

Consolidated Edison Company of New York, Inc.

M29 Transmission Line Project

Exhibit 5

Design Drawings

EXHIBIT 5: DESIGN DRAWINGS

The requirements of this Exhibit, as specified at 16 NYCRR §86.6, are generally applicable to overhead transmission facilities. The proposed Project includes the installation of a primarily underground 345 kV high-pressure fluid-filled (HPFF pipe-type) transmission line, consisting of one feeder and associated manholes. The transmission line will be installed primarily within the curb-to-curb portion of the rights-of-way of public roadways. Accordingly, the requirements pertaining to design drawings showing the dimensions of structures, the material of construction, and the color and finish are not applicable to the proposed Project.

The design features of the Project transmission line, including typical cross-section diagrams of the required trench and manholes as well as cross-section diagrams of typical cable designs, are provided in Exhibit E-1, Description of Proposed Transmission Facilities. Figure 5-1 hereto shows a profile of the centerline of the proposed transmission line route with an exaggerated vertical scale (16 NYCRR § 86.6(c)). Further design details for the proposed transmission line and substation improvements will be provided as part of the Environmental Management and Construction Plan for this Project.

Design Standards

The transmission line and equipment additions to the Sprain Brook and Academy Substations will be designed to meet the New York Independent System Operator's ("NYISO") design criteria and Con Edison's Substation and Engineering Department Engineering Design Guideline Specification EI-2002, Rev. 3. Con Edison's guideline specification requires that a substation's components and systems shall meet and conform to all applicable ANSI, EIA, IEEE, NEMA and OSHA standards, as well as all Con Edison specifications and procedures. In addition, the proposed facilities will meet all guidelines or standards of the Association of Edison Illuminating Companies ("AEIC") Standard CS-2; and American Society of Testing and Materials ("ASTM") Standard B-3. System design will comply with applicable sections of the latest version of the National Electrical Code ("NEC") and National Electrical Safety Code ("NESC").

Figure 5-1. Centerline Profile

M29 Elevation Profile

