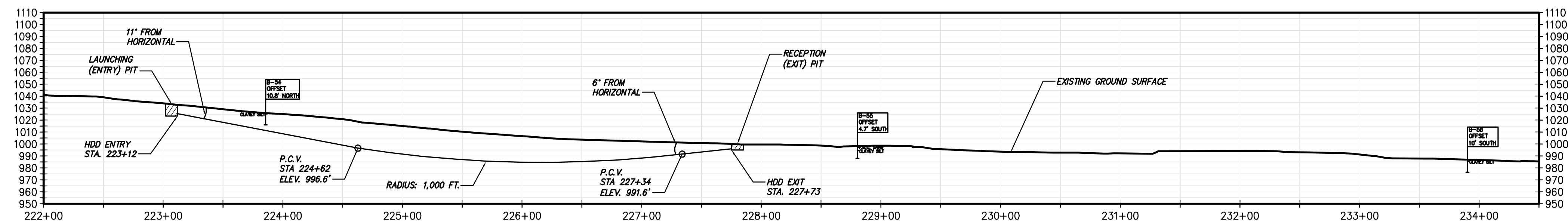


BETHANY PROPERTY CROSSING PLAN - 1" = 60'

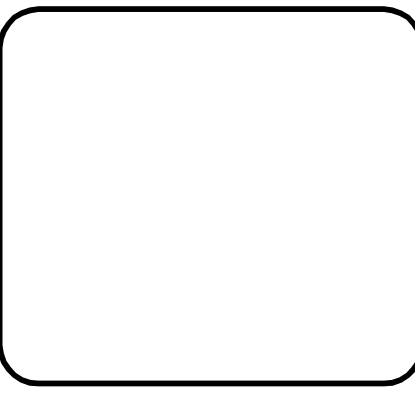


BETHANY PROPERTY CROSSING PROFILE - 1" = 60'

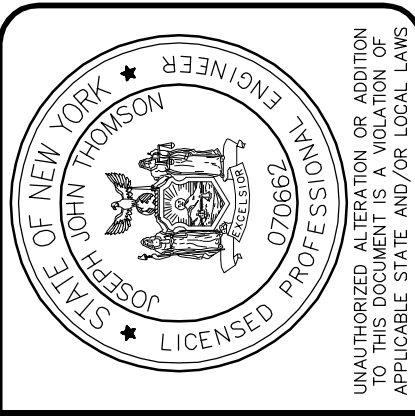
HORIZONTAL DIRECTIONAL DRILLING NOTES:

- TRENCHLESS CROSSING TO BE COMPLETED BY HORIZONTAL DIRECTIONAL DRILLING (HDD).
- THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE ACCURACY OF THE PLANS WITH RESPECT TO THE EXISTING SITE FEATURES, THE UTILITY LOCATIONS IN EITHER PLAN OR PROFILE, OR THE SIZE OF THE UTILITIES SHOWN. IN ADDITION, THE ENGINEER WILL NOT BE RESPONSIBLE FOR UTILITIES BROKEN OR DAMAGED DURING THE PROPOSED CONSTRUCTION.
- THE SUBSURFACE CONDITIONS ARE SHOWN FOR DISCUSSION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE AVAILABLE GEOTECHNICAL DATA AND CONFIRMING THE ACCURACY OF THIS INTERPRETATION. THE CONTRACTOR IS RESPONSIBLE TO PERFORM ADDITIONAL SUBSURFACE INVESTIGATIONS AS REQUIRED TO COMPLETE INSTALLATION AT NO COST TO THE OWNER.
- EXCAVATE AND EXPOSE ALL UTILITIES WITHIN 10 FEET OF CONSTRUCTION TO VERIFY LOCATION, AND TO PREVENT DAMAGE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING:
 - UTILITY CLEARANCE.
 - SITE ACCESS INCLUDING ANY POLICE ESCORTS THAT MAY BE REQUIRED BY PERMITTING AGENCIES.
 - DRILLING AND RECEIVING AREA ACCESS AND WORK SPACE.
 - ACCESS AND PERMITS FOR WATER WITHIN 1 MILE OF THE SITE AND ACCESS TO A DELIVERY ROUTE FROM THE WATER AND THE DRILL SITE.
 - PROVIDING SAFE ACCESS TO THE WORK SITE FOR OWNER'S REPRESENTATIVES.
 - REVIEW OF PROJECT PLANS AND DRAWINGS.
 - ALL LABOR, EQUIPMENT, AND MATERIALS INCLUDING STEEL CASING FOR THE CONSTRUCTION OF THE DRILL (IF NEEDED).
 - MOVING, WELDING, TESTING OF THE WELDED PIPE FOR COATING INTEGRITY, AND REPAIR OF COATING IF NECESSARY OF THE GAS PIPE. THE COATED PIPE WILL BE PROVIDED BY THE OWNER.
 - INSTALLATION OF A NEW HIGH PRESSURE GAS PIPELINE THROUGH HORIZONTAL DIRECTIONAL DRILLING.
- THE CONTRACTOR SHALL COMPLETE THE DRILL IN GENERAL ACCORDANCE WITH THE CONCEPTUAL DRILL PATH SHOWN ON THE DRAWINGS. THE DESIGN PROFILE INCLUDES AN 11-DEGREE ENTRY ANGLE, AND AN 6-DEGREE EXIT ANGLE. THE MINIMUM CLEARANCE BELOW TOP OF PAVEMENT/GROUND SURFACE IS TO BE 20 FEET AT ITS DEEPEST LOCATION BORE. MAXIMUM RADIUS OF CURVATURE SHALL BE 800 FEET. CONCEPTUAL ALIGNMENT SHOWN FOR INFORMATION PURPOSES. CONTRACTOR TO MAKE HIS OWN EVALUATION BASED UPON AVAILABLE TOOLS, EQUIPMENT, AND PIPE MATERIALS PROPOSED FOR USE IN BID PRICE AND GIVEN THE AVAILABLE SUBSURFACE CONDITIONS. INSTALLED PIPE ALIGNMENT SHALL BE WITHIN AN ALIGNMENT ZONE THAT IS A MAXIMUM OF 5' ABOVE AND 10' BELOW CONCEPTUAL ALIGNMENT, UNLESS APPROVED BY ENGINEER.
- SUBMIT FOR APPROVAL COMPLETE WORKING DRAWINGS SHOWING DETAILS OF THE PROPOSED METHOD OF CONSTRUCTION AND THE SEQUENCE OF OPERATIONS TO BE PERFORMED DURING CONSTRUCTION AT THE HDD CROSSING. DRAWINGS SHOWING PROPOSED WORK ZONE LAYOUT, INCLUDING EQUIPMENT, AND EROSION CONTROL. DETAILED DESCRIPTION OF PROJECTS ON WHICH THIS SYSTEM HAS BEEN SUCCESSFULLY USED INCLUDING THE NAMES, ADDRESSES AND TELEPHONE NUMBERS OF OWNER'S REPRESENTATIVES FOR THESE PROJECTS AS WELL AS LENGTH, DIAMETER, AND PIPE MATERIAL USED. A DESCRIPTION OF THE BORE TRACKING SYSTEM TO BE USED.
- PIPELINE: PROVIDED BY THE OWNER. PIPE WILL CONSIST OF 8 INCH DIAMETER STEEL X-52, 0.322" WT COATED WITH POWERCRETE OVER FBE. CONTRACTOR SHALL INSTALL COMPANY SUPPLIED POWERCRETE "J" KITS OR EQUAL PER MFG. INSTRUCTION.
- BORE WILL BE DRILLED FROM THE AREA SHOWN ON THE DRAWINGS AND WILL EXTEND TO THE RECEIVING AREA SHOWN, ALONG THE DRILL PATH SHOWN.
- THE WORK AREA IS LIMITED IN WIDTH AND LENGTH.
- CONTRACTOR TO PROVIDE AS-BUILT PLAN AND PROFILE AT COMPLETION OF PROJECT.
- USE WATER IN PIPE TO CONTROL BUOYANCY AND INTERNAL/EXTERNAL PRESSURE DIFFERENTIAL, AS NEEDED DURING INSTALLATION.
- PIPE TO BE SUPPORTED ON ROLLERS TO REDUCE FRICTION AND MINIMIZE DAMAGE, AS NEEDED DURING INSTALLATION.
- SELECTIVE CLEARING ZONE - CONTRACTOR SHALL LIMIT CLEARING TO 15 FEET WIDE AREA CENTERED OVER PIPELINE AND SHALL PROTECT AND MAINTAIN TREES OUTSIDE 15 FEET LIMIT BETWEEN RESIDENTIAL BACKYARDS AND CONSTRUCTION WORK ZONE, STATION 222+00 TO STATION 228+00.

No.	Submittal / Revision	App'd	By	Date
0	ISSUED FOR BID	JH	DDL	06/20/12
1	FINAL-ISSUED FOR BID	JH	SHW	8/1/12
2	FINAL-ISSUED FOR BID	JH	SHW	9/14/12



NYSEG
 GAS BUSINESS UNIT
 KIRKWOOD, N.Y.



Design: JIG
 Drawn: TRG
 Checked: JH

SENECA WEST PIPELINE
 INTERCONNECT
 BETHANY PROPERTY CROSSING
 PLAN AND PROFILE
 Issue Date: 04/2012
 Project No.: 22867
 Scale: AS SHOWN

FIGURE-2

File: V:\PROJECTS\NYK2\22867\CADD\LACAD\22867_HDD_PLAN AND PROFILE.DWG Layout: BETHANY
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