR ALL ABOVE HMA TYPES SHALL BE HOT MIX ASPHALT BINDER COURSE, IL-19.0, N70 AT A MINIMUM THICKNESS OF 2-1/4 INCH (RESURFACING IF USED) TO 10 INCH (FULL DEPTH, PATCHING) AND A MAX LIFT THICKNESS IS 4 INCH.

PAVEMENT, PORTLAND CEMENT CONCRETE (PCC) PAVEMENT AND PAVEMENT PATCHING

- 28. SAW CUT THE FULL DEPTH OF PAVEMENT.
- 29. PCC PAVEMENT THICKNESS SHALL BE 10 INCH ON A 12-INCH THICK SUB BASE GRANULAR MATERIAL CONSISTING OF 3 INCH TOP LIFT OF CA 06 AND 9 INCH BOTTOM LIFT OF POROUS GRANULAR EMBANKMENT (PGE). PCC PAVEMENT SHALL BE BUILT PER THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ART 420. THE PGE SUB BASE SHALL BE BUILT PER THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ART 207 AND 1004.05.
- 30. PCC PATCHING SHALL MATCH THE EXISTING PAVEMENT THICKNESS. THE PATCH LENGTH SHALL BE A MINIMUM OF 6 FEET. THE PAVEMENT OPENING SHALL BE SAW-CUT TO THE FULL DEPTH OF THE PAVEMENT AT THE LIMITS OF REMOVAL AND MUST EXTEND 1 FOOT BEYOND EACH SIDE OF THE TRENCH EXCAVATION. THE PATCH SHALL EXTEND THE FULL WIDTH OF THE EXISTING LANE(S). PCC PATCHING SHALL BE BUILT PER THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ART 442 AND IDOT STANDARD 442101.
- 31. PAVEMENT PATCHES GREATER THAN OR EQUAL TO 15SY SHALL USE PAVEMENT FABRIC IN ACCORDANCE WITH IDOT STANDARD 420701 AND PROVIDE 3 ½ INCHES OF CLEARANCE BETWEEN THE PAVEMENT SURFACE AND THE TOP OF THE FABRIC.
- 32. WHERE THE PROPOSED PAVEMENT OR MEDIAN ABUTS THE EXISTING PAVEMENT, MEDIAN OR CURB AND GUTTER LONGITUDINALLY, PROVIDE A TIED LONGITUDINAL CONSTRUCTION JOINT IN ACCORDANCE WITH IDOT STANDARD 420001, USING 30" LONG #6 (3/4"DIA.) DEFORMED TIE BARS AT 24 INCH CENTERS.
- 33. WHERE THE PROPOSED PAVEMENT OR MEDIAN ABUTS THE EXISTING PCC PAVEMENT OR MEDIAN TRANSVERSALLY, PROVIDE A TRANSVERSE JOINT IN ACCORDANCE WITH IDOT STANDARD 442101, USING 18" LONG #12 (1-1/2"DIA.) SMOOTH EPOXY DOWEL BARS AT 12 INCH CENTERS.

COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS CONSTRUCTION NOTES (CONTINUED):

- 34. PROVIDE TRANSVERSE SAWED CONTRACTION JOINTS EVERY 15 FEET IN ACCORDANCE WITH IDOT STANDARD 420001, USING 18" LONG #12 (1-1/2"DIA.) SMOOTH EPOXY DOWEL BARS AT 12 INCH CENTERS AND ALIGN PROPOSED JOINTS WITH EXISTING JOINTS. IF A PROPOSED JOINT IS LOCATED LESS THAN 6 FEET FROM AN EXISTING JOINT, THEN THE EXISTING PAVEMENT OR MEDIAN SHALL BE REMOVED AND REPLACED UP TO THE EXISTING JOINT.
- 35. CONSTRUCT CURB AND GUTTER IN ACCORDANCE WITH IDOT STANDARD 606001. PROVIDE A TIED LONGITUDINAL CONSTRUCTION JOINT IN ACCORDANCE WITH IDOT STANDARD 420001, USING 30" LONG #6 (3/4"DIA.) DEFORMED TIE BARS AT 24 INCH CENTERS.
- 36. CONSTRUCT MEDIANS IN ACCORDANCE WITH IDOT STANDARD 606301. PROVIDE A TIED LONGITUDINAL CONSTRUCTION JOINT IN ACCORDANCE WITH IDOT STANDARD 420001, USING 30" LONG #6 (3/4"DIA.) DEFORMED TIE BARS AT 24 INCH CENTERS.
- 37. WHERE A MEDIAN OPENING IS PROVIDED, THE PAVEMENT SHALL BE CROWNED AT THE CENTERLINE USING A ONE PERCENT CROSS SLOPE.
- 38. IN THE REMOVAL OF SIDEWALK THE USE OF ANY TYPE OF CONCRETE BREAKER THAT WILL DAMAGE THE UNDERGROUND STRUCTURES WILL NOT BE PERMITTED.
- 39. ALL PROPOSED BUS SHELTER AND BUS SHELTER PADS MUST MEET THE CURRENT IDOT BUREAU OF DESIGN AND ENVIRONMENT (BDE) MANUAL AND IDOT BUREAU OF LOCAL ROADS (BLR) MANUAL, PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.
- 40. ALL PROPOSED SIDEWALK (CROSS-WALK) SHALL BE RAMPED IN COMPLIANCE WITH THE CURRENT IDOT BDE MANUAL, IDOT BLR MANUAL, PROWAG AND ADA REQUIREMENTS.
- 41. ALL PROPOSED CURB RAMPS SHALL BE INSPECTED AFTER CONSTRUCTION. IDOT FORM D1 PD0031 SHALL BE FILLED OUT FOR EACH LOCATION. IF THERE ARE ANY DEFICIENCIES THE DEFICIENCIES SHALL BE FIXED AND THE FORM REFILLED OUT FOR THE LOCATION UNTIL THE CURB RAMP IS COMPLIANT. A COPY OF THE FINAL FORM SHALL BE SUBMITTED TO THE CCDOTH PERMITS OFFICE AT HWY.PERMITS@COOKCOUNTYIL.GOV FOR THE PERMIT FILE. CCDOTH PERMITS OFFICE WILL FORWARD THE COMPLETED FORMS TO THE COOK COUNTY ADA COORDINATOR FOR THE COOK COUNTY ADA FILE.
- 42. ALL PROPOSED SIDEWALK SHALL BE 8" THICK WITHIN DRIVEWAY LIMITS.

TRAFFIC CONTROL

- 43. OWNER SHALL PROVIDE AND MAINTAIN AT ITS OWN EXPENSE, SUCH TEMPORARY ROADS AND APPROACHES, AS MAY BE NECESSARY TO PROVIDE ACCESS TO DRIVEWAYS, HOUSES, BUILDINGS OR OTHER PROPERTY ABUTTING THE SITE OF THE PERMITTED WORK. ACCESS SHALL NOT BE BLOCKED.
- 44. NO LANE CLOSURES OR TRAFFIC DETOURS RELATING TO PERMITTED WORK WILL BE ALLOWED BETWEEN THE HOURS OF 6 A.M. TO 9 A.M. AND 3 P.M. TO 6:30 P.M., (OTHER THAN AS ALLOWED FOR EMERGENCY MAINTENANCE PER THE ORDINANCE). ALL TRAFFIC CONTROL DEVICES MUST CONFORM TO IDOT HIGHWAY STANDARDS AND THE LATEST EDITION OF THE STATE OF ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS. ALL LANE CLOSURES SHALL BE IN ACCORDANCE WITH IDOT HIGHWAY STANDARDS.
- 45. THE OWNER SHALL CONDUCT ITS OPERATIONS IN A MANNER SO AS TO INSURE THE MINIMUM HINDRANCE TO TRAFFIC, USING THE PAVEMENT AND AT NO TIME SHALL ITS OPERATIONS OBSTRUCT MORE THAN ONE HALF (1/2) OF THE AVAILABLE PAVEMENT WIDTH.
- 46. WHEN EXISTING TRAFFIC CONTROL SIGNS SUCH AS STOP SIGNS, STOP AHEAD SIGNS, AND CROSSROAD SIGNS ARE REMOVED IN THE PROGRESS OF THE PERMITTED WORK, SAID SIGNS SHALL BE IMMEDIATELY RESET AS CLOSE AS POSSIBLE TO THEIR ORIGINAL LOCATION. AFTER THE COMPLETION OF THE PERMITTED WORK HAS BEEN APPROVED, SAID TRAFFIC CONTROL SIGNS SHALL BE RESTORED TO THEIR ORIGINAL POSITION AND CONDITION OR AS DIRECTED BY THE CCDOTH PERMIT ENGINEER.
- 47. THE USE OF FLAGMEN AND THE NUMBER, TYPE, COLOR, SIZE AND PLACEMENT OF ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO IDOT HIGHWAY STANDARDS AND THE LATEST EDITION OF THE STATE OF ILLINOIS MUTCD FOR STREETS AND HIGHWAYS.

UTILITIES, ALL

- 48. IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO COORDINATE WITH THE ALL UTILITY COMPANIES SHARING THE COOK COUNTY ROW AND RELOCATE THE EXISTING POWER POLES, FIRE HYDRANTS, GUARDRAIL AND APPURTENANCES AS NEEDED FOR THE PROPOSED PERMIT WORK. THERE SHALL BE NO COST TO THE COUNTY.
- 49. AS A REQUIREMENT OF THIS PERMIT ALL UTILITY OWNERS (PRIVATE AND GOVERNMENT) SHALL MAINTAIN A MEMBERSHIP WITH J.U.L.I.E. LOCATING SERVICE UNTIL THE UTILITY IS COMPLETELY REMOVED FROM COOK COUNTY ROW.

UTILITIES, AERIAL

- 50. ALL AERIAL LINES CROSSINGS OR PARALLEL MUST HAVE A MINIMUM CLEARANCE OF 18'3".
- 51. POLE OWNER PERMISSION IS REQUIRED FOR ALL CABLE, CONDUIT AND OTHER APPURTENANCE CONNECTION TO A POLE.
- 52. PROPOSED AERIAL CABLE SHALL NOT BLOCK THE EXISTING TRAFFIC SIGNAL HEADS.
- 53. PROPOSED AERIAL CABLE SHALL NOT TOUCH EXISTING TRAFFIC SIGNAL EQUIPMENT.

UTILITIES, UNDERGROUND

- 54. ALL AUGER PITS AND EXCAVATIONS SHALL BE A MINIMUM OF 10 FEET FROM THE EDGE OF PAVEMENT OR BACK OF CURB, AND WOOD OR STEEL SHEETING SHALL BE USED. AUGER PITS LEFT OPEN OVERNIGHT SHALL BE PROTECTED WITH CONCRETE BARRIER WALLS. THE ENDS OF THE CONCRETE BARRIER WALLS SHALL BE PROTECTED WITH CRASH ATTENUATORS. THE BARRIER WALL AND CRASH ATTENUATORS DESIGN SHALL MEET IDOT BDE MANUAL AND IDOT BLR MANUAL DESIGN REQUIREMENTS.
- 55. ALL EXTERNAL CASING VOIDS SHALL BE PRESSURE GROUTED OR FILLED WITH TRENCH BACKFILL USING PUMPING OR JETTING OUTSIDE OF THE CASING. THE INSIDE OF THE CASING SHALL BE SEALED OR FILLED USING THE EXTERNAL VOID PROCEDURES.
- 56. THAT A MINIMUM DEPTH OF 42 INCHES WILL BE MAINTAINED FROM THE GROUND SURFACE TO THE TOP OF THE CONDUIT, CABLE, OR PIPE AND A MINIMUM DEPTH OF 36 INCHES FROM THE TRUE FLOW LINE OF THE DRAINAGE DITCH TO THE TOP OF THE CONDUIT, CABLE OR PIPE.
- 57. PROPOSED UNDERGROUND UTILITIES RUNNING PARALLEL TO EXISTING WATER MAIN OR SANITARY SEWER SHALL ADJUST THE ALIGNMENT IF THE UTILITY IS WITHIN 5 FEET OF THE OUTER WALL OF THE WATER MAIN OR SANITARY SEWER. THE PROPOSED UTILITY SHALL MAINTAIN A DISTANCE OF 5 FEET OR GREATER WHILE RUNNING PARALLEL TO THE EXISTING WATER MAIN OR SANITARY SEWER. THE DISTANCE BETWEEN PARALLEL OR CROSSING SANITARY OR STORM SEWER WITH WATER MAIN SHALL MEET IEPA REQUIREMENTS.



VILLAGE UTILITY REQUIREMENTS

VILLAGE OF MIDLOTHIAN REQUIREMENTS:

- CROSSING/SEPARATION REQUIREMENTS: THE VILLAGE REQUIRES A 24" CROSSING/SEPARATION BETWEEN UTILITIES.

CITY OF MARKHAM:

- CROSSING/SEPARATION REQUIREMENTS: THE CITY REQUIRES A MINIMUM OF 18" BETWEEN UTILITIES.

<div>PREPARED BY:</div> <div><div>333 South Wabash Avenue, Suite 2901 Chicago, Illinois 60604 T 312.987.0061 F 312.987.0071</div></div>											<div>PREPARED FOR:</div> <div><div>1844 FERRY RD. NAPERVILLE, IL 60563 (888) 642-6748</div></div>	CRAWFORD LINE REPLACEMENT - PHASE 3									
												CCDOTH CONSTRUCTION NOTES									
												MIDLOTHIAN & MARKHAM, IL									
	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.					1844 FERRY RD. NAPERVILLE, IL 60563 (888) 642-6748						COUNTY	TOWNSHIP	TOWN	TIER	RANGE	1/4 SECTION	PROJECT ID	WORK ORDER NO.	NICOR JOB NO.	
	1	2/24/2023	JV	ISSUE FOR BID	LS	DK	COOK	BREMEN	MIDLOTHIAN	36N		13E	3PM	143	11013014	120378/320378	TC266				
REV	DATE	BY	DESCRIPTION	CK.	APP.	SCALE	ENGINEER	DRAWN BY	CORROSION	CHECKED BY	APPROVED BY	DRAWING FILE NO.	SHEET NO.								
					REVISIONS					N.T.S.	J. VOTAVA	J. RUFFOLO	A. GERVASIO	L. SOJA	D. KOWALEWSKI	E15143N-	3 of 53				



1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:

- STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION;
- THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD) WATERSHED MANAGEMENT ORDINANCE AND TECHNICAL GUIDANCE MANUAL;
- IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055).
2. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

1. MWRD, THE MUNICIPALITY AND THE OWNER OR OWNERS REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.
2. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.
3. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.
4. THE LOCATION OF ALL MAJOR UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.
5. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
6. MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.
7. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.
8. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO MEET THE CITY OF CHICAGO'S MINIMUM REQUIREMENTS.
9. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

1. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.
2. A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.
3. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.
4. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).
5. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
6. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.
7. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

<u>PIPE MATERIAL</u>	<u>PIPE SPECIFICATION</u>	<u>JOINT SPECIFICATION</u>
VITRIFIED CLAY PIPE	ASTM C-700	ASTM C-425
REINFORCED CONCRETE SEWER PIPE	ASTM C-76	ASTM C-443
CAST IRON SOIL PIPE	ASTM A-74	ASTM C-564
DUCTILE IRON PIPE	ANSI A21.51	ANSI A21.11
POLYVINYL CHLORIDE (PVC) PIPE		
6-INCH TO 15-INCH DIAMETER SDR 26	ASTM D-3034	ASTM D-3212
18-INCH TO 27-INCH DIAMETER F/DY=46	ASTM F-679	ASTM D-3212
HIGH DENSITY POLYETHYLENE (HDPE)	ASTM D-3350	ASTM D-3216, F-2620 (HEAT FUSION)
	ASTM D-3035	ASTM D-3212, F-477 (GASKETED)
WATER MAIN QUALITY PVC		
4-INCH TO 36-INCH	ASTM D-2241	ASTM D-3139
4-INCH TO 12-INCH	AWWA C900	ASTM D-3139
14-INCH TO 48-INCH	AWWA C905	ASTM D-3139



THE FOLLOWING MATERIALS ARE ALLOWED ON A QUALIFIED BASIS SUBJECT TO DISTRICT REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE. A SPECIAL CONDITION WILL BE ADDED TO THE PERMIT WHEN THE PIPE MATERIAL BELOW IS USED FOR SEWER CONSTRUCTION OR A CONNECTION IS MADE.

<u>PIPE MATERIAL</u>	<u>PIPE SPECIFICATION</u>	<u>JOINT SPECIFICATION</u>
POLYPROPYLENE (PP) PIPE		
12-INCH TO 24-INCH DOUBLE WALL	ASTM F-2736	D-3212, F-477
30-INCH TO 60-INCH TRIPLE WALL	ASTM F-2764	D-3212, F-477

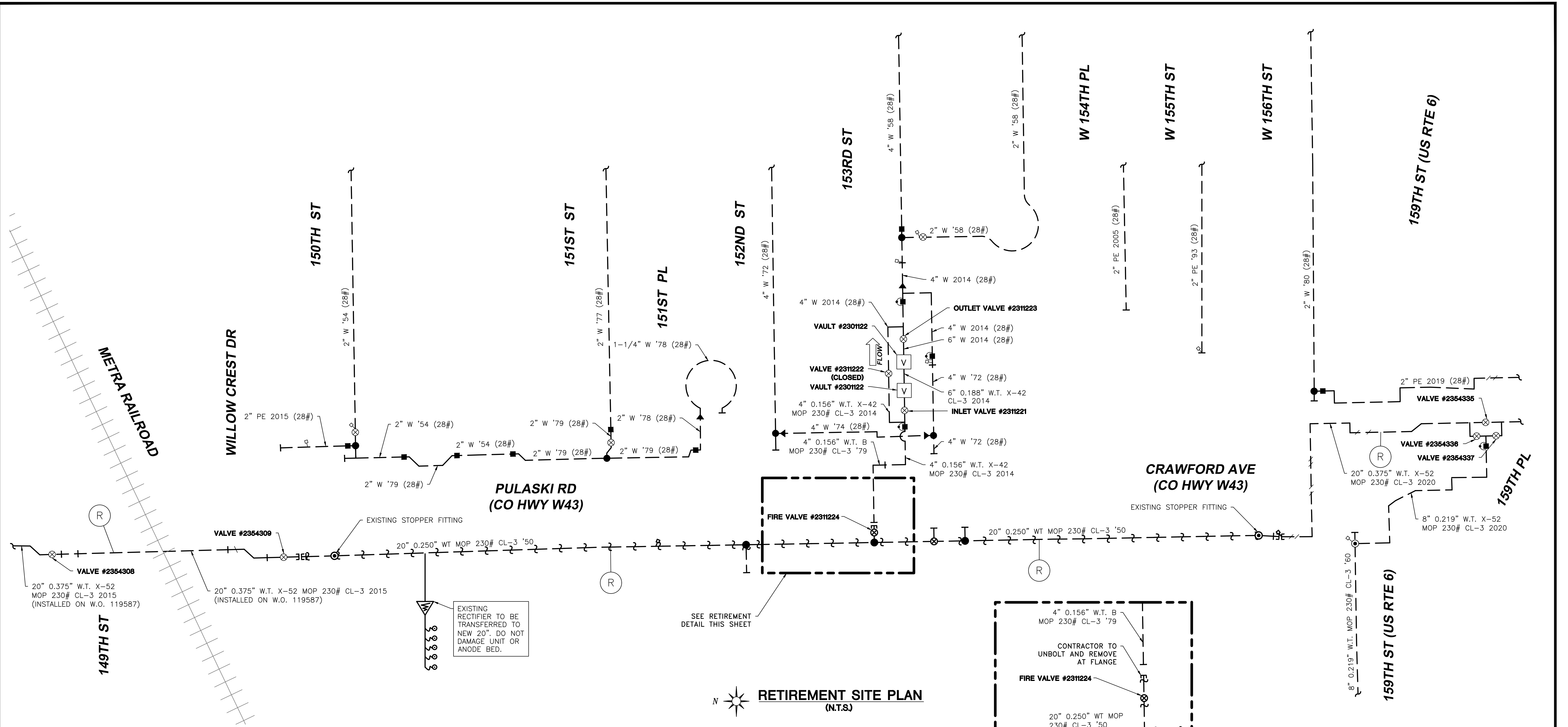
8. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE  $\frac{3}{4}$ " TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO  $\frac{1}{4}$  THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-7, CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.
9. NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.
10. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.

12. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
  - a. A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUBWYE SADDLE OR HUB-TEE SADDLE.
  - b. REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
  - c. WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.
13. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
14. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
15. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.
16. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THAT CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.
17. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.
18. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.
19. A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCES SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

LEGEND	
	CONSTRUCTION SILT FENCE
	CONSTRUCTION FENCE
	PROPOSED NICOR GAS PIPELINE
	EXISTING NICOR GAS PIPELINE
	REMOVED/RETIRED NICOR GAS PIPELINE
	UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	UNDERGROUND TELEPHONE
	FIBER OPTIC
	UNDERGROUND CABLE
	WATER
	STORM SEWER
	SANITARY SEWER
	RAILROAD
	WETLAND/STREAM BUFFER
	FLOODPLAIN/FLOODWAY
	GAS VALVE
	REDUCER
	LATERAL WELD TEE
	PRESSURE CONTROL FITTING
	INSULATING FLANGE
	INSULATING FITTING
	CUT & CAP
	SIGN
	MANHOLE/CATCHBASIN
	POWER POLE
	GUY WIRE ANCHOR
	TRAFFIC SIGNAL
	TRAFFIC SIGNAL BOX
	WETLAND

PREPARED BY:								PREPARED FOR:		CRAWFORD LINE REPLACEMENT - PHASE 3 MWRD CONSTRUCTION NOTES MIDLOTHIAN & MARKHAM, IL										
 333 South Wabash Avenue, Suite 2901 Chicago, Illinois 60604 T 312.987.0061 F 312.987.0071								 Nicor Gas*												
DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.		1	2/24/2023	JV	ISSUE FOR BID			LS	DK	1844 FERRY RD. NAPERVILLE, IL 60563 (888) 642-6748		COUNTY	TOWNSHIP	TOWN	TIER	RANGE	1/4 SECTION	PROJECT ID	WORK ORDER NO.	NICOR JOB NO.
REV	DATE	BY	DESCRIPTION			CK.	APP.			COOK	BREMEN	MIDLOTHIAN, MARKHAM	36N	13E 3PM	143	11013014	120378/320378	TC266		
REVISIONS										DATE	SCALE	ENGINEER	DRAWN BY	CORROSION	CHECKED BY	APPROVED BY	DRAWING FILE NO.	SHEET NO.		
											N.T.S.	J. VOTAVA	J. RUFFOLO	L. SOJA	D. KOWALEWSKI	E15143N-	4 of 53			





SYMBOL LEGEND	
	PURGE END (GCS 209/708)
	ANODE (GCS 513/514)
	LATERAL TEE (GCS 210 21-33, 720, 721)
	PRESSURE CNTL. FTG. (GCS 21038/39)
	TRANSITION FITTING (GCS 703)
	VALVE - GENERAL
	REDUCER (GMS 308 & 336)
	INS. COUPLING (EC1)
	TIN WHISTLE (GMS 6382, 3. 4)
	DUAL 5' X 5' VAULT
	CUT AND CAP (GCS 849)
	RETIRE MAIN (GCS 849)
	EXCAVATE AREA (GCS 870)
	TREE
	INSULATOR FLANGE
	ELECTRICAL TEST STATION
	RECTIFIED MAIN
	FLOODPLAIN

PREPARED BY:

**MILHOUSE**

333 South Wabash Avenue, Suite 2901  
Chicago, Illinois 60604  
T 312.987.0061  
F 312.987.0071

DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

REV	DATE	BY	DESCRIPTION	CK.	APP.
1	2/24/2023	JV	ISSUE FOR BID	LS	DK
REVISIONS					

PREPARED FOR:

1844 FERRY RD.  
NAPERVILLE, IL 60563  
(888) 642-6748

**CRAWFORD LINE REPLACEMENT - PHASE 3  
RETIREMENT SITE PLAN & SYMBOL LEGEND  
MIDLOTHIAN & MARKHAM , IL**

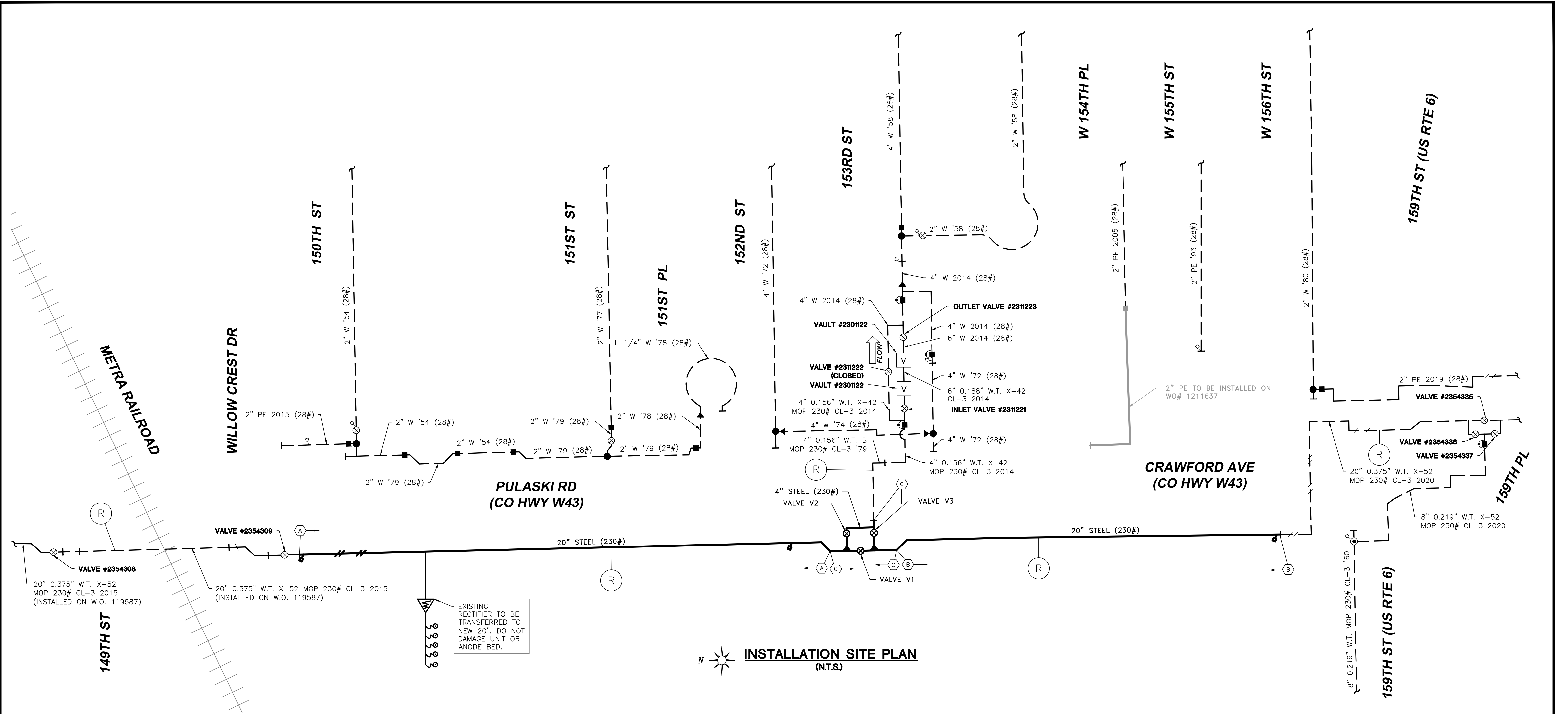
COUNTY	TOWNSHIP	TOWN	TIER	RANGE	1/4 SECTION	PROJECT ID	WORK ORDER NO.	NICOR JOB NO.
COOK	BREMEN	MIDLOTHIAN, MARKHAM	36N	13E	3PM	11013014	120379/320378	TC266
DATE	SCALE	CORROSION	CHECKED BY	APPROVED BY	DRAWING FILE NO.	SHEET NO.		
	N.T.S.	J. VOTAVA	J. RUFFOLO	A. GERVASIO	L. SOJA	D. KOWALEWSKI	E15143N-	5 OF 53



**CAUTION: EXISTING 20" STEEL 230# MOP SYSTEM GAS MAINS ARE CATHODICALLY PROTECTED BY AN IMPRESSED CURRENT SYSTEM. CONTACT NICOR GAS CORROSION (815) 754-3386 TO TEMPORARILY SHUT OFF RECTIFIER(S) IF NEEDED.**

**RECTIFIER LOCATION:**  
#610: 41.619551, -87.717988 (MIDLOTHIAN)





TEST SECTION			DESCRIPTION				LEAK TEST PER GCS 887				STRENGTH TEST PER GCS 888						WELD INSPECTION PER GCS 861			FIELD RECORD PER GCS 860			
SECTION	MOP	TYPE	TOTAL LENGTH	DIA	MAT'L	PAGE	TEST PRESSURE (PSI)	PRIOR TO STRENGTH	COMB W/ STRENGTH	MIN HOURS	TEST PRESSURE (PSI)	% SMYS AT TEST		TEST MEDIUM	WATER* (GALLONS)	ALLOWABLE ΔP (PSI) (>60# SYS)	MIN HOURS	VISUAL	RADIOGRAPHIC (%)	OTHERS	SECTION	DIA	PIPE IDENTIFICATION "DATA CODE"-STEEL MAIN ONLY
												PIPE	FITTINGS										
(A)	230	1	2807'	20"	STL	12-15	100	-	X	2**	345*	17.7-23.1	17.7-23.1	-	42,509	-	8	<input type="checkbox"/>	100%	<input type="checkbox"/>	(A)	20"	
(B)	230	1	2133'	20"	STL	15-16	100	-	X	2**	345*	17.7-23.1	17.7-23.1	-	32,302	-	8	<input type="checkbox"/>	100%	<input type="checkbox"/>	(B)	20"	
(C)	230	1	40'	20"	STL	15	100	X	-	5	345*	17.7-23.1	17.7-23.1	X	-	-	1	<input type="checkbox"/>	100%	<input type="checkbox"/>	(C)	20"	
			-	8"	STL							-	8.9-11.6			-		<input checked="" type="checkbox"/>	-	<input type="checkbox"/>		8"	
			50'	4"	STL							9.6-12.5	6.3-8.2			-		<input checked="" type="checkbox"/>	-	<input type="checkbox"/>		4"	

\* CONFIRM ELEVATION CHANGE TO ENSURE ENTIRE LENGTH OF PROPOSED PIPE IS TESTED TO REQUIRED MINIMUM. TEST GAUGE TO BE AT HIGHEST PIPE ELEVATION. LOCATION TO BE DETERMINED IN FIELD AT TIME OF CONSTRUCTION.

\*\* STABILIZATION OF TEST MEDIUM PRIOR TO COMBINED TEST (LEAK AND STRENGTH) IS REQUIRED. AFTER STABILIZATION, BUT PRIOR TO COMBINED TEST, HOLD PRESSURE AT 100 PSIG MINIMUM FOR 2 HOURS AND RECORD PRESSURE ON CHART.



CAUTION: EXISTING 20" STEEL 230# MOP SYSTEM GAS MAINS ARE CATHODICALLY PROTECTED BY AN IMPRESSED CURRENT SYSTEM. CONTACT NICOR GAS CORROSION (815) 754-3386 TO TEMPORARILY SHUT OFF RECTIFIER(S) IF NEEDED.

RECTIFIER LOCATION:  
#610: 41.619551, -87.717988 (MIDLOTHIAN)

PREPARED BY:  
**MILHOUSE**  
333 South Wabash Avenue, Suite 2901  
Chicago, Illinois 60604  
T 312.987.0061  
F 312.987.0071

DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

REV	DATE	BY	DESCRIPTION	CK.	APP.
1	2/24/2023	JV	ISSUE FOR BID	LS	DK

REVISIONS

PREPARED FOR:  
**Nicor Gas**

1844 FERRY RD.  
NAPERVILLE, IL 60563  
(888) 642-6748

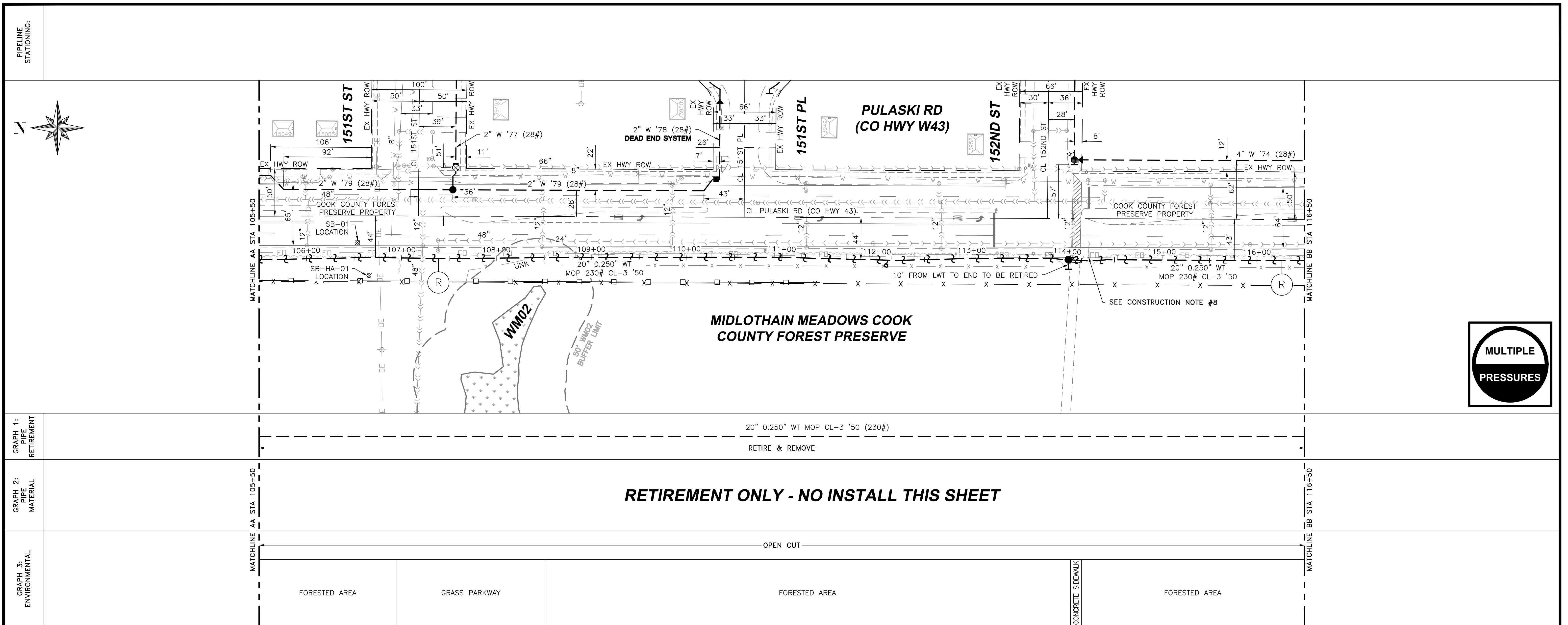
CRAWFORD LINE REPLACEMENT - PHASE 3  
INSTALLATION SITE PLAN & TEST DATA TABLE  
MIDLOTHIAN & MARKHAM , IL

COUNTY	TOWNSHIP	TOWN	TIER	RANGE	1/4 SECTION	PROJECT ID	WORK ORDER NO.	NICOR JOB NO.
COOK	BREMEN	MIDLOTHIAN, MARKHAM	36N	13E	3PM	11013014	120379/320378	TC266
DATE	SCALE	ENGINEER	DRAWN BY	CORROSION	CHECKED BY	APPROVED BY	DRAWING FILE NO.	SHEET NO.
	N.T.S.	J. VOTAVA	J. RUFFOLO	A. GERVASIO	L. SOJA	D. KOWALEWSKI	E15143N-	6 OF 53





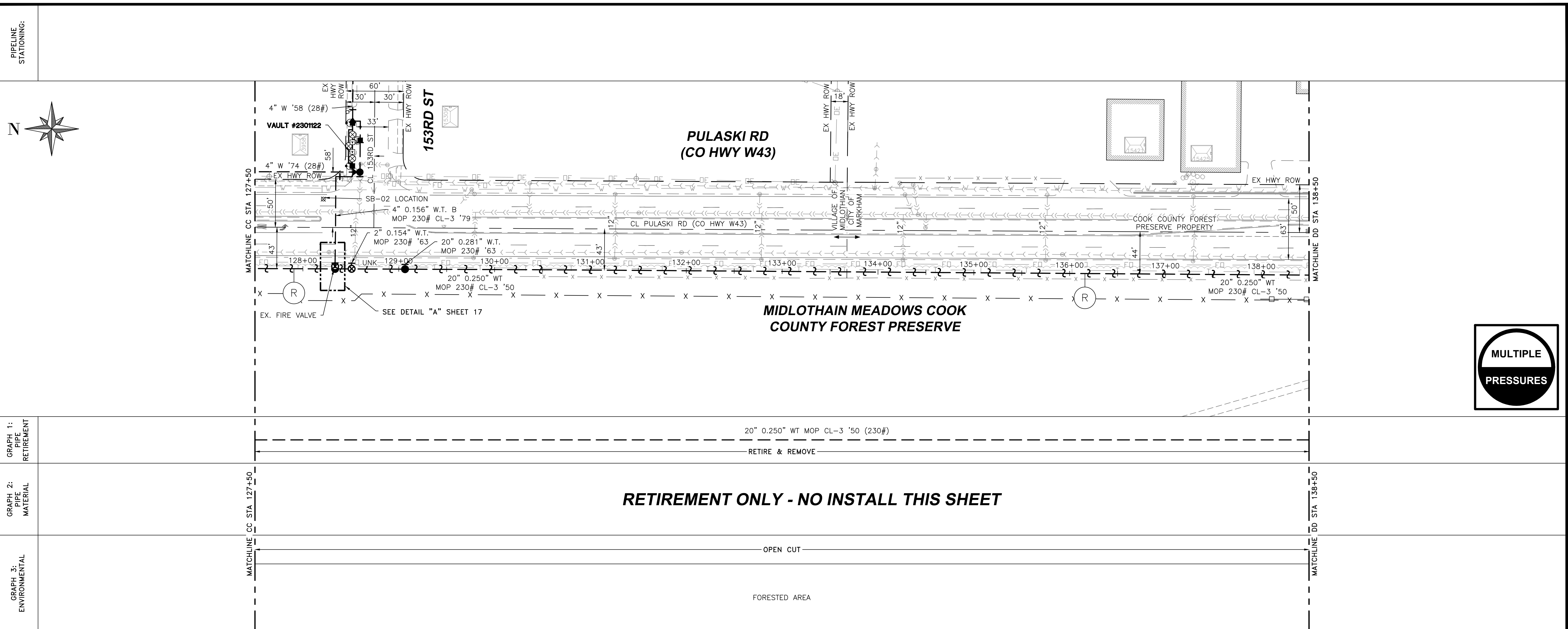




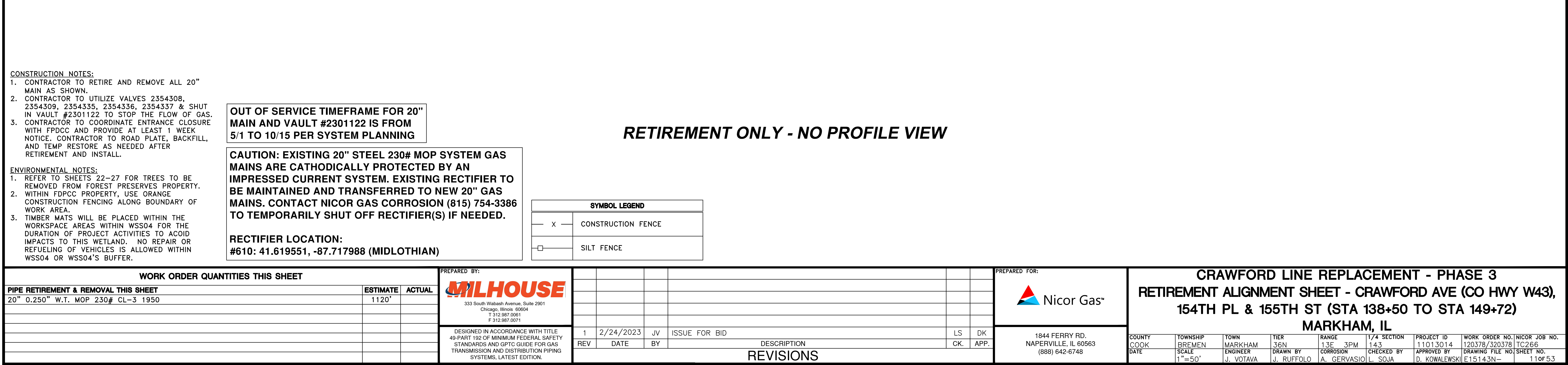








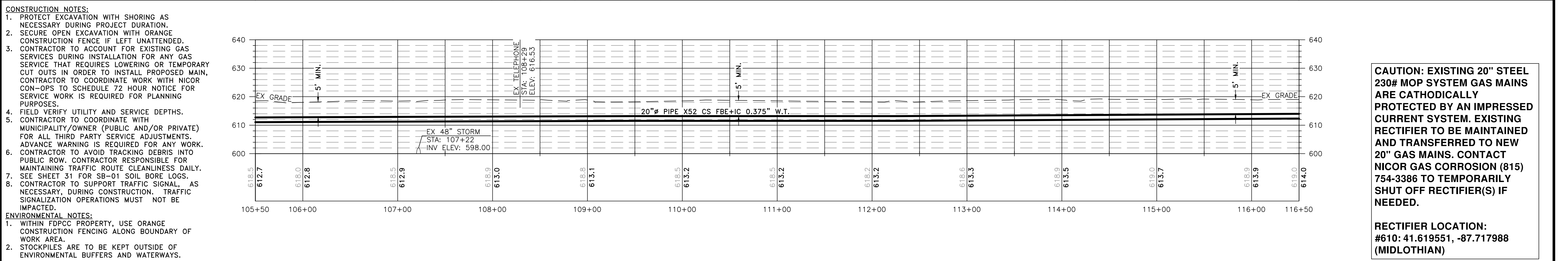
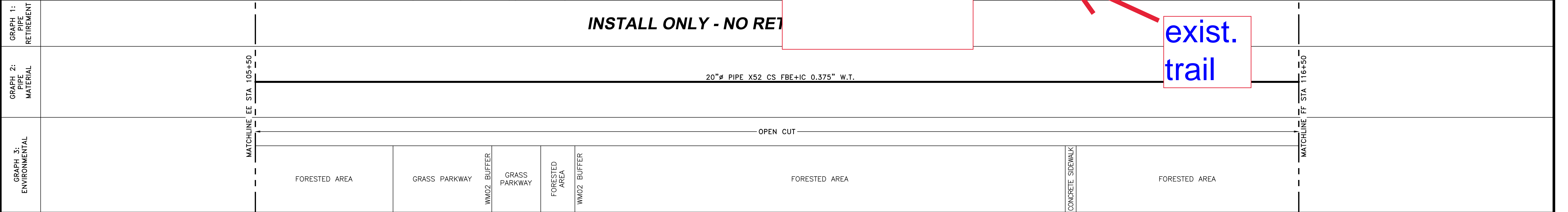
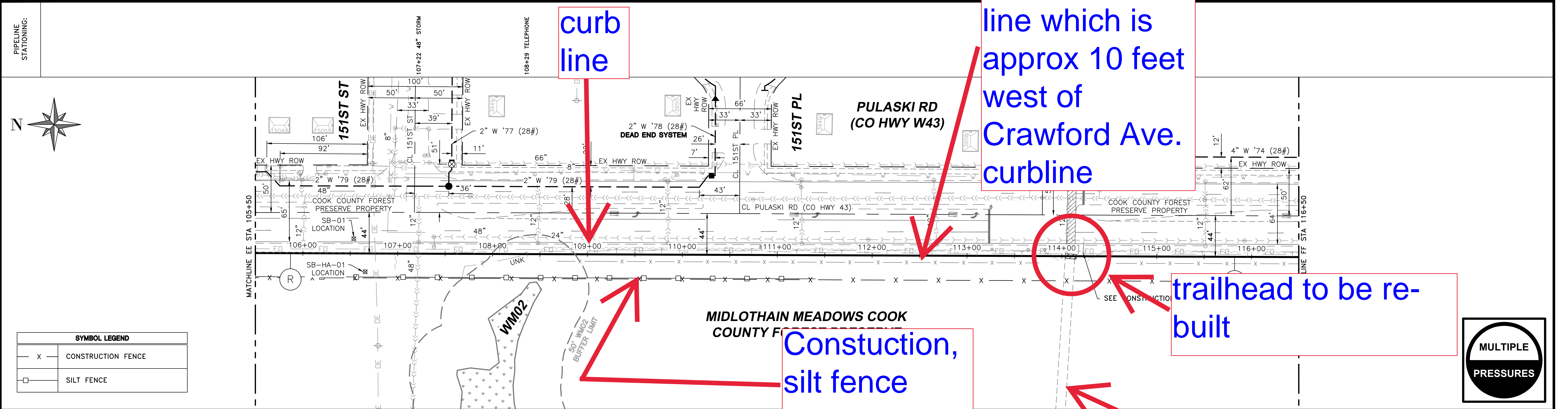














WORK ORDER QUANTITIES THIS SHEET				PREPARED BY:				PREPARED FOR:				CRAWFORD LINE REPLACEMENT - PHASE 3 INSTALLATION ALIGNMENT SHEET - PULASKI RD (CO HWY W43), 151ST ST, 151ST PL & 152ND ST (STA 105+50 TO STA 116+50) MIDLOTHIAN, IL																			
PIPE INSTALLATION THIS SHEET				ESTIMATE	ACTUAL									COUNTY		TOWNSHIP		TOWN		TIER		RANGE		1/4 SECTION		PROJECT ID		WORK ORDER NO.		NICOR JOB NO.	
20"Ø PIPE X52 CS FBE+IC 0.375" W.T.				1100'		333 South Wabash Avenue, Suite 2901 Chicago, Illinois 60604 T 312.987.0061 F 312.987.0071				1844 FERRY RD. NAPERVILLE, IL 60563 (888) 642-6748				COOK		BREMEN		MIDLOTHIAN		36N		13E 3PM		143		11013014		120378/320378		TC266	
						DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.				1 2/24/2023 JV ISSUE FOR BID				LS		DK								CHECKED BY		APPROVED BY		DRAWING FILE NO.		SHEET NO.	
										REV DATE BY DESCRIPTION CK. APP.				CK.		DK.								D. KOWALEWSKI		D. KOWALEWSKI		E1514.3N-		13 OF 53	
										REVISIONS																					





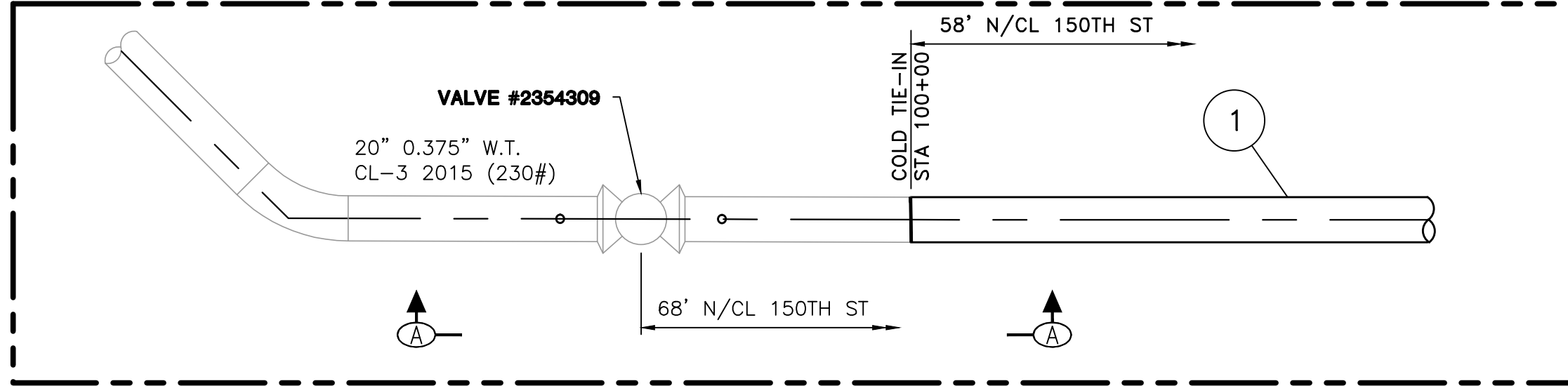




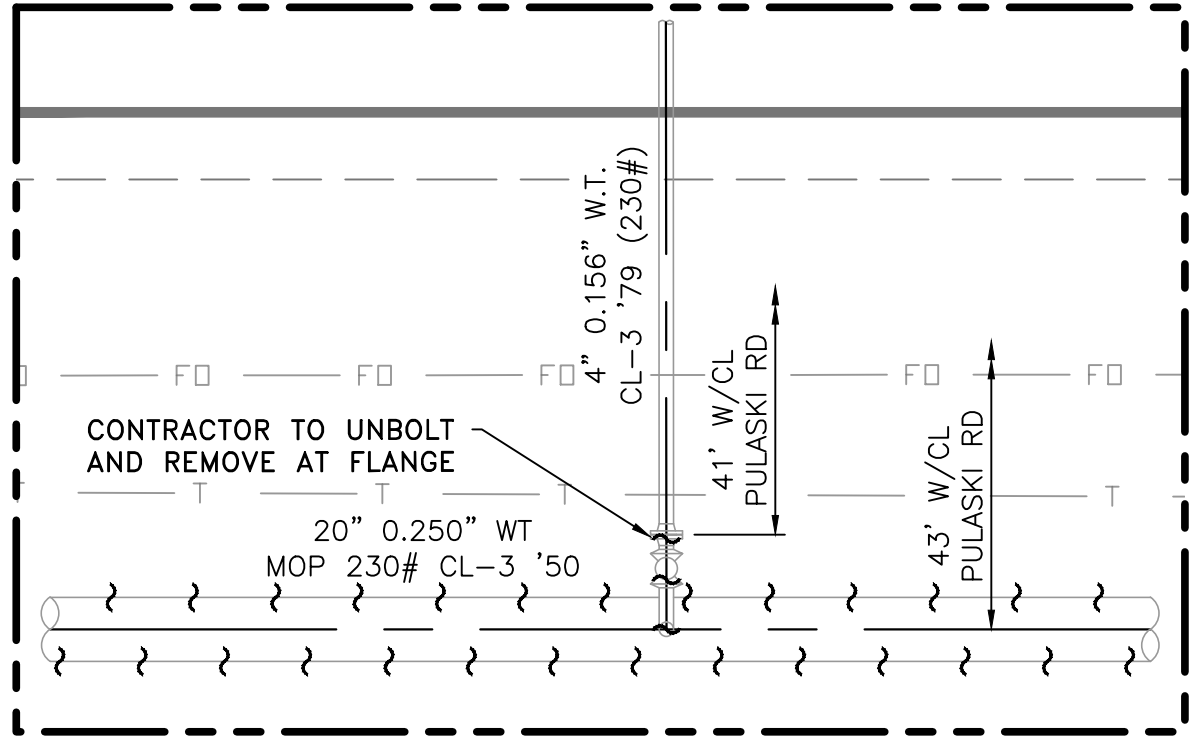




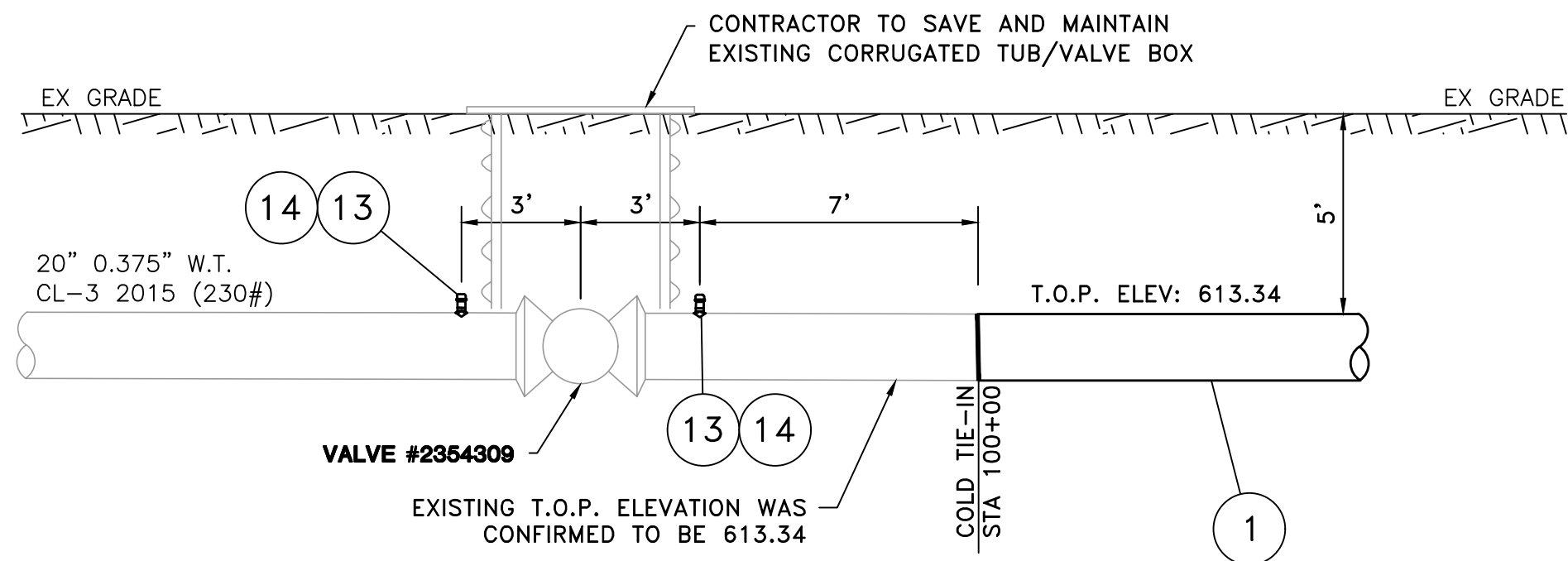




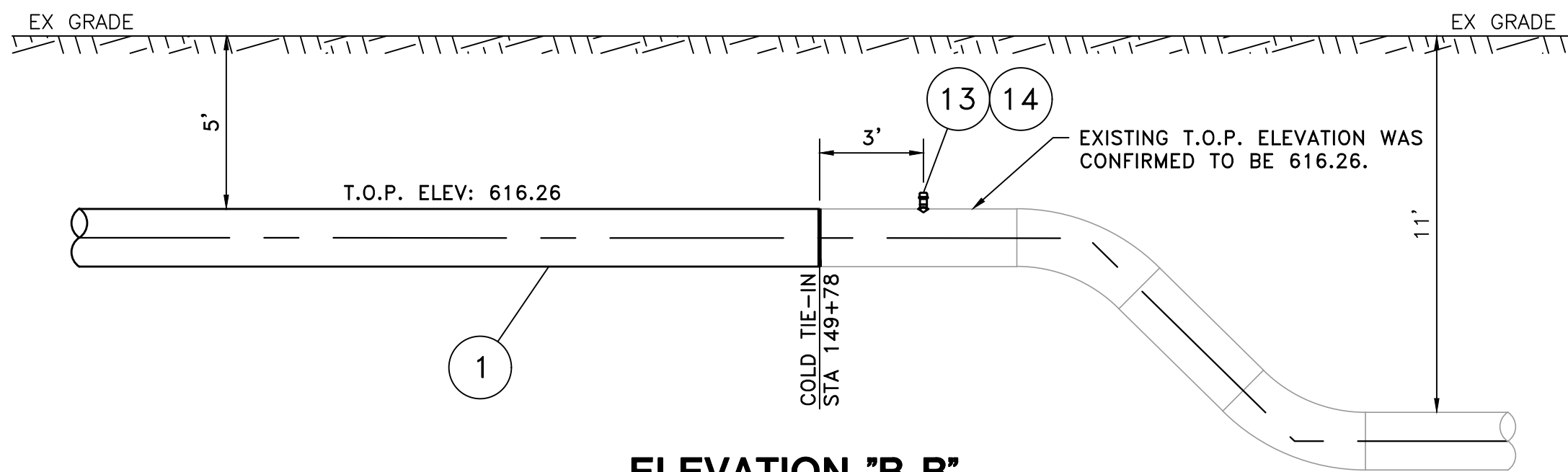
**NORTH TIE-IN DETAIL**  
(SCALE: 1"=5')



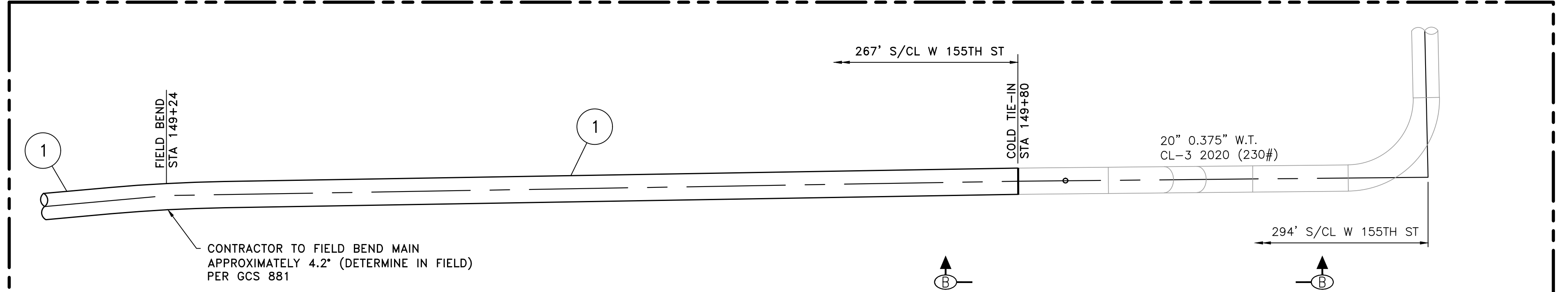
**DETAIL "A"**  
(SCALE: 1"=5')



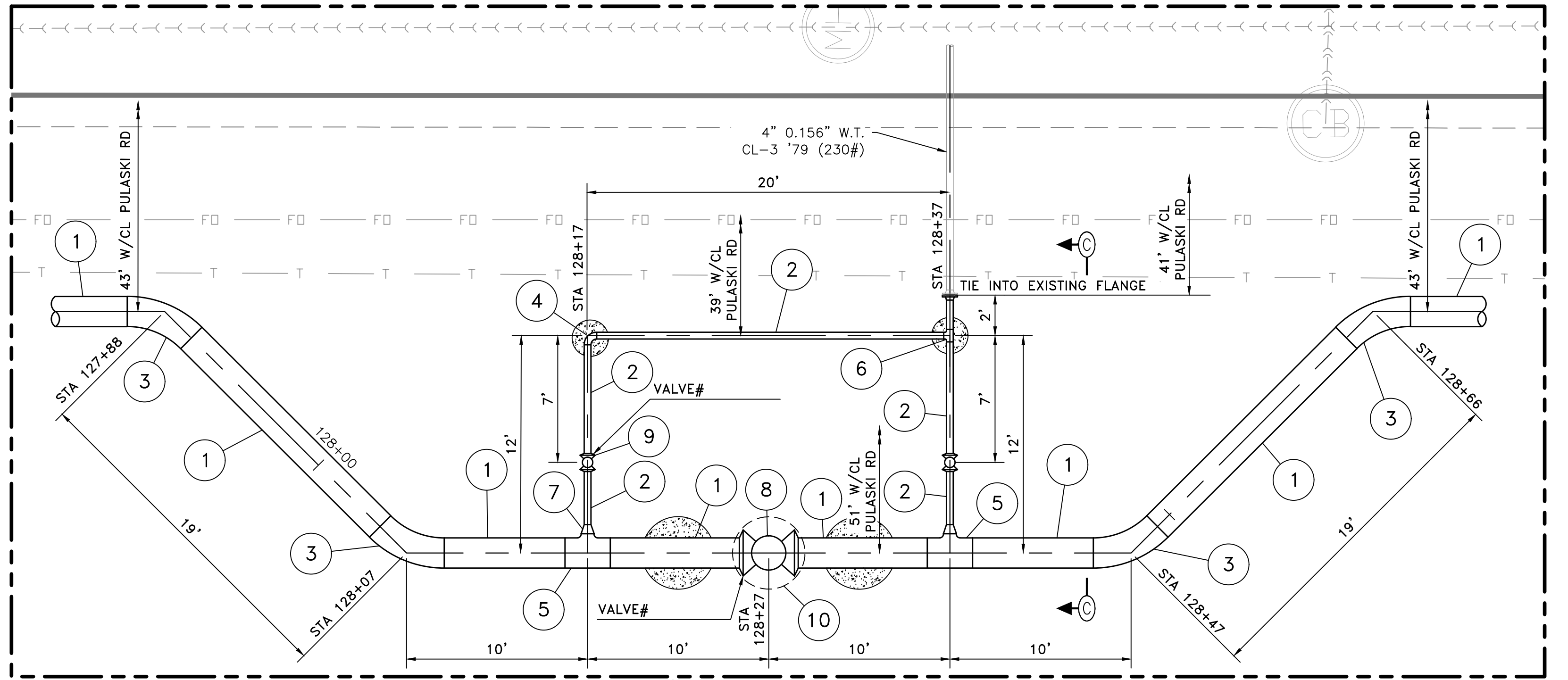
**ELEVATION "A-A"**  
(SCALE: 1/4"=1'-0")



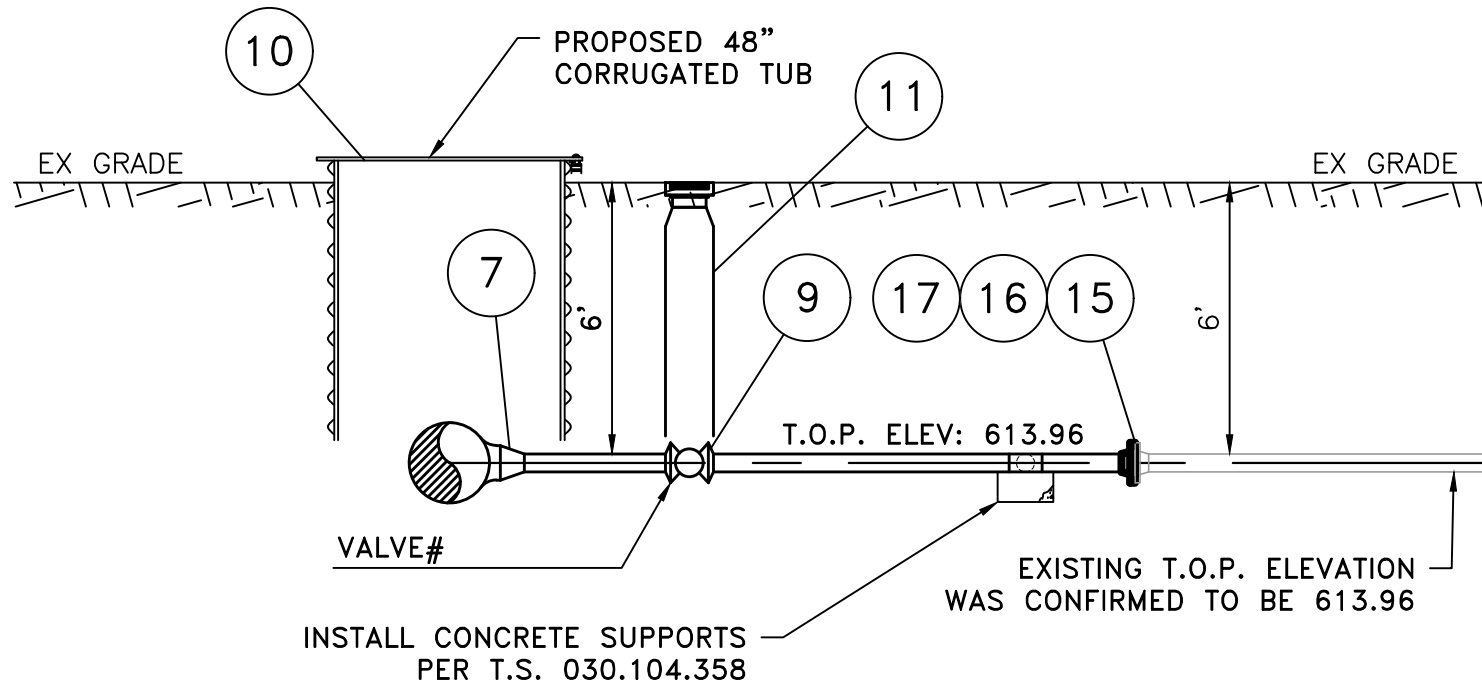
**ELEVATION "B-B"**  
(SCALE: 1/4"=1'-0")



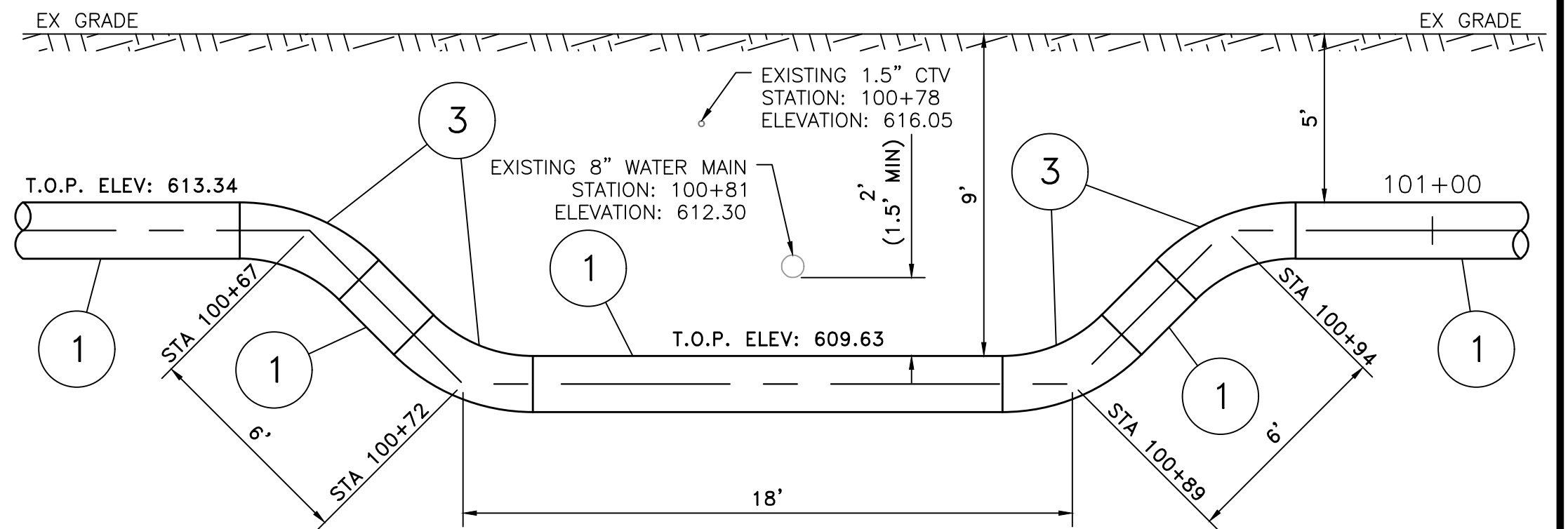
**SOUTH TIE-IN DETAIL**  
(SCALE: 1"=5')



**DETAIL "B"**  
(SCALE: 1"=5')



**ELEVATION "C-C"**  
(SCALE: 1/4"=1'-0")



**ELEVATION "D-D"**  
(SCALE: 1/4"=1'-0")

REFER TO SHEET 10 FOR DETAIL "A" PLAN VIEW  
REFER TO SHEET 12 FOR NORTH TIE-IN AND ELEVATION "D-D" PLAN VIEW  
REFER TO SHEET 15 FOR DETAIL "B" PLAN VIEW  
REFER TO SHEET 16 FOR SOUTH TIE-IN PLAN VIEW  
REFER TO SHEET 20 FOR BILL OF MATERIAL

PREPARED BY:

**MILHOUSE**

333 South Wabash Avenue, Suite 2901  
Chicago, Illinois 60604  
T 312.987.0061  
F 312.987.0071

DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

REV	DATE	BY	DESCRIPTION	LS	DK	CK	APP.
1	2/24/2023	JV	ISSUE FOR BID				
REVISIONS							

PREPARED FOR:

**Nicor Gas**

1844 FERRY RD.  
NAPERVILLE, IL 60563  
(888) 642-6748

**CRAWFORD LINE REPLACEMENT - PHASE 3**  
**TIE-IN DETAILS, DETAIL "A" TO "B" & ELEVATIONS "A-A" TO "D-D"**  
**MIDLOTHIAN, IL**

COUNTY COOK	TOWNSHIP MIDLOTHIAN	TOWN MIDLOTHIAN	TIER 36N	RANGE 13E	SECTION 3PM	1/4 SECTION CORROSION	PROJECT ID 11013014	WORK ORDER NO. 120379/320378	NICOR JOB NO. TC266
DATE	SCALE AS NOTED	ENGINEER J. VOTAVA	DRAWN BY J. RUFFOLO	CHECKED BY A. GERVASIO	L. SOJA	APPROVED BY D. KOWALEWSKI	DRAWING FILE NO. E15143N-	SHEET NO. 17 OF 53	



CONCRETE SPECIFICATION

1.0 GENERAL

CONCRETE USED FOR CONSTRUCTION OF NICOR GAS FACILITIES WILL CONFORM TO THE FOLLOWING SPECIFICATIONS:

2.0 READY MIXED CONCRETE

READY MIXED CONCRETE SHALL CONFORM TO ASTM C-94 (LATEST EDITION) STANDARD SPECIFICATIONS FOR READY MIXED CONCRETE.

2.1 CEMENT: ASTM C150 TYPE I

2.3 QUALITY OF CONCRETE:

THE CONTRACTOR SHALL PROVIDE 3000 PSI CONCRETE MINIMUM. OR A 6 BAG MIX WITH 3/4" AGGREGATE MAXIMUM IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE STANDARD 613 (LATEST EDITION).

NO LARGER QUANTITIES SHALL BE HAND MIXED THAN ONE CU. FT. ON SITE WITH PERMISSION OF THE INSPECTOR. THE MIX SHALL CONFORM TO 1 PART CEMENT, 2 PARTS SAND, 3 PARTS AGGREGATE BY VOLUME.

4.0 FORMS

CONCRETE FORM WORK SHALL CONFORM TO ACI 347 (LATEST EDITION).

5.0 EARTHFORM

WHEN SPECIFIED UPON THE DRAWING THE CONTRACTOR MAY EARTHFORM; BUT IN NO CASE MAY THE CONTRACTOR EARTHFORM IN DISTURBED SOIL OR ABOVE FINAL GRADE.

6.0 FIELD INSPECTION

6.1 ALL CONCRETE INSTALLED IN THE FIELD SHALL BE ACCEPTABLE TO THE OWNER AND IN ACCORDANCE WITH ACI 301 (LATEST EDITION) FIELD REFERENCE MANUAL.

6.2 SAMPLING OF CONCRETE WILL BE PROVIDED BY THE OWNER. ALL TESTS SHALL BE MADE AT THE COST OF AND UNDER THE SUPERVISION OF THE OWNER.

7.0 CONSTRUCTION JOINTS

CONSTRUCTION JOINTS MAY BE INSTALLED ONLY AS SPECIFIED UPON THE DRAWINGS.

☒ INFORMATION HAS NOT BEEN PROVIDED BY THE CLIENT THAT WOULD REQUIRE THIS DESIGN TO ADDRESS WET OR CORROSIVE GAS CONDITIONS

☐ INFORMATION HAS BEEN PROVIDED BY THE CLIENT THAT REQUIRES THIS DESIGN TO ADDRESS WET OR CORROSIVE GAS CONDITIONS

CFR 192.476 - INTERNAL CORROSION CONTROL: DESIGN AND CONSTRUCTION OF TRANSMISSION LINE - FOR NICOR USE ONLY

1. IS WET OR CORROSIVE GAS EXPECTED IN THE PIPING?  
OR "CAN INTERNAL CORROSION BE A THREAT TO THIS PIPING?"

YES: ☐ NO: ☐

IF ANSWERED "YES", COMPLETE REMAINDER OF FORM

2. IS THE NEW/REVISED PIPING PIGGABLE?

YES: ☐ NO: ☐

3. DESIGN MINIMIZES DEAD ENDS AND LOW AREAS?  
EXPLAIN:

YES: ☐ NO: ☐

4. WILL THE DESIGN CONFIGURATION ALLOW LIQUID WATER TO COLLECT?  
EXPLAIN:

YES: ☐ NO: ☐

5. ARE PIPE OR VESSELS INTERNALLY COATED TO PREVENT CORROSION?

YES: ☐ NO: ☐

6. IS THERE EQUIPMENT TO MONITOR GAS QUALITY?  
IF YES, DESCRIBE EQUIP. AND LOCATION:

YES: ☐ NO: ☐

7. ARE THERE SEASONAL DELIVERY PATTERNS ON NO-FLOW CONDITIONS ANTICIPATED?  
EXPLAIN:

YES: ☐ NO: ☐

8. ARE THERE FEATURES TO ALLOW SAMPLING OF GAS OR PIPELINE LIQUIDS?  
EXPLAIN:

YES: ☐ NO: ☐

9. ARE THERE DRIPS, SEPARATORS, FILTERS OR OTHER FEATURES FOR LIQUID REMOVAL?  
EXPLAIN:

YES: ☐ NO: ☐

10. WAS IT DEEMED IMPRACTICAL OR UNNECESSARY TO DESIGN FEATURES THAT WILL REDUCE THE RISK OF INTERNAL CORROSION?  
IF YES, EXPLAIN:

YES: ☐ NO: ☐

GENERAL COMMENTS:

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_

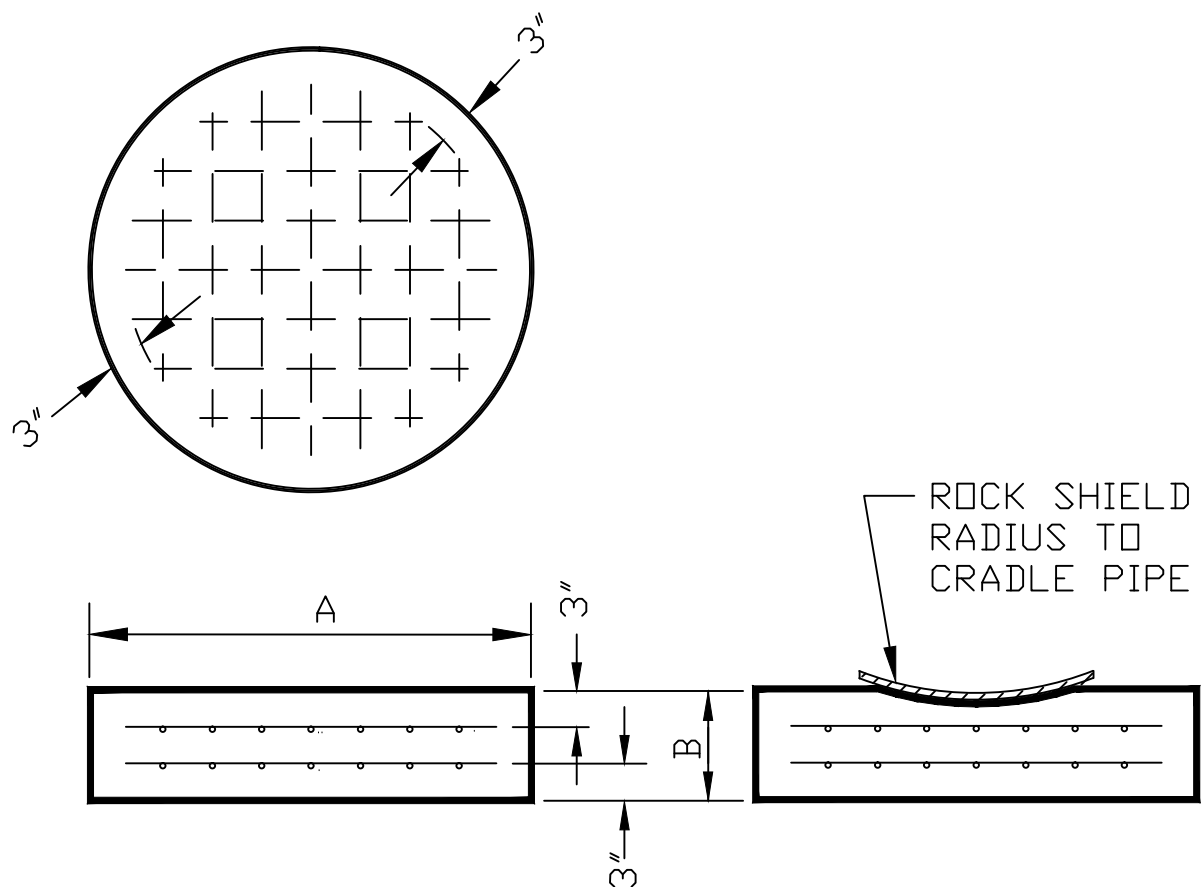
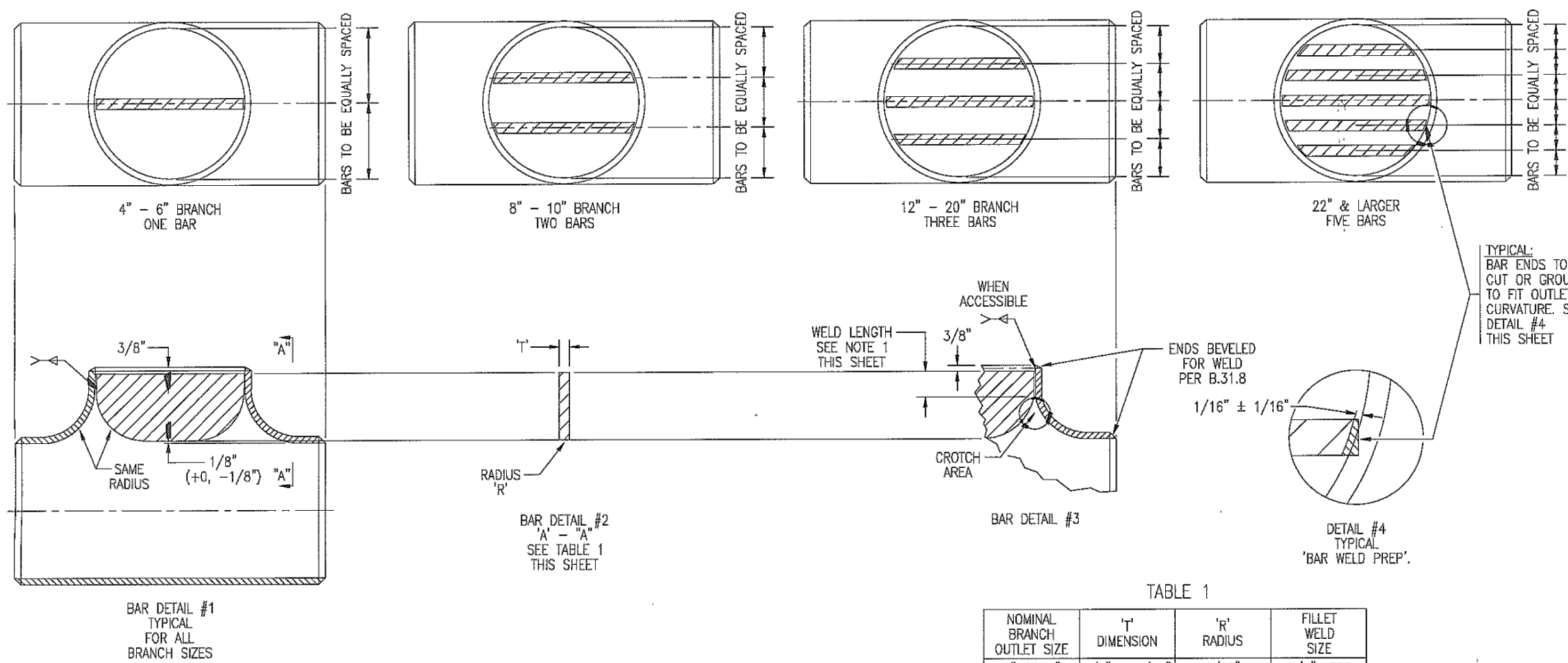


TABLE		
PIPE SIZE	A	B
30" 5'-0"		
24" 4'-0"		
20" 4'-0"		
18" 4'-0"		
16" 3'-0"		
12" 2'-0"		
10" 2'-0"		
8" 2'-0"		
6" 1'-6"		
2" 1'-0"		
1'-1" MINIMUM - BUT MAY BE VARIED IN FIELD BY CO. REPRESENTATIVE		
REINFORCING		
WIRE MESH		
6" X 6" W 7.5 X W 7.5		
WIRE MESH		
6" X 6" W 2.9 X W 2.9		
NONE		

APPROVED BY CAH



- NOTES:
1. FILLET WELD ALL OF THE STRAIGHT LENGTH OF EACH BAR, AVOID WELDING IN THE GROUCH AREA. SEE BAR DETAIL #3 WELD LENGTH.
  2. GUIDE BARS SHALL BE ASTM A501 OR ASTM A516.
  3. GUIDE BARS ARE TO BE EQUALLY SPACED.
  4. FILLET WELDS SHALL BE A MINIMUM OF TWO (2) PASSES MADE WITH E7018 ELECTRODES, FLUX CORE OR EQUIVALENT. PREPARE WELD AREA TO 200° F. MINIMUM.
  5. WHEN PERFORMING SCRAPER BAR WELDS, COMPLETE THE WELD ON ONE END AND ALLOW TO COOL TO AMBIENT TEMPERATURE BEFORE WELDING THE OTHER END.
  6. SCRAPER BAR WELDS SHALL BE NONDESTRUCTIVELY INSPECTED USING THE DYE PENETRANT METHOD PER ASTM E165 OR THE MAGNETIC PARTICLE METHOD PER ASTM E709.
  7. THE FITTING SHALL BE DESIGNED IN ACCORDANCE WITH CFR TITLE 49 PART 192, MINIMUM FEDERAL SAFETY STANDARDS, AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

BRANCH OUTLET SIZE	"T" DIMENSION	"R" RADIUS	FILLET WELD SIZE
4" - 10"	1/2" ± 1/16"	1/16"	3/8" LEGS
12" - 18"	1/2" ± 1/16"	1/16"	3/8" LEGS
20" - 24"	7/8" ± 1/16"	1/8"	5/8" LEGS
26" - 34"	7/8" ± 1/16"	1/8"	5/8" LEGS
36" - 42"	7/8" ± 1/16"	1/8"	5/8" LEGS
44" & LARGER	7/8" ± 1/16"	1/8"	5/8" LEGS

DESIGNED IN ACCORDANCE WITH TITLE 49, PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.



SCRAPER BAR SPECIFICATION FOR GRATED PIGGING TEE

DWG. 273471  
REV. 112  
APPROVED BY JH  
SCL. 1 OF 1

PREPARED BY:



333 South Wabash Avenue, Suite 2901  
Chicago, Illinois 60604  
T 312.987.0061  
F 312.987.0071

DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

REV	DATE	BY	DESCRIPTION	LS	DK	CK	APP.
1	2/24/2023	JV	ISSUE FOR BID				

REVISIONS

PREPARED FOR:



1844 FERRY RD.  
NAPERVILLE, IL 60563  
(888) 642-6748

CRAWFORD LINE REPLACEMENT - PHASE 3  
TECHNICAL SPECIFICATIONS  
MIDLOTHIAN, IL

COUNTY	TOWNSHIP	TOWN	TIER	RANGE	SCALE	1/4 SECTION	PROJECT ID	WORK ORDER NO.	NICOR JOB NO.
COOK	BREMEN	MIDLOTHIAN	36N	13E	3PM	143	11013014	120379/320378	TC266
DATE	AS NOTED	ENGINEER	DRAWN BY	CORROSION	CHECKED BY	APPROVED BY	DRAWING FILE NO.	SHEET NO.	
		J. VOTAVA	J. RUFFOLO	A. GERVASIO	L. SOJA	D. KOWALEWSKI	E15143N-	18 of 53	

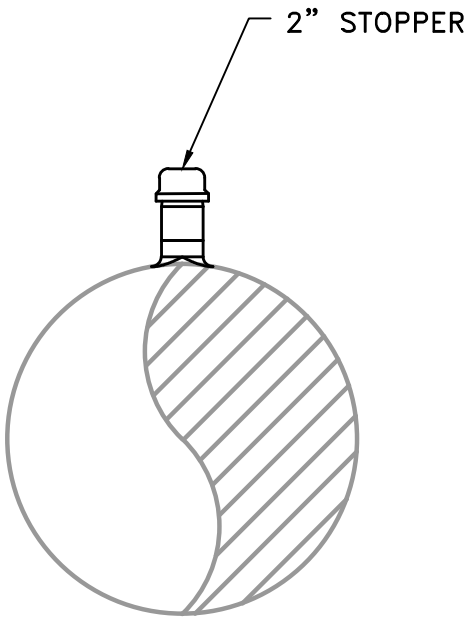
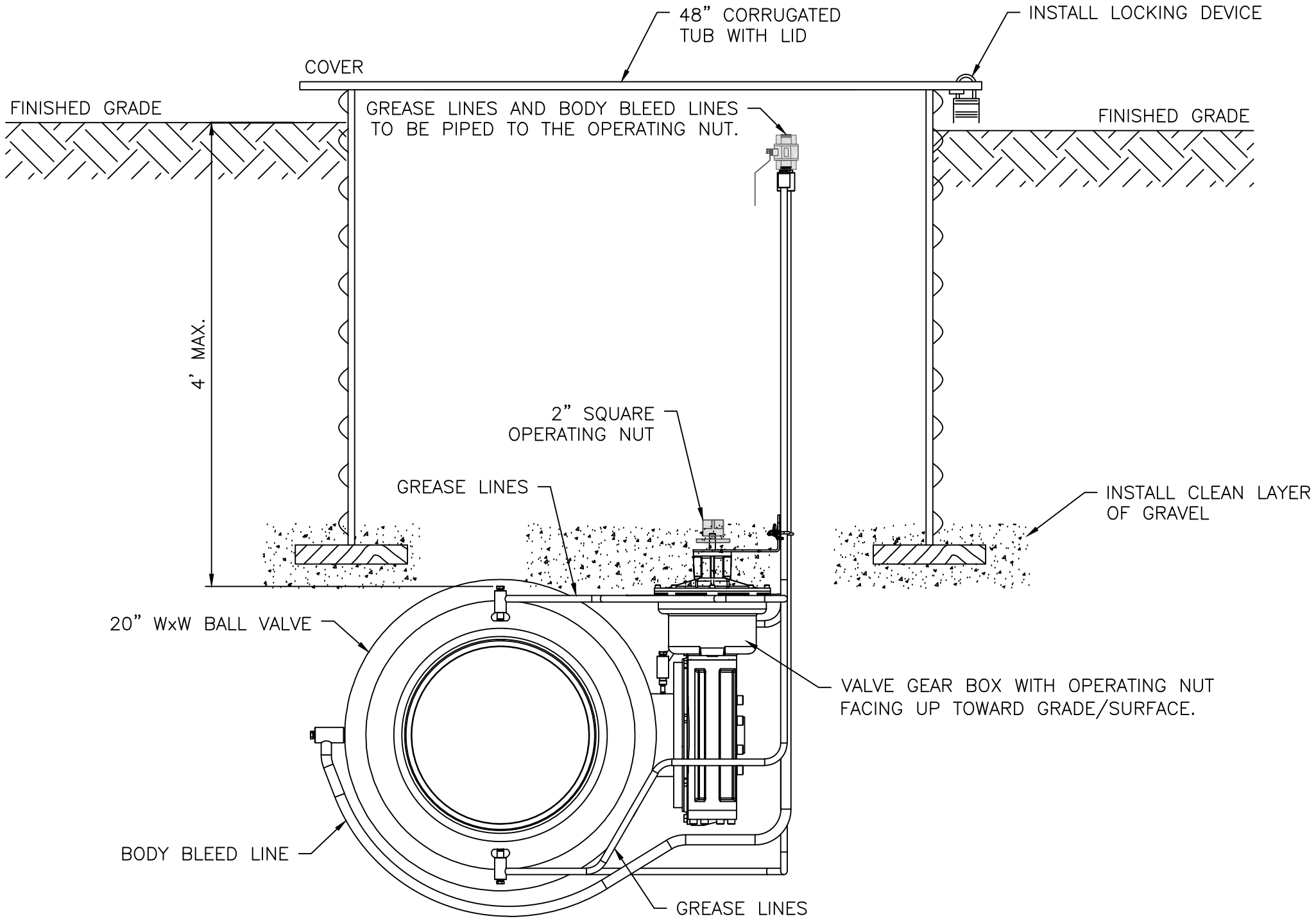
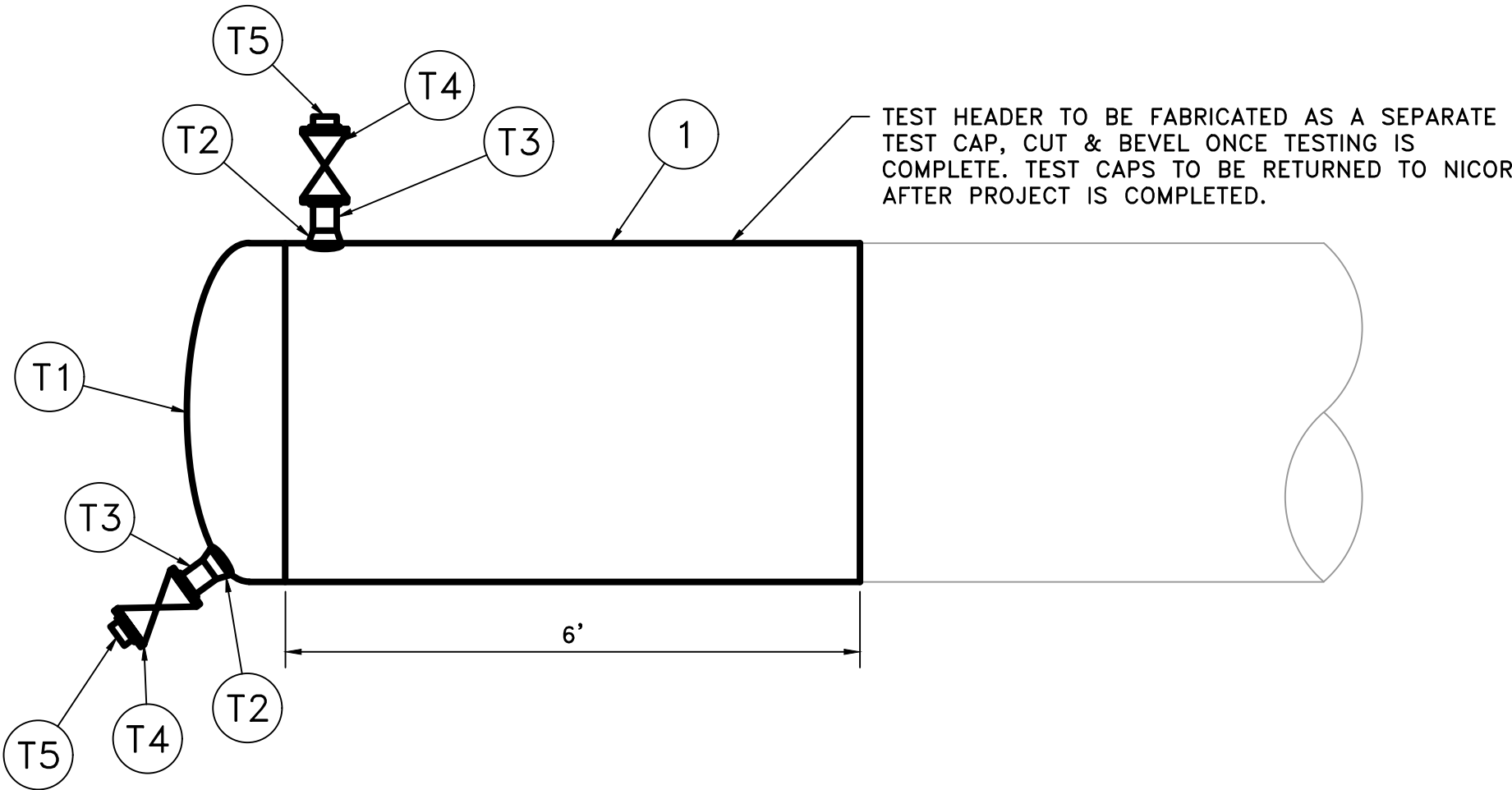
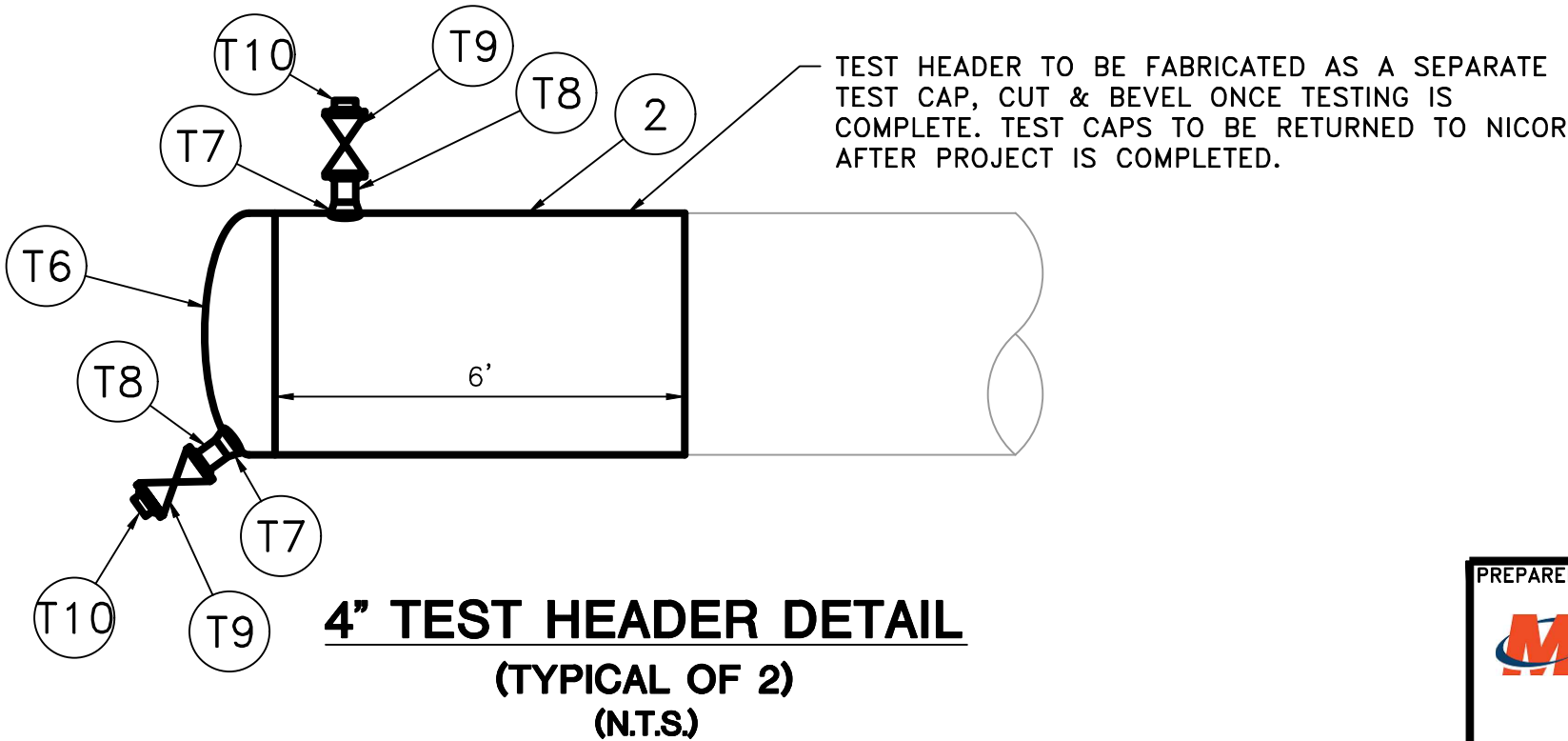







BILL OF MATERIAL				
CRAWFORD PHASE 3 - W.O. 120378/320378				
TAG ITEM NUMBER	QUANTITY	UNIT	DESCRIPTION	DESIGN PRESSURE
1	4980	FT	20" PIPE, 0.375" W.T., X-52, API 5L, PSL 2, FBE+IC, CS	975
2	50	FT	4" PIPE, 0.156" W.T., X-52, API 5L, PSL 2, FBE, CS	1802
3	8	EA	20" ELBOW, 45 DEGREE, 3R, SEGMENT A BLE, 0.375" W.T., Y-52, MSS-SP-75, PER NICOR T.S. 030.201.015	975
4	1	EA	4" ELBOW, 90 DEGREE, LR, 0.237" W.T., Y-52, MSS-SP-75, PER NICOR T.S. 030.201.015	2738
5	2	EA	20"x8" REDUCING TEE W/SCRAPER BARS, 20" 0.375" W.T. RUN, 8" 0.322 W.T. BRANCH, Y-52, MSS-SP-75 T.S. 030.201.015	975
6	1	EA	4" TEE, STRAIGHT, 0.237" W.T., Y-52, MSS-SP-75 T.S. 030.201.015	2738
7	2	EA	8"x4" CONCENTRIC REDUCER, 8" 0.322" W.T.x4" 0.237" W.T., Y-52, MSS-SP-75 T.S. 030.201.015	1941
8	1	EA	20" BALL VALVE, WxW, CL-300, COATED FOR BURIED SERVICE, 2" SQUARE OPERATING NUT, AND SEALED GEAR OPERATOR	740
9	2	EA	4" BALL VALVE, WxW, CL-300, COATED FOR BURIED SERVICE, 2" SQUARE OPERATING NUT, AND SEALED GEAR OPERATOR	740
10	1	EA	VAULT, 48", CORRUGATED STEEL PIPE WITH ALUMINUM COVER, PER GMS 639.6	-
11	2	EA	10" VALVE BOX W/COVER, SAFETY-CAP & TAG (624031, 624032, 624033, 624024, 568129, 568190)	-
12	AS REQ'D	EA	MARKER AND DECAL FOR PIPELINE LOCATING	-
13	3	EA	2" MUELLER STOPPER NIPPLE, COMPLETE WITH STEEL CAP PER GMS 343.15, MODEL #H-17491	1440
14	3	EA	20" RUN x 2" BRANCH, WELDOLET, 3000#, F.S., A-105, MSS-SP-97	3000
15	1	EA	4" FLANGE, CL 300, RFWN, BORE TO MATCH 4" 0.237" W.T. X-52 API-5L PSL 2 PIPE, ANSI B16.5, PER NICOR T.S. 030-201.125	740
16	1	EA	4" GASKET, CL 300, SPRIAL WOUND, FLEXITALLIC STYLE CGI W/316L SS WINDING, GRAPHITE FILLER, CS OUTER RING, 316L SS INNER RING, PER ASME B16.20	740
17	8	EA	3/4" x 4-1/2" STUD BOLT, B7, A-193, W/ 2 HH NUTS, 2H A-194 (4" CL 300 - 8 REQ'D PER ASSEMBLY)	-

TESTING MATERIALS FOR CRAWFORD PHASE 3 - W.O. 120378/320378			
TAG ITEM NUMBER	QUANTITY	UNIT	DESCRIPTION
T1	2	EA	20" WELD CAP. 0.375" W.T., Y-52, MSS-SP-75
T2	4	EA	20" RUN x 2" BRANCH, THREADOLET, 3000#, F.S., A-105, MSS-SP-97
T3	4	EA	2" x 3" LONG NIPPLE, XS, TBE, CS, CMLS, MNPT, A 733, PER B36.10 (SR#839374)
T4	4	EA	2" BALL VALVE FEMALE, NPT, 3000#
T5	4	EA	2" THREADED PLUG, 3000#, BLK, F.S., SQUARE HEAD, A 105 (SR# 834003)
T6	2	EA	4" WELD CAP. 0.237" W.T., Y-52, MSS-SP-75
T7	4	EA	4" RUN x 1" BRANCH, THREADOLET, 3000#, F.S., A-105, MSS-SP-97
T8	4	EA	1" x 3" LONG NIPPLE, XS, TBE, CS, CMLS, MNPT, A 733, PER B36.10 (SR#839374)
T9	4	EA	1" BALL VALVE FEMALE, NPT, 3000#
T10	4	EA	1" THREADED PLUG, 3000#, BLK, F.S., SQUARE HEAD, A 105 (SR# 834003)



PREPARED BY:								PREPARED FOR:		CRAWFORD LINE REPLACEMENT - PHASE 3 TEST HEADER DETAILS, BLOWOFF DETAIL & BILL OF MATERIAL MIDLOTHIAN, IL							
<div>MILHOUSE</div> <div>333 South Wabash Avenue, Suite 2901 Chicago, Illinois 60604 T 312.987.0061 F 312.987.0071</div>								<div> Nicor Gas™</div>									
DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.		1	2/24/2023	JV	ISSUE FOR BID			LS	DK	1844 FERRY RD. NAPERVILLE, IL 60563 (888) 642-6748							
		REV	DATE	BY	DESCRIPTION			CK.	APP.								
		REVISIONS															

COUNTY	TOWNSHIP	TOWN	TIER	RANGE	1/4 SECTION	PROJECT ID	WORK ORDER NO.	NICOR JOB NO.
COOK	BREMEN	MIDLOTHIAN	36N	13E 3PM	143	11013014	120378/320378	TC266
DATE	SCALE	ENGINEER	DRAWN BY	CORROSION	CHECKED BY	APPROVED BY	DRAWING FILE NO.	SHEET NO.
	N/A	J. VOTAVA	J. RUFFOLO	A. GERVASIO	L. SOJA	D. KOWALEWSKI	E15143N-	20 of 53