

Submission of Supplemental Projects for Inclusion in the Local Plan

ComEd Local Plan - 2025

Need Number: ComEd-2024-005

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Solution Meeting 3/15/2024

Need Meeting 1/19/2024

Project Driver:

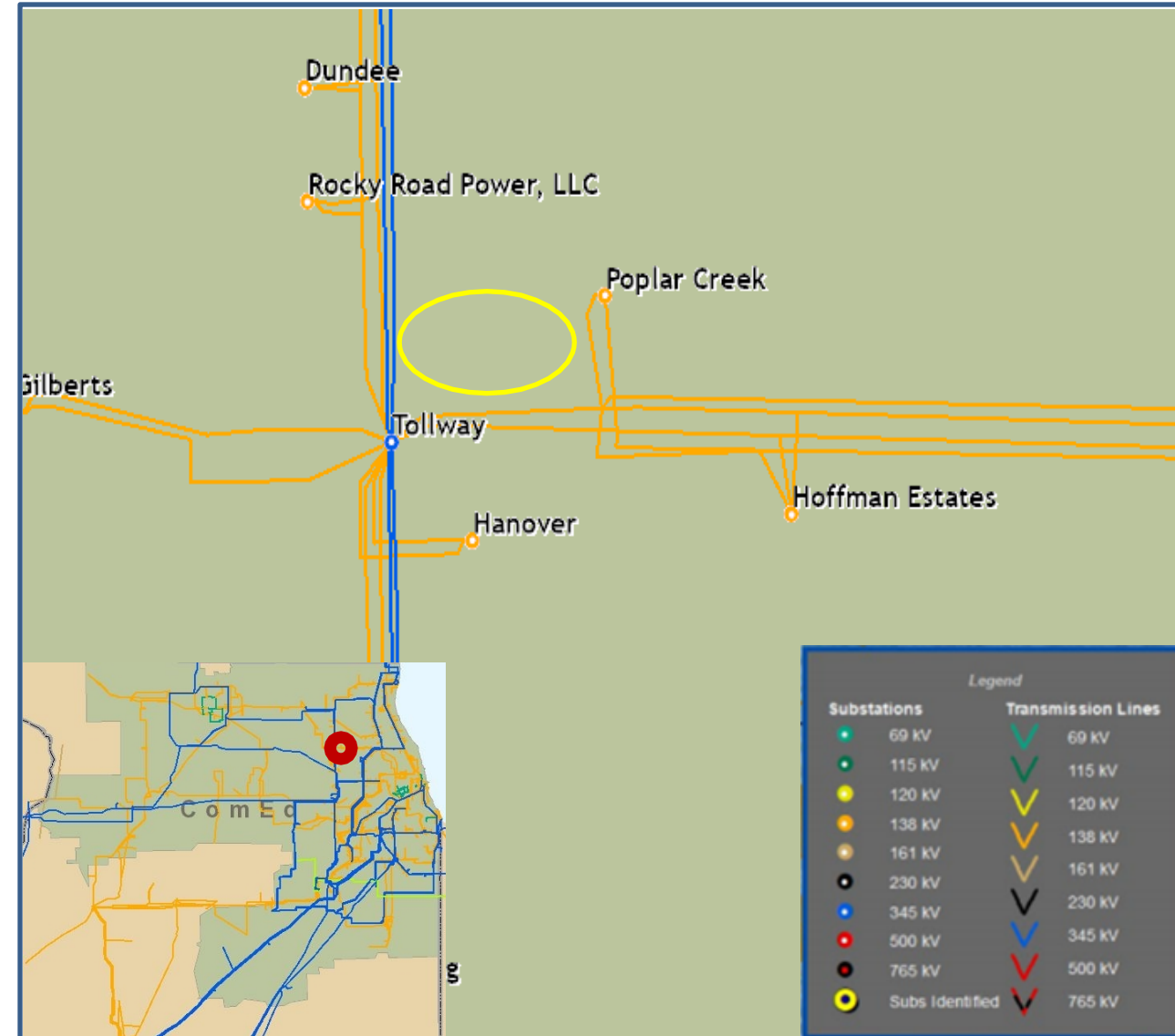
Customer Service

Specific Assumption Reference:

- New transmission customer interconnections or modification to an existing customer

Problem Statement:

New customer is looking for transmission service in the Hoffman Estates area. Initial loading is expected to be 17 MW in June 2026, 222 MW in 2028, with an ultimate load of 324 MW.



Need Number: ComEd-2024-005

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Selected Solution:

- New customer will be radially served by two new 2.5 mile 138 kV lines from Tollway substation to the customer site. Customer substation will be double ring bus configuration with 4 – 138 kV to 34 kV transformers. At Tollway, replace 138 kV BT 2-3 CB with two 138kV BT CBs.

Estimated transmission cost: \$3M

Supplemental Project ID: s3578.1

Projected In-Service: 12/31/26

Project Status: Engineering

Model: 2028 RTEP



Need Number: ComEd-2023-005

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Solutions Meeting 6/14/2024

Need Meeting 8/18/2023

Project Driver:

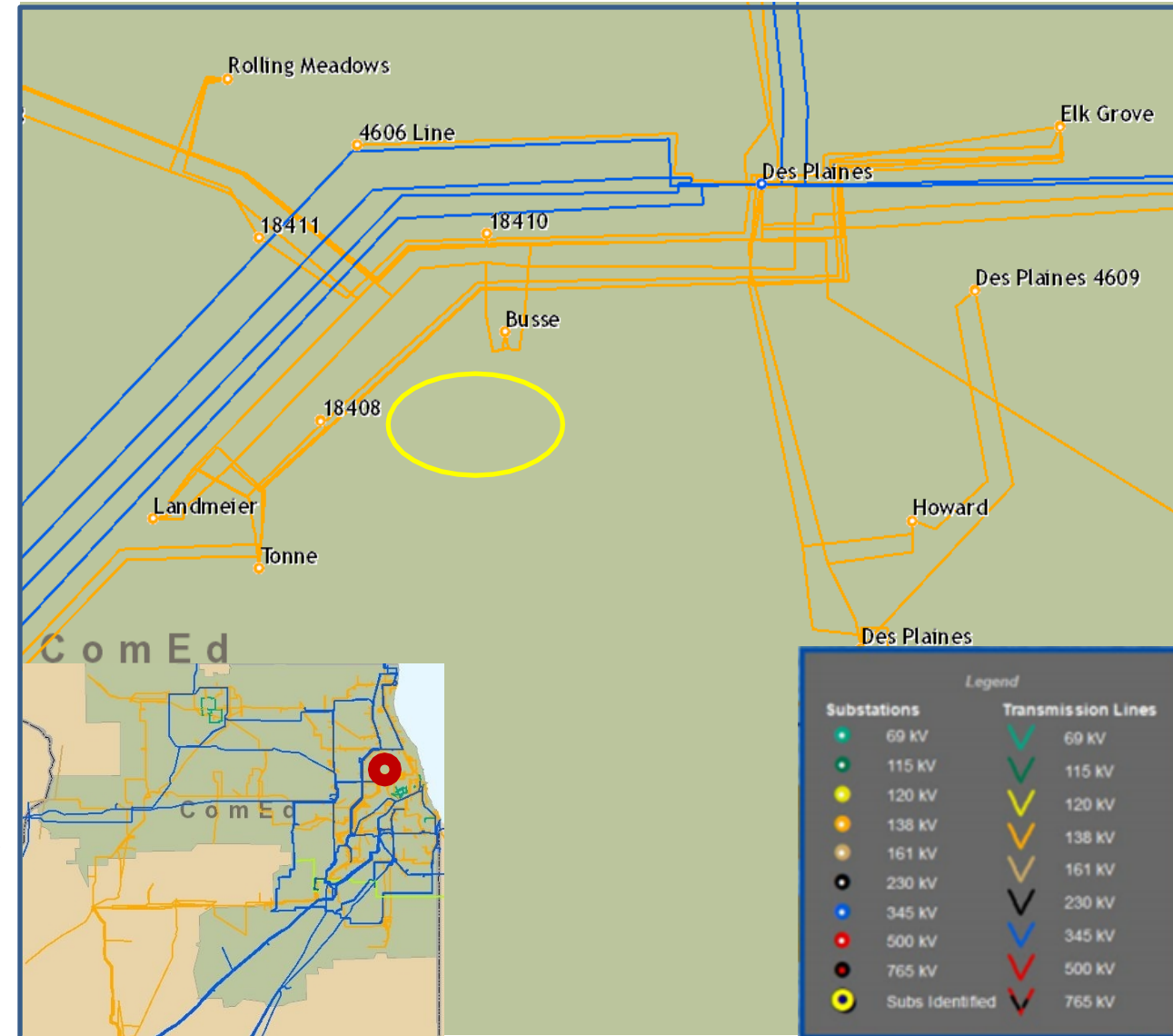
Customer Service

Specific Assumption Reference:

- New transmission customer interconnections or modification to an existing customer

Problem Statement:

New customer is looking for transmission service in Elk Grove. Initial loading is expected to be 60 MW in August 2026, 270 MW in 2028, with an ultimate load of 270 MW.



Need Number: ComEd-2023-005

Process Stage:

Submission of Supplemental Project for inclusion in the Local Plan
March 26, 2025

Selected Solution:

- Expand TSS Elk Grove to the east and build a new 138kV GIS building. Existing overhead 138kV transmission lines, L.18407 and L.18408, will be cut over from the exiting GIS building to the new GIS building via overhead conductors. The new GIS will be tied to the existing GIS through two new bus ties.
- The new GIS station will install fourteen 138 kV CBs in a breaker and a half configuration.
- Customer will be radially served with four 138/34 kV, 112MVA transformers.

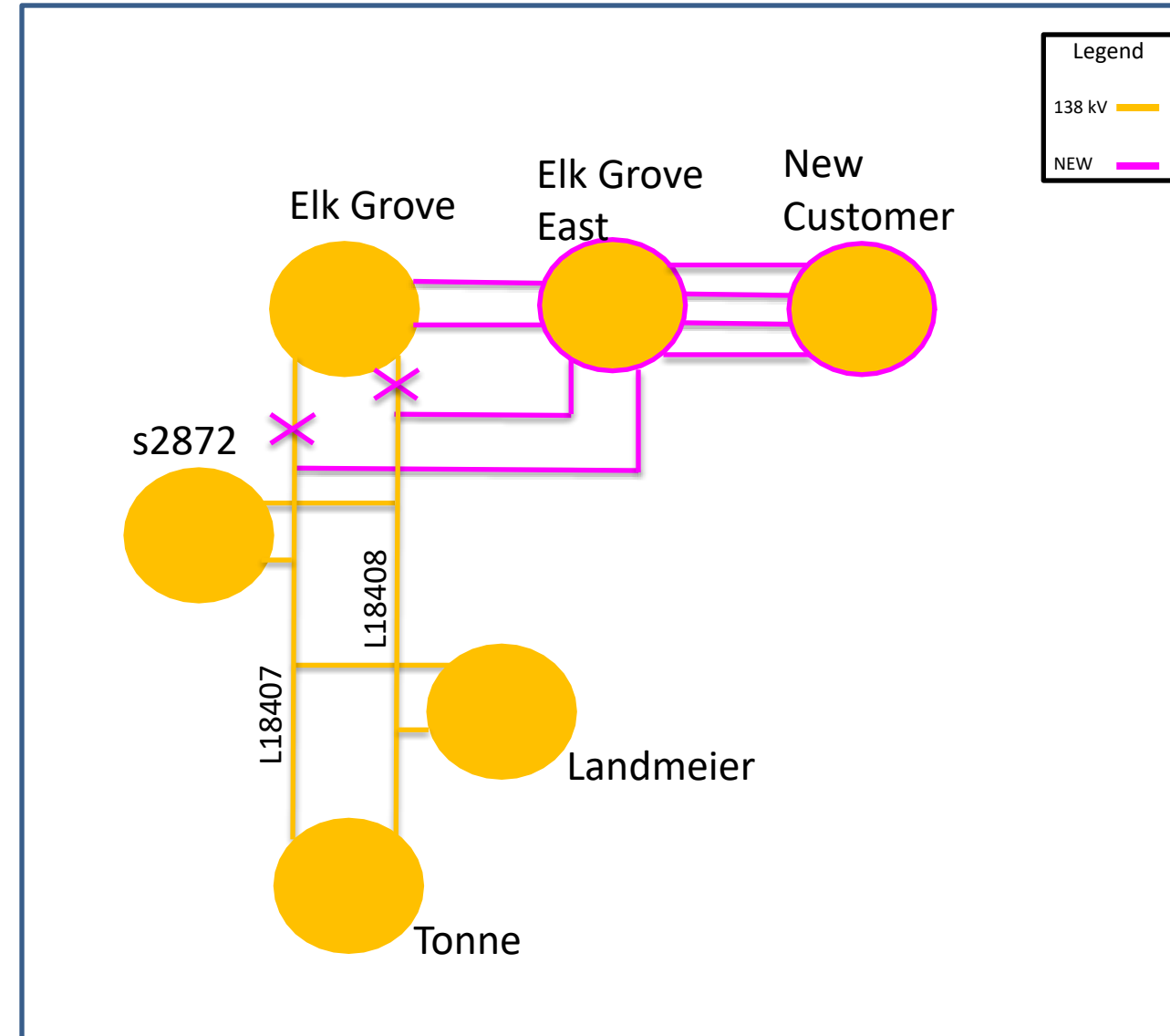
Estimated transmission cost: \$130.9M

Supplemental Project ID: s3579.1

Projected In-Service: 8/30/26

Project Status: Engineering

Model: 2028 RTEP



Need Number: ComEd-2024-013

Process Stage:

Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Solution Meeting 6/14/2024

Need Meeting 4/19/2024

Project Driver:

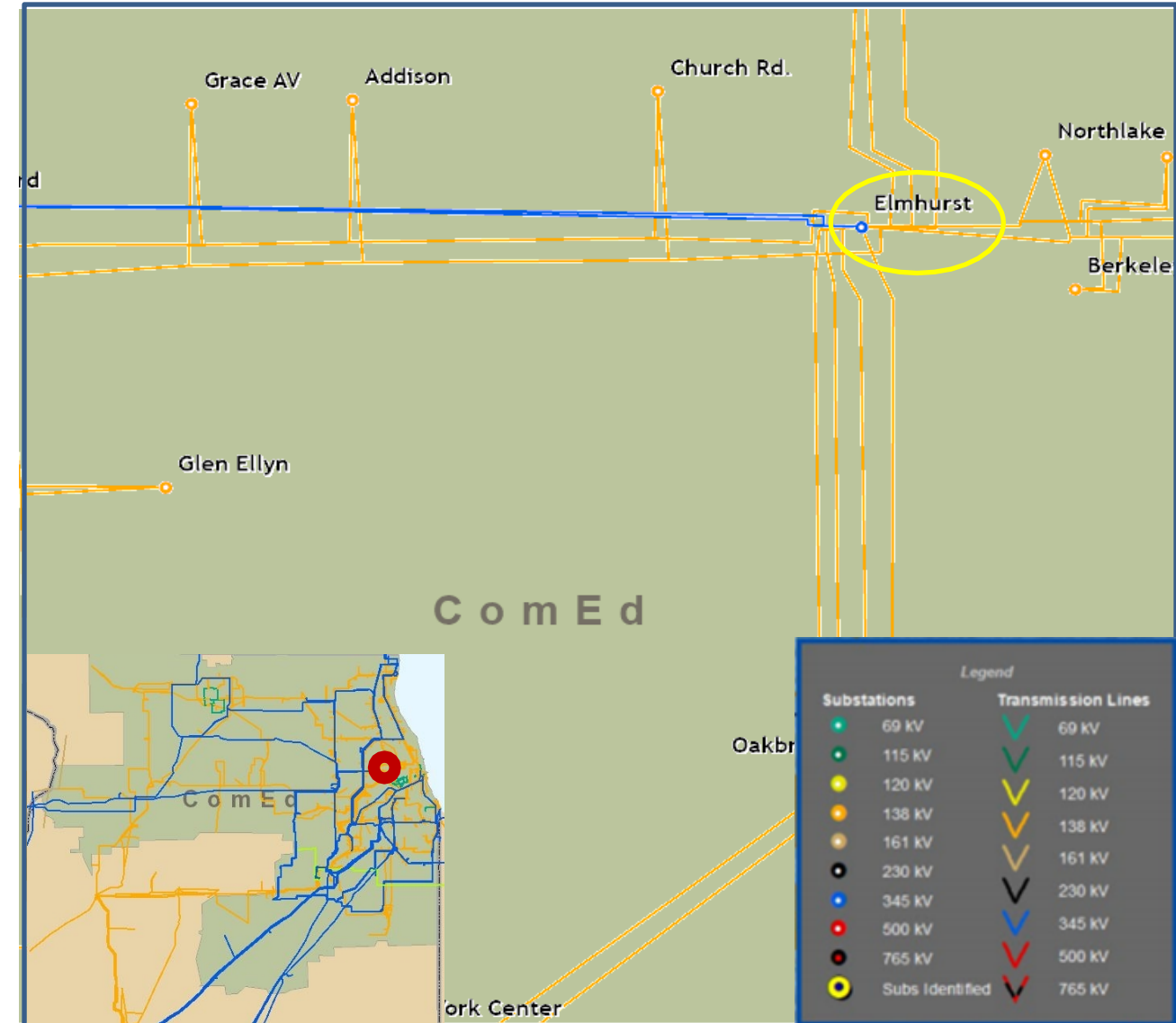
Customer Service

Specific Assumption Reference:

- Transmission System configuration changes due to new or expansion of existing distribution substations

Problem Statement:

ComEd Distribution has a customer requesting service in the Elmhurst area. Initial loading is expected to be 53 MW in January 2025, 103 MW in 2028, with an ultimate load of 103 MW.



Need Number: ComEd-2024-013

Process Stage:

Submission of Supplemental Project for inclusion in the Local Plan
March 26, 2025

Selected Solution:

Phase 1: (s3580.1)

- Install two new 60 MVA, 138/34 kV distribution transformers at Elmhurst to a new 34 kV terminal
- Install two new 138 kV BT CBs between Bus 3 and Bus 4

Estimated transmission cost: \$6M

Phase 2: (s3580.2)

- Install third new 60 MVA 138/34 kV distribution transformer at Elmhurst

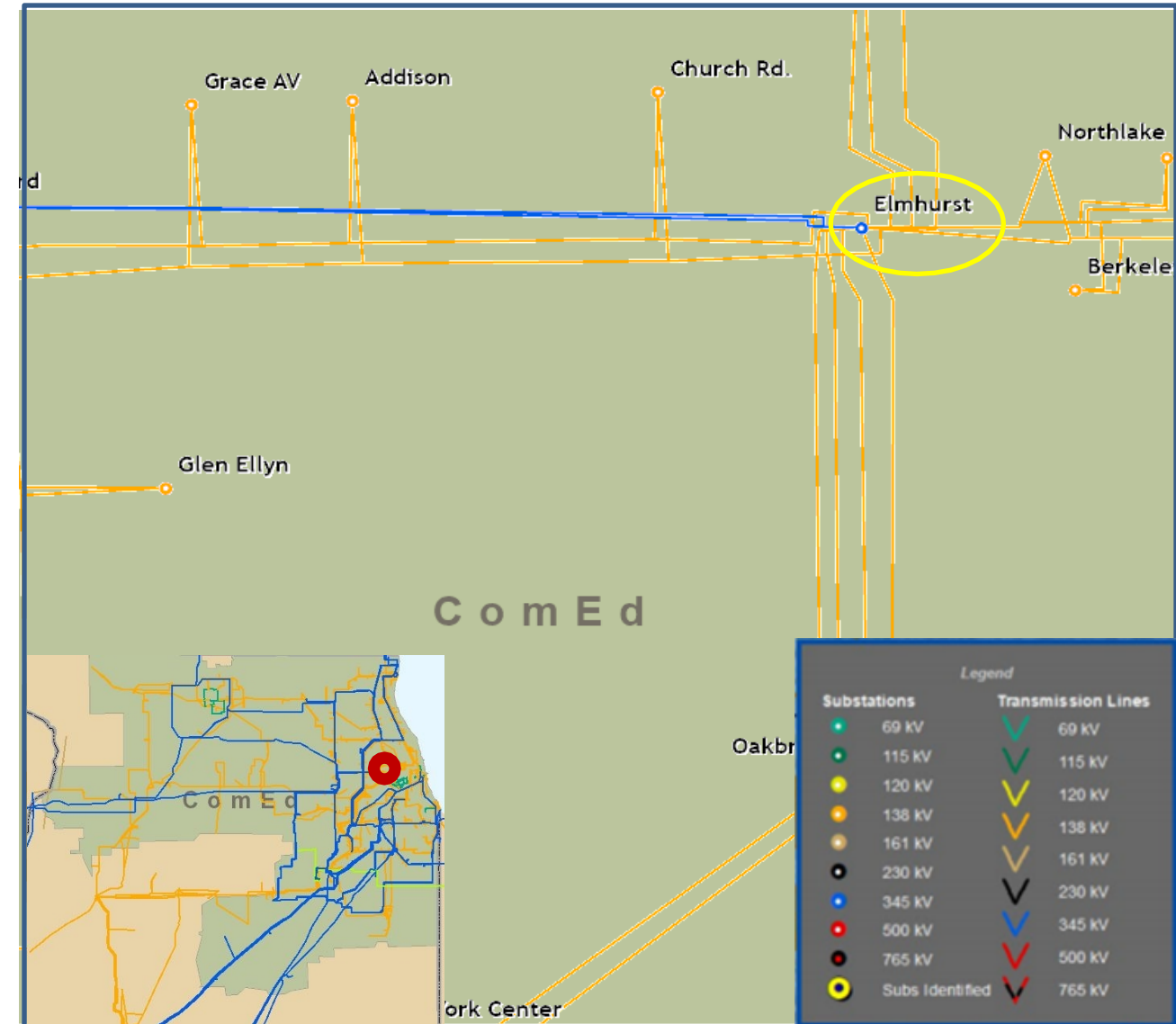
Estimated transmission cost: \$0

Supplemental Project ID: s3580.1, s3580.2

Projected In-Service: Phase 1: 8/1/2025, Phase 2: 6/1/2027

Project Status: Engineering

Model: 2028 RTEP



Need Number: ComEd-2023-009

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Solutions Meeting 6/14/2024

Need Meeting 9/15/2023

Project Driver:

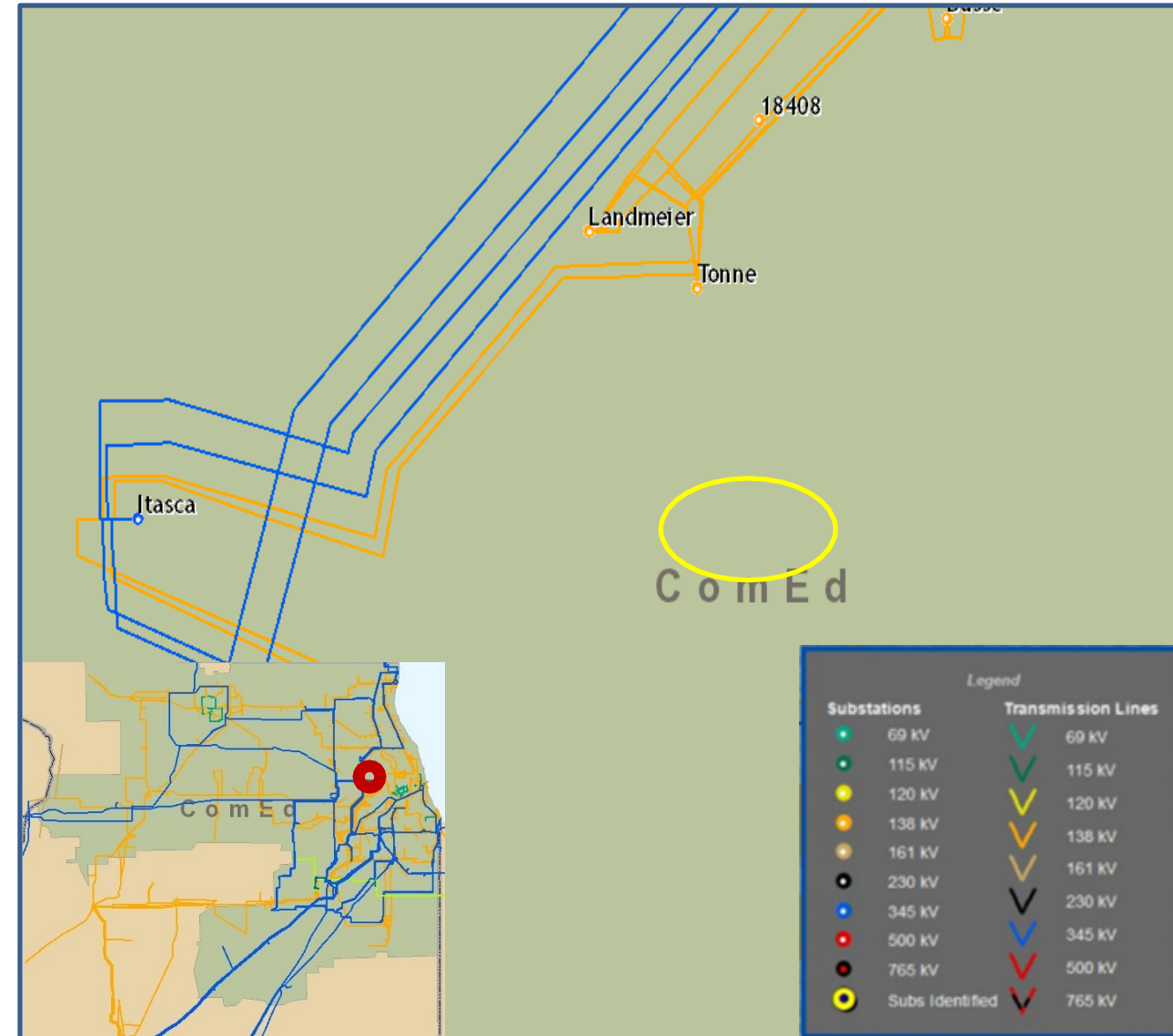
Customer Service

Specific Assumption Reference:

- New transmission customer interconnections or modification to an existing customer

Problem Statement:

New customer is looking for transmission service in the Itasca area. Initial loading is expected to be 96 MW in December 2026, 177.5 MW in 2028, with an ultimate load of 272.7 MW.



Need Number: ComEd-2023-009

Process Stage:

Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Selected Solution:

- New customer will be radially served by expanding the bus at Itasca with 2 new bays to connect 2 new, 3-mile 138 kV lines from Itasca to the customer site. Customer substation will be twelve 138 kV CB double ring bus configuration with four 138/34 kV transformers.

Estimated transmission cost: \$9.9M

Supplemental Project ID: s3581.1

Projected In-Service: 12/1/26

Project Status: Engineering

Model: 2028 RTEP



Need Number: ComEd-2023-008

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Solutions Meeting 8/6/2024

Need Meeting 9/15/2023

Project Driver:

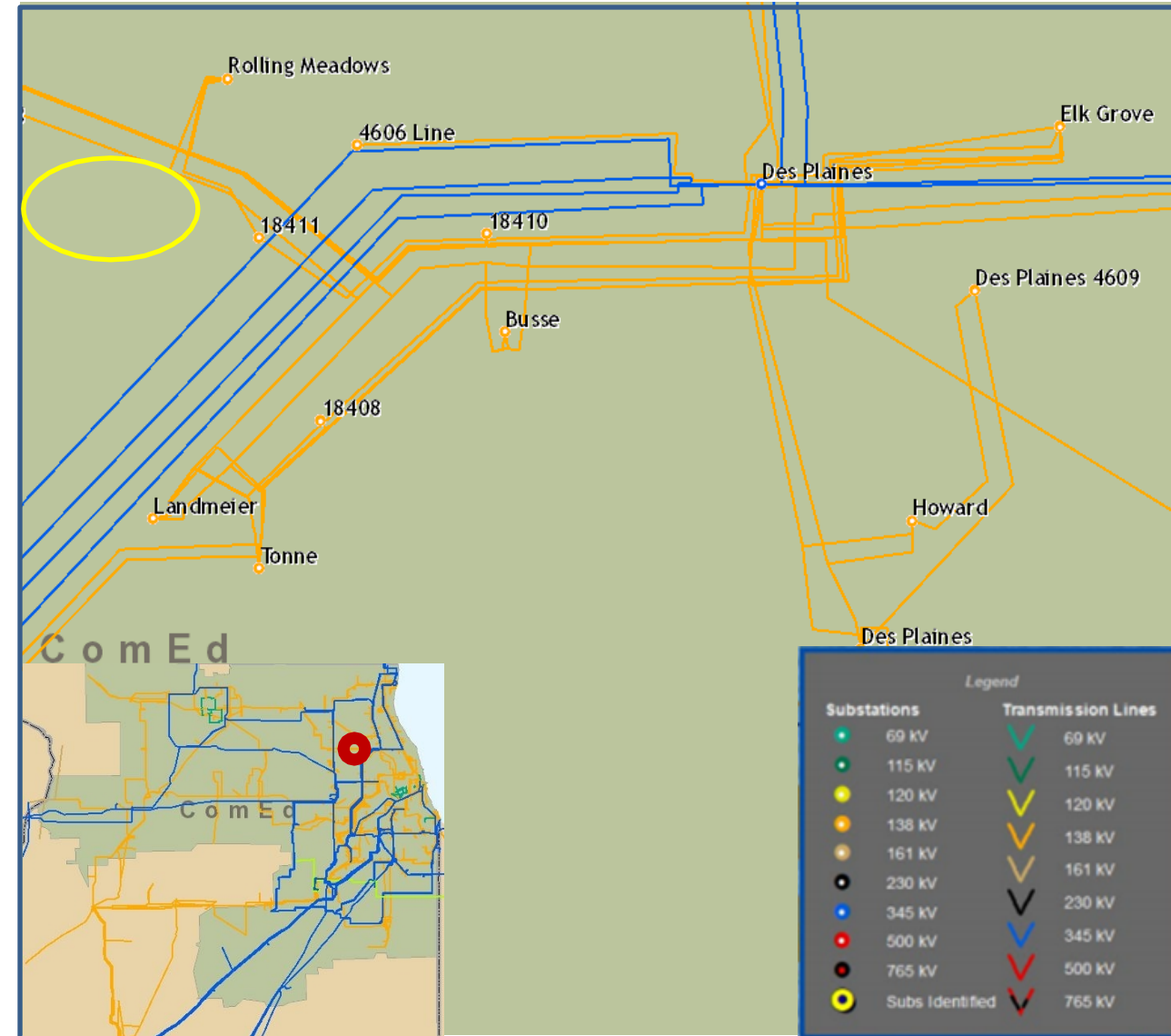
Customer Service

Specific Assumption Reference:

- New transmission customer interconnections or modification to an existing customer

Problem Statement:

New customer is looking for transmission service in the Elk Grove area. Initial loading is expected to be 117 MW in December 2026, 333 MW in 2028, with an ultimate load of 378 MW.



Need Number: ComEd-2023-008

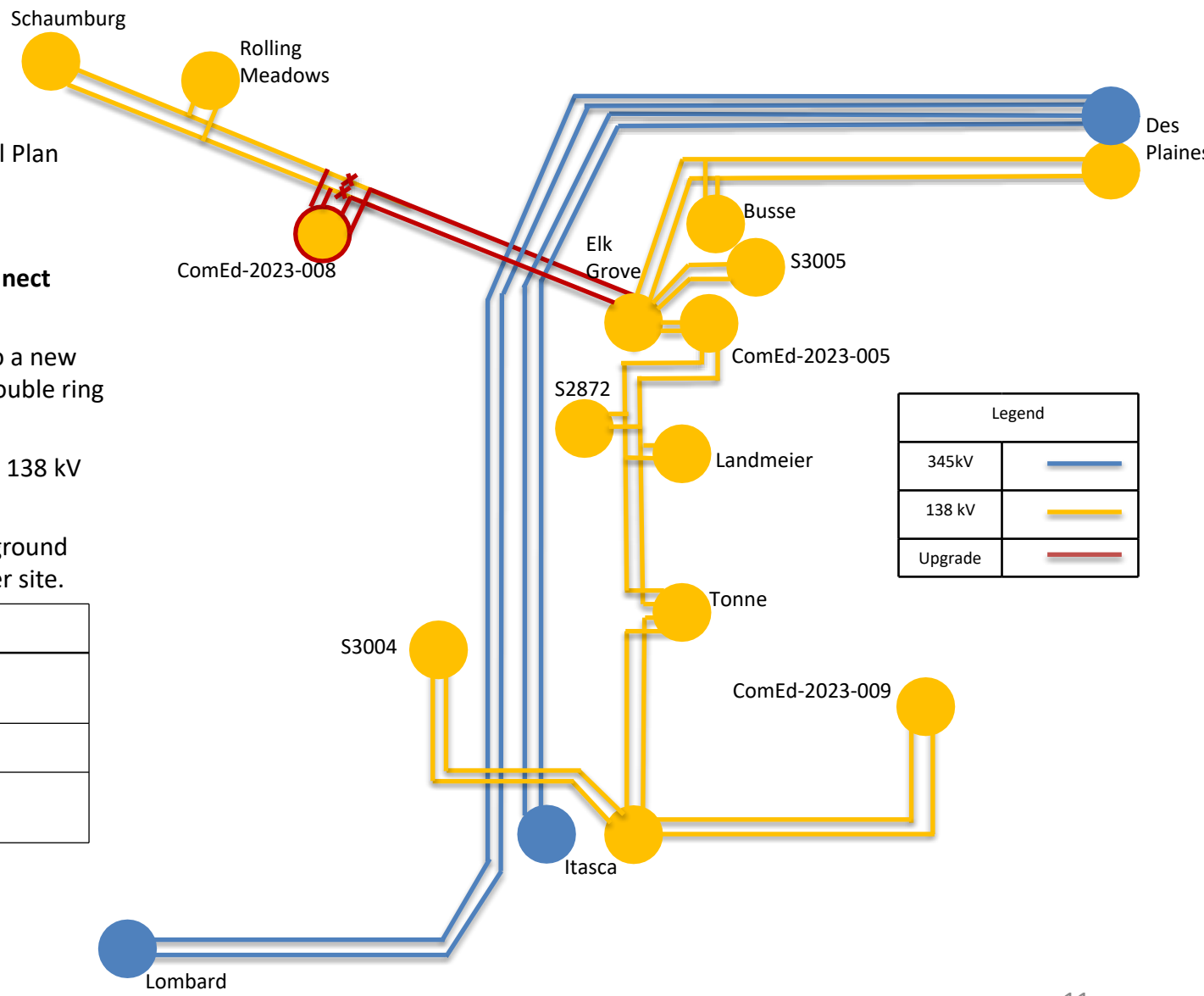
Process Stage: Submission of Supplemental Project for inclusion in the Local Plan
March 26, 2025



Selected Solution:

The following scope of work is all direct connect facilities to physically connect demand to the grid. (s3582.1)

- Cut into existing 138 kV Elk Grove – Schaumburg lines, extend 4 lines to a new customer substation. Customer substation will be sixteen 138 kV CB, double ring bus configuration with five 138/34 kV 112 MVA transformers.
- Reconductor 1.25 miles of existing 636 ACSR with 1033.5 ACSS on each 138 kV line from Elk Grove to new customer site.
- Replace existing 1600 XLPE underground cables with 2500 XLPE underground cables (two per phase) on each 138 kV line out of Elk Grove to customer site.

Existing ratings MVA)	SN/SE	WN/WE
Elk Grove – Rolling Meadows (Red)	249/317	298/353
Elk Grove – Rolling Meadows (Blue)	249/317	298/353
New Ratings (MVA)	SN/SE	WN/WE
Elk Grove – ComEd-2023-008 (Red)	521/521	521/521
Elk Grove – ComEd-2023-008 (Blue)	521/521	521/521



Legend	
345kV	
138 kV	
Upgrade	

ComEd Transmission Zone M-3 Process Customer in Elk Grove

The following components are system reinforcements required to serve the load and meet applicable TPL-001, PJM, and Exelon transmission planning criteria: (s3582.2)

- Cut into existing 345kV Des Plaines – Lombard lines and extend 4 lines to a new Elk Grove twelve (12) CB 345 kV GIS bus in a breaker-and-a-half configuration.
- Install 2 new 420 MVA 345/138 kV autotransformers at Elk Grove

Estimated system reinforcement transmission cost: \$158M

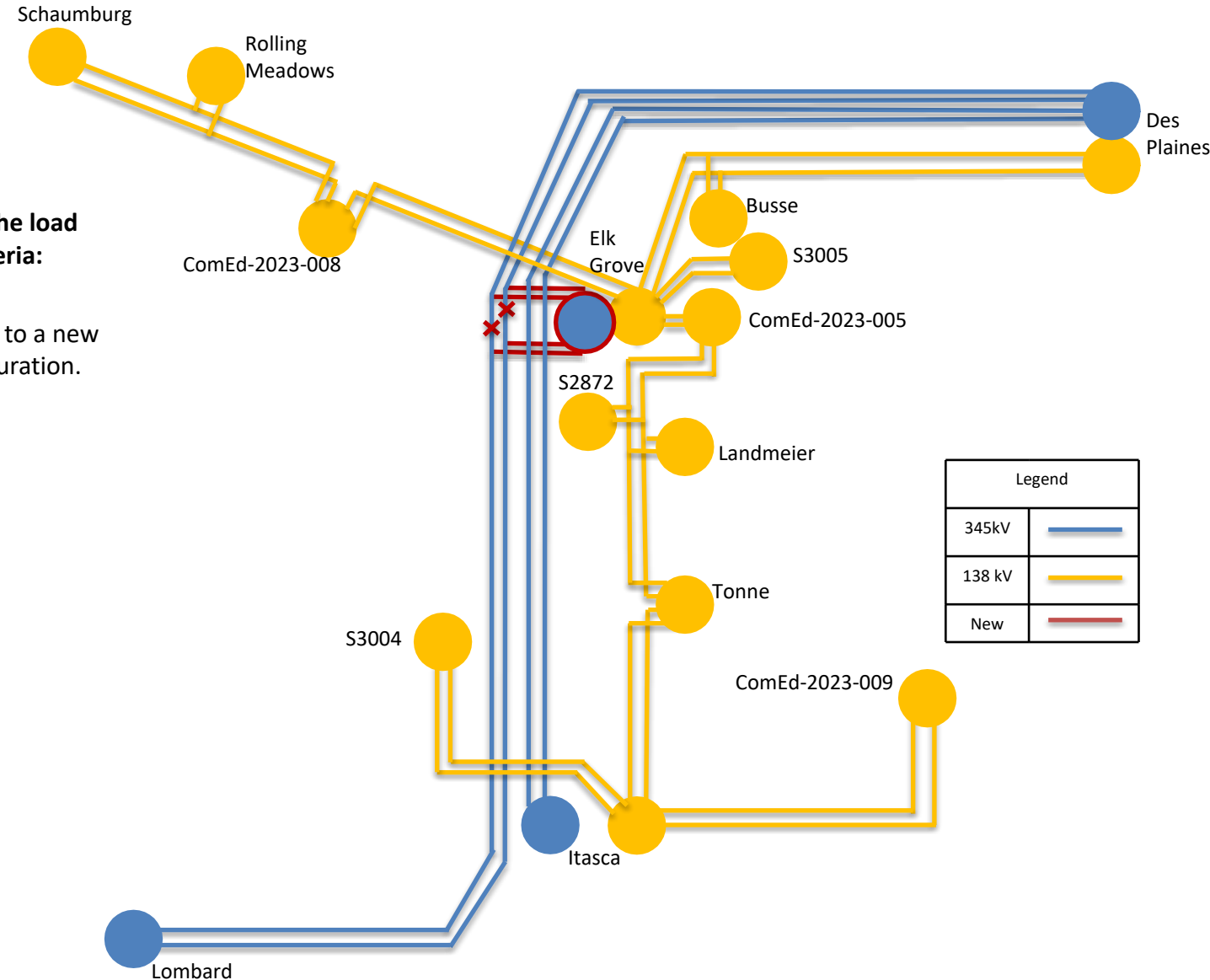
Total estimated transmission cost: \$158M

Supplemental Project ID: s3582.1, s3582.2

Projected In-Service: 12/31/2026 (s3582.1), 12/31/2026 (s3582.2)

Project Status: Engineering

Model: 2028 RTEP



Need Number: ComEd-2024-004

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Solutions Meeting 8/6/2024

Need Meeting 1/19/2024

Project Driver:

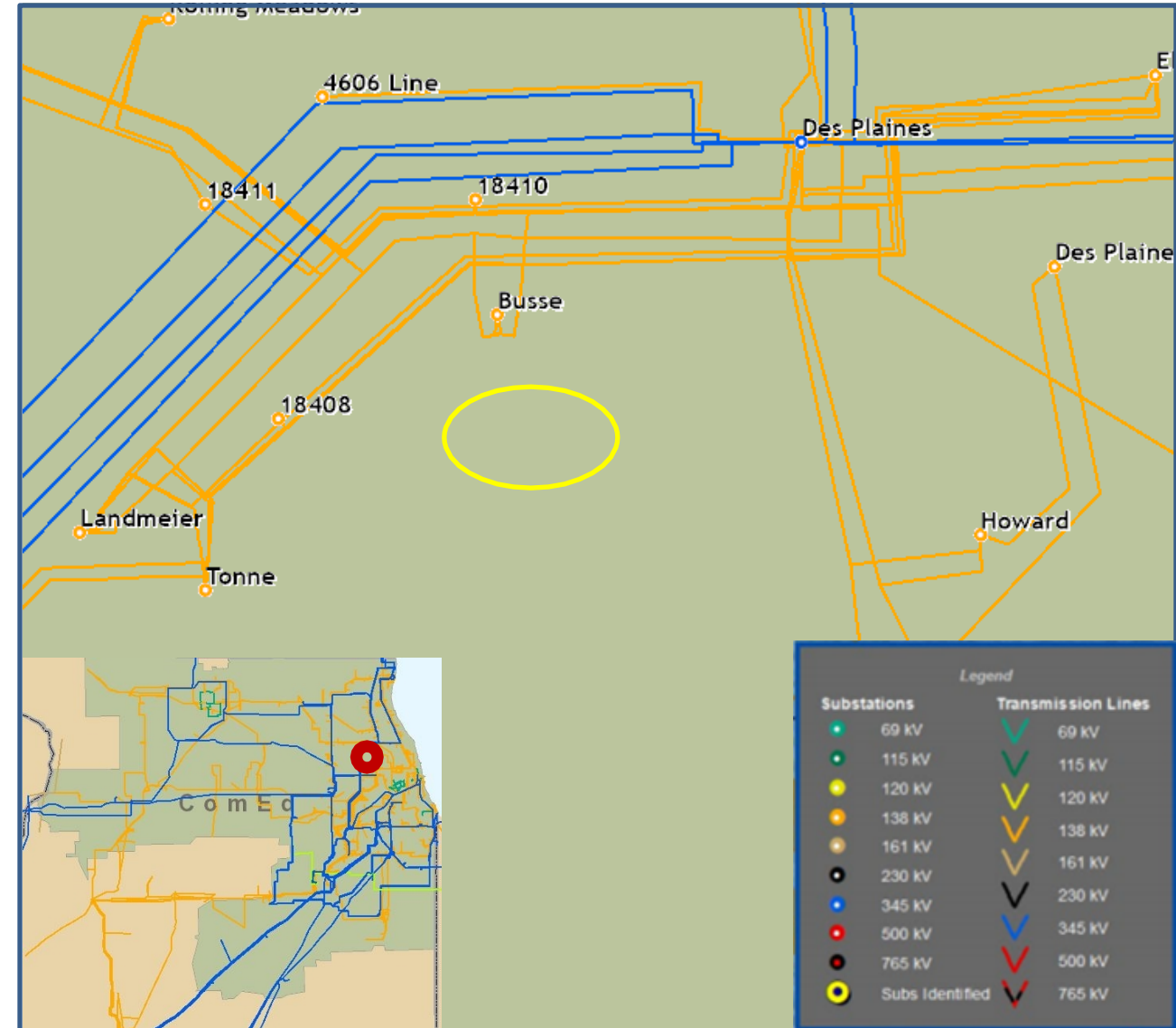
Customer Service

Specific Assumption Reference:

- New transmission customer interconnections or modification to an existing customer

Problem Statement:

New customer is looking for transmission service in the Elk Grove area. Initial loading is expected to be 25 MW in June 2027, 87 MW in 2028, with an ultimate load of 260 MW.



ComEd Transmission Zone M-3 Process Customer in Elk Grove

Need Number: ComEd-2024-004

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Selected Solution:

The following scope of work is all direct connect facilities to physically connect demand to the grid. (s3583.1)

- New customer will be radially served by two new 1.7 mile 138 kV lines from Elk Grove East substation (ComEd-2023-005) to the customer site. Customer substation will be a fifteen CB, double ring bus configuration with 6 – 138/34 kV, 112 MVA transformers.
- Install 4 new 138kV GIS CBs to the breaker-and-a-half configuration at Elk Grove East to connect the new radial lines to the customer substation

Estimated direct connect facilities transmission cost: \$12M

The following components are system reinforcements required to serve the load and meet applicable TPL-001, PJM, and Exelon transmission planning criteria: (s3583.2)

- Install 2 new 345 kV CBs, 2 new 138 kV CBs and install 2 new 345/138 kV, 420 MVA autotransformers at Itasca substation

Estimated system reinforcement transmission cost: \$28.6M

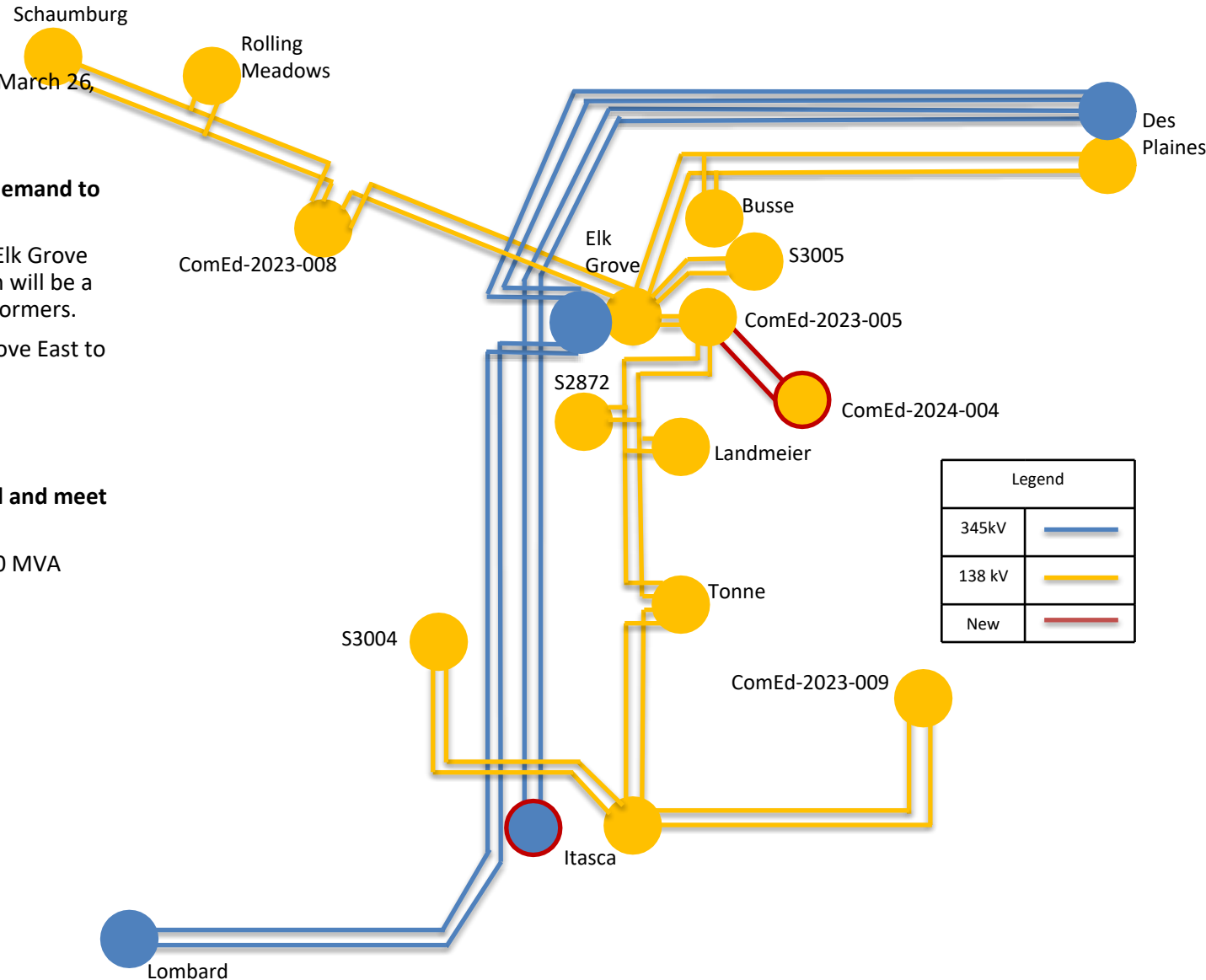
Total Estimated Transmission Cost: \$40.6M

Supplemental Project ID: s3583.1, s3583.2

Projected In-Service: 12/31/2026 (s3583.1), 12/31/2027 (s3583.2)

Project Status: Engineering

Model: 2028 RTEP



Need Number: ComEd-2024-003

Process Stage:

Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Solutions Meeting 9/20/2024

Need Meeting 1/19/2024

Project Driver:

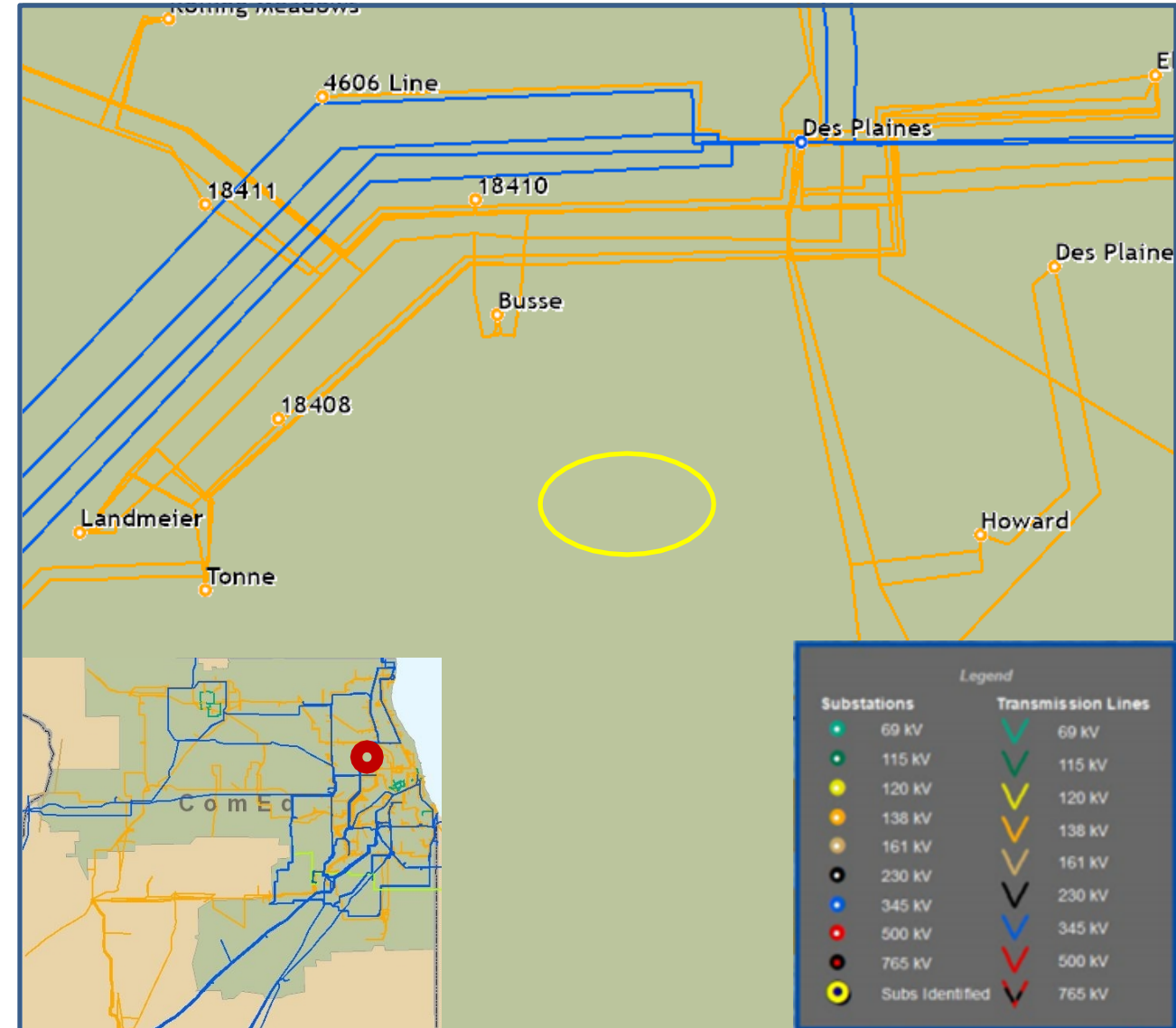
Customer Service

Specific Assumption Reference:

- New transmission customer interconnections or modification to an existing customer

Problem Statement:

New customer is looking for transmission service in the Elk Grove area. Initial loading is expected to be 16 MW in December 2027, 21 MW in 2028, with an ultimate load of 250 MW.



Need Number: ComEd-2024-003

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan
March 26, 2025

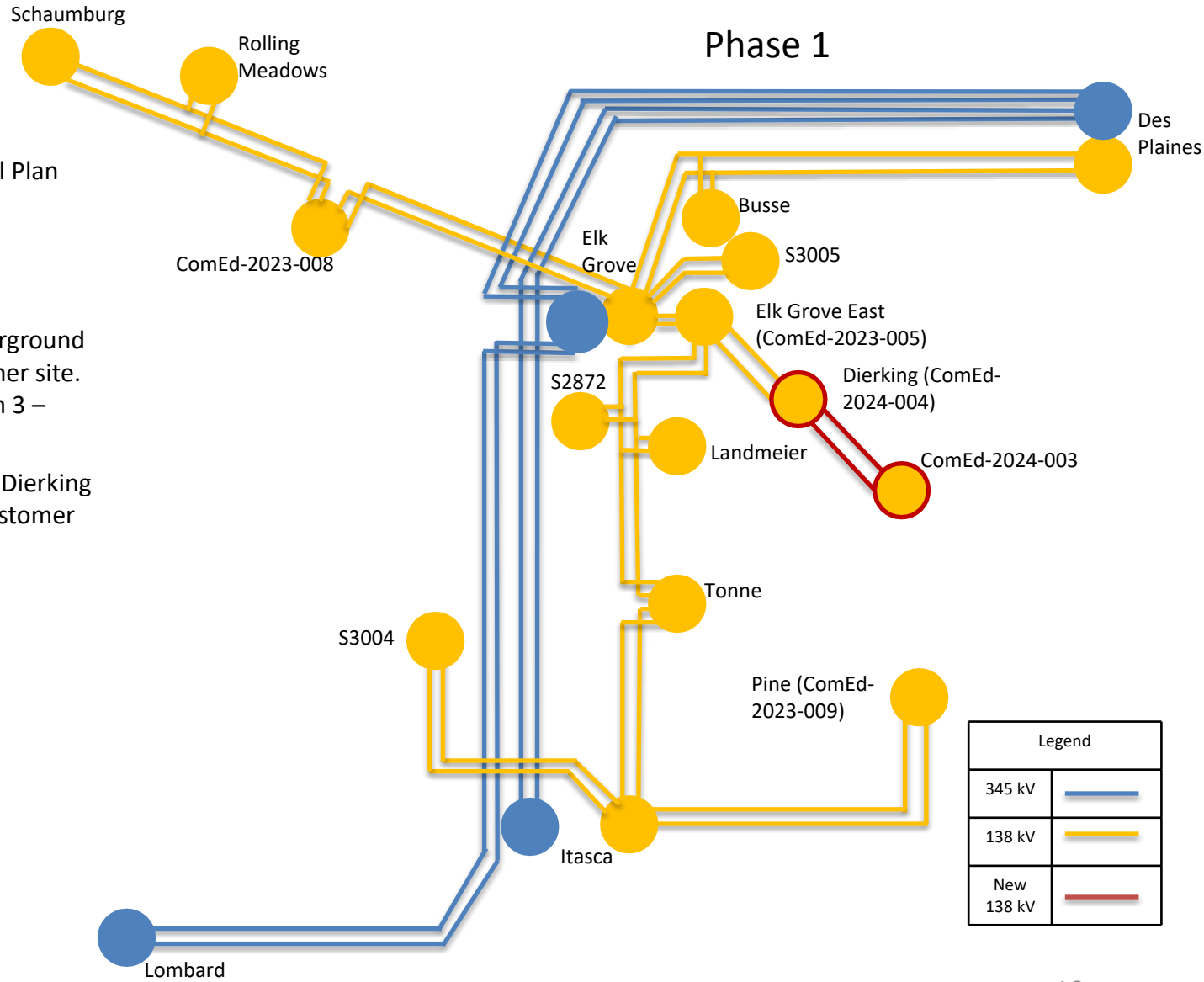
Selected Solution:

Phase 1: (s3584.1)

- New customer will be radially served by two new 1.7 mile 138 kV underground lines from ComEd Dierking substation (ComEd-2024-004) to the customer site. Customer substation will be a 11 CB, double ring bus configuration with 3 – 138/34 kV, 112 MVA transformers.
- Install 2 new 138kV CBs to the double ring bus configuration at ComEd Dierking substation (ComEd-2024-004) to connect the new radial lines to the customer substation

Facility	Old Ratings		New Ratings	
	SN/SE	WN/WE	SN/SE	WN/WE
Dierking – ComEd-2024-003 (Red)	-	-	280/280	280/280
Dierking – ComEd-2024-003 (Blue)	-	-	280/280	280/280

Estimated direct connect facilities transmission cost: \$121.4M



ComEd Transmission Zone M-3 Process Customer in Elk Grove

Need Number: ComEd-2024-003

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Selected Solution:

Phase 2: (s3584.2)

- Install second 1600 XLPE cable per phase on two – 1.5 mile 138kV underground lines from ComEd Elk Grove East substation (ComEd -2023-005) to ComEd Dierking substation (ComEd-2024-004)
- Install second 1600 XLPE cable per phase on two – 3 mile 138kV underground lines from ComEd Itasca substation to ComEd Pine substation (ComEd-2023-009)
- Install two new 138kV CBs to the double ring bus configuration at ComEd Pine substation (ComEd-2023-009) to connect the new lines to the customer substation
- Install two new 3 mile 138 kV underground lines from ComEd Pine substation (ComEd-2023-009) to the customer site

Facility	Old Ratings		New Ratings	
	SN/SE	WN/WE	SN/SE	WN/WE
Pine – ComEd-2024-003 (Red)	-	-	280/280	280/280
Pine – ComEd-2024-003 (Blue)	-	-	280/280	280/280
Elk Grove East - Dierking (Red)	280/280	280/280	351/449	351/449
Elk Grove East - Dierking (Blue)	280/280	280/280	351/449	351/449
Itasca - Pine (Red)	280/280	280/280	351/449	351/449
Itasca - Pine (Blue)	280/280	280/280	351/449	351/449

Estimated direct connect facilities transmission cost: \$168.0M

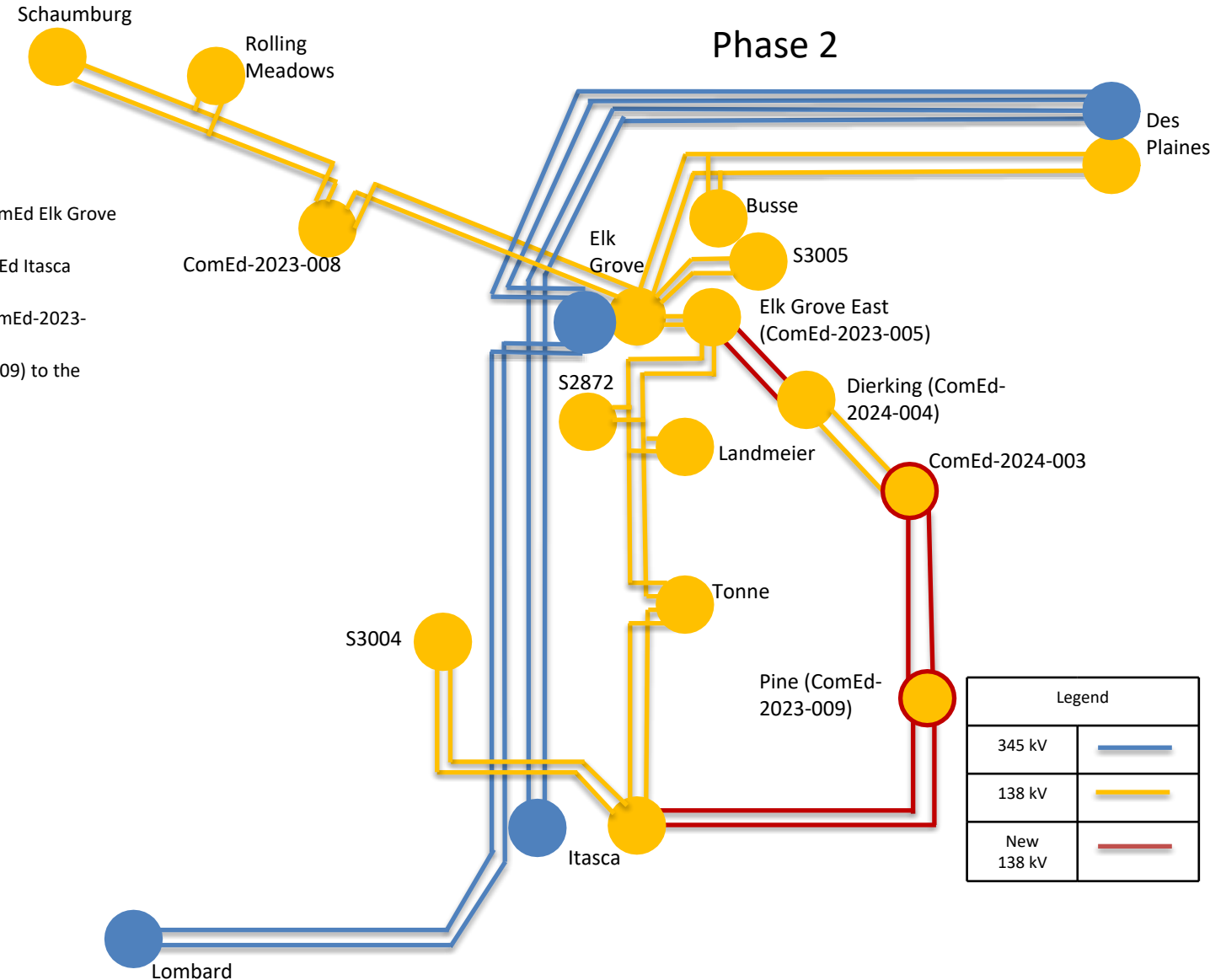
Total Estimated Transmission Cost: \$289.4M

Supplemental Project ID: s3584.1, s3584.2

Projected In-Service: 12/31/2027 (s3584.1), 12/31/2028 (s3584.2)

Project Status: Conceptual

Model: 2028 RTEP



Need Number: ComEd-2024-018

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Solution Meeting 11/6/2024

Need Meeting 9/10/2024

Project Driver:

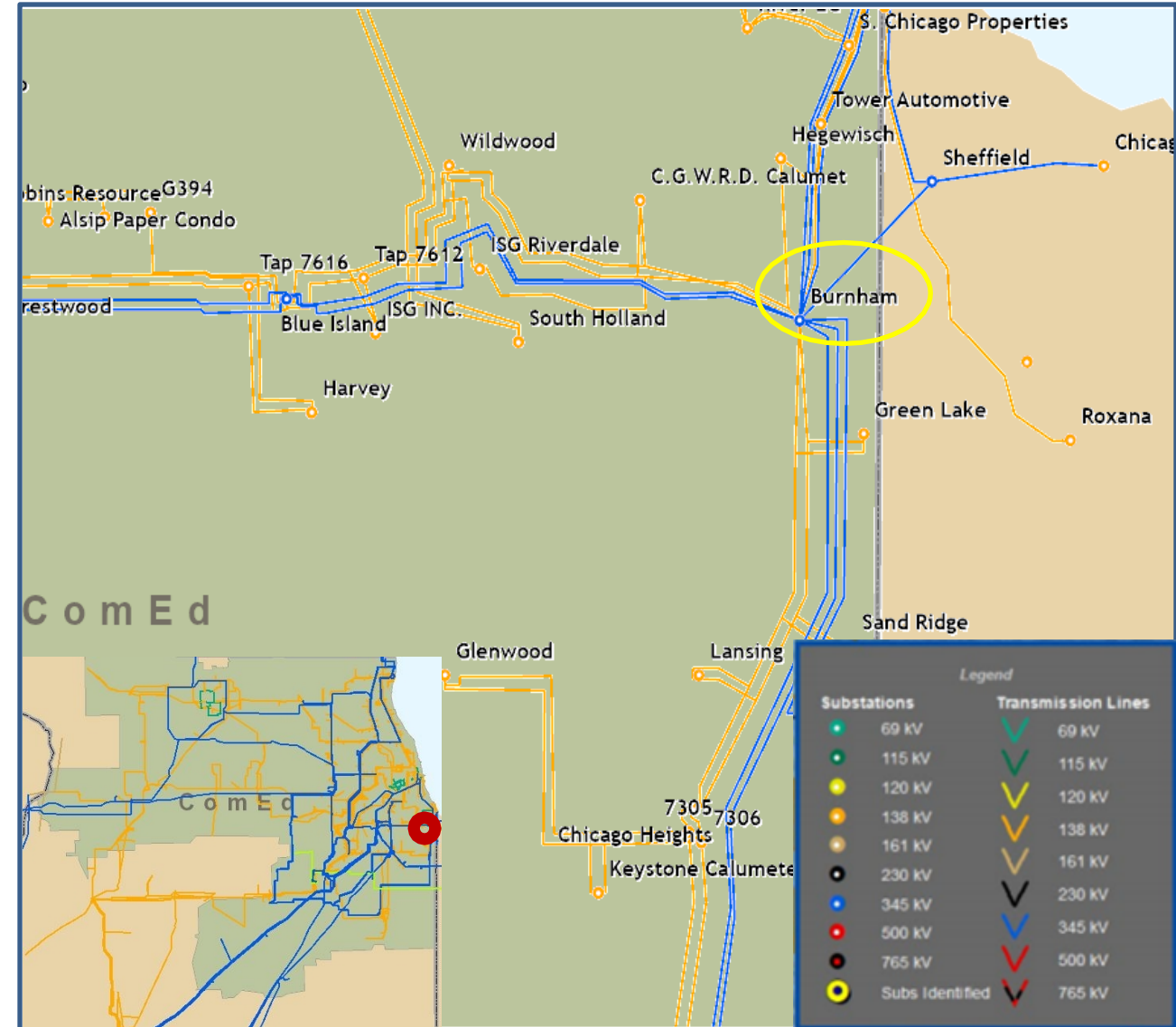
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:

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

Problem Statement:

- Burnham 345kV BT1-2 oil circuit breaker was installed in 1971. It is in deteriorating condition, has a lack of replacement parts and has elevated maintenance costs.



Need Number: ComEd-2024-018

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Selected Solution:

Replace existing 345 kV oil BT1-2 CB with new 345 kV SF6 CB.

Existing Breaker Ratings: 2000 A, 50 kA

New Breaker Ratings: 3000 A, 63 kA

Facility	Old Ratings		New Ratings	
	SN/SE	WN/WE	SN/SE	WN/WE
Burnham – Sheffield (Ameren) 345kV	1201/1441	1486/1651	1201/1479	1497/1710

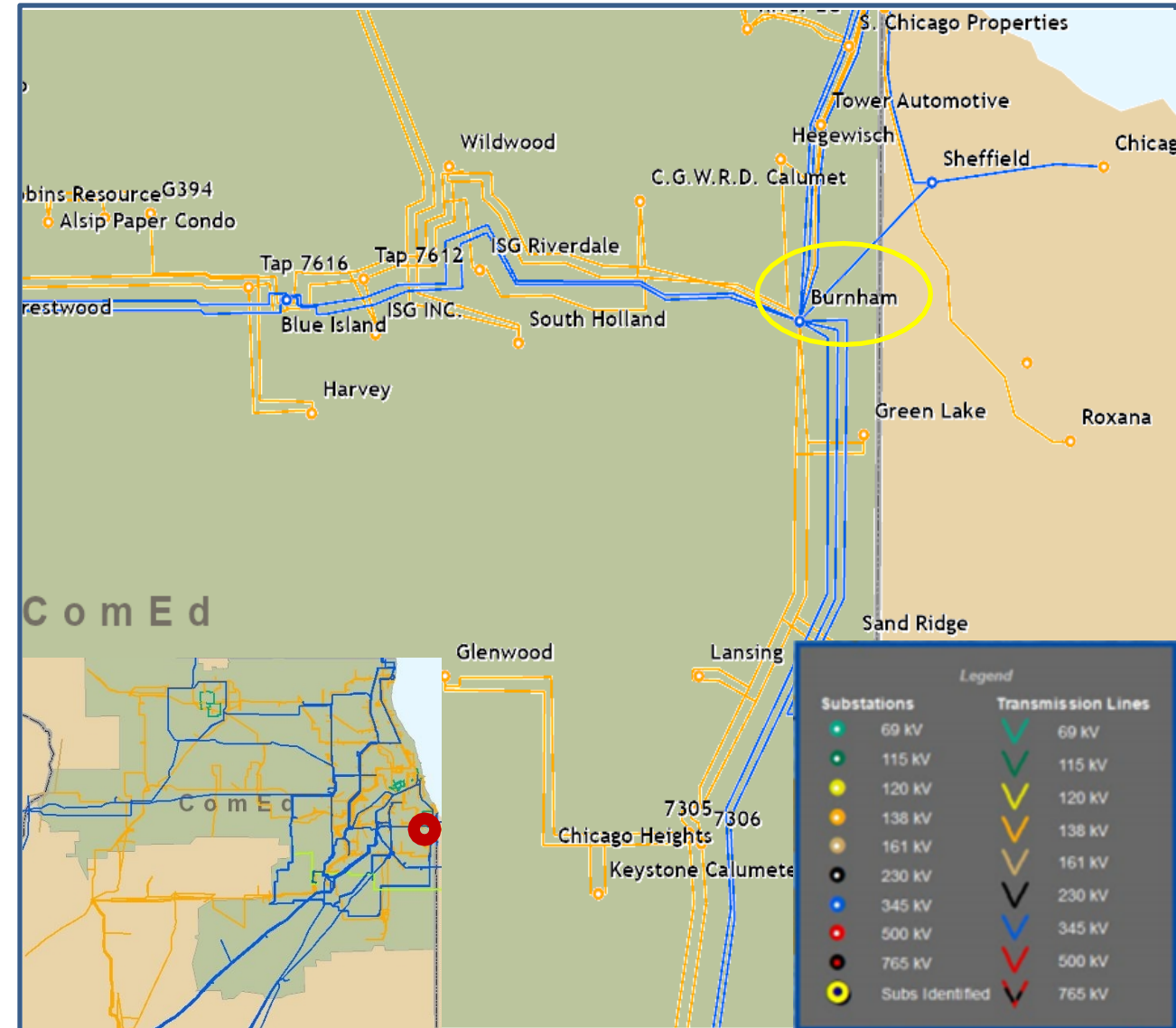
Estimated transmission cost: \$2.1M

Supplemental Project ID: s3585.1

Projected In-Service: 12/31/24

Project Status: In Service

Model: 2029 RTEP



Need Number: ComEd-2024-019

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Solution Meeting 11/6/2024

Need Meeting 9/10/2024

Project Driver:

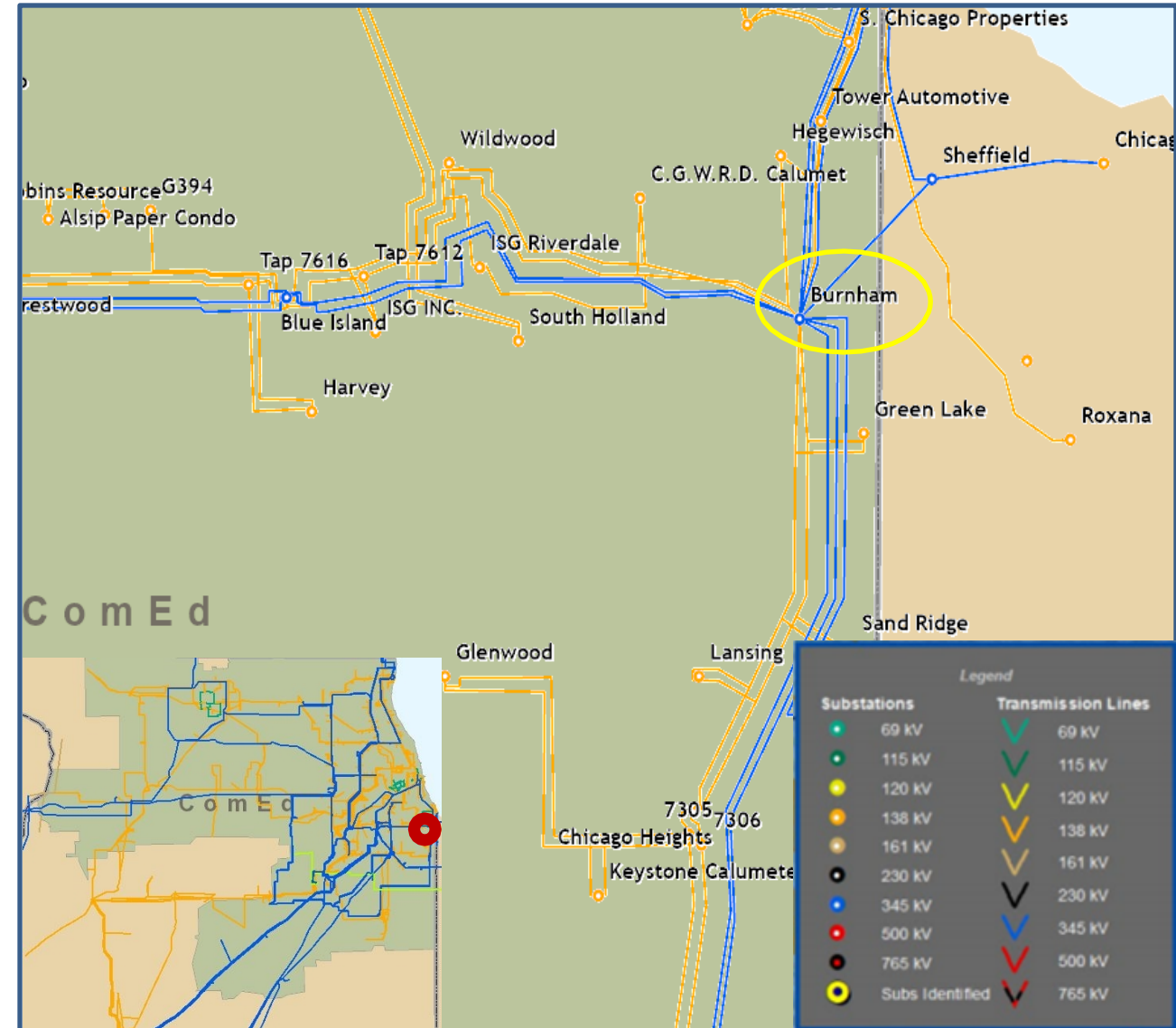
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:

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

Problem Statement:

- Burnham 345kV BT2-13 oil circuit breaker was installed in 1971. It is in deteriorating condition, has a lack of replacement parts and has elevated maintenance costs.



Need Number: ComEd-2024-019

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Selected Solution:

Replace existing 345 kV oil BT2-13 CB with new 345 kV SF6 CB.

Existing Breaker Ratings: 2000 A, 50 kA

New Breaker Ratings: 3000 A, 63 kA

Facility	Old Ratings		New Ratings	
	SN/SE	WN/WE	SN/SE	WN/WE
Burnham – Bloom 345 kV	1201/1441	1486/1651	1201/1479	1497/1710

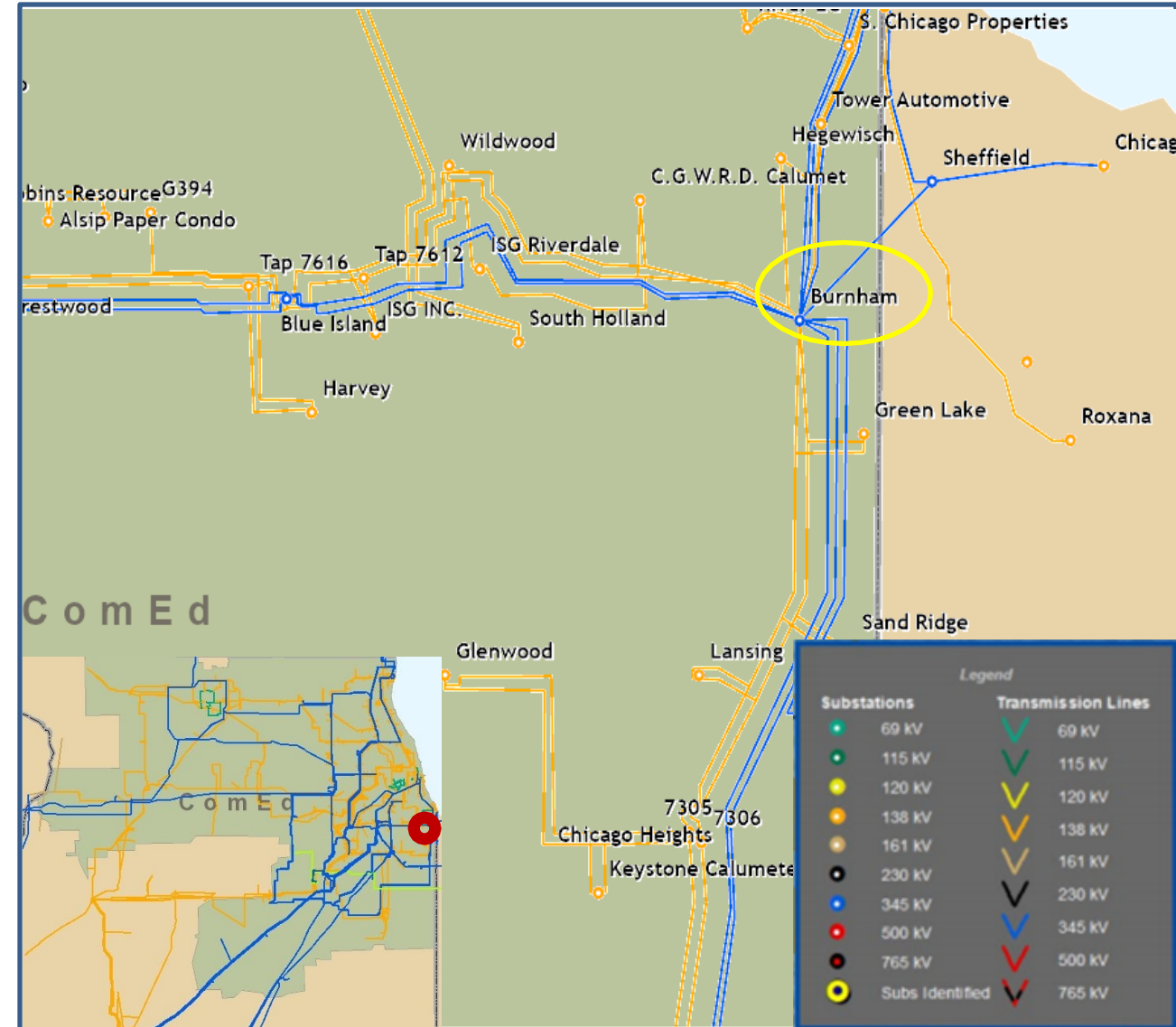
Estimated transmission cost: \$2.1M

Supplemental Project ID: s3586.1

Projected In-Service: 12/31/25

Project Status: Engineering

Model: 2029 RTEP



Need Number: ComEd-2024-020

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Solution Meeting 11/6/2024

Need Meeting 9/10/2024

Project Driver:

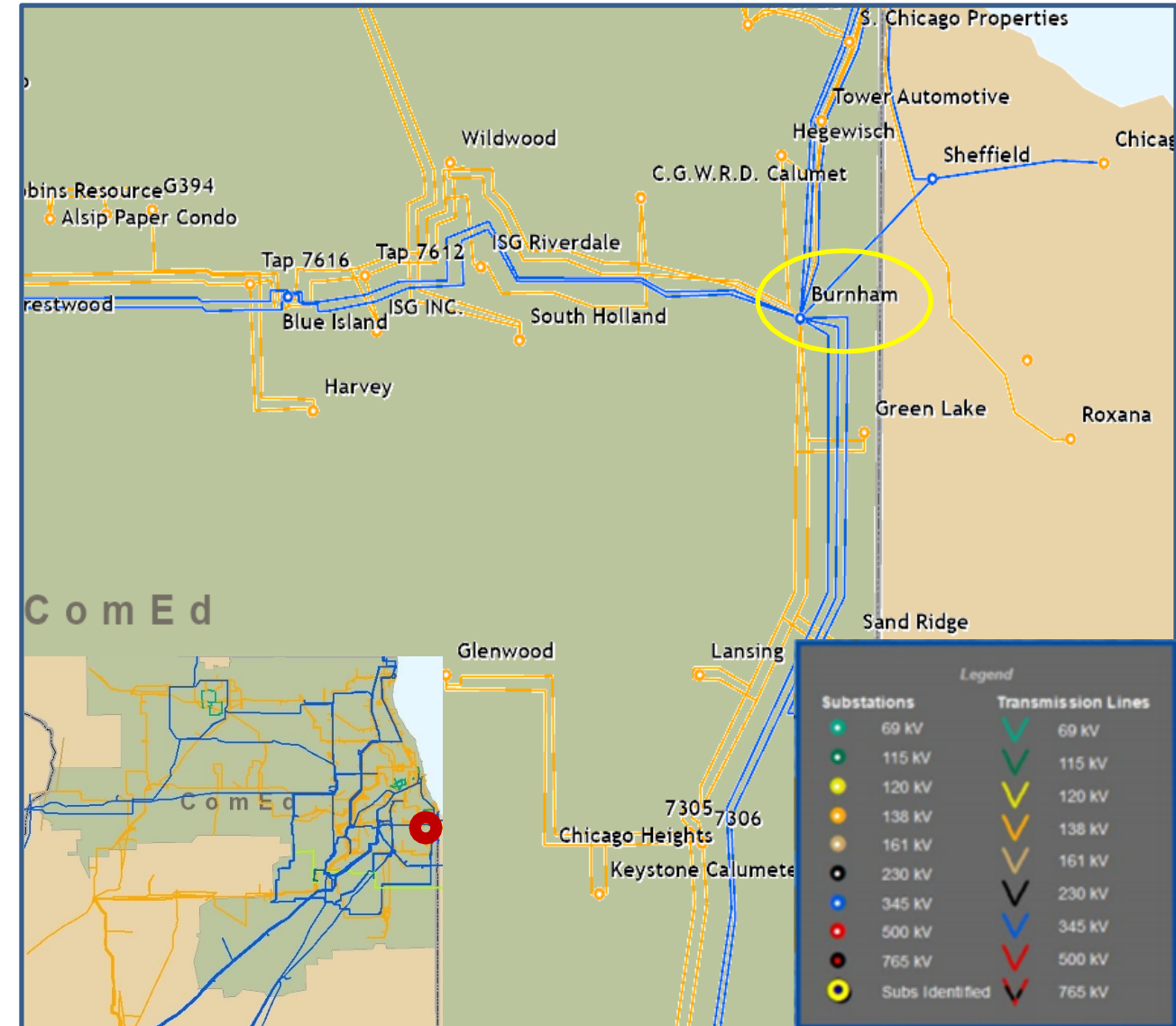
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:

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

Problem Statement:

- Burnham 345kV BT12-13 oil circuit breaker was installed in 1988. It is in deteriorating condition, has a lack of replacement parts and has elevated maintenance costs.



Need Number: ComEd-2024-020

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Selected Solution:

Replace existing 345 kV oil BT12-13 CB with new 345 kV SF6 CB.

Existing Breaker Ratings: 2000 A, 50 kA

New Breaker Ratings: 3000 A, 63 kA

Facility	Old Ratings		New Ratings	
	SN/SE	WN/WE	SN/SE	WN/WE
Burnham – State Line 345 kV	1201/1383	1497/1656	1201/1479	1497/1710
Burnham – Davis Creek 345 kV	1201/1383	1497/1656	1201/1479	1497/1710

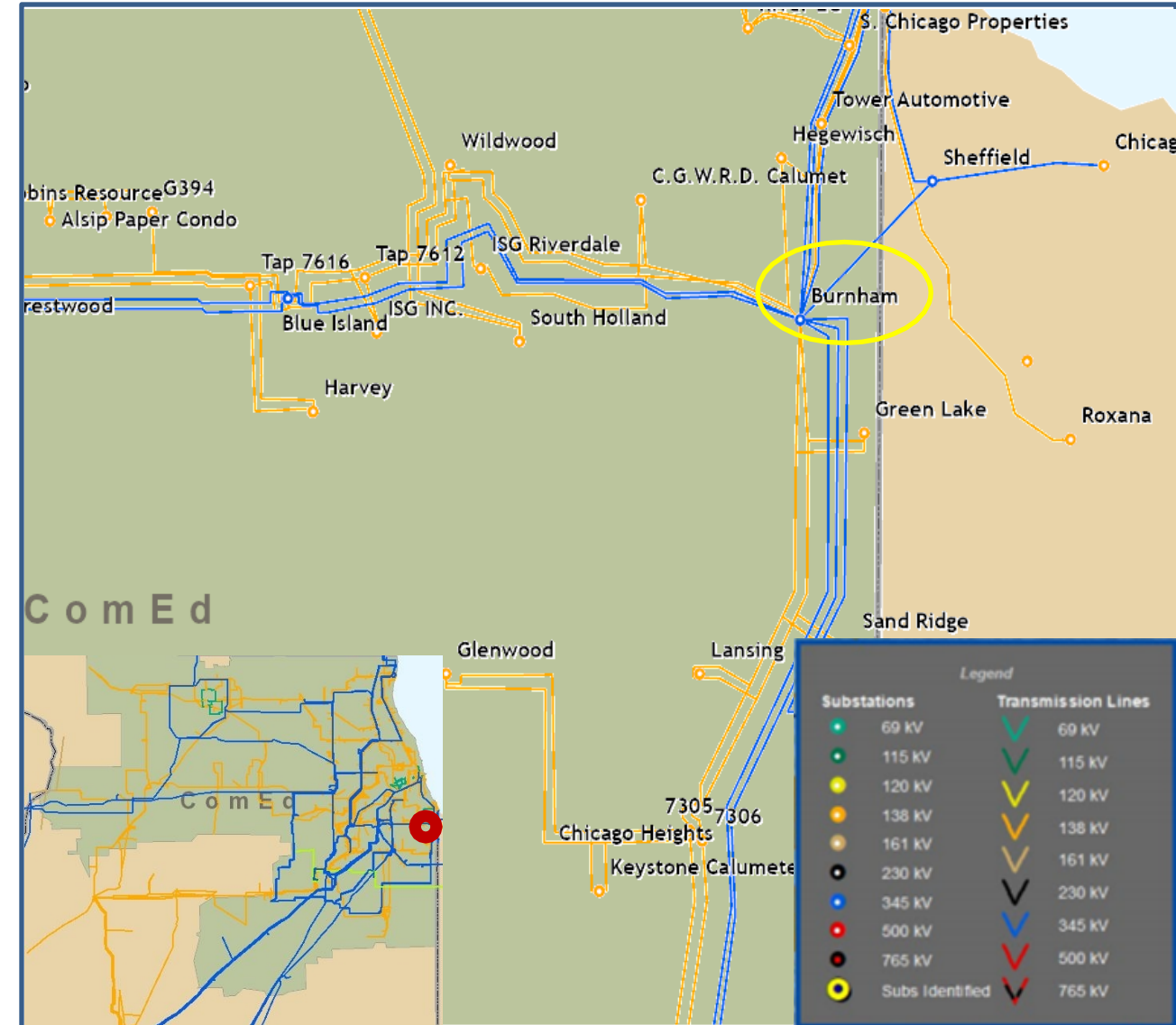
Estimated transmission cost: \$2.1M

Supplemental Project ID: s3587.1

Projected In-Service: 12/31/26

Project Status: Engineering

Model: 2029 RTEP



Need Number: ComEd-2024-002

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Previously Presented:

Need Meeting 1/19/2024

Solution Meeting 11/15/2024

Project Driver:

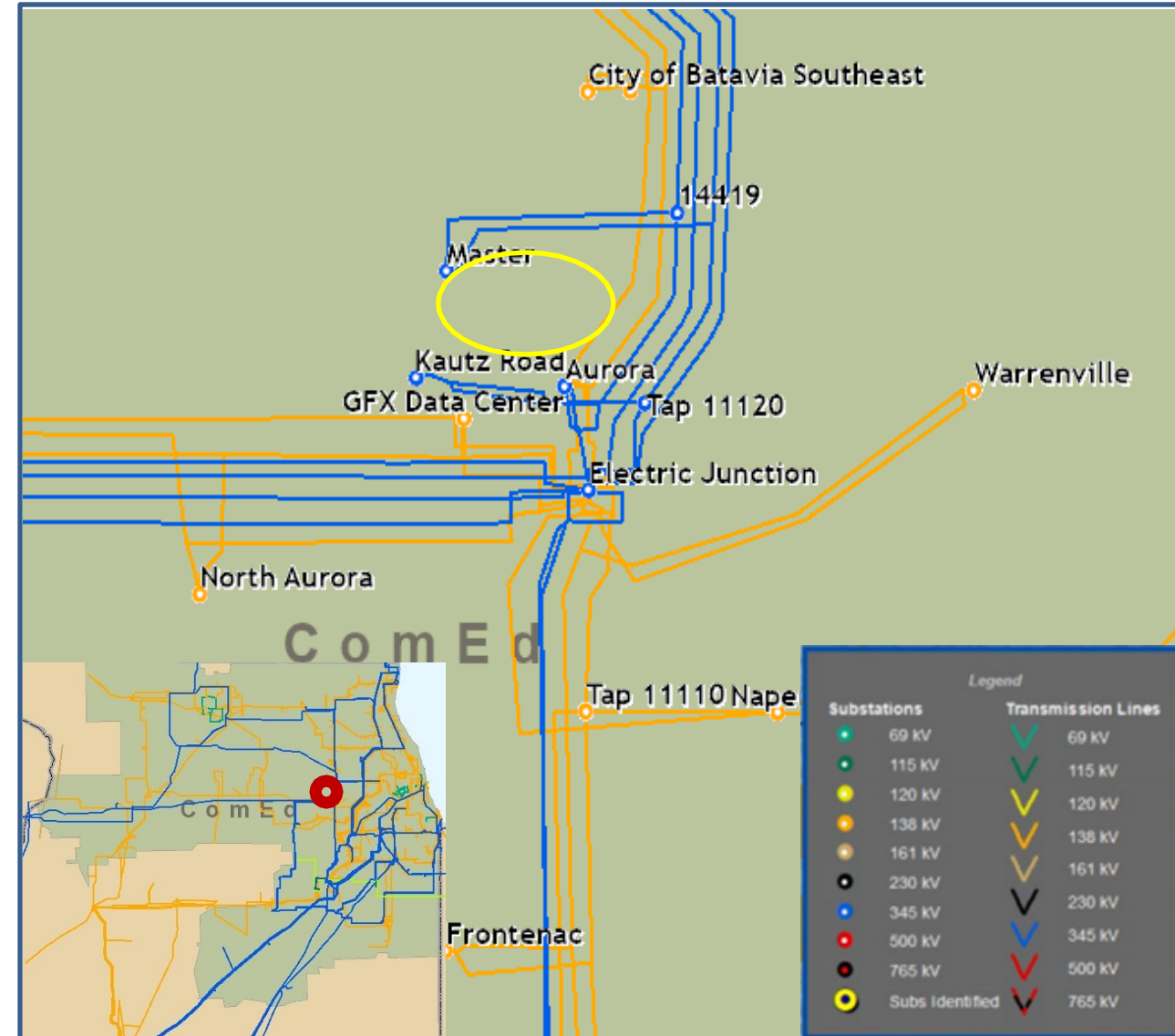
Customer Service

Specific Assumption Reference:

- New transmission customer interconnections or modification to an existing customer

Problem Statement:

New customer is looking for transmission service in the Aurora area. Initial loading is expected to be 74 MW in June 2026, 126 MW in 2028, with an ultimate load of 130 MW.



Need Number: ComEd-2024-002

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan March 26, 2025

Selected Solution:

- New customer will be radially served by two new 1.0 mile 138 kV lines from Electric Junction substation to the customer site.
- Customer substation will be double ring bus configuration with 4 – 138/34 kV, 60 MVA transformers.

Estimated transmission cost: \$0M

Supplemental Project ID: s3592.1

Projected In-Service: 12/31/26

Project Status: Engineering

Model: 2029 RTEP



Need Number: ComEd-2024-017

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan September 26, 2025

Previously Presented:

Solutions Meeting 3/4/2025

Need Meeting 8/6/2024

Project Driver:

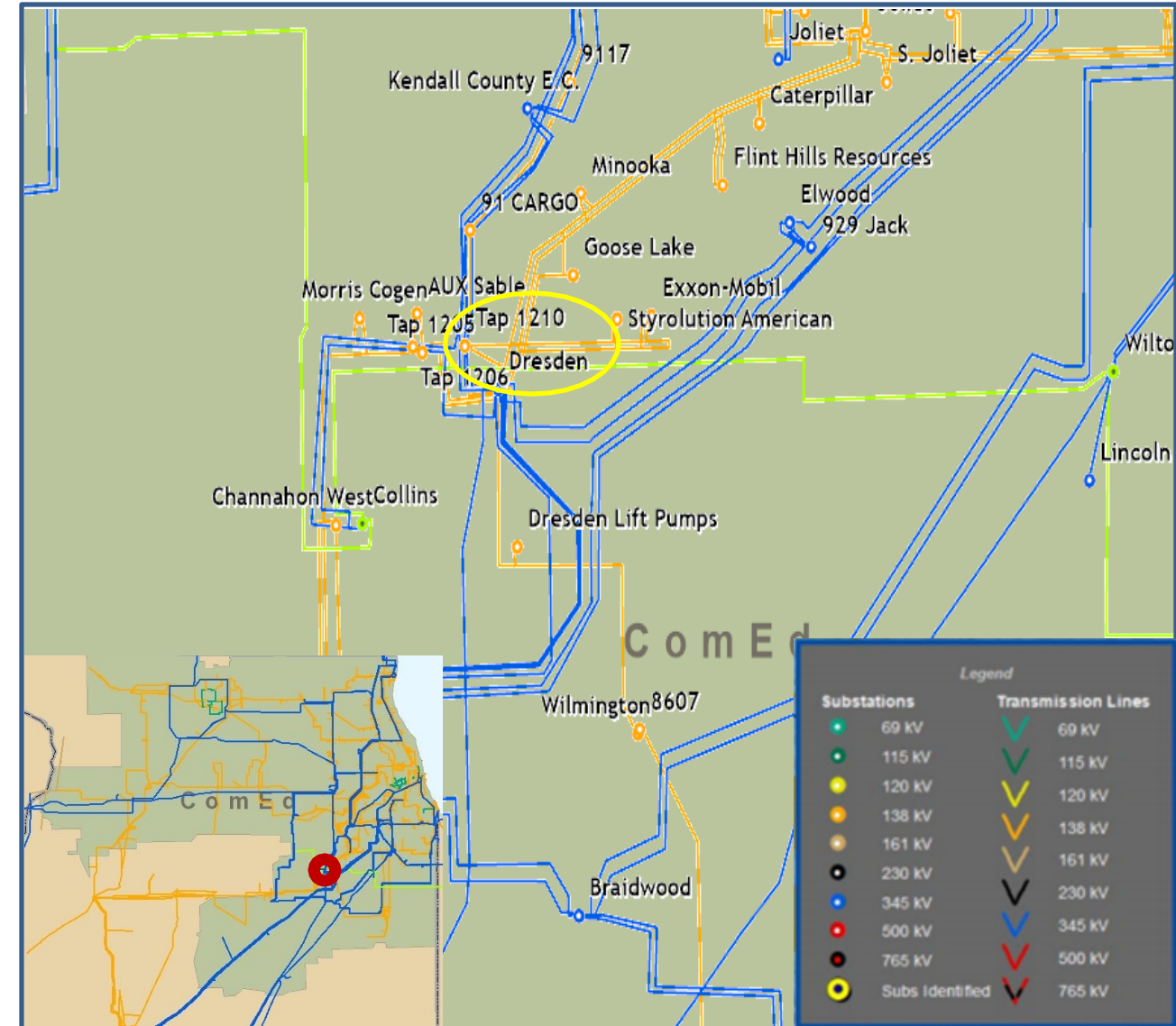
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:

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

Problem Statement:

- Dresden 345kV BT4-8 oil circuit breaker was installed in 1968. It is in deteriorating condition, has a lack of replacement parts and has elevated maintenance costs.



Need Number: ComEd-2024-017

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan September 26, 2025

Selected Solution:

Replace 345 kV BT4-8 oil circuit breaker with new SF6 circuit breaker.

Existing rating 1600A, 40kA

Proposed rating 3000A, 63kA

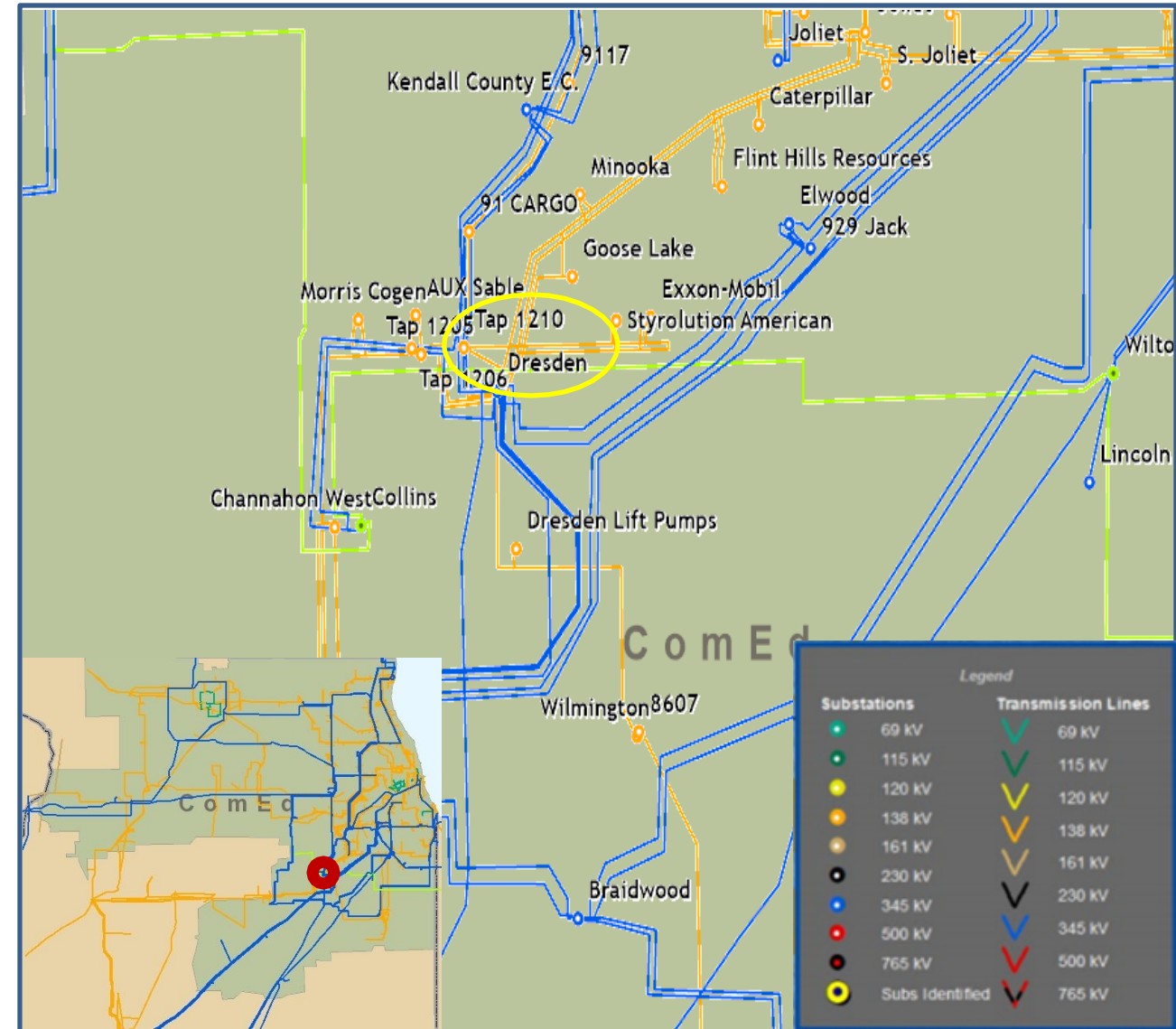
Total Estimated Transmission Cost: \$2.7M

Supplemental Project ID: s3725.1

Projected In-Service: 12/31/2026

Project Status: Engineering

Model: 2029 RTEP



Need Number: ComEd-2025-003

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan
September 26, 2025

Previously Presented:

Solution Meeting 3/14/2025

Need Meeting 2/14/2025

Project Driver:

Operational Flexibility and Efficiency

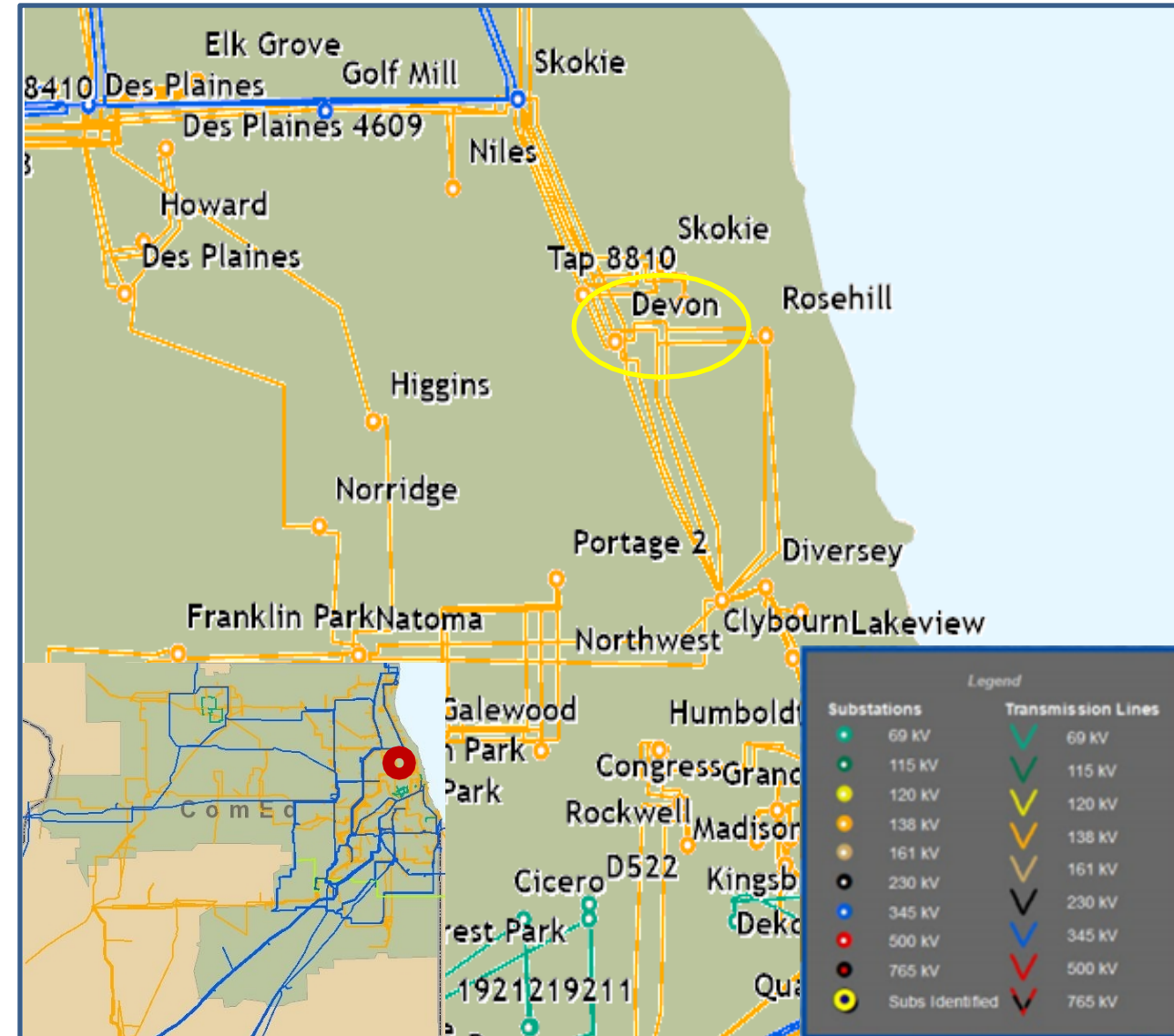
Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

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

Problem Statement:

- Devon 138 kV is currently served by seven 138 kV lines, supplying four 138-12 kV distribution transformers. There are 138 kV line breakers on lines L8803 (Devon-Skokie), L11415 (Northwest-Rosehill-Devon), L8809 (Devon-Skokie), L11414 (Northwest-Rosehill-Devon), and L11411 (Northwest-Devon). 138 kV L11416 (Northwest-Devon) has a line circuit switcher. 138 kV L11416 (Devon-Skokie) has a line motor operated disconnect. 138 kV L8810 (Devon-Skokie) has a line disconnect.
- 138 kV oil circuit breakers for L11414 and L11415 were installed in 1953 and the L8810-L11411 oil circuit breaker was installed in 1962 at Devon substation. They are in deteriorating condition, lack replacement parts, and have elevated maintenance costs.



Need Number: ComEd-2025-003

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan September 26, 2025

Selected Solution:

- Replace three 138KV Oil Circuit Breakers for 138KV lines L11415 (Northwest-Rosehill-Devon), L11414 (Northwest-Rosehill-Devon), L11411 (Northwest-Devon).
 - Existing rating 1200A, 40kA; 1600A, 40 kA
 - Proposed rating 3000A, 63kA
- Install 138 kV 3000A SF6 line circuit breakers on 138 kV lines L11416 (Northwest-Devon) , L11416 (Devon-Skokie), and L8810 (Devon-Skokie).
- Install 138 kV, 3000A SF6 circuit breakers on high side of 138-12kV transformers 73 and 74.

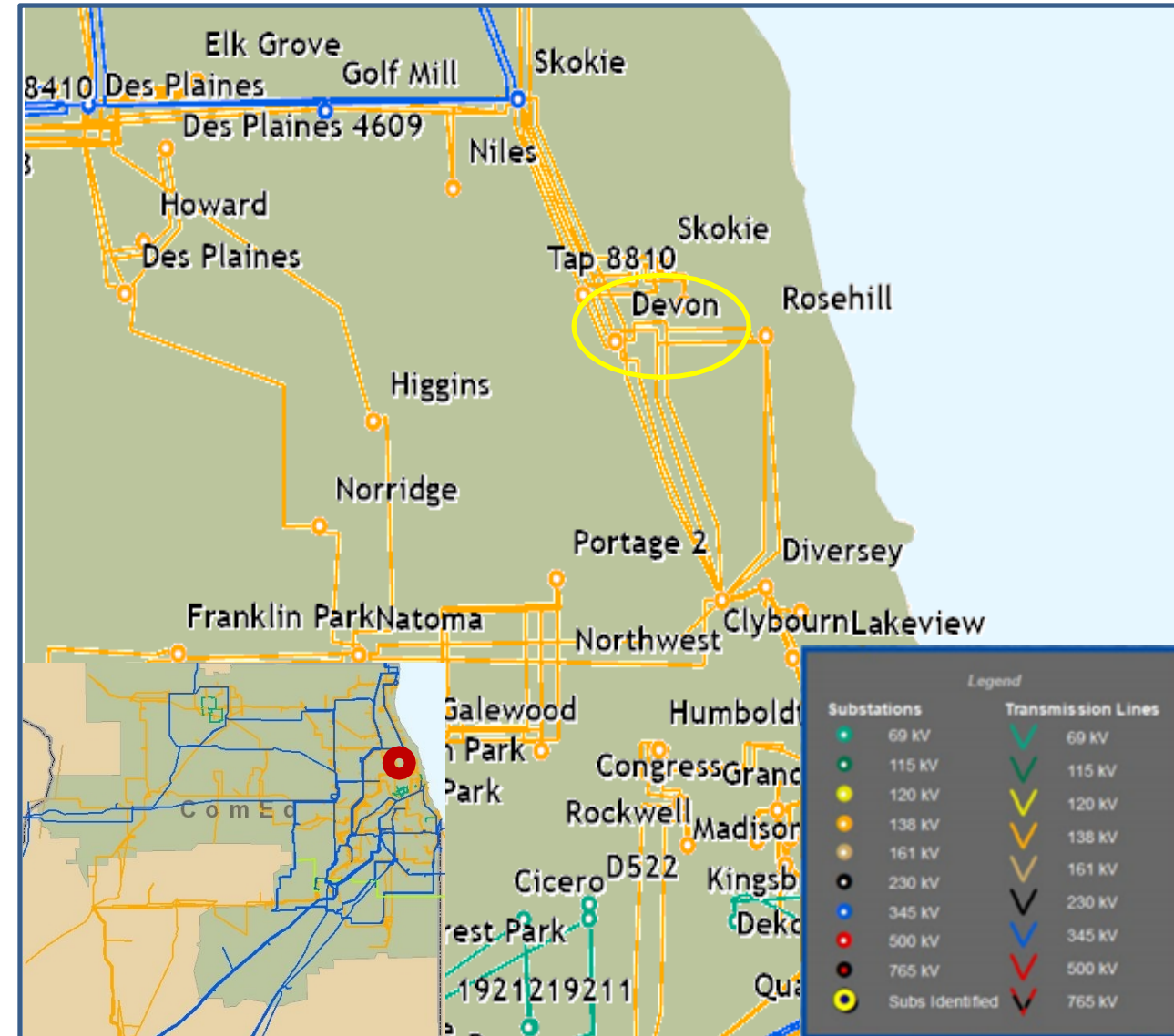
Estimated cost: \$ 18.9 M

Supplemental Project ID: s3726.1

Projected In-Service: 12/31/2026

Project Status: Engineering

Model: 2029 RTEP



Need Number: ComEd-2025-001

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan September 26, 2025

Previously Presented:

Solution Meeting 2/14/2025

Need Meeting 1/17/2025

Project Driver:

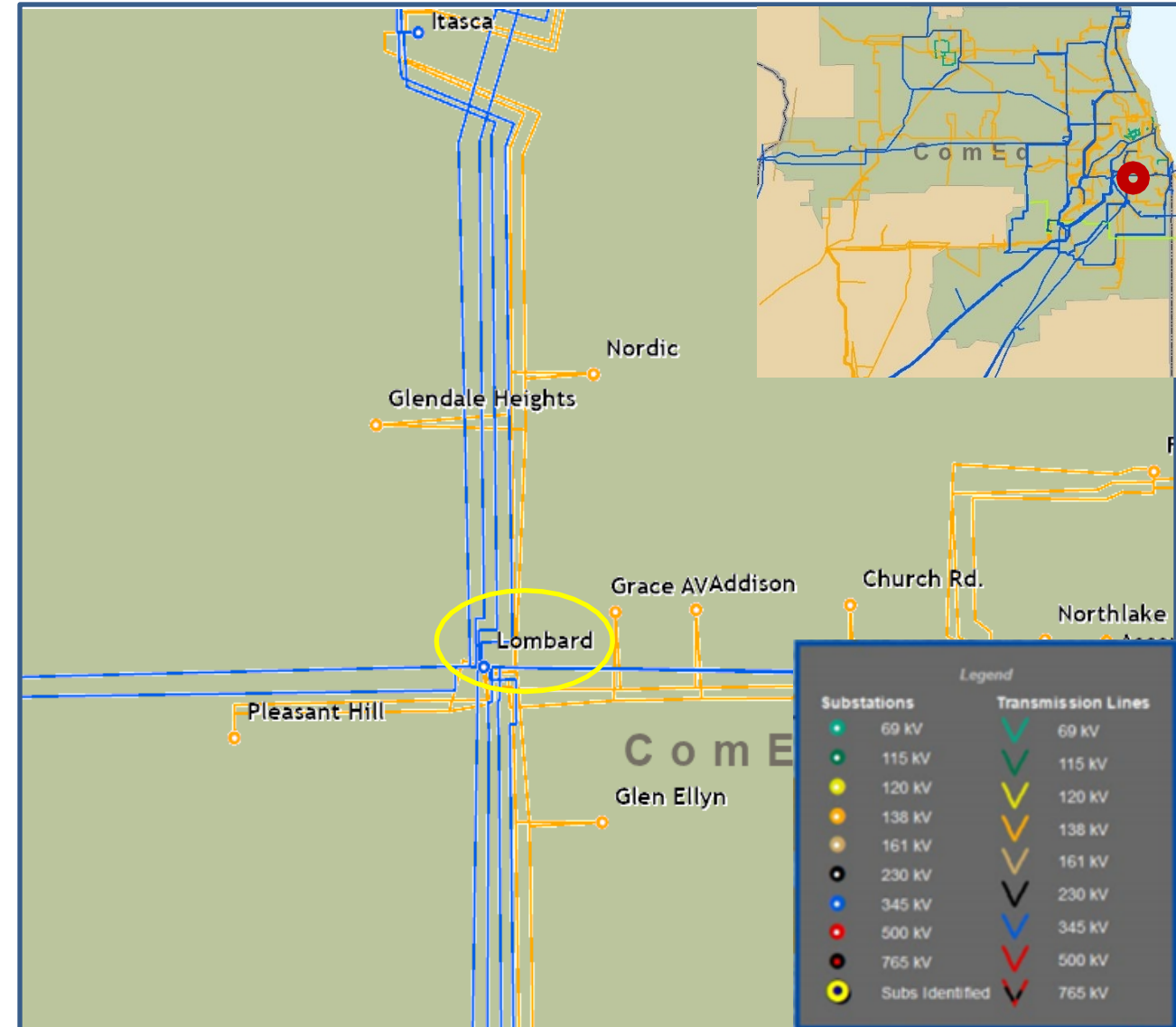
Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

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

Problem Statement:

The 138 kV 1200 A, 36kA L10301 wave trap at Lombard is over its rated fault current.



ComEd Transmission Zone M-3 Process 138 kV L10301 Wave Trap at Lombard

Need Number: ComEd-2025-001

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan September 26, 2025

Selected Solution:
 Upgrade wave trap on 138 kV Lombard – Lisle line L10301
 Existing rating 1200A, 36kA
 Proposed rating 2000A, 63kA

Existing ratings (MVA)	SN/SE	WN/WE
L10301 Lombard - Lisle	292/321	316/343
New Ratings (MVA)	SN/SE	WN/WE
L10301 Lombard - Lisle	376/483	452/538

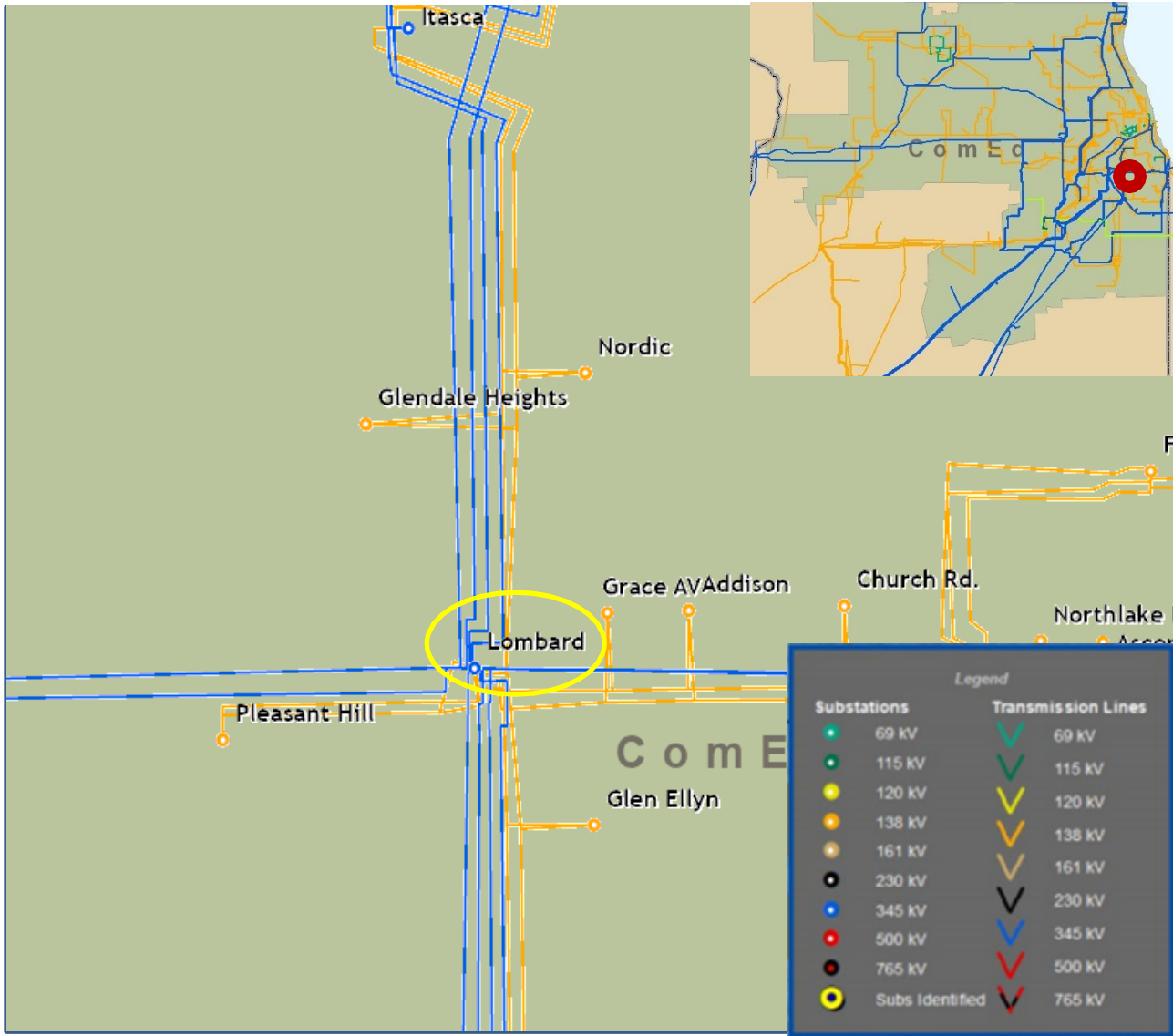
Estimated cost: \$ 0.15 M

Supplemental Project ID: s3727.1

Projected In-Service: 12/31/2025

Project Status: In-Service

Model: 2029 RTEP



Need Number: ComEd-2025-002

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan September 26, 2025

Previously Presented:

Solution Meeting 2/14/2025

Need Meeting 1/17/2025

Project Driver:

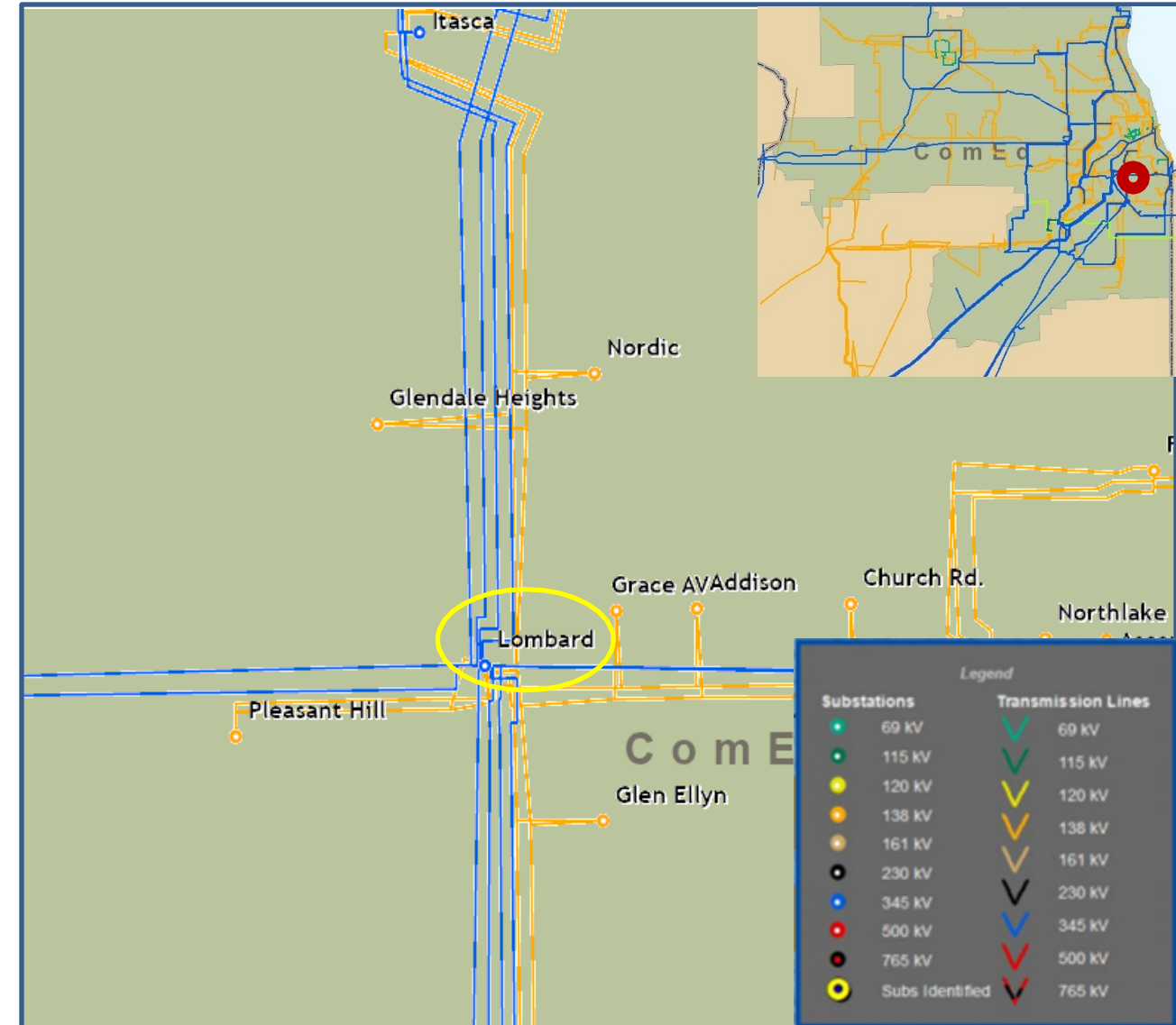
Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

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

Problem Statement:

The 138 kV 1200 A, 36kA L10302 wave trap at Lombard is over its rated fault current.



ComEd Transmission Zone M-3 Process 138 kV L10302 Wave Trap at Lombard

Need Number: ComEd-2025-002

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan September 26, 2025

Selected Solution:

Upgrade wave trap on 138 kV Lombard – Lisle line L10302

Existing rating 1200A, 36kA

Proposed rating 2000A, 63kA

Existing ratings (MVA)	SN/SE	WN/WE
L10302 Lombard – Lisle	292/321	316/343
New Ratings (MVA)	SN/SE	WN/WE
L10302 Lombard - Lisle	376/483	452/538

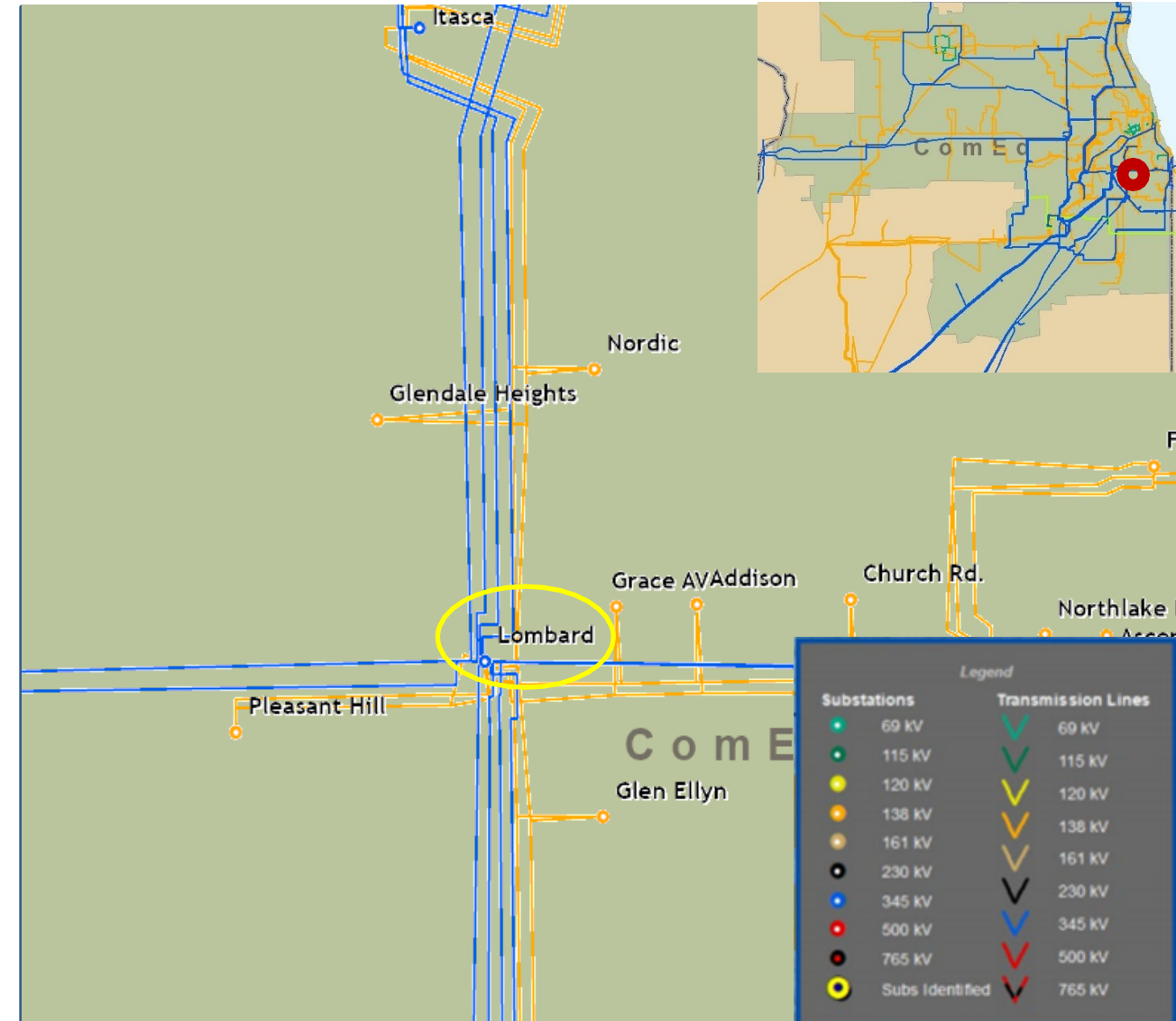
Estimated cost: \$ 0.15 M

Supplemental Project ID: s3728.1

Projected In-Service: 12/31/2027

Project Status: Conceptual

Model: 2029 RTEP



Revision History

3/28/2025 – V1 Added slides #1-25, s3578-s3587, s3592

9/26/2025 – V2 Added slides #26-33, s3725-3728