# Submission of Supplemental Projects for Inclusion in the Local Plan

ComEd Local Plan - 2021

# ComEd Transmission Zone M-3 Process
# 138 kV BT 1-2 at ESS J310

**Need Number:** ComEd-2020-012

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan May 14, 2021

**Previously Presented:**

Need Meeting December 18, 2020

Solution Meeting February 17, 2021

**Project Driver:**

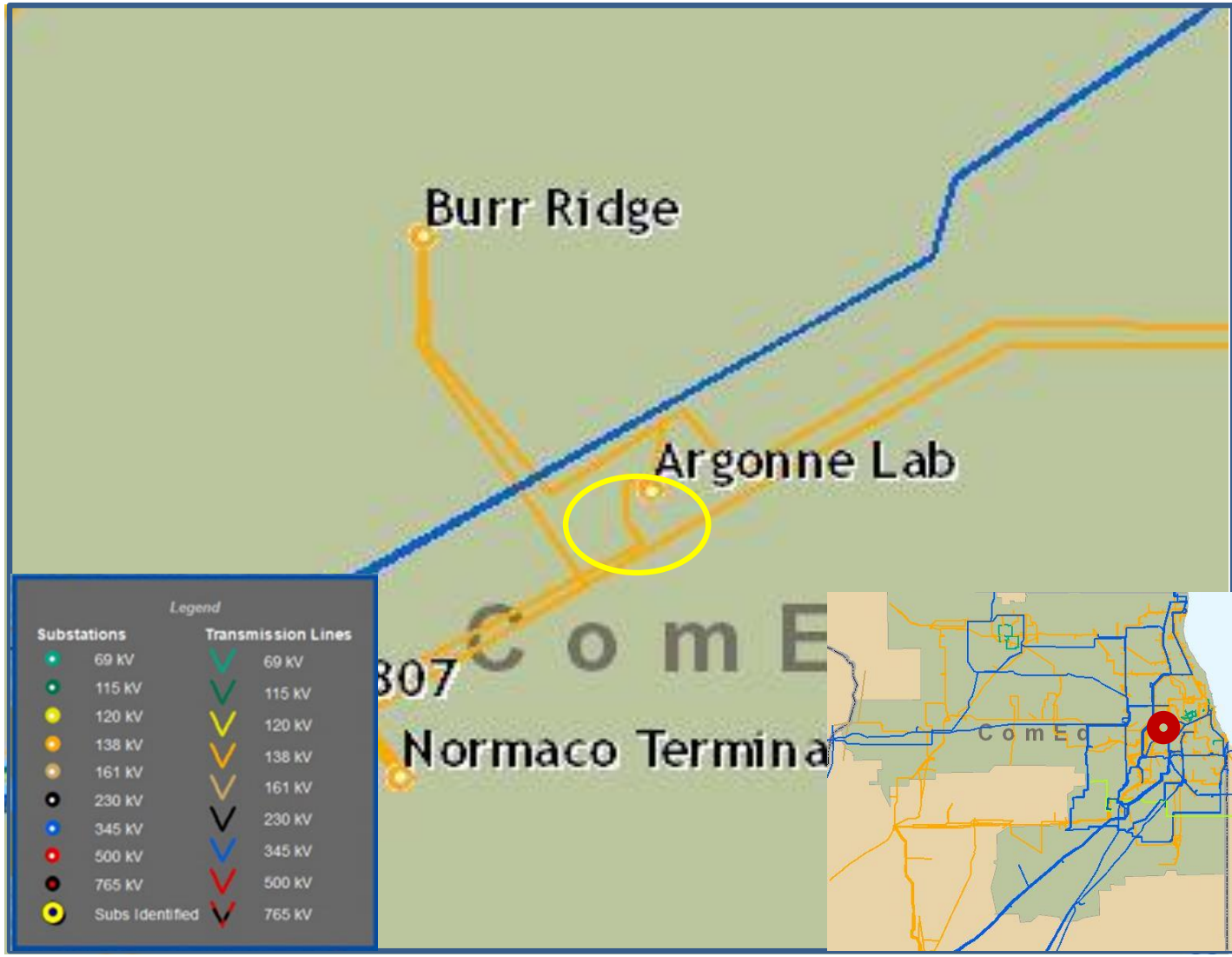
Equipment Material Condition, Performance and Risk

**Specific Assumption Reference:**

Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions

**Problem Statement:**

4 Current Transformers on 138 kV BT1-2 breaker at ESSJ310 are failing and there is a risk of mis-operation or overtripping. Breaker age is 70 years old. Components are obsolete; therefore repair is impossible.



# ComEd Transmission Zone M-3 Process
# 138 kV BT 1-2 at ESS J310

**Need Number:** ComEd-2020-012

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan May 14, 2021

**Proposed Solution:**

- Replace 138 kV BT 1-2 at ESS J310

Old fault rating was 14.6 kA.

New fault rating will be 63 kA.

Estimated cost: $2.1M

**Alternatives Considered:**

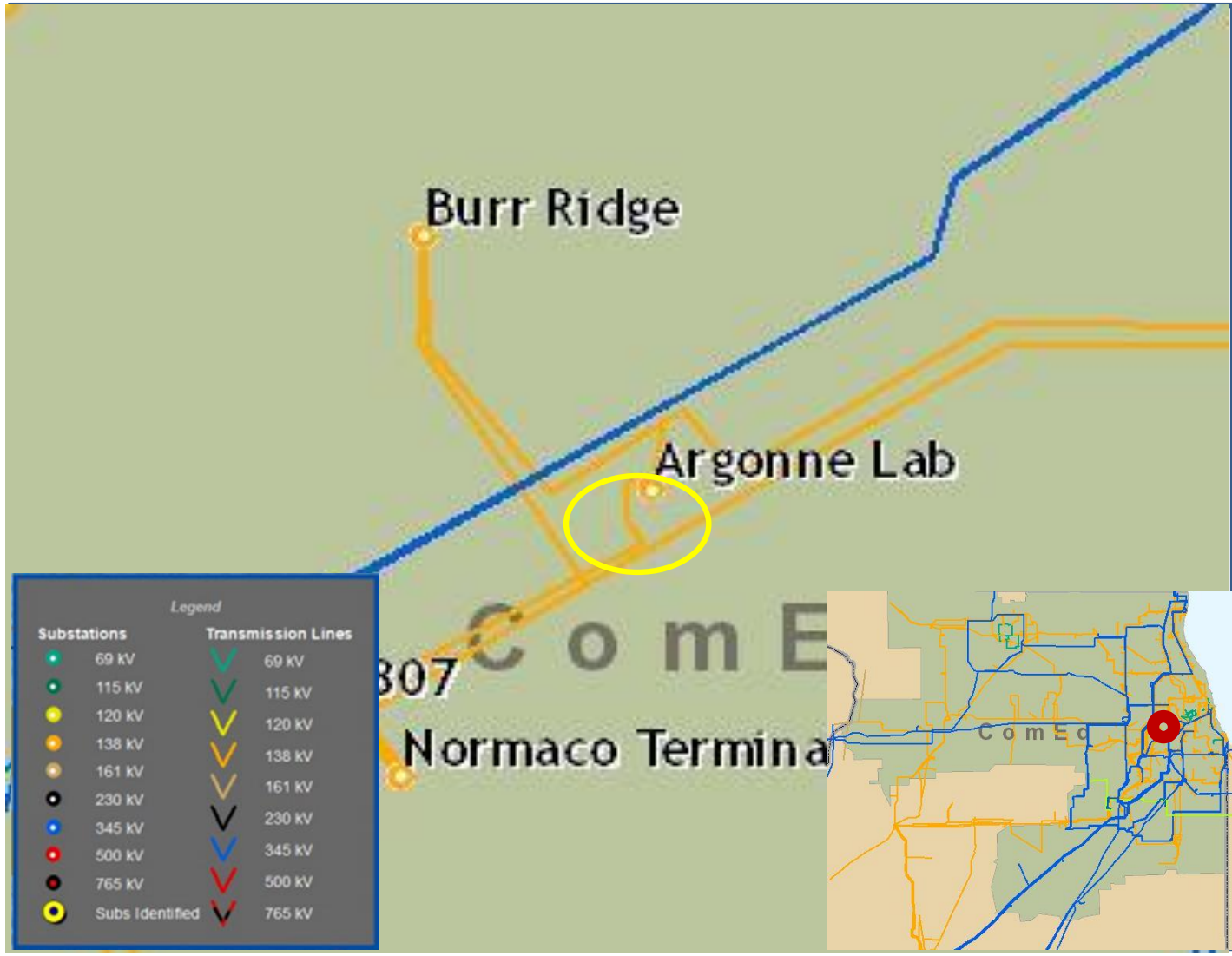
1. Do nothing – maintenance issue remains

**Supplemental Project ID:** s2463

**Projected In-Service:** 12/31/21

**Project Status:** Engineering

**Model:** 2025 RTEP



# ComEd Transmission Zone M-3 Process
# 138 kV Line 8604

**Need Number:** ComEd-2021-001

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan June 4, 2021

**Previously Presented:**

Need Meeting March 19, 2021

Solution Meeting April 16, 2021

**Project Driver:**

Operational Flexibility and Efficiency

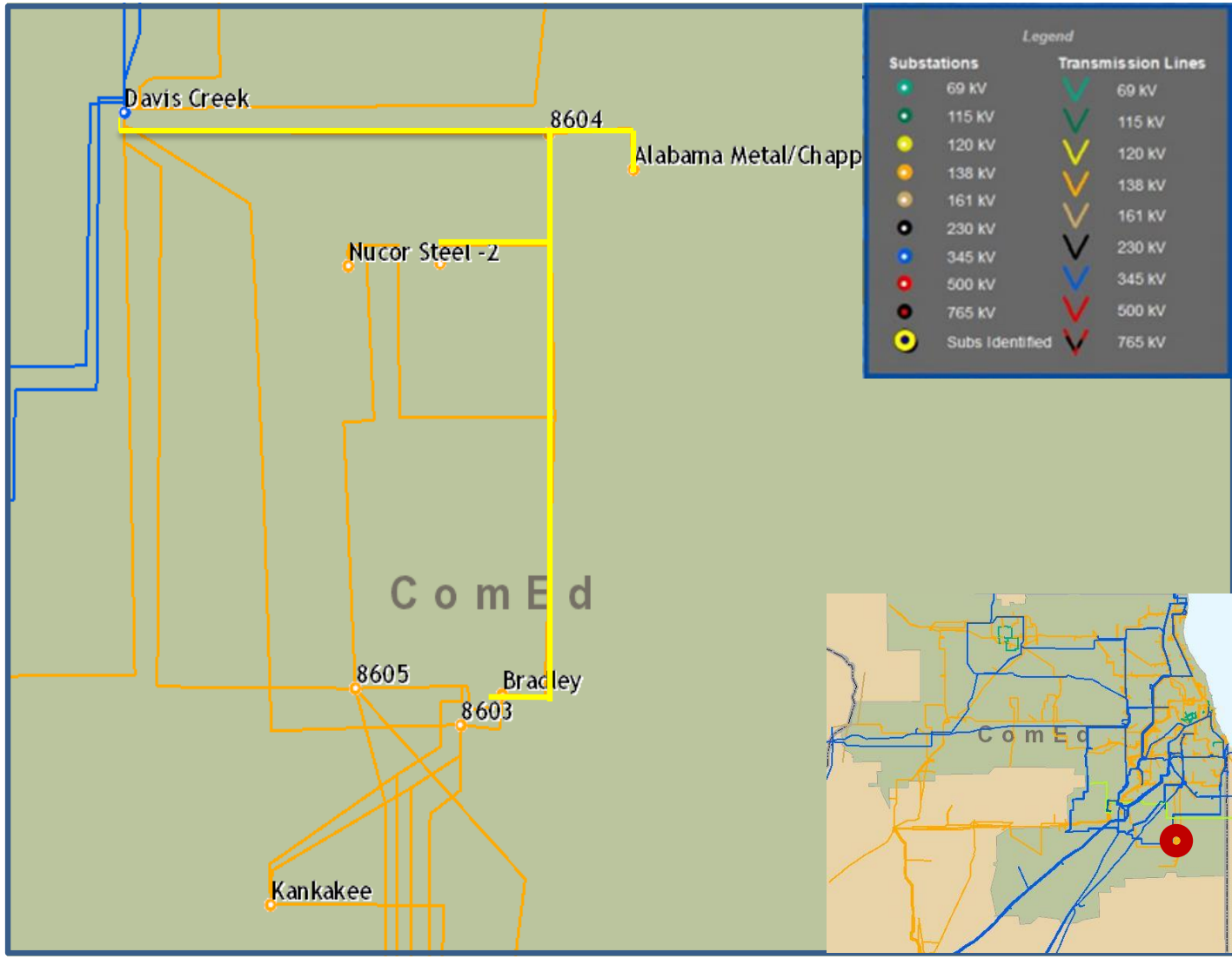
Equipment Material Condition, Performance, and Risk

**Specific Assumption Reference:**

- Enhancing system functionality, flexibility, visibility, or operability
- Networking existing radial facilities
- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions

**Problem Statement:**

- 138 kV line 8604 is currently normally open at Bradley
- The Bradley / Kankakee area serves 335 MW of load from two lines
- Line 8604 has 3.5 miles of 40 year old 636 kCMIL ACSR conductor on 80 year old wood H-frames.
- Wood poles, crossarms, braces, and insulators are nearing the end of their useful life



# ComEd Transmission Zone M-3 Process
# 138 kV Line 8604

**Need Number:** ComEd-2021-001

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan June 4, 2021

**Proposed Solution:**

- Rebuild 3.5 miles of line 8604 on steel poles with 1113 kcmil ACSR conductor
- Normally close 138 kV line 8604 CB at Bradley
- Replace two over dutied 138 kV CBs at Bradley
    - CBs are 64 years old and obsolete

Ratings:

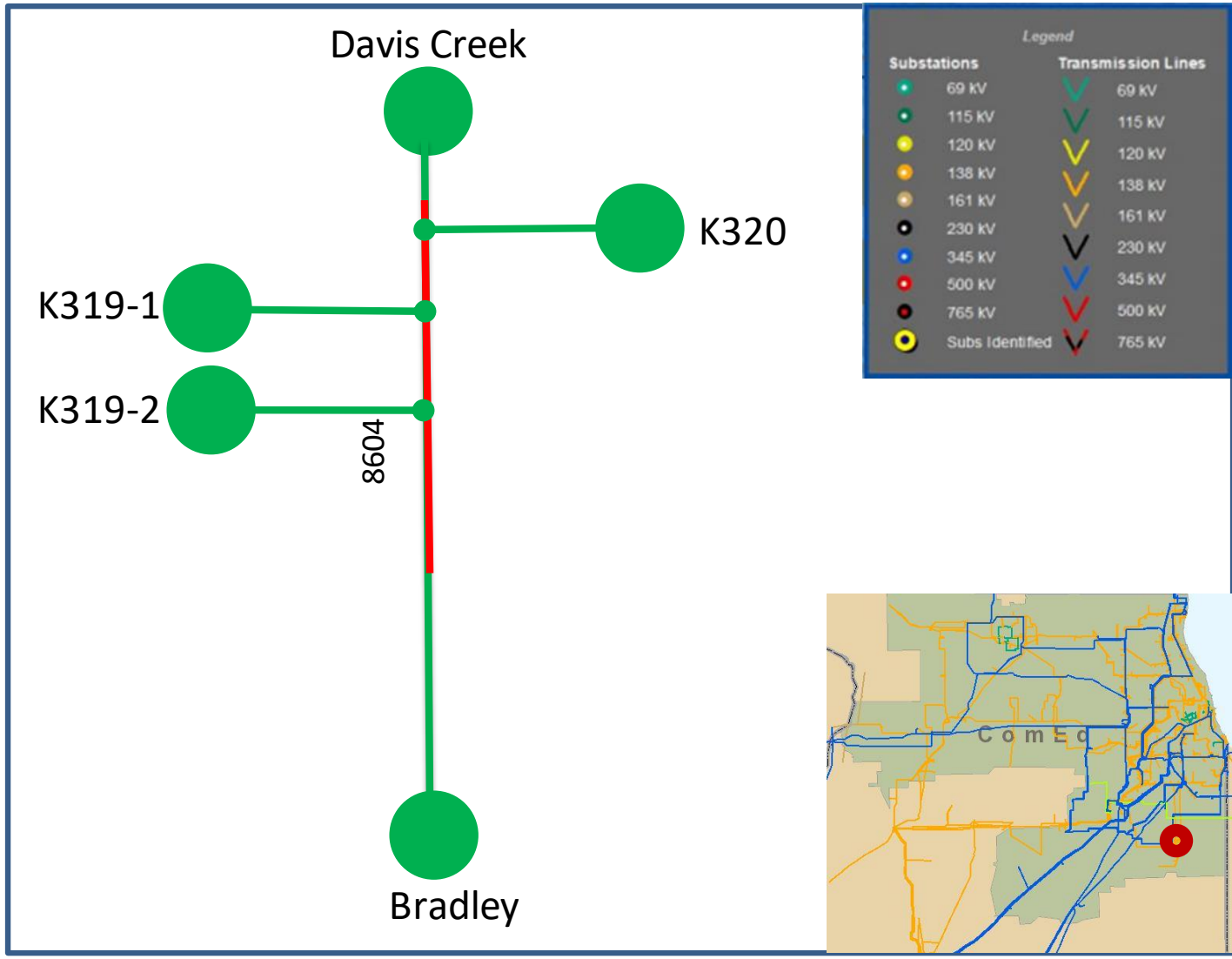
- Old: 249/317 New: 351/449 MVA SN/SLTE
- Old: 21 kA New: 63 kA

Estimated cost: $20M

**Alternatives Considered:**

1. Do nothing – Operational and material condition concerns remain

**Supplemental Project ID:** s2519
**Projected In-Service:** 12/31/23
**Project Status:** Conceptual
**Model:** 2025 RTEP



# ComEd Transmission Zone M-3 Process
# 138 kV Line 0708

**Need Number:** ComEd-2021-002

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan June 4, 2021

**Previously Presented:**

Need Meeting March 19, 2021

Solution Meeting April 16, 2021

**Project Driver:**

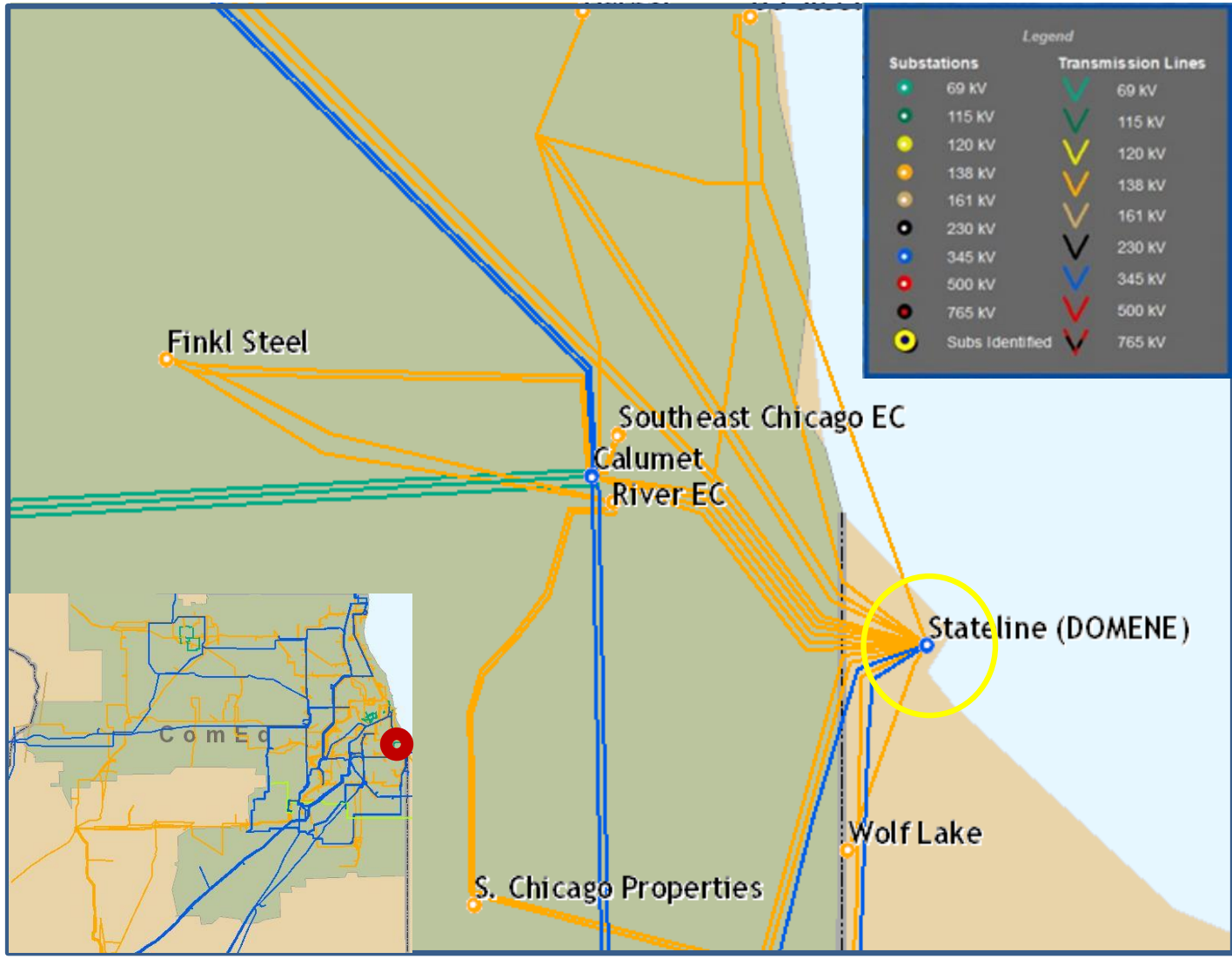
Operational Flexibility and Efficiency

**Specific Assumption Reference:**

- Enhancing system functionality, flexibility, visibility, or operability
- Internal and/or regulatory recommended design guidelines or standards

**Problem Statement:**

- 138 kV line 0708 is directly connected to center bus at State Line substation without a circuit breaker.
- A fault on line 0708 separates the 2 other 138 kV buses.



# ComEd Transmission Zone M-3 Process
# 138 kV Line 0708

**Need Number:** ComEd-2021-002

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan June 4, 2021

**Proposed Solution:**

- Install 138 kV CB on line 0708

Estimated cost: $2.6M

**Alternatives Considered:**

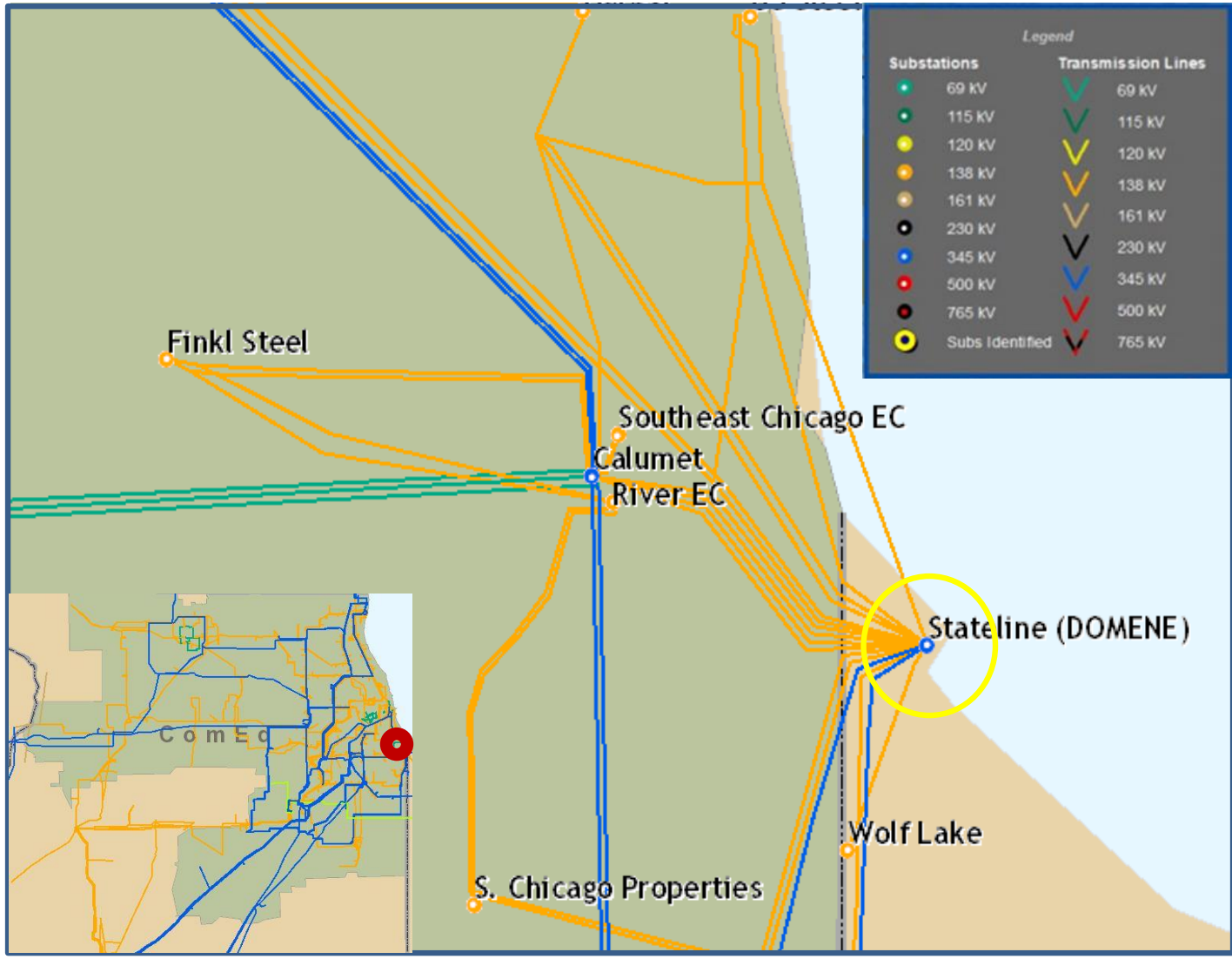
1. Do nothing – operational issue remains

**Supplemental Project ID:** s2520

**Projected In-Service:** 12/31/22

**Project Status:** Conceptual

**Model:** 2025 RTEP



# ComEd Transmission Zone M-3 Process
# Customer in Hoffman Estates

**Need Number:** ComEd-2021-003

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan October 1, 2021

**Previously Presented:**

Need Meeting April 16, 2021

Solution Meeting July 16, 2021

**Project Driver:**

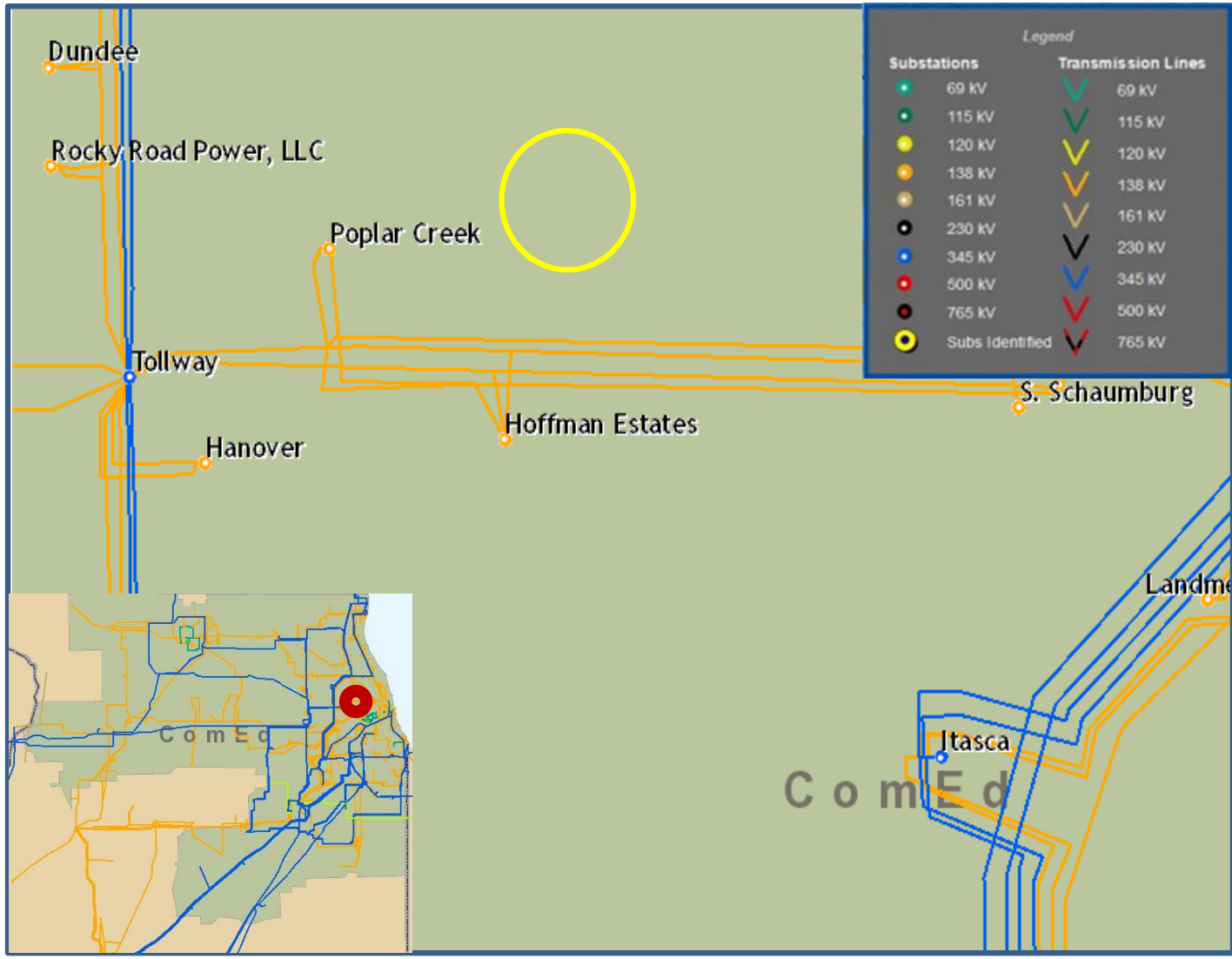
Customer Service

**Specific Assumption Reference:**

- New transmission customer interconnections or modification to an existing customer

**Problem Statement:**

New customer is looking for transmission service in Hoffman Estates. Initial loading is expected to be 24 MW in June 2023 with an ultimate load of 96 MW by the end of 2027.



# ComEd Transmission Zone M-3 Process
# Customer in Hoffman Estates

**Need Number:** ComEd-2021-003

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan October 1, 2021

**Selected Solution:**

- Rebuild Hoffman Estates with BAAH GIS
- Extend 2-138 kV lines 1.5 miles to new customer substation

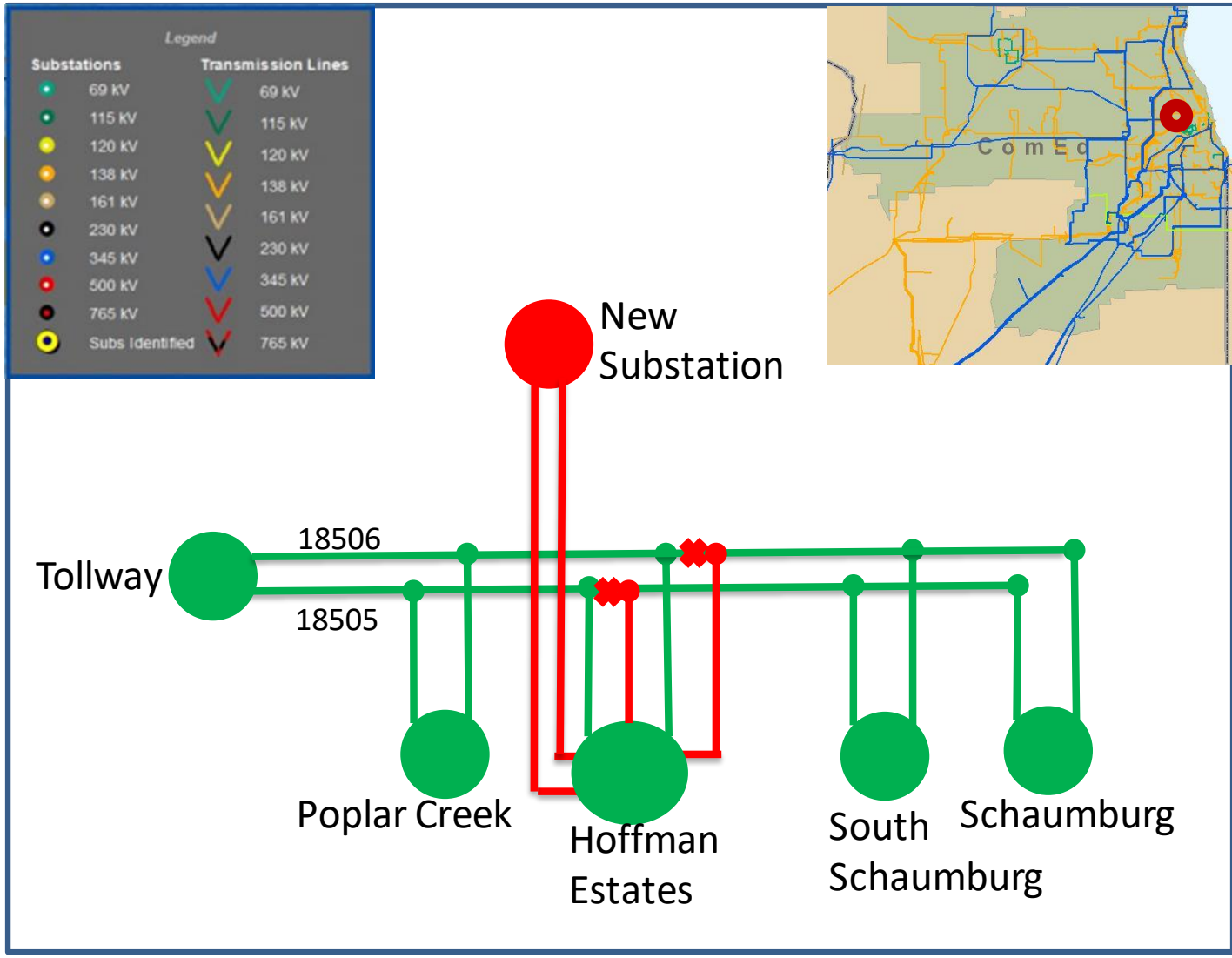
Estimated transmission cost: $0M

**Projected In-Service:** 12/31/23

**Supplemental Project ID:** s2582

**Project Status:** Conceptual

**Model:** 2026 RTEP



# Revision History

5/19/2020 – V1 – Added  s2463

6/7/2021 – V2 – Added s2519 and s2520

10/1/2021 – V3 – Added s2582