

Subregional RTEP Committee – Western FirstEnergy Supplemental Projects

February 17, 2021

Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Need Number: ATSI-2020-039
Process Stage: Solution Meeting
Solutions Meeting: 02/17/2021
Previously Presented: Need Meeting – 11/20/2020

Supplemental Project Driver(s):
Equipment Material Condition, Performance, and Risk
Infrastructure Resilience

Specific Assumption Reference(s):

Global Factors

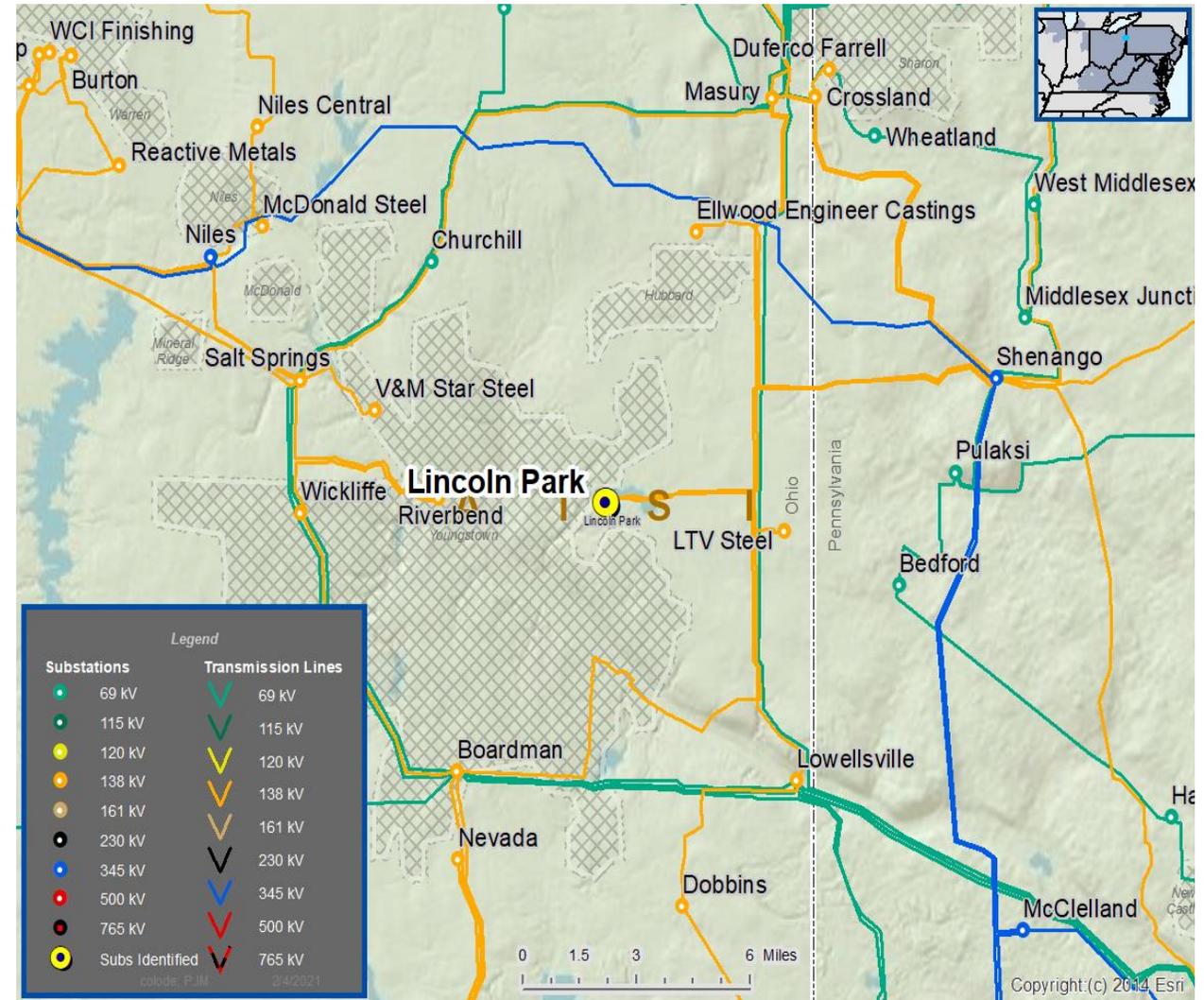
- Increasing negative trend in maintenance findings and/or costs
- Failure risk, to the extent caused by asset design characteristics, or historical industry/ company performance data, or application design error

Substation Condition Rebuild/Replacement

- Circuit breakers and other fault interrupting devices
- Switches

Problem Statement

- McGraw Edison oil circuit breakers B-67, B-68, and associated disconnect switches at Lincoln Park are experiencing increasing maintenance concerns; hydraulic fluid issues, deteriorated operating mechanisms and increasing maintenance trends.
 - Breakers B-67 and B-68 are 48 years old
 - Associated terminal equipment line arrestors and substation conductor



Need Number: ATSI-2020-039
Process Stage: Solution Meeting
Solutions Meeting: 02/17/2021
Previously Presented: Need Meeting –11/20/2020

Proposed Solution:

- Replace two (2) 138 kV breakers (B67 & B68) with two (2) 138 kV, 40 kA, 3000 A breakers
- Upgrade relays at Lincoln Park for the Lincoln Park-Lowellville line terminal
- Replace four (4) 138 kV disconnect switches (D82, D81, D99 & D100) with 2000 A switches
- Replace (3) 138kV CVTs (CC91, CC92, & CC93).
- Install a 138kV 1200 A Lowellville line terminal MOABS and support structure
- Replace leads and bus connection with conductor at least 278MVA/SN, 339MVA/SE

Transmission Line Ratings:

- Lincoln Park-Lowellville 138 kV Line
 - Before Proposed Solution: 155 MVA SN / 155 MVA SE
 - After Proposed Solution: 187 MVA SN / 191 MVA SE

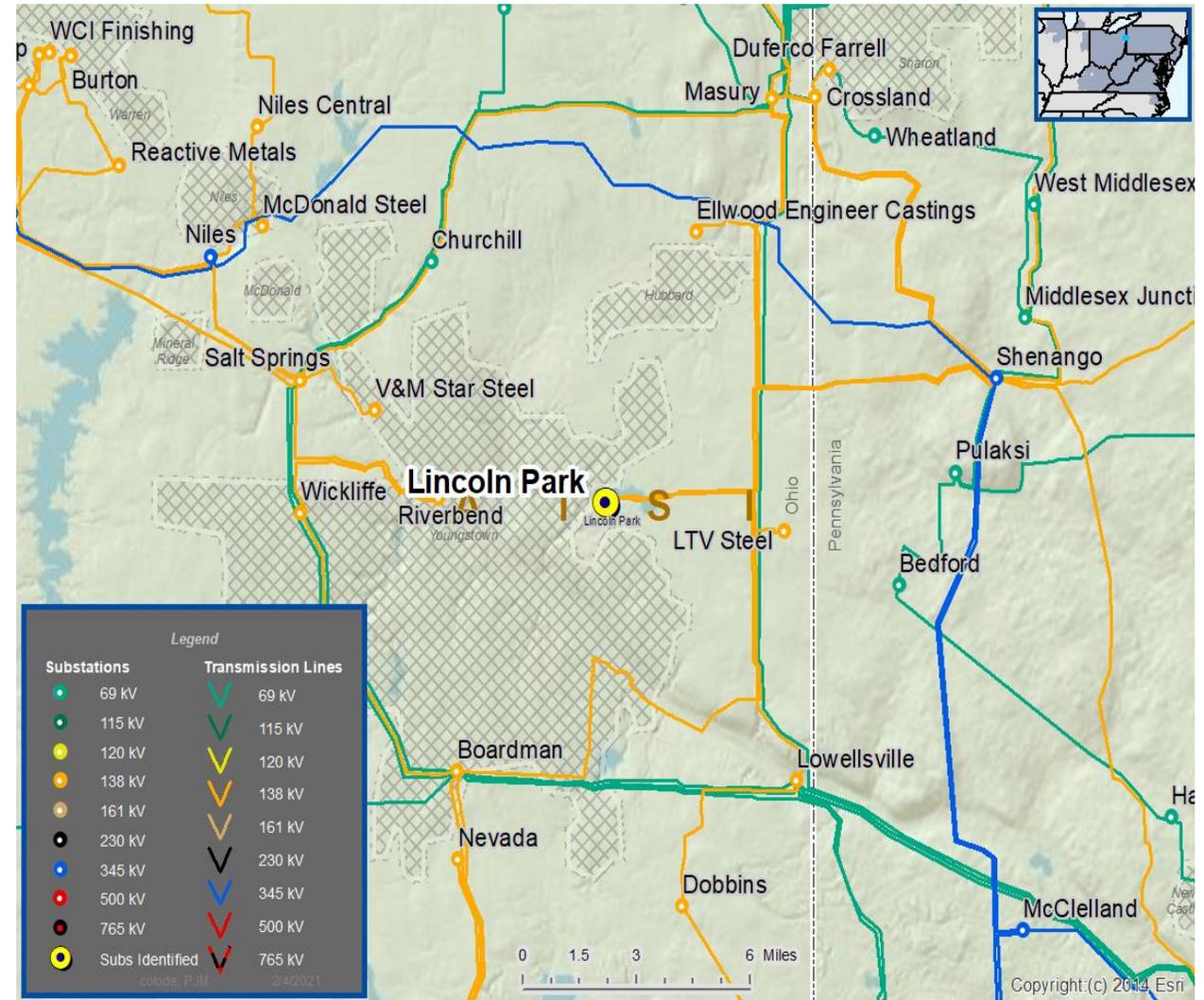
Alternatives Considered:

- Maintain existing condition and risk of failure.

Estimated Project Cost: \$1.4 M

Projected IS Date: 12/31/2021

Status: Engineering



Need Number: ATSI-2020-040
Process Stage: Solution Meeting
Solutions Meeting: 02/17/2021
Previously Presented: Need Meeting – 09/11/2020

Supplemental Project Driver(s):
Customer Service

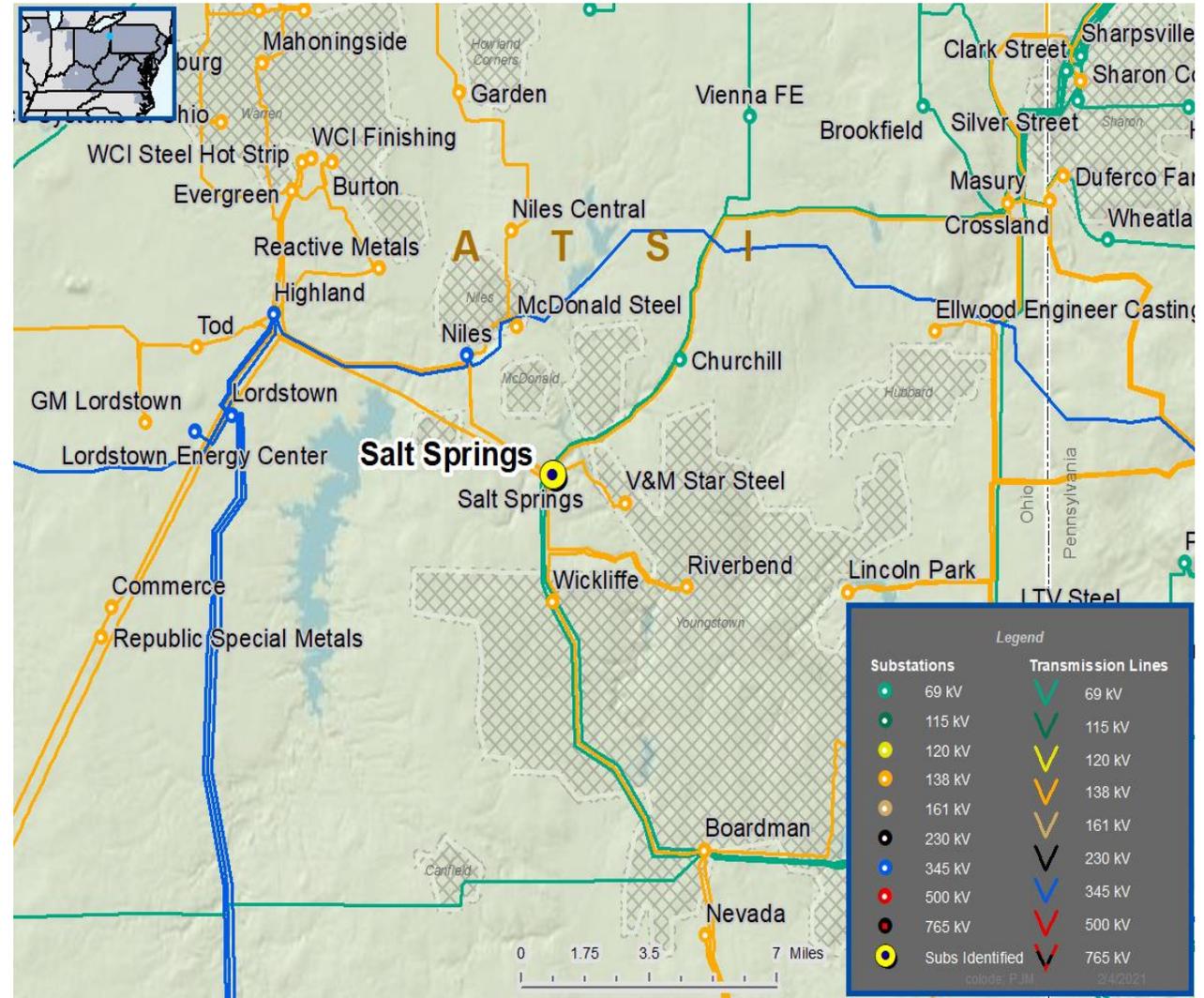
Specific Assumption Reference(s)

Customer connection requests will be evaluated per FirstEnergy’s “Requirements for Transmission Connected Facilities” document and “Transmission Planning Criteria” document.

Problem Statement

New Customer Connection – A customer requested 69 kV transmission service for approximately 4.2 MVA of total load near the Kimberly-Salt Springs 69 kV Line.

Requested In-Service Date: April 6, 2020



Need Number: ATSI-2020-040
Process Stage: Solution Meeting
Solutions Meeting: 02/17/2021
Previously Presented: Need Meeting – 09/11/2020

Proposed Solution:

Victoria Road 69 kV Transmission Line Tap

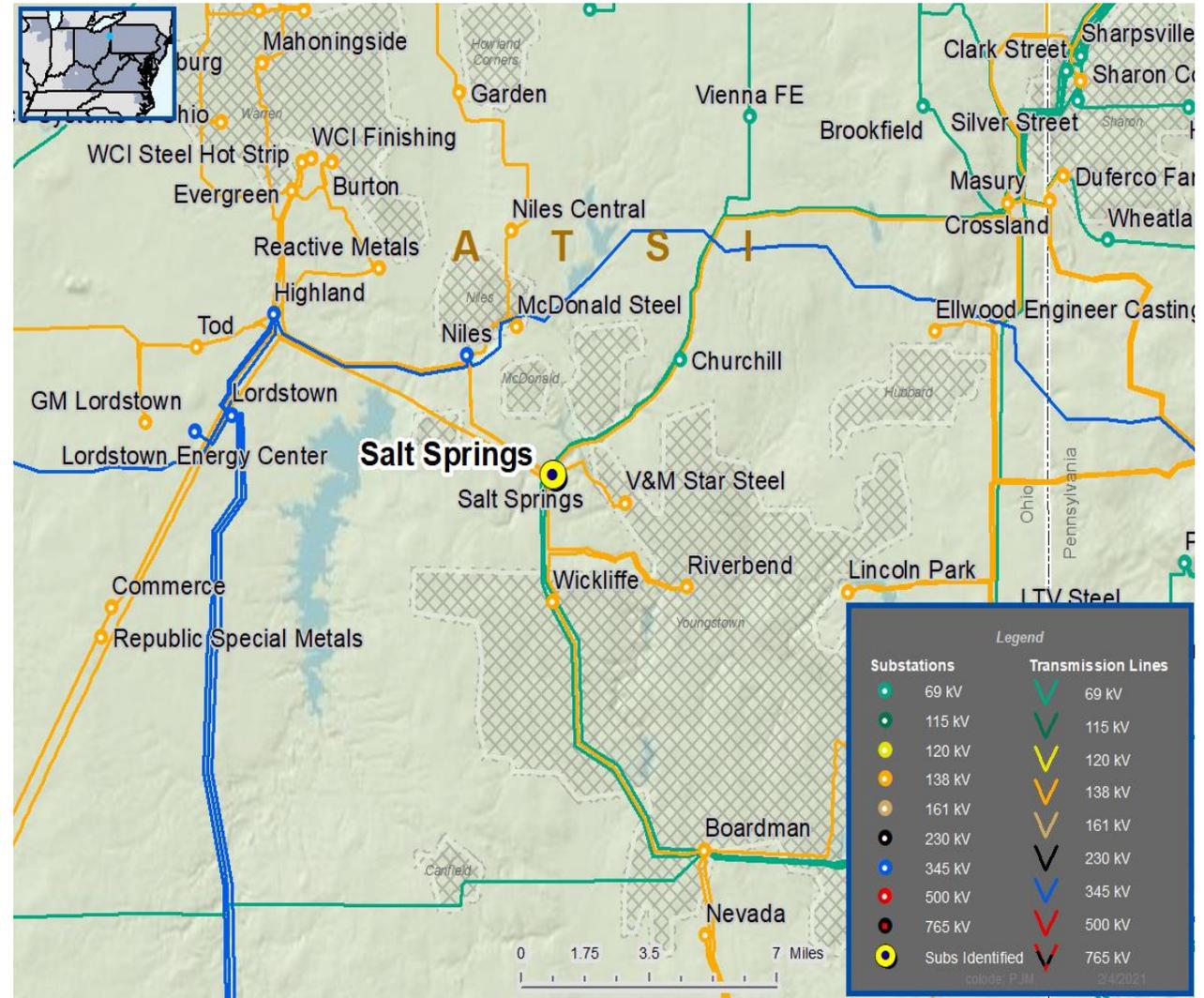
- Convert and rebuild the Meander-West Austintown 23 kV line to 69 kV between Kimberly substation and West Austintown substation
- Tap the Kimberly-West Austintown 23 kV Line at or near Victoria Rd.
- Build ~0.2 miles of 336 ACSR 69 kV line from the tap location to the customer substation

Alternatives Considered:

- Serve new customer from the Meander-West Austintown 23 kV Line

Estimated Project Cost: \$4.3 M

Projected In-Service: 05/31/2021
Status: Engineering
Model: 2019 Series 2024 Summer RTEP 50/50



Appendix

High Level M-3 Meeting Schedule

Assumptions	Activity	Timing
	Posting of TO Assumptions Meeting information	20 days before Assumptions Meeting
	Stakeholder comments	10 days after Assumptions Meeting
Needs	Activity	Timing
	TOs and Stakeholders Post Needs Meeting slides	10 days before Needs Meeting
	Stakeholder comments	10 days after Needs Meeting
Solutions	Activity	Timing
	TOs and Stakeholders Post Solutions Meeting slides	10 days before Solutions Meeting
	Stakeholder comments	10 days after Solutions Meeting
Submission of Supplemental Projects & Local Plan	Activity	Timing
	Do No Harm (DNH) analysis for selected solution	Prior to posting selected solution
	Post selected solution(s)	Following completion of DNH analysis
	Stakeholder comments	10 days prior to Local Plan Submission for integration into RTEP
	Local Plan submitted to PJM for integration into RTEP	Following review and consideration of comments received after posting of selected solutions

Revision History

2/5/2021 – V1 – Original version posted to pjm.com