Facilities Study Report

For

Physical Interconnection of

PJM Generation Interconnection Request

Project ID AG1-118

Sugar Grove - Waterman 138kV

Revision 0: December 2024

Revision 1: September 1015

Introduction

This Facilities Study has been prepared in accordance with the PJM Open Access Transmission Tariff. The Transmission Owner (TO) is Commonwealth Edison.

Introduction

Revision History: Administrative changes to move TSS 56 and TDC 569 scope to “Upgrades to Neighboring Facilities Sections”. Physical Interconnection Facilities Study estimate in the Phase III System Impact Study was updated to include costs associated with relay upgrades at TSS 56 and TSS 189.

A. Transmission Owner Facilities Study Summary

1. PROJECT DESCRIPTION

The Project Developer (PD) has proposed a Solar Generating Facility located in Dekalb County, Illinois with a designated PJM Project ID of AG1-118. The installed facilities will have a total Maximum Facility Output (MFO) of 300MW with 180MW of this output being recognized by PJM as Capacity.

2. POINT OF INTERCONNECTION (POI)

The Generating Facility will interconnect with the Commonwealth Edison transmission system via a newly constructed 138kV kV breaker-and-a-half substation, TSS 956 Rimsnider Road, tapping the TSS 113 Waterman - TDC 569 Sugar Grove 138kV line, L.11106, approximately 3.3 miles from TSS 113 Waterman and 14.5 miles from TDC 569 Sugar Grove.

The construction of the new interconnection substation will result in the splitting of the existing TSS 113 Waterman – TDC 569 Sugar Grove 138kV, L.11106 into two lines on the transmission system. The new L.95602 will connect TSS 956 Rimsnider Road to TSS 113 Waterman and L.11106 will connect TSS 956 Rimsnider Road to TDC 569 Sugar Grove.

The proposed generation interconnection is shown on the single line diagram in Attachment #1.

3. POINT OF CHANGE IN OWNERSHIP

The Point in Change of Ownership will be located at the first dead-end structure inside TSS 956 Rimsnider Road fence line.

4. SCOPE OF PROJECT DEVELOPER INTERCONNECTION FACILITIES

Project Developer will design, build, own, operate and maintain the Project Developer Interconnection Facilities on Project Developer’s side of the Point of Change in Ownership (PCO). This includes, but is not limited to:

4.1. The Project Developer is responsible for construction of the additional 300MW Solar generation. The Project Developer is also responsible for two (2) 138kV circuit breakers, two (2) generator step-up transformers (GSU), four (4) 138kV motor operated disconnect switches, and a 138kV generation lead line with associated structures terminating at TSS 956 Rimsnider Road.

4.2. At AG1-118 Sugar Grove - Waterman 138kV, in general, Project Developer relaying, etc. to follow section 6.2 (Design E) of latest version of ComEd interconnections guidelines (for Generators at Transmission Level) Rev2 Effective fate 12/16/21, with the following project specific notes (where applicable):

- New 138kV gas circuit breakers to auto trip and isolate for critical gas level
- New 138kV Tie Line terminal relay types to be the same as ComEd terminal relays. This includes relay firmware versions.
- ComEd Protection and Control Engineering must review all Project Developer relay protection design drawings and relay settings.
- Project Developer equipment impedance and/or test data must be provided to ComEd Protection and Control Engineering to model in a short circuit program.
- Project Developer to include over/under frequency and voltage protection at solar farm collector bus. Suggested settings will be provided by ComEd. Under-frequency settings are to comply with MAIN Guide 1B.
- Dual bus protection for 34.5kV bus.
- Dual TRFM protection and site protection must be compliant with NERC & PJM requirements.
- Metering is required to be installed per ComEd & PJM standards.
- SCADA interface to ComEd will be required.
- Witness testing by ComEd or a Designated Authority will be required and must be pre-scheduled at least 90 days in advance.

4.3. Project Developer to provide transformer test reports for 138kV - 34.5kV step up transformers, for ComEd short circuit modeling. Test reports must include %Z impedance and load loss.

4.4. For any new equipment connected to the BES (Bulk Electric System rated at 100kV or above) the associated primary/System 1 and secondary/System 2 protective schemes to have a minimum redundant:

- Connected CTs (where available)
- PT secondary (where available)
- DC control circuits
- Auxiliary trip relays
- Circuit breaker trip coils (where available)
- Communication circuitry
- Foundations and structures to support all/new equipment

4.5 The Project Developer will be responsible to purchase real estate or obtain the necessary right-of-way easement to install the 138kV transmission line to TSS 956 Rimsnider Road substation.

4.6 New Gas Circuit breaker control for loss of SF6 gas condition should be as follows (see Engineering practice EP-5206E and relay specifications):

- For an open SF6 circuit breaker, when SF6 gas drops to the critical level, the close circuit of breaker shall be opened, and motor operated disconnects on both sides of CB shall be opened

- For a closed SF6 gas circuit breaker, when SF6 gas drops to the critical level, the circuit breaker shall be opened, and motor operated disconnects on both sides of CB shall be opened and the close of the circuit breaker shall be opened.

4.7 All changes to topology, including generation, must be modeled during the Phase 1 study for PRC-027 compliance. A protection system coordination study is required for new BES buses or when there is a 15% (or greater) change in the fault current for an existing BES bus. Settings changes may be required per the outcome of this coordination study.

4.8 The Project Developer is to provide two, physically diverse, Single Mode Fiber paths between TSS 956 Rimsnider Road Interconnection Substation and AG1-118 Collector Substation.

4.9 Project Developer will be responsible for Line L.95601 Single Mode Fiber from Project Developer's Substation to ComEd's Substation TSS 956 Rimsnider Road. This will be used for Primary Relay scheme using Direct-on-Fiber connections per the Relay Notes. The minimum Fiber count is 48 Fibers and construction will be in adherence with ComEd Transmission Line standards. The Project Developer will own and maintain this Fiber cable up to the fiber distribution panel in TSS 956 Rimsnider Road.

138kV L95601	**Function**	**TSS956**		**Burr Oak Solar (GIC)**	
87L-1 SEL-411L-1 (Direct Fiber)	Current Diff, LTT, BFTT	T	R	T	R
87L-2 SEL-411L-1 (Direct Fiber)	Current Diff, LTT, BFTT	T	R	T	R

** Load rejection transfer trip if at TSS956, any of the below conditions occur (logic via 52b breaker aux contacts): Both 138kV BT1-2 and BT1-3 breakers are open

4.10 Project Developer will be responsible for Line L.95601 Single Mode Fiber from Project Developer's Substation ComEd's Substation TSS 956 Rimsnider Road. This will be used for Secondary Relay scheme using Direct-on-Fiber connections per the Relay Notes. This Fiber must be built in a physically diverse path from the Fiber path used for the Primary Relay scheme. The minimum Fiber count is 48 Fibers. The Project Developer will own and maintain this Fiber cable up to the fiber distribution panel in TSS 956 Rimsnider Road.

4.11 The demarcation of ownership for these Fiber cables will be in the Fiber Distribution Panel (FDP) in the ComEd Substation TSS 956 Rimsnider Road. The Project Developer will own and maintain both Fiber cables from ComEd's TSS 956 Rimsnider Road FDP all the way to their generator substation.

4.12 The Project Developer will be responsible to request and bear the cost of any outages required on existing transmission or distribution lines that may be required for the transport of any large equipment, i.e. turbines, rotors, turbine structures, etc.

4.13 Option to Build

- If the Project Developer selects the Option to Build, the Project Developer shall

construct TSS 956 Rimsnider Road.

- The Project Developer shall construct TSS 956 Rimsnider Road and transfer ownership to ComEd prior to commercial operation of AG1-118. The Project Developer shall transfer ownership of the real estate in fee to ComEd.
- Substation requirements are described below in section B.

B. Transmission Owner Facilities Study Results

The following is a description of the planned Transmission Owner facilities for the physical interconnection of the proposed AG1-118 project to Commonwealth Edison transmission system. These facilities shall be designed according to Commonwealth Edison Applicable Technical Requirements and Standards. Once built, Commonwealth Edison will own, operate, and maintain these Facilities.

1. TRANSMISSION OWNER INTERCONNECTION FACILITIES:

The TO Interconnection Facilities will include, but not be limited to, the following.

- Install two (2) new vertical double-circuit 138kV deadend structures on drilled shaft foundations.
- Line conductor from the dead-end structure to the bus position in the switchyard of the interconnection substation.
- Project Developer to provide two, physically diverse, Single Mode Fiber paths between TSS 956 Rimsnider Road Interconnection Substation and Burr Oak Solar.
- One (1) new 138kV motor-operated disconnect switches, rated for 3000A, to be installed at each new breaker
- Three (3) metering CT/PTs
- Three (3) Surge Arrestors
- Foundations and structures

2. STAND ALONE NETWORK UPGRADES

The Stand Alone Network Upgrades will include, but not be limited to, the following.

For new interconnection substation:

TSS 956 Rimsnider Road Interconnection Substation

A new breaker and a half substation, TSS 956 Rimsnider Road 138kV, will be constructed along the L.11106 138kV transmission line to interconnect the AG1-118 project with the Commonwealth Edison transmission system.

The greenfield new substation will include

- Three (3) new gas SF6 138kV circuit breakers BT 1-2, BT 2-3, and BT 1-3, with accommodation for future breakers BT 4-5, BT 5-6, and BT 1-6 rated for 3000A

- One (1) new 138kV motor-operated disconnect switches, rated for 3000A, to be installed at each new breaker
- Two (2) line disconnect switches, rated for 3000A, to be installed at each line

  One (1) line disconnect switches, rated for 3000A, to be installed at Project Developer line
- Nine (9) new 138kV 1200:1 CCVTs to be installed at Busses 1, 2, and 3
- Two (2) new 3000A Wave Traps
- Two (2) new CCVTs with Power Line Carrier Accessories and Line Tuners
- Six (6) Surge Arrestors
- Foundations and structures to support all/new equipment

One (1) new 12kV-208/120V AC auxiliary transformer to be installed. This will be fed via a nearby 12kV distribution line to be determined during detailed design; new 12kV UG cable will be run to allow access to TSS 956 Rimsnider Road. The distribution line connection will require construction of new 12kV overhead lines and poles from an existing distribution line to TSS 956 Rimsnider Road. Connection details and length will be determined during detailed engineering and may exceed the assumptions in this study. If a lower cost option is found during engineering, the cost estimate would be reduced. It is assumed that no new ROW for the new distribution line will be required, but this will be determined during detailed engineering. One (1) propane 120/208V back-up generator to be installed as the emergency station service AC source.

New control building to be installed to accommodate new relaying and relaying for future breaker-and-a-half bus expansion. Control enclosure shall meet latest ComEd standards. If NERC Low Impact, install BSC/IT UCOMM router and firewall. If Medium Impact, use serial communication. The new control building will contain:

- One (1) 125VDC battery system
- DC distribution panels
- Relay panels
- Marshalling cabinets
- Auxiliary AC power panels
- Building HVAC system
- Fire/security system
- SCADA
- Metering equipment.
- Additionally, auxiliary data communications will be installed to communicate with Project Developer remote end for SCADA and metering purposes.
- Install SEL-3350 RTAC with redundant RST-2228 Switch Architecture (Master, Master Aux A/B, and Aux A/B switches).
- Install SEL-3620 Port Servers as needed for IED relays that must be connected serially over the available 3350 RTAC ports. Preference is to connect relays IP to the switch architecture.
- Install SEL-3555 HMI.
- Install SEL-2488 GPS Clock.

- Install SEL-3555 PDC cabinet per GDD
- Install SEL-2440 devices for any hardwire I/O
- For each Project Developer RTU, install a pair of fiber serial connections to the RTAC for data exchange.
- Connect metering group-provided revenue meter to station IP architecture.
- Confirm latest device model numbers and GDD with the assigned SCADA engineer.

Relay Installs at TSS 956 Rimsnider Road.

- Install a 50BF/35/79 SEL-451 for all new CBs. Refer to GDD1930 and 1931
- Install a 79-2/SEL-351A for a second reclosing mode on all new CBs.
- At TSS956, install standard ComEd 138kV Project Developer interface relaying consisting of a System 1 87L-1/SEL-411L-1 and a System 2 87L-2/SEL-311L-1 current differential scheme.
- In addition, install load rejection logic such that the transfer trip is initiated on both primary and secondary relaying to Project Developer site if 138kV L95601 breaker at TSS956 is opened (Refer to GDD 4003 for load rejection design).

Yard cable trench to be installed from control building to breakers and line terminal structures. Cable Trough to have a drainage system installed below the trough per ComEd standards. A lift station may be needed.

New substation to require installation of new fence and (2) sliding vehicular gates that are positioned no less than one half of the yard diagonal apart, as well as site development and grading. Preliminary security classification for the proposed substation indicates that fencing will be 7’ with 1’ barbed wire; fencing must adhere to all ComEd specifications and requirements. Security requirements including fencing may change. New station grounding, lightning protection, and lighting to be evaluated by studies, designed, and installed.

The developer ground grid shall not be tied to the TSS 956 Rimsnider Road ground grid. New property will need to be purchased.

The access road to the main public road should be a minimum of 28 feet and have an asphalt or concrete approach. The radius transition to the main road to be in accordance with the requirements of the government having jurisdiction of the public road.

- Minimum width of road is 20’-0”
- Minimum turning radius (horizontal curve) of road to be 40’-0” to the center of the road.
- Maximum slope of road is to be 4.5%

Stormwater detention and any other required stormwater management features to be constructed outside of the substation fence. These must satisfy all local, county, state, and federal requirements for stormwater management.

Security system will need to be installed to meet ComEd standards.

If any utilities are routed under the substation these will need to be re-routed outside of the substation.

Fiber cable circuits

Project Developer to provide two, physically diverse, Single Mode Fiber paths between TSS 956 Rimsnider Road Interconnection Substation and AG1-118.

System 1 Relays will use the “System 1” Fiber cable for a Current Differential Relay Scheme, which will also provide Direct Transfer Trip (DTT). This Fiber cable will be owned and maintained by the Project Developer and should have minimum of 48 Fibers. The demarcation for the Fibers in this cable will be in a Fiber Distribution Panel (FDP) inside of the TSS 956 Substation. ComEd will own and maintain the FDP.

System 2 Relays will use the “System 2” Fiber cable for a Current Differential Relay Scheme, which will also provide Direct Transfer Trip (DTT). This Fiber cable will be owned and maintained by the Project Developer and should have a minimum of 48 Fibers. The demarcation for the Fibers in this cable will be in a Fiber Distribution Panel (FDP) inside of the TSS 956 Substation. ComEd will own and maintain the FDP.

The Project Developer will own and maintain both Fiber cables from ComEd’s TSS 956 FDP all of the way to their AG1-118.

Spare Fibers may be used for telephony, SCADA, Metering, Fire Protection, or other data purposes.

PM to engage UCOMM Fiber Engineering early in the process.

New Carrier equipment will be installed for L11106 and L95602 at TSS 956 Rimsnider Road.

3. NETWORK UPGRADES

The Network Upgrades will include, but not be limited to, the following.

Transmission Line Tie-in for new interconnection substation:

Cut existing L11106 138kV transmission line between existing structures 245 and 246 to loop into the new TSS 956 Rimsnider Road Substation and break into new L95602.

a. ComEd will be performing the design, procurement, and construction of the new structures required to cut over to the new TSS 956 Rimsnider Road Substation.
b. Install three (3) new vertical single circuit 138kV deadend structures 245, 245D, and 246D on drilled shaft foundations.
    i. Structure 245 will be approximately 90’. Structures 245D and 246D will both be approximately 85’. They all will be similar to EM10377 but modified to have a double deadend static wire attachment instead of a single static wire attachment.
c. Approximately 0.1 new circuit miles of conductor and shield wire will be installed.
    i. New conductor and shield wire for the 138kV lines for TSS 956 will be T2-556.5 kcmil (24/7) Parakeet ACSR and 7#6 Alumoweld, respectively.
    ii. Existing conductor and shield wire on 138kV L11106 is T2-556.5 kcmil (24/7) Parakeet ACSR and 7#6 Alumoweld, respectively, and

will be transferred to new cut-in structures 245 and 246D.

d. Existing structure 245 will be removed. Existing structures 244 and 246 will remain.
e. ComEd will install approximately 3.3 miles of fiber from TSS 956 Rimsnider Rd to TSS 113 Waterman, along L11106.

- TDC 569, TSS 56, TSS 111 upgrades below are included in the L11106 Transmission Line cut-in line item on the Facilities Study estimate.

TDC 569 Sugar Grove

- 138kV L11106, install a second system of DTT receiver.

TSS 56 North Aurora

- 138kV L11106, install a second system of DTT receiver.

TSS 111 Electric Junction

- 138kV L11106, install a second system of DTT receiver.

Upgrades to neighboring facilities:

TSS 113 Waterman

- ComEd's existing TSS113 138kV L95602 terminal (former L11106), review and reset the existing relays (11-1 SEL-421-5 DCB & 11-2 SEL-311C-1 STEP). Maintain existing comm scheme (carrier), but remote terminals (TDC569, TSS56, & TSS111) are replaced with TSS956.
    - 138kV L95602 line breaker already has SEL-451-5 relay. Revise reclosing settings as needed.
    - Review and reset any "upstream" backup elements (local or remote) that look into L95602.
    - Update station prints as required (new line number).

TSS 189 Crego

- ComEd's existing TSS189 138kV L95602 terminal (former L11106), review and reset the existing relays (11-1 SEL-421-5 DCB & 11-2 SEL-311C-1 STEP). Maintain existing comm scheme (carrier), but remote terminals (TDC569, TSS56, & TSS111) are replaced with TSS956.
    - BT10-11 and BT11-12 already have SEL-451-5 relays. Revise reclosing settings needed.
    - Review and reset any "upstream" backup elements (local or remote) that look into L95602.

- Update station prints as required (new line number).

TSS 56 Aurora

- The new L11106 DCB pilot zones may be short enough to warrant removing the 34kV blocking terminals at TDC569 and TSS56. In this case:

  At ComEd's existing TSS56 station, remove the DCB comm equipment and rewire/reset the existing TR76, TR77, & TR78 SEL-311C-1 relays and the existing TR79 SEL-321 relay. See print 56E-4003.

TDC 569 Sugar Grove

- The new L11106 DCB pilot zones may be short enough to warrant removing the 34kV blocking terminals at TDC569 and TSS56. In this case:

  At ComEd's existing TDC569 station, remove the DCB comm equipment and rewire/reset the existing TR77 SEL-311B relay. See print 569E-413A.

Note: 138kV L11104 (second source to both TDC569 and TSS56) is a radial line without a DCB scheme.

4. OTHER SCOPE OF WORK

ComEd to provide oversight to the Project Developer at the Project Developer's cost or the engineering and construction of the interconnect substation.

Metering will be required to be installed at the interconnection substation. Metering to be provided for revenue and AMI purposes.

5. MILESTONE SCHEDULE FOR COMPLETION OF COMED WORK

Facilities outlined in this report are estimated to take 60 of months to construct, from the time the Generation Interconnection Agreement is fully executed. This schedule may be impacted by the timeline for procurement and installation of long lead items, the ability to obtain outages to construct and test the proposed facilities.

Description	Start month	Finish month
Detailed Design	1	21
Permitting	21	50
Construction	50	60

6. ASSUMPTIONS IN DEVELOPING SCOPE/COST/SCHEDULE

- This study is based on the Phase 2 System Impact Report for PJM Generation Interconnection New Service Request Project AG1-118 Sugar Grove - Waterman 138kV. The steady-state voltage study for stability analysis will be performed by PJM during the Facilities Study Phase. The PJM study could identify upgrades to the ComEd system that would become part of this project's scope of work. It is assumed that all associated network upgrades, as listed in the above Phase 2 System Impact, are complete prior to this New Service Request Project being placed in service.
- The schedule is based on GIA contract being executed by all parties and the deposit received.
- ComEd cost estimates assume that work will be performed during normal weekdays and with no overtime.
- Transmission line outages for the tap construction have not been identified, but generally are available in spring (March to May) and fall (September to November). These outages are controlled by PJM.
- The Project Developer will be responsible to request and bearing the cost for relocation of existing transmission or distribution lines (including structures) that may be required for transmission line crossings, the transport of any large equipment, such as cranes, etc. The backfeed date identified in earlier sections is not yet approved. Formal submittal of this request to ComEd's TSO for ultimate review by PJM can be made 7 months prior to the back feed request date.
- All upgrades to facilities included in this document will be required to meet the latest ComEd standards.
- Upgrades are subject to change based on detailed design development
- Costs are based on 2024 rates and do not reflect a potential increase in Labor or Material costs.
- Project Developer to upload as-built drawings to ComEd drawing system (Meridian).
- Single fiber routing has not been included in this study.
- ComEd cost estimate is valid for six (6) months after Facilities Study is released by PJM.
- This study assumes that any additional right-of-way and/or easement work required will be at the expense of the Project Developer.
- This Facilities Study is time-dependent. If the project is not into construction within one year of the issuance, the FS will be void and the project re-studied, requiring the completion of a new FS.
- Both (1) all real property conveyed in fee to ComEd must be remediated to and (2) all real property to which real property rights are transferred to ComEd (as determined in ComEd's discretion) must be remediated to IEPA's Tiered Approach to Corrective Action.
- This Facilities Study report (FSR) assumes that generator output and plant auxiliary power consumption can both be metered with revenue accuracy as described. The final revenue metering configuration and equipment will be confirmed, and may be revised, during detailed engineering following execution of the Generator Interconnection Agreement (GIA)).

- Project Developer owned line L.95601 is assumed to be exiting the station to the West. Final determination of line exit will be determine during detailed design.
- Final station location and transmission plan and profiles will be determined during detailed design due to any changes in final site location.

7. REVENUE METERING REQUIREMENTS

All revenue metering needed for this interconnection project must meet the metering requirements stated in Appendix 2, section 8 of the AG1-118 GIA, and in PJM Manuals M01 and M14D. The details of applicable revenue metering requirements are given in the 'ComEd Interconnection Guidelines' posted on PJM website.
The revenue metering will be installed on the ComEd side of the Point of Change in Ownership, owned and maintained by ComEd.

- REVENUE METERING FOR PJM AND COMED
  - The revenue meter measures the wholesale energy output (Hourly compensated net MWH and Hourly compensated net MVARH) of the Generating Facility.
  - The metering equipment, including revenue meter and CT/PT shall be installed, at Project Developer's expense, at the interconnection substation on ComEd side of the Point of Change in Ownership.
  - ComEd shall own, operate, maintain, inspect, and test all the metering equipment as set forth in 'Testing of Metering Equipment' section of the PJM Tariff, at the Project Developer's expense.
- REAL-TIME METERING FOR PJM
  - The Project Developer shall install, own, operate, maintain, inspect, and test real-time metering equipment to measure and transmit directly to PJM the real time MW, MVAR, voltage and status of electrical equipment such as circuit breakers and Motor Operated Disconnect switches, in conformance with the requirements listed in PJM Manuals M-01 and M-14D, at the Project Developer's expense.
- RETAIL METERING FOR COMED
  - The AMI Meter measures the energy consumption by the Project Developer at transmission level and hence shall be designed to measure low MW flow.
  - The metering equipment including AMI Meter and CT/PT shall be installed at the interconnection substation on ComEd side of the POI, at the Project Developer's expense.
  - ComEd shall own, operate, maintain, inspect, and test all the metering equipment as set forth in the 'ComEd Interconnection Guidelines'.
- BATTERY TERMINAL AMI METERING FOR COMED
  - FERC Order 841 designates inflow to charge battery storage facility as wholesale power. To separately measure the power inflow to charge the battery and bill it at wholesale rate, the Project Developer needs to install the following equipment.
    - Advanced Metering Infrastructure (AMI) equipment including AMI Meter and Current Transformer/Potential Transformer (CT/PT) at the output terminal of the battery storage facility to measure power flow from transmission system to charge the battery storage facility.

- Fiber cable to provide communication link to transmit AMI meter data to the ComEd SCADA system.

8. LAND REQUIREMENTS FOR INTERCONNECTION SUBSTATION

- For a 138kV substation bisecting one transmission line, the site shall be at least 500' x 400' excluding the stormwater detention facility. The site should be expandable to 500' x 800' without any restriction.
- The site should be accessible from at least two sides to bring in future transmission lines. This means that there should be no river, another transmission line, hills, forest, or wetland on at least two sides of the site.
- There should be no legal agreements or other impediment to interconnect additional generator lead lines to this site from other generators in the future.
- The site should not encroach into ComEd transmission or distribution corridors.
- If the Project Developer owns the land surrounding the substation site, the Project Developer must provide open easement to ComEd to bring in future transmission lines into the substation.
- The Project Developer is responsible to build an access road meeting ComEd requirements to the substation site from the nearest public road.
- The Project Developer is responsible to acquire land to install tie-lines integrating the substation with the ComEd transmission system.
- The Project Developer is responsible to acquire land for the stormwater detention facility meeting all applicable ComEd Environmental requirements and all applicable municipal, county, and state requirements for stormwater management.

Upon completion of the construction and installation of the interconnection substation, the tie-line, access road, stormwater detention facility and related improvements and facilities, and the satisfactory completion of testing of the interconnection substation acceptable to ComEd, the Project Developer shall transfer all the Property Rights and Permits to ComEd, at no cost or expense to ComEd, pursuant to documentation that is acceptable to ComEd, including (without limitation) the Property Transfer Documents in fee simple.

All real property conveyed in fee to ComEd must be remediated to and all real property to which real property rights are transferred to ComEd (as determined in ComEd's discretion) must be remediated to IEPA's Tiered Approach to Corrective Action Objectives (TACO) Tier 1 residential remediation standards.

9. ENVIRONMENTAL AND PERMITING

- ComEd will be responsible to obtain all environmental approvals and permitting required. This includes any endangered species studies and monitoring, as required. Costs associated with this permitting are at the expense of the Project Developer.
- The Project Developer will be responsible for site restoration required for substation and transmission upgrades. This includes, but is not limited to road restoration/improvements, wetland restoration, and farm field restoration/crop damage. Costs associated with this are at the expense of the Project Developer.
- The Project Developer will be responsible for the cost to purchase real estate or obtain the necessary right-of-way easement for all upgrades associated with this project. These associated upgrades are not included in the costs listed in this study.
- The Project Developer will be responsible for remediation costs for locations found to have environmental contaminations and remediation. This may require contaminated soil disposal as well as lead paint removal for existing structure work.

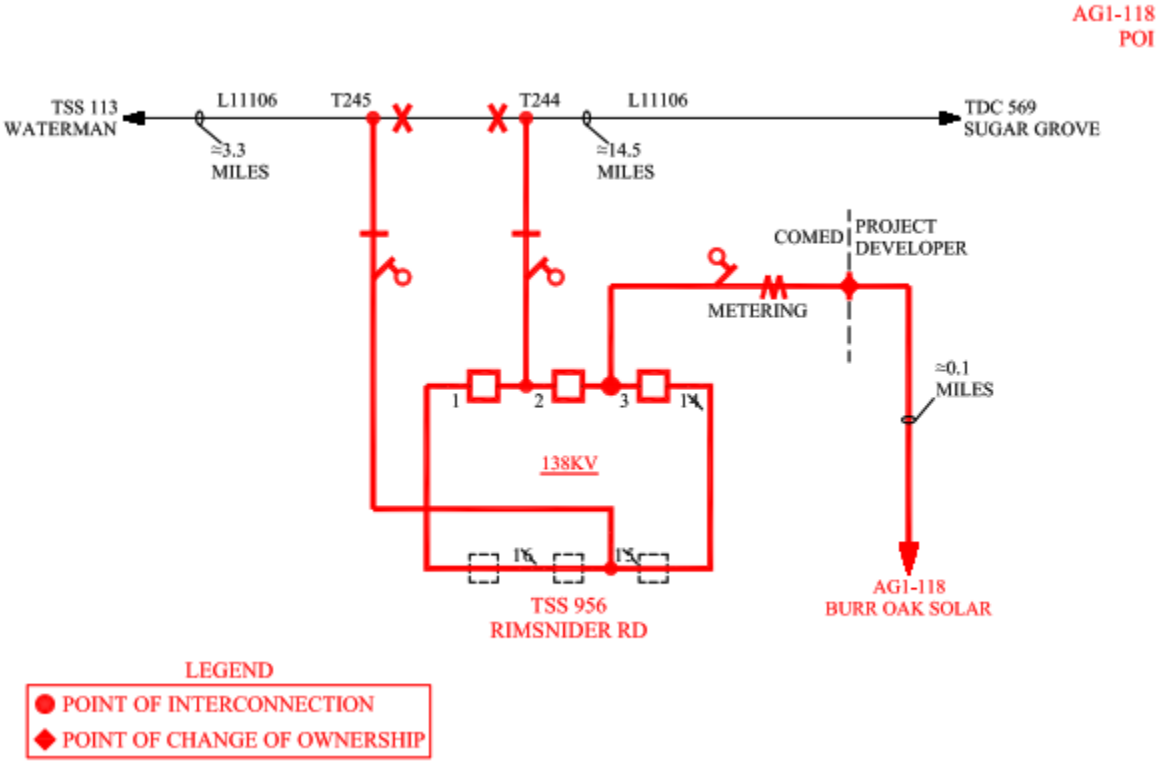
- It is assumed that all necessary permits will be obtained in a timely manner to allow engineering and construction to proceed according to the Milestone Schedule.
- It is assumed that conveyance of property and rights will be obtained to support the PJM Transmission Outage Schedule.
- It is assumed that the required Environmental Study will yield no impediments to the development of the site.
- ComEd will complete geotechnical soil borings, resistivity study, and analysis for substation and transmission upgrades. Costs associated with this are at the expense of the Project Developer.

C. APPENDICES

1) Attachment #1: High Level Project Diagram Depicting Interconnection Facilities for Physical Interconnection and Points of Ownership/Demarcation
2) Attachment #2: General Arrangement for the Substation Equipment
3) Attachment #3: One Line Diagram
4) Attachment #4: Transmission Line Tie-In Plan
5) Attachment #5: Geographical Map Showing the Property Location

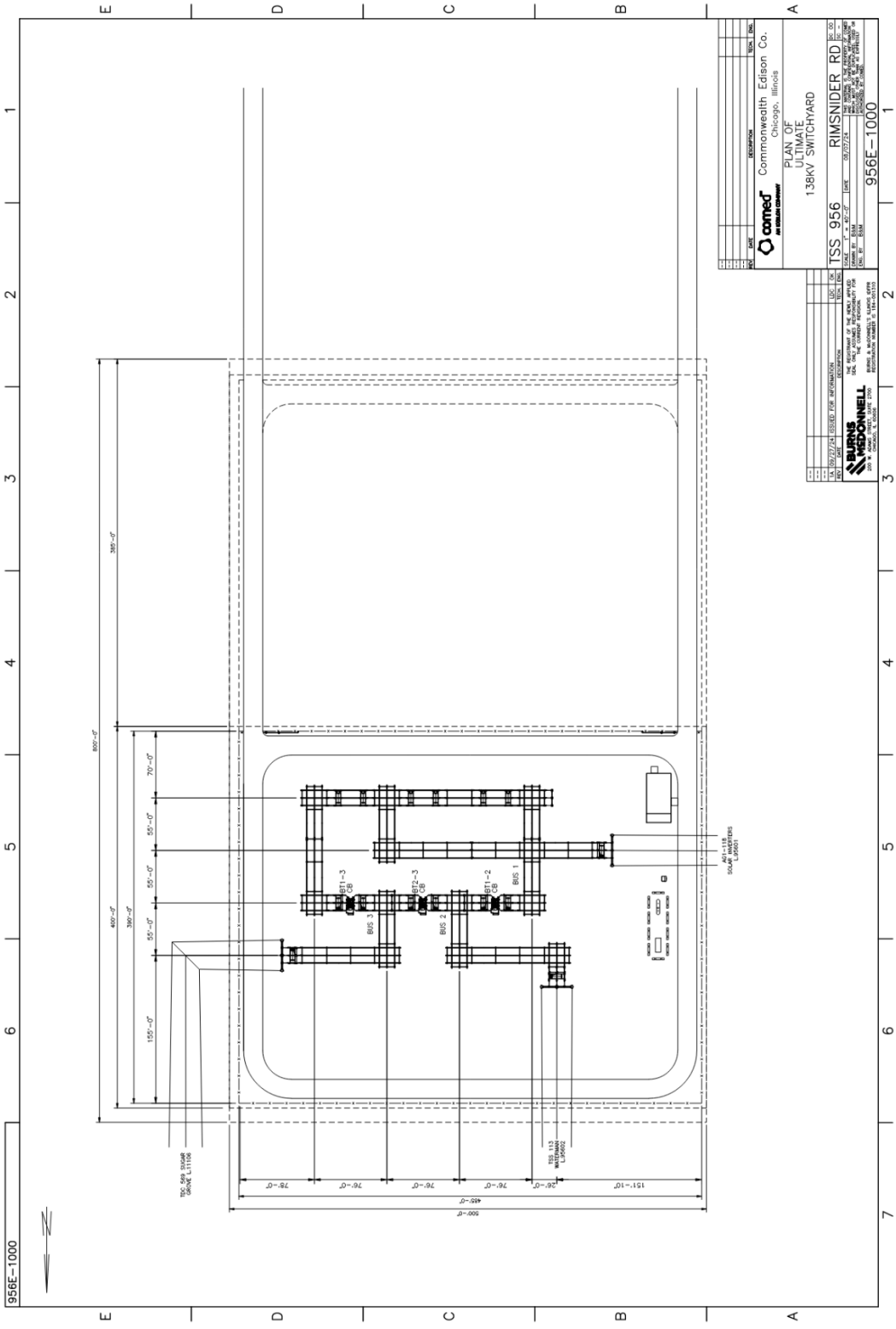
Attachment #1:

High Level Planning Diagram Depicting Interconnection Facilities and Points of Ownership/Demarcation



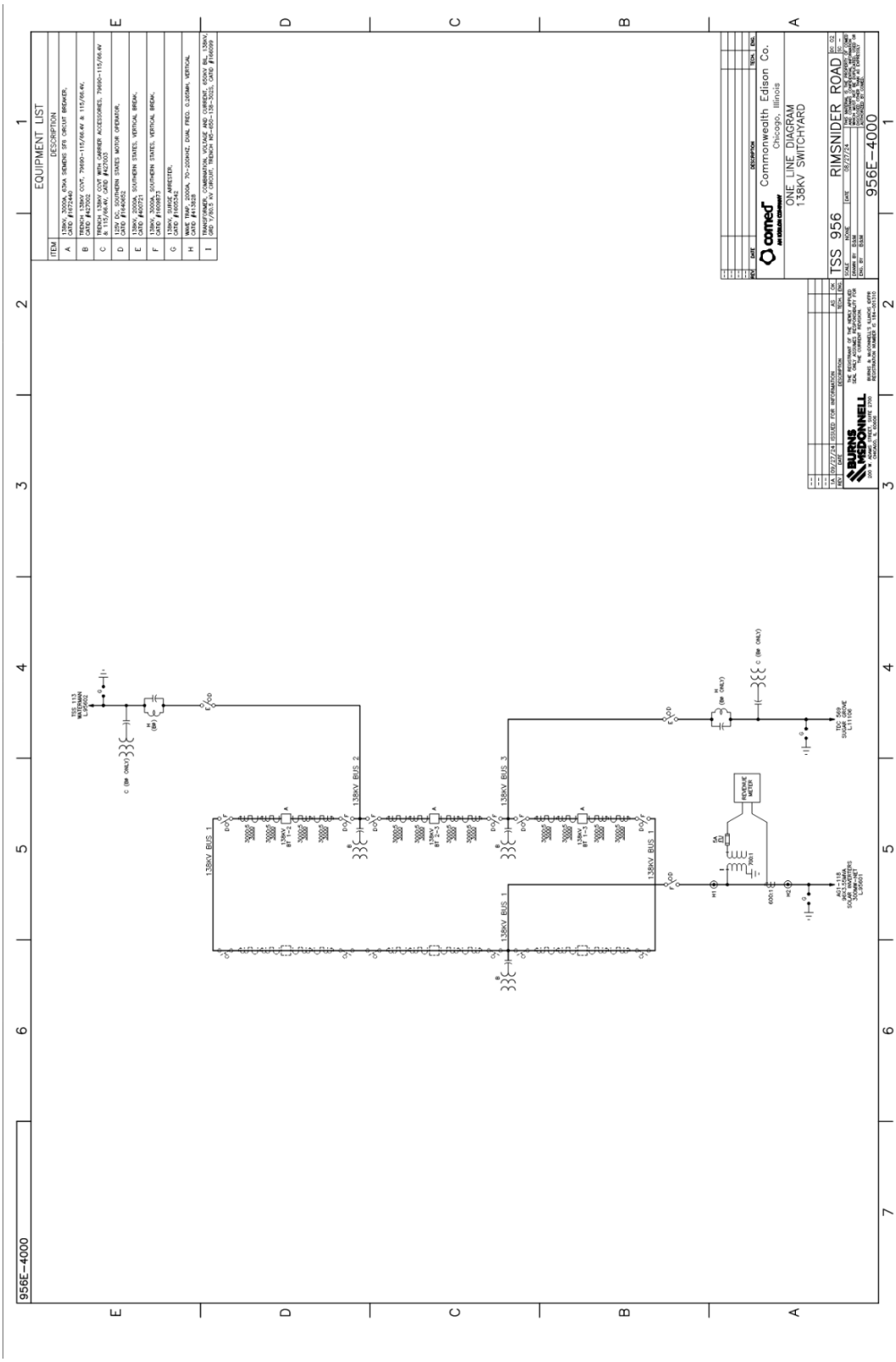
Attachment #2:

General Arrangement for the Substation Equipment



Attachment #3:

One Line Diagram



Attachment #4:

Transmission Line Tie-In Plan

(Attached PDF)

Attachment #5:

Geographical Map Showing the Property Location