

STEP 2 – Preliminary Study Sites and Routes

3.0 STEP 2 – PRELIMINARY STUDY SITES AND ROUTES

3.1 Technical Siting Study

Step 2 involved the development and presentation of the preliminary study sites for the proposed substation and preliminary 138 kV transmission line study corridors. For the purposes of this discussion, and in accordance with the Study, preliminary routes are more appropriately referred to as preliminary study corridors.

3.1.1 Preliminary Substation Study Site and Route Development

As previously identified, ARCADIS had performed an intensive data collection effort for the development of the GIS geospatial database by acquiring various datasets or spatial coverages for each of the identified environmental siting criteria.

Stakeholders and agencies were contacted, and other public data sources were queried in an effort to develop a comprehensive database of information. More than 20 agencies or public entities were solicited for data acquisition. Electronic and hardcopy information was obtained. Hardcopy information was converted to electronic format. As data was developed, managed, and analyzed, hundreds of individual data files resulted. Each individual criterion became an accumulation of multiple data files, or layers. **Table 1** identified the types of data that were acquired. Again, each of the items identified actually represent a collection of data subsets.

The environmental siting criteria were then mapped. The following figures depict the opportunities, sensitivities, and a composite map of the criteria.

Figure 9 – Opportunities

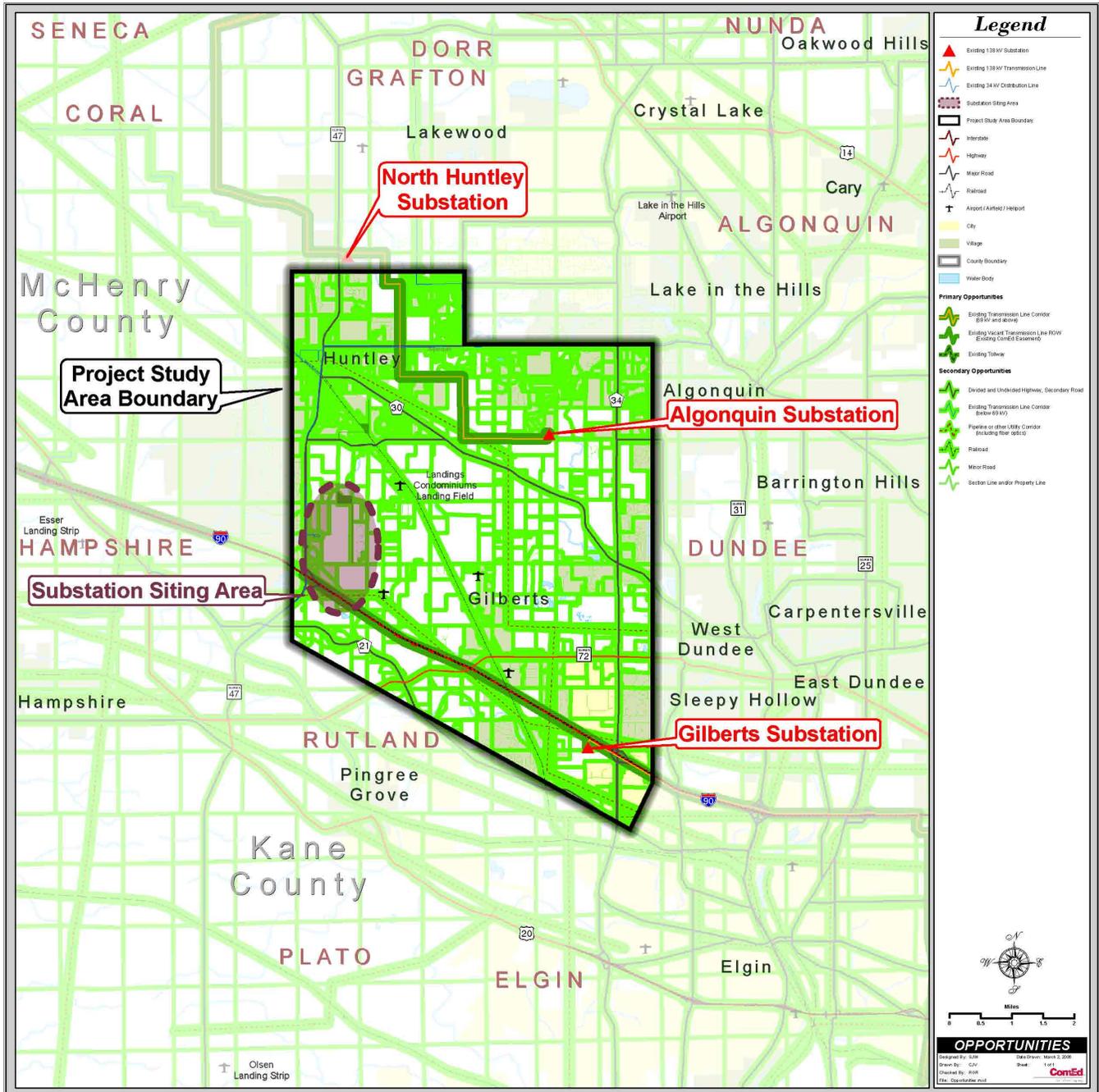


Figure 10 – Sensitivities

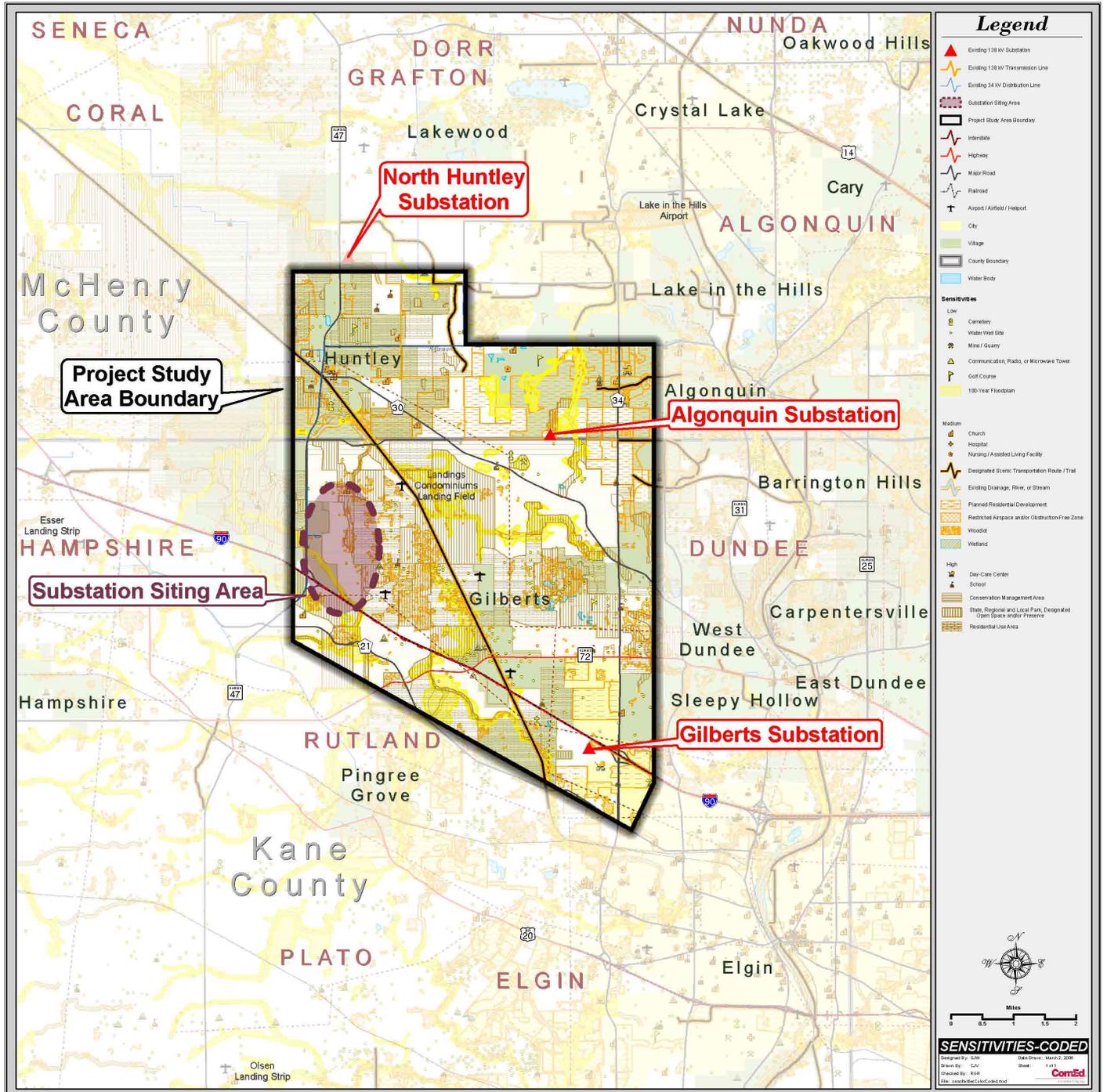
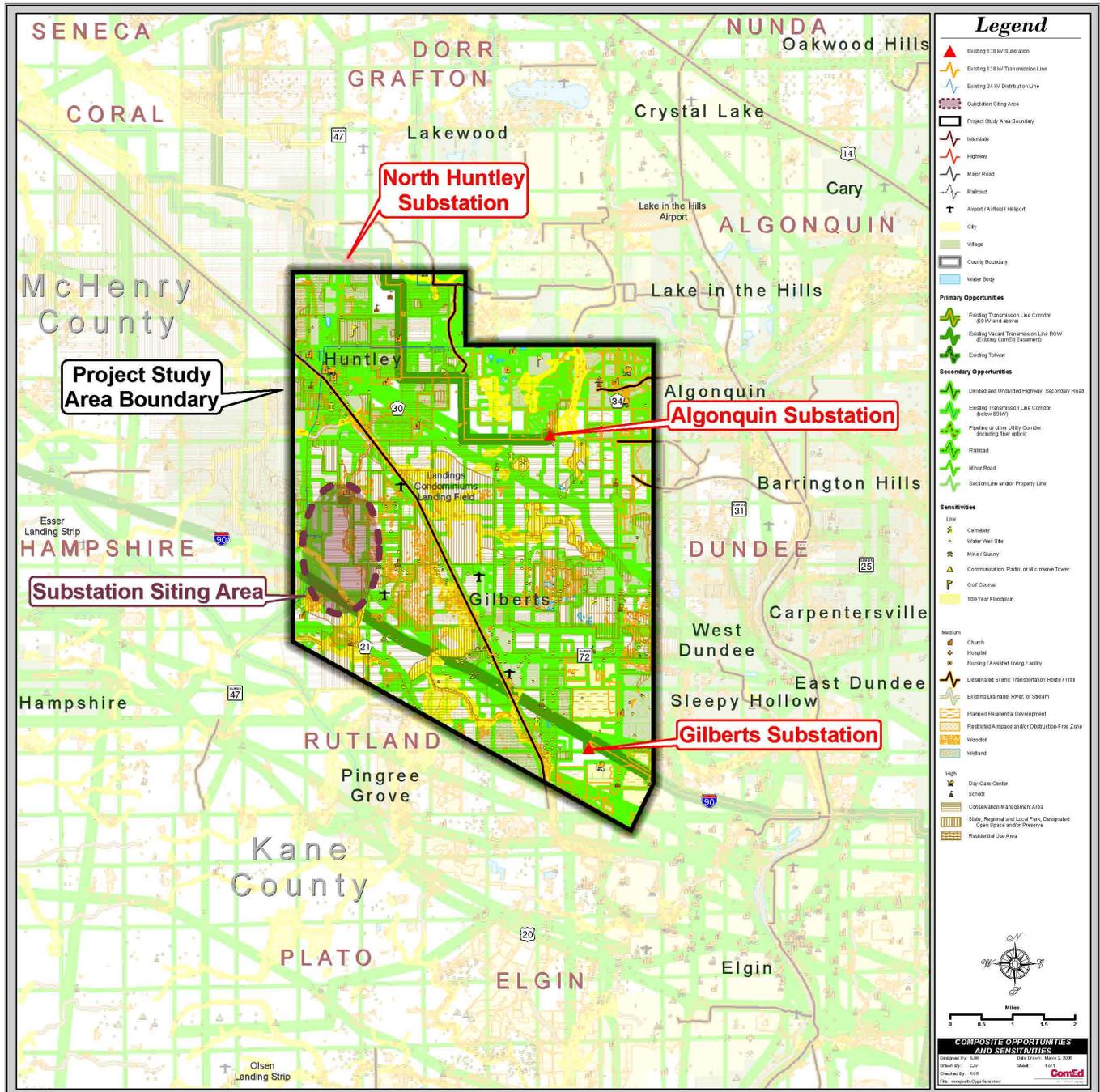


Figure 11 – Composite Opportunities and Sensitivities



Composite mapping facilitates the qualitative analysis of occurring opportunities in conjunction with occurring sensitivities. More than 200 individual opportunity segments were identified. Opportunities were segmented at each instance where two or more linear features diverged. Given the size of the study area, this approach demonstrated a concentrated, granular attention to detail for the fair analysis of all existing linear features or opportunities. Ultimately, opportunities that 1) have a lesser overall occurrence of associated sensitivities, 2) optimize the contiguous use of existing ROWs or linear features, and/or 3) have a greater occurrence of low priority sensitivities would be characterized as preliminary transmission line study corridors. Primary opportunities, which included existing ComEd owned properties, ROWs, and easements, were clearly identified. The following discussion details the intensive and methodical evaluation process that was undertaken for the development of the preliminary study corridors and substation study sites.

The Project requires the interconnection of a proposed 138 kV transmission line at a new substation to be sited within the defined Substation Siting Area. **Section 2.1.2** describes how the Substation Siting Area was defined. Recognizing that this interconnection area was more specific, from a spatial perspective, than the Siting Study Area and logically encompassed fewer substation siting opportunities by comparison, it was apparent that the substation study sites should be developed prior to the development of the preliminary study corridors.

A qualitative analysis of the environmental siting criteria within the Substation Siting Area was conducted. In addition, other factors were considered. These feasibility factors included considerations pertaining to site control and construction challenges. The Substation Siting Area included a number of vacant land parcels that met the minimum acreage required. Few sensitivities occurred within the Substation Siting Area. Sensitivities that did occur included existing open space and planned commercial uses.

Four preliminary study sites were identified within the Substation Siting Area, as depicted on the figure below.

Figure 12 – Preliminary Substation Study Sites



The Substation Siting Area is outlined by the dashed purple line. The four preliminary substation study sites are represented by the hatched dark purple areas. Parcel boundaries are also shown in white.

The northern-most preliminary substation study site is a property that is already owned by ComEd. Moving south, the second preliminary substation study site is concentrated on an existing distribution center, taking advantage of an adjacent property having a similar use. The third preliminary substation study site is located immediately east of the Prime Outlet Mall near the northwest corner of the intersection of I-90 and Route 47. This site optimized the use of a vacant land parcel having a minimal associated occurrence of sensitivities. The fourth preliminary substation study site is located south of I-90 and east of Route 47. This site optimized the use of a large vacant land parcel having a minimal associated occurrence of sensitivities, existing access, and flexibility for future site expansion.

The figures below depict the various possible orientations of the Project for siting the proposed transmission line.

Figure 14 – Project Orientation Option A (A to B to C)

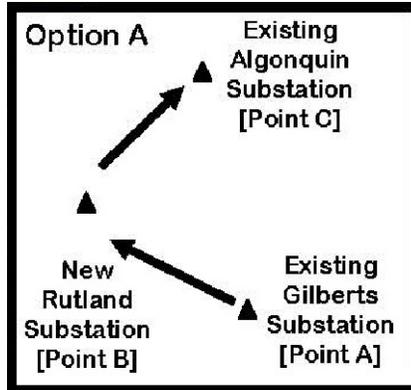


Figure 15 – Project Orientation Option B (A to C to B)

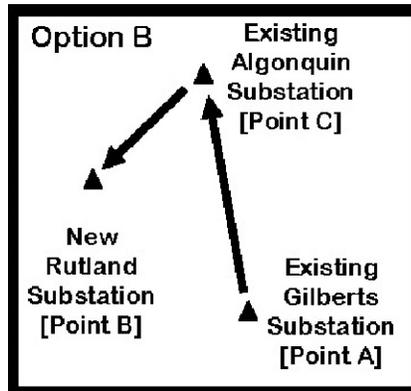
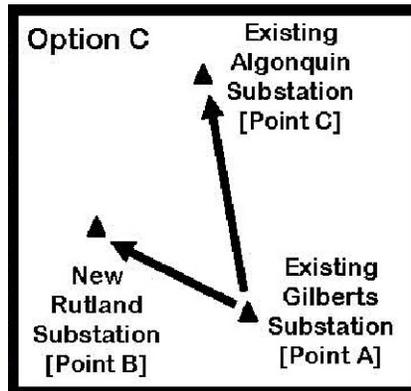


Figure 16 – Project Orientation Option C (A to B and A to C)



The Rutland South Sub-Study area encompassed opportunities generally having a southeast to northwest orientation. This sub-study area, which included both sides of the I-90 tollway, would allow for the evaluation of a Point A to Point B path between the Gilberts Substation and the proposed substation. The Rutland Central Sub-Study area