



Reliability Analysis Update 2024 RTEP W1

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Transmission Expansion Advisory
Committee
November 19, 2024

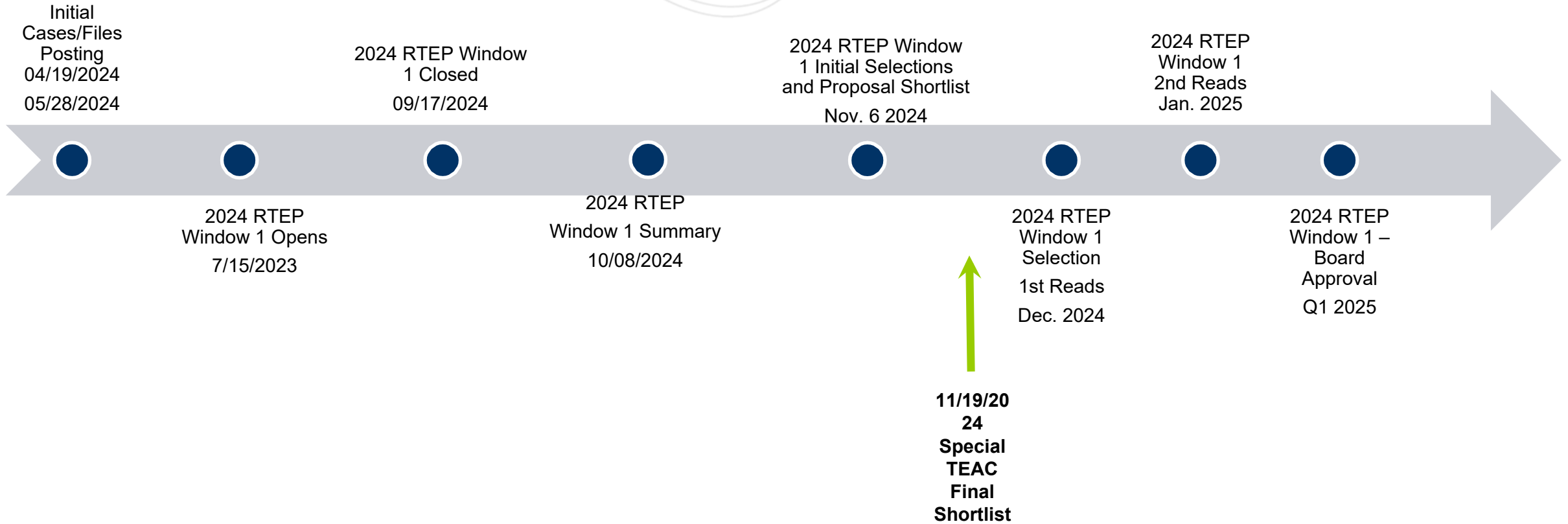


- Timeline Updates
- Overview of Needs and Evaluation Criteria
- Submitted Proposals and General Merits
- Evaluation Progress
- Transfer Capability Assessment and Evaluation Results
- Constructability and Financial Evaluation Assessment Summary
- 2024 RTEP W1 – Final Short List
- Next Steps

2024 RTEP Window 1 Updates



2024 RTEP Window 1 – Timeline



Heavy transmission interface flows west to east driven by load increase in Dominion/East. PJM earlier identified need for additional west-east reinforcement is materializing earlier – higher forecasted load in MAAC/Dominion/APS.

- 10 GW and 15 GW of load increase for 2029 and 2032 respectively between the 2022 LF and 2024 LF
- The load growth is attributed primarily to data centers and some electrification/EV loads.

Proposed reinforcements through 2022 RTEP Window 3 and 2023 RTEP Windows 1 and 2 are performing well.

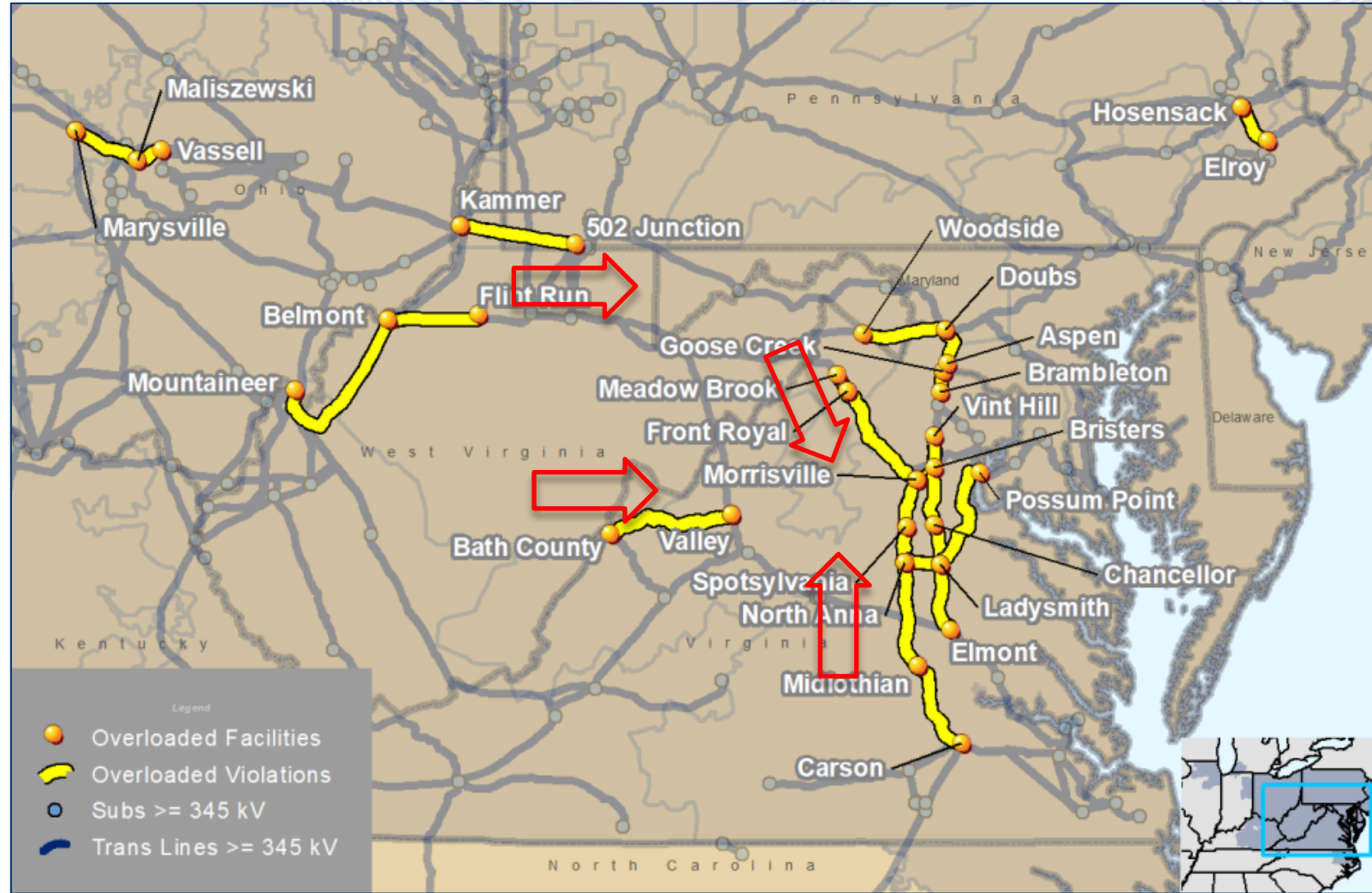
No major transmission upgrades identified east of DOM/APS.

In addition to regional transfer requirements, there are load pockets that need to be addressed in AEP, ATSI, Dominion, PECO, BGE and PPL transmission zones.

Primarily due to shift in generation flow as a result of overall system load increase and +2 GW of generation deactivations.

The eight-year RTEP (2032) scenarios mainly focus on right-sizing solutions.

- Long-lead transmission needs (capture long-lead items).
- Check/confirm impact of “forecast” generation on transmission needs identified in the five-year model.
- PJM will also be considering robustness of the solutions in view of the anticipated 2025 PJM Load Forecast.



Window **opened**
July 15, 2024

60-Day Window

Window **closed**
Sept. 17, 2024

94 total proposals submitted from 16 different entities
(10 incumbent and 6 non-incumbent).

40 Greenfield Projects
and **48** Upgrades

6 Joint Proposals
(Parent Projects – representing
combinations of select projects from above
group)

~\$50 B Total Proposals
Value – Only a fraction of it
will be selected.

- Several proposals have cost containment commitments – mostly minor (e.g., engineering).
- Proposals range from simple upgrades to facilities, to new extra-high-voltage transmission lines and facilities.
- Targeting Q1 2025 Board approval – December and January for TEAC first and second reads

All proposals submitted to address west-east regional flows recommended 765 kV solutions:

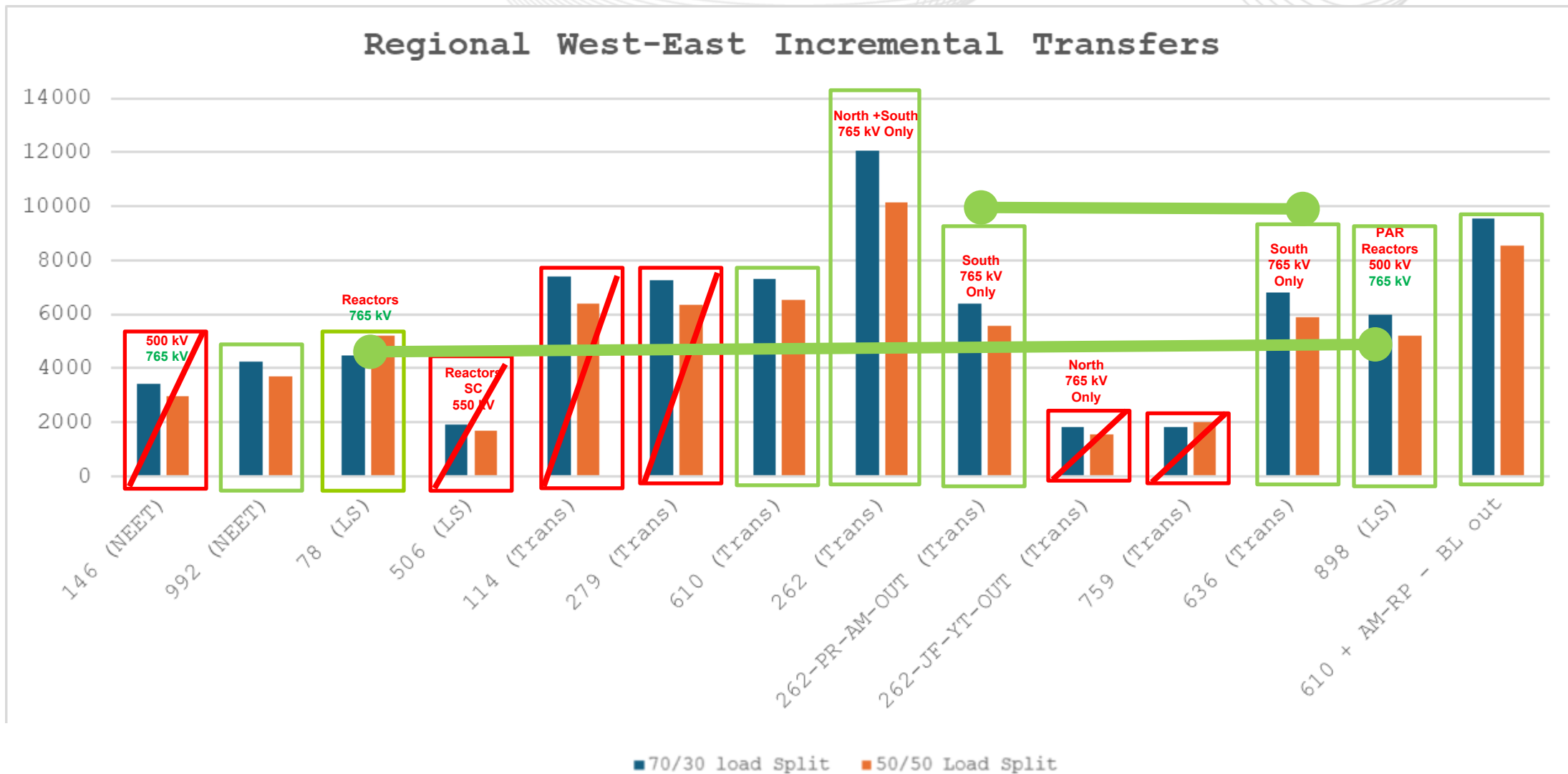
A number of proposals attempt to address in-zone N-1-1 conditions that were found to be alleviated with the selected regional solutions. These needs will then be eliminated accordingly (Primarily in PPL zone).

- Multiple proposals recommend variants of Joshua Falls/Axton-Morrisville area 765 kV development.
 - Transource (Dominion, FirstEnergy, and Transource)
 - LS Power
 - NextEra
- The Joint Planning Proposals (by DOM/FE/Transource) recommend a northern, John Amos-Northern Virginia 765 kV development.
- West-east regional solutions will include at least one variant of these proposals for a 765 kV development, plus accompanying 500 kV and 765 kV upgrades.

Individual Proposal Screening	<p>Complete</p>	
Baseline Scenarios Were Developed and Analyzed	<ul style="list-style-type: none"> • Preliminary analysis shows good performance of a number of holistic proposals (joint proposals and those submitted to cover both regional transfer and local needs combined). 	<ul style="list-style-type: none"> • PJM developed scenarios incorporating (or eliminating) components to identify an optimal combination yielding better performance.
Transfer Capability Analysis	<p>PJM conducted Transfer Capability analysis for key proposals – regional west-east needs.</p>	
Scenario Analysis	<ul style="list-style-type: none"> • PJM scenario analysis considered variants to where both future generation (west-north and west-south) may materialize and ratio of future load growth split (DOM, PPL and PSEG “Eastern MAAC”). 	<ul style="list-style-type: none"> • Full scenario details and evaluation results will be shared at the November 19th TEAC.

Scenarios with their associated proposed developments will be ranked based on:

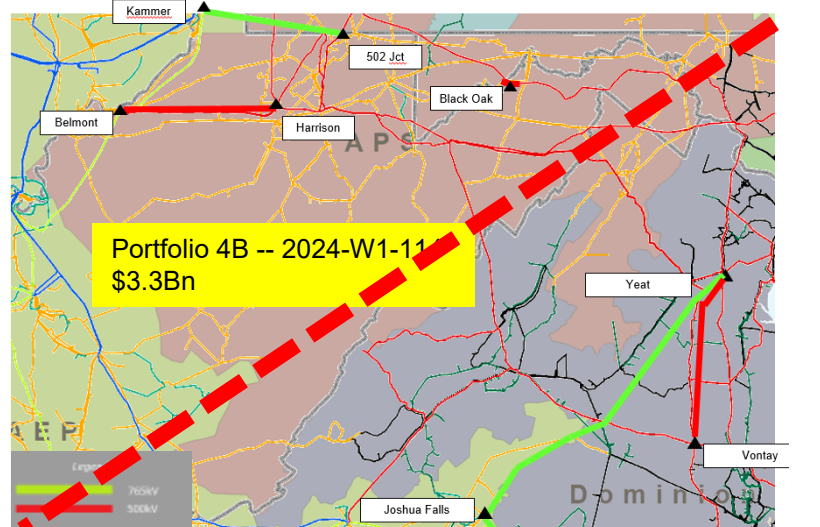
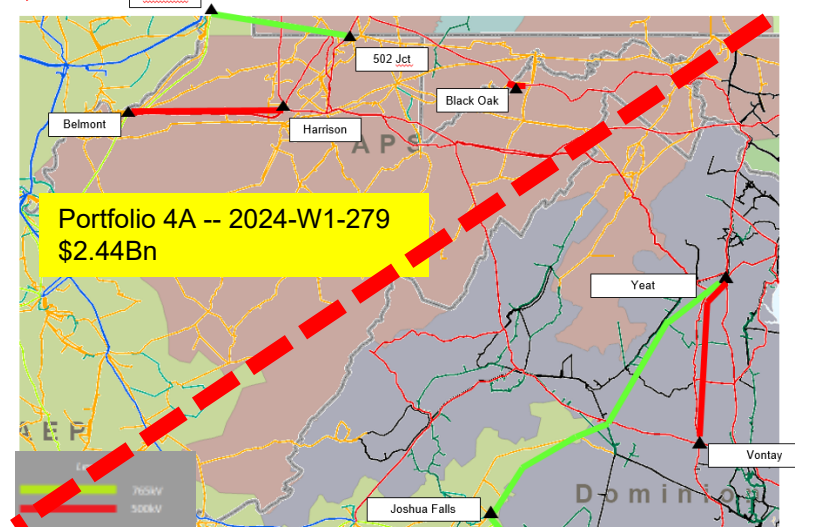
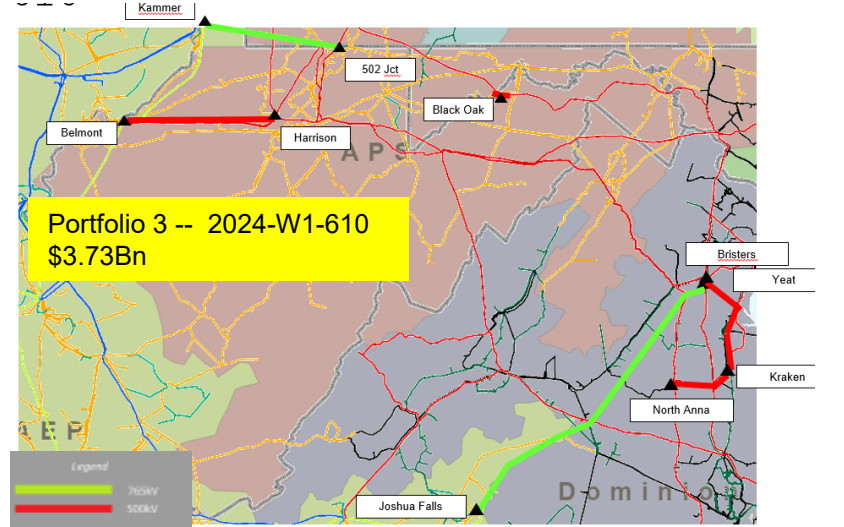
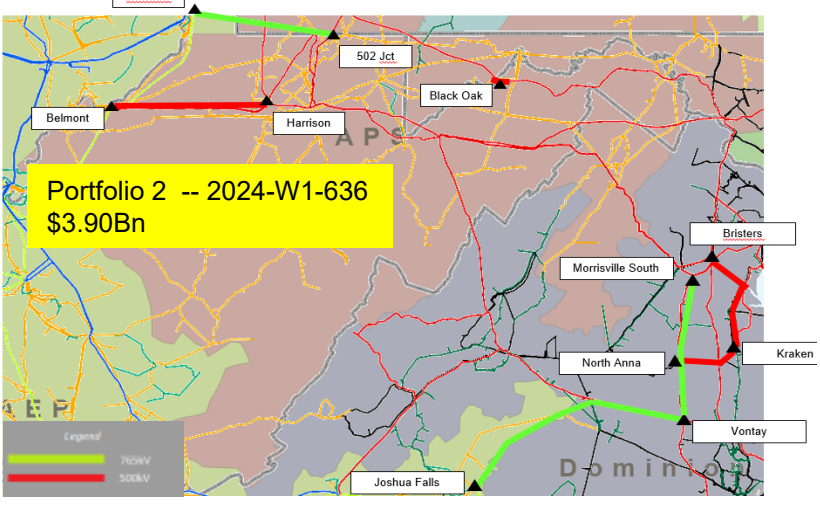
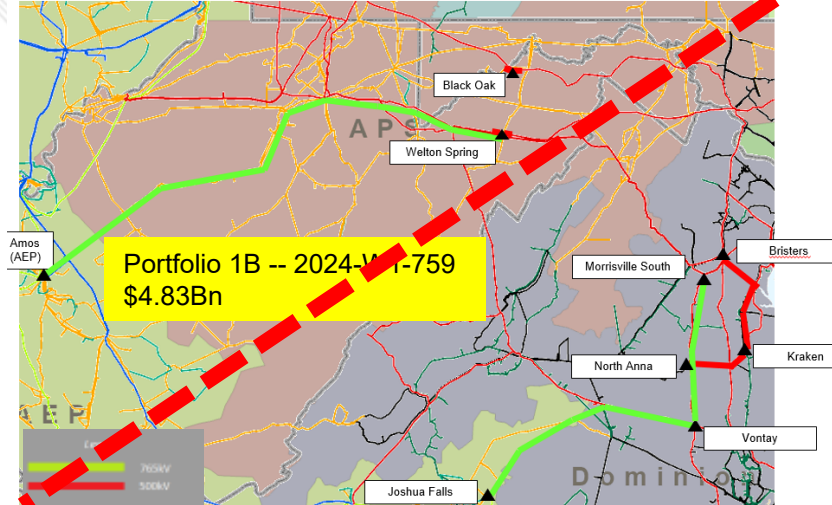
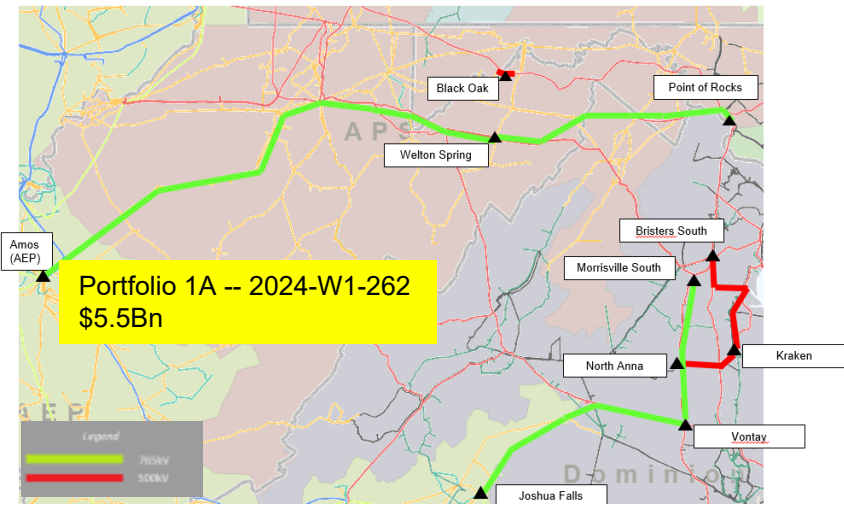
<p>Meeting the system needs of 2029 (all kV levels) and 2032 (long-lead reinforcements)</p>	<p>Being scalable/flexible to address forecasted needs going forward (for right-sizing and limiting disruption)</p> <p>Anticipated load growth to be included in the PJM 2025 Load Forecast (Eastern PJM/MAAC), which will further increase west-east flow requirements from modeled 2024W1 base models.</p>
<p>Utilization of existing ROWs and brownfield development/expansion (where possible and efficient)</p> <ul style="list-style-type: none"> • Greenfield developments will be required, particularly along all proposed 765 kV solutions – Varying degrees. • Expansion to existing 500 kV ROWs instead of wreck and rebuild due to outage and scheduling considerations. 	<p>Cost evaluation using third-party cost benchmarking metrics – weak cost containment provisions</p> <p>Proposing entity experience in developing and operating 765 kV facilities</p>





2024 RTEP Window 1 (Preliminary Short-List)

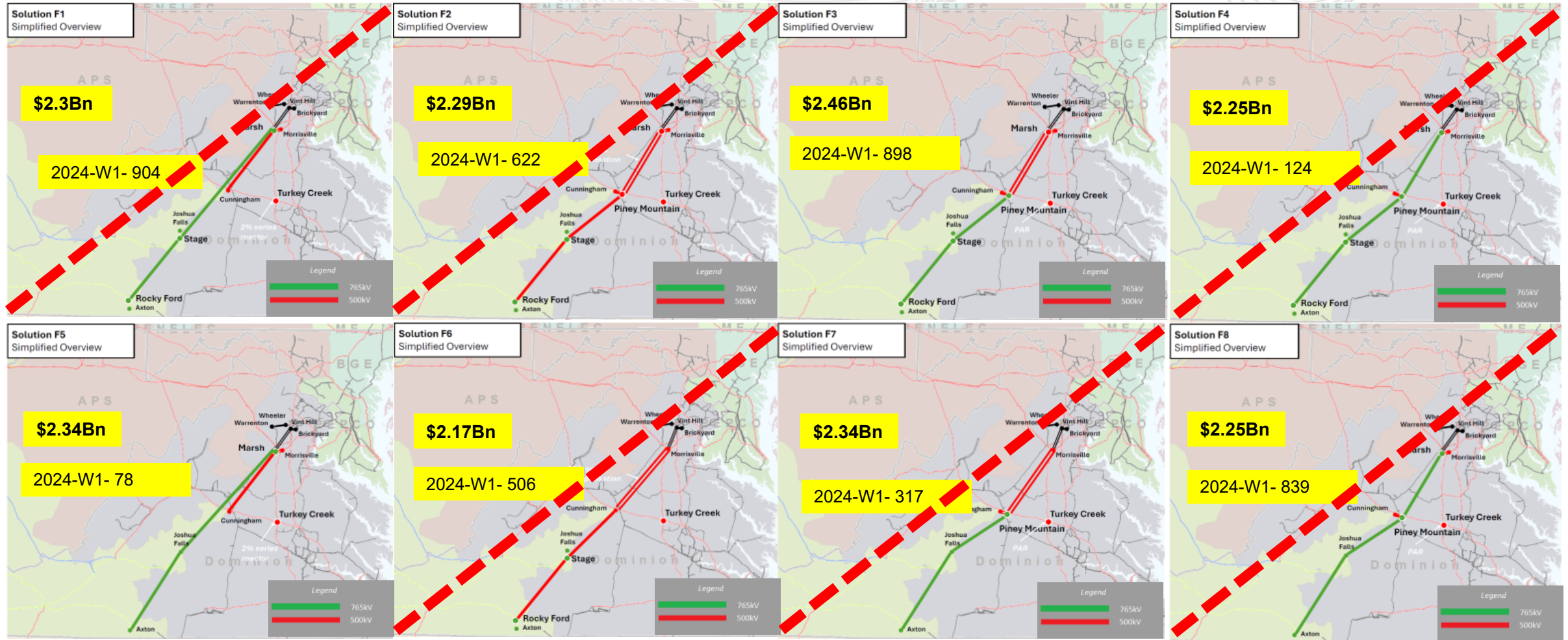
Dominion/First Energy/Transource – Simplified Key Components





2024 RTEP Window 1 (Preliminary Short-List)

LS Power Proposal Summaries – Simplified Key Components





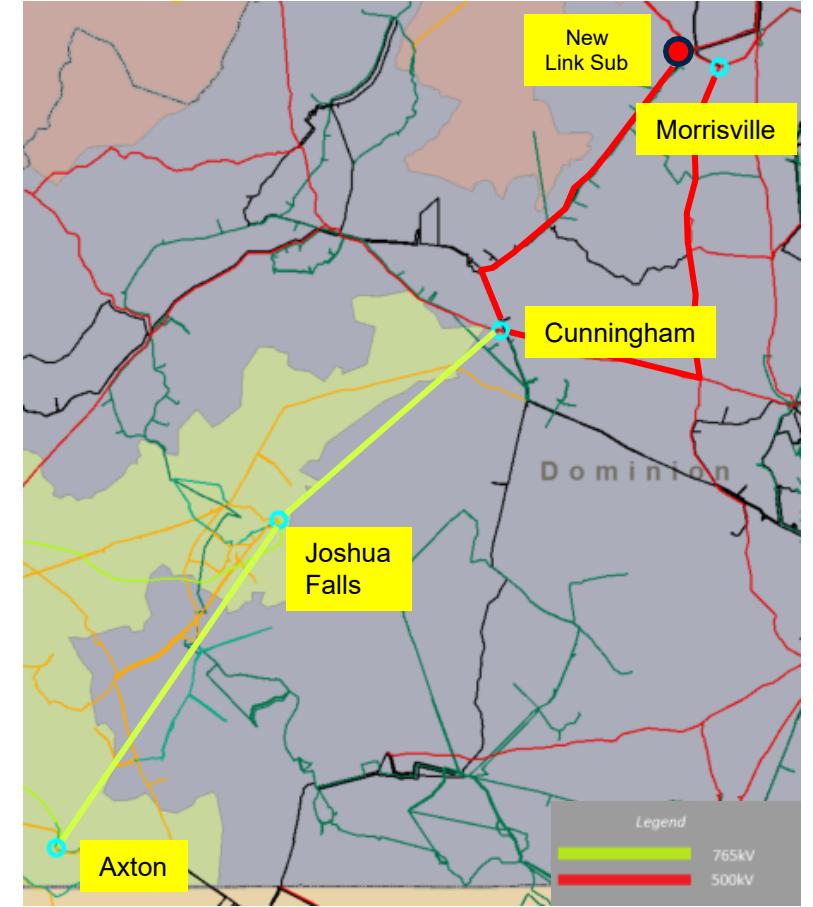
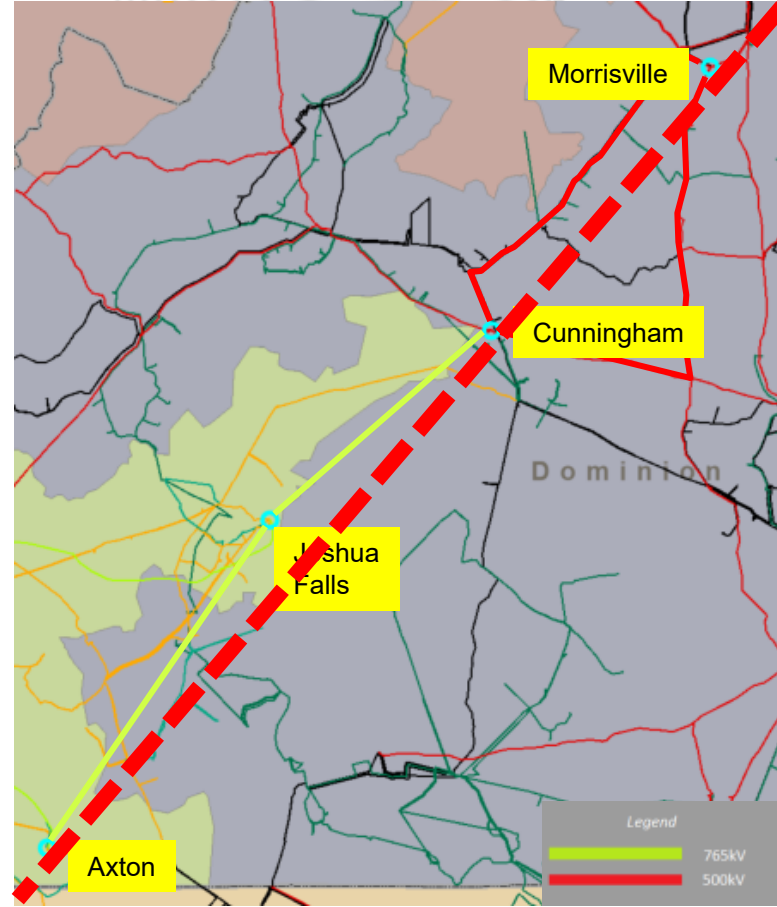
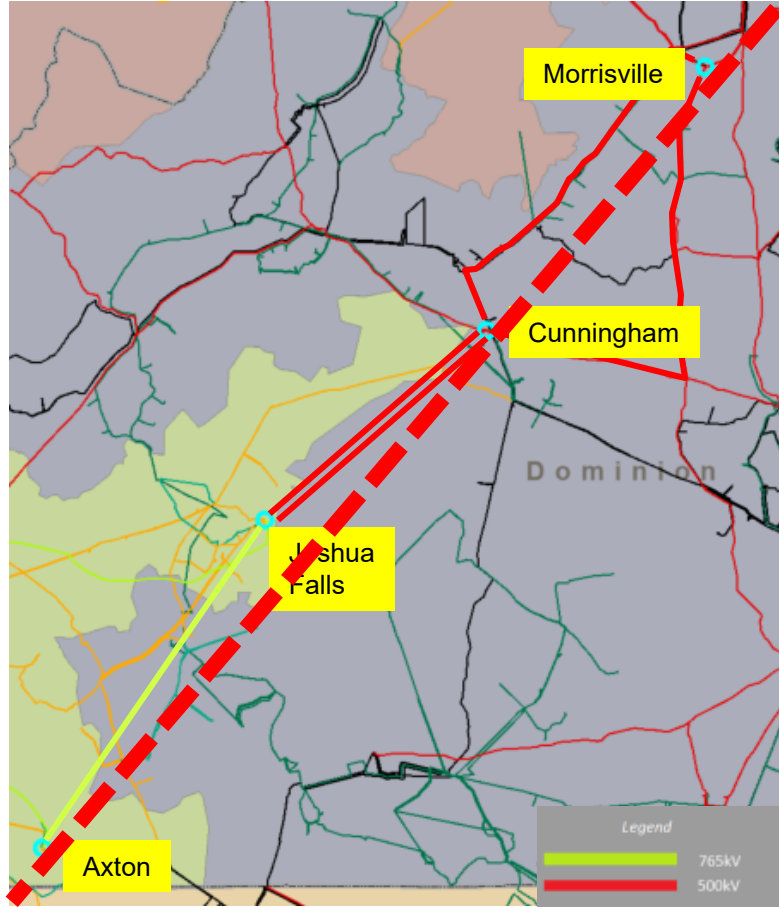
2024 RTEP Window 1 (Preliminary Short-List)

NextEra Proposal Summaries - Simplified Key components

2024W1-146 -- \$2.26Bn

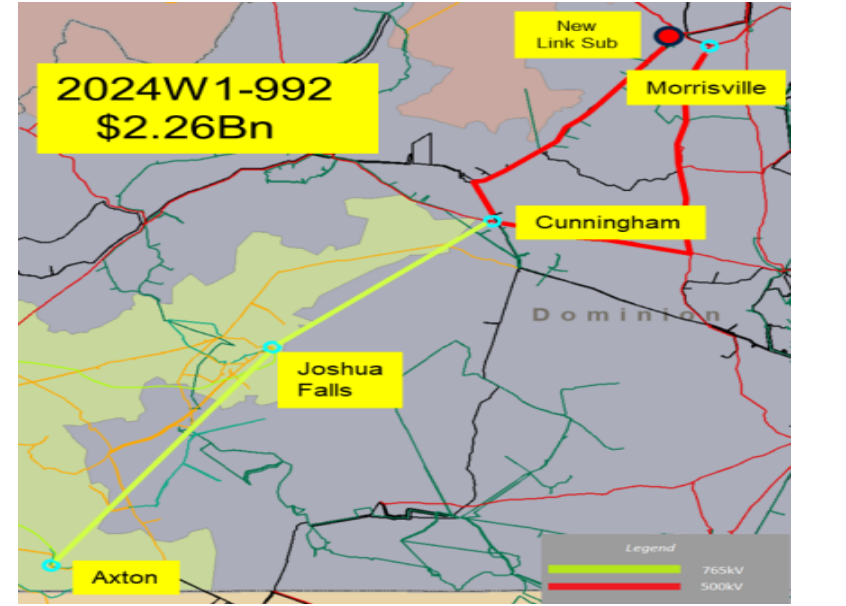
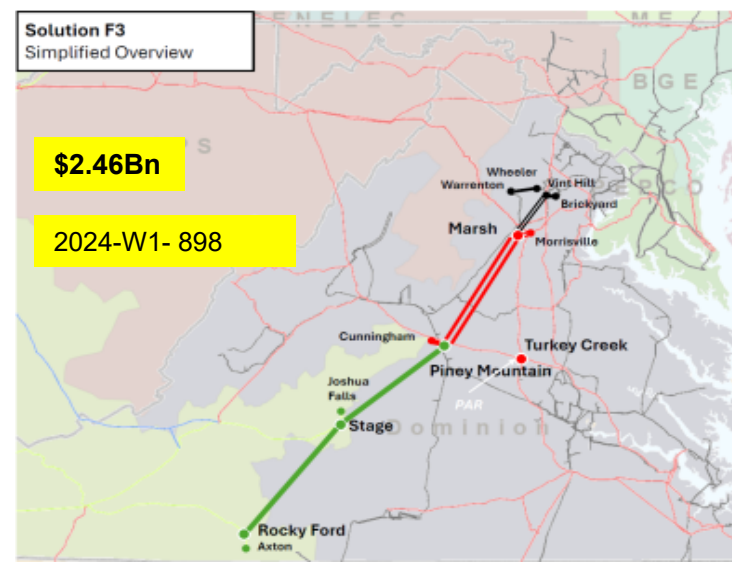
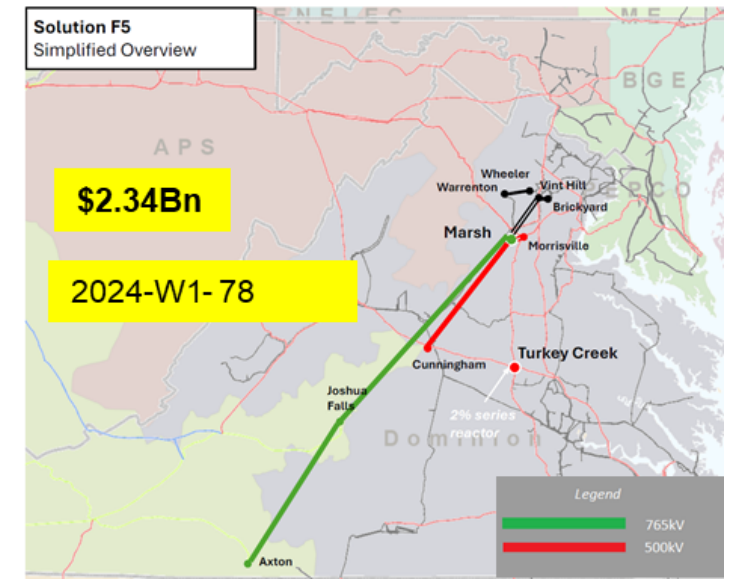
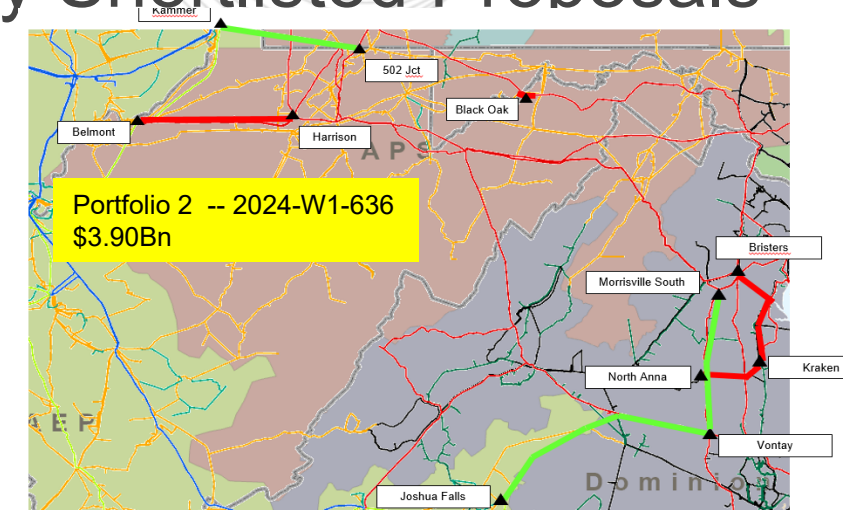
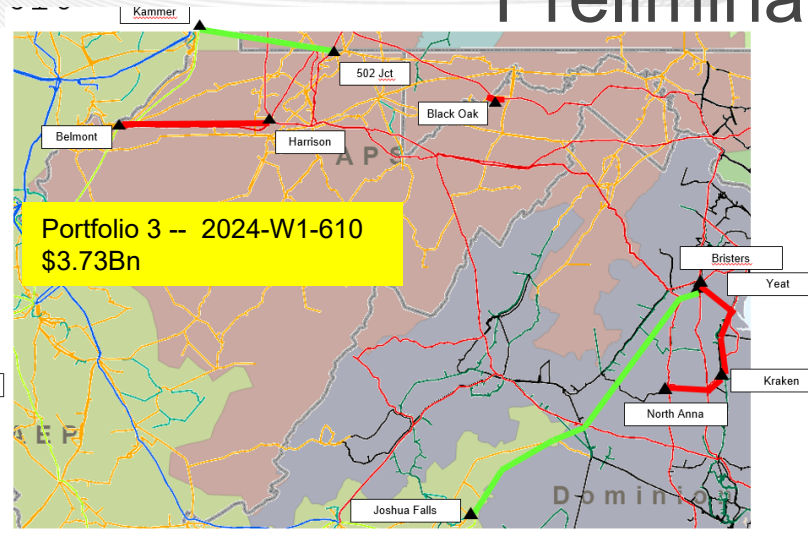
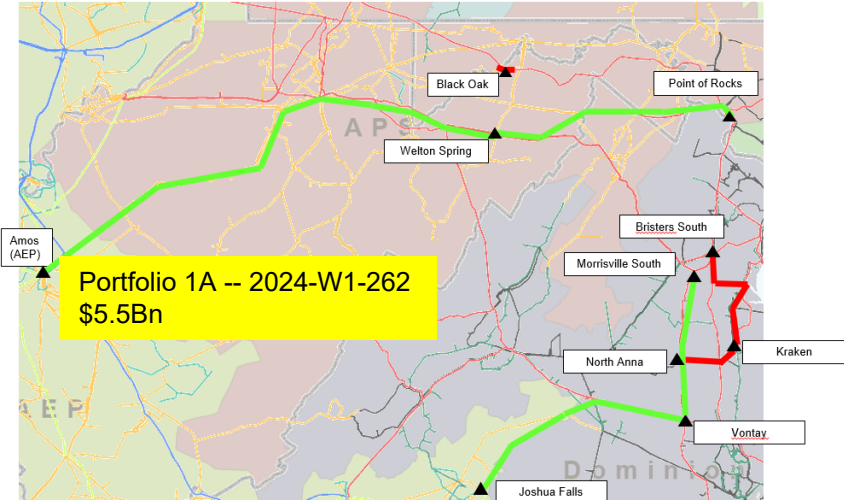
2024W1-768 -- \$2.2Bn

2024W1-992 -- \$2.26Bn



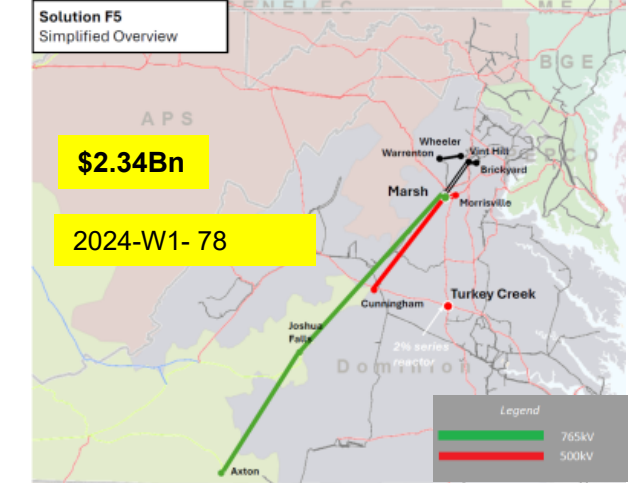
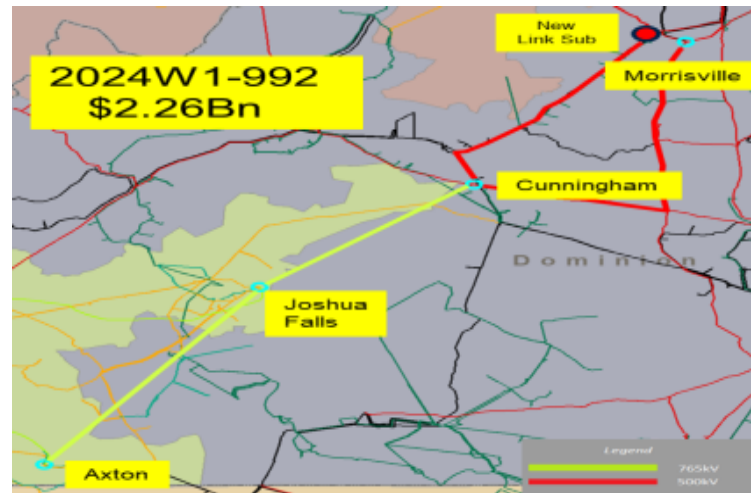
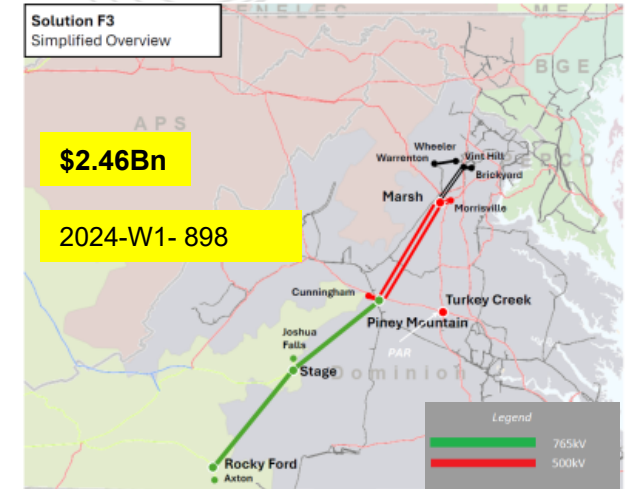
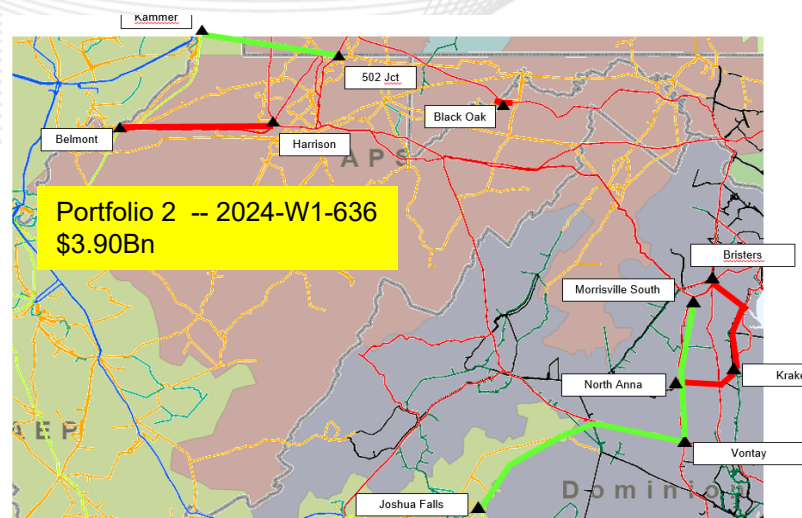
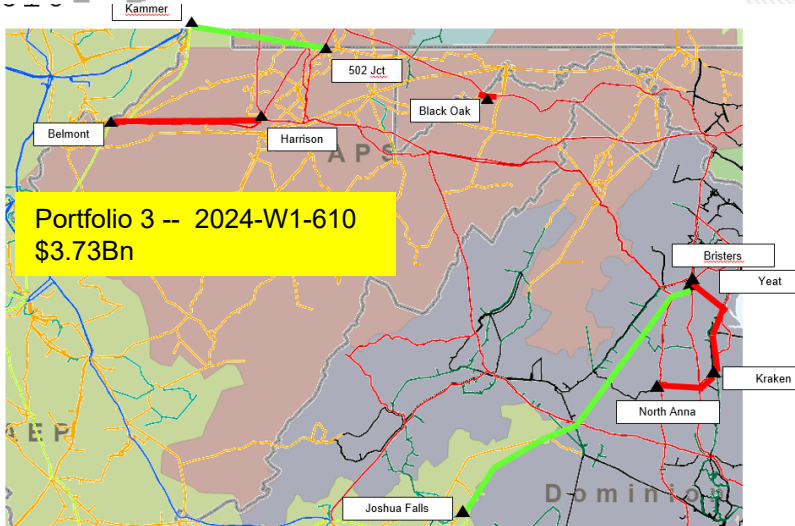


Common Merits among Preliminary Shortlisted Proposals



- All shortlisted proposals offer a Joshua Falls/Axton 765kV greenfield line “towards” the Morrisville 500 kV Station
- While all preliminary short listed proposals meet the posted need (at varying degrees), some offer more complete and even additional benefits / robustness merits such as;
 - Stronger 765 kV support to the heart of the Dominion system vs 500kV
 - Covering and encompassing a wider geographic area where load is growing
 - Providing flexibility, softening operational risk of outages (to upgrade existing transmission) and relief to existing constraints on the system (Stability)
- One proposal offers considerably higher transfer capability (2 x 765 kV lines – South and North);
 - Allows for more flexibility between north and south transfers in near term
 - Enhanced resilience and reliability levels
 - Supports future load growth in Eastern PJM and other longer term needs.

Focusing on Short-listed proposals offering “similar” merits



- All proposals offer similar concepts providing a new 765 kV source from Joshua Falls or Axton towards the Morrisville area
- Proposals 636 and 610 offer a 500kV reinforcement along the Dominion N-S 500kV corridor and through a load growth area as well as 500 or 765 kV reinforcement along the northern 500kV transfer corridor. Proposals 636 and 610 could be staged as needs arise and unfold
- Proposal 78 and 898 offer a direct, 765 kV greenfield line between Axton and Morrisville (through Joshua Falls) and a greenfield 500 kV line between Cunningham and Morrisville, and various 230kV reinforcement (Marsh-Vint Hill and Wheeler-Warrenton)
- Proposal 992, 78 and 898 do not address all needs inside the Dominion system of more “regional / Dominion Internal nature”
- Proposals 78, 898 and 992 introduce an additional 765kV segment (compared to 636 and 610) between Joshua Falls and Axton ~ 60 Miles long

- Sink Definitions

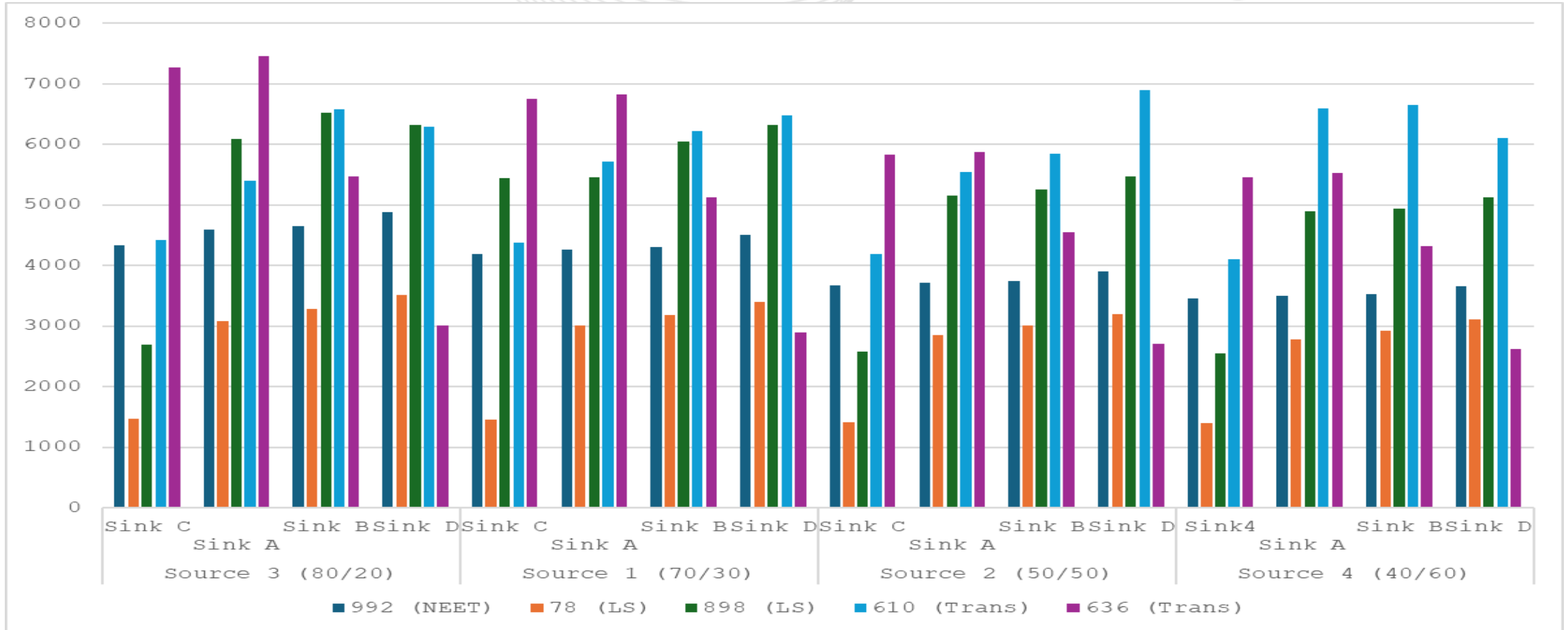
Subsystem	Sink A	Sink B	Sink C	Sink D
PSEG	5.8%	5.5%	5.8%	0.0%
PPL1	23.0%	26.0%	17.2%	40.0%
PPL2	34.5%	39.0%	23.0%	60.0%
DOM	23.0%	13.0%	20.1%	0.0%
APS	13.8%	15.6%	13.8%	0.0%

- Source Definitions (North/South (Western PJM) %age surplus gen)

Source 3	Source 1	Source 2	Source 4
80/20	70/30	50/50	40/60

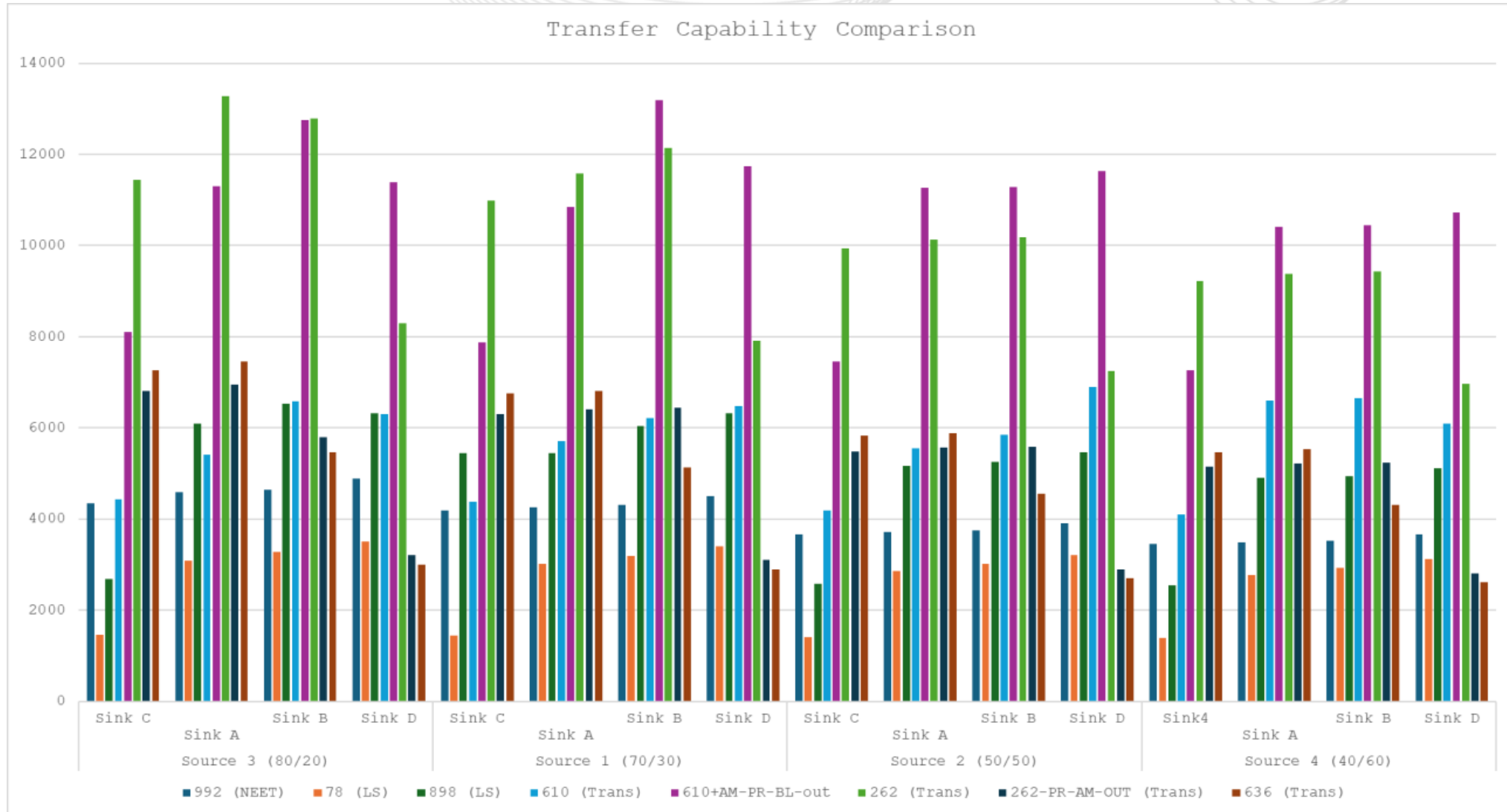
Incremental Transfer Capability

Preliminary Short-listed proposals offering “similar” merits



- Proposals 610 and 636 (could be staged as need materializes) offer the highest incremental transfer capability among preliminary short list proposals.
- Regardless of which (Source/Sink Combination), either 610 or 636 offer the highest transfer capability.
- Proposals 636 and 610 do not require the additional 78 Miles of 765 kV line (Joshua Falls – Axton)
- Proposals 636 and 610 offer expandability and staging while also extends service reach to the eastern side of the constrained area where load is growing rapidly.

Incremental Transfer Capability (including Proposal 262 and its variants)



- It is clear that Proposal 262 and its variants (adds 1x765kV path in the north) offers a much higher incremental transfer capability compared to all other proposals.
- This is an added benefit on top of what is offered by the other smaller group of projects (610, 636, 78, 898 and 992)
- Proposal 262 offers a strong incremental transmission capability addition, regardless of the sink / source combination studied.



Constructability and Financial Evaluation Assessments Summary

PJM Risk Assessment Criteria

Risk Assessment	Cost Estimate Risks	Cost Containment Risk	Schedule Risks	Constructability Risks	ROW/Land Acquisition Risk	Outage Coordination Risk	Proposing Entity Experience & Capability Risks
Low	Proposal is within 0-20% of Independent Estimate	Hard Cost Cap (Project cost capped with no cost recovery above binding cost cap) with minimal exclusions.	Ratings assessed based on independent assessment of proposed in-service dates, and assessment of significant schedule risks such as such as permitting and constraint mitigation, long-lead material procurement, land/ROW acquisition, construction complexity.	Ratings assessed based on independent assessment of the number and severity of constructability risks assessed for the proposed project scope, such as permitting and constraint mitigation, land/ROW acquisition, construction complexity.	Pure Brownfield Rebuild/Reconductor/New Build within existing ROW (or property already owned by entity)	Ratings assessed based on PJM's assessment of complexity, impact and duration of outages required for development, including consideration of outage coordination plans proposed.	Entity has demonstrated significant experience & capability of developing and operating proposed facilities
Low-Medium	Proposal is within 21-30% of Independent Estimate	Mix of Hard/Soft caps on Project components			Mostly brownfield with some greenfield (i.e. Uses/Overlaps existing ROW but requires expansion or some new greenfield)		Entity has demonstrated limited experience & capability of developing and operating proposed facilities
Medium	Proposal is within 31-40% of Independent Estimate	Soft Caps (No direct cap on Project costs, but indirect caps via reductions to ROE, and/or incentives for cost overruns).			Moderate Mix of Green and Brownfield (i.e. Uses/Overlaps existing ROW but requires expansion or some new greenfield)		Entity has no experience operating proposed facilities, but has demonstrated some experience with developing proposed facilities.
Medium-High	Proposal is within 41-50% of Independent Estimate	Minimal cost caps and/or excessive exclusions			Mostly Greenfield with some Brownfield (i.e. Uses/Overlaps existing ROW but requires expansion or some new greenfield) OR Parallels existing ROW for entire alignment with no overlaps.		Entity has no experience developing and operating proposed facilities, but has provided a detailed & effective plan
High	Proposal is greater than 50% of Independent Estimate	No cost containment			Pure Greenfield		Entity has no experience developing and operating proposed facilities and has not provided a detailed & effective plan



Dominion-FirstEnergy-Transource Joint Proposals

2024 RTEP W1 Proposal Risk Assessments										
Applicable Proposal IDs for Joint Proposals	Proposal ID	Proposing Entity	Proposal Description	Cost Estimate Risks	Cost Containment Risks	Schedule Risks	Constructability Risks	ROW/Land Acquisition Risks	Outage Coordination Risks	Proposing Entity Experience & Capability Risk
262	708	TRAIL	Amos - Welton Springs - Point of Rocks 765 kV Line	Low	Medium-High	High	High	Medium-High	Low	Low
759	883	TRAIL	Amos - Welton Spring 765 kV Line	Low	Medium-High	Medium-High	Medium-High	Medium-High	Low	Low
279	286	TRNSRC	Joshua Falls - Durandal	Low-Medium	Medium-High	Medium	Medium	Medium	Low	Low
279, 114	300	TRNSRC	Yeat - Vontay	Low	Medium-High	Medium	Medium	Low-Medium	Medium	Low
262, 636, 759	665	TRNSRC	Joshua Falls - Vontay - Morrisville South	Low-Medium	Medium-High	Medium-High	Medium	Medium	Low	Low
279, 610, 114	820	TRNSRC	Joshua Falls - Yeat	Low-Medium	Medium-High	Medium-High	Medium-High	Medium-High	Low	Low
262, 759, 636, 610	967	VEPCO	DVP Central Area Improvement for Portfolios	Low	Medium-High	Medium	Medium	Low-Medium	Medium	Low
	907	TRAIL	500 kV Expansion Plan	Low	Medium-High	High	High	Medium-High	Medium-High	Low
610, 636, 279, 114	977	TRAIL	Belmont - Harrison 500 kV Line	Low	Medium-High	Medium	Medium	Medium	Low	Low
610, 636, 279, 114	727	KEYATC	Kammer - 502 Junction 765 kV Line	Low	High	Medium	Low-Medium	Low	Medium-High	Low
279, 114	617	TRNSRC	AEP Incumbent upgrades for Portfolio #4	Low-Medium	High	Medium-High	Medium-High	Medium	Medium	Low
262, 759, 636, 610, 279, 114	781	VEPCO	500kV Solutions for Portfolios	Low	High	Low-Medium	Low-Medium	Low	Medium	Low
	983	VEPCO	500kV Safety Solutions	Low	High	Medium	Medium	Medium	Medium	Low



LS Power Proposals

Proposal ID	Proposing Entity	Proposal Description	Cost Estimate Risks	Cost Containment Risks	Schedule Risks	Constructability Risks	ROW/Land Acquisition Risks	Outage Coordination Risks	Proposing Entity Experience & Capability Risk
78	CNTLTM	F5 Solution	Low-Medium	Medium	Medium-High	Medium-High	High	Low	Medium-High
124	CNTLTM	F4 Solution	Medium	Medium	Medium-High	Medium-High	High	Low	Medium-High
317	CNTLTM	F7 Solution	Low	Medium	Medium-High	Medium-High	High	Low	Medium-High
506	CNTLTM	F6 Solution	Low-Medium	Medium	Medium-High	Medium-High	High	Low	Low
622	CNTLTM	F2 Solution	Low-Medium	Medium	Medium-High	Medium-High	High	Low	Low
839	CNTLTM	F8 Solution	Medium	Medium	Medium-High	Medium-High	High	Low	Medium-High
898	CNTLTM	F3 Solution	Low-Medium	Medium	Medium-High	Medium-High	High	Low	Medium-High
904	CNTLTM	F1 Solution	Medium	Medium	Medium-High	Medium-High	High	Low	Medium-High
200	CNTLTM	Common Components	High	Medium-High	Medium-High	High	Medium	Medium	Low

Proposal ID	Proposing Entity	Proposal Description	Cost Estimate Risks	Cost Containment Risks	Schedule Risks	Constructability Risks	ROW/Land Acquisition Risks	Outage Coordination Risks	Proposing Entity Experience & Capability Risk
146	NEETMH	Axton - Joshua Falls 765kV + Joshua Falls - Mt Ida 500kV	Low-Medium	Medium	Medium-High	Medium-High	Medium-High	Medium-High	Medium-High
768	NEETMH	Axton - Joshua Falls - Mt Ida	Low-Medium	Medium	Medium-High	Medium-High	Medium-High	Medium-High	Medium-High
992	NEETMH	Axton - Joshua Falls - Mt Ida 765kV transmission lines + Link 500/230kV substation	Medium	Medium	Medium-High	Medium-High	Medium-High	Medium-High	Medium-High
944	NEETMH	Upgrades to AEP 138kV and Dominion 230kV transmission lines	High	High	Low	Low-Medium	Low	Medium	Low



Ohio Area Proposals

Proposal ID	Proposing Entity	Proposal Description	Cost Estimate Risks	Cost Containment Risks	Schedule Risks	Constructability Risks	ROW/Land Acquisition Risks	Outage Coordination Risks	Proposing Entity Experience & Capability Risk
694	TRNSRC	Fostoria Central - Lake Ave. 345 kV DC	Medium	Medium-High	Medium	Medium	High	Low	Low
843	ATSI	Lemoyne - Lake Ave 345 kV Line	Low	High	Medium	Medium	Medium	Medium	Low
605	ATSI	ATSI 138kV Rebuild	Low-Medium	High	Low	Low	Low	Medium	Low
294	NEETMH	Bay Shore - Davis-Besse - Lake Ave	Medium	Medium	Medium	Medium	Medium-High	Medium	Low
357	NEETMH	Bay Shore - Davis-Besse - Lake Ave + Lemoyne - Lake Ave 345kV	Low-Medium	Medium	Medium	Medium	Medium-High	Medium	Low
533	NEETMH	Lemoyne - Lake Ave 345kV	High	Medium	Medium	Medium	Medium-High	Low	Low



2024 RTEP W1 Shortlist

Baseline Reliability Projects



AEP Transmission Zone: Baseline Cluster AEP-3,4,5

- As part of the 2024 RTEP Window 1, the projects listed in the table below were proposed to address Cluster AEP-3, 4, 5

Proposal ID #	Project Type	Entity	Cluster	Project Title	Project Description	kV Level	Estimated Cost (\$M)
408	GREENFIELD	AEPSCT	AEP - 3/4/5	Maliszewski 765/345 kV Upgrades	Establish a 345 kV yard at the existing Maliszewski station and upgrade the 765 kV portion of the station to accommodate and install a 765/345 kV transformer and cut in the existing Hyatt - West Millersport 345 kV; Hyatt - West Millersport 345 kV Cut In at Corridor 345KV station; Station work at Corridor 345 kV station, Hyatt 35kV station and Marysville 345kV station; Relaying Upgrades at West Millersport 345 kV ; Maliszewski - Corridor 345 kV Reconductoring; Bokes Creek - Marysville 345kV Reconductoring; Marysville - Hyatt 345 kV Rebuild	765/345	145.494
350	GREENFIELD	TRNSRC	AEP - 3/4/5	Jester - Hayden	- Jester greenfield 765/345kV station - Approx. 12 miles of greenfield 345kV double circuit transmission line between Jester greenfield 765/345kV Station and Hayden 345kV stations.	765/345	229.411
863	UPGRADE	AEPSCT	AEP - 3/4	Maliszewski Series Reactor Upgrades	Replace the existing 138 kV series reactor at Maliszewski station with a 4% reactor with a higher continuous current rating. In addition, the proposal will upgrade limiting station equipment on the reactor bypass.	138	2.328
744	UPGRADE	AEPSCT	AEP - 4	Maliszewski-Polaris Rebuild	Rebuild the 2.8 mile 138 kV line between Maliszewski and Polaris stations.	138	8.884
338	UPGRADE	AEPSCT	AEP - 3	Genoa-Westar Rebuild	Rebuild the approximately 2 mile long 138 kV line between Westar and Genoa stations.	138	8.789
464	UPGRADE	AEPSCT	AEP - 3	Genoa-Westar Sag Remediation	Perform a sag study and mitigate clearance issues on Westar - Genoa 138 kV line to allow line to operate to conductor's designed rating	138	2.815

- Additionally, in the non-competitive solution, AEP submitted a solution to upgrade 765 kV circuit breaker 'B' to a 5000A 50 kA breaker at Maliszewski station . In addition, the project will replace disconnect switches on breakers 'B' and 'D", upgrade the existing wavetrap towards Marysville, and upgrades relays on the 765 kV lines towards Marysville and Vassell. **Estimated cost: \$6.9M;**



AEP Transmission Zone: Baseline Cluster AEP-3,4,5 (Shortlist)

Short List:

	Proposal	Estimate Cost (\$M)
Option 1	408	145.494
Option 2	863 + Non comp	9.228

PJM is currently evaluating both options taking into consideration local load increase in the upcoming 2025 load forecast and will make the initial selection in Dec. TEAC.



ATSI Transmission Zone: Baseline Cluster 2 (ATSI)

- As part of the 2024 RTEP Window 1, the projects listed in the table below were proposed to address Cluster 2 in ATSI zone

Proposal ID #	Project Type	Entity	Cluster	Project Title	Project Description	kV Level	Estimated Cost (\$M)
605	UPGRADE	ATSI	ATSI - 2	Rebuild/Reconductor existing 138 kV lines/Terminal upgrades at 345 kV substations	Rebuild Beaver to Johnson, Greenfield to Lakeview, Avery to Shinkrock, Avery to Hayes and Greenfield to Beaver Corridor. Reconductor 1 span from Ottawa substation. Upgrade terminal equipment at Beaver, Davis Besse & Bayshore 345 kV substation. Swap 345 kV line terminals at Beaver 345 kV substation	138/345	265.1
843	GREENFIELD	ATSI	ATSI - 2	New 345 kV line between Lemoyne to Lake Ave	Build a new approximately 88 miles Lemoyne - Lake Avenue 345 kV line by leveraging existing 138 kV corridors. Associated yard work at Lemoyne and Lake Ave 345 kV substations	345	455.0
694	GREENFIELD	TRNSRC	ATSI - 2	New double circuit 345 kV line between Fostoria Central and Lake Ave	Build a new 79 mile 345kV double circuit line from Fostoria Central to Lake Avenue 345kV station. - Lake Ave 345kV station. Associated Substation work at Fostoria Central and Lake Ave 345 kV substations	345	328.3
533	GREENFIELD	NEXTERA	ATSI - 2	New 345 kV line between Lemoyne - Lake Ave	Construct a single circuit 345kV line from ATSI's Lemoyne substation to ATSI's Lake Ave substation. Associated yard work at Lemoyne and Lake Ave 345 kV substations	345	202.0
294	GREENFIELD	NEXTERA	ATSI - 2	New 345 kV line between Bayshore to Davis Besse to Lake Ave	Install second circuit on open tower position along the existing Bayshore - Davis-Besse 345 kV line. Utilize spare tower position on the Davis-Besse to Lemoyne line to string a new 345kV circuit from Davis-Besse to Lake Ave. Associated yardwork at existing Bay Shore, Davis Besse and Lake Ave 345 kV substations	345	257.3
357	GREENFIELD	NEXTERA	ATSI - 2	New 345 kV line between Bayshore to Davis Besse to Lake Ave New 345 kV line between Lemoyne to Lake Ave	Install second circuit on open tower position along the existing Bayshore - Davis-Besse line. Utilize spare tower position on the Davis-Besse to Lemoyne line to string a new 345kV circuit from Davis-Besse to Lake Ave. Install new circuit on empty tower position on portion of Lemoyne - Davis Besse corridor. Associated yardwork at existing Bay Shore, Davis Besse, Lemoyne and Lake Ave 345 kV substations	345	344.1



ATSI Transmission Zone: Baseline Cluster 2 (ATSI)

Short List:

	Project	Estimate Cost (\$M)	Pros
Option 1	605	265.1	Addresses the intended violations Rebuilds/reconductor existing 138 kV lines provides sufficient margin
Option 2	843	455.0	Addresses the intended violations Leveraging existing 138 kV ROW (Greenfield)
Option 3	533	202.0	Addresses the intended violations Low cost (Greenfield)

PJM is currently evaluating all three options based and conducting additional analysis and will make the initial selection in Dec. TEAC.

- The Following Proposals are selected for further evaluation (Short-Listed):
 - Proposal # 636
 - Proposal # 610
 - Proposal # 262
- All other proposals part of the preliminary shortlist are not subject to further consideration.

- PJM will continue to evaluate the merits of the shortlisted proposals
- Additional discussions with proposing entities will continue to further refine proposals
- PJM is currently planning to bring forward the selected proposals to the Dec 3rd and Jan 7th TEAC for 1st and 2nd reads.



Appendix 1

2024 RTEP Window 1 Proposals



2024 RTEP Window 1 Proposals

Proposal ID #	Entity	Cluster	Project Title	Total Component Cost (\$M)
12	PE	PECO	PECO Competitive Window Upgrades	\$43.2
17	PPLTO	PPL - 2	Bushkill - Kittatinny 230 kV line reconductor	\$35.5
24	VEPCO	DOM - 1	230kV and 115kV Solutions for Portfolios	\$861.7
72	PPLTO	PPL - 2	Juniata - Cumberland - Williams Grove 230 kV upgrade project	\$78.5
78	CNTLTM	0 & DOM - 1	F5 Solution	\$1,897.0
81	TRNSRC	0	AEP incumbent upgrades for Portfolio #1, 2 & 3	\$137.0
114	TRNSRC	0 & DOM - 1	Joint	See Proposal
408	AEPSCT	AEP - 3/4/5	Maliszewski 765/345 kV Upgrades	\$145.5
124	CNTLTM	0 & DOM - 1	F4 Solution	\$1,810.8
132	PEPCO	No Cluster	Dickerson H 230kV Caps	\$12.4
135	COMED	COMED - 1	Reconductor 345 kV lines 1202 & 1227 Dresden to Mulberry	\$16.3
146	NEETMH	0 & DOM - 1	Axton - Joshua Falls 765kV + Joshua Falls - Mt Ida 500kV	\$2,263.7
459	AEPSCT	No Cluster	Mountaineer and Belmont Station Upgrades	\$10.5
200	CNTLTM	0 & DOM - 1	Common Components	\$439.7
232	POTOED	No Cluster	FirstEnergy Upgrades to Support Portfolio Proposals	\$97.5
261	VEPCO	DOM - 1	Overdutied Breaker Replacement	\$70.7
262	TRNSRC	0 & DOM - 1	Joint	See Proposal
738	AEPSCT	AEP - 1	Boxwood-Bremo 138 kV Rebuild	\$140.4
279	TRNSRC	0 & DOM - 1	Joint	See Proposal



2024 RTEP Window 1 Proposals

Proposal ID #	Entity	Cluster	Project Title	Total Component Cost (\$M)
286	TRNSRC	0	Joshua Falls - Durandal	\$350.3
294	NEETMH	ATSI	Bay Shore - Davis-Besse - Lake Ave	\$257.3
295	PEPCO	BGE	Marley Neck 115 kV Substation	\$107.6
300	TRNSRC	0	Yeat - Vontay	\$381.7
312	PPLTO	PPL - 2	Acahela 500/230 kV Substation expansion project	\$116.3
317	CNTLTM	0 & DOM - 1	F7 Solution	\$1,896.7
330	PPLTO	PPL - 2	Juniata - Hunterstown 500 kV line	\$356.7
949	AEPSCT	AEP - 1	Boxwood-Bremo 138 kV Sag Study and Partial Rebuild	\$10.5
350	TRNSRC	AEP - 3/4	Jester - Hayden	\$229.4
357	NEETMH	ATSI	Bay Shore - Davis-Besse - Lake Ave + Lemoyne - Lake Ave 345kV	\$344.1
386	PPLTO	PPL - 2	Juniata - TMIS 500 kV DCT line	\$353.7
390	VEPCO	DOM - 1	230kV Safety Solutions	\$1,008.5
117	AEPSCT	No Cluster	Tidd-Mahans Lane 138 kV Rebuild	\$15.1
447	COMED	COMED - 1	Cut 345 kV L8014 Pontiac to Dresden into Mulberry	\$23.5
574	AEPSCT	No Cluster	Tiltsville-West Bellaire 138 kV Rebuild	\$28.5
863	AEPSCT	AEP - 3/4	Maliszewski Series Reactor Upgrades	\$2.3
470	PEPCO	BGE	BGE local Mitigation Alternative	\$71.9
479	PPLTO	PPL - 2	Lackawanna - Paupack 230 kV line reconductor	\$47.6
502	MATLIT	METED	Hunterstown #2 500/230 kV Transformer	\$43.1
506	CNTLTM	0 & DOM - 1	F6 Solution	\$1,732.1



2024 RTEP Window 1 Proposals

Proposal ID #	Entity	Cluster	Project Title	Total Component Cost (\$M)
526	PPLTO	PPL - 2	Jenkins - Pocono 230 kV line	\$60.0
527	VEPCO	DOM - 1	Cap Bank and STATCOM Installation	\$322.0
532	COMED	COMED - 1	345kV Shunt Inductor at Mulberry	\$28.2
533	NEETMH	ATSI	Lemoyne - Lake Ave 345kV	\$202.1
546	TRNSLK	PPL - 1	Pennsylvania Border - Drakestown 500 kV line (greenfield route)	\$246.1
549	PPLTO	PPL - 2	Susquehanna T10 Station Line Reconfiguration	\$9.5
551	POTOED	0	Chanceford - Goose Creek 500 kV Line	\$13.9
167	AEPSCT	No Cluster	Leesville Station Conductor Replacement	\$.120
605	ATSI	ATSI	ATSI 138kV Rebuild + Substation Terminal Upgrades	\$265.2
610	TRNSRC	0 & DOM - 1	Joint	See Proposal
617	TRNSRC	0	AEP incumbent upgrades for Portfolio #4	\$167.3
622	CNTLTM	0 & DOM - 1	F2 Solution	\$1,848.1
636	TRNSRC	0 & DOM - 1	Joint	See Proposal
665	TRNSRC	0	Joshua Falls - Vontay - Morrisville South	\$1,188.5
694	TRNSRC	ATSI	Fostoria Central - Lake Ave. 345 kV DC	\$328.3
708	TRAIL	0	Amos - Welton Springs - Point of Rocks 765 kV Line	\$1,944.9
727	KEYATC	0	Kammer - 502 Junction 765 kV Line	\$292.4
756	AEPSCT	AEP - 6	Cyprus Station Reconfiguration	\$1,745.0
769	AEPSCT	AEP - 6	Rebuild Beatty-Cyprus 138 kV Line	\$33.1
276	AEPSCT	AEP - 2	Bixby - Buckeye Steel 138 kV Reconfiguration	\$4.1



2024 RTEP Window 1 Proposals

Proposal ID #	Entity	Cluster	Project Title	Total Component Cost (\$M)
759	TRNSRC	0 & DOM - 1	Joint	See Proposal
761	VEPCO	DOM - 1	138/115 kV Safety Solutions	\$104.1
768	NEETMH	0 & DOM - 1	Axton - Joshua Falls - Mt Ida	\$2,191.0
856	AEPSCT	AEP - 2	Canal - Mound Street 138 kV Rebuild	\$31.1
781	VEPCO	DOM - 1	500kV Solutions for Portfolios	\$161.7
816	COMED	COMED - 2	Autotransformer at Itasca	\$14.3
820	TRNSRC	0	Joshua Falls - Yeat	\$1,016.8
839	CNTLTM	0 & DOM - 1	F8 Solution	\$1,808.1
843	ATSI	ATSI	Lemoine - Lake Ave 345 kV Line	\$455.0
850	PPLTO	PPL - 2	Pocono 80 MVar 230 kV capacitor bank	\$4.9
744	AEPSCT	AEP - 4	Maliszewski-Polaris Rebuild	\$8.8
860	PPLTO	PPL - 2	Face Rock T1 and T2 transformer replacement	\$9.5
940	AEPSCT	No Cluster	Canal - Gay 138 kV Rebuild	\$15.6
873	VEPCO	AEP - 1	Line 8 Rebuild - Bremo to Scottsville Interconnection (APCO)	\$42.1
876	PPLTO	PPL - 2	Siegfried 500/230 kV Substation expansion project	\$106.9
883	TRAIL	0	Amos - Welton Spring 765 kV Line	\$1,274.4
885	TRAIL	0	FirstEnergy Components for Proposals 2024-W1-636, 610, 279 and 114	\$52.6
888	COMED	COMED - 2	Reconductor Des Plaines to Busse	\$7.2
898	CNTLTM	0 & DOM - 1	F3 Solution	\$2,015.6
900	TRNSLK	PPL - 1	Pennsylvania Border - Drakestown 500 kV line (brownfield route)	\$276.9



2024 RTEP Window 1 Proposals

Proposal ID #	Entity	Cluster	Project Title	Total Component Cost (\$M)
904	CNTLTM	0 & DOM - 1	F1 Solution	\$1,864.6
907	TRAIL	0	500 kV Expansion Plan	\$2,838.9
922	PPLTO	PPL - 2	Lackawanna - Siegfried - Drakestown 500 kV line project	\$618.3
926	PPLTO	PPL - 2	Wescosville 2nd 500/138 kV transformer	\$36.8
935	PPLTO	PPL - 2	Juniata 500 kV Substation yard reconfiguration	\$22.2
338	AEPSCT	AEP - 3	Genoa-Westar Rebuild	\$8.7
944	NEETMH	No Cluster	Upgrades to AEP 138kV and Dominion 230kV transmission lines	\$69.1
464	AEPSCT	AEP - 3	Genoa-Westar Sag Remediation	\$2.8
955	PSEGRT	PECO	230kv Eagle Point - Penrose	\$390.9
967	VEPCO	DOM - 1	DVP Central Area Improvement for Portfolios	\$1,189.7
977	TRAIL	0	Belmont - Harrison 500 kV Line	\$277.4
980	VEPCO	DOM - 1	Line #579 EOL Rebuild_Septa to Yadkin (99-2993)	\$216.7
983	VEPCO	DOM - 1	500kV Safety Solutions	\$2,839.3
992	NEETMH	0 & DOM - 1	Axton - Joshua Falls - Mt Ida 765kV transmission lines + Link 500/230kV substation	\$2,256.2
994	PPLTO	PPL - 2	Juniata - Dauphin 230 kV line reconductor	\$2.2



Appendix 2

2024 RTEP W1– Full Constructability Matrix



Dominion-FirstEnergy-Transource Joint Proposals

2024 RTEP W1 Proposal Risk Assessments

Applicable Proposal IDs for Joint Proposals	Proposal ID	Proposing Entity	Proposal Description	Proposal Cost Estimate	Independent Cost Estimate	Cost Estimate Risks	Cost Containment Risks	Schedule Risks	Constructability Risks	ROW/Land Acquisition Risks	Outage Coordination Risks	Proposing Entity Experience & Capability Risk	Proposed ISD	765 kV Ckt. Miles	500 kV Ckt. Miles	EHV Ckt. Total
262	708	TRAIL	Amos - Welton Springs - Point of Rocks 765 kV Line	\$ 1,944,988,294.77	\$ 2,117,592,291.77	Low	Medium-High	High	High	Medium-High	Low	Low	12/1/2029	261	0	261
759	883	TRAIL	Amos - Welton Spring 765 kV Line	\$ 1,274,423,041.56	\$ 1,390,153,690.56	Low	Medium-High	Medium-High	Medium-High	Medium-High	Low	Low	12/1/2029	175	0	175
279	286	TRNSRC	Joshua Falls - Durandal	\$ 350,251,158.00	\$ 453,980,438.00	Low-Medium	Medium-High	Medium	Medium	Medium	Low	Low	12/1/2029	64	0	64
279, 114	300	TRNSRC	Yeat - Vontay	\$ 381,728,557.00	\$ 423,476,103.06	Low	Medium-High	Medium	Medium	Low-Medium	Medium	Low	12/1/2030	0	64	64
262, 636, 759	665	TRNSRC	Joshua Falls - Vontay - Morrisville South	\$ 1,188,512,351.00	\$ 1,437,285,113.00	Low-Medium	Medium-High	Medium-High	Medium	Medium	Low	Low	12/1/2029	146	0	146
279, 610, 114	820	TRNSRC	Joshua Falls - Yeat	\$ 1,016,895,559.00	\$ 1,278,447,533.00	Low-Medium	Medium-High	Medium-High	Medium-High	Medium-High	Low	Low	12/1/2029	138	0	138
262, 759, 636, 610	967	VEPCO	DVP Central Area Improvement for Portfolios	\$ 1,189,775,296.32	\$ 1,065,552,777.00	Low	Medium-High	Medium	Medium	Low-Medium	Medium	Low	12/1/2029	0	67	67
	907	TRAIL	500 kV Expansion Plan	\$ 2,838,900,776.05	\$ 2,743,829,450.12	Low	Medium-High	High	High	Medium-High	Medium-High	Low	12/1/2029	0	395.8	395.8
610, 636, 279, 114	977	TRAIL	Belmont - Harrison 500 kV Line	\$ 277,408,474.00	\$ 300,964,888.00	Low	Medium-High	Medium	Medium	Medium	Low	Low	12/1/2029	0	56	56
610, 636, 279, 114	727	KEYATC	Kammer - 502 Junction 765 kV Line	\$ 292,459,887.36	\$ 328,069,112.56	Low	High	Medium	Low-Medium	Low	Medium-High	Low	12/1/2029	41.9	0	41.9
279, 114	617	TRNSRC	AEP Incumbent upgrades for Portfolio #4	\$ 167,351,119.00	\$ 202,947,231.41	Low-Medium	High	Medium-High	Medium-High	Medium	Medium	Low	12/1/2029	0	0	0
262, 759, 636, 610, 279, 114	781	VEPCO	500kV Solutions for Portfolios	\$ 161,680,709.90	\$ 152,329,204.21	Low	High	Low-Medium	Low-Medium	Low	Medium	Low	12/1/2029	0	0	0
	983	VEPCO	500kV Safety Solutions	\$ 2,839,364,040.68	\$ 2,041,240,890.07	Low	High	Medium	Medium	Medium	Medium	Low	6/1/2029	0	0	0



LS Power + NextEra Proposals

2024 RTEP W1 Proposal Risk Assessments

Proposal ID	Proposing Entity	Proposal Description	Proposal Cost Estimate	Independent Cost Estimate	Cost Estimate Risks	Cost Containment Risks	Schedule Risks	Constructability Risks	ROW/Land Acquisition Risks	Outage Coordination Risks	Proposing Entity Experience & Capability Risk	Proposed ISD	765 kV Ckt. Miles	500 kV Ckt. Miles	EHV Ckt. Total
78	CNTLTM	F5 Solution	\$ 1,897,054,166.00	\$ 2,418,258,931.00	Low-Medium	Medium	Medium-High	Medium-High	High	Low	Medium-High	6/1/2029	196.8	74.6	271.4
124	CNTLTM	F4 Solution	\$ 1,810,831,815.00	\$ 2,420,316,653.00	Medium	Medium	Medium-High	Medium-High	High	Low	Medium-High	6/1/2029	192.7	9.4	202.1
317	CNTLTM	F7 Solution	\$ 1,896,758,766.00	\$ 2,233,218,784.00	Low	Medium	Medium-High	Medium-High	High	Low	Medium-High	6/1/2029	130.9	147.4	278.3
506	CNTLTM	F6 Solution	\$ 1,732,107,945.00	\$ 2,126,988,620.00	Low-Medium	Medium	Medium-High	Medium-High	High	Low	Low	6/1/2029	0	273.7	273.7
622	CNTLTM	F2 Solution	\$ 1,848,138,486.00	\$ 2,301,778,403.00	Low-Medium	Medium	Medium-High	Medium-High	High	Low	Low	6/1/2029	0	268.3	268.3
839	CNTLTM	F8 Solution	\$ 1,808,086,862.00	\$ 2,360,326,264.00	Medium	Medium	Medium-High	Medium-High	High	Low	Medium-High	6/1/2029	196.5	9.4	205.9
898	CNTLTM	F3 Solution	\$ 2,015,627,111.00	\$ 2,455,959,788.00	Low-Medium	Medium	Medium-High	Medium-High	High	Low	Medium-High	6/1/2029	127.1	140.6	267.7
904	CNTLTM	F1 Solution	\$ 1,864,623,351.00	\$ 2,452,002,473.00	Medium	Medium	Medium-High	Medium-High	High	Low	Medium-High	6/1/2029	192.6	74.6	267.2
200	CNTLTM	Common Components	\$ 439,753,860.00	\$ 697,103,658.48	High	Medium-High	Medium-High	High	Medium	Medium	Low	6/1/2029	0	0	0
146	NEETMH	Axton - Joshua Falls 765kV + Joshua Falls - Mt Ida 500kV	\$ 2,263,756,064.81	\$ 2,769,690,455.80	Low-Medium	Medium	Medium-High	Medium-High	Medium-High	Medium-High	Medium-High	6/1/2030	76	230.5	306.5
768	NEETMH	Axton - Joshua Falls - Mt Ida	\$ 2,191,007,184.00	\$ 2,790,749,034.20	Low-Medium	Medium	Medium-High	Medium-High	Medium-High	Medium-High	Medium-High	6/1/2030	145	161.5	306.5
992	NEETMH	Axton - Joshua Falls - Mt Ida 765kV transmission lines + Link 500/230kV substation	\$ 2,256,234,092.60	\$ 3,043,221,782.00	Medium	Medium	Medium-High	Medium-High	Medium-High	Medium-High	Medium-High	6/1/2030	145	156.93	301.93
944	NEETMH	Upgrades to AEP 138kV and Dominion 230kV transmission lines	\$ 69,139,000.00	\$ 484,719,812.27	High	High	Low	Low-Medium	Low	Medium	Low	6/1/2029	0	0	0



2024 RTEP W1 Proposal Risk Assessments

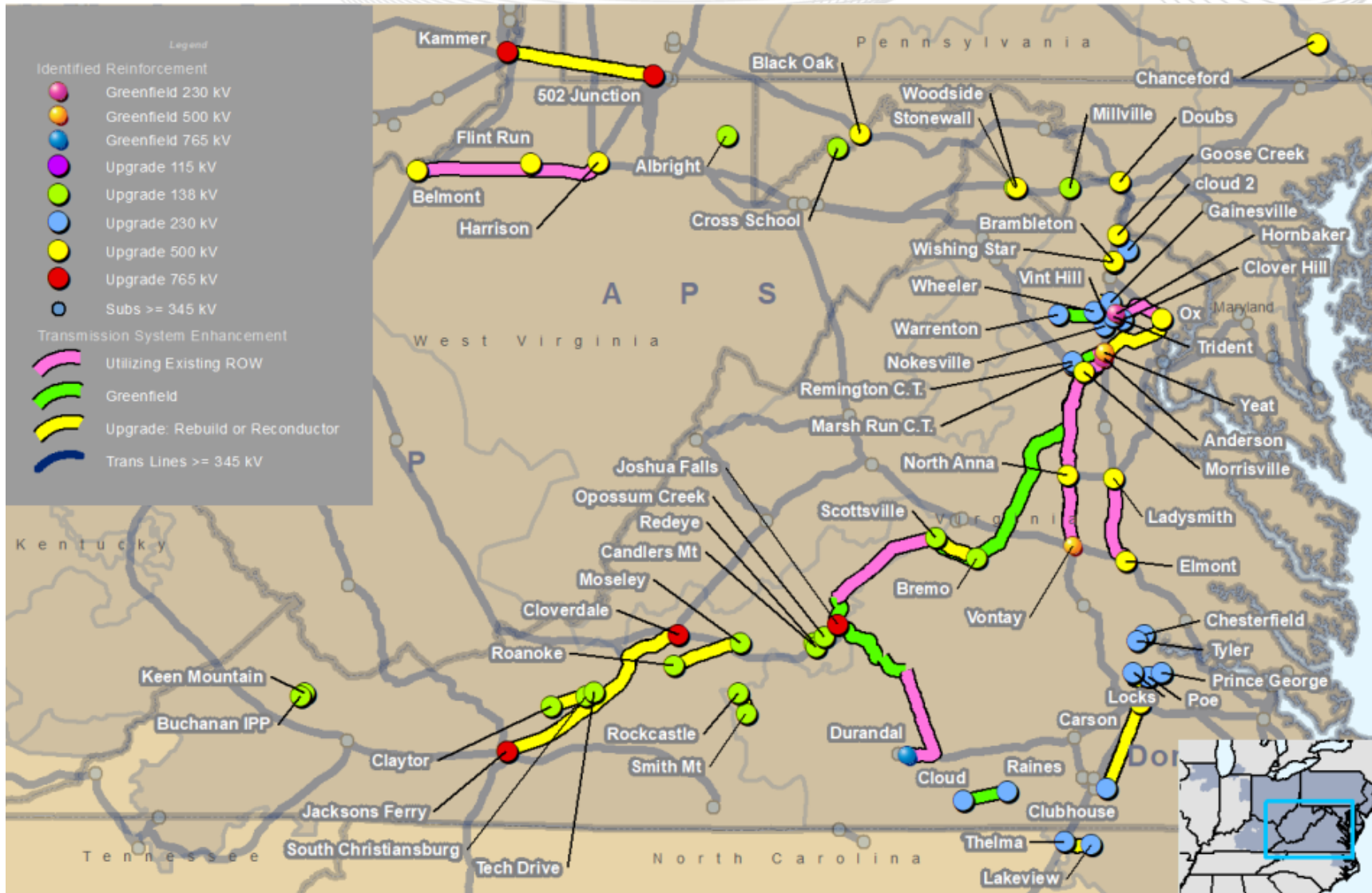
Proposal ID	Proposing Entity	Proposal Description	Proposal Cost Estimate	Independent Cost Estimate	Cost Estimate Risks	Cost Containment Risks	Schedule Risks	Constructability Risks	ROW/Land Acquisition Risks	Outage Coordination Risks	Proposing Entity Experience & Capability Risk	Proposed ISD	765 kV Ckt. Miles	500 kV Ckt. Miles	EHV Ckt. Total
694	TRNSRC	Fostoria Central - Lake Ave. 345 kV DC	\$ 328,369,046.00	\$ 438,088,291.61	Medium	Medium-High	Medium	Medium	High	Low	Low	12/1/2029	N/A	N/A	N/A
843	ATSI	Lemoyne - Lake Ave 345 kV Line	\$ 455,038,571.00	\$ 510,124,970.86	Low	High	Medium	Medium	Medium	Medium	Low	6/1/2029	N/A	N/A	N/A
605	ATSI	ATSI 138kV Rebuild	\$ 265,156,487.00	\$ 323,466,472.04	Low-Medium	High	Low	Low	Low	Medium	Low	6/1/2029	N/A	N/A	N/A
294	NEETMH	Bay Shore - Davis-Besse - Lake Ave	\$ 257,300,886.58	\$ 347,039,402.87	Medium	Medium	Medium	Medium	Medium-High	Medium	Low	6/1/2030	N/A	N/A	N/A
357	NEETMH	Bay Shore - Davis-Besse - Lake Ave + Lemoyne - Lake Ave 345kV	\$ 344,117,143.00	\$ 424,798,435.22	Low-Medium	Medium	Medium	Medium	Medium-High	Medium	Low	6/1/2030	N/A	N/A	N/A
533	NEETMH	Lemoyne - Lake Ave 345kV	\$ 202,084,415.75	\$ 325,026,046.75	High	Medium	Medium	Medium	Medium-High	Low	Low	6/1/2030	N/A	N/A	N/A



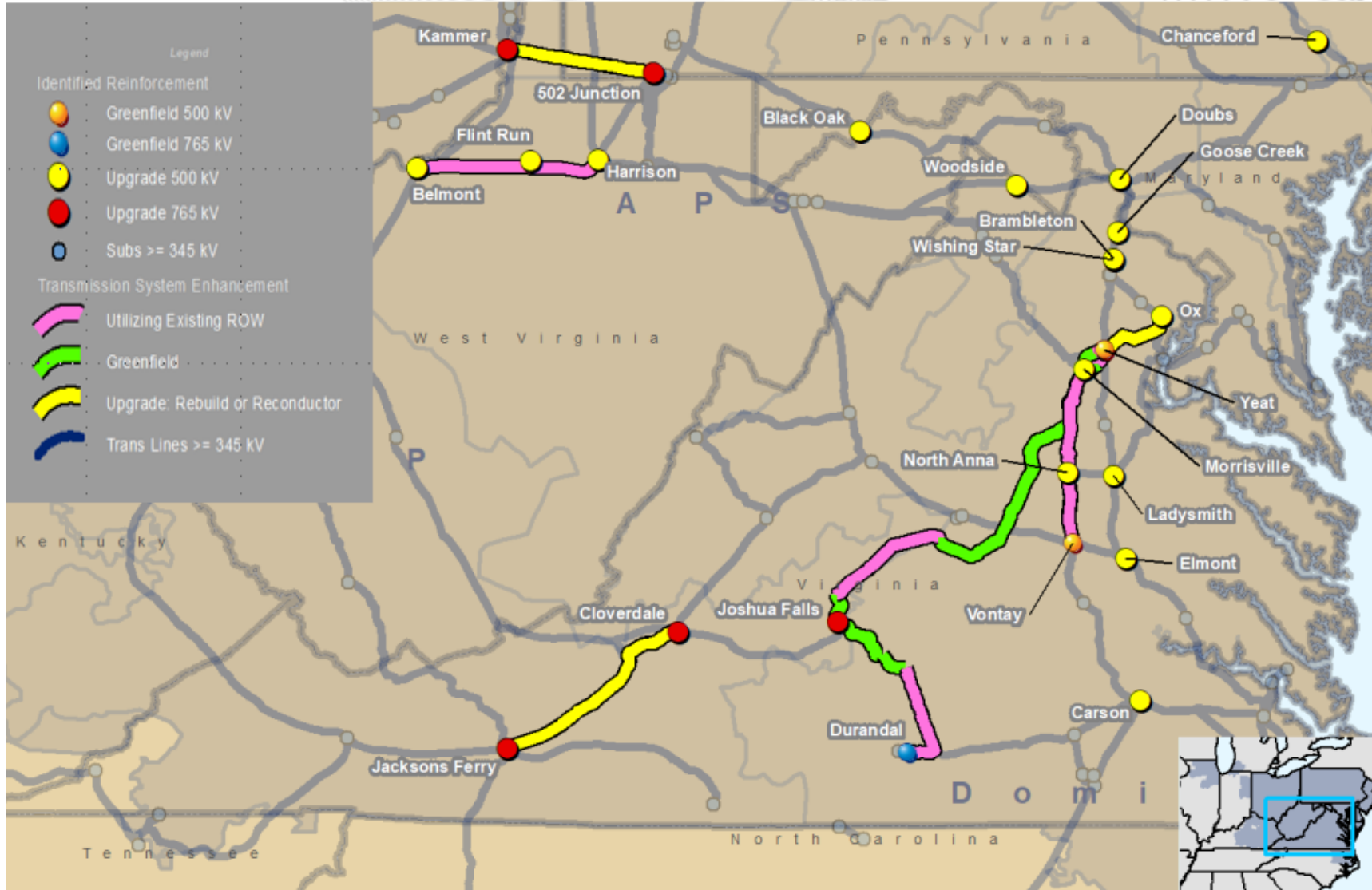
Appendix 3

2024 RTEP W1– Proposal Maps

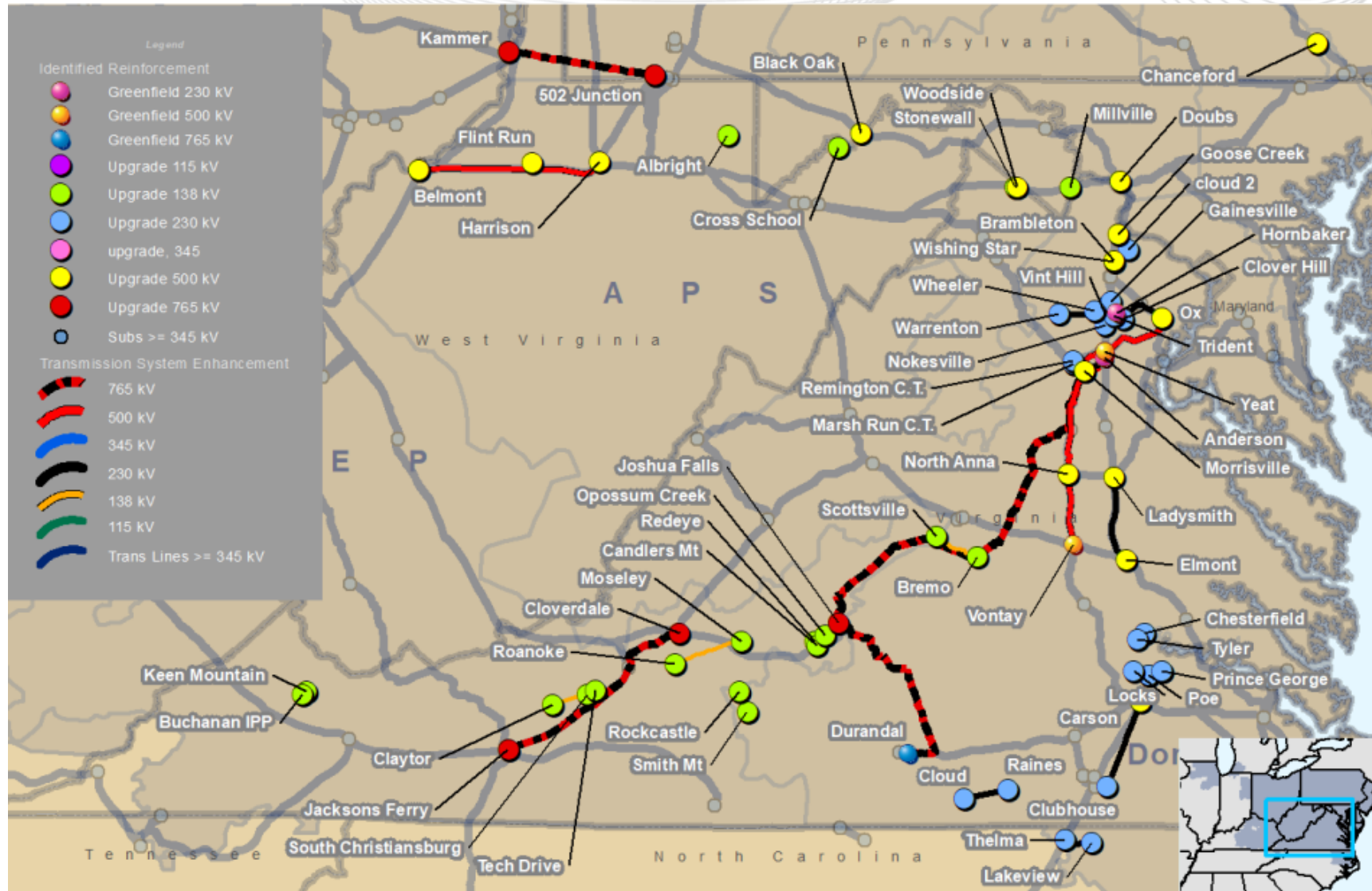
Transource Proposals



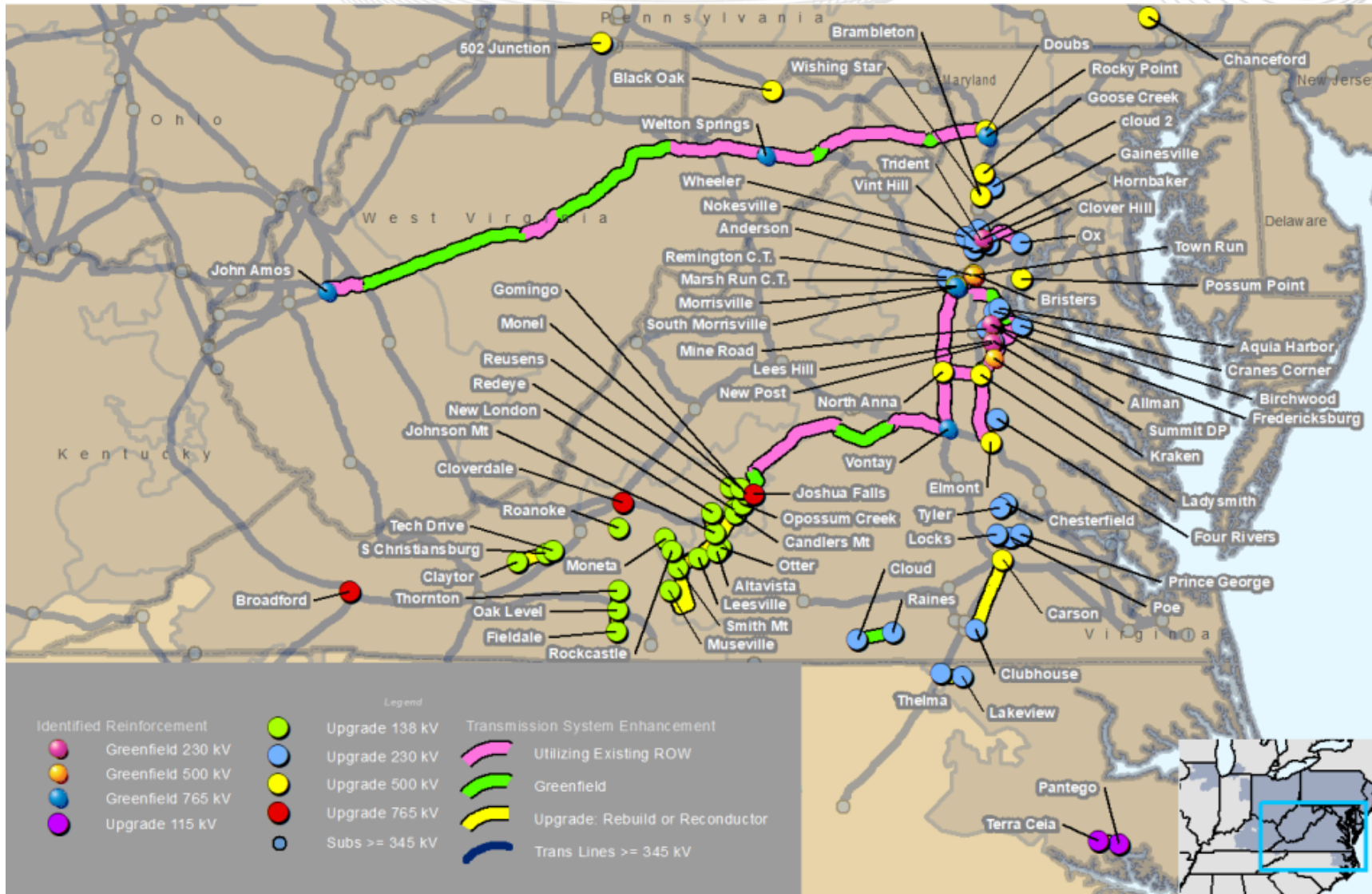
NOTE: This map is only intended to illustrate the general electrical connectivity of the projects, and should not be relied upon for exact geographical substational locations or line routes.



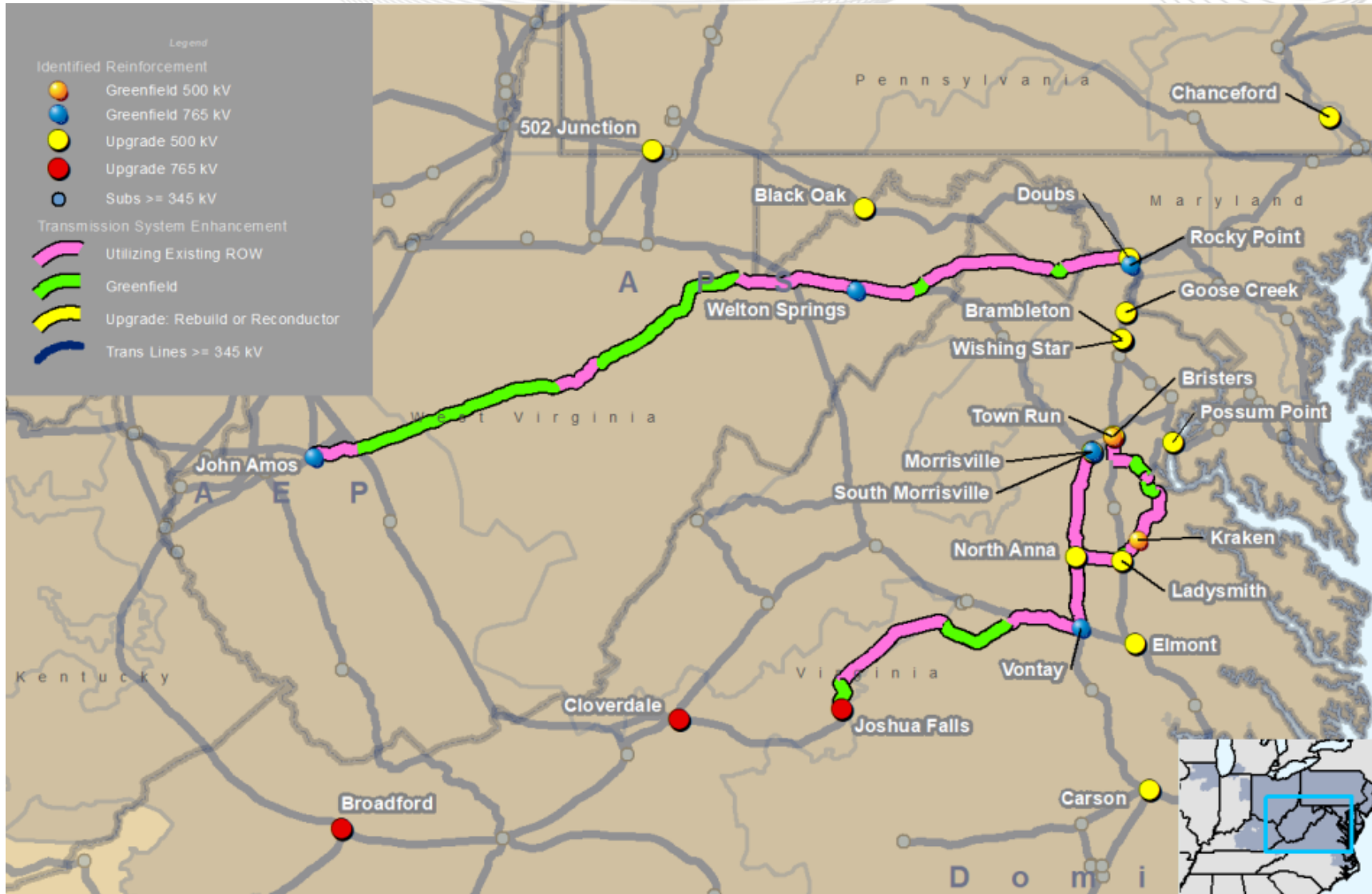
NOTE: This map is only intended to illustrate the general electrical connectivity of the projects, and should not be relied upon for exact geographical substation locations or line routes.



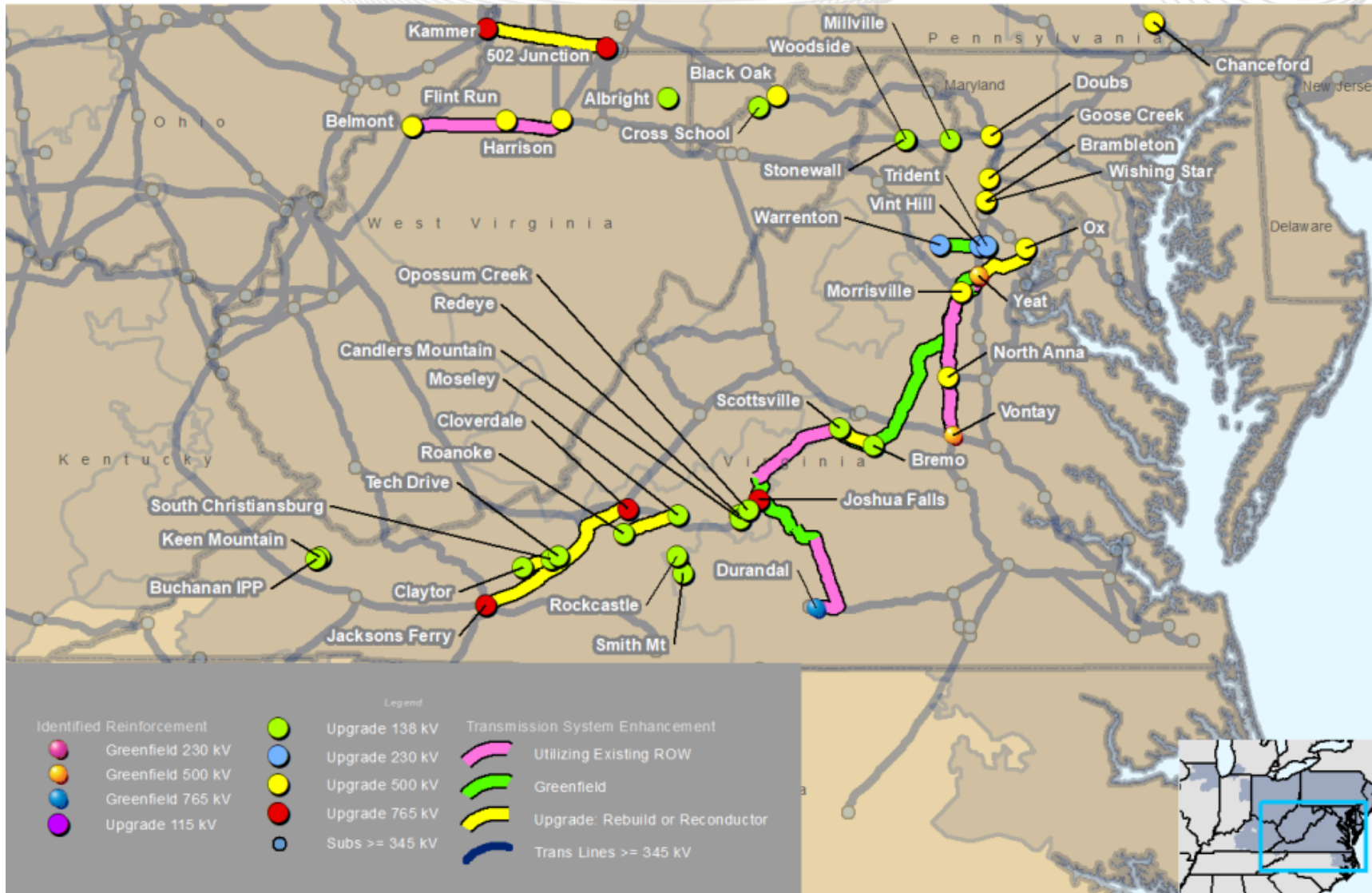
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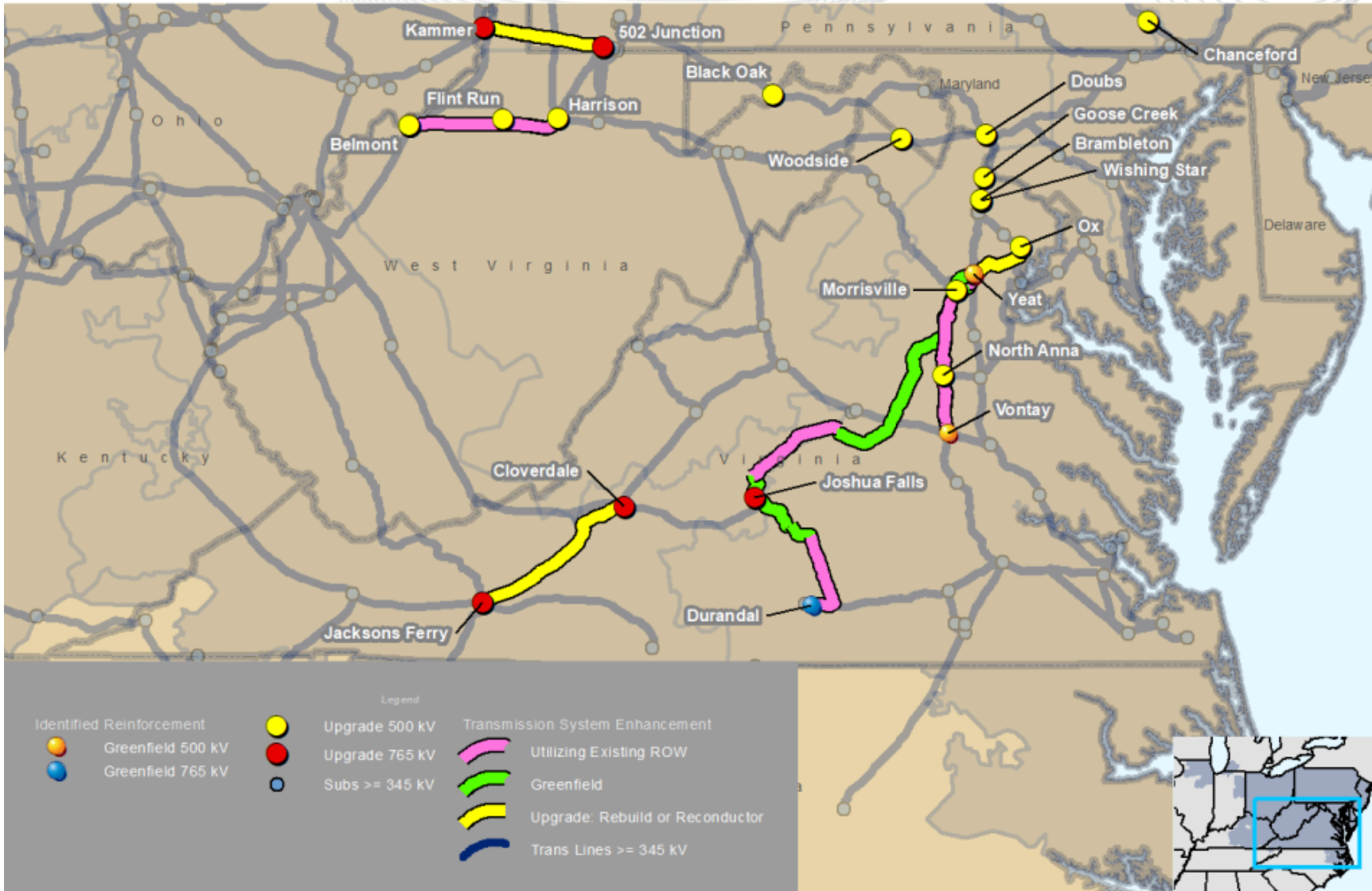
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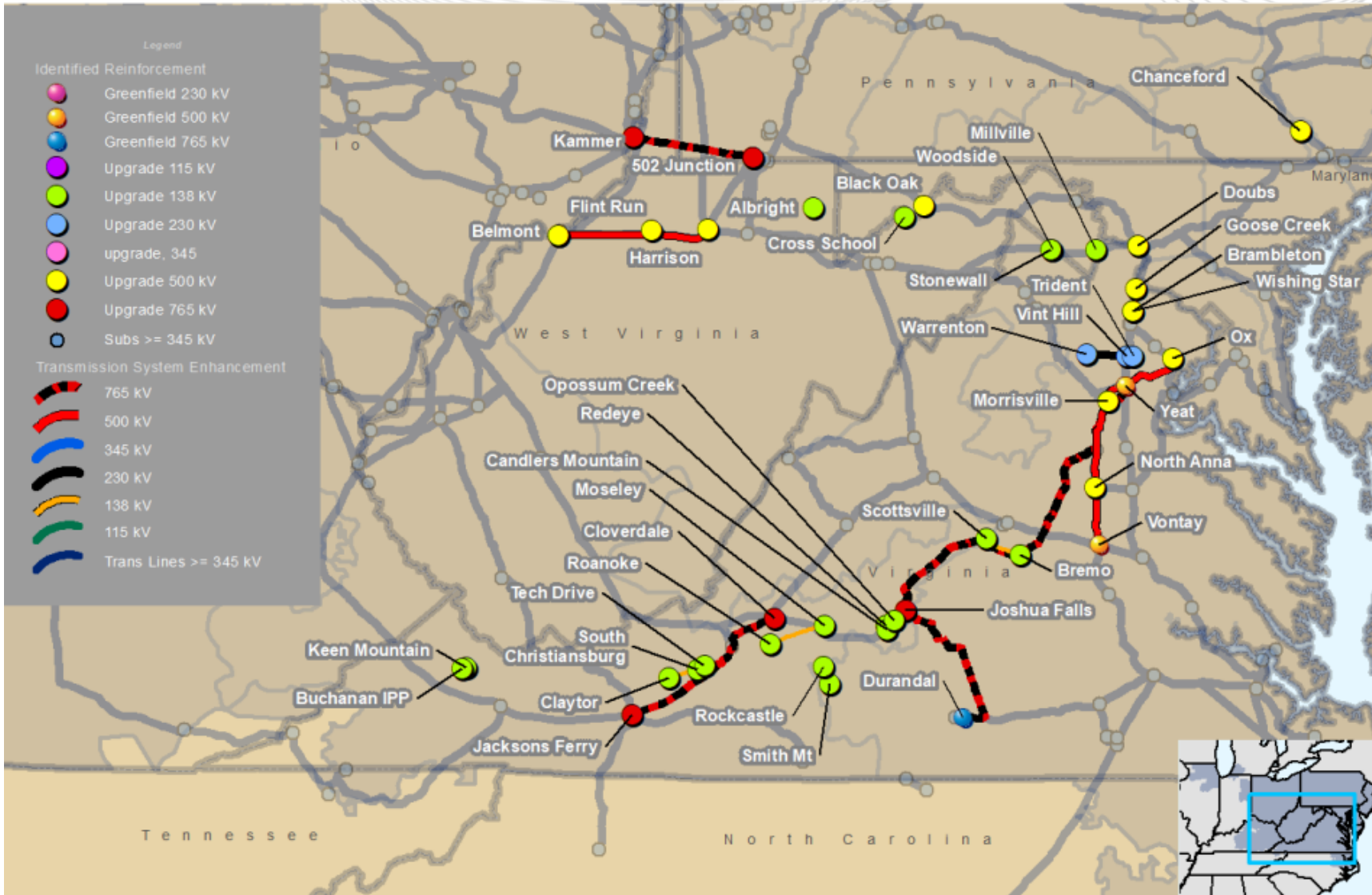
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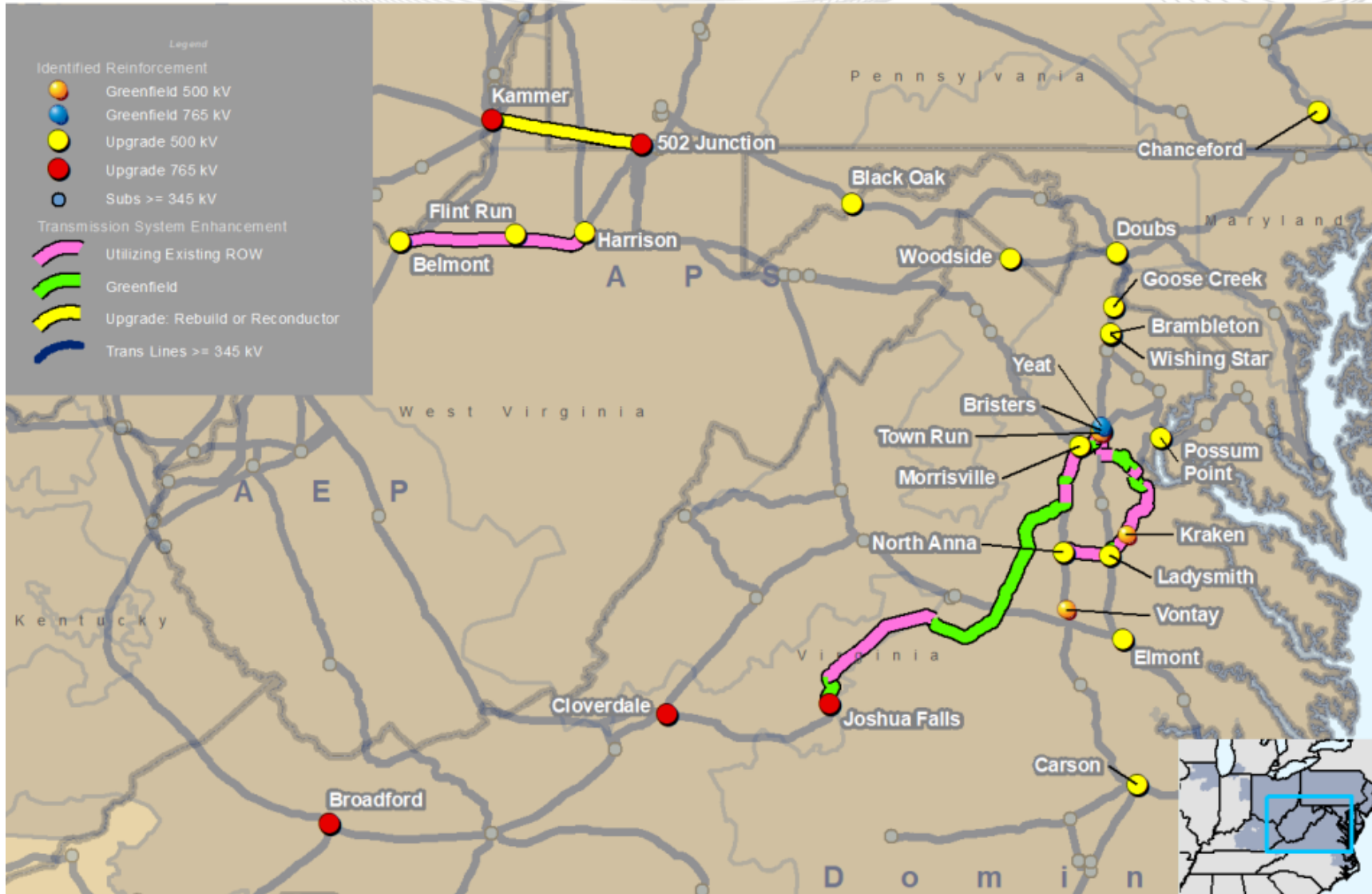
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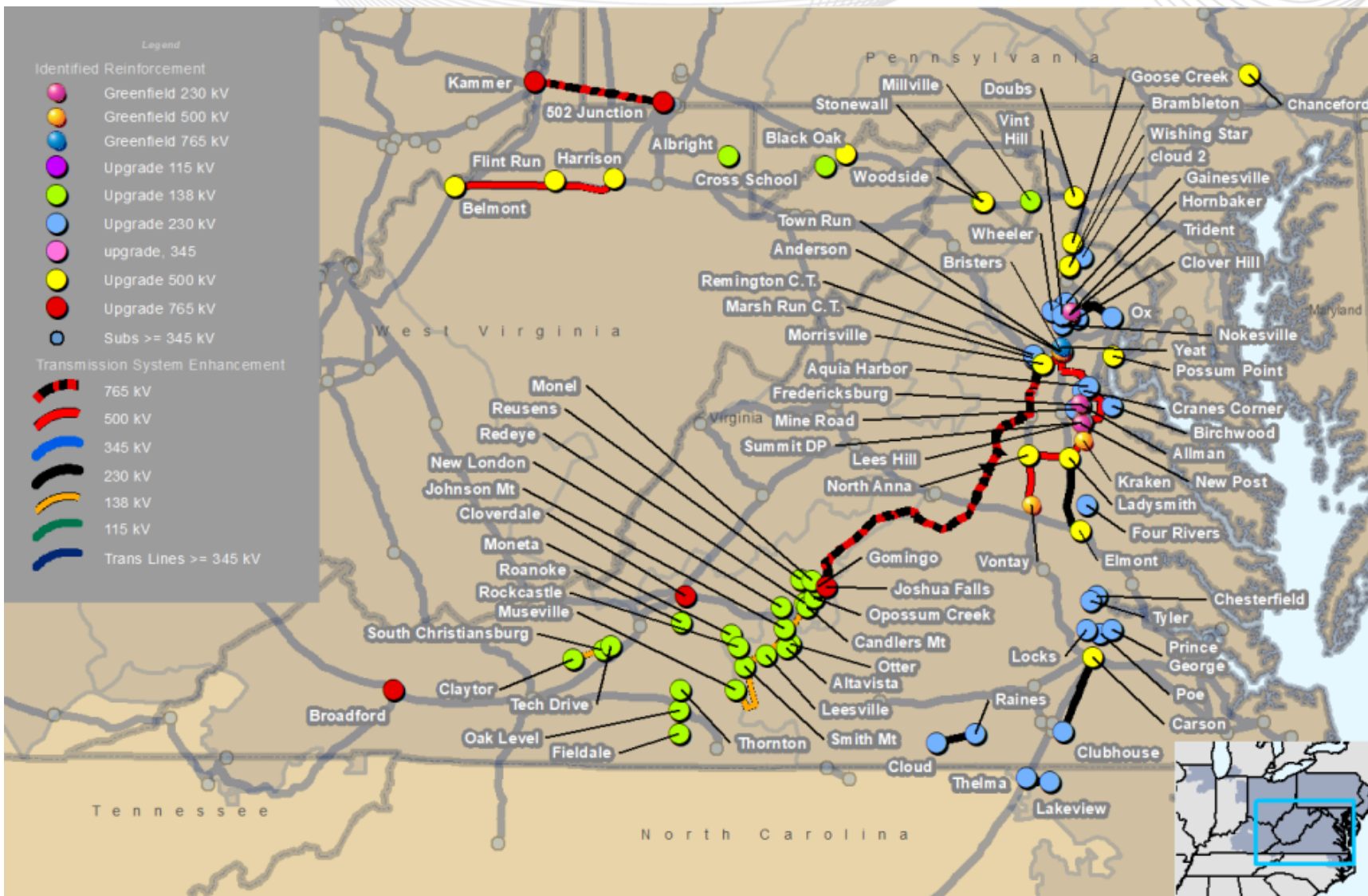
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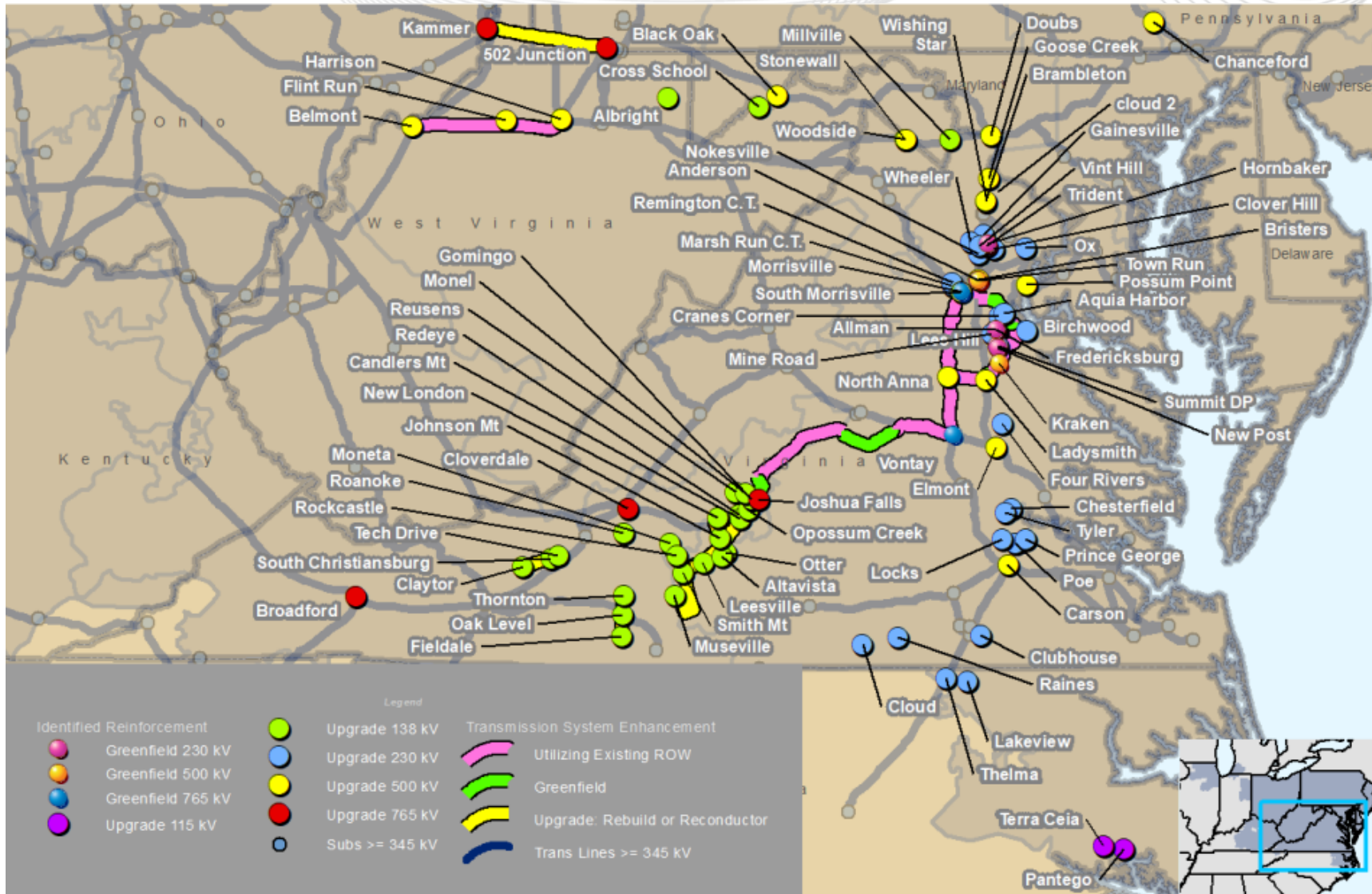
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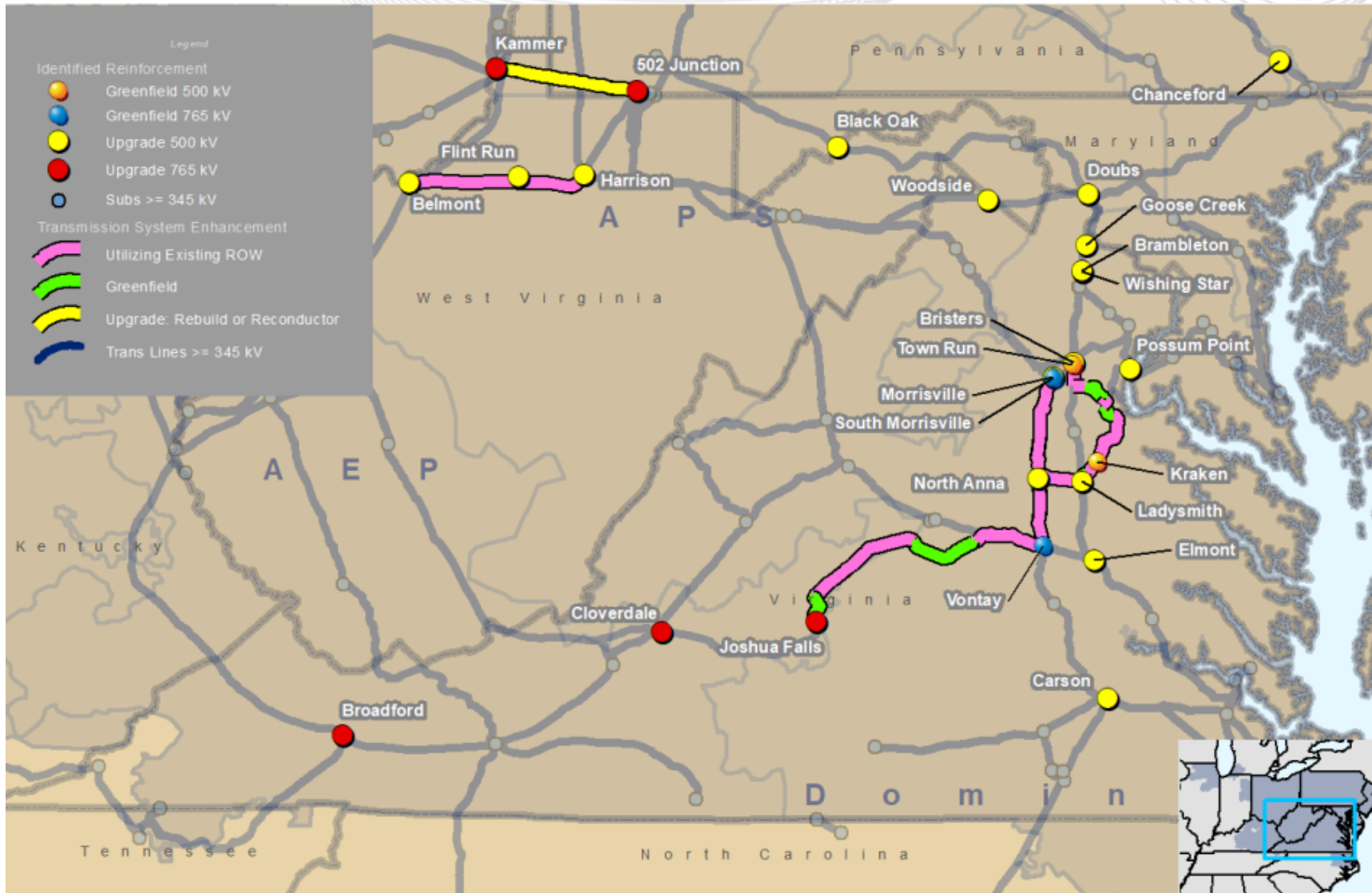
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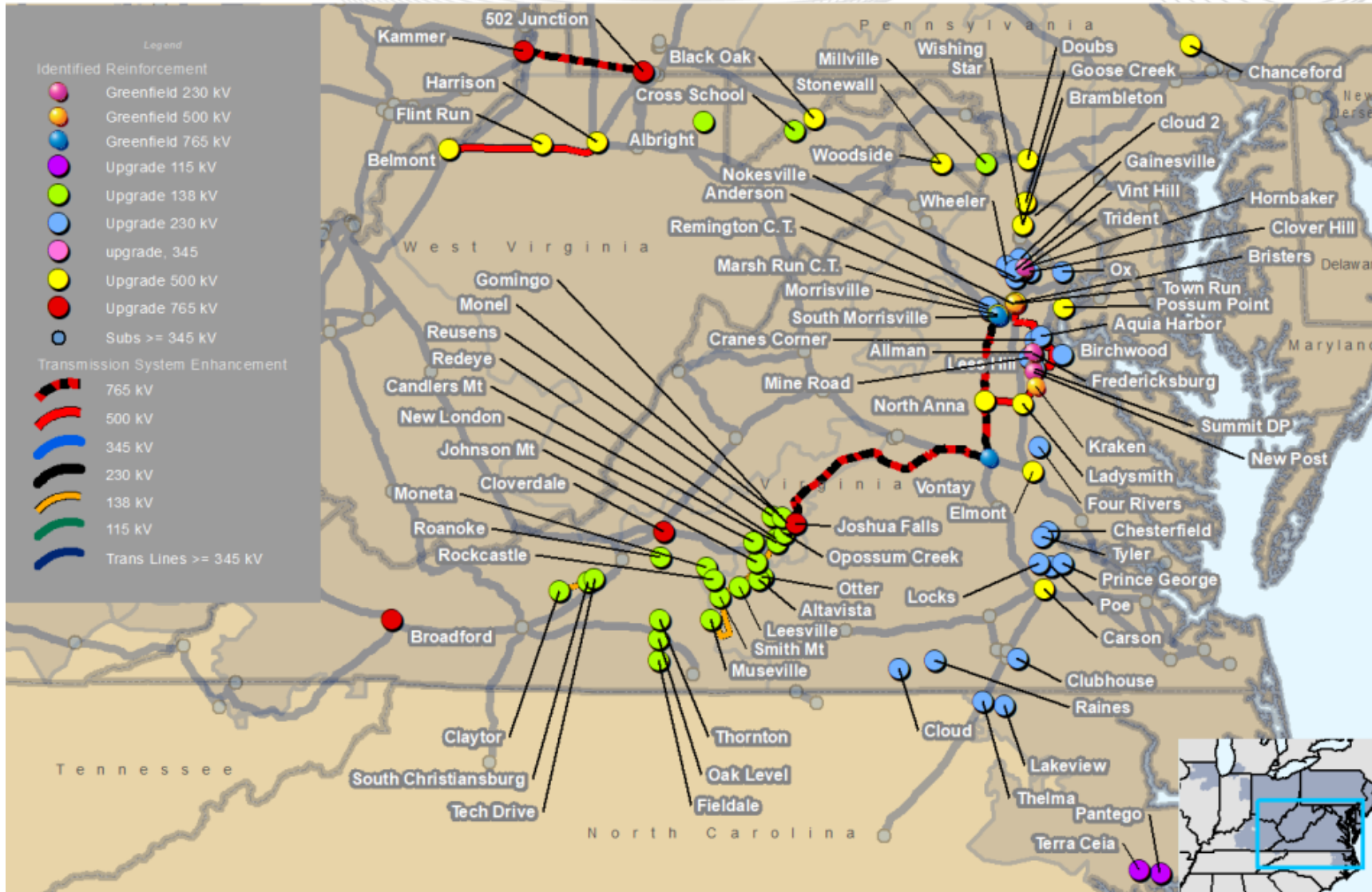
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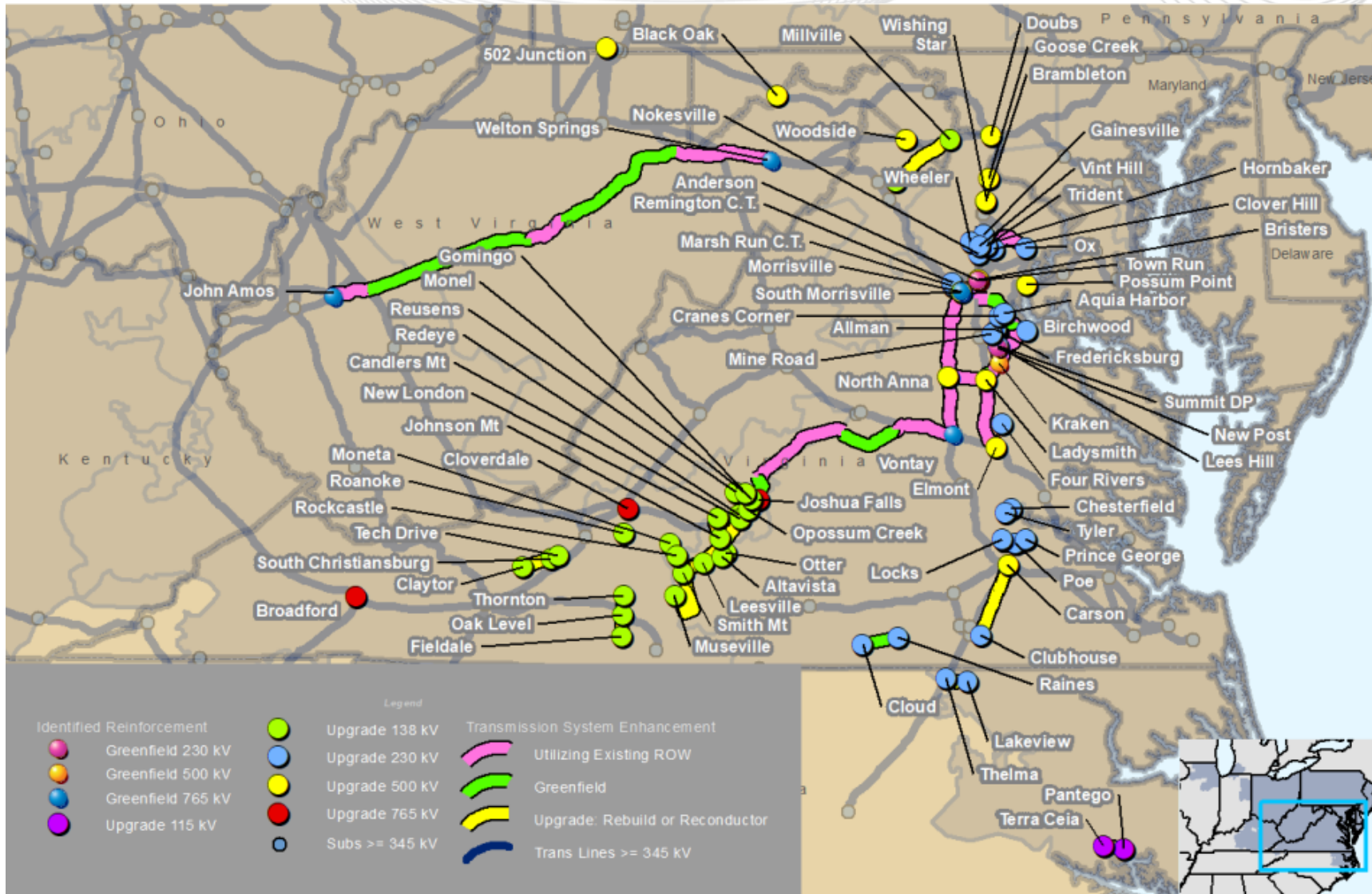
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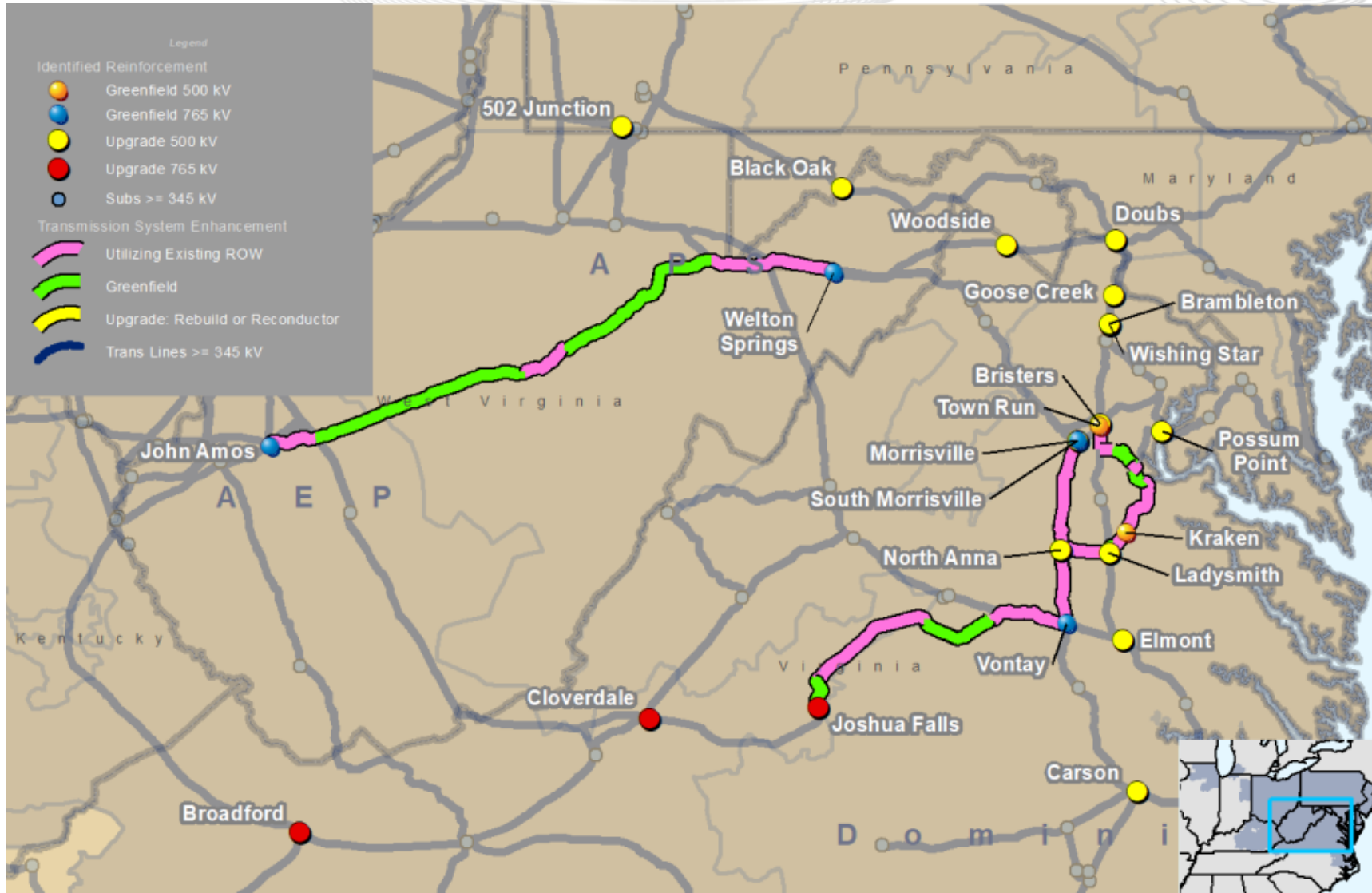
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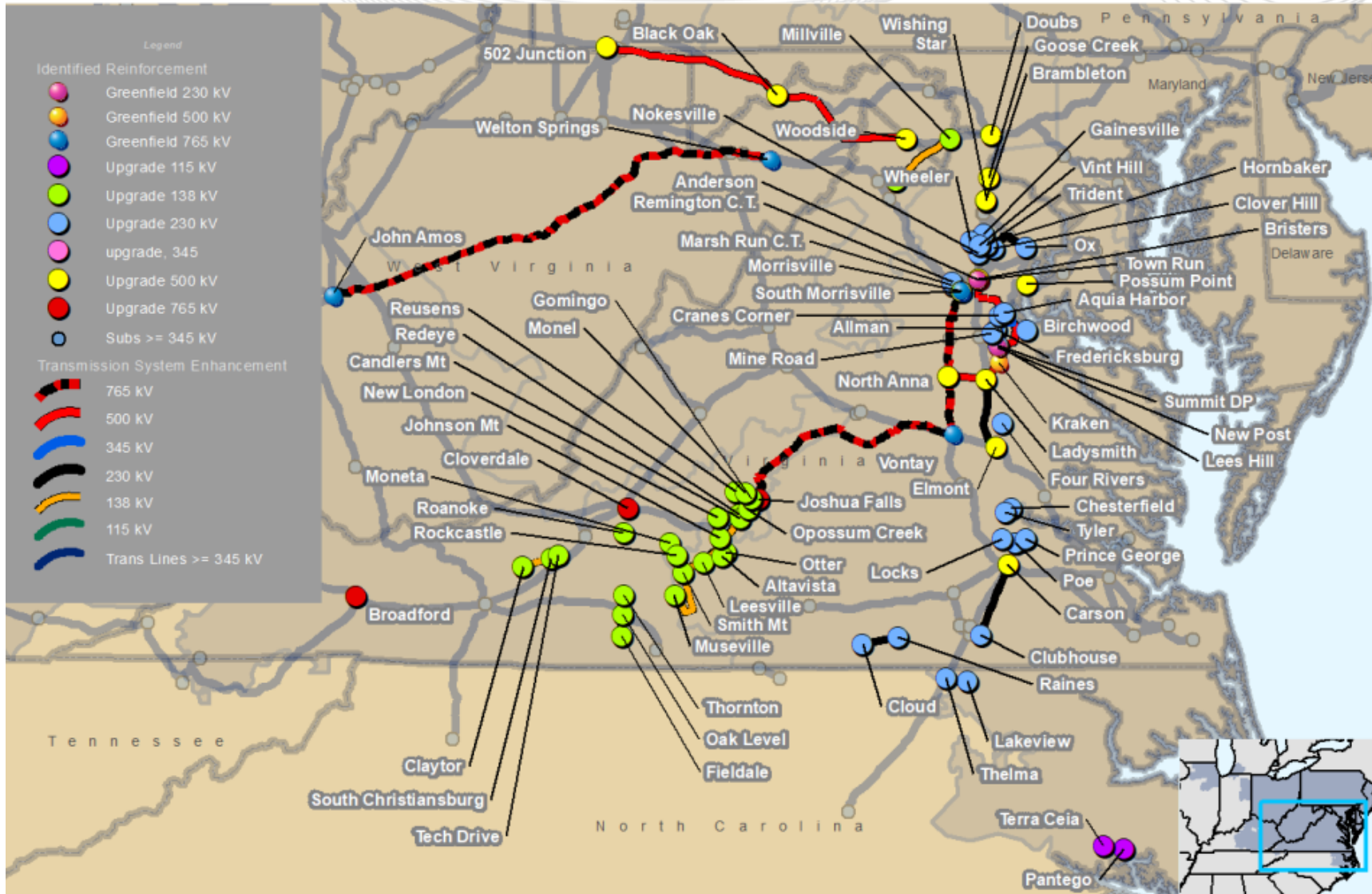
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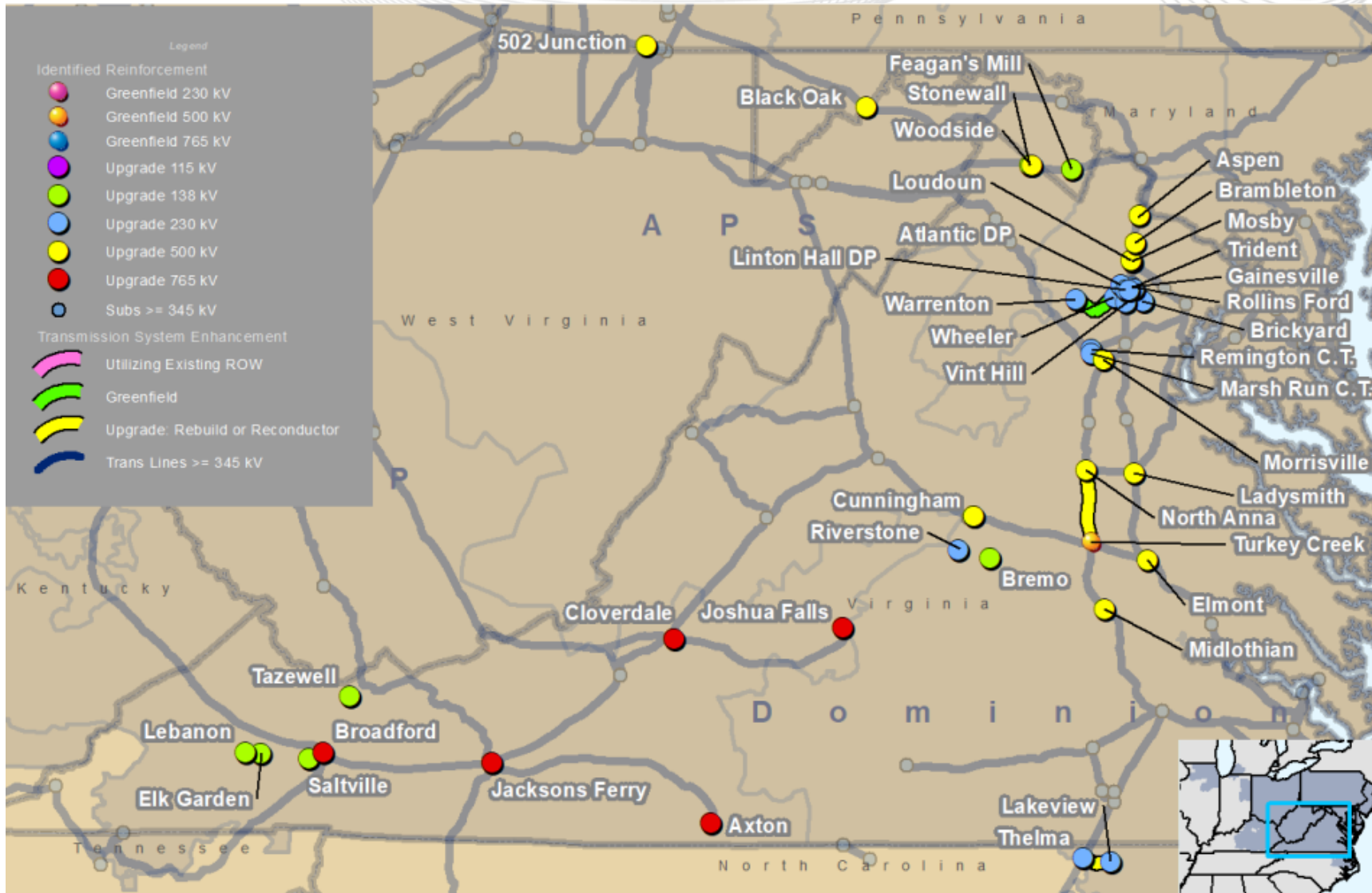
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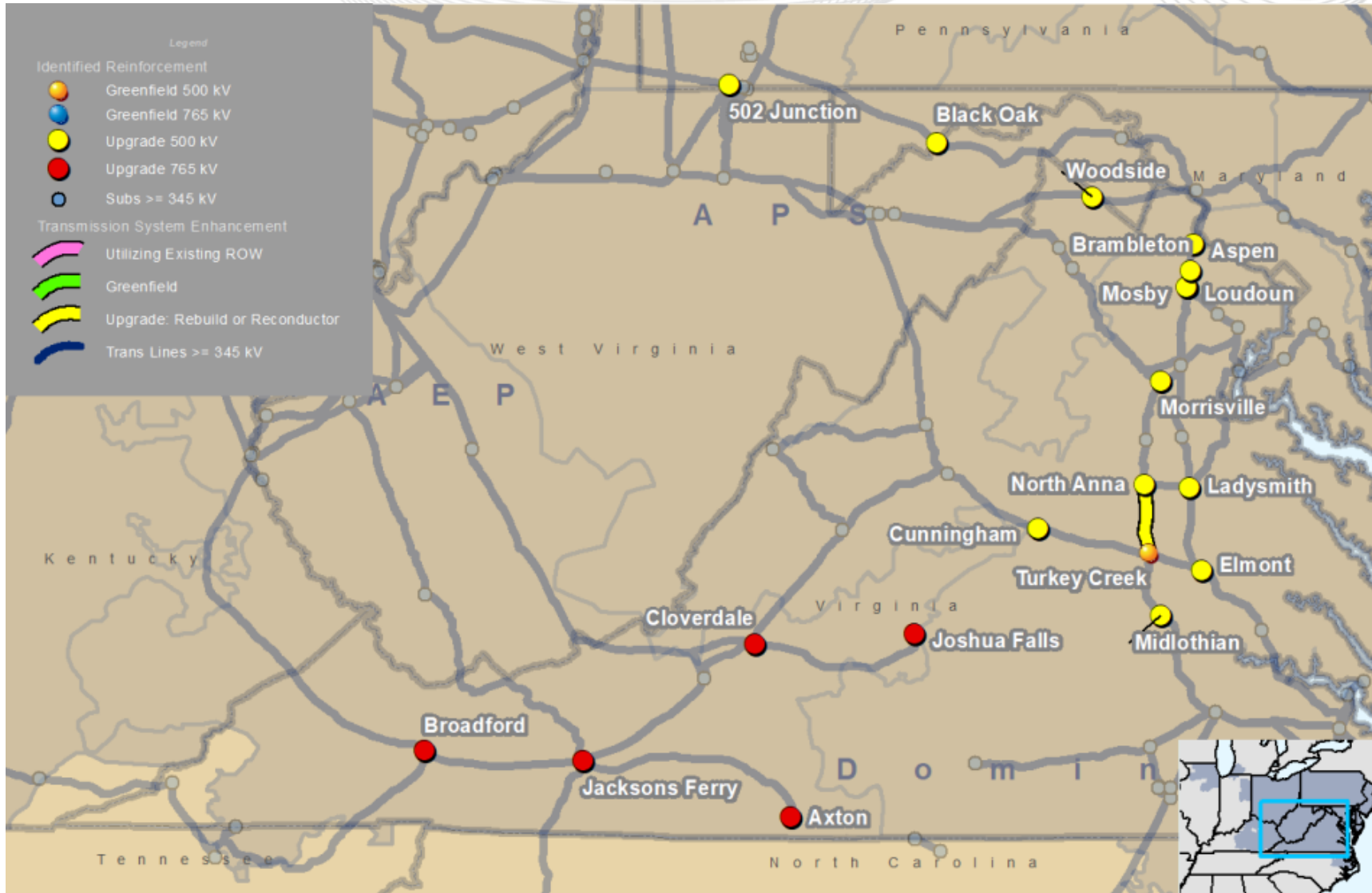
Please note that the following proposals are part of Transource Portfolio projects, 262, 759, 636, 610, 279 and 114 and as a result, are not included in this slide deck:

24, 81, 286, 300, 551, 617, 665, 708, 727, 781, 820,
883, 885, 967 & 977

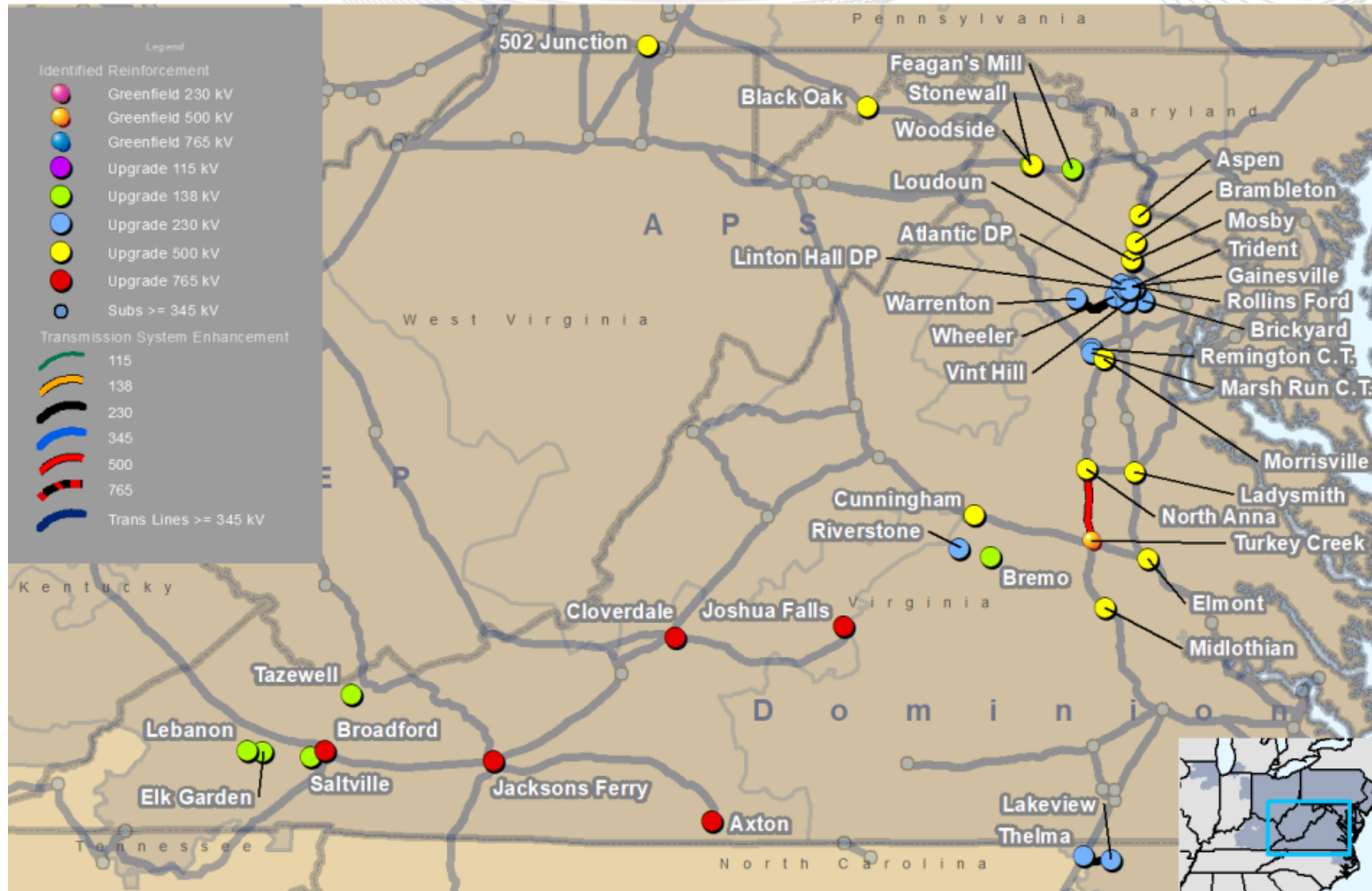
CNTLTM (LS Power) Proposals



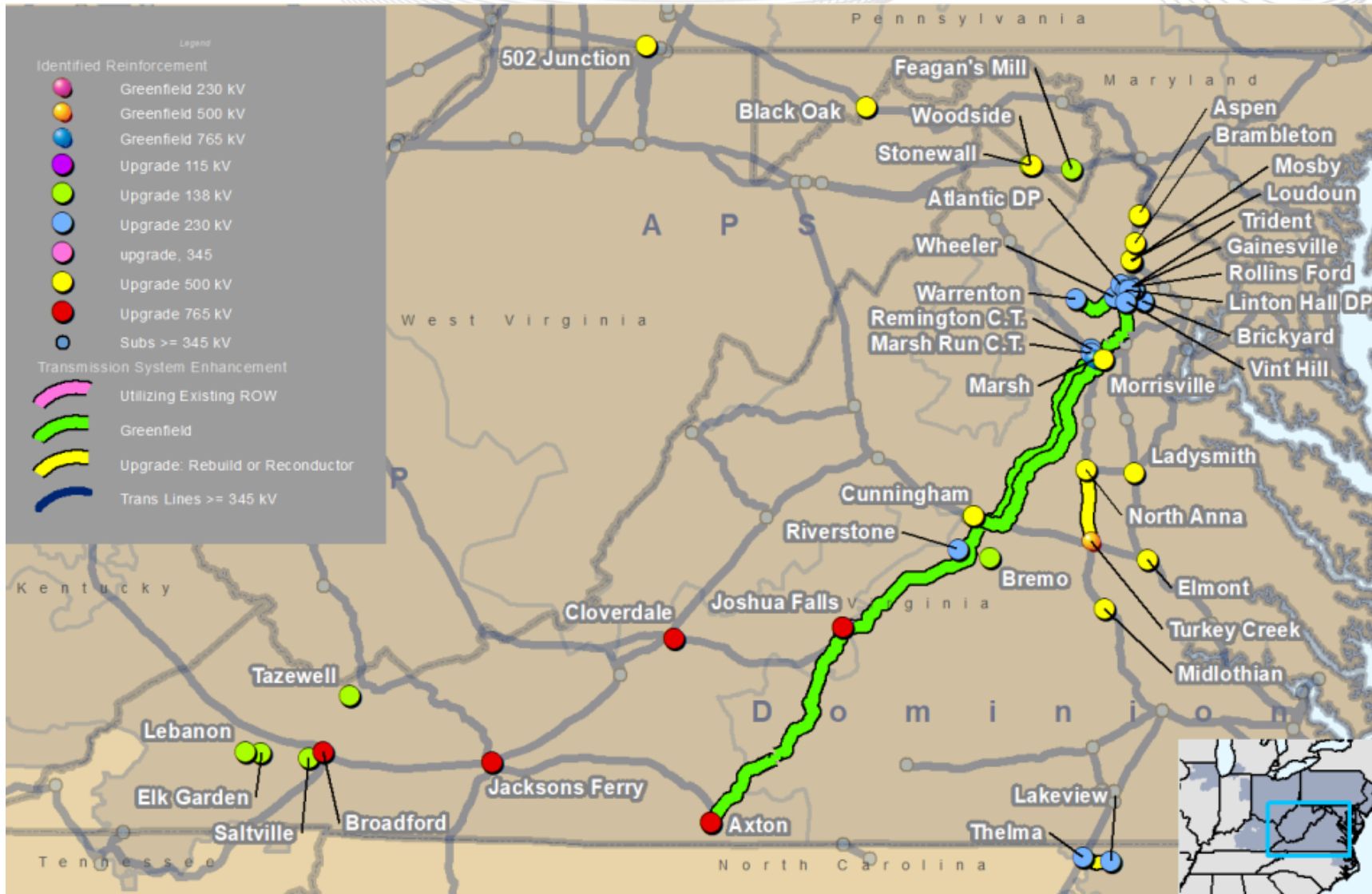
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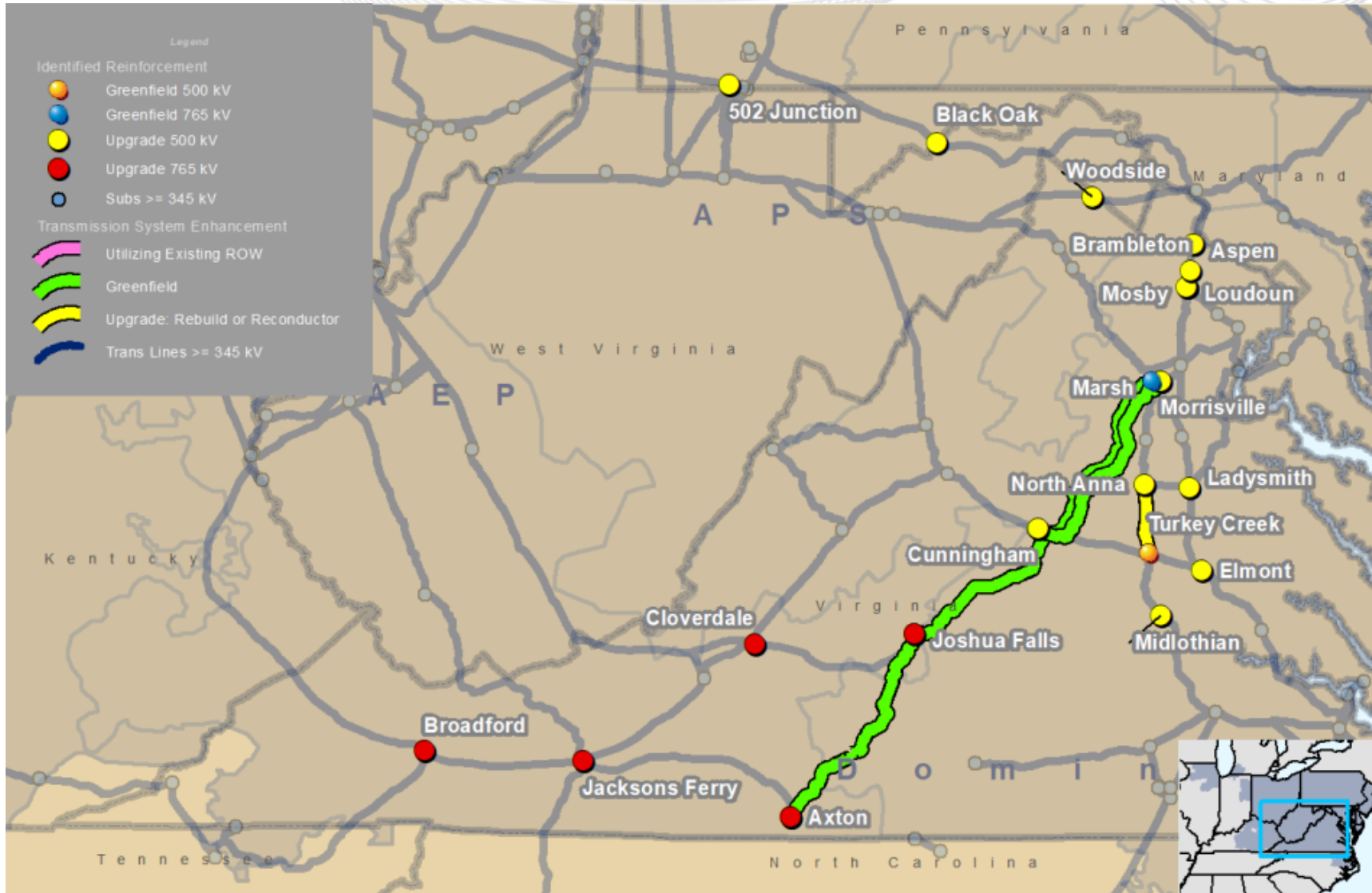
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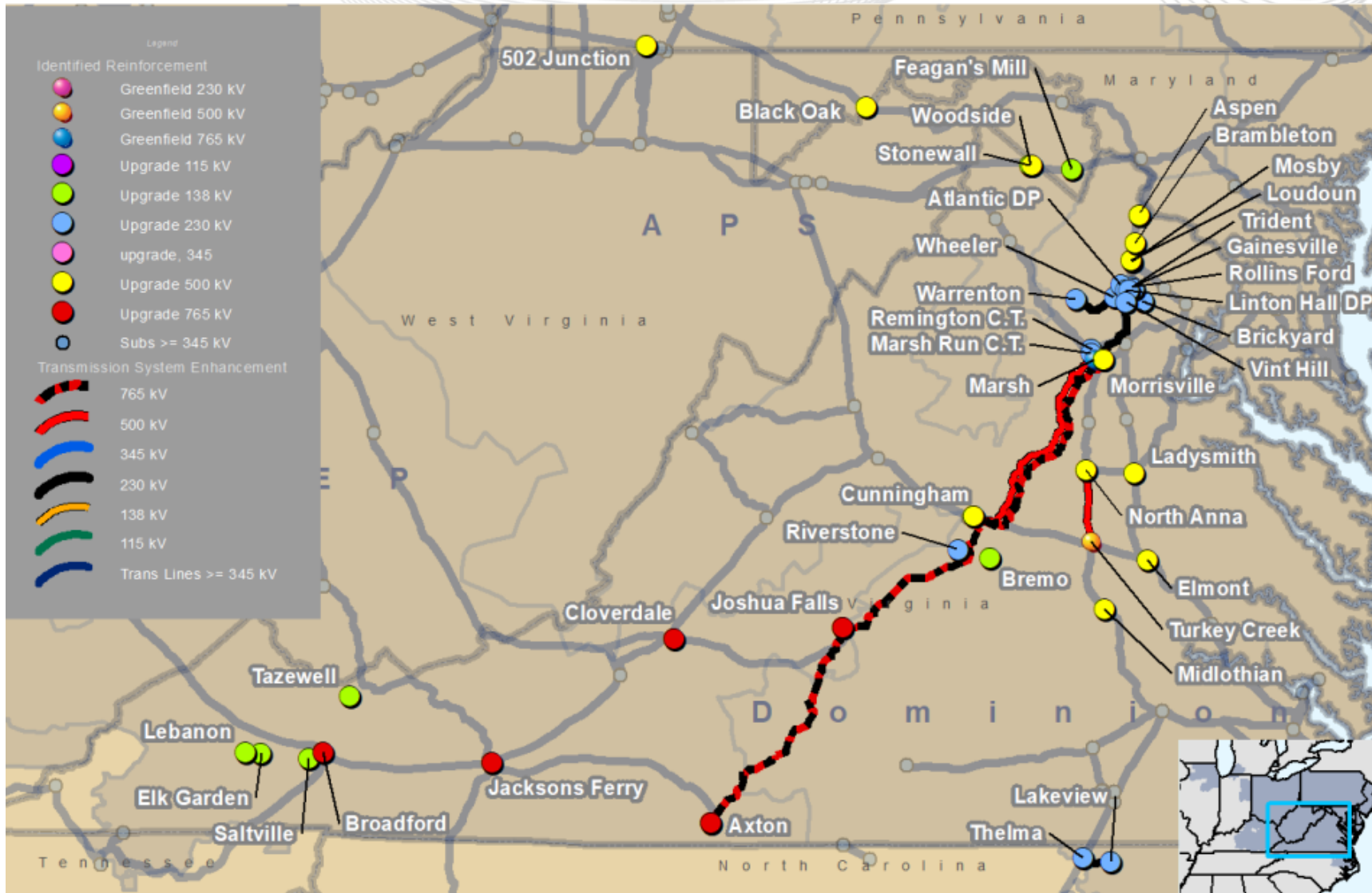
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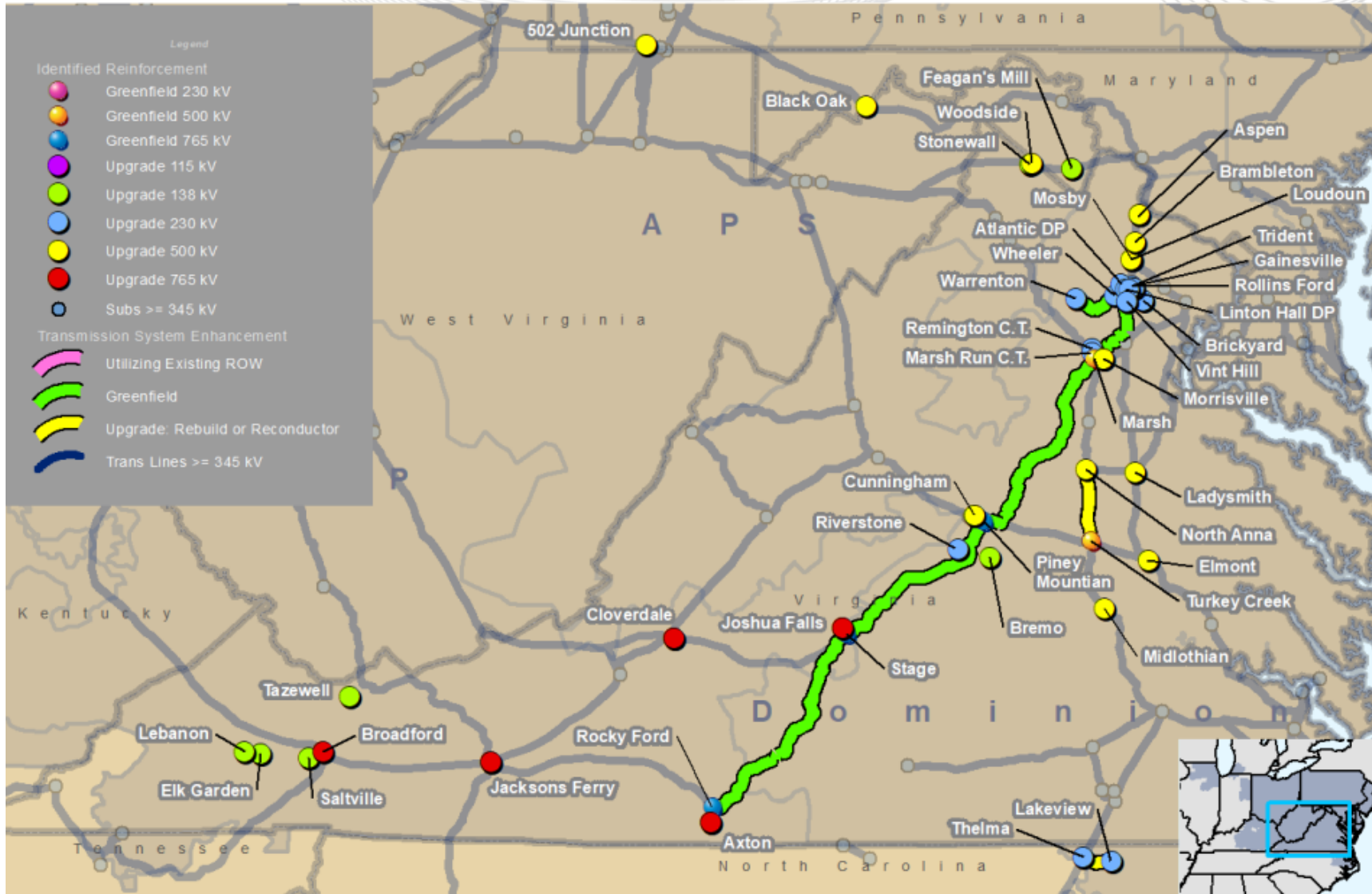
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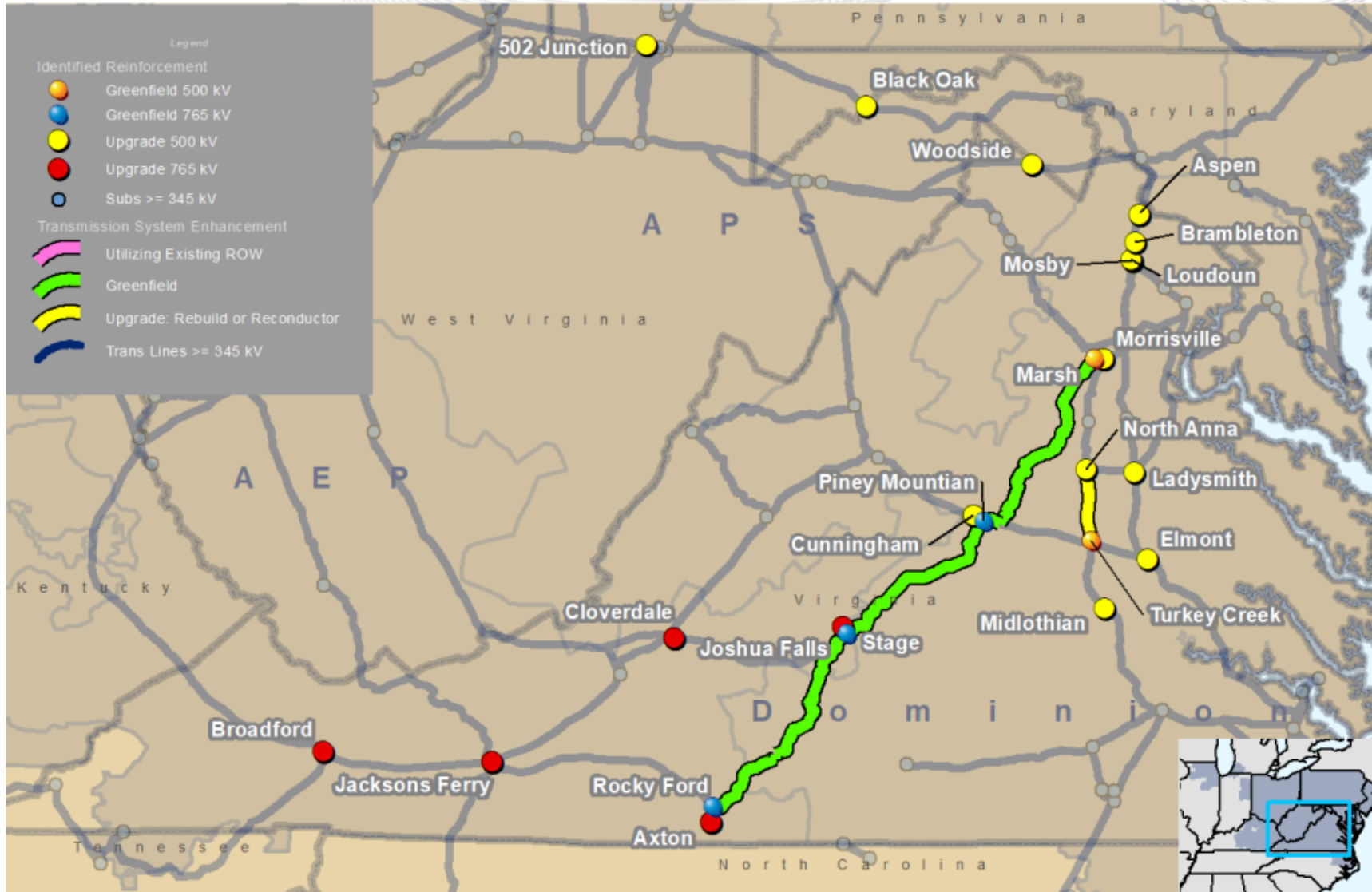
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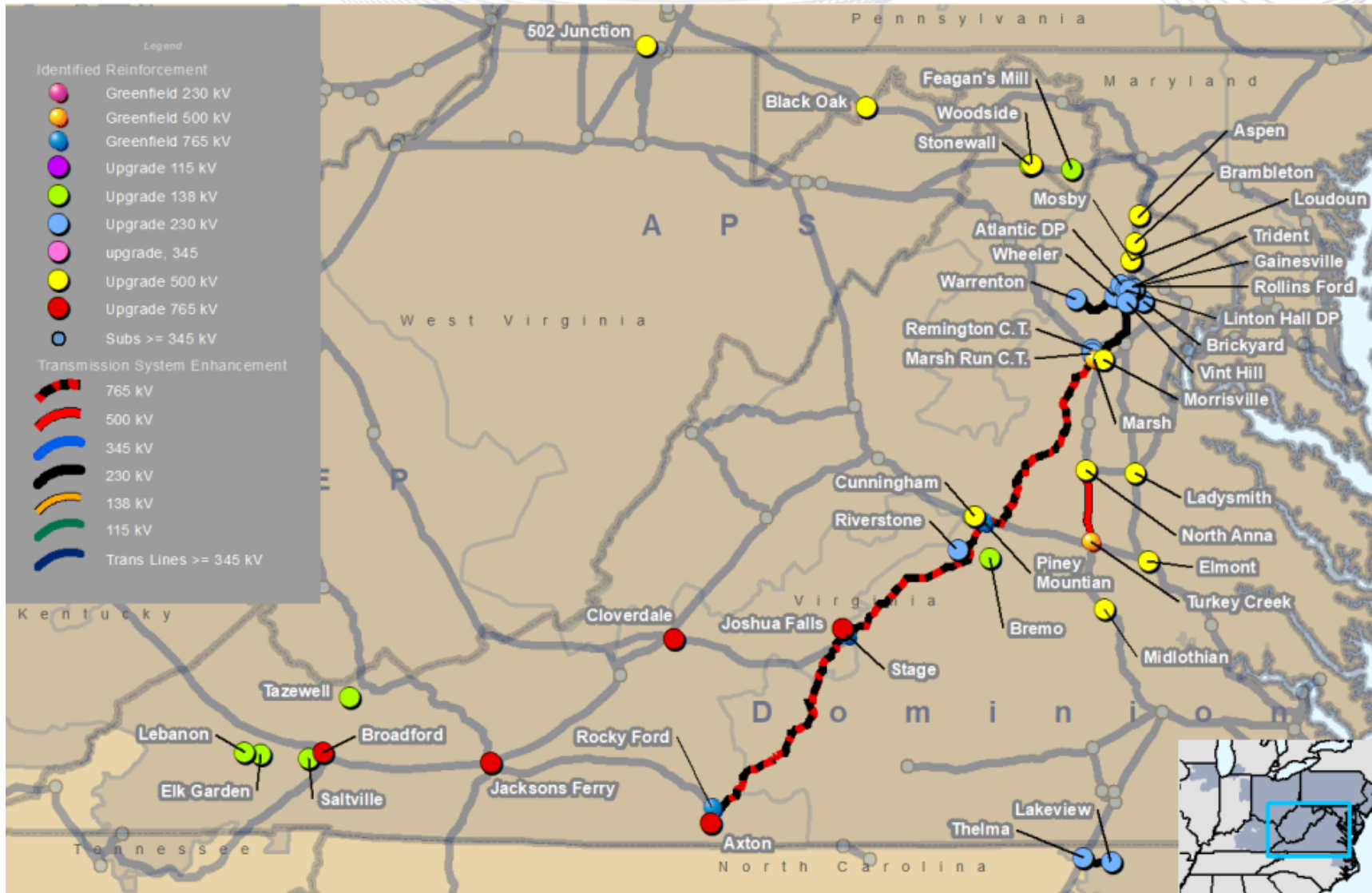
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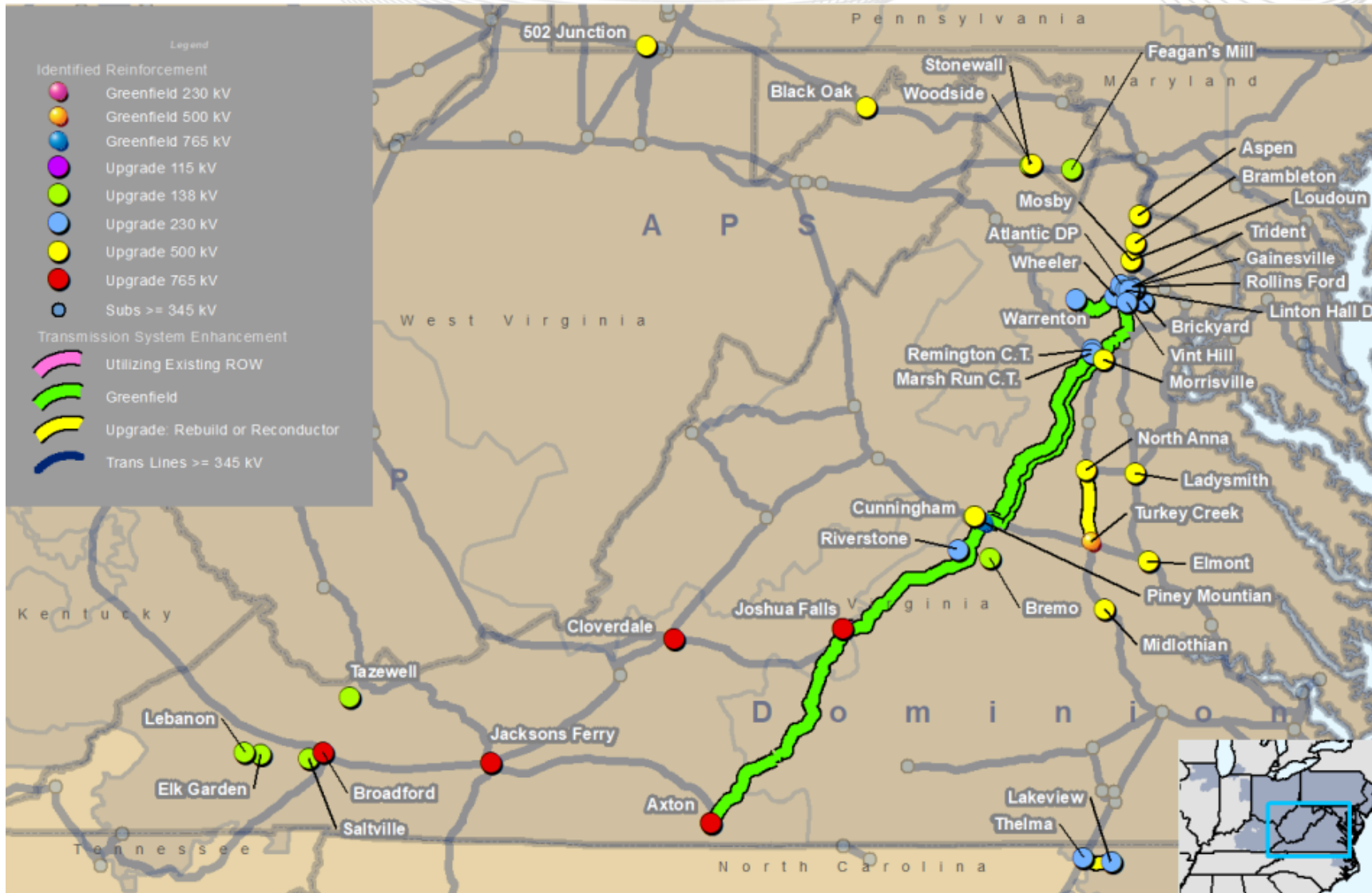
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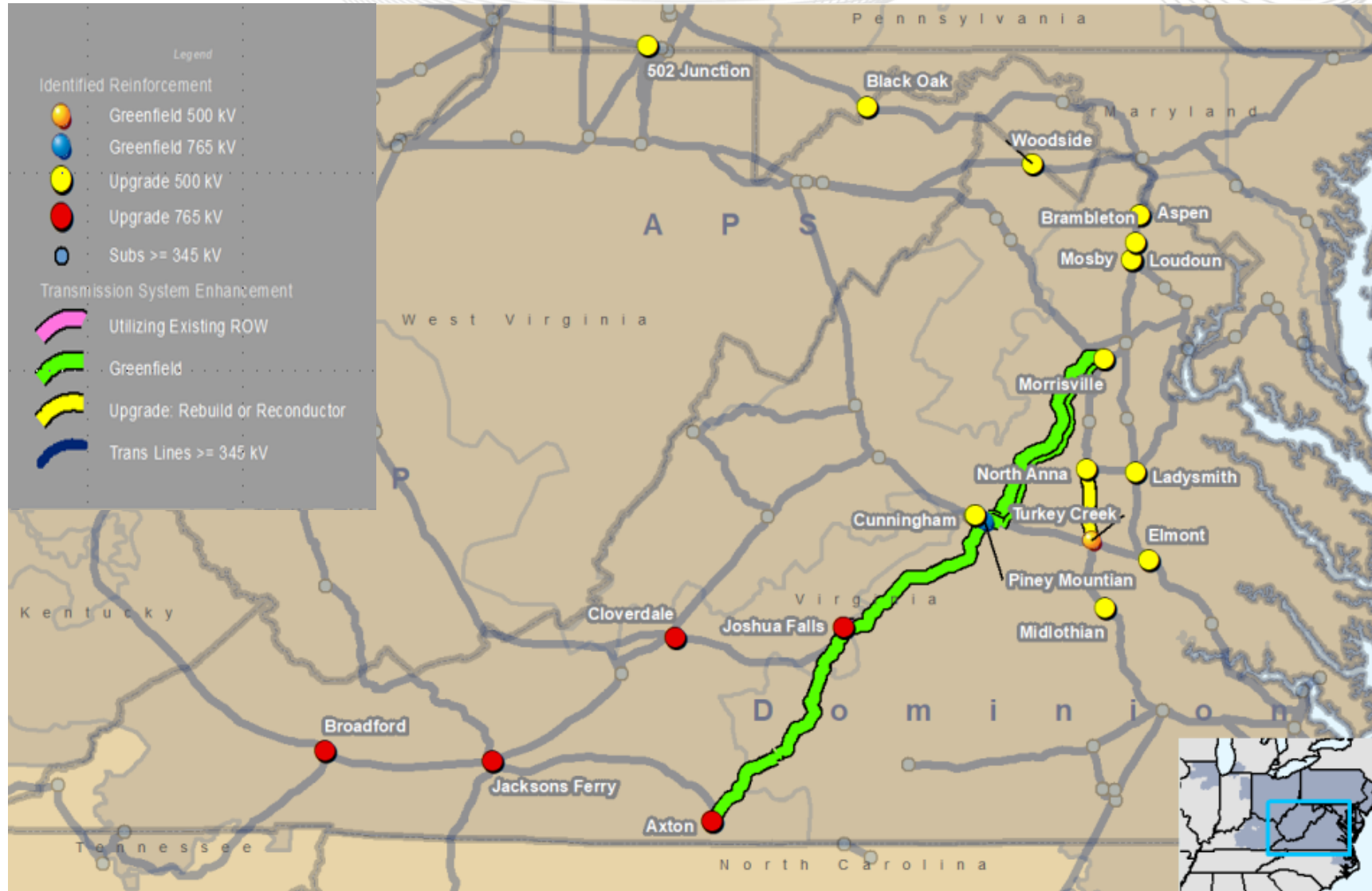
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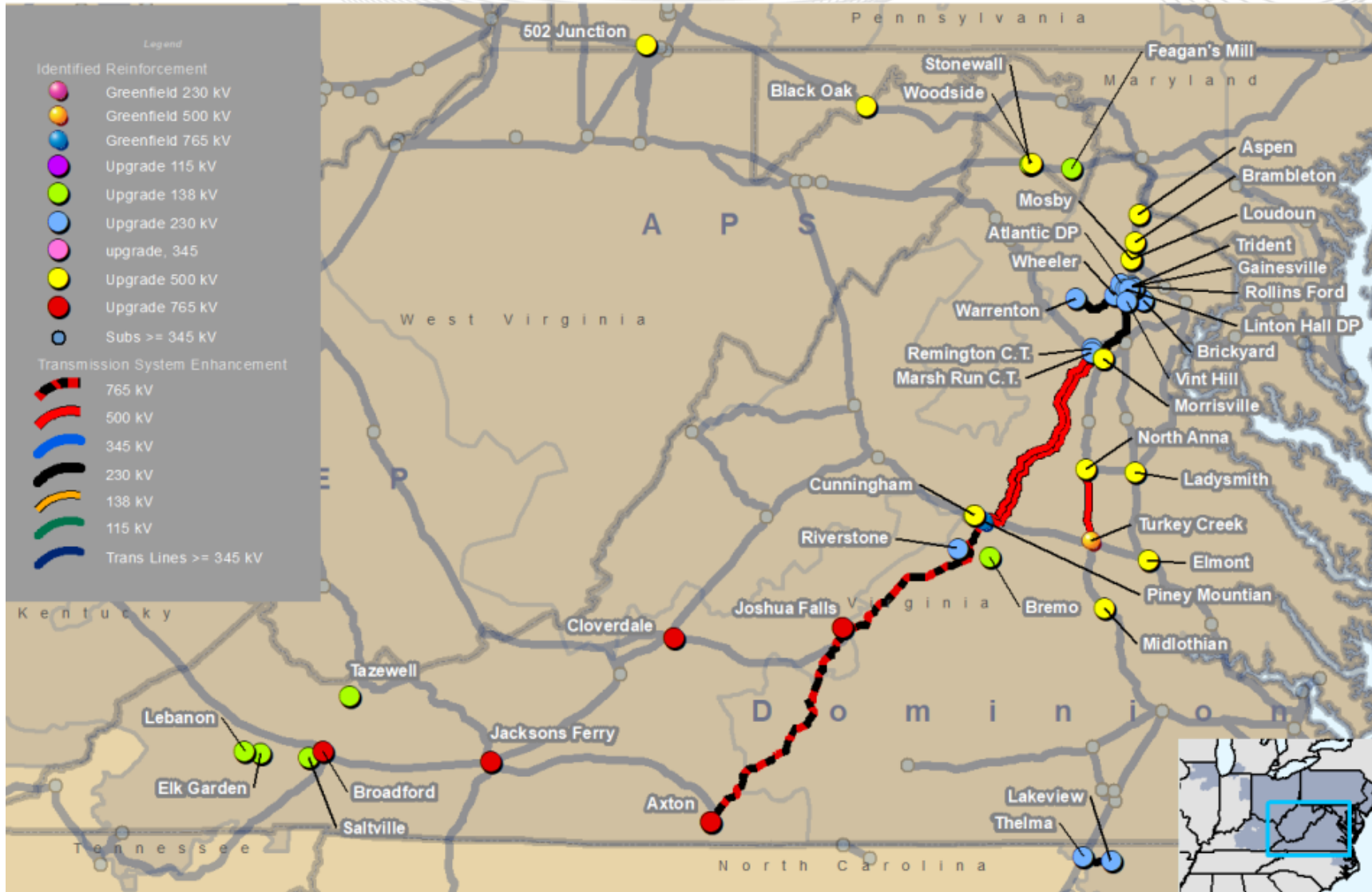
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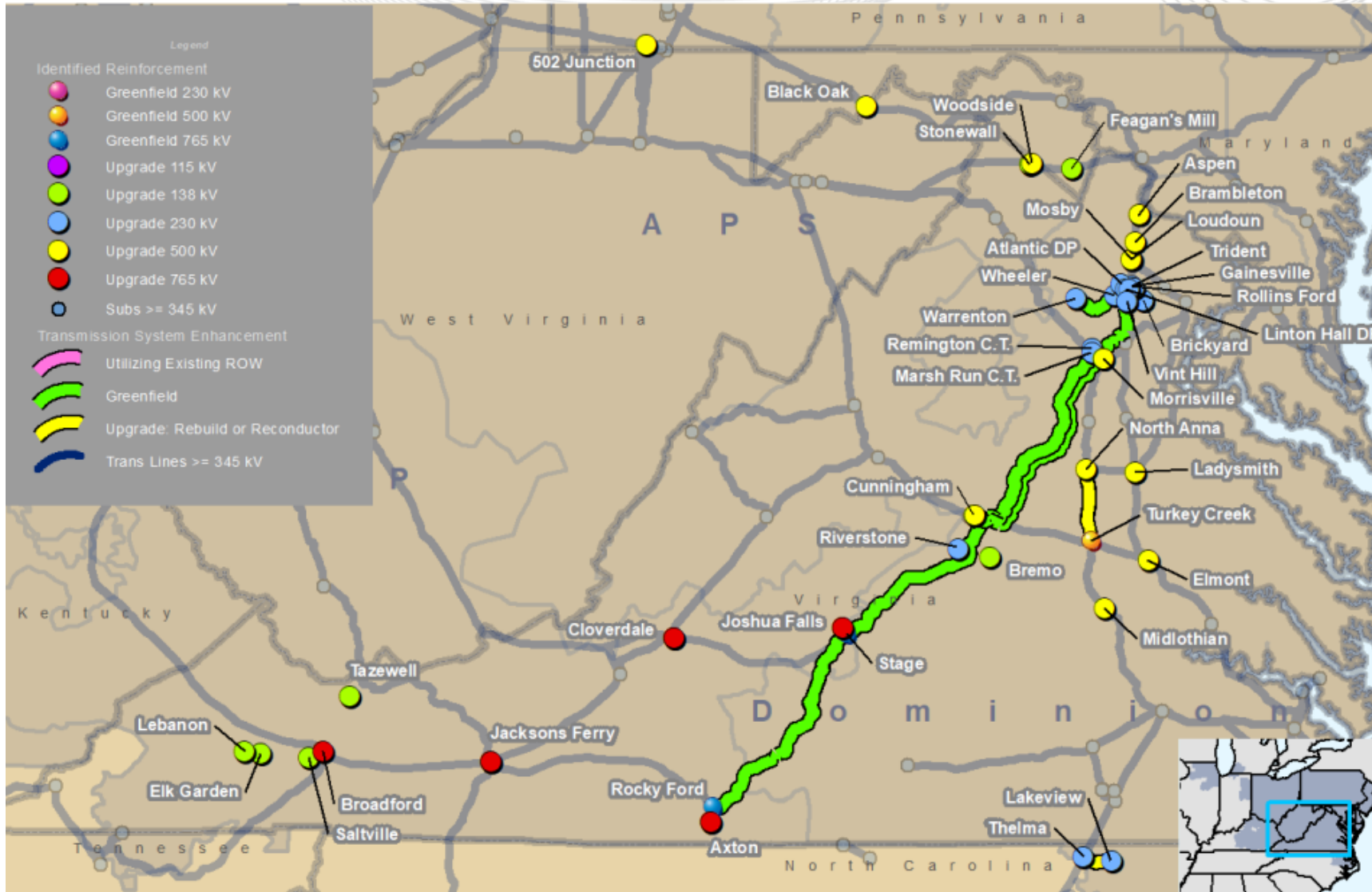
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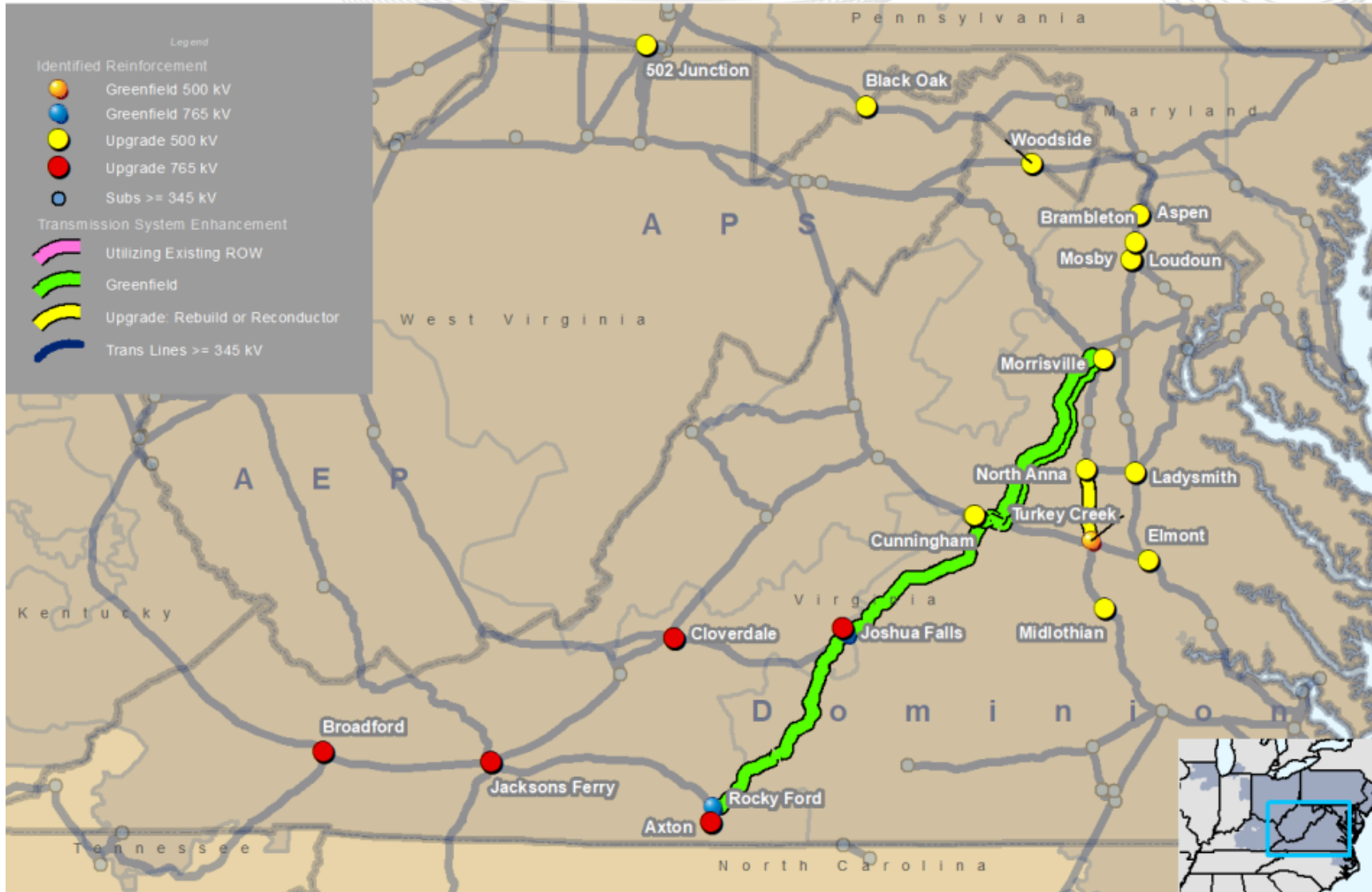
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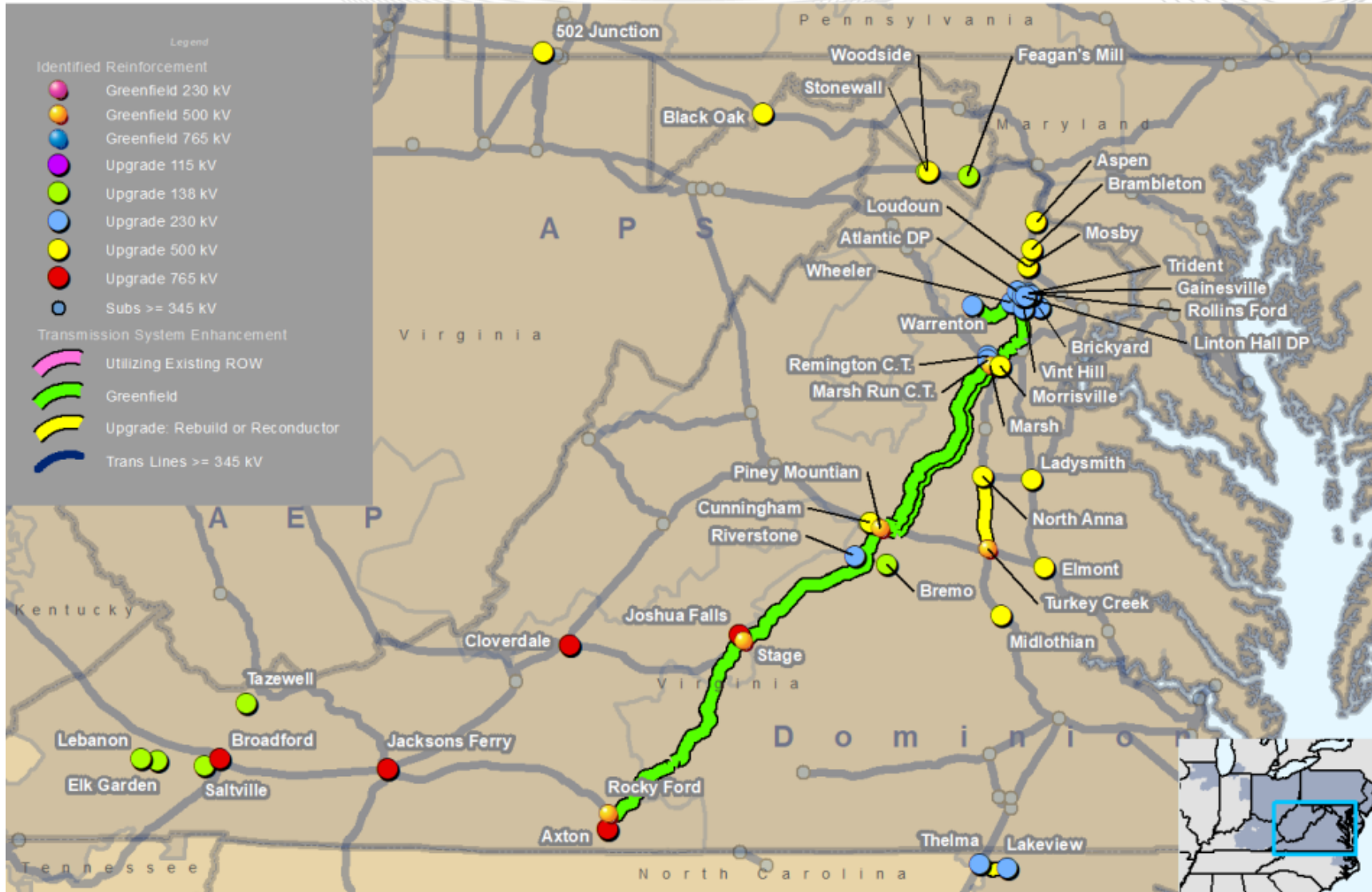
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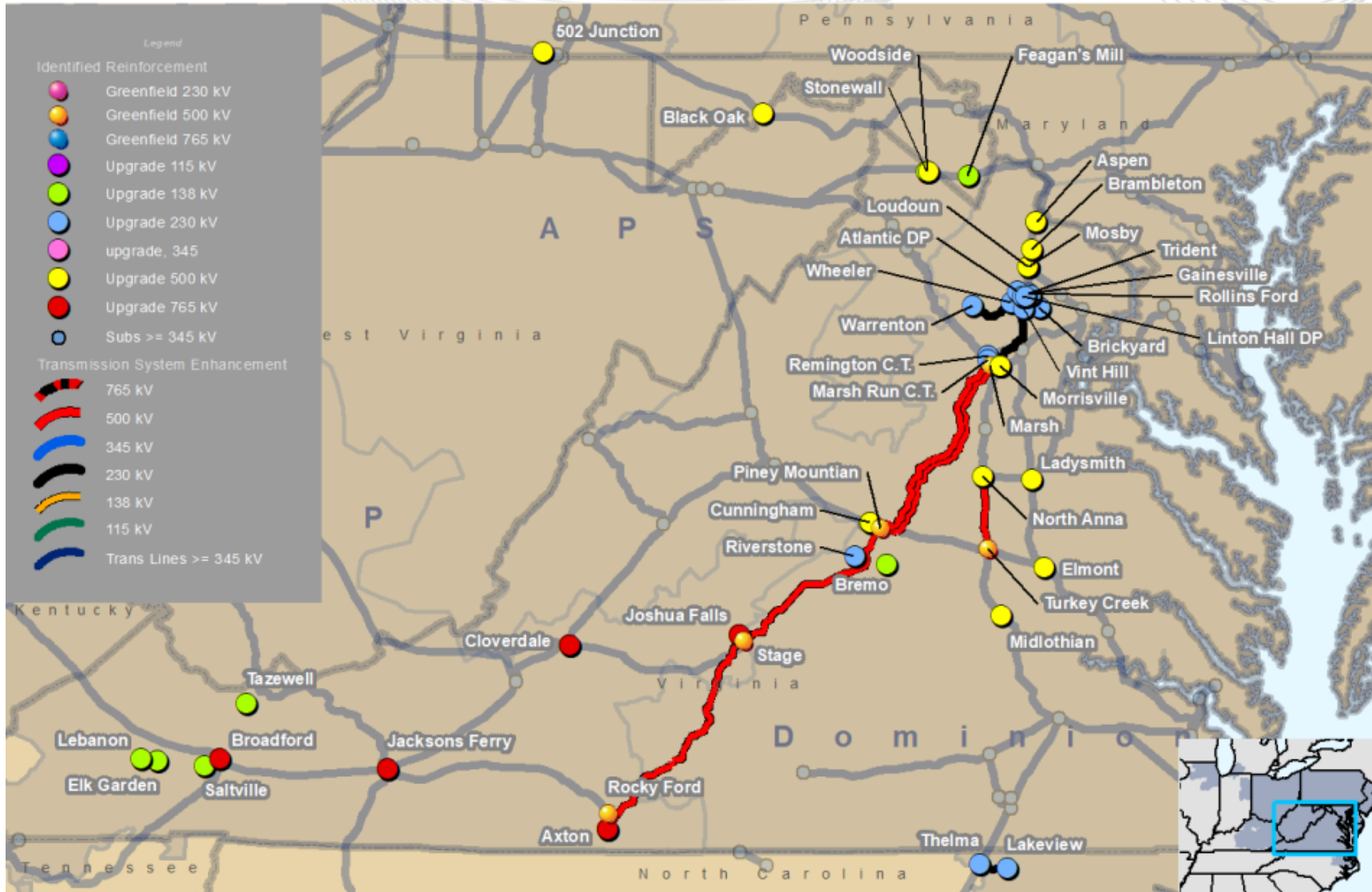
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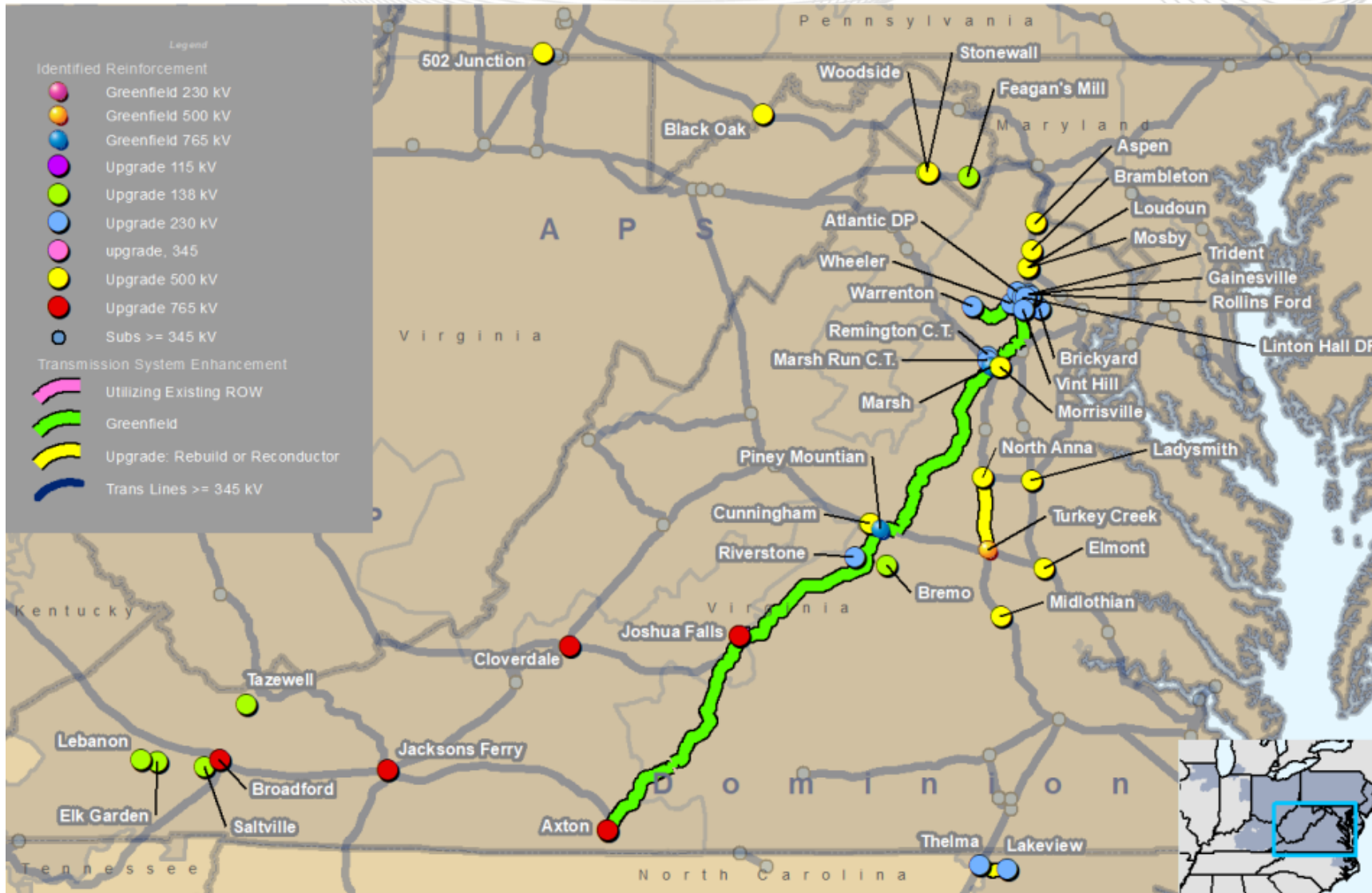
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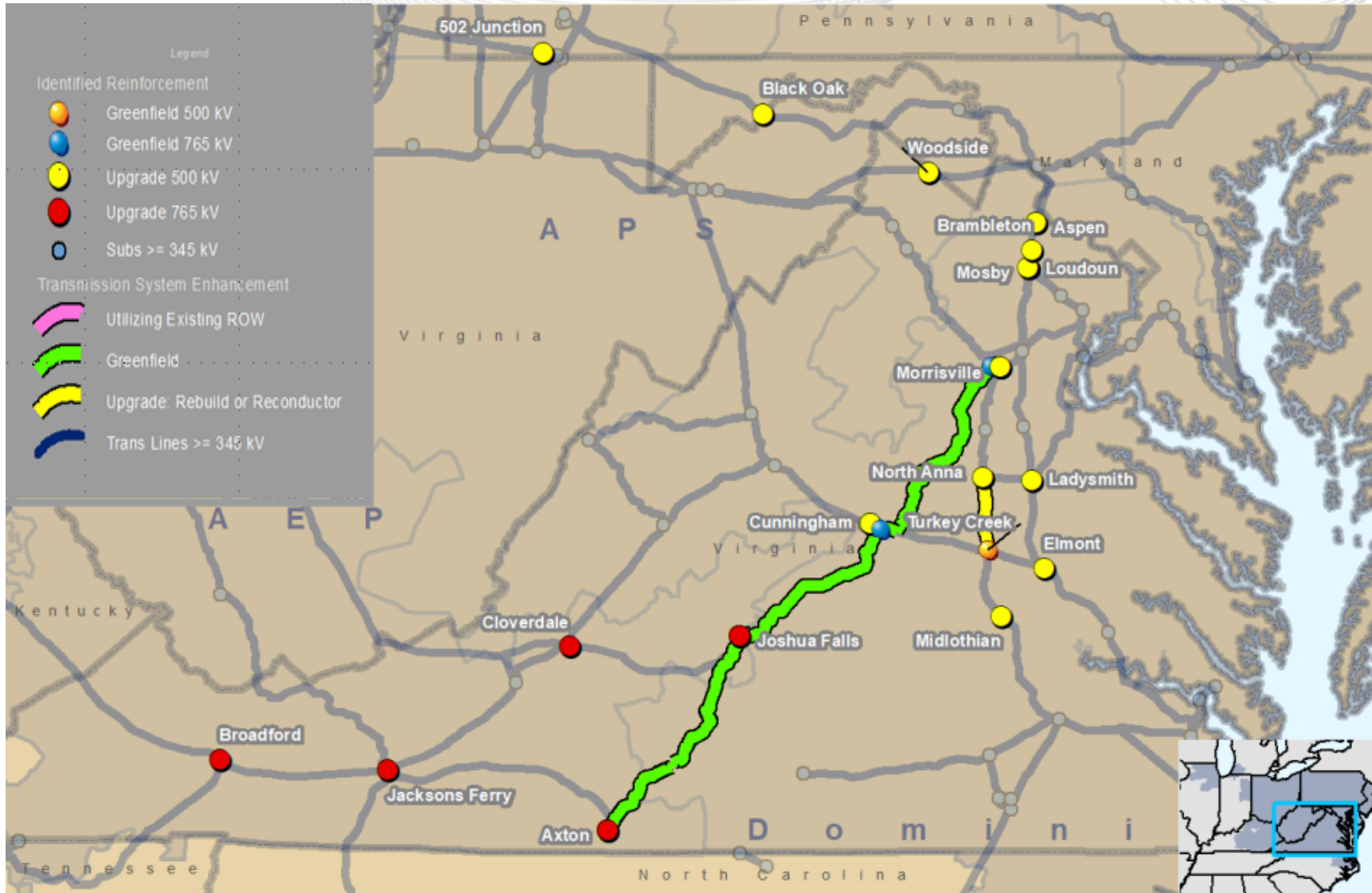
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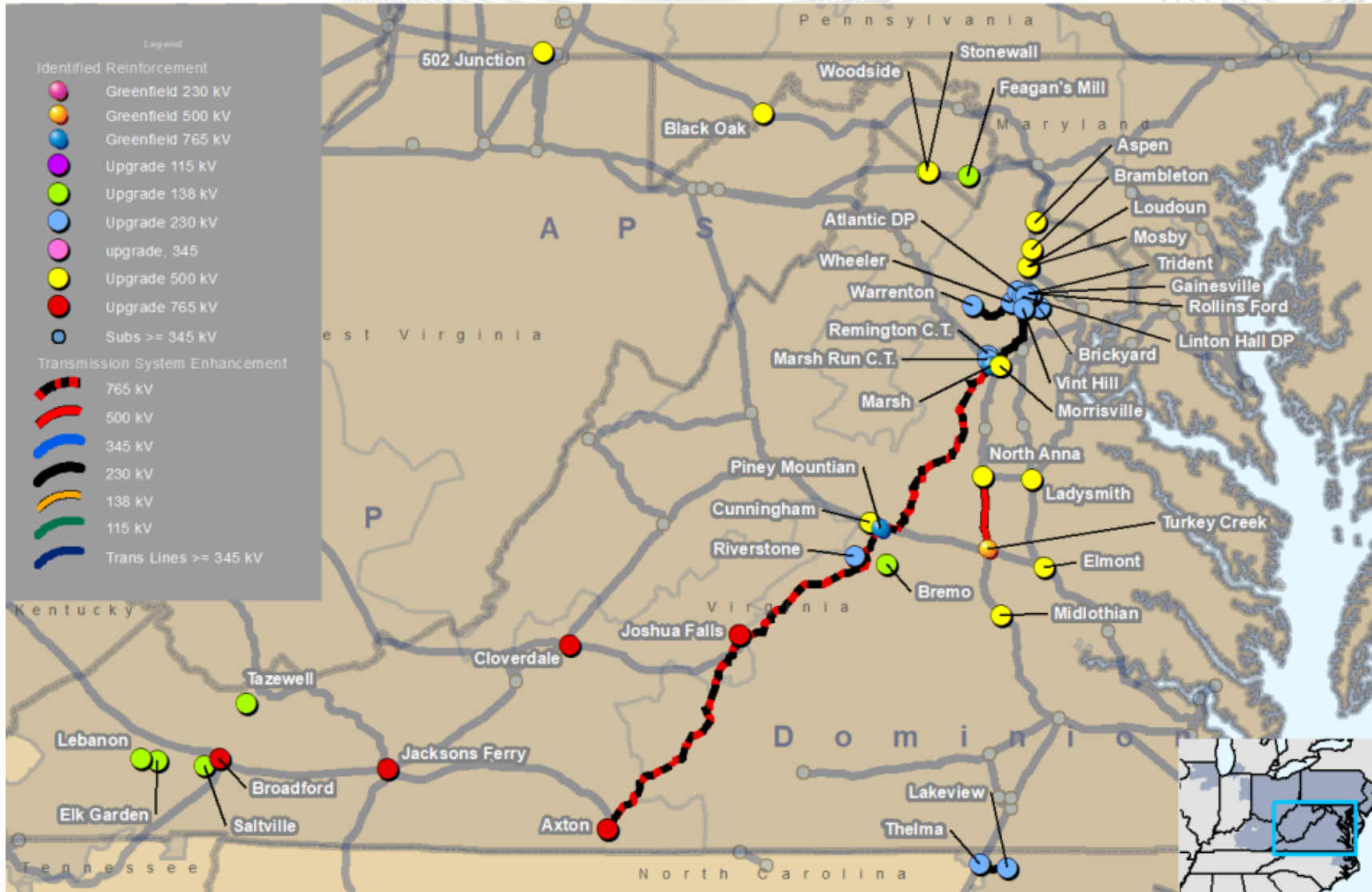
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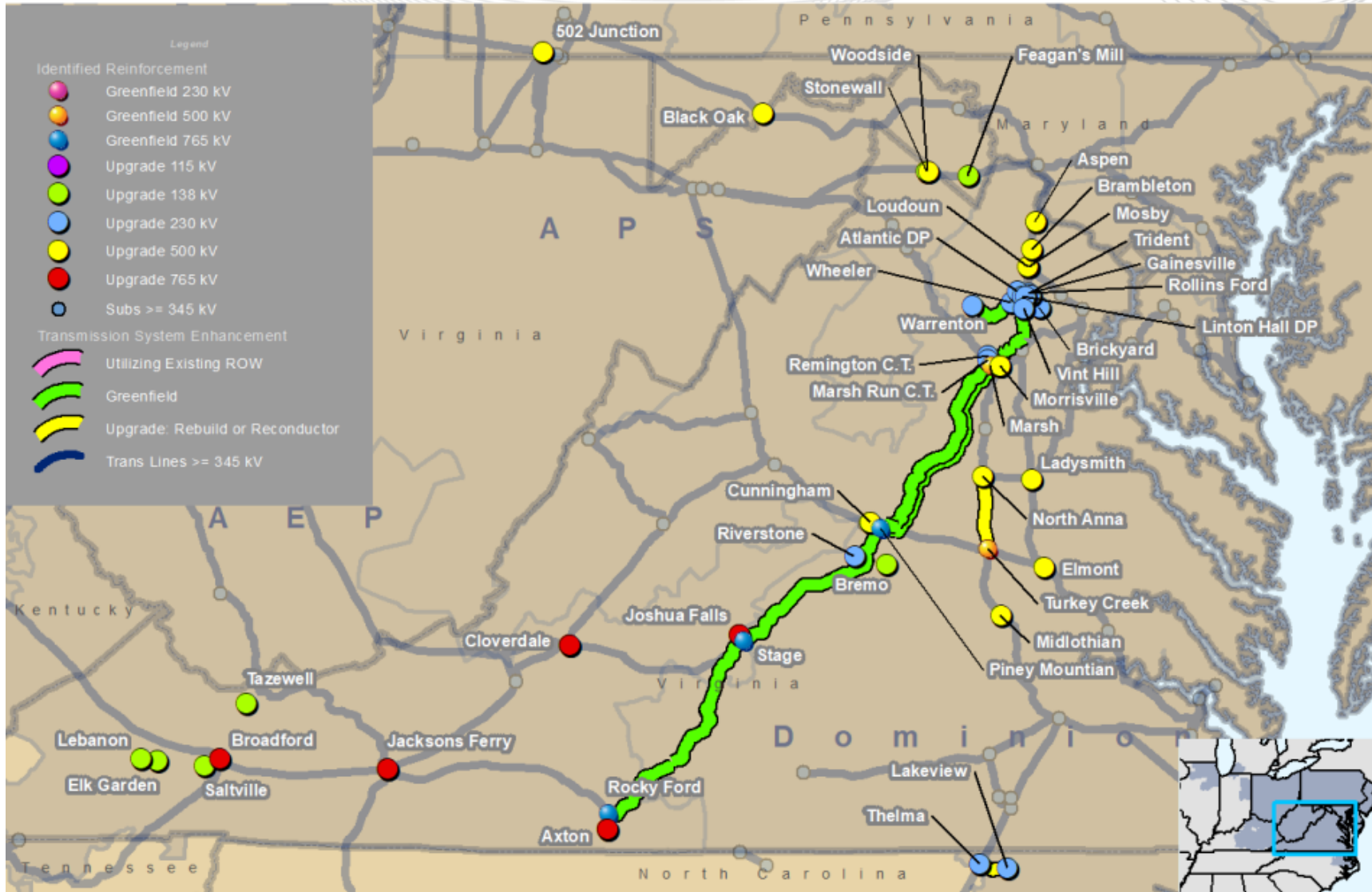
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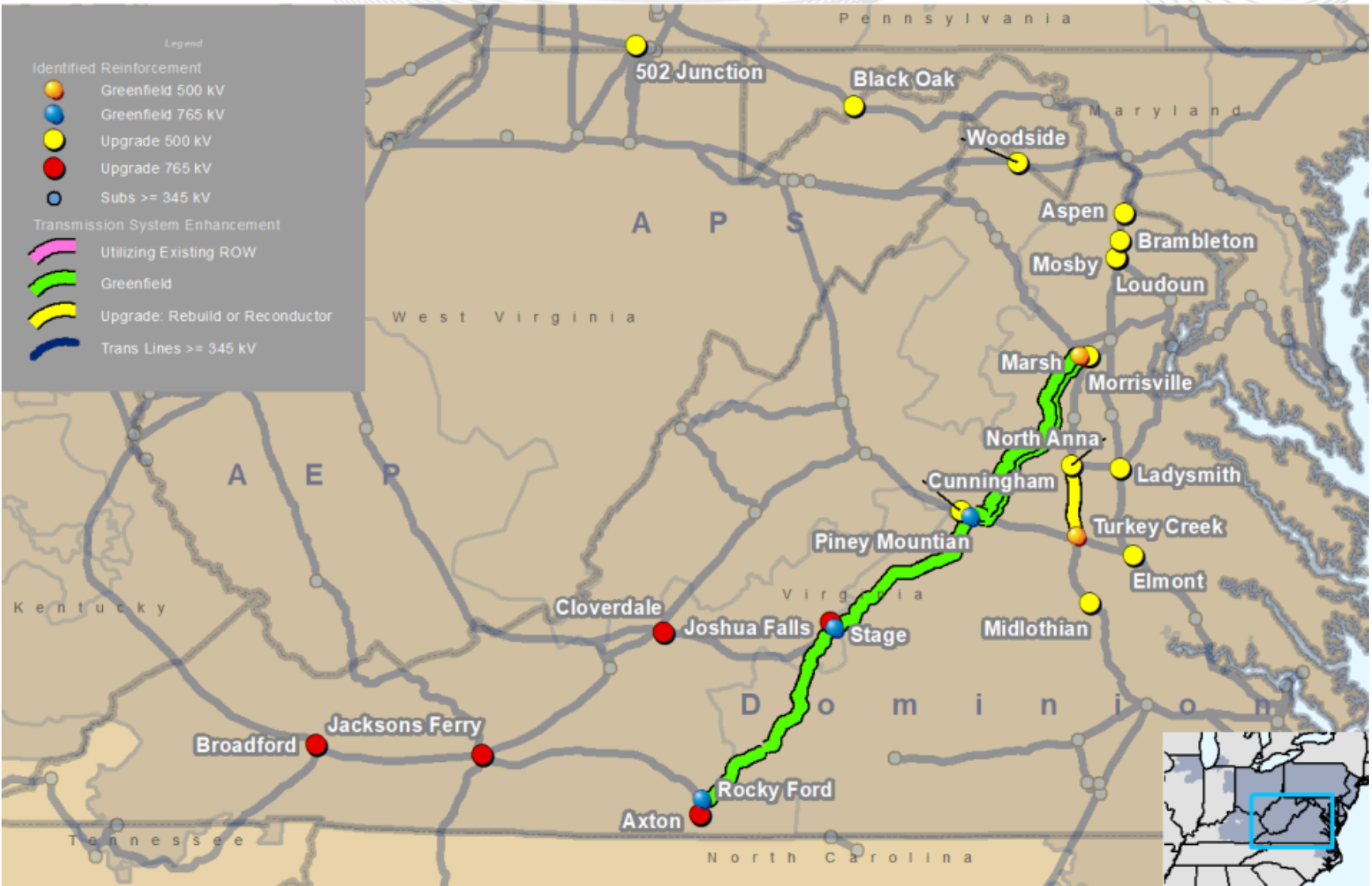
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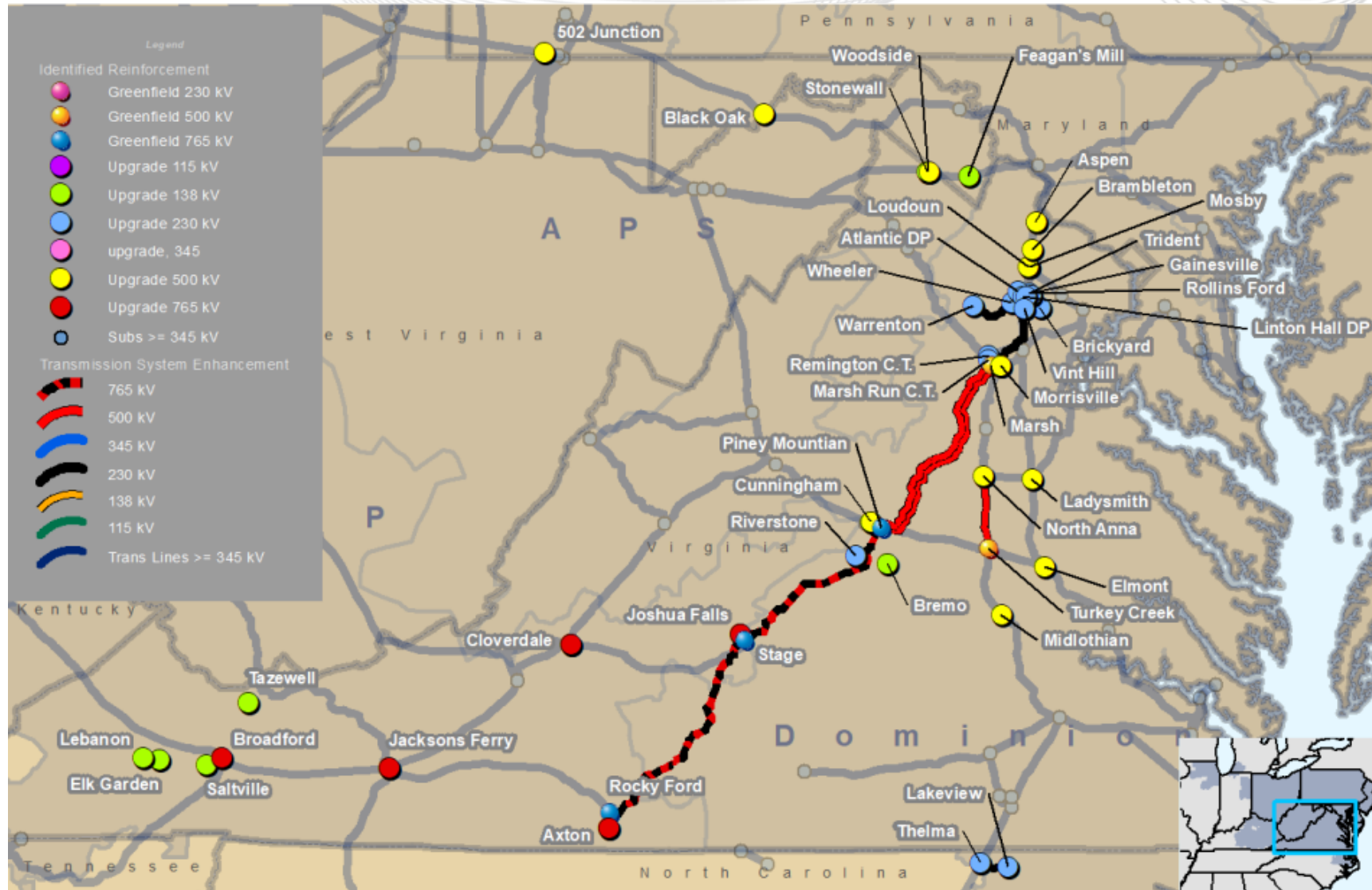
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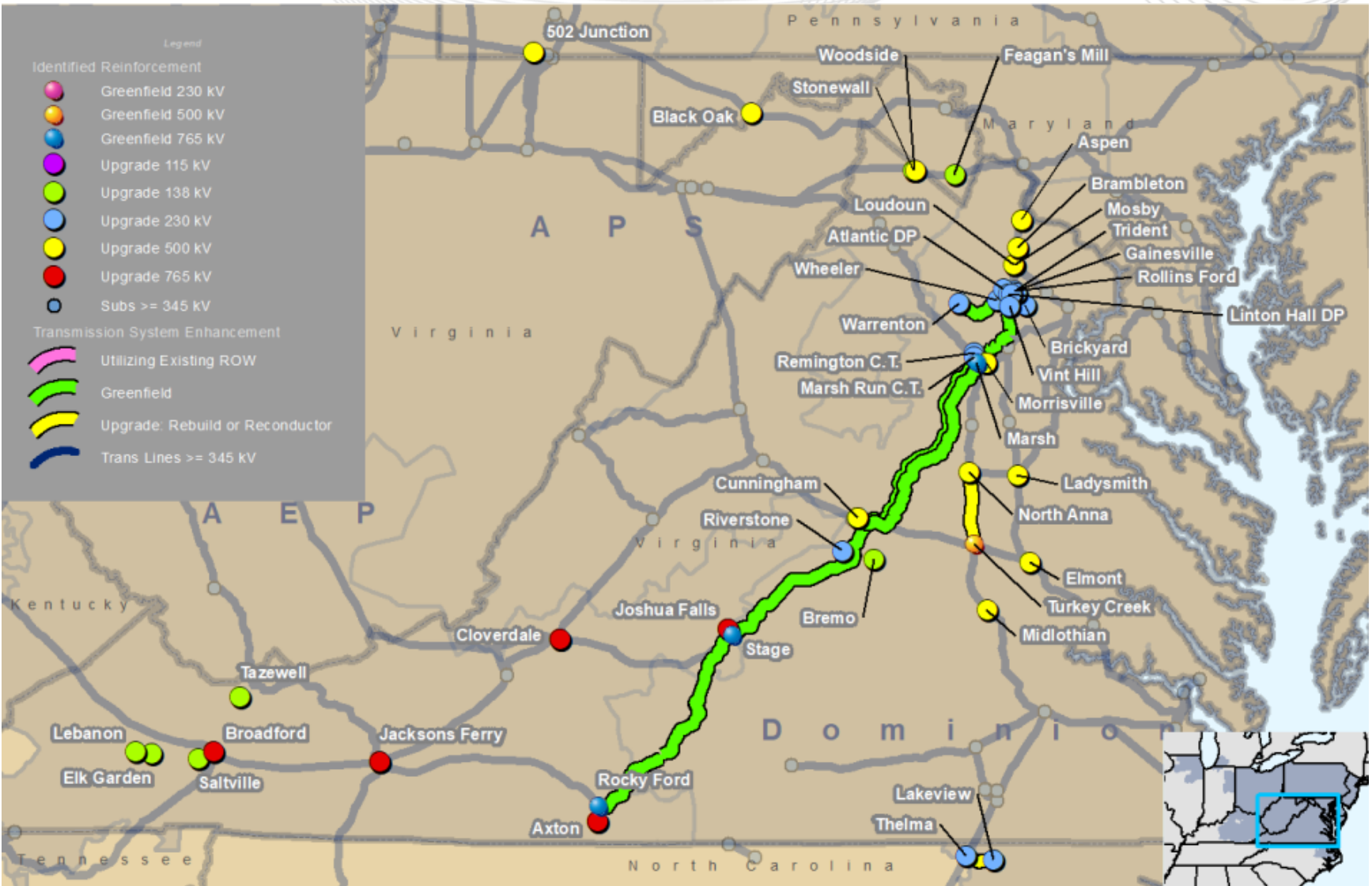
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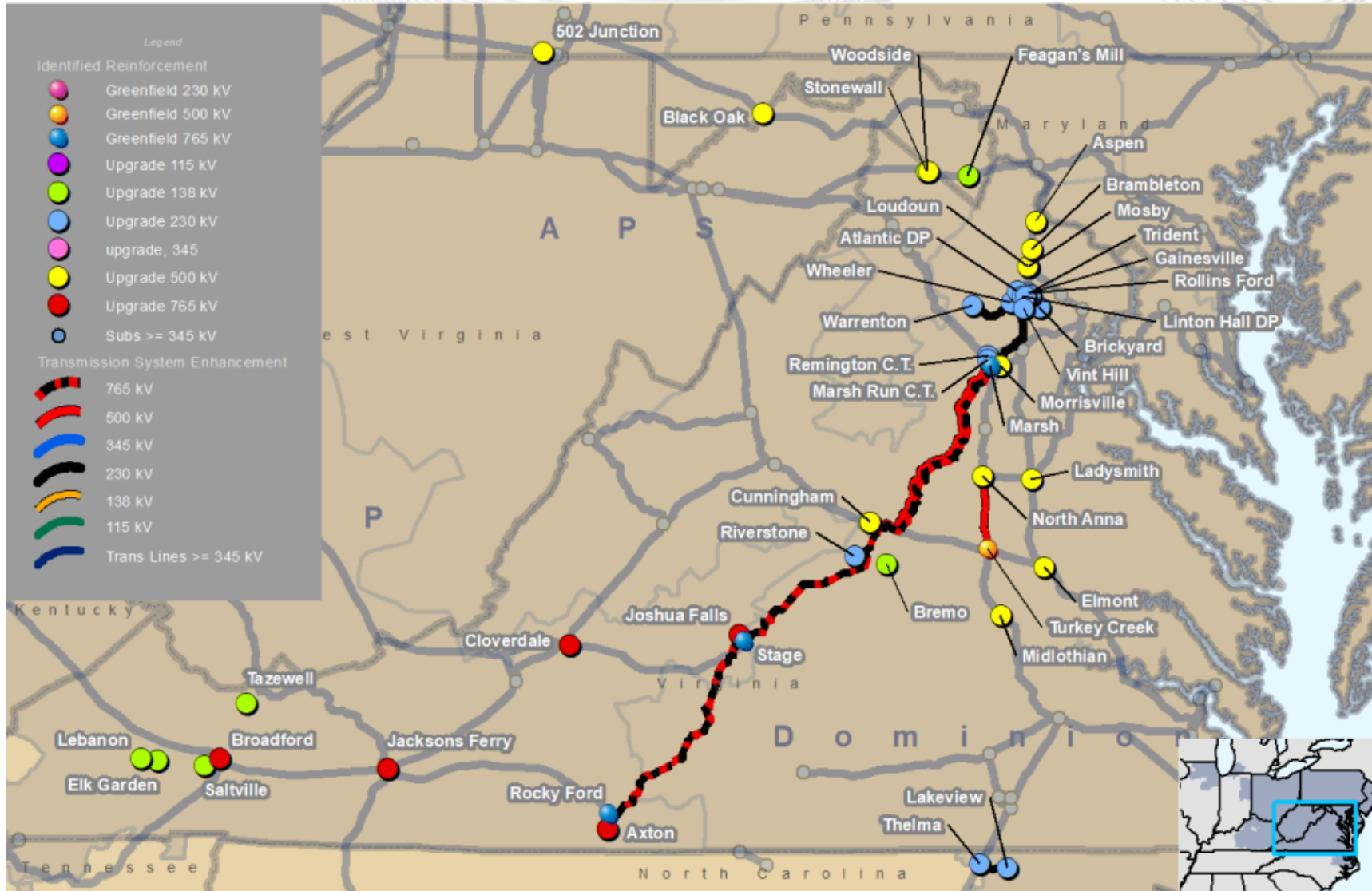
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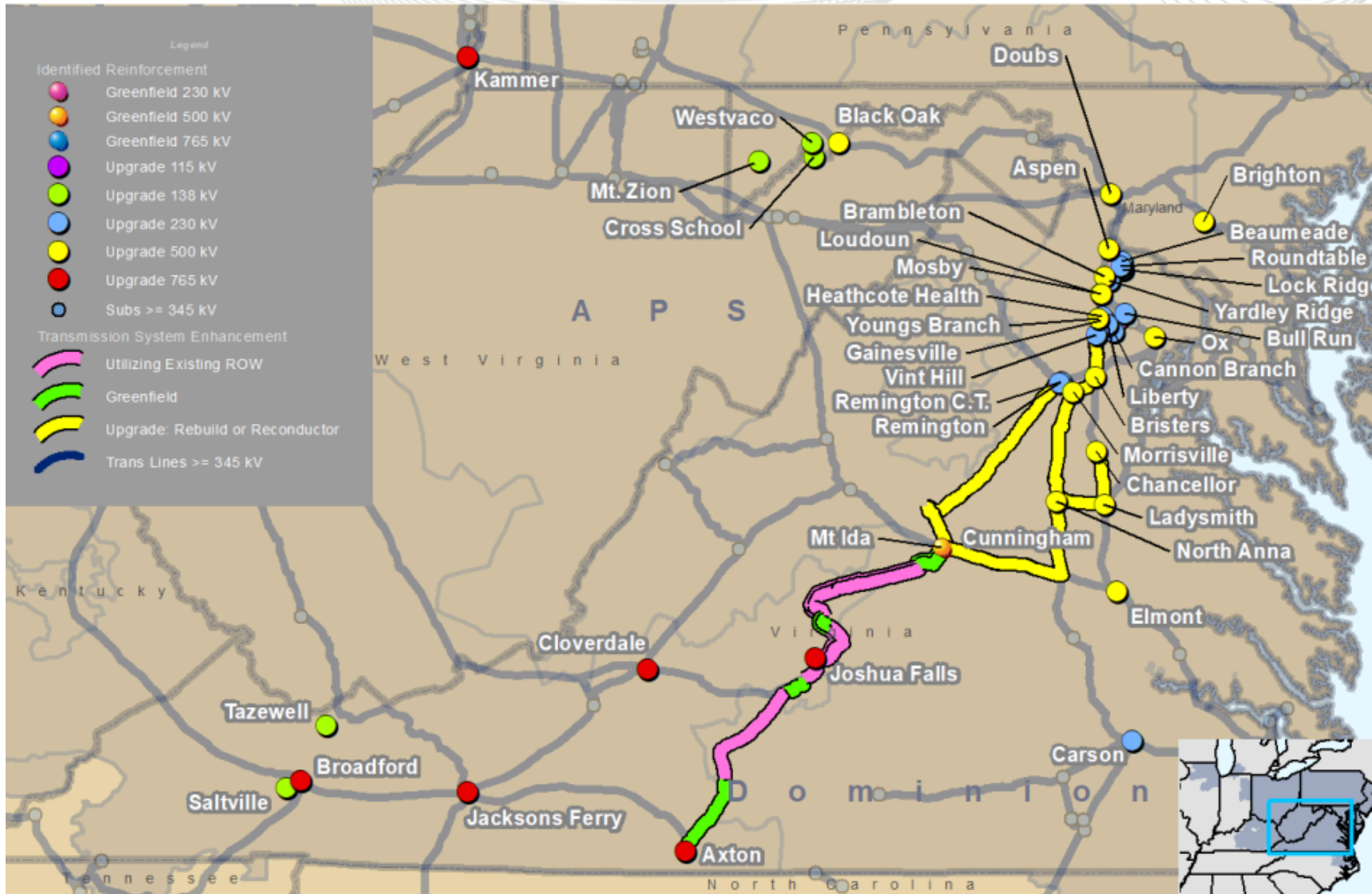


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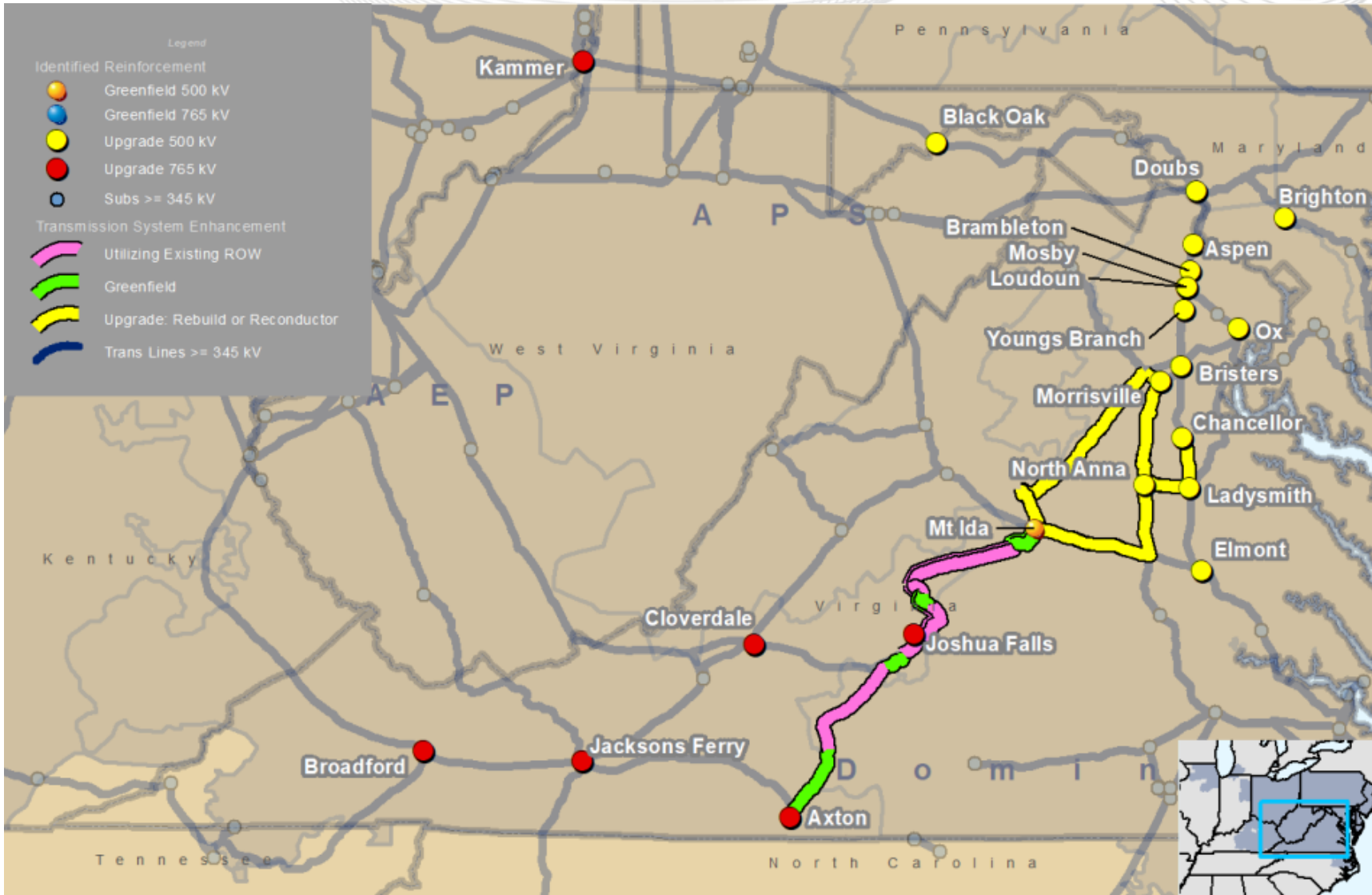


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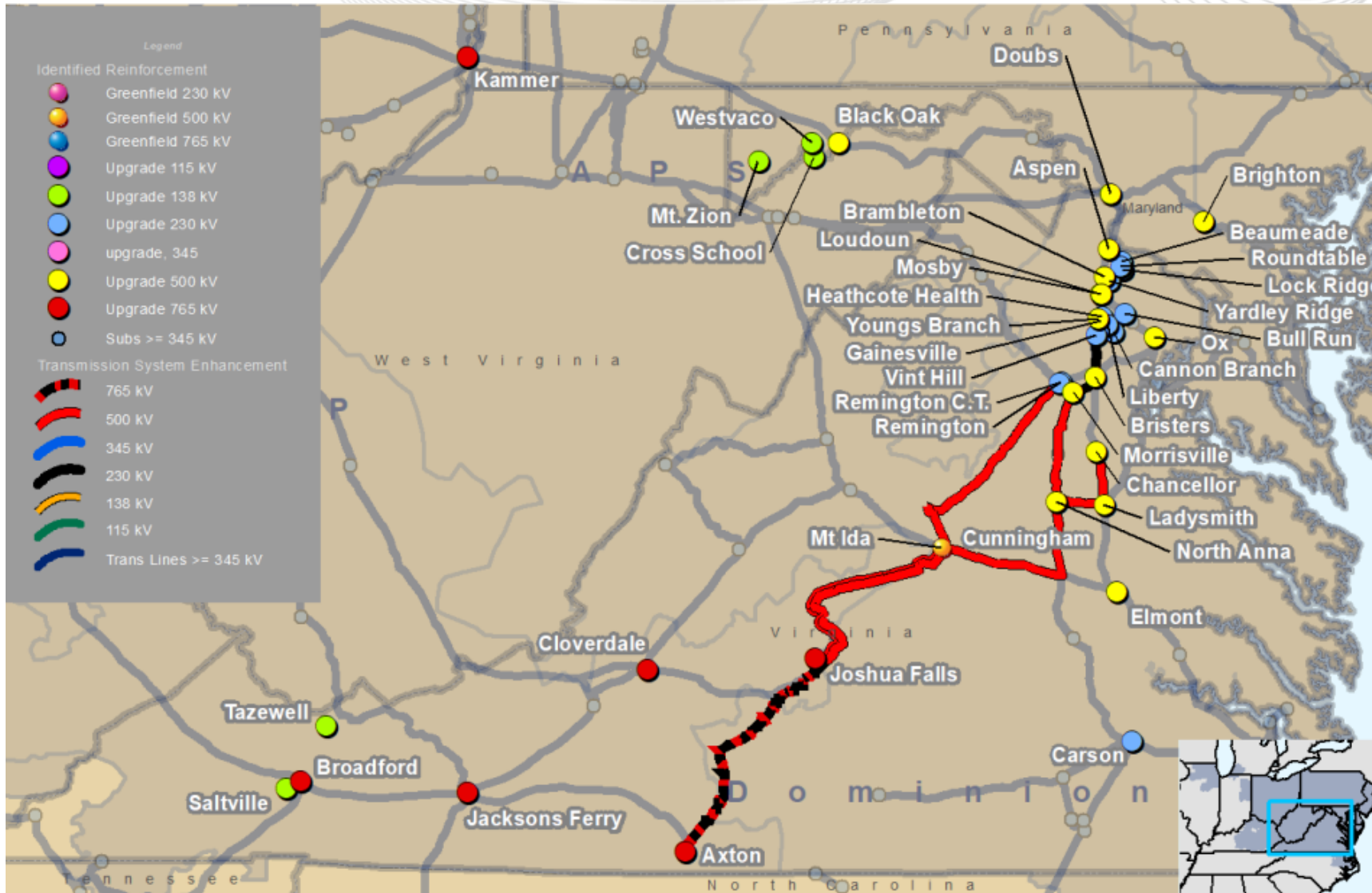
NEETMH (NextEra) Proposals



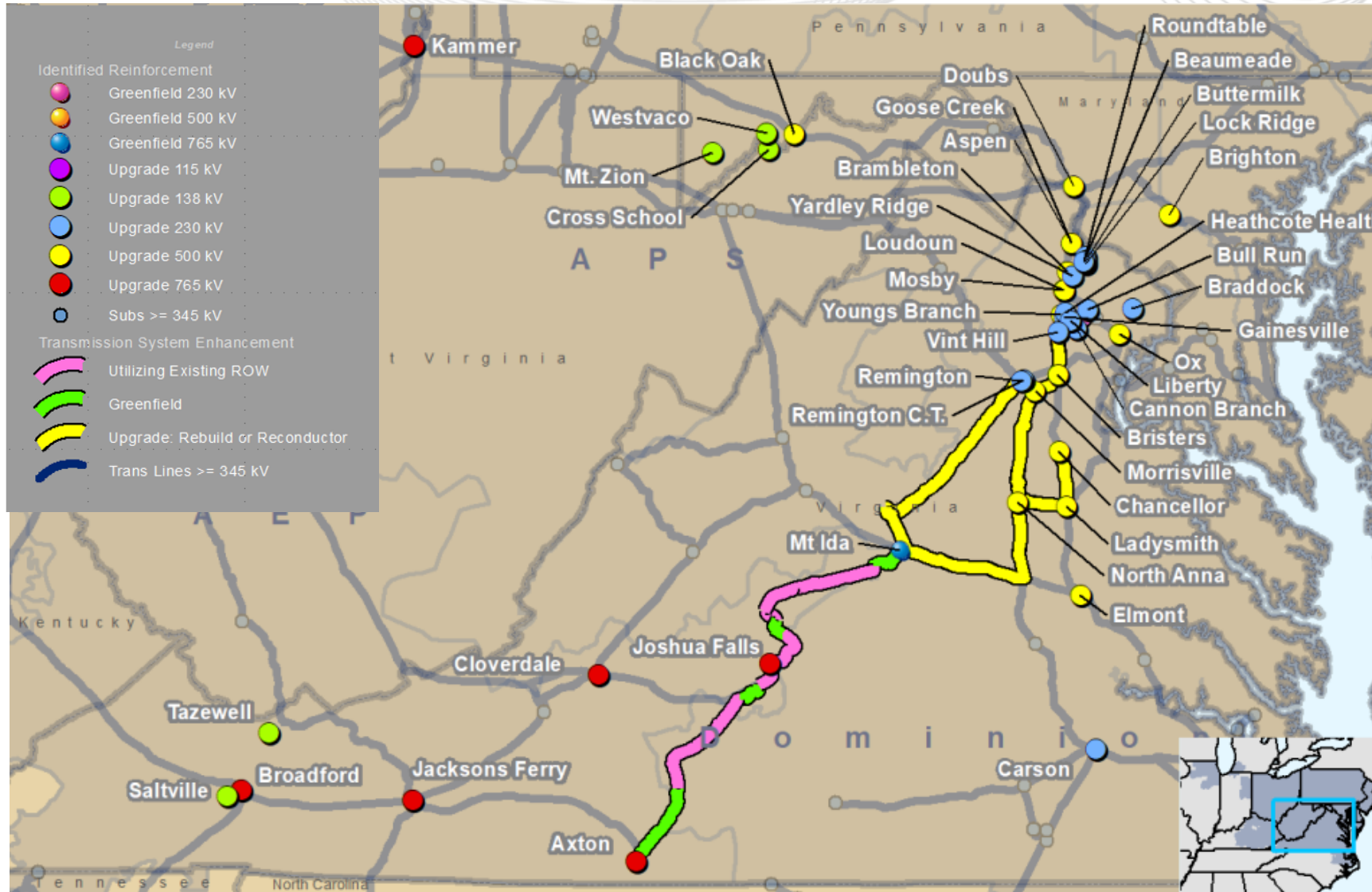
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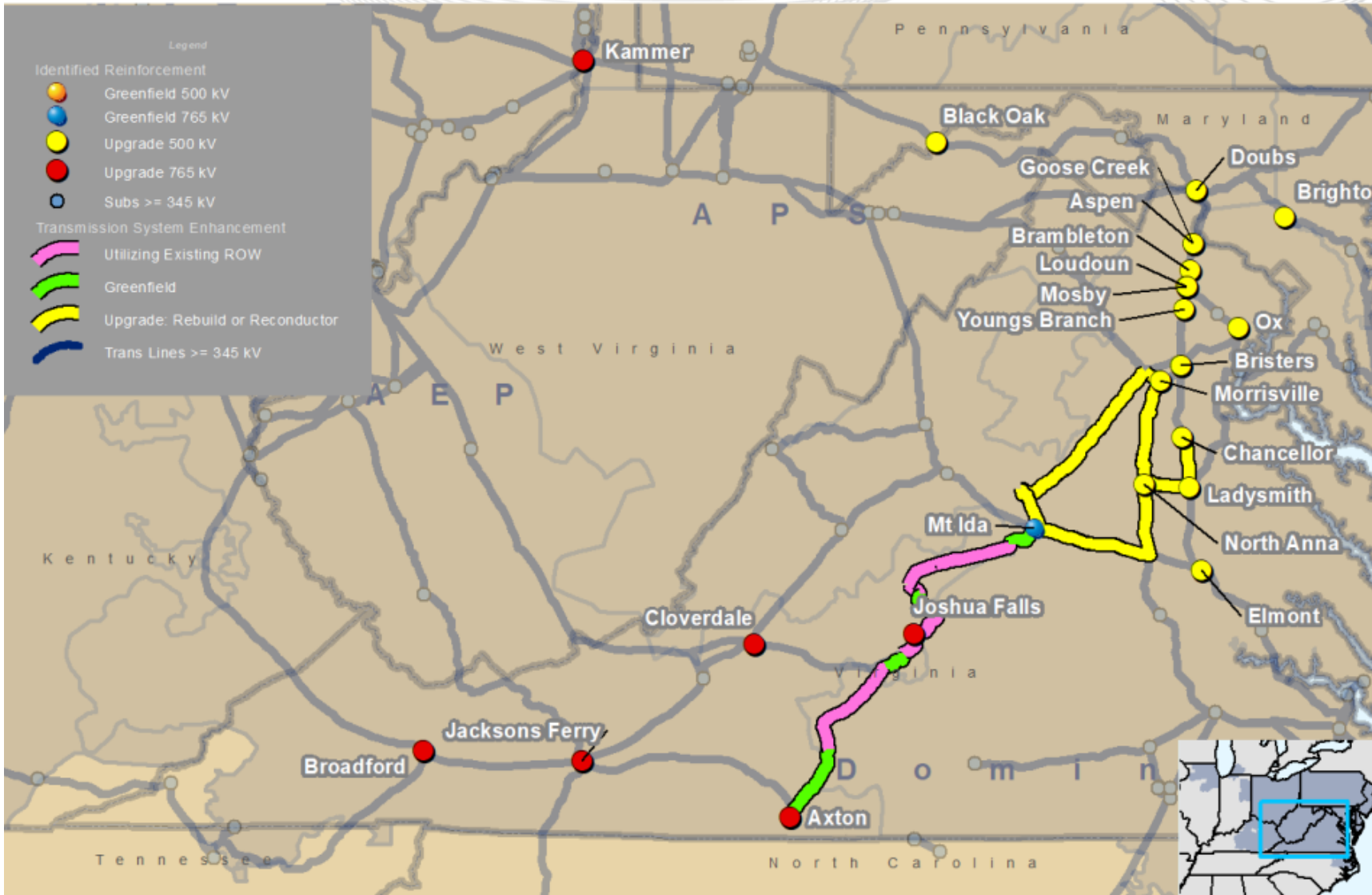
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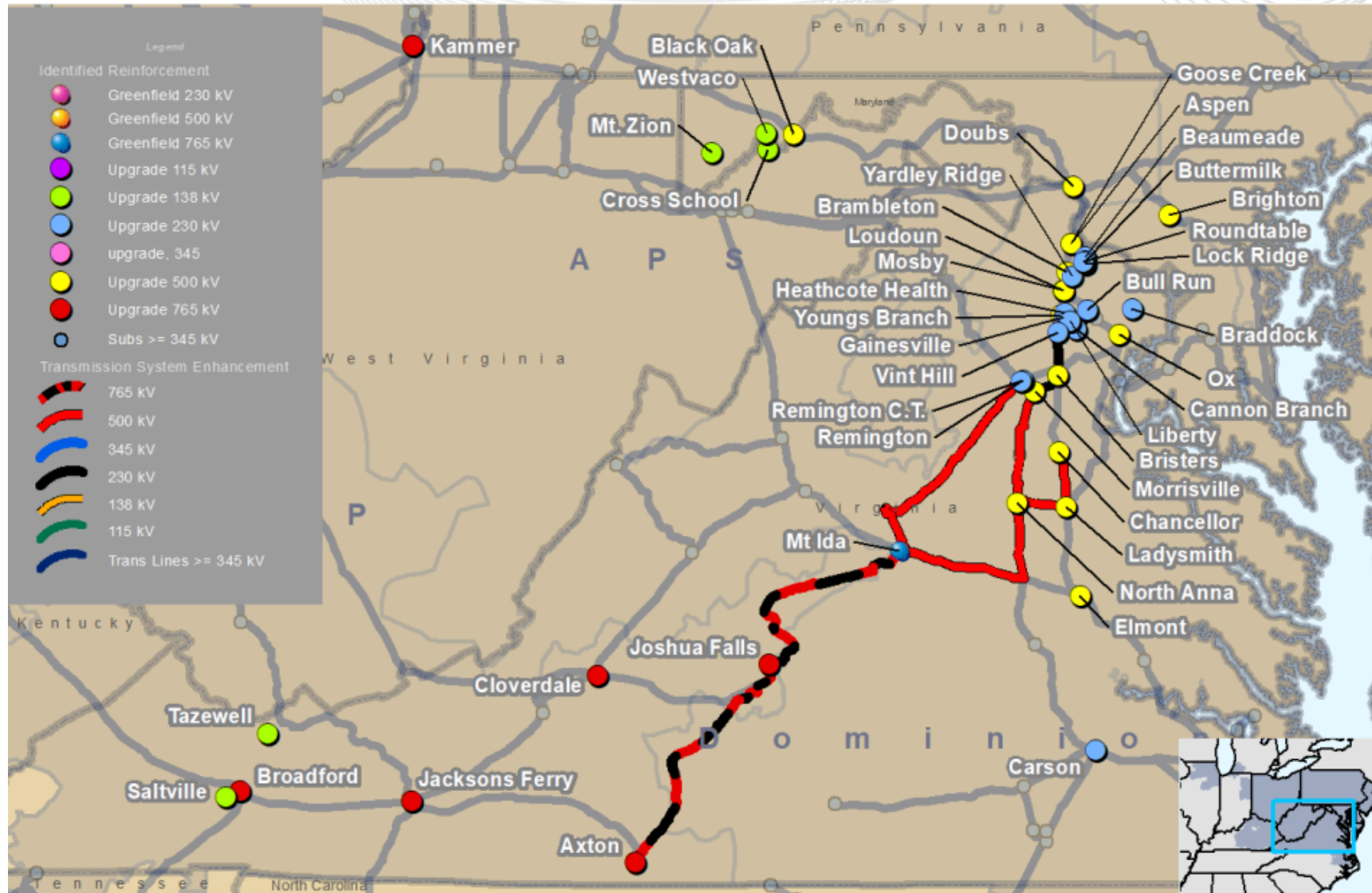
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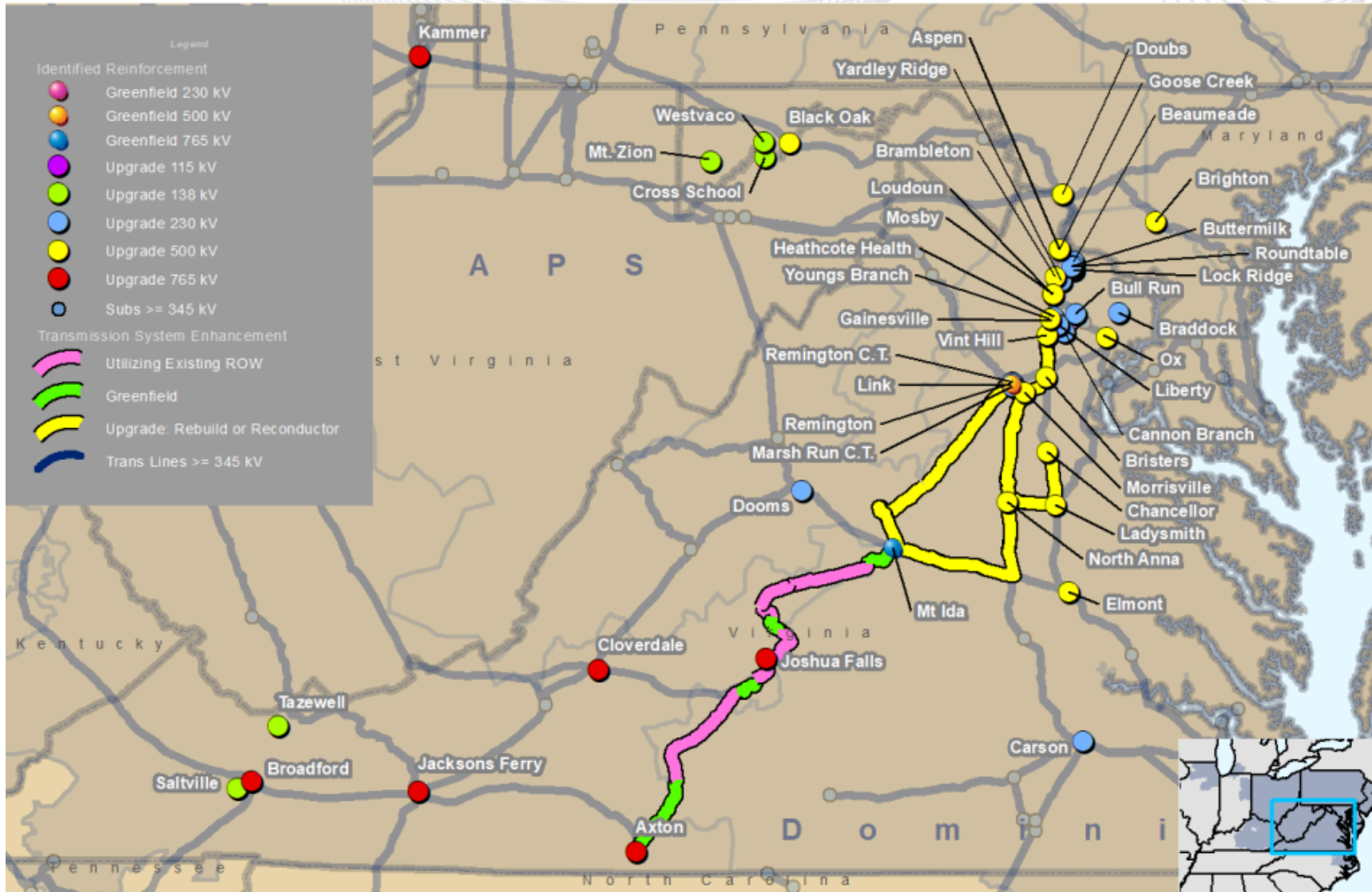
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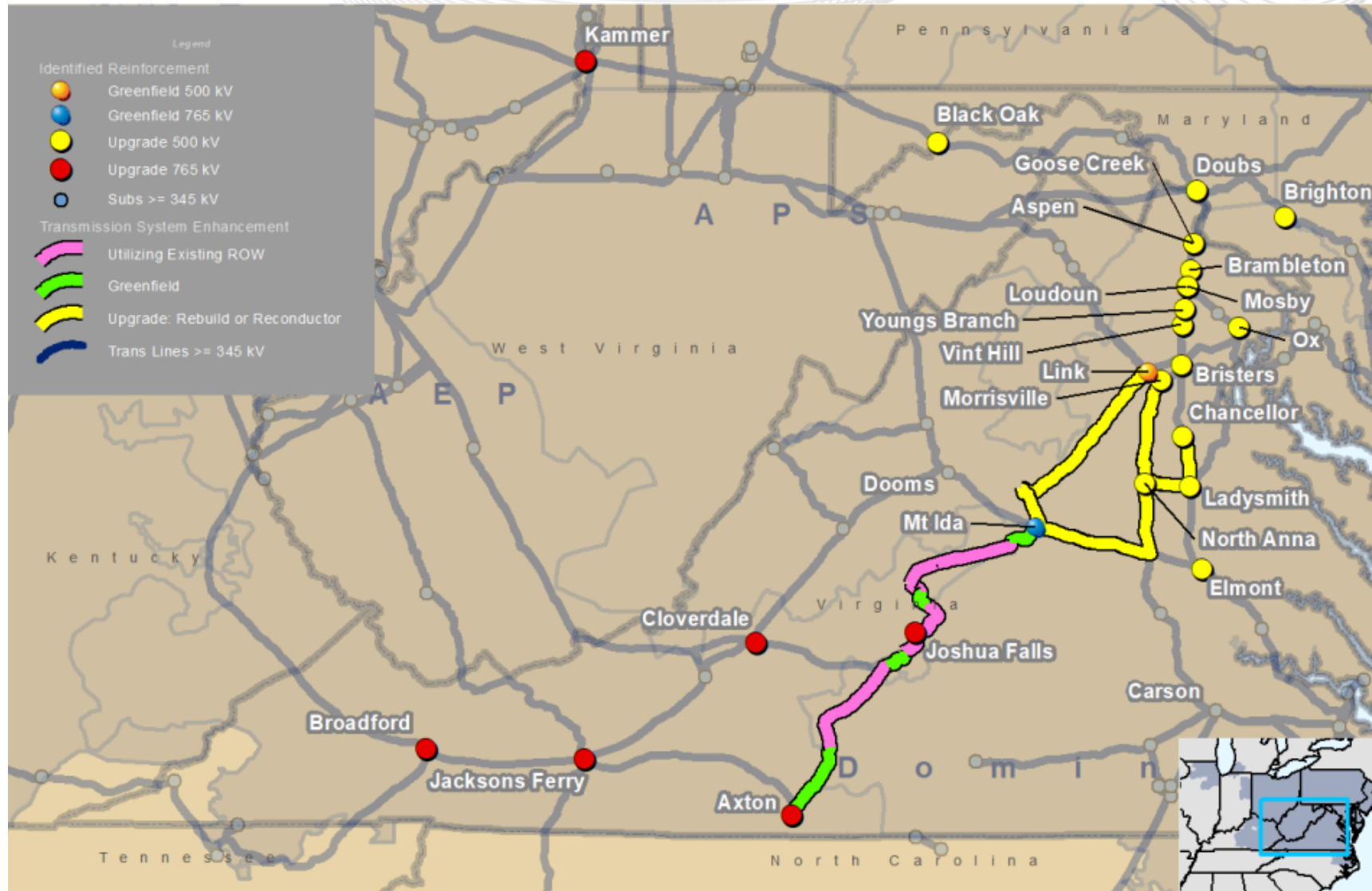
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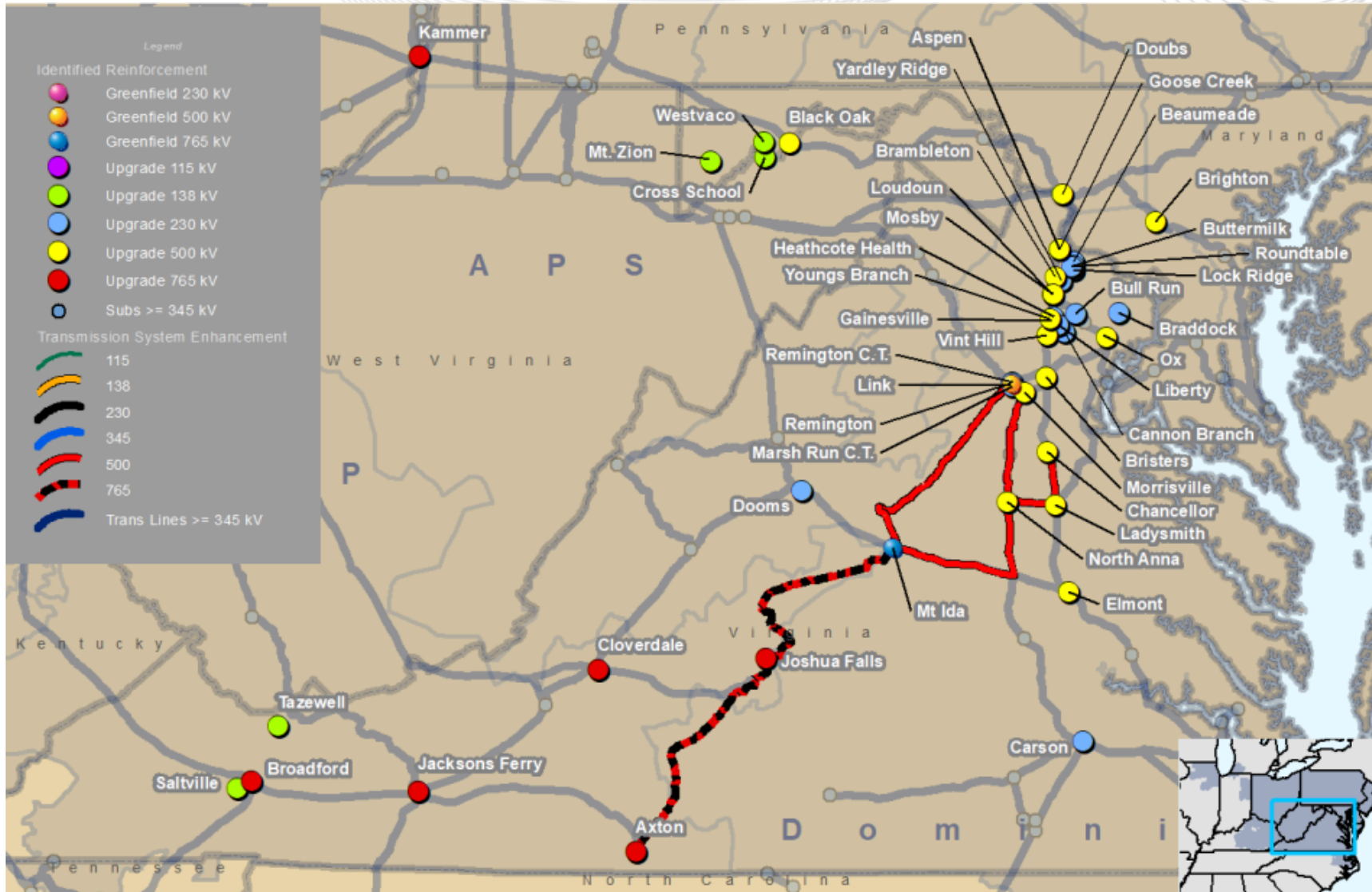
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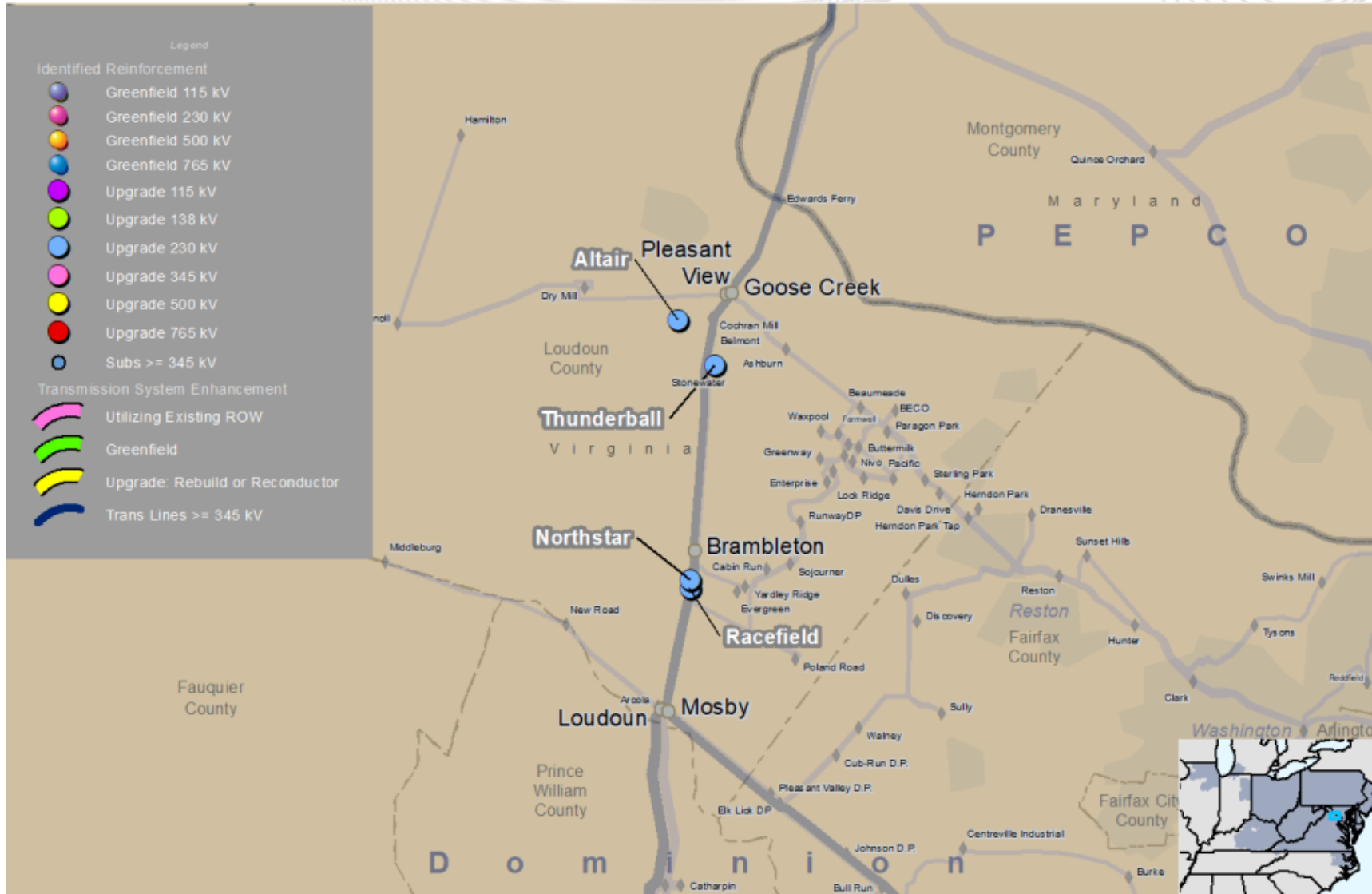


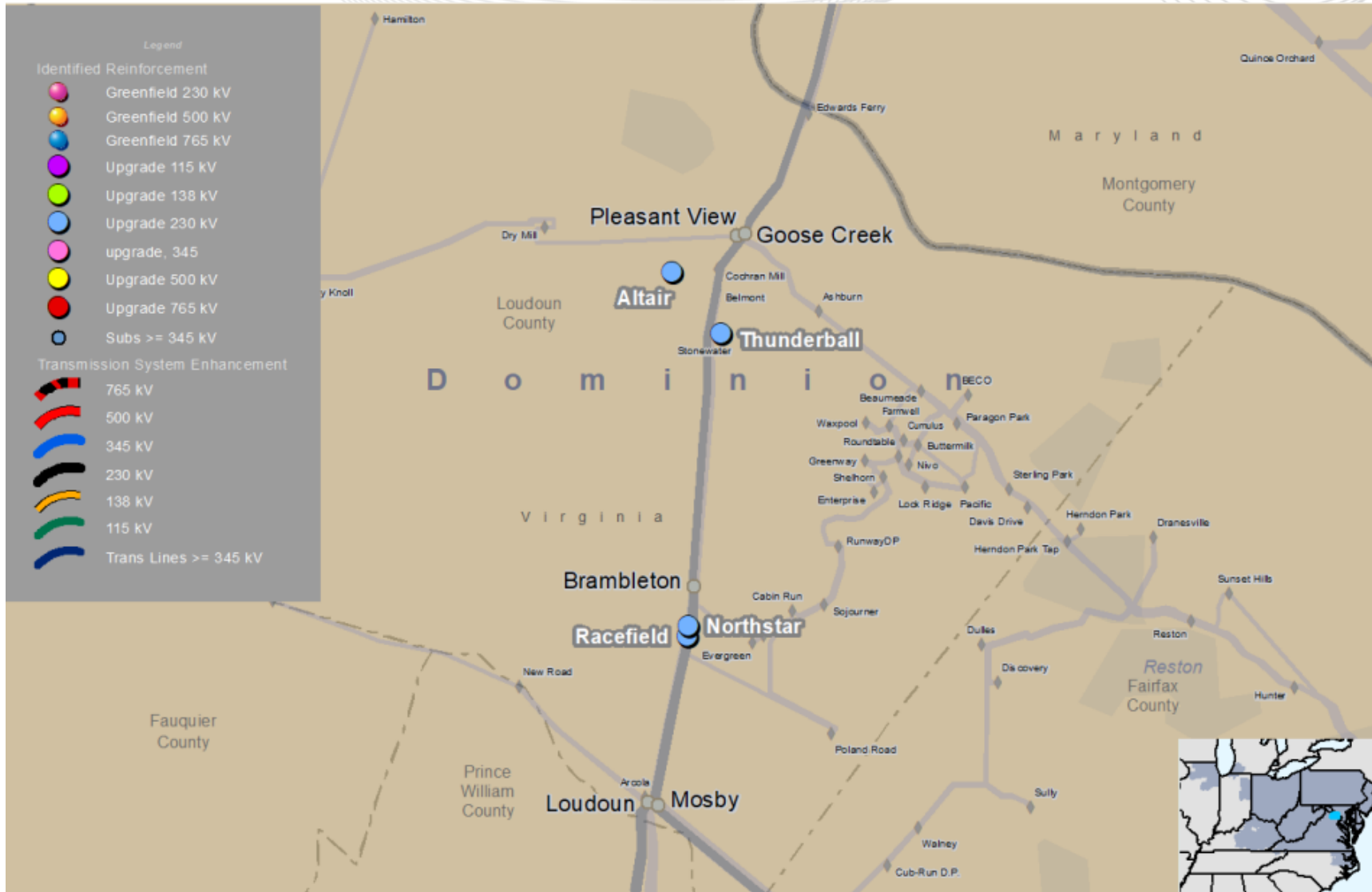
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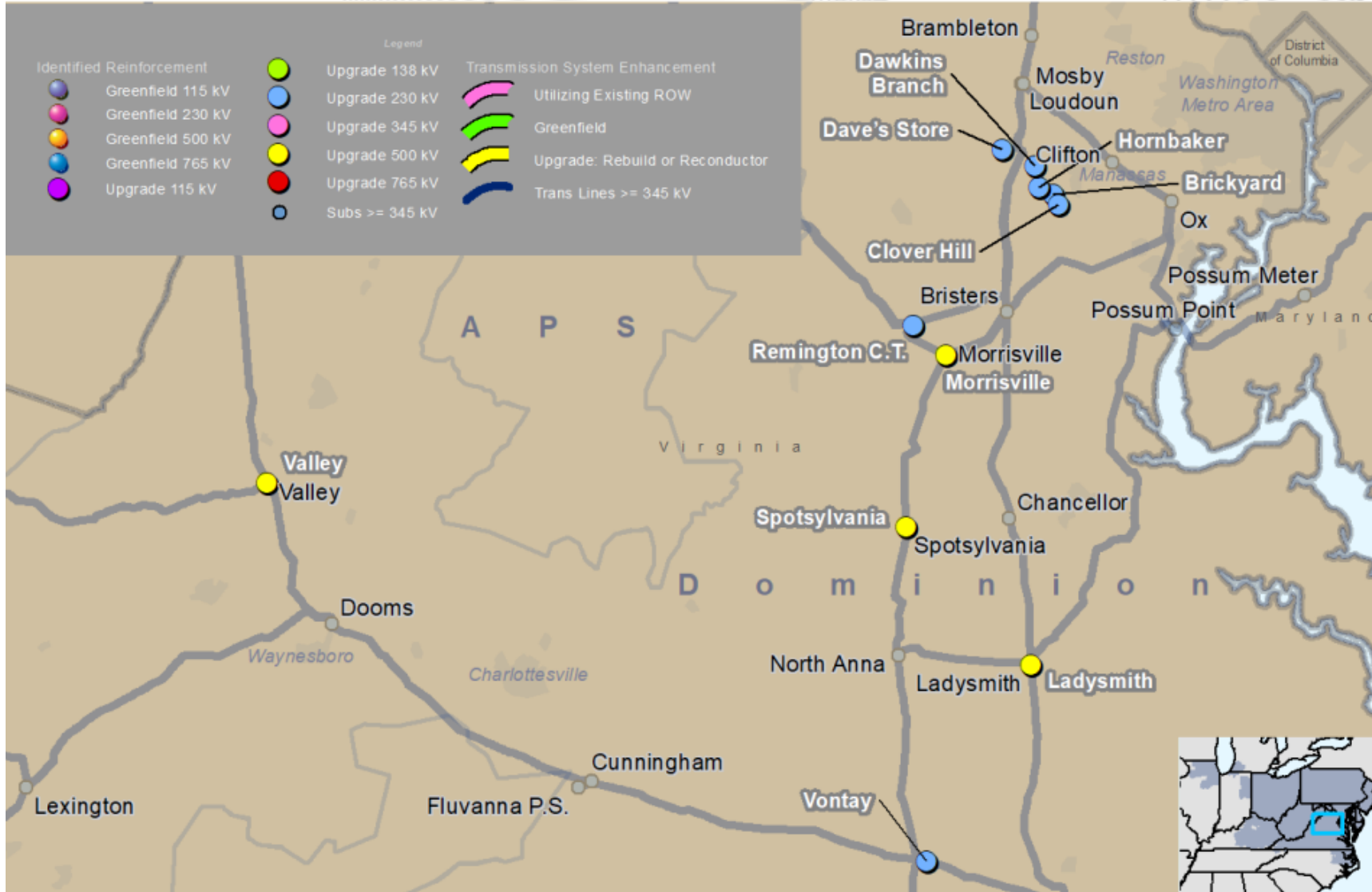


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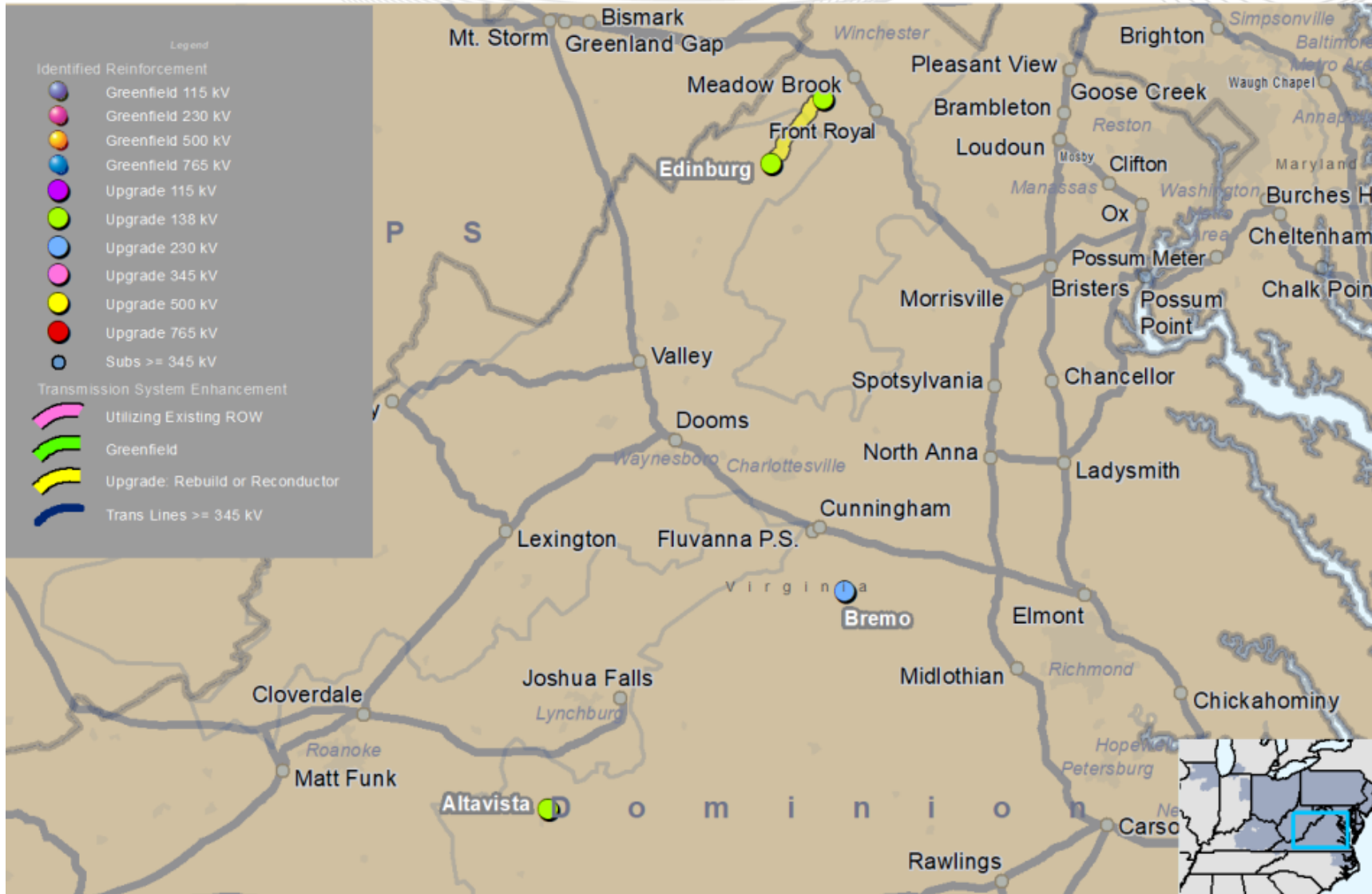
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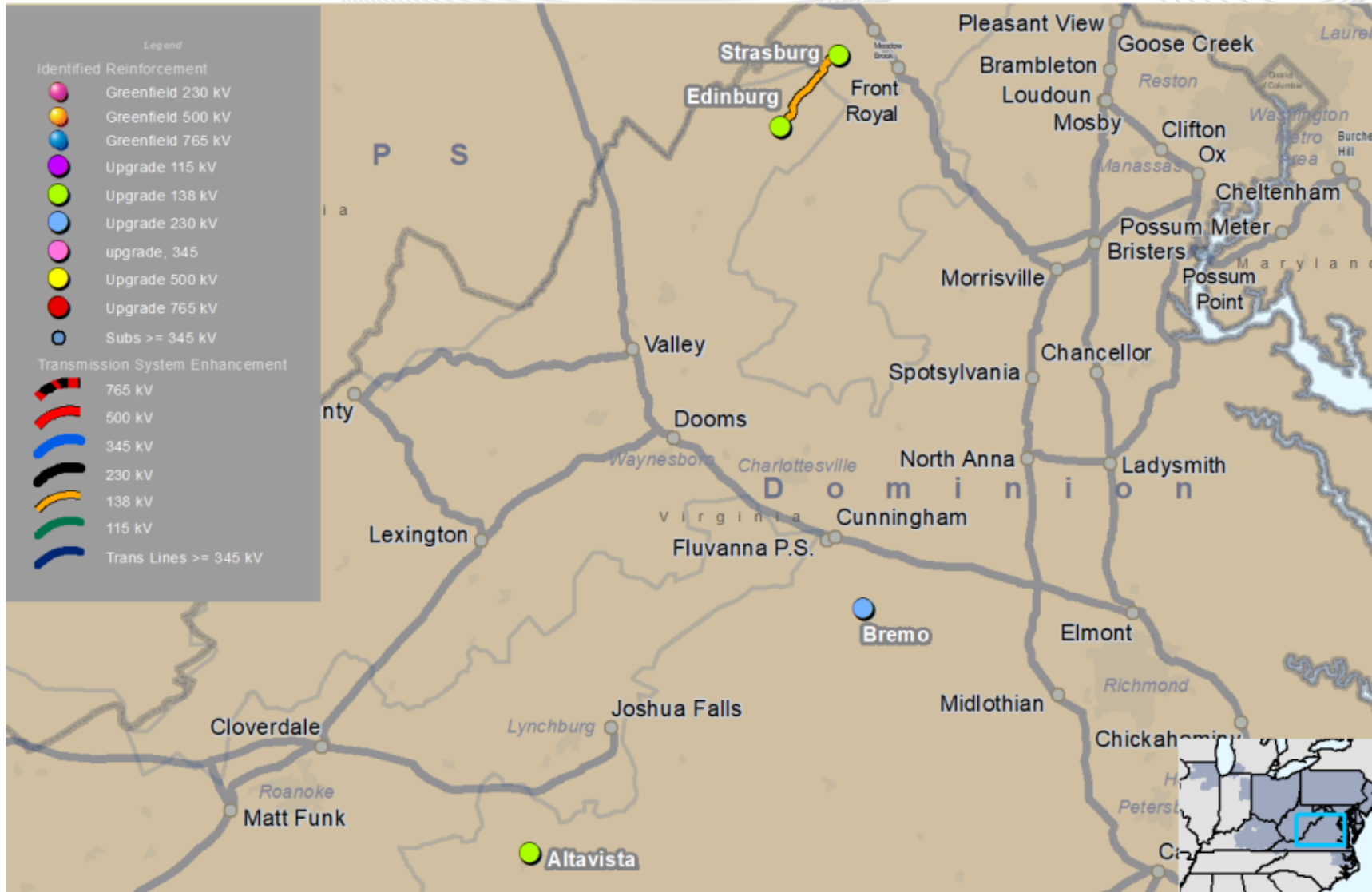


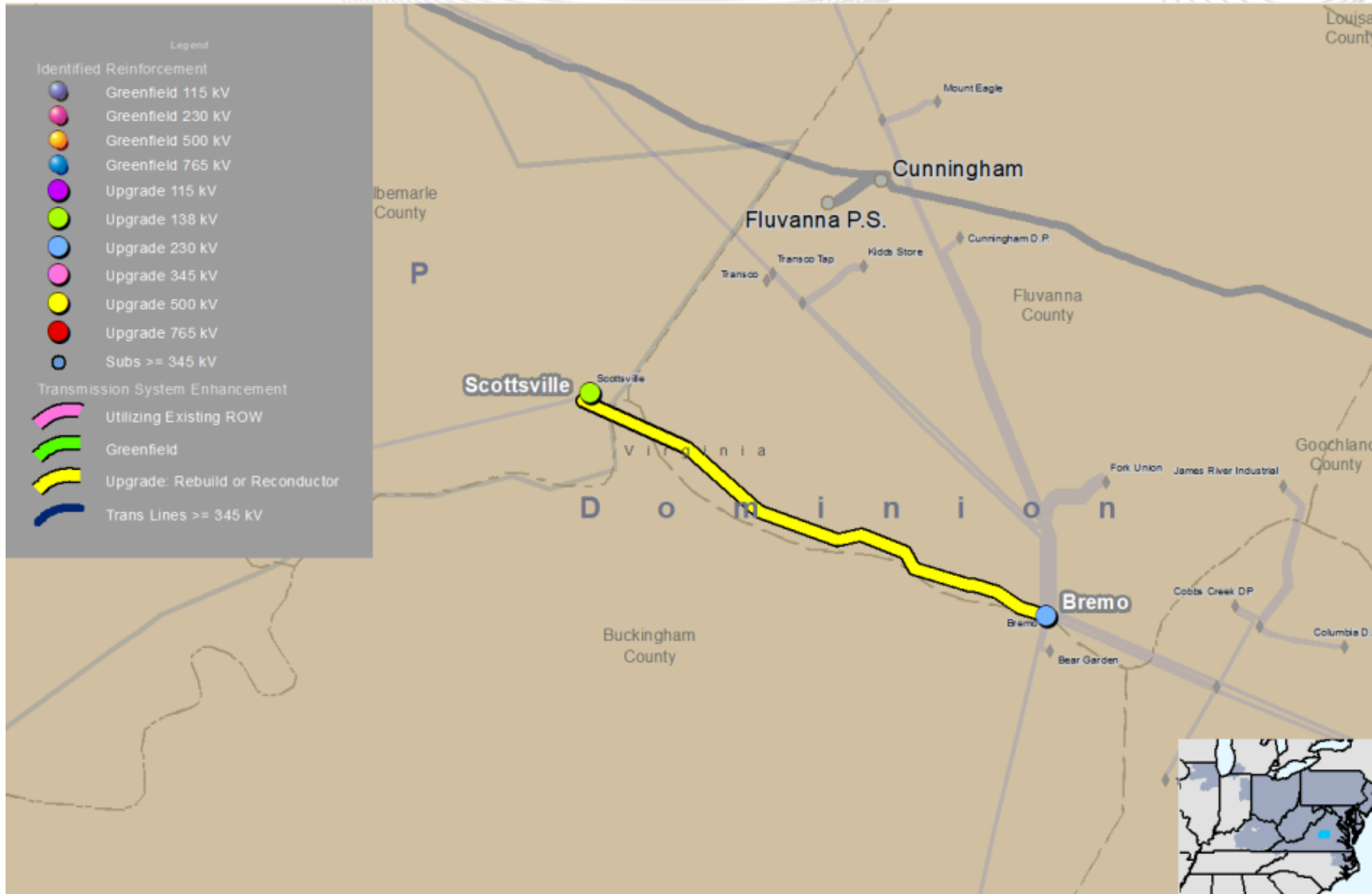


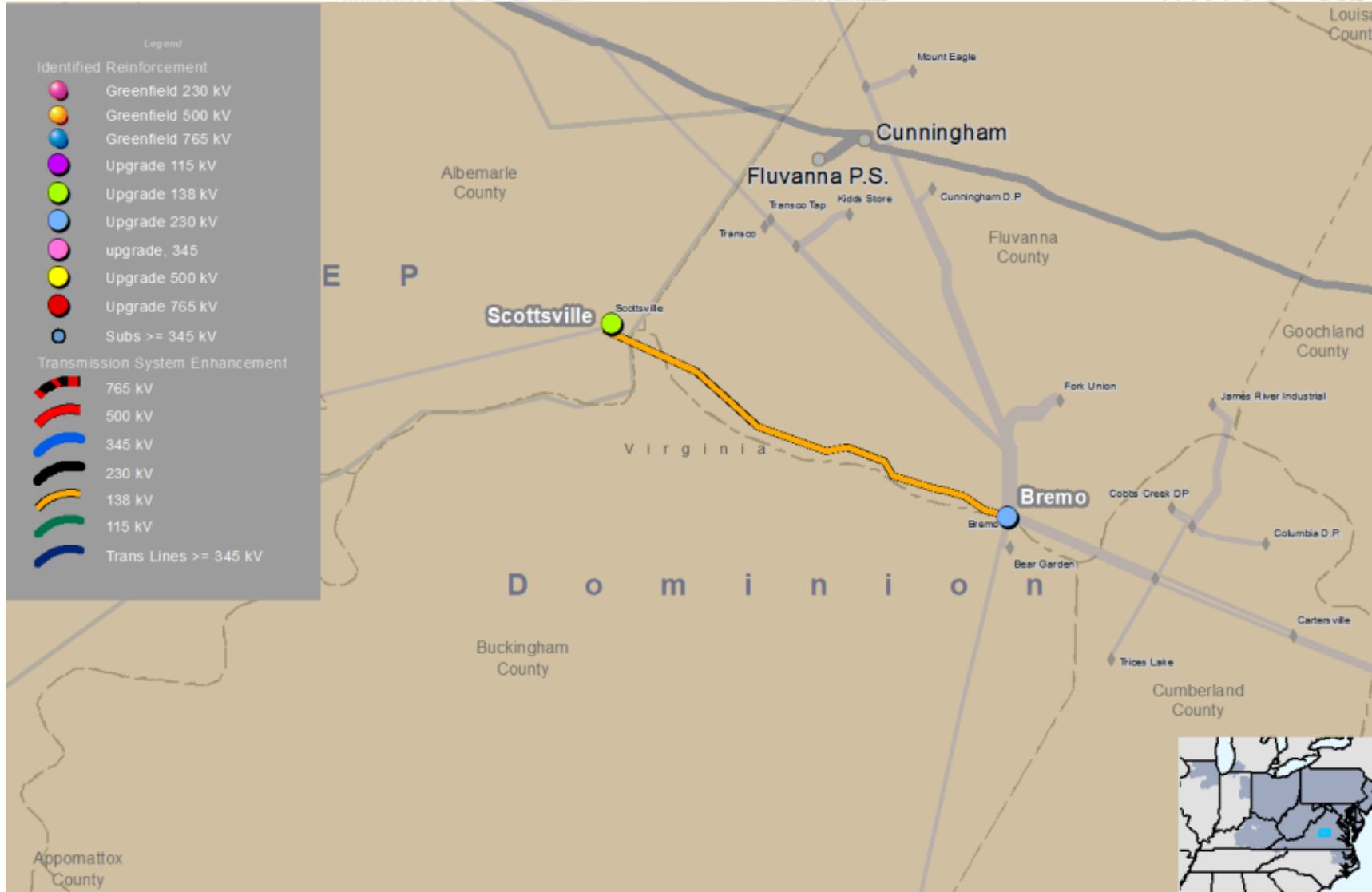


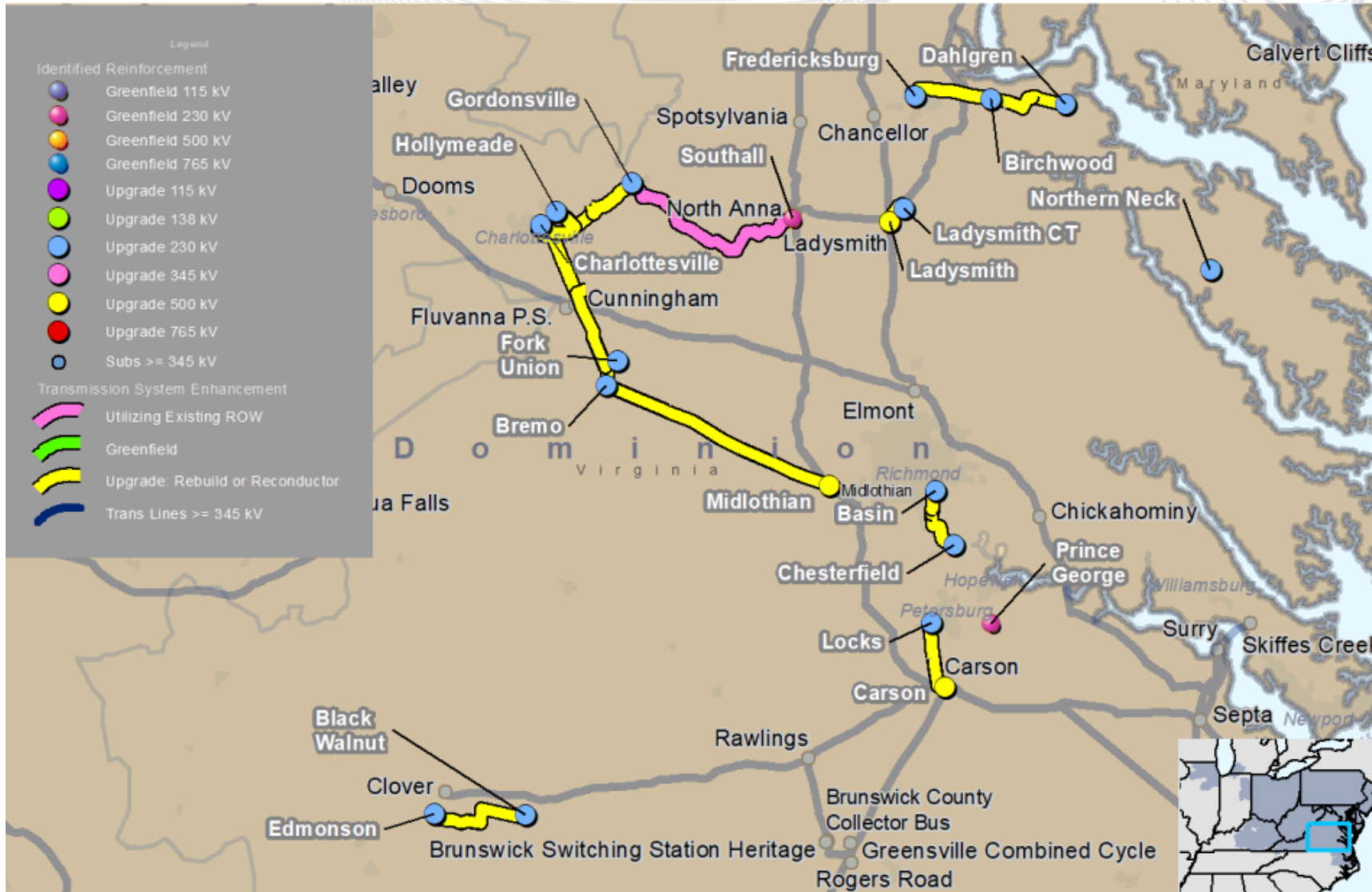


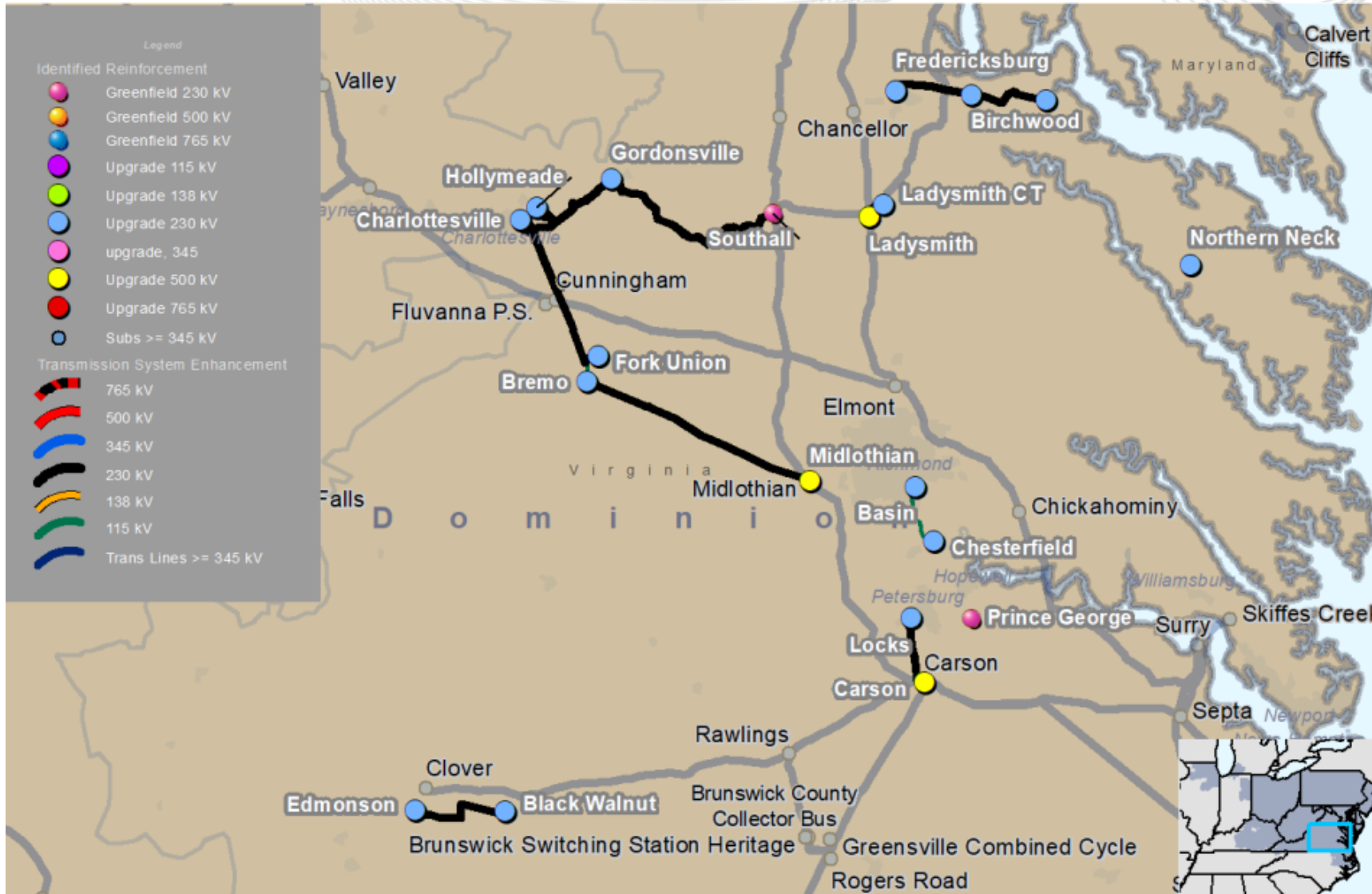


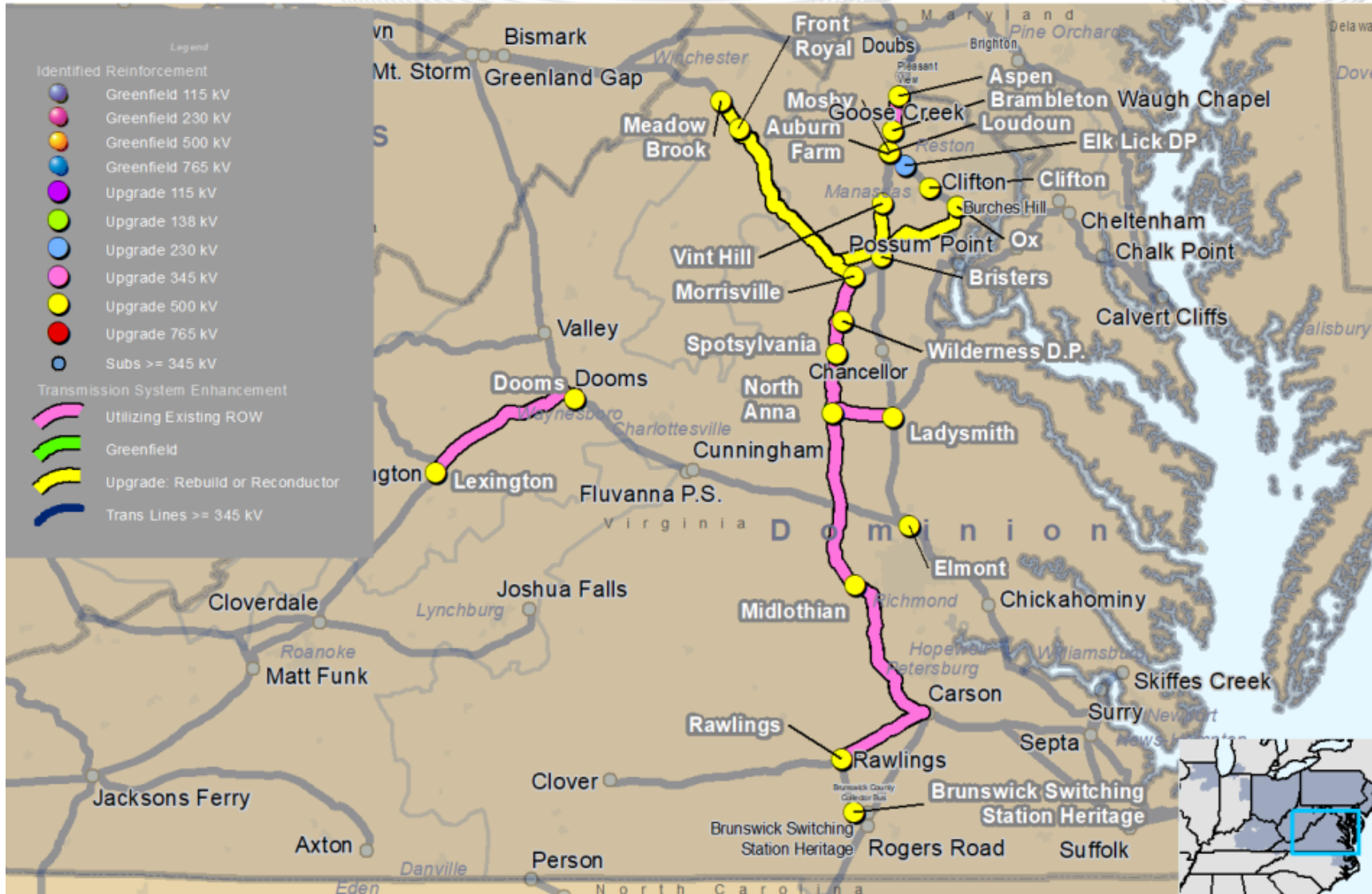


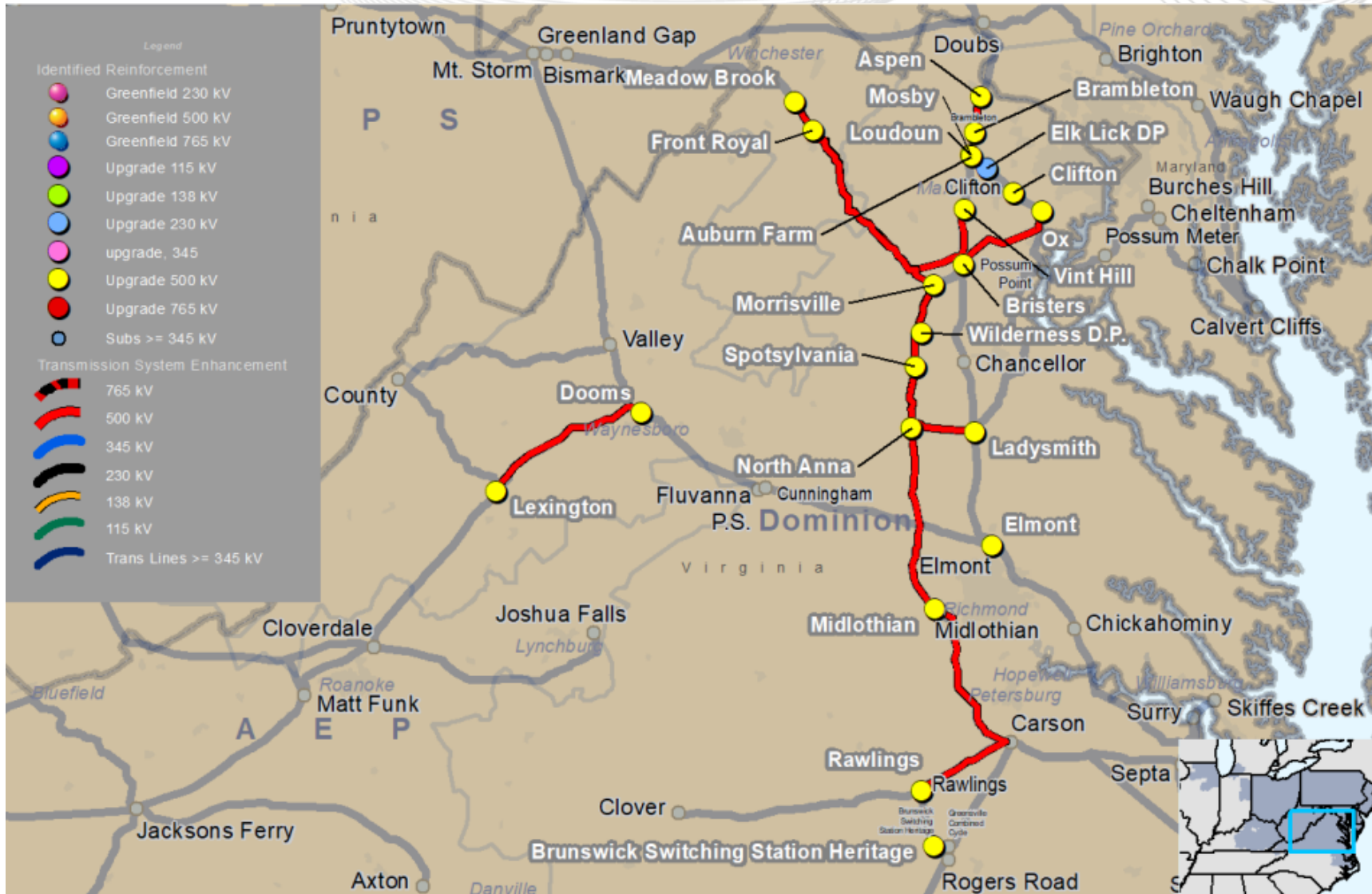


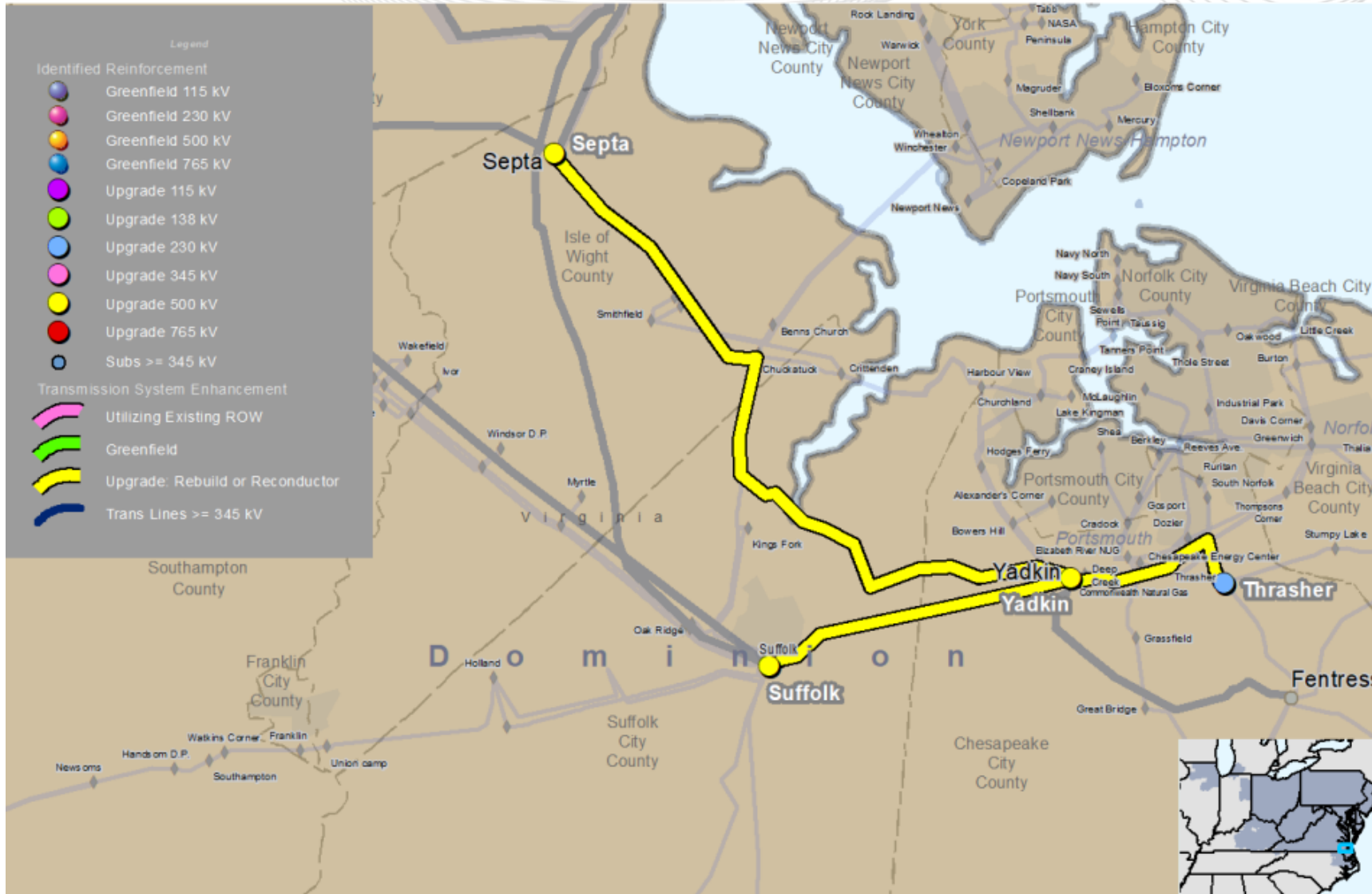


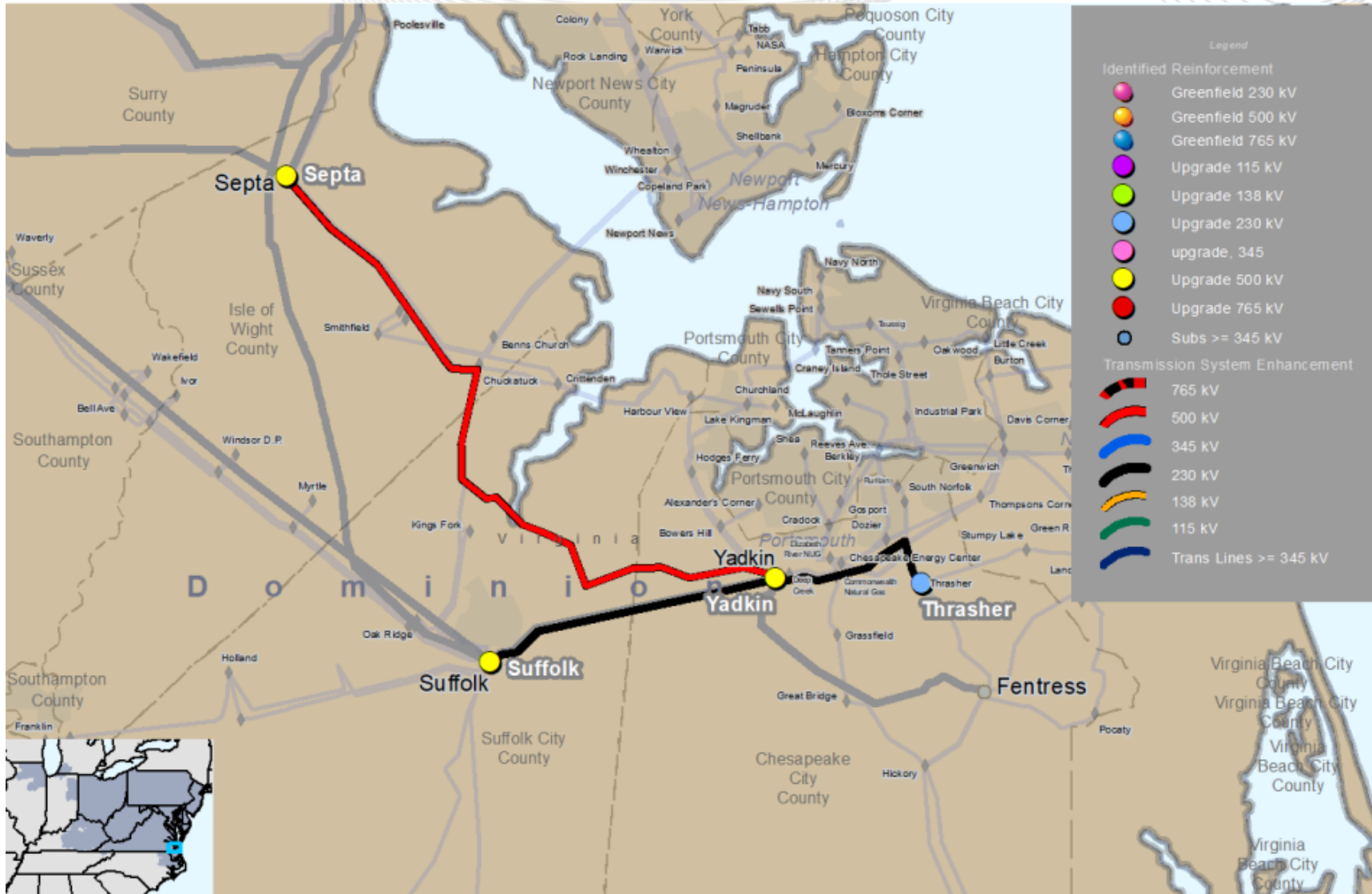




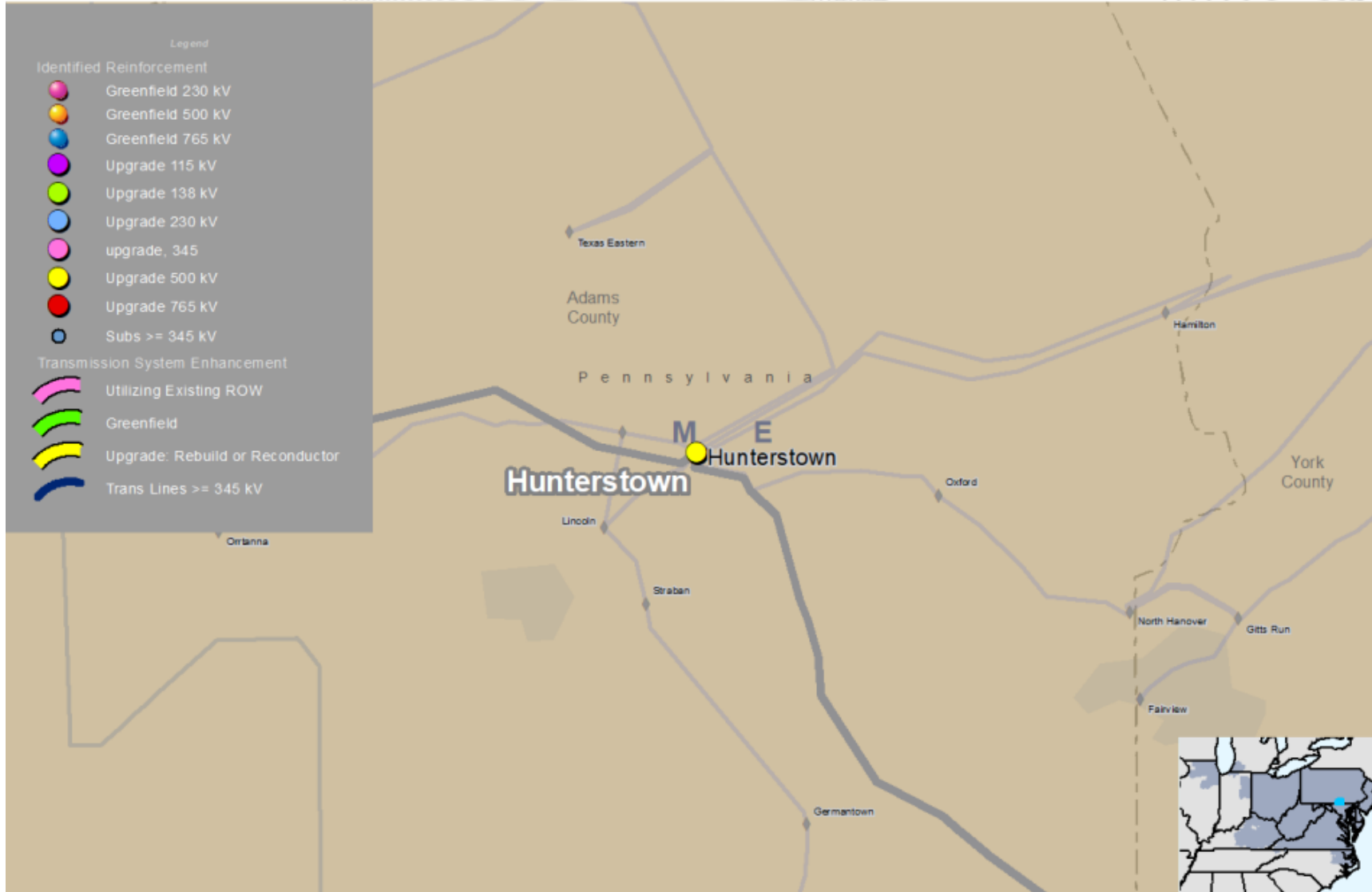


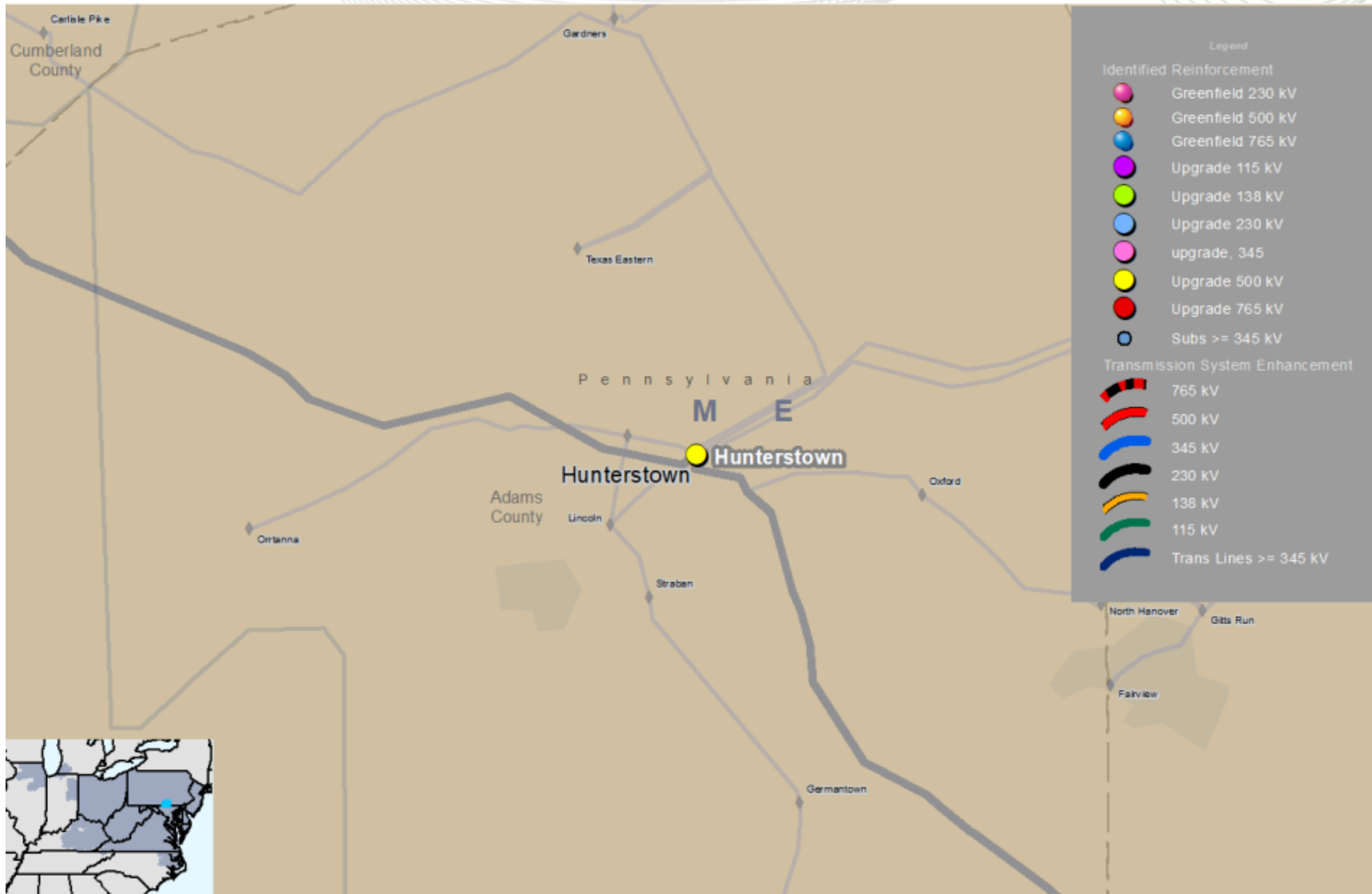




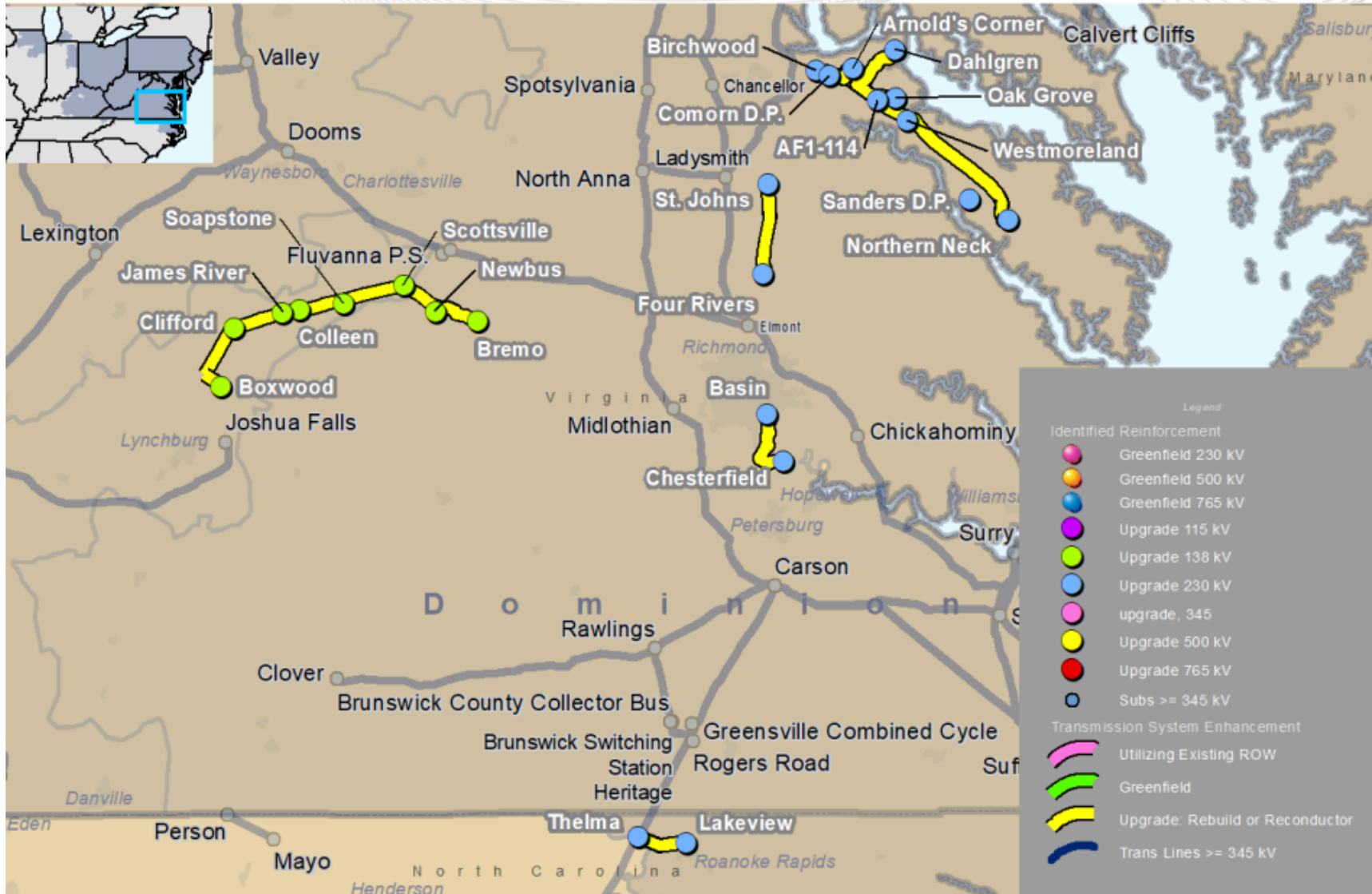


MATLIT

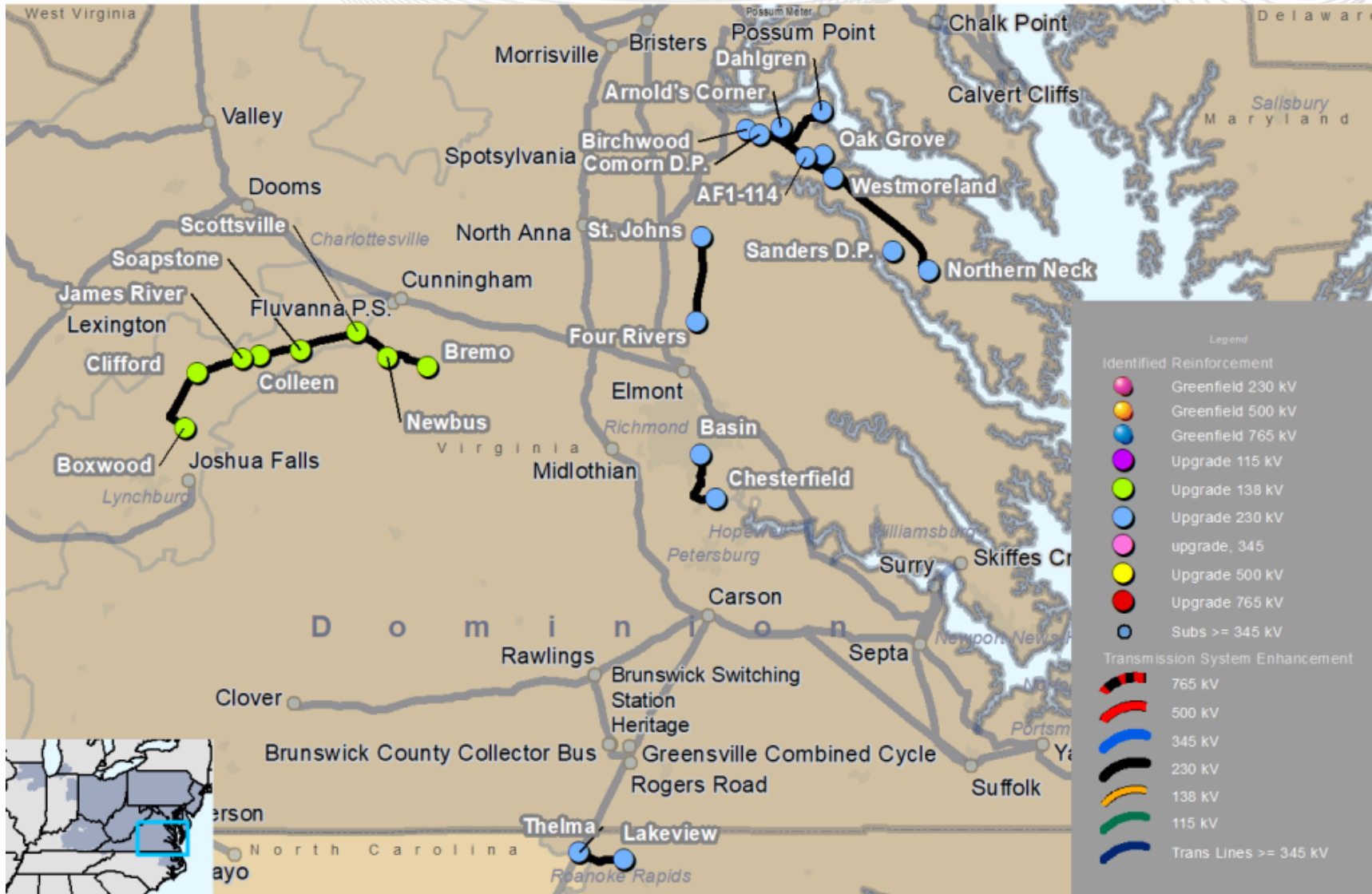




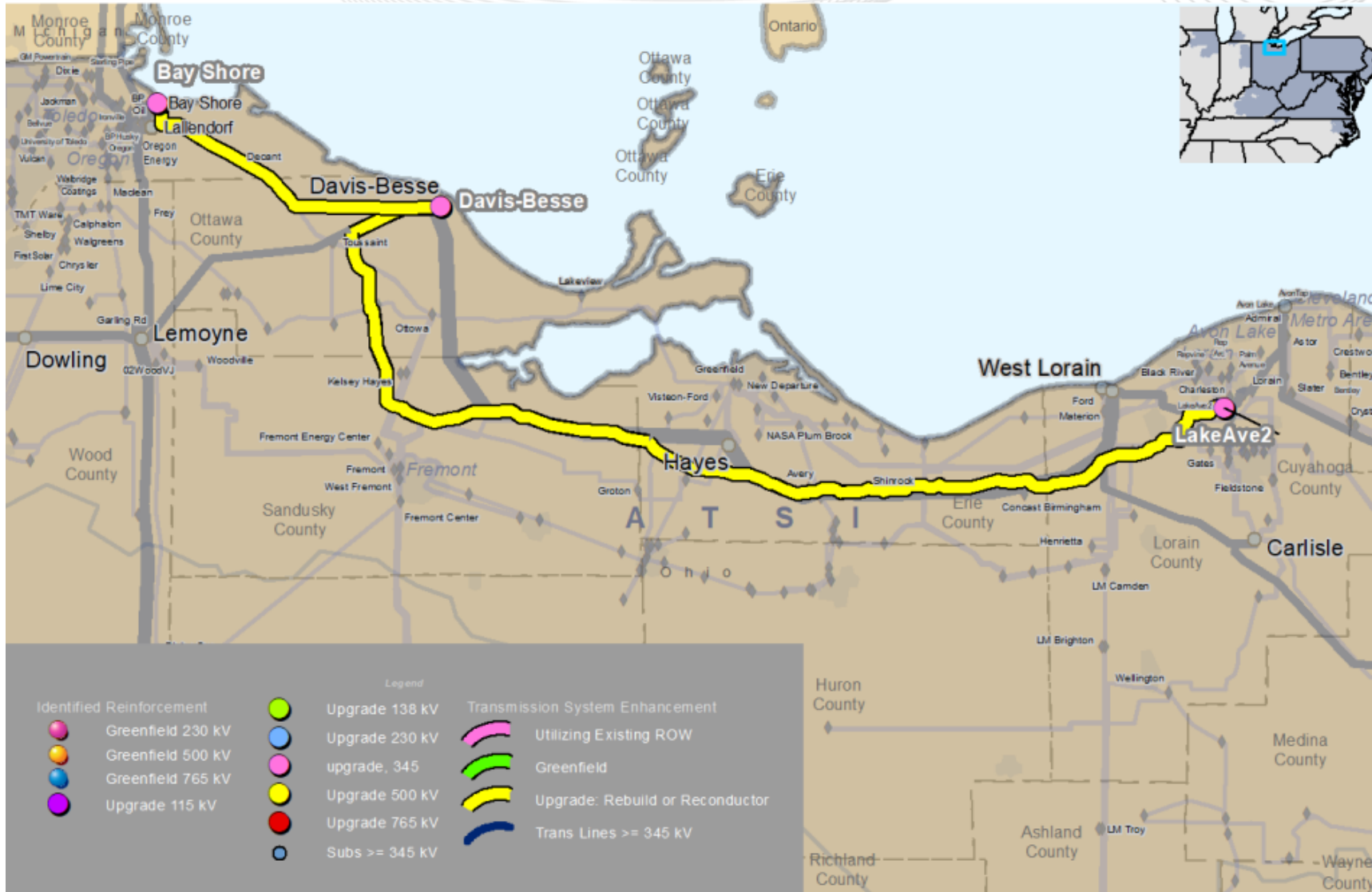
NEETMH- Proposals



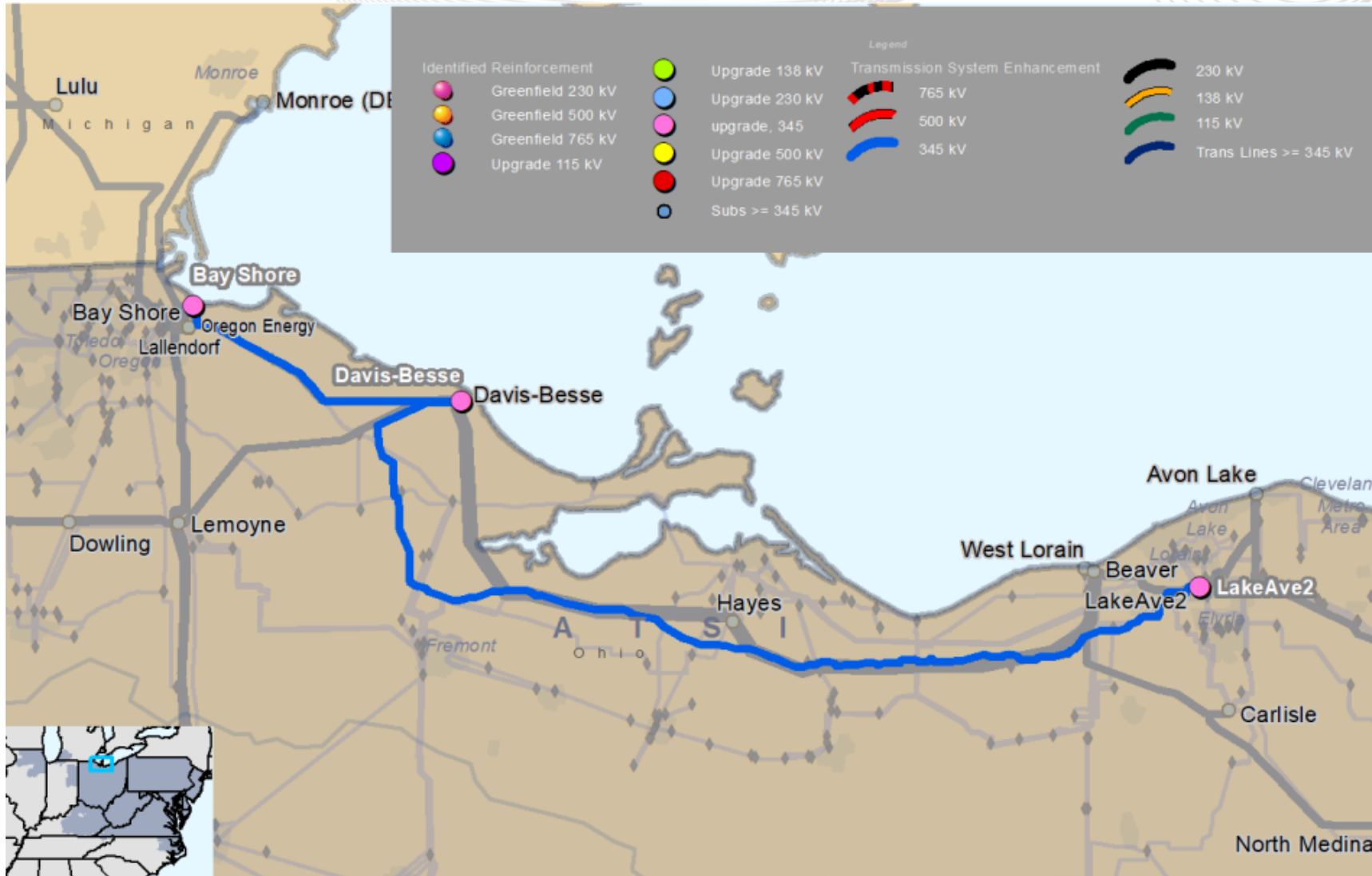
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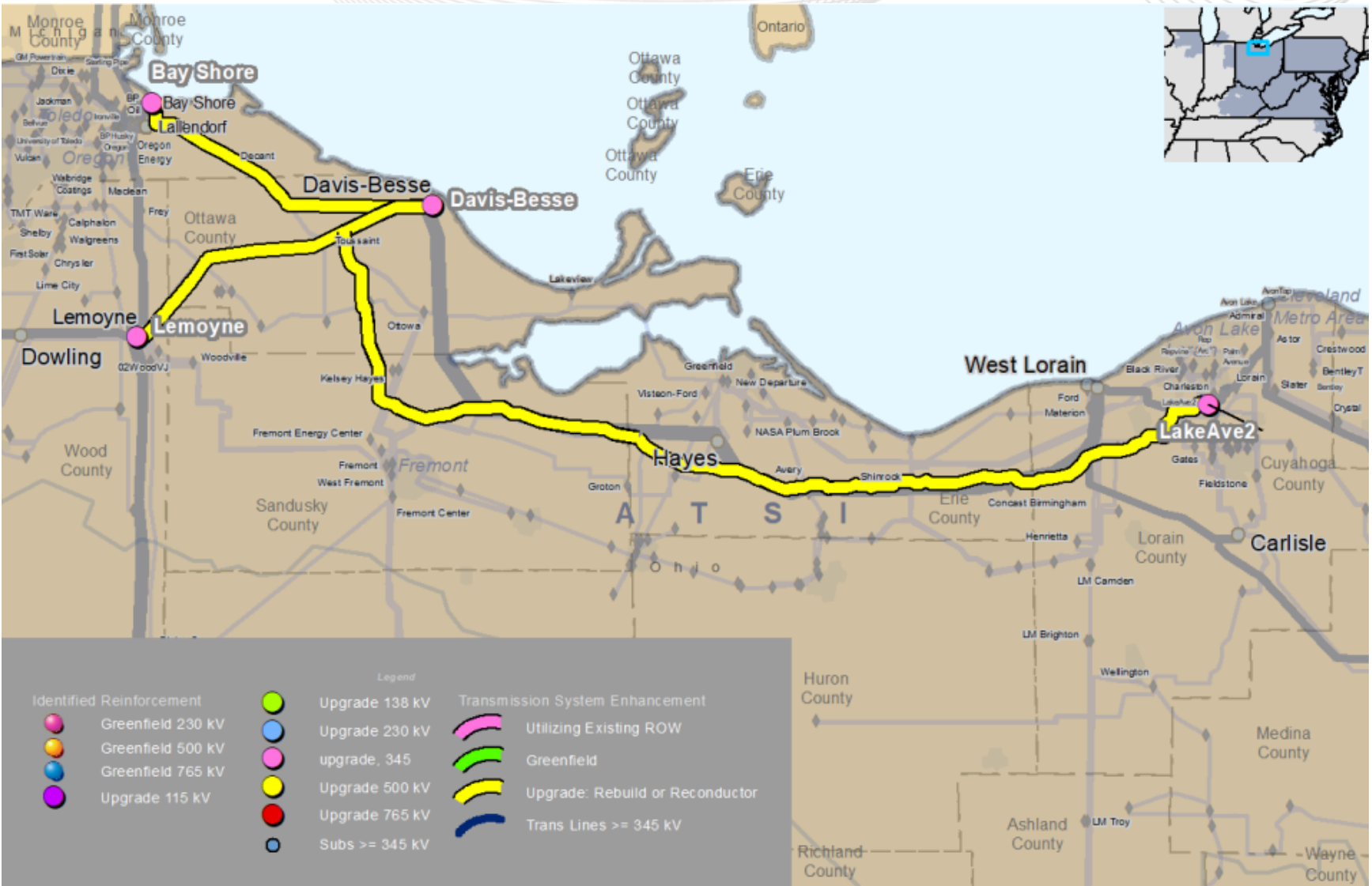
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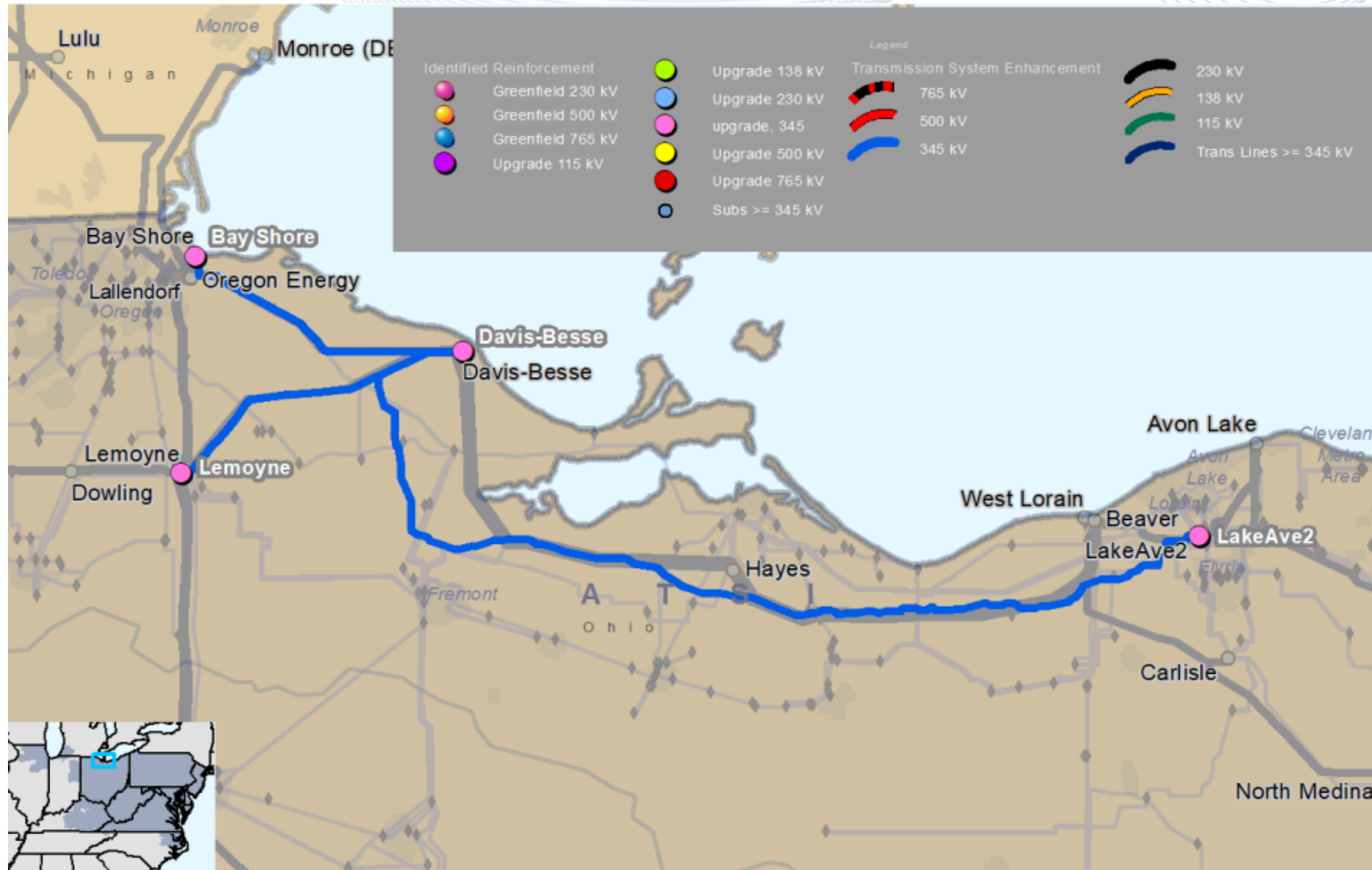
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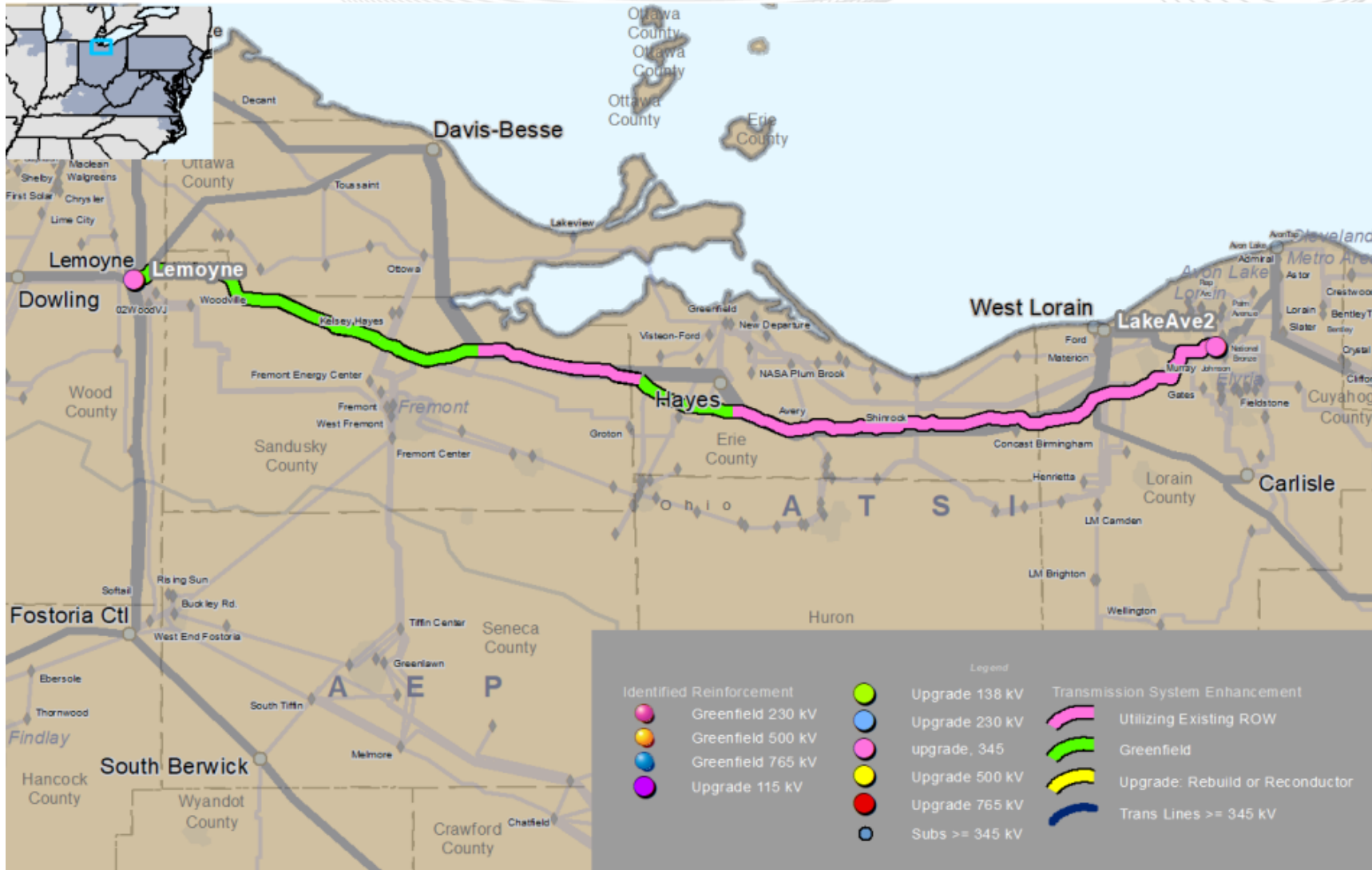
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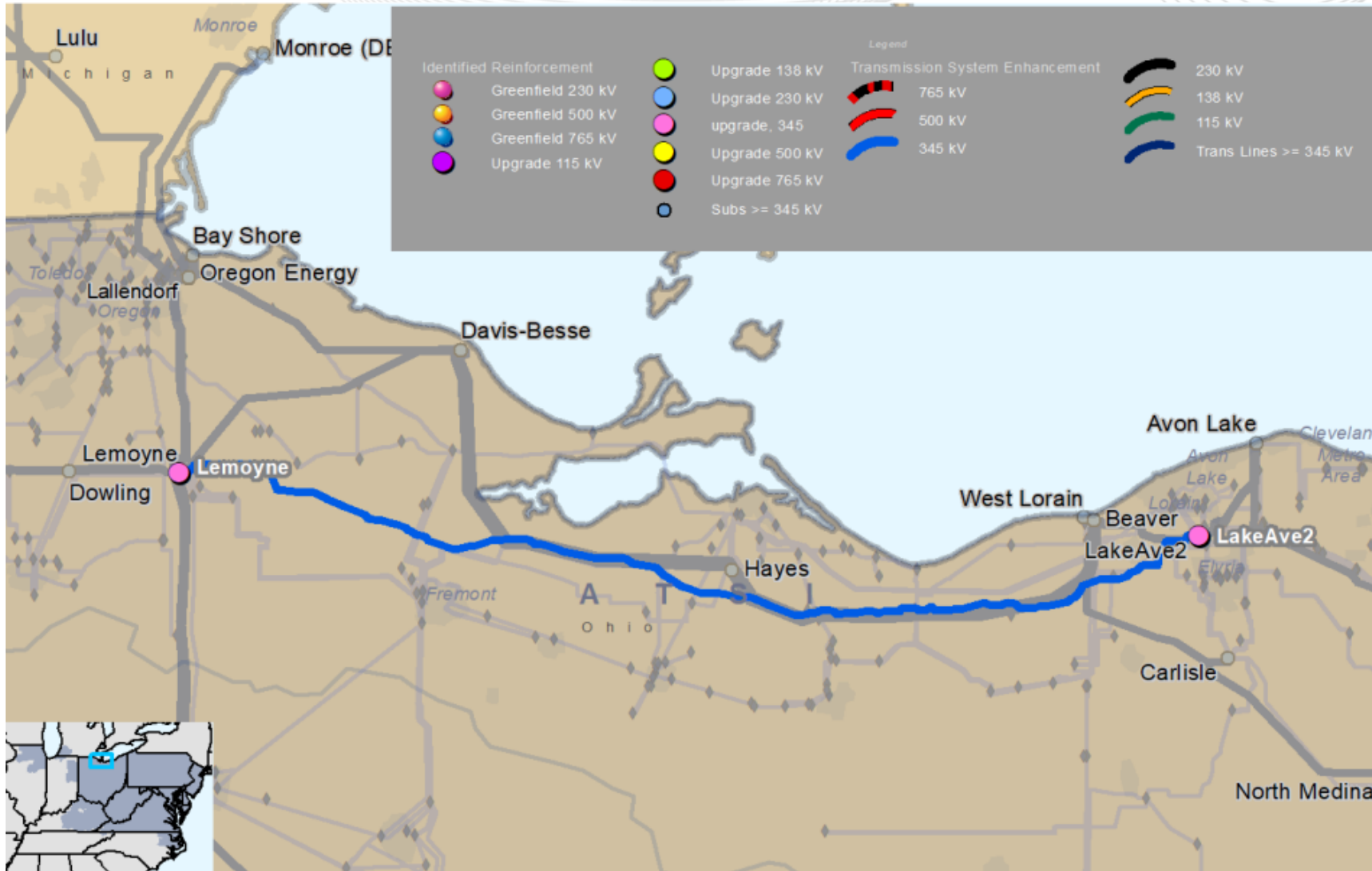
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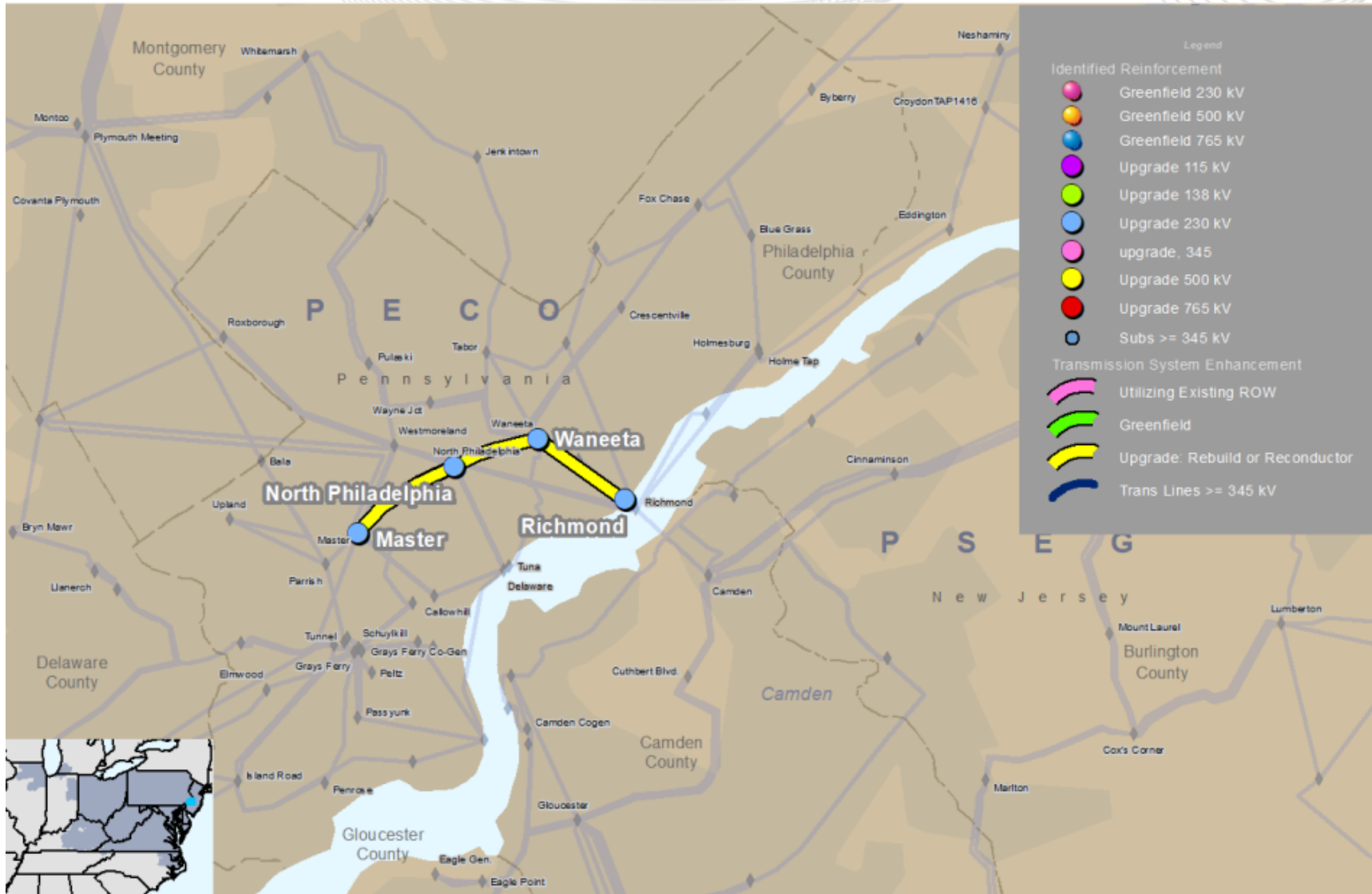


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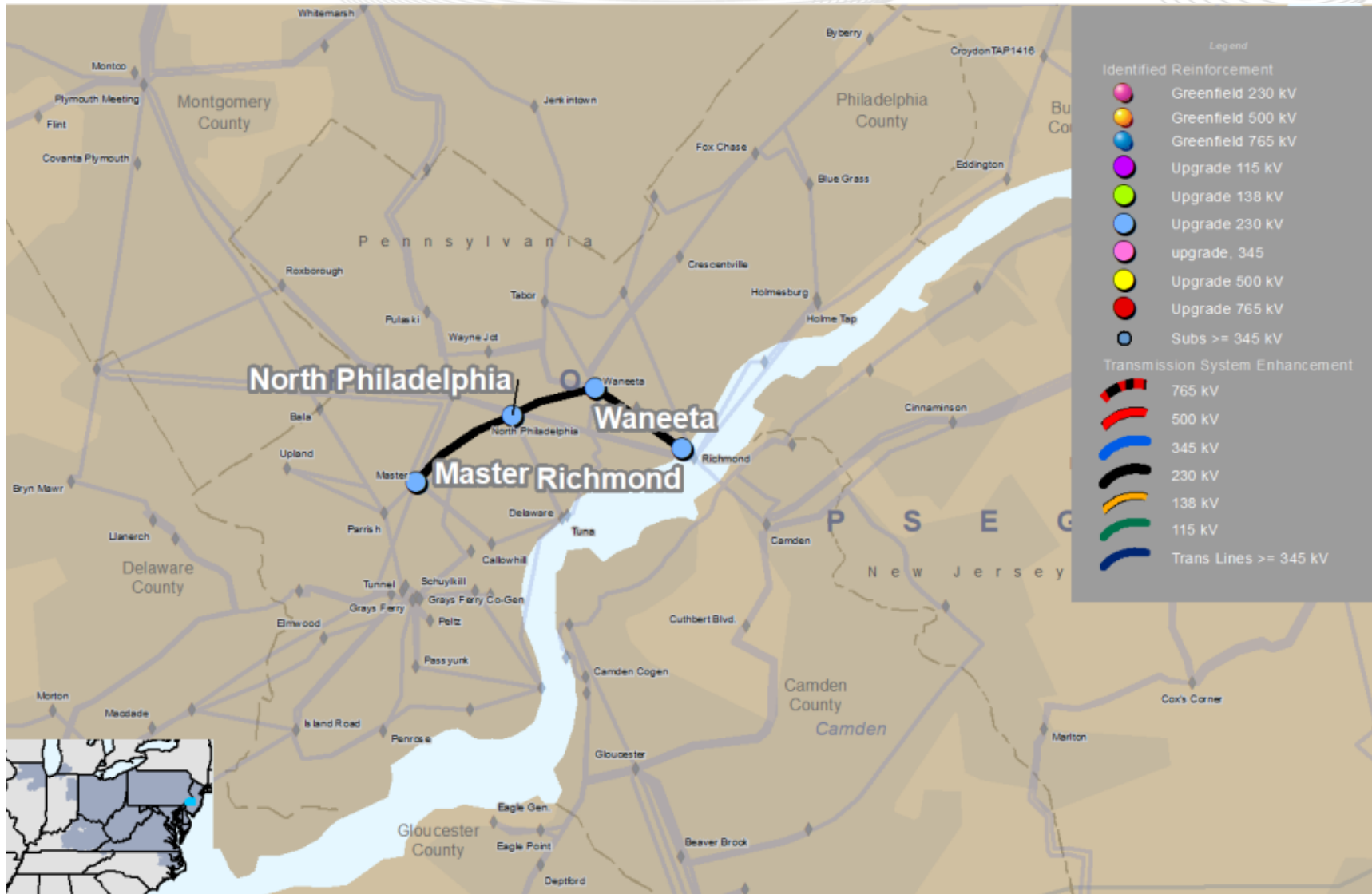


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PECO

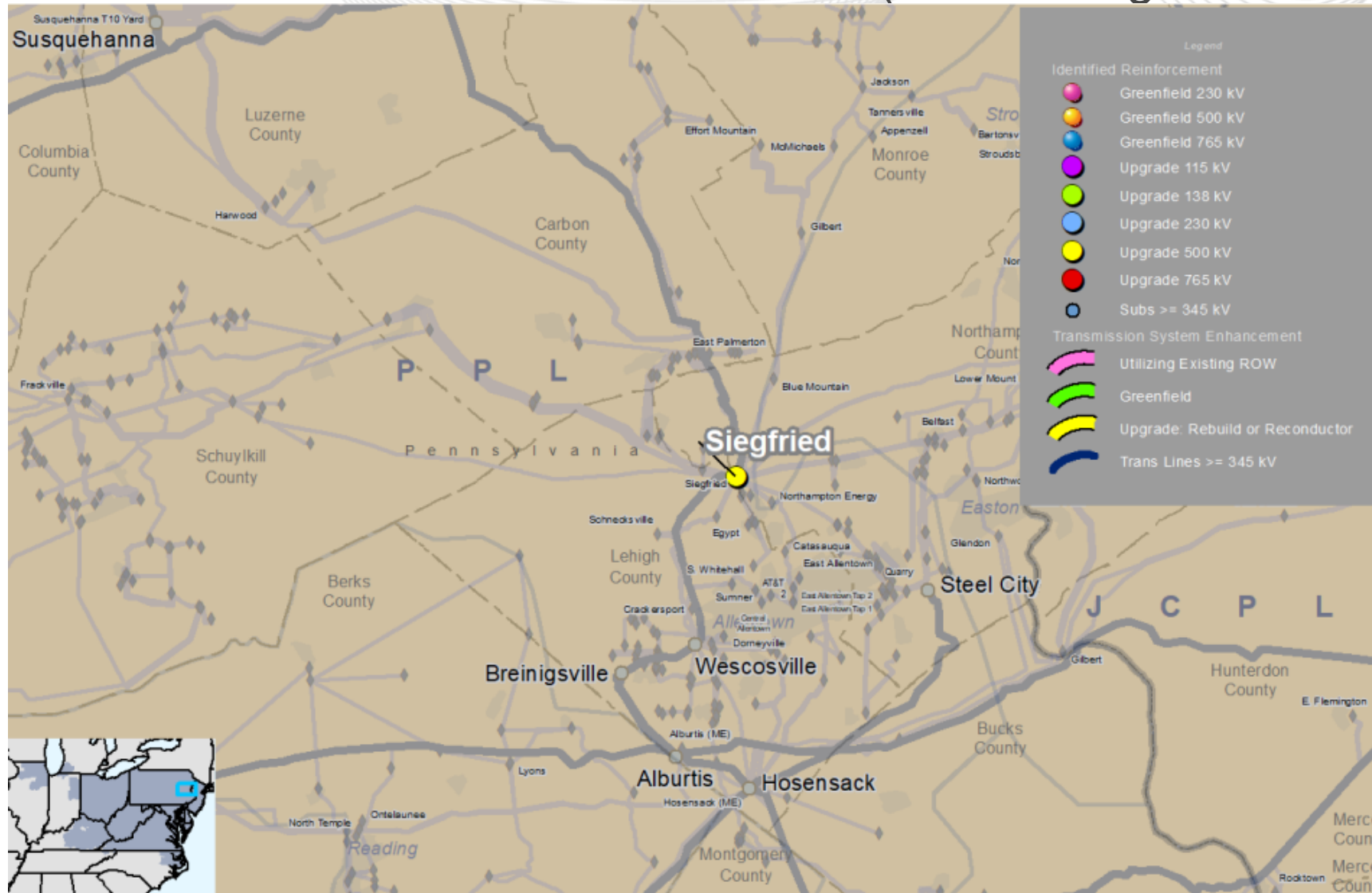


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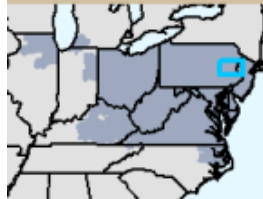


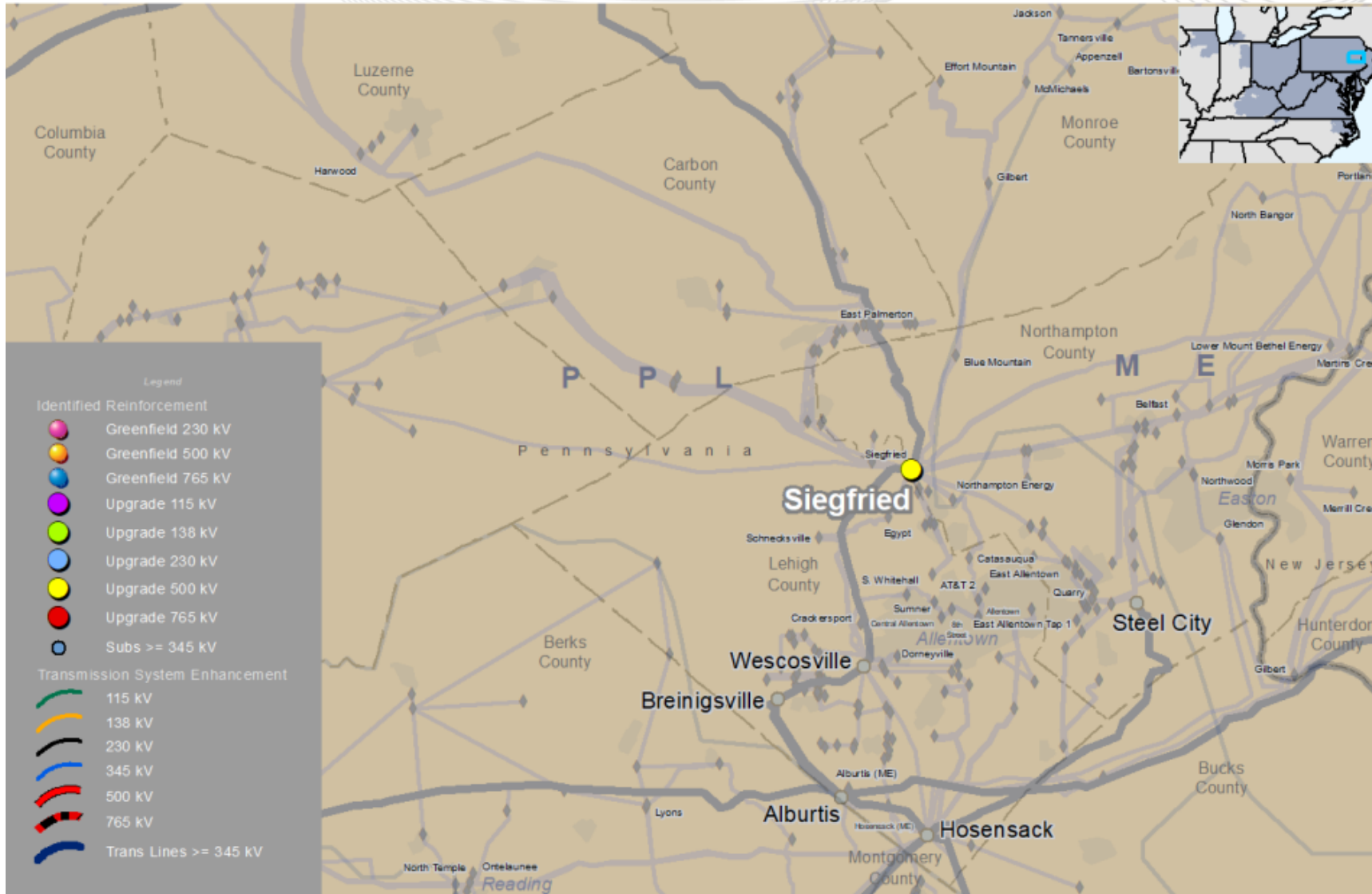
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PPL/TRANSLK

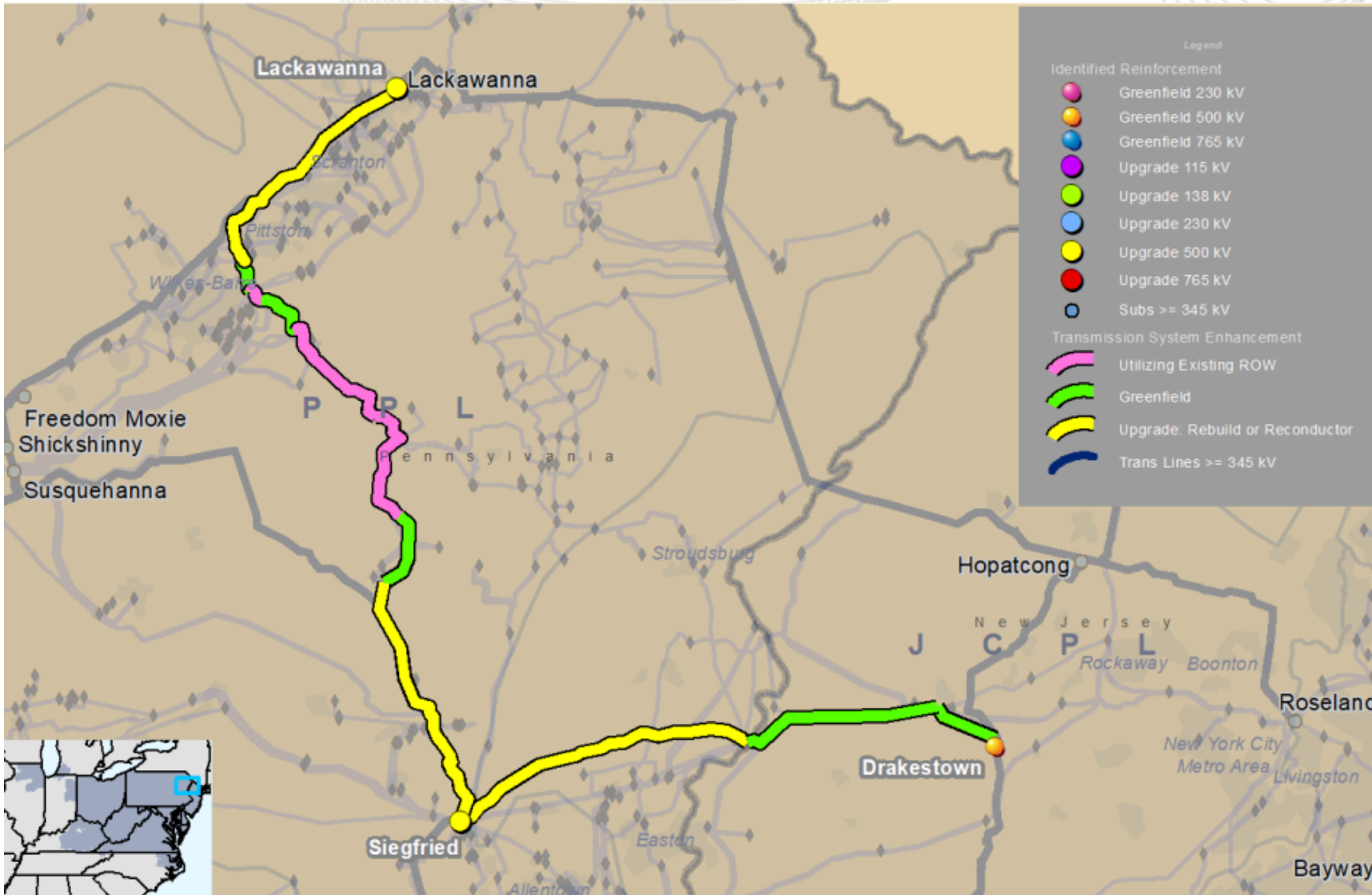


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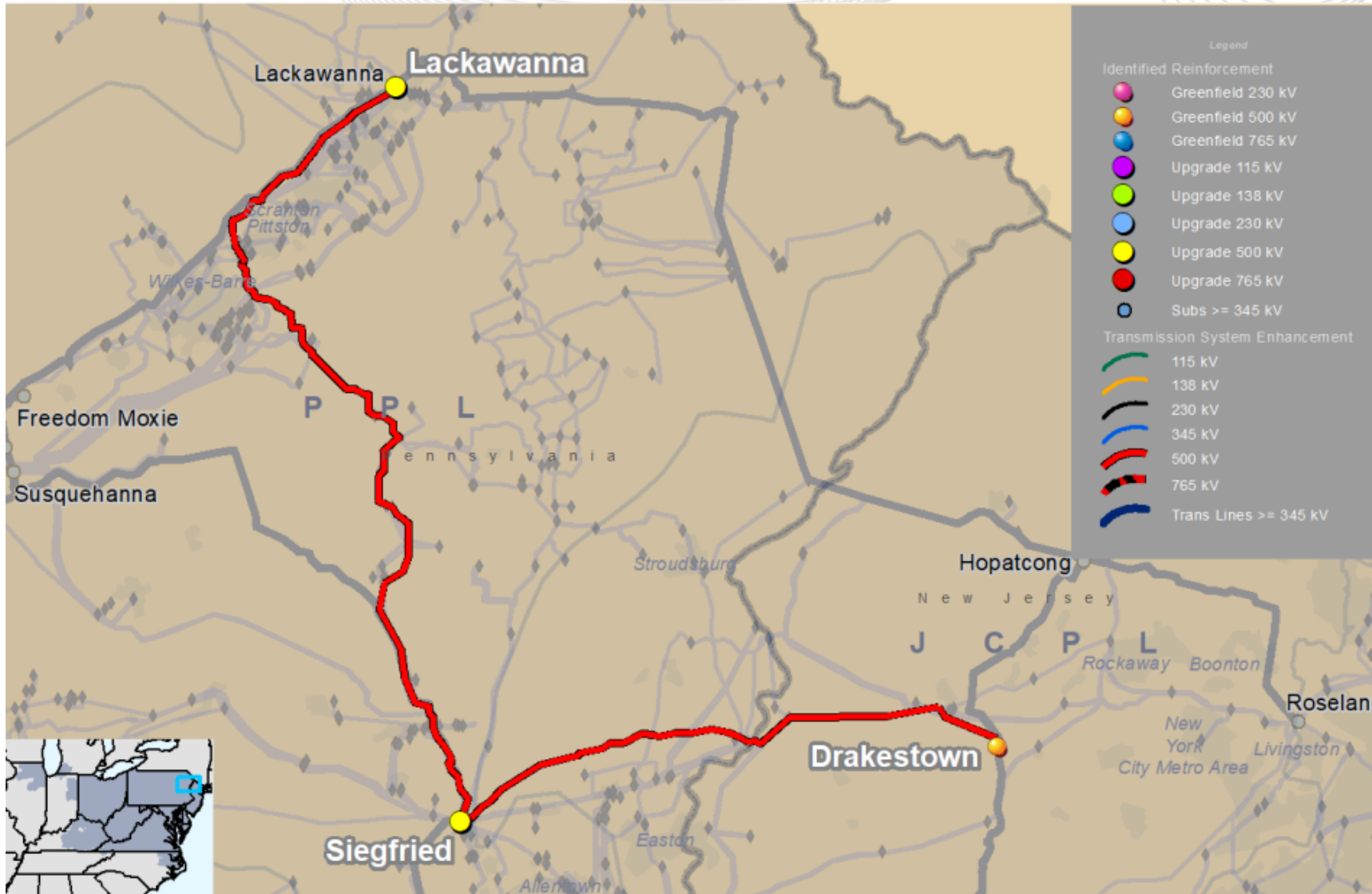




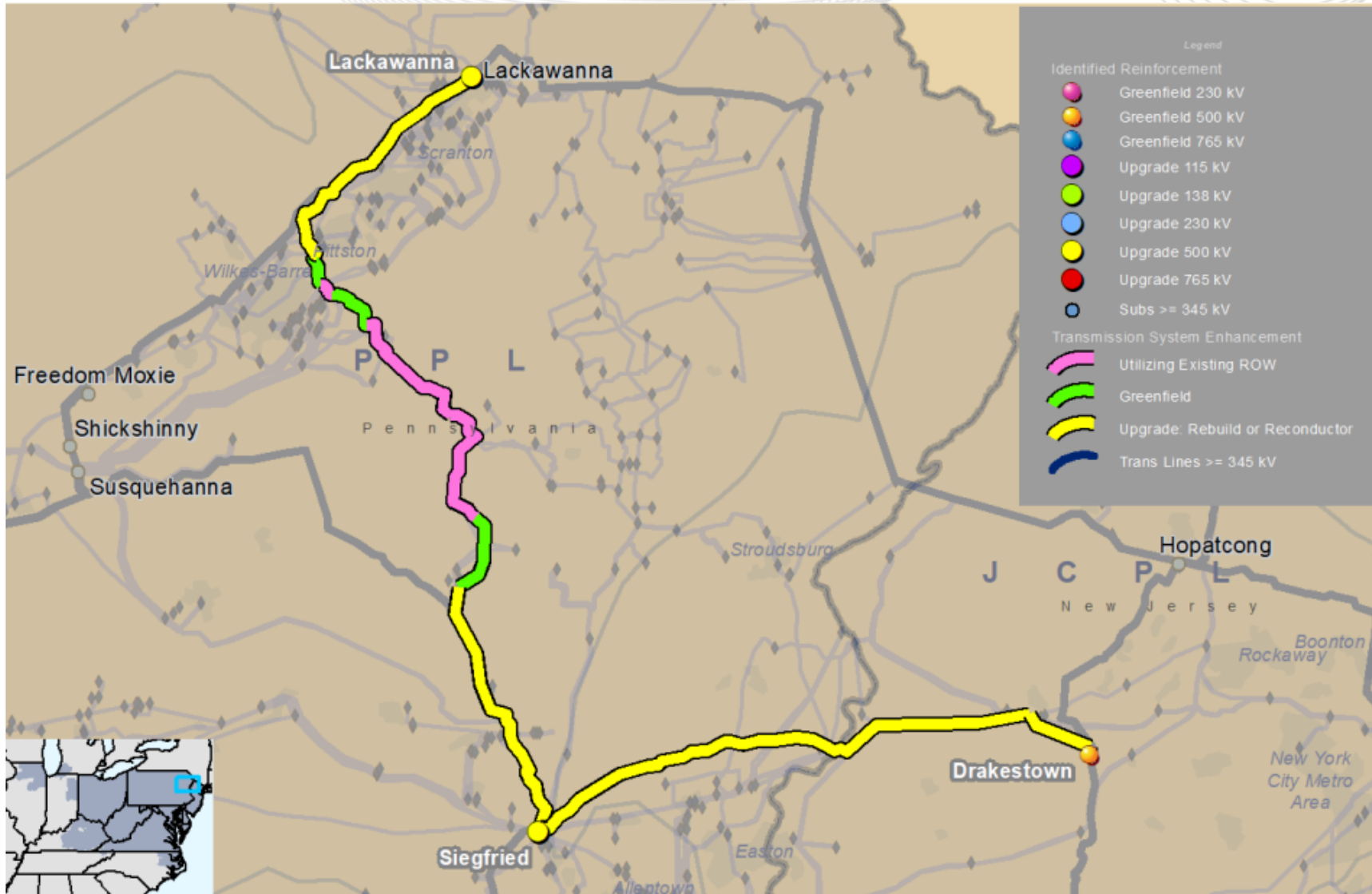
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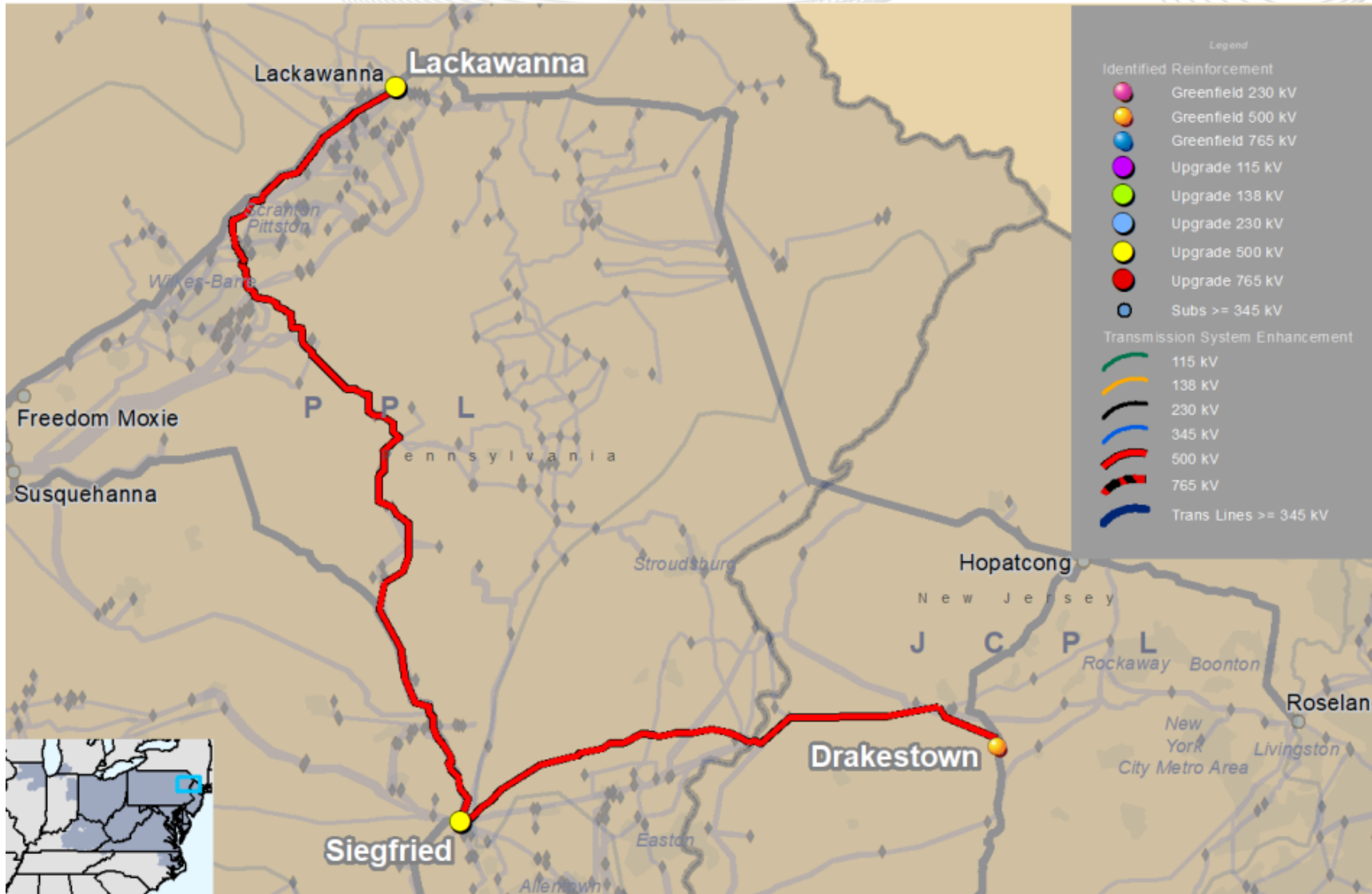
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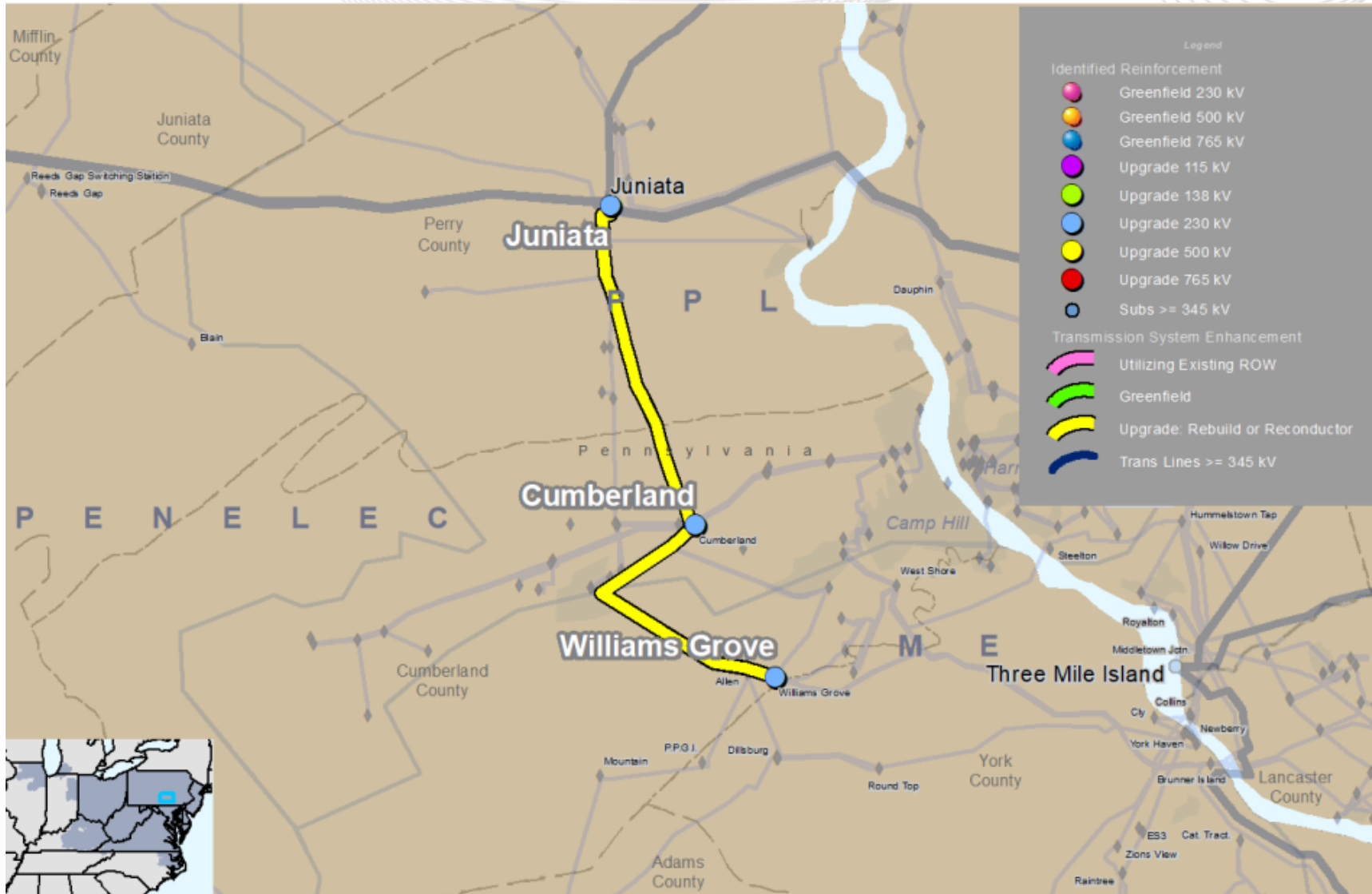
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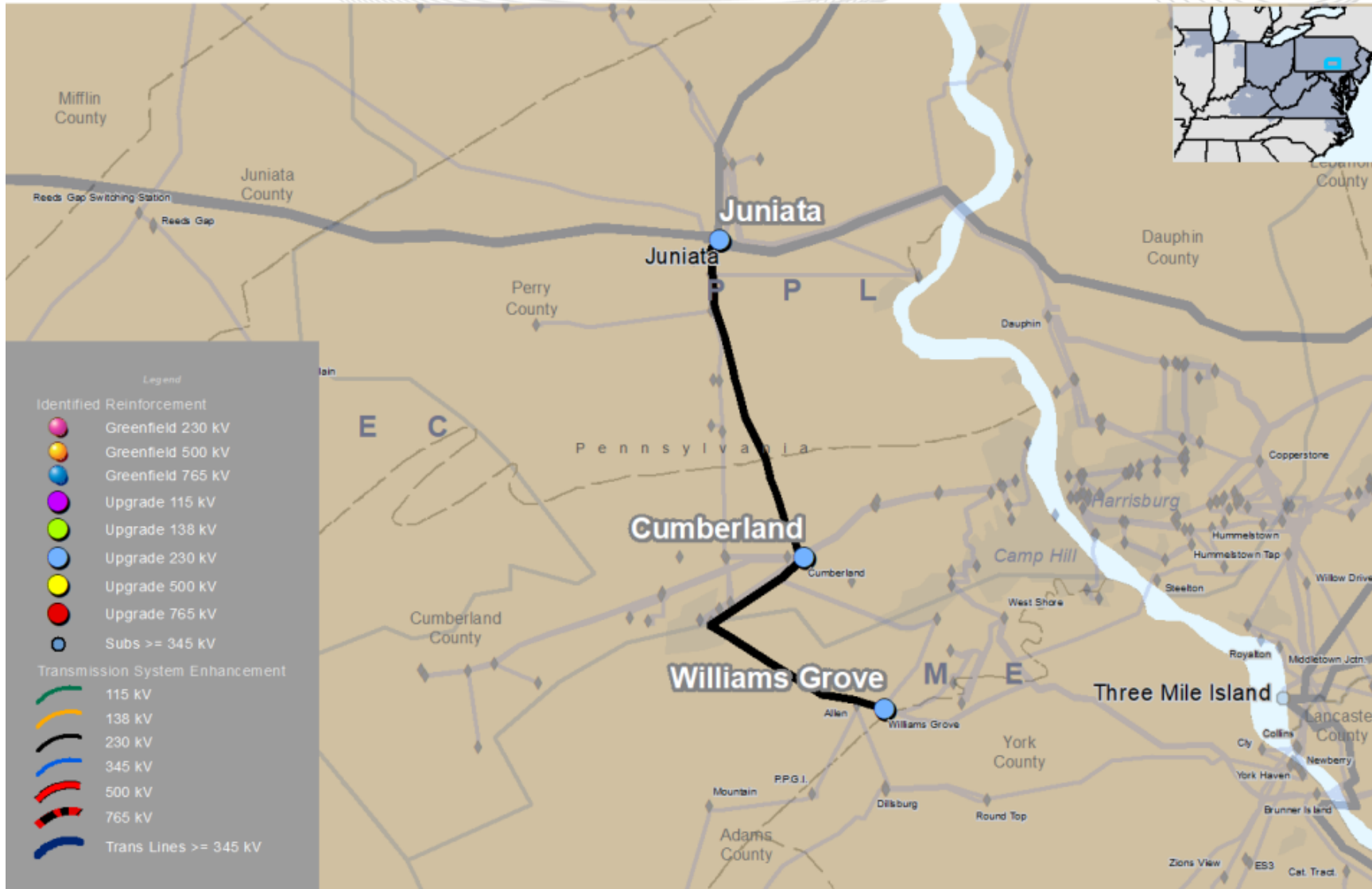


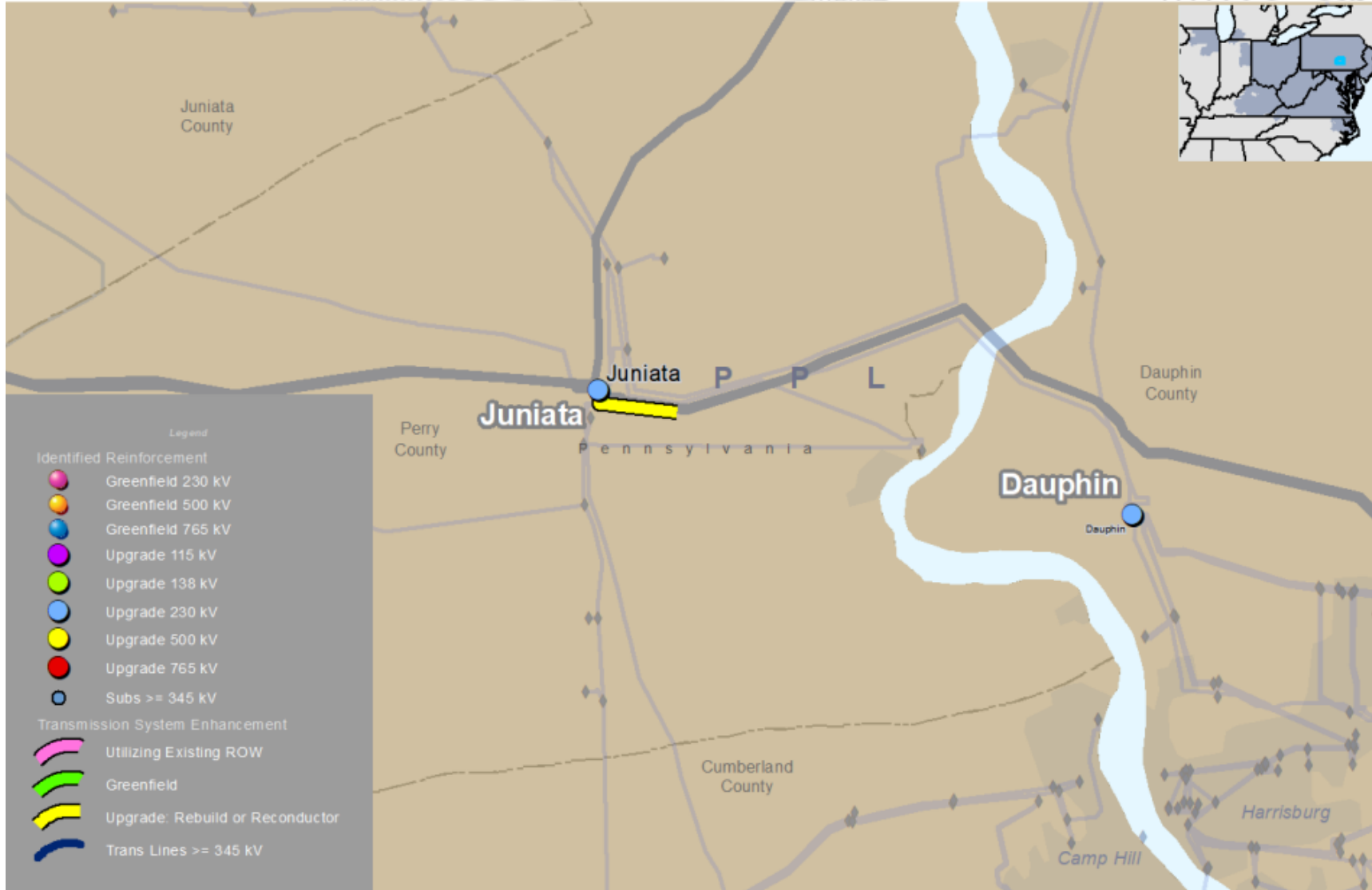
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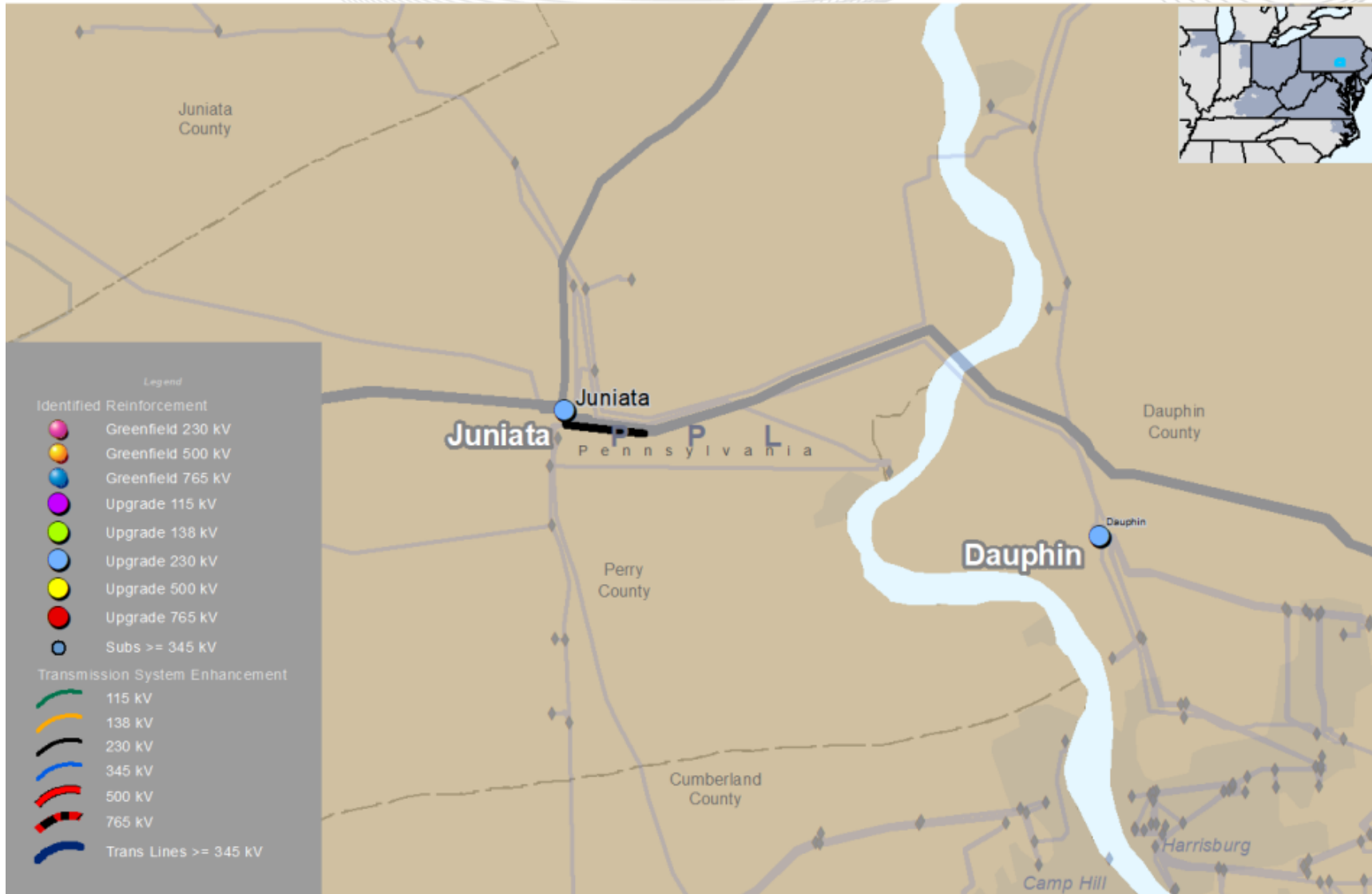
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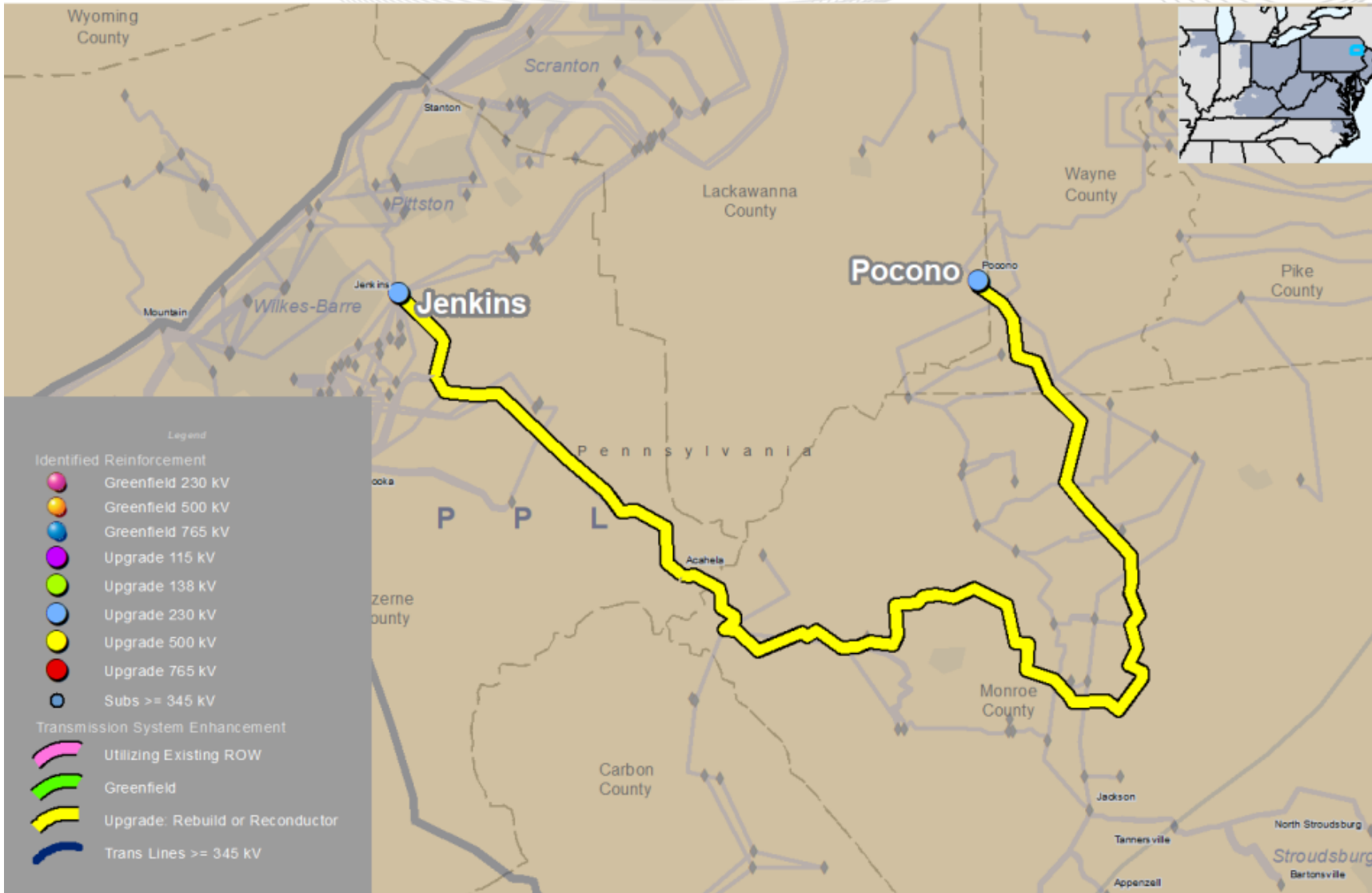




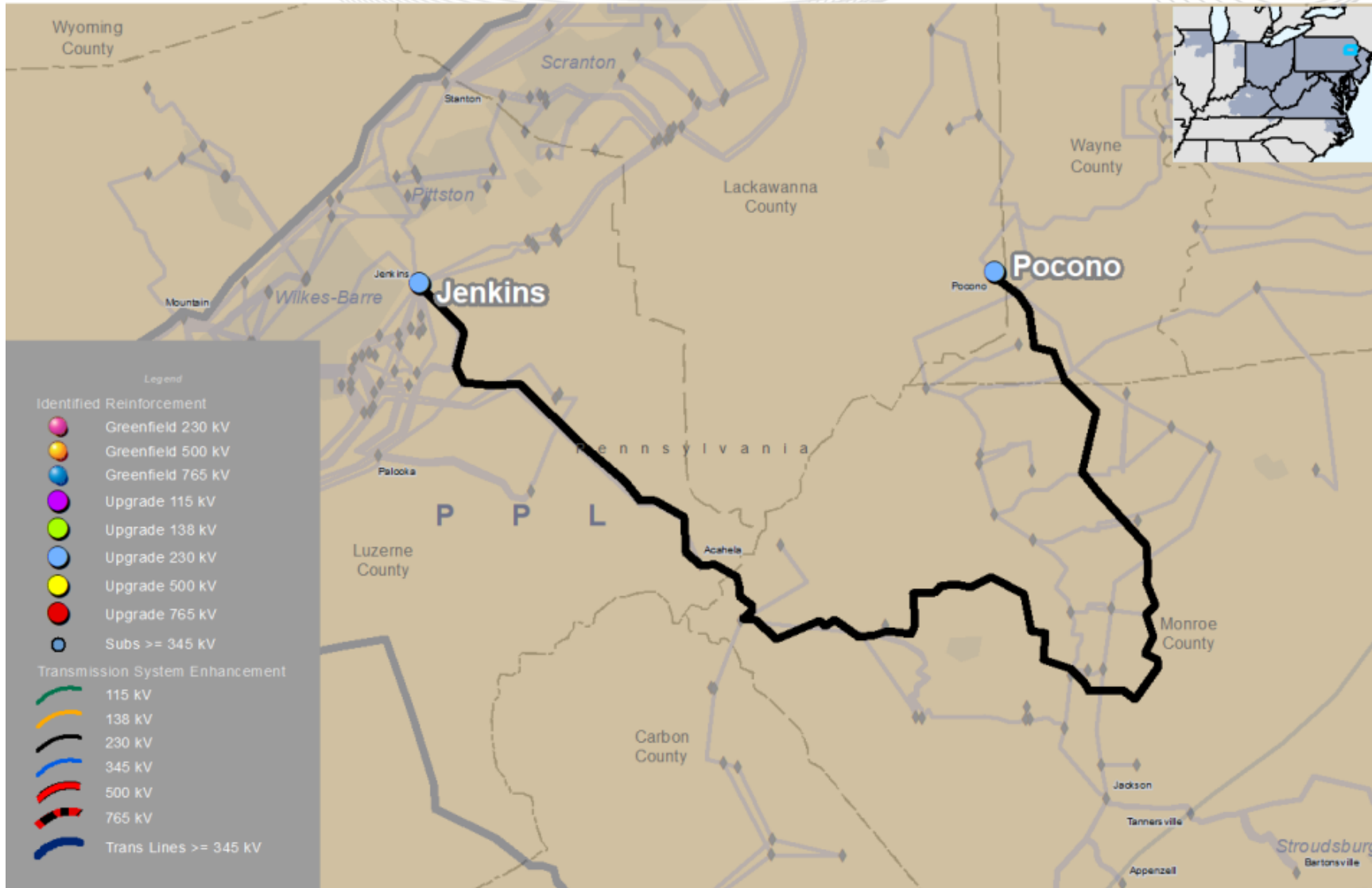
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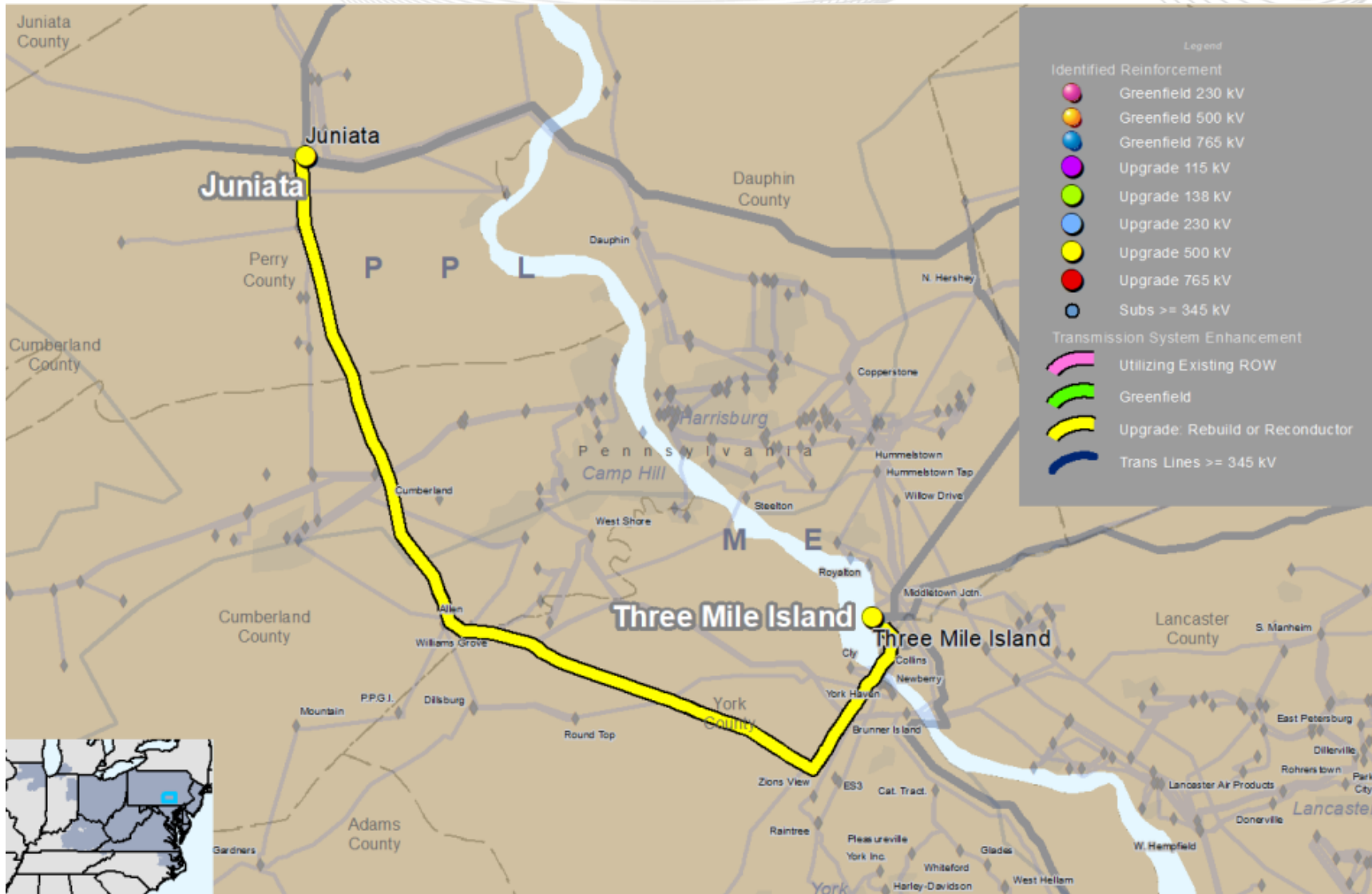
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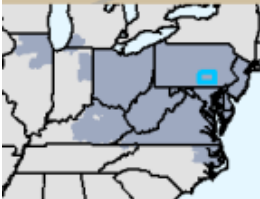
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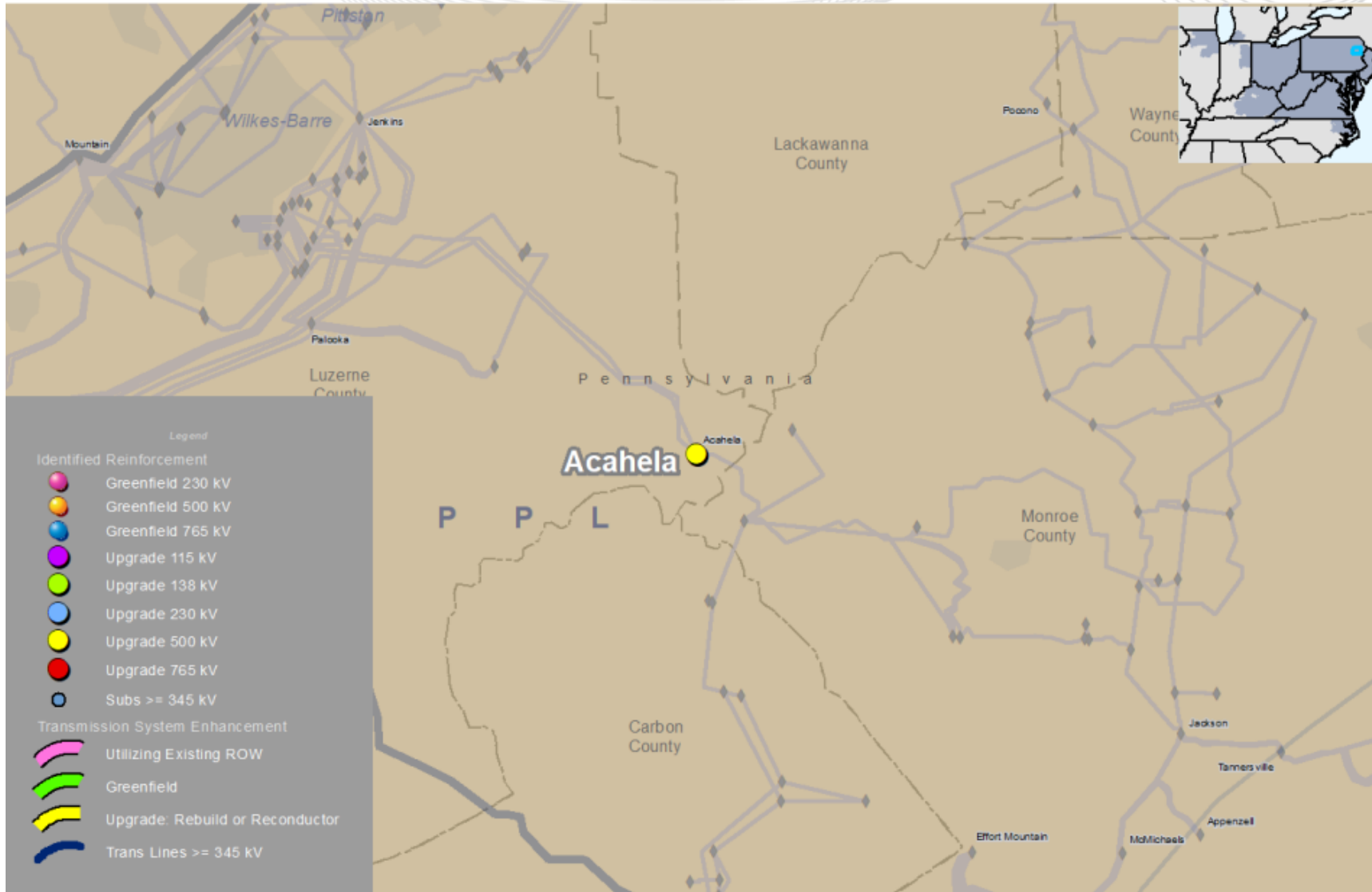


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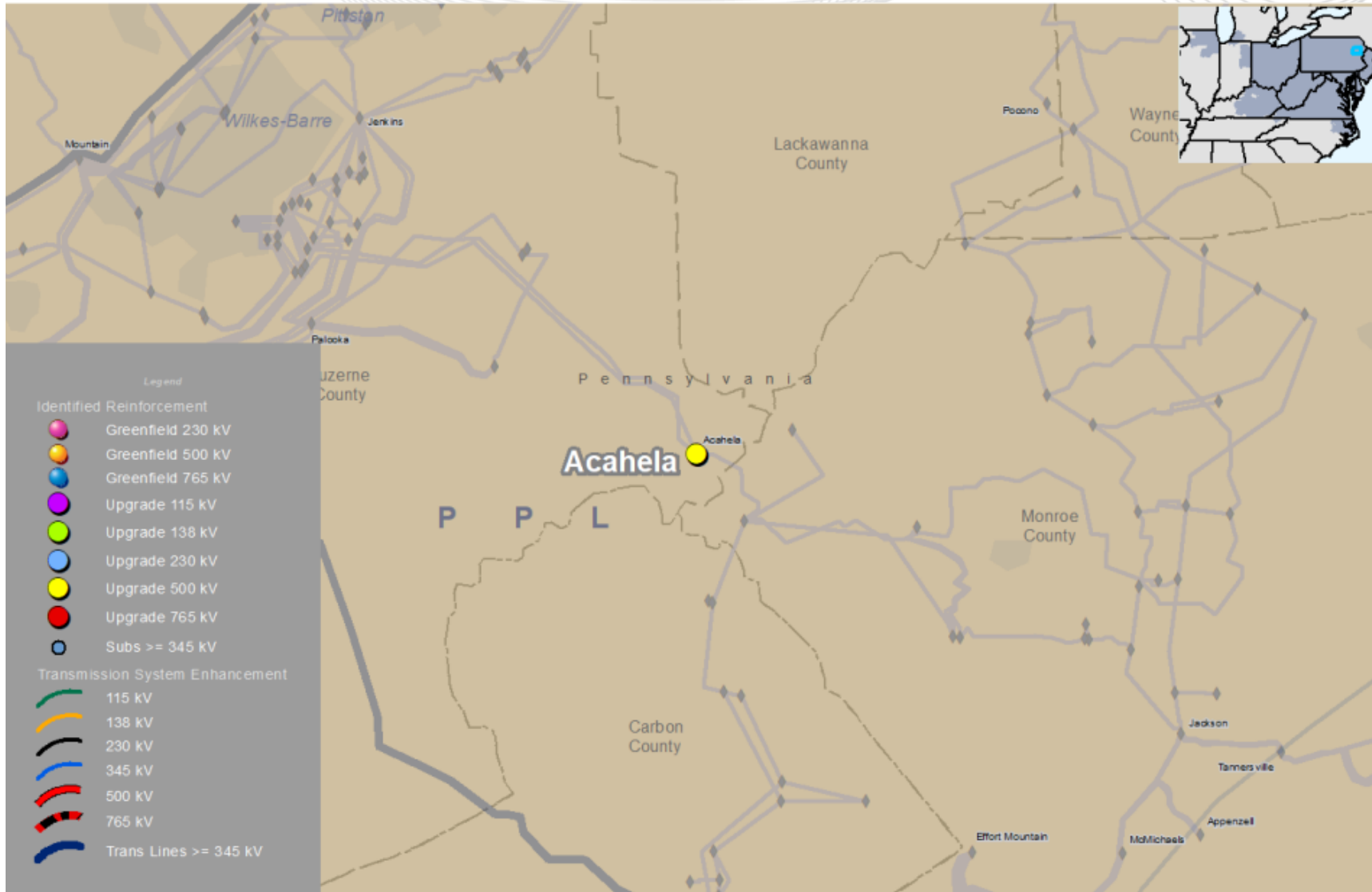




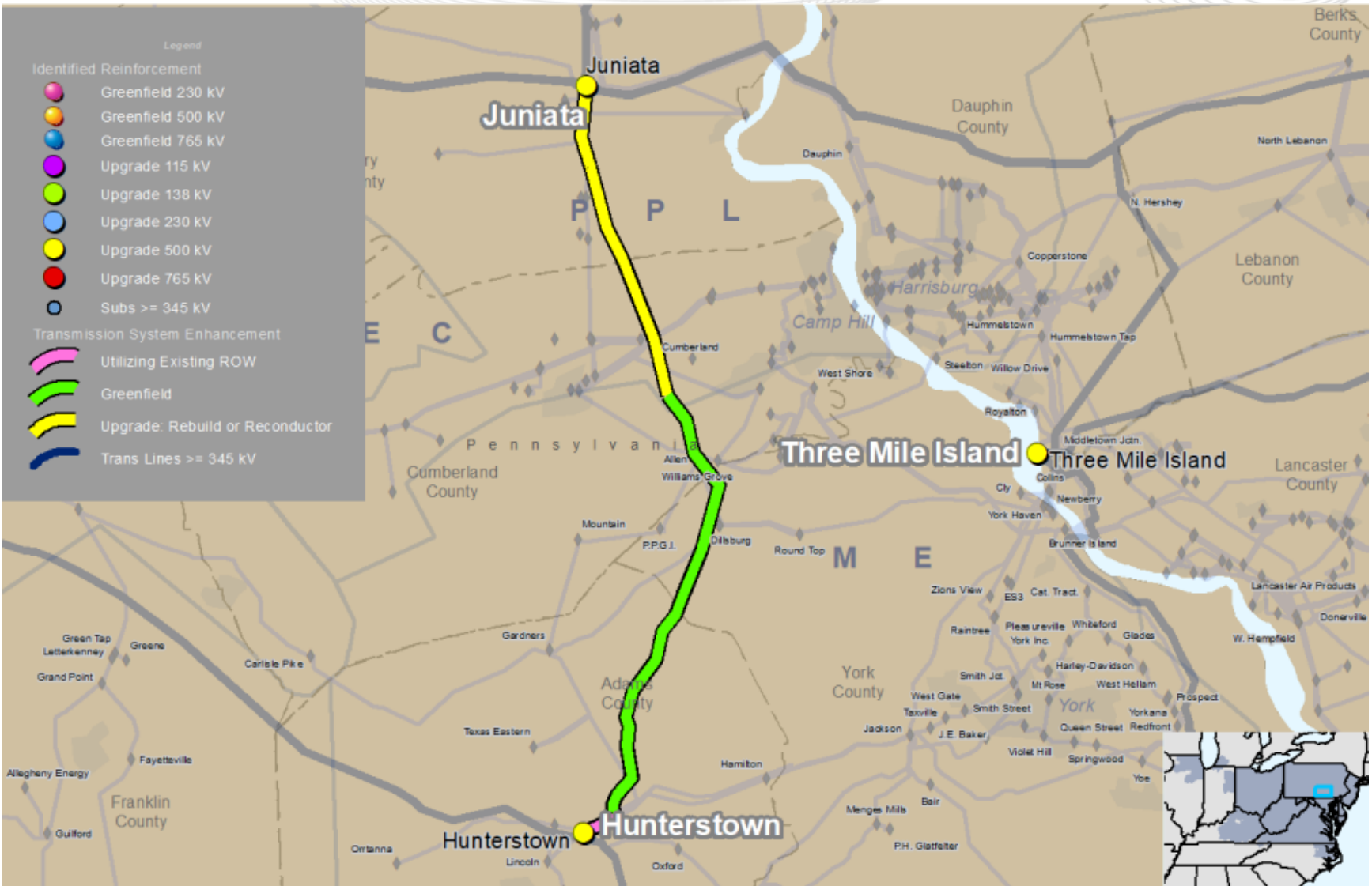
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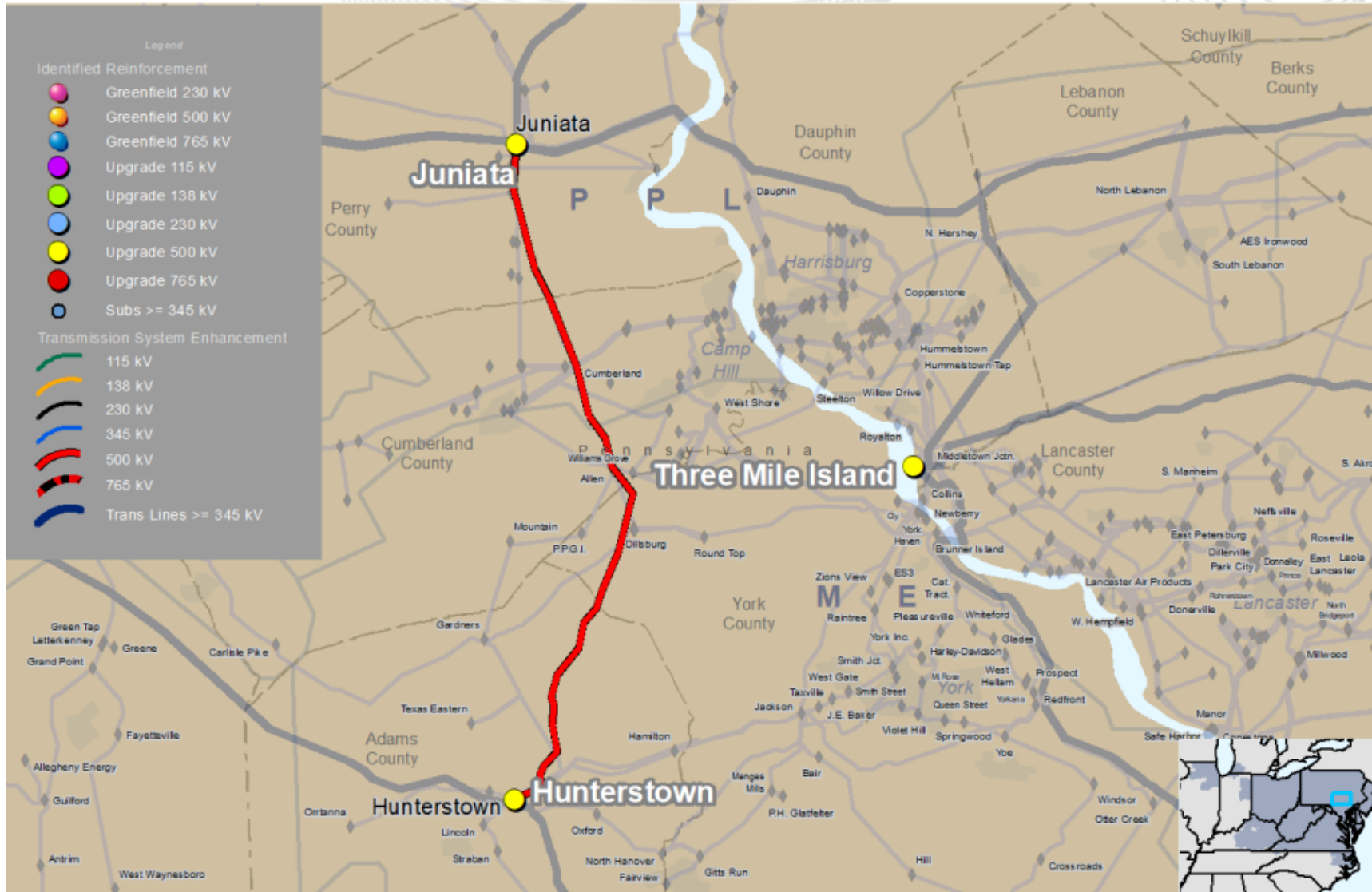
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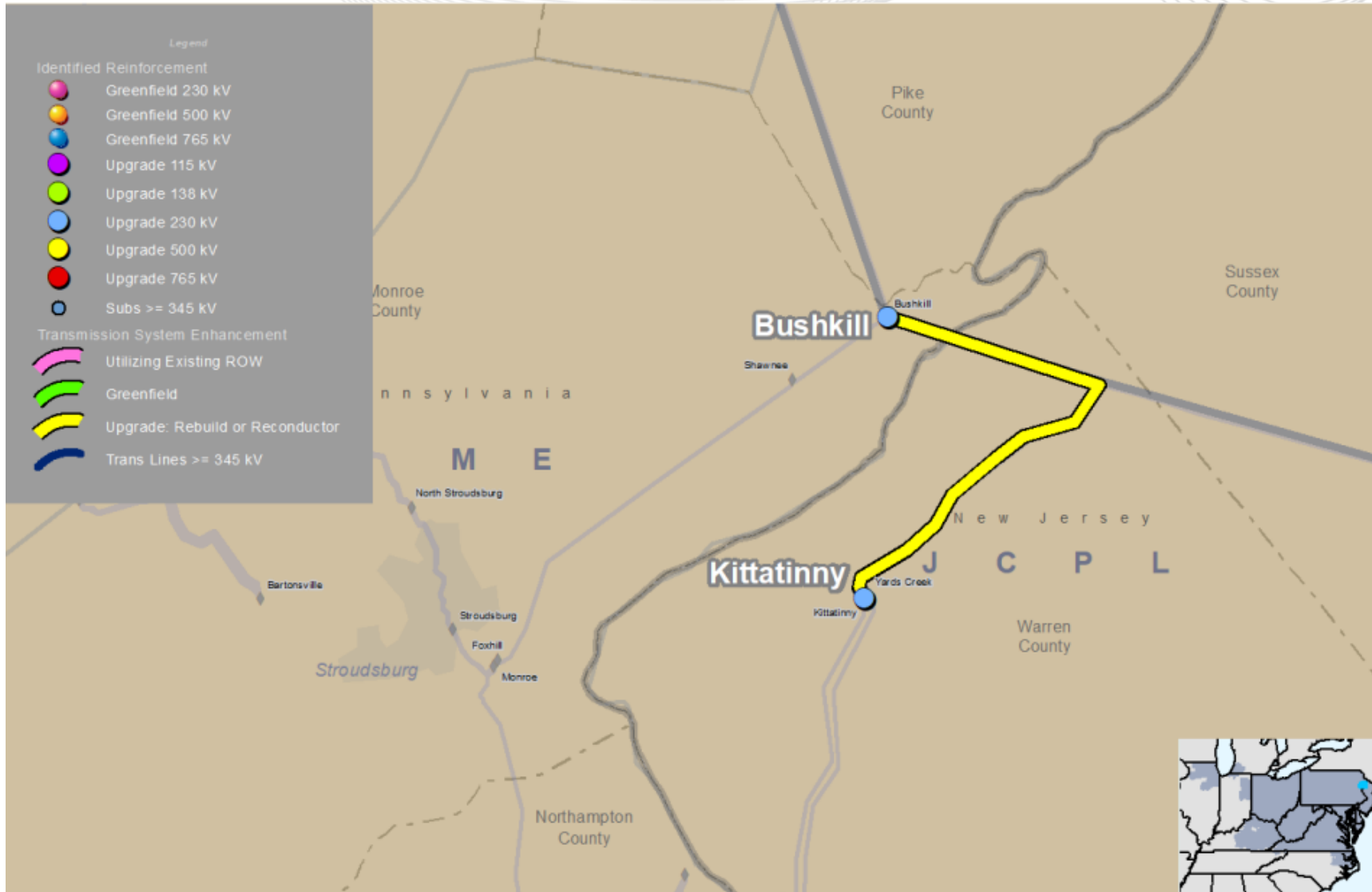
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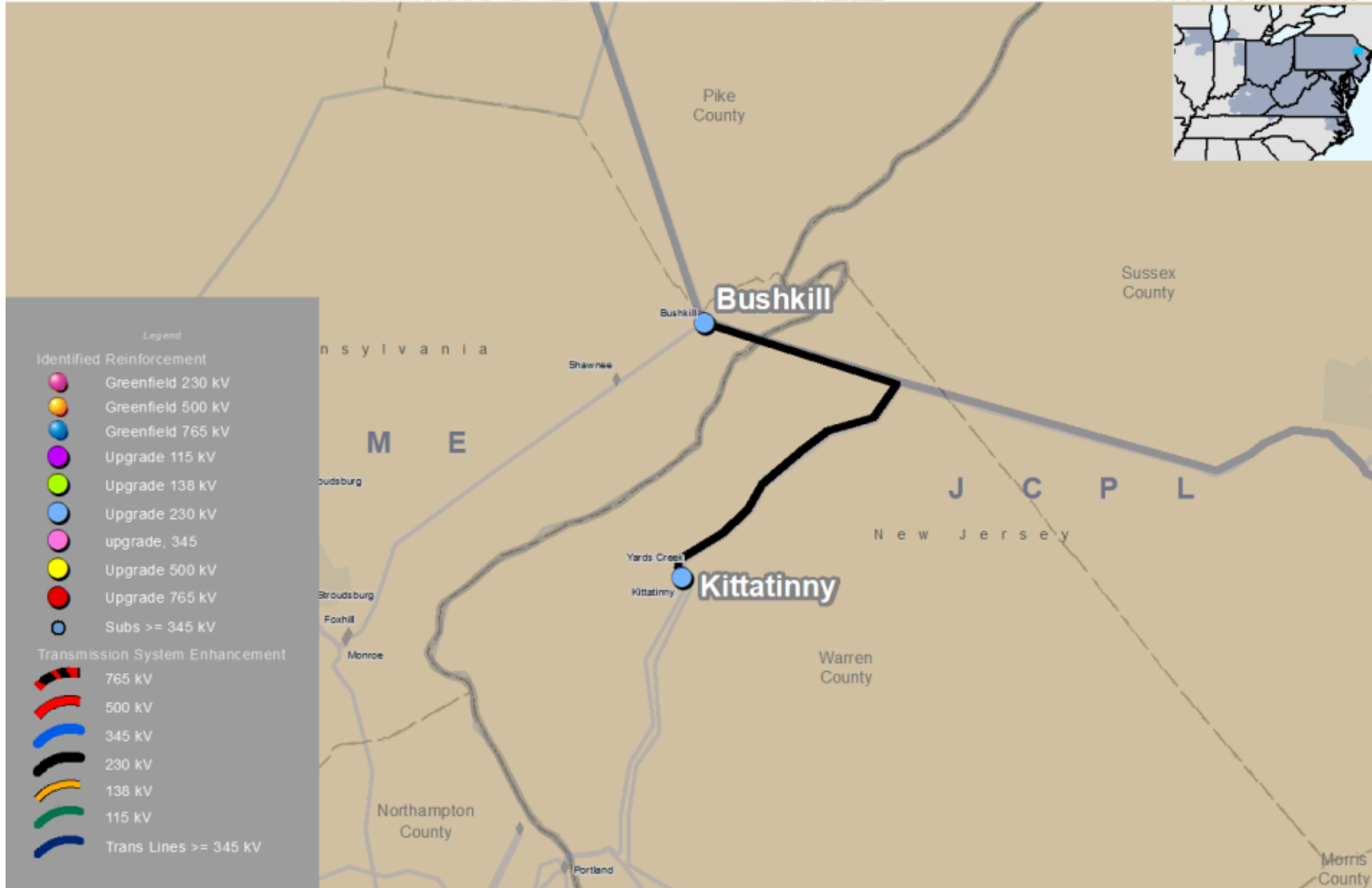


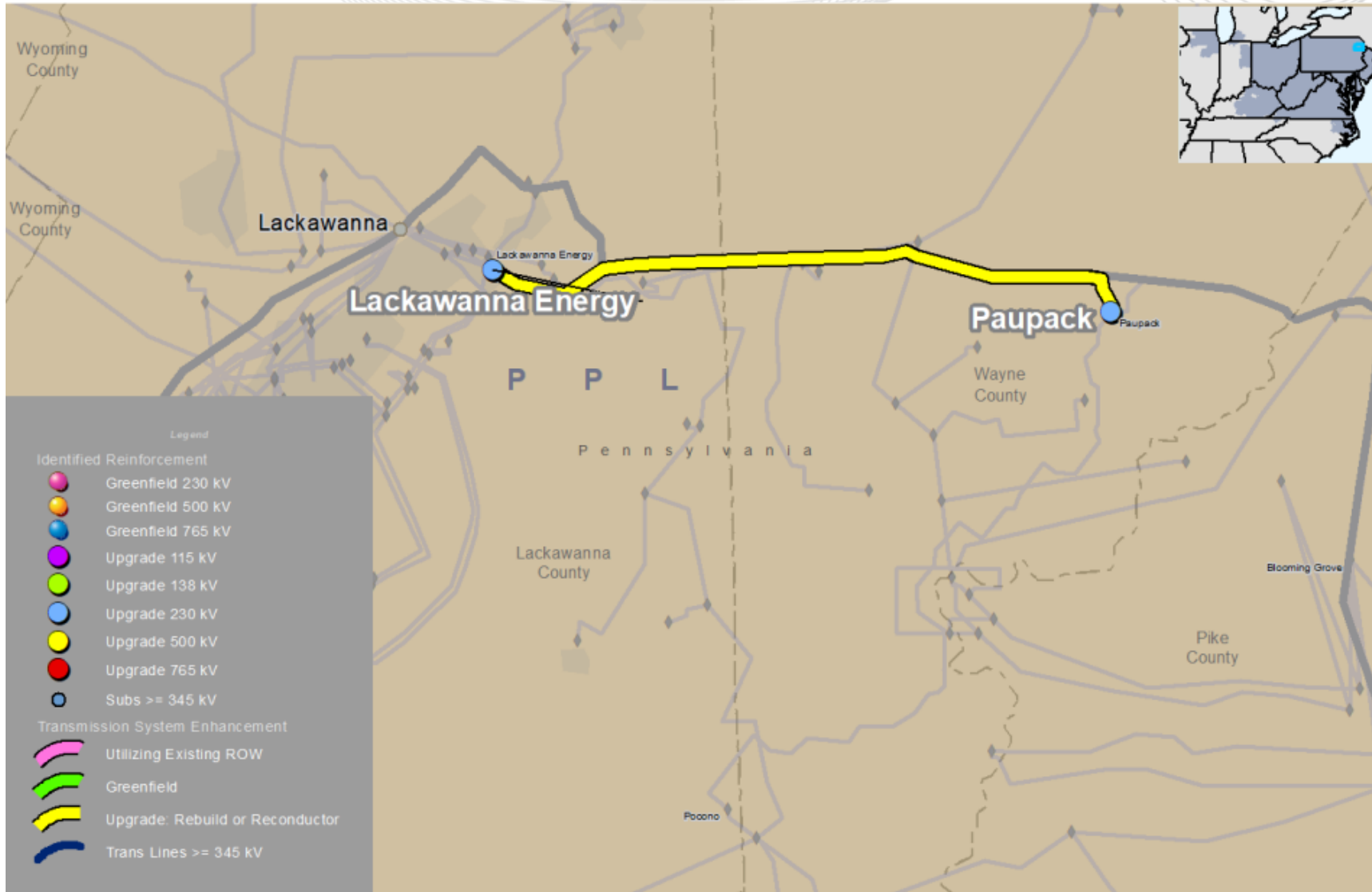
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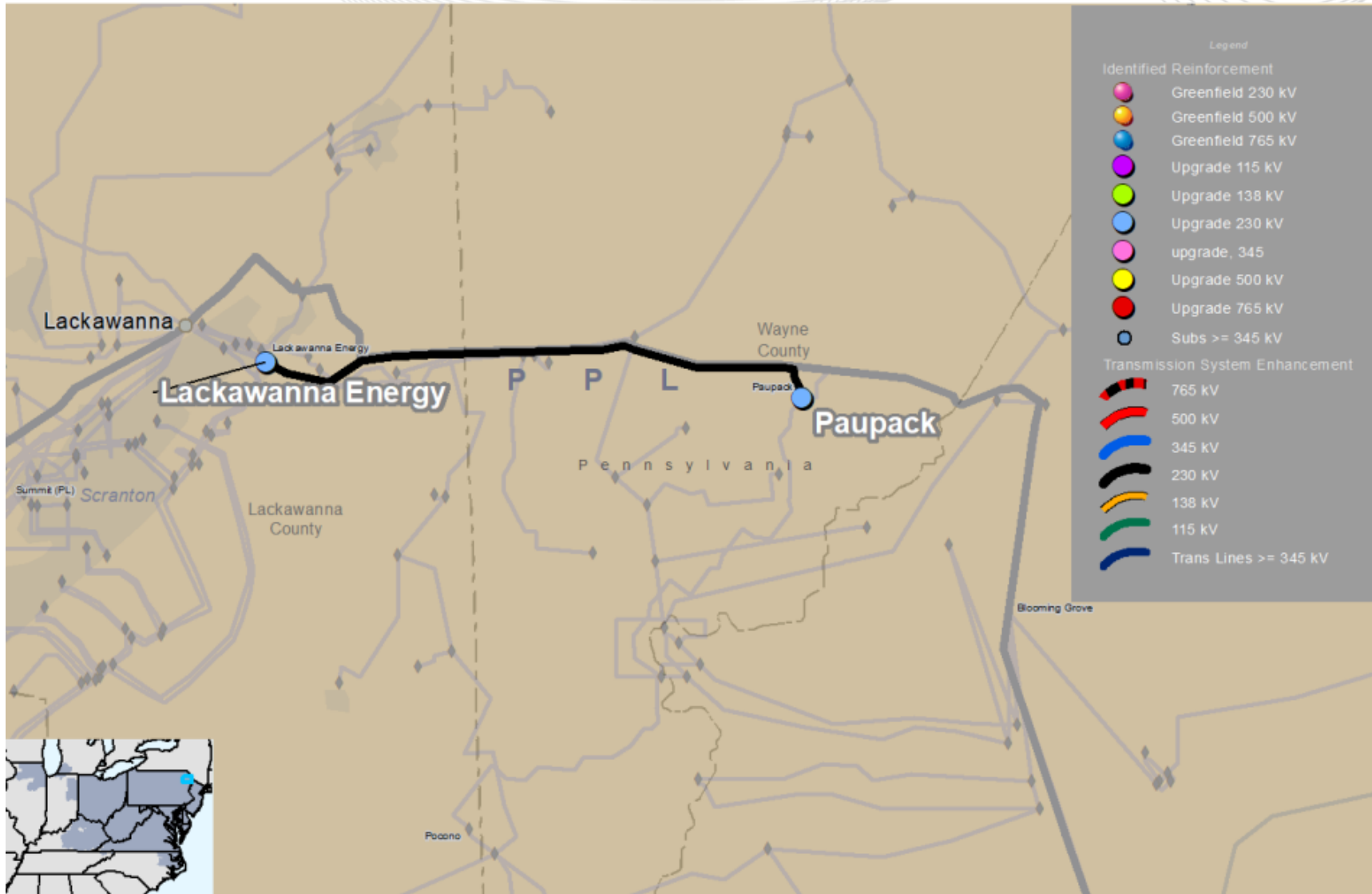


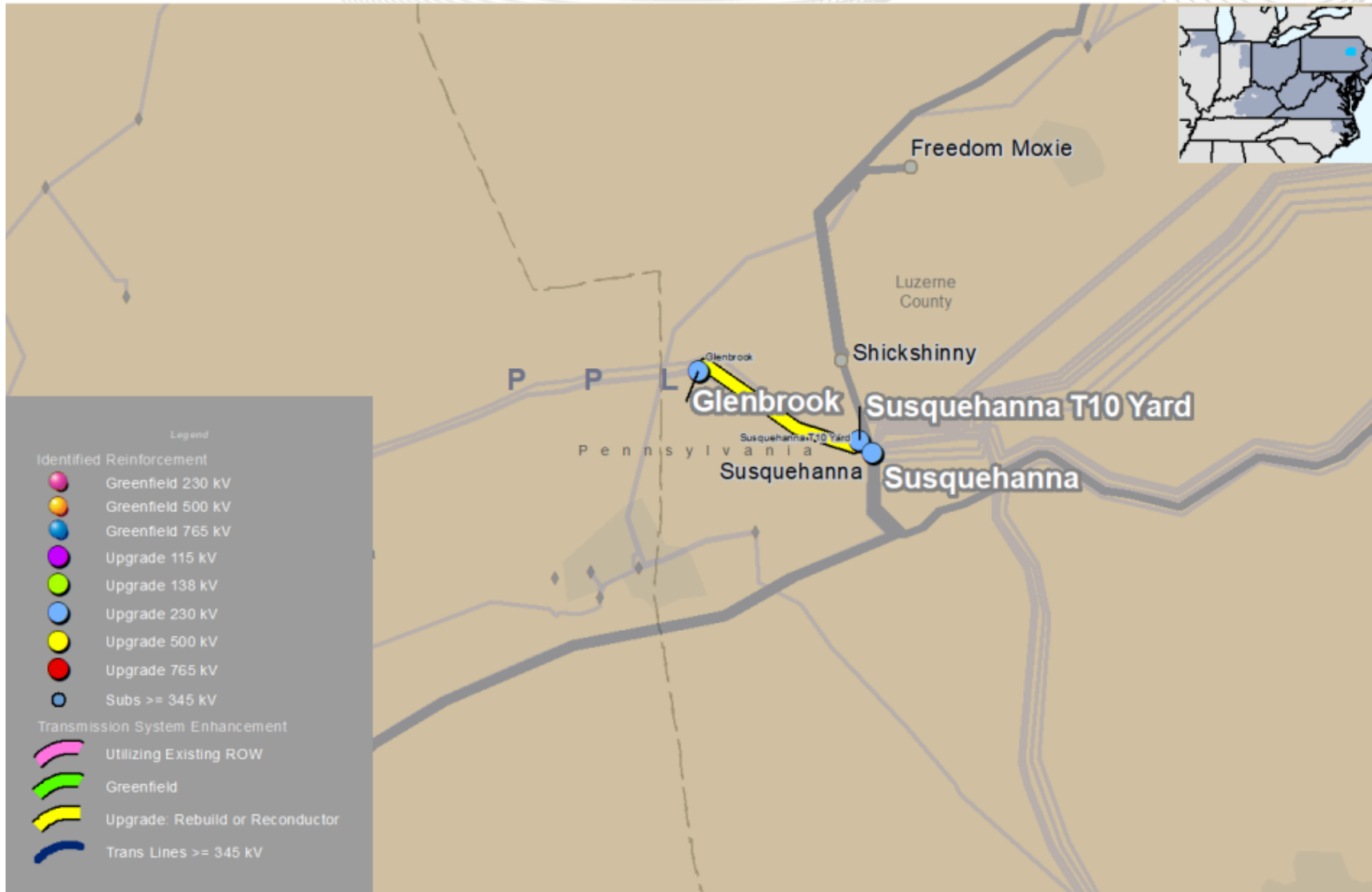
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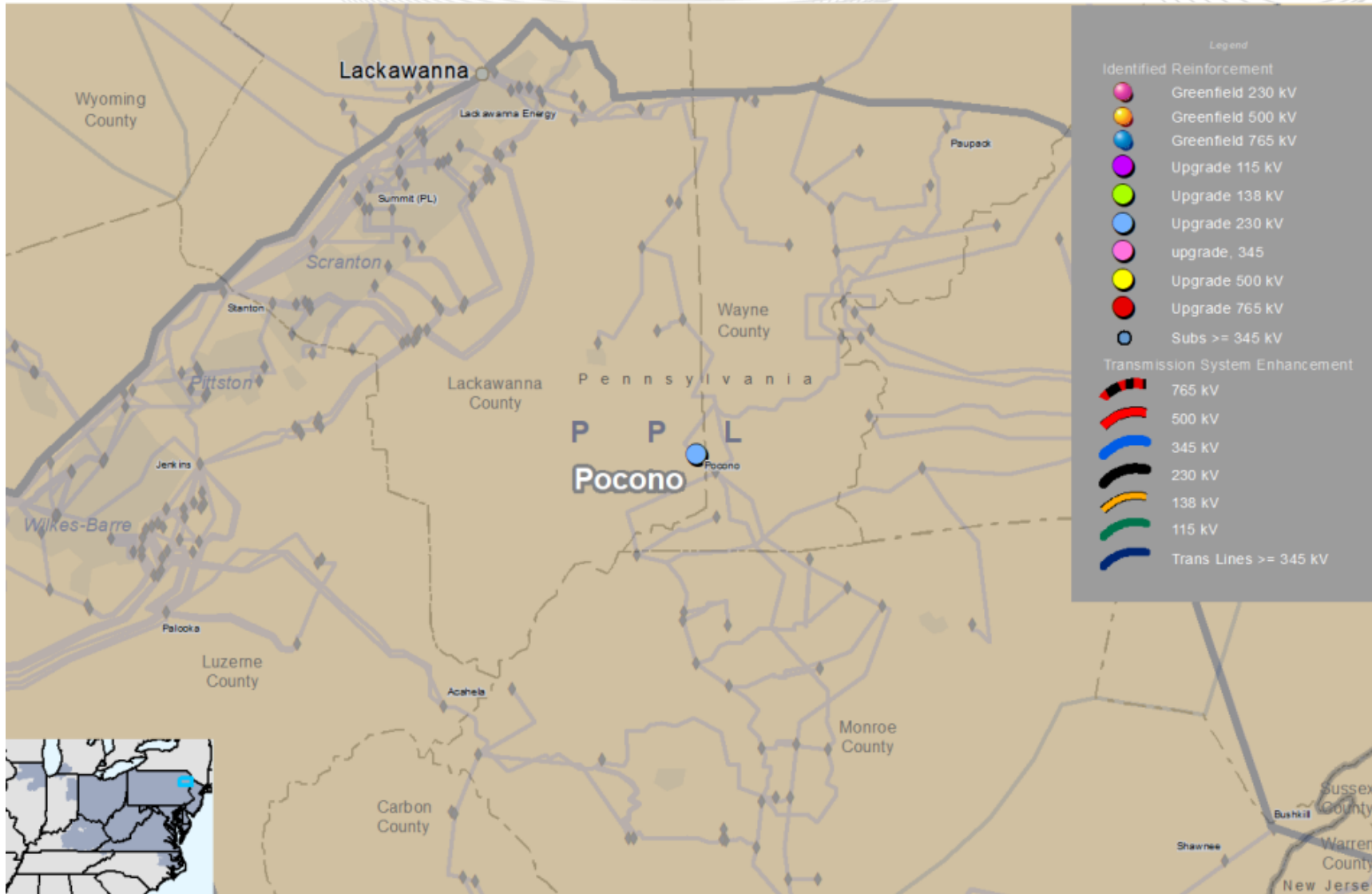


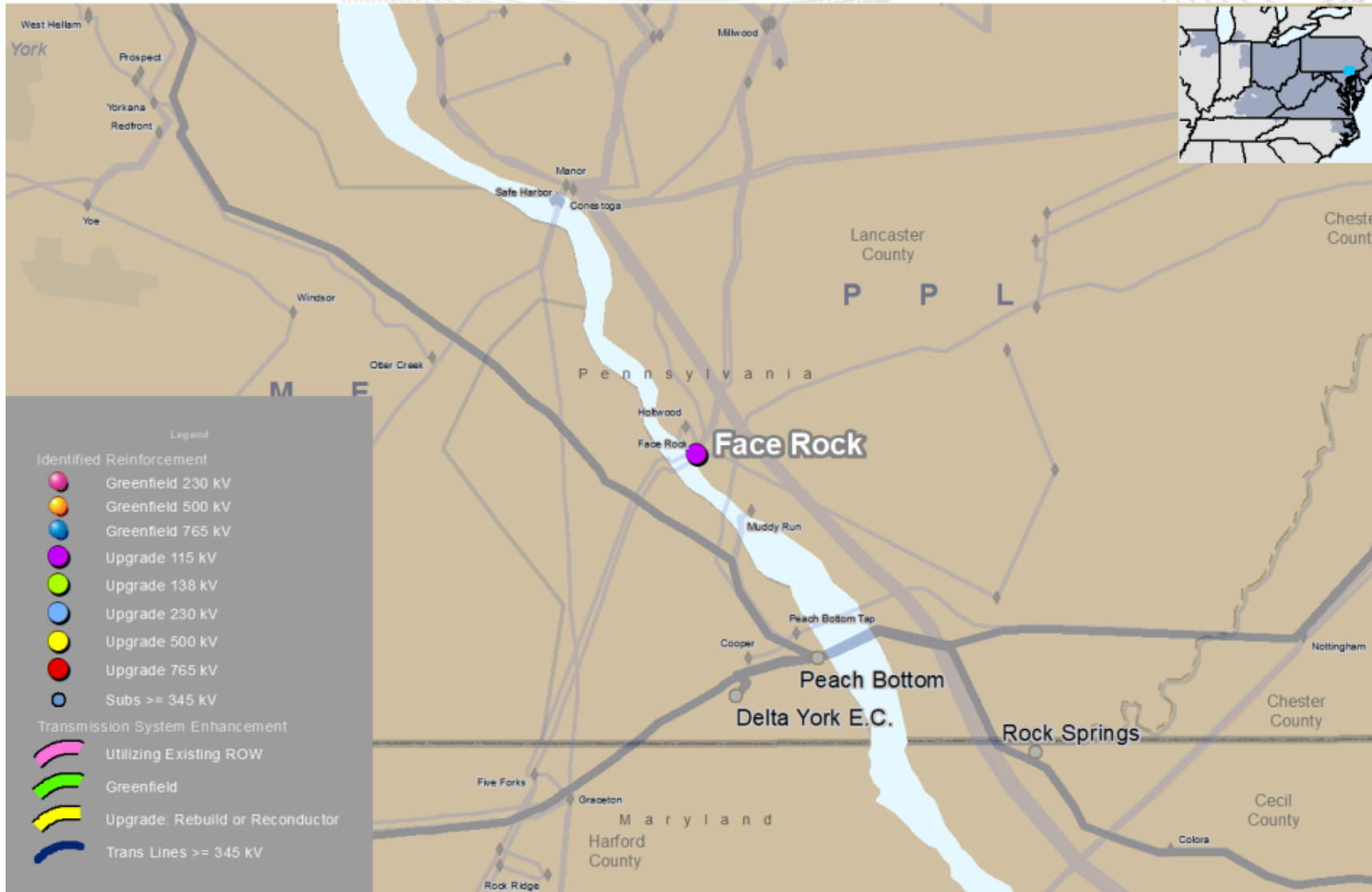


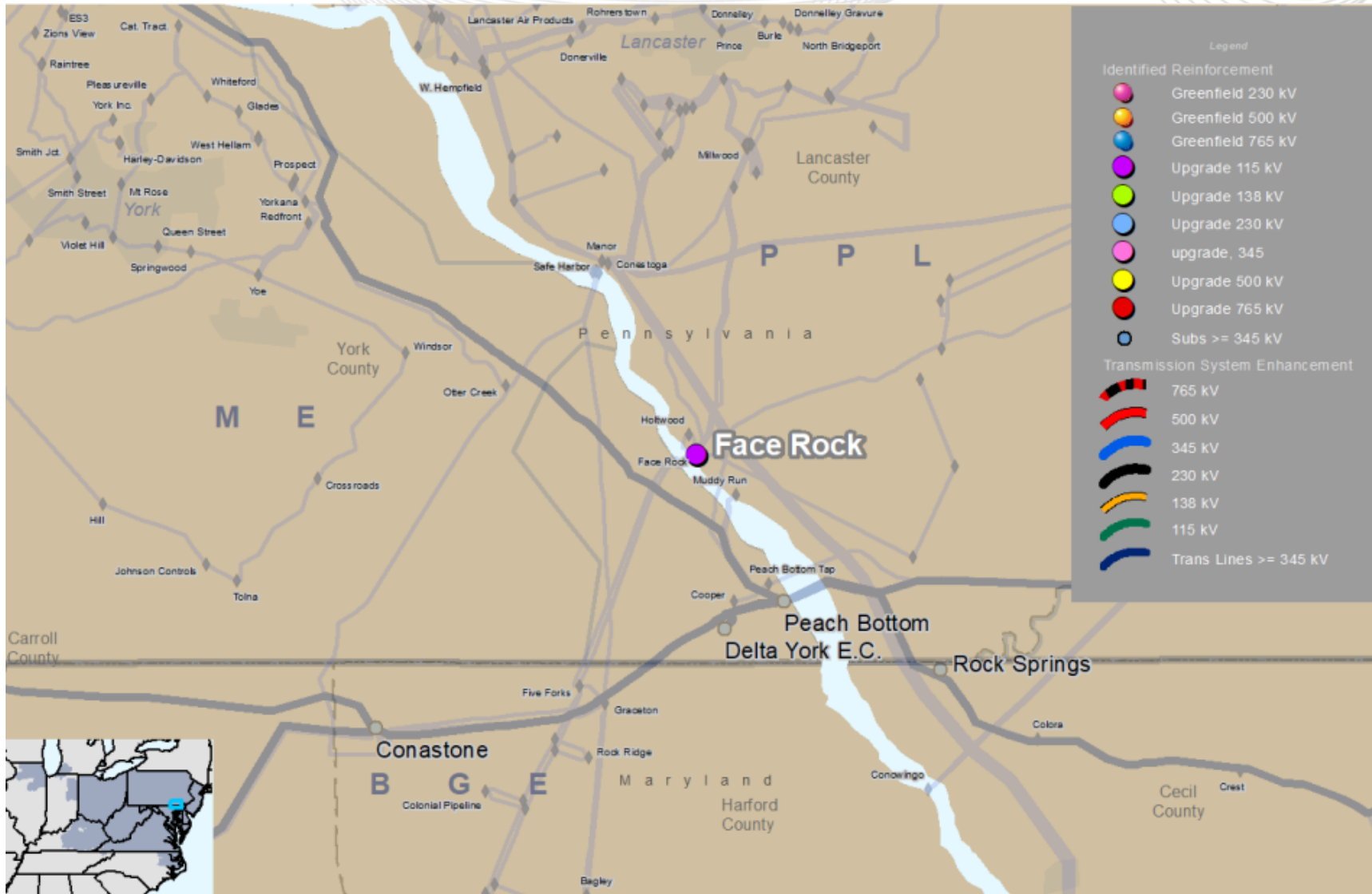


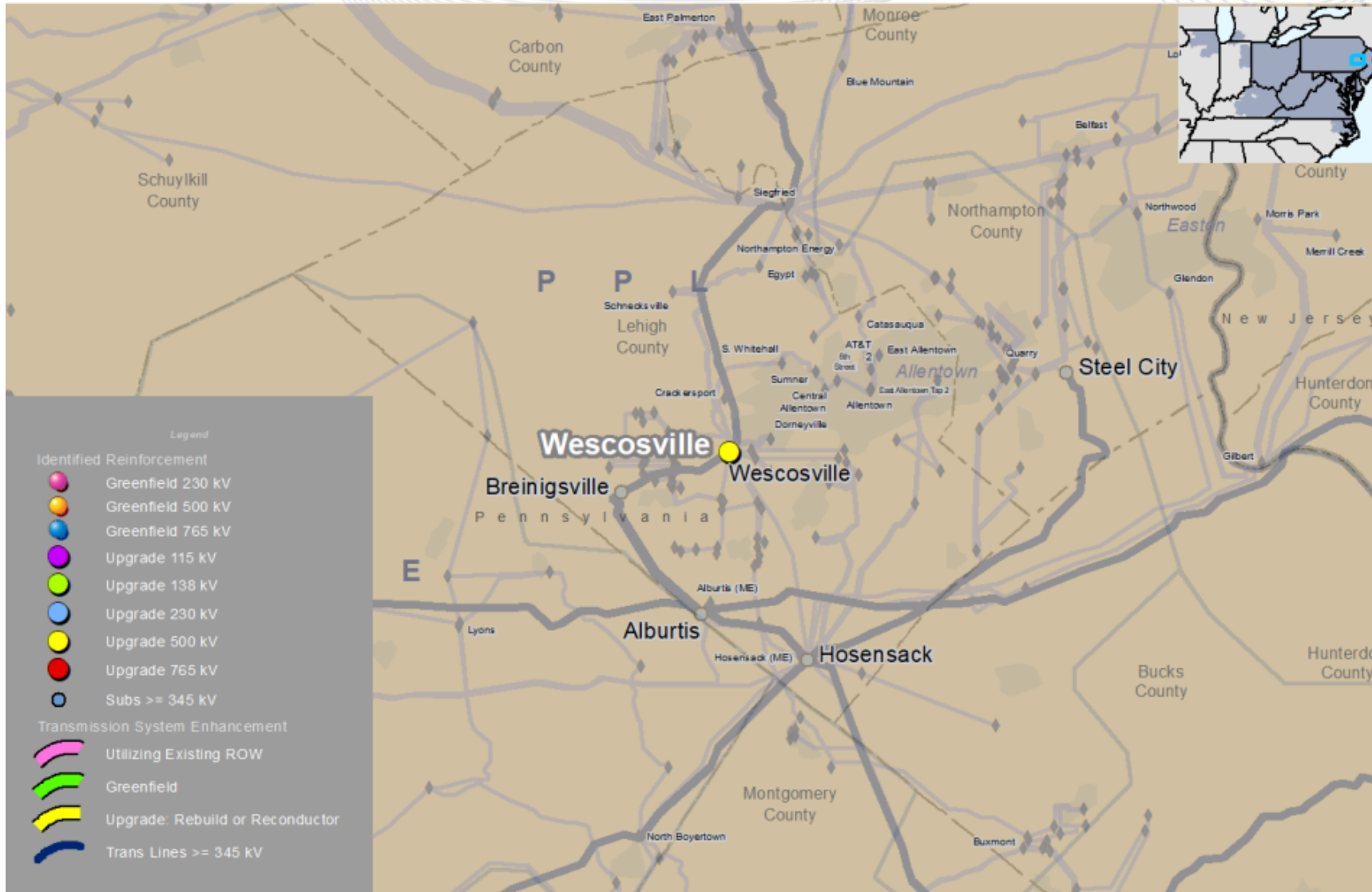


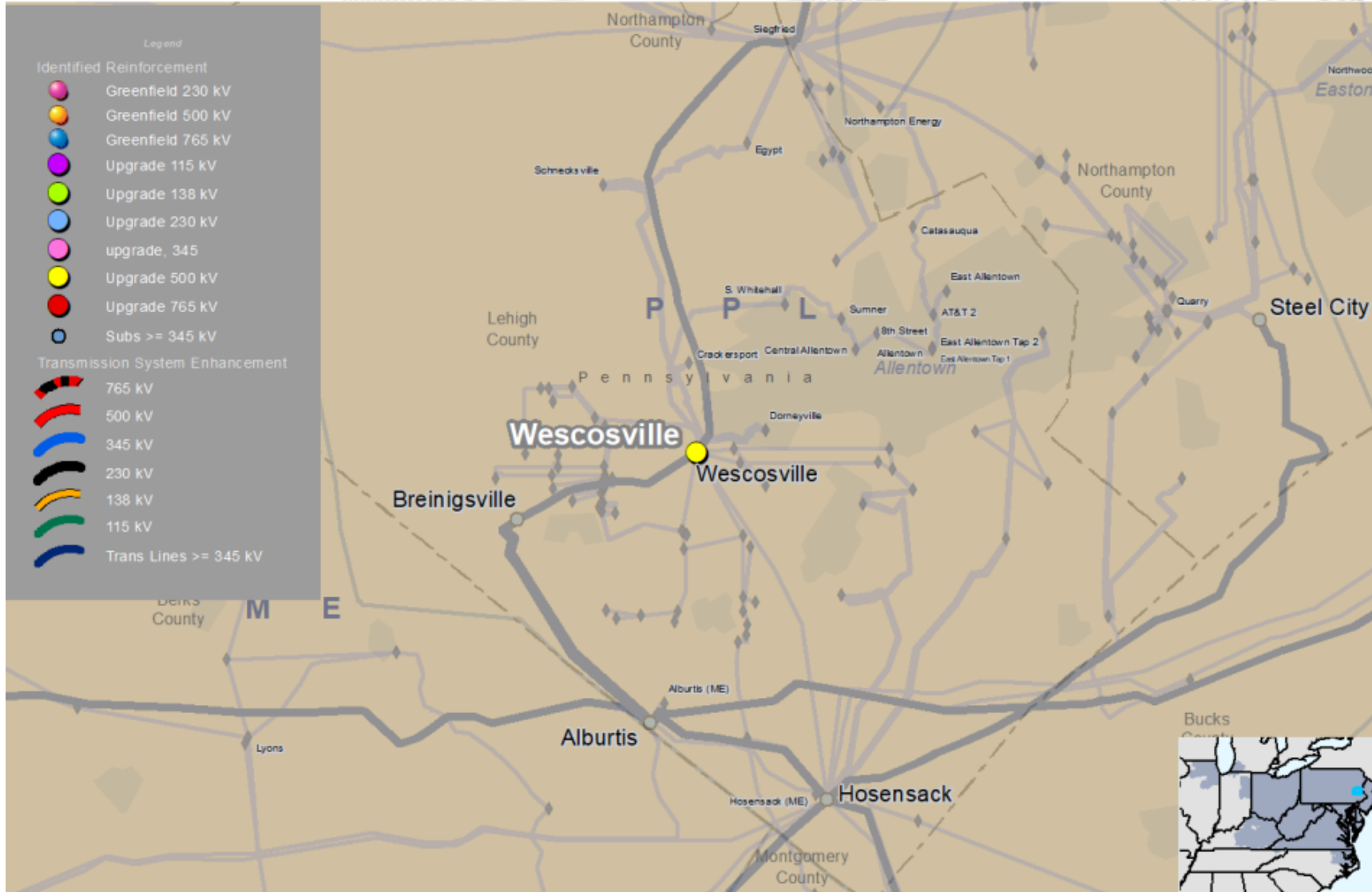


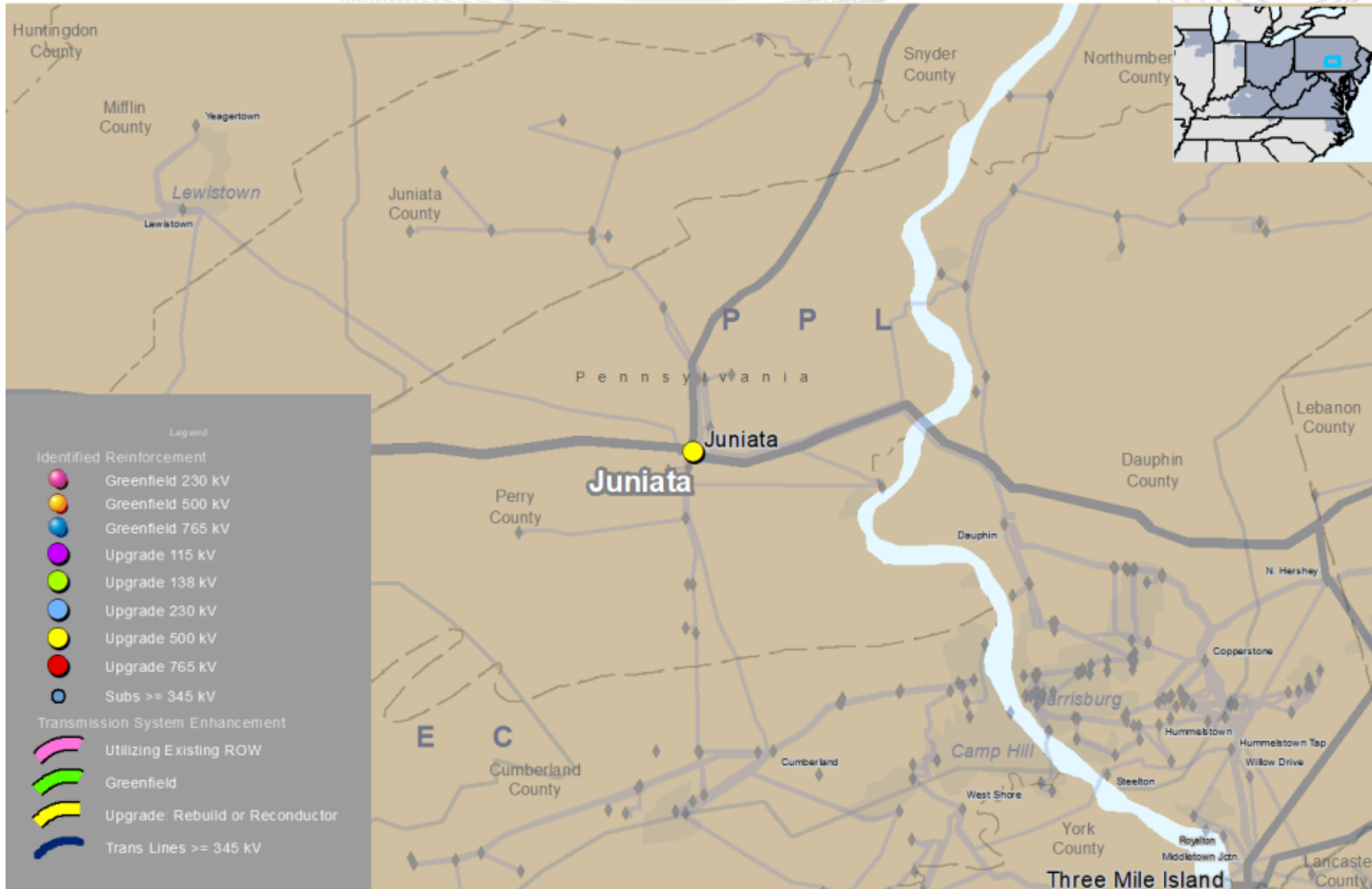


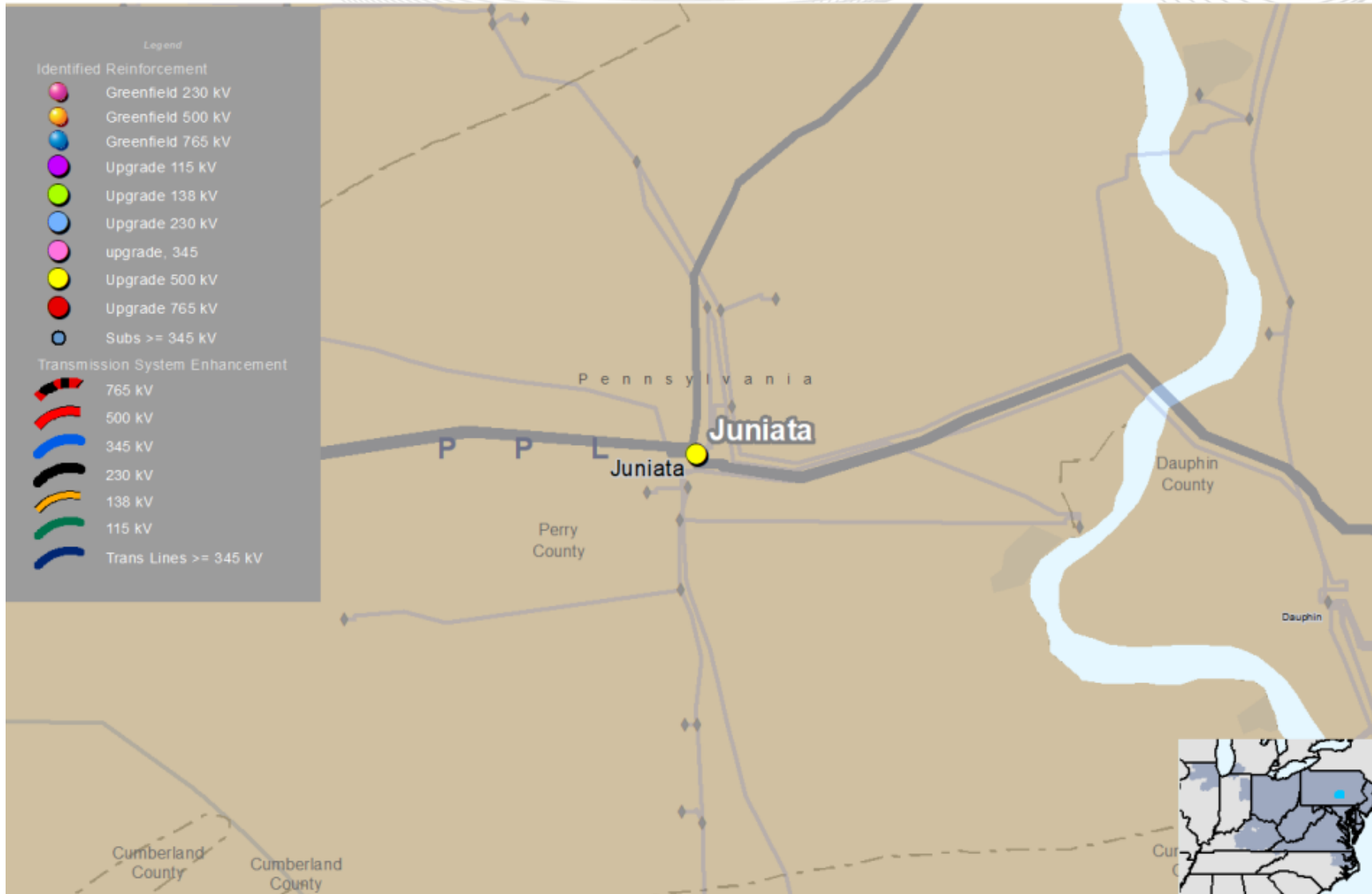




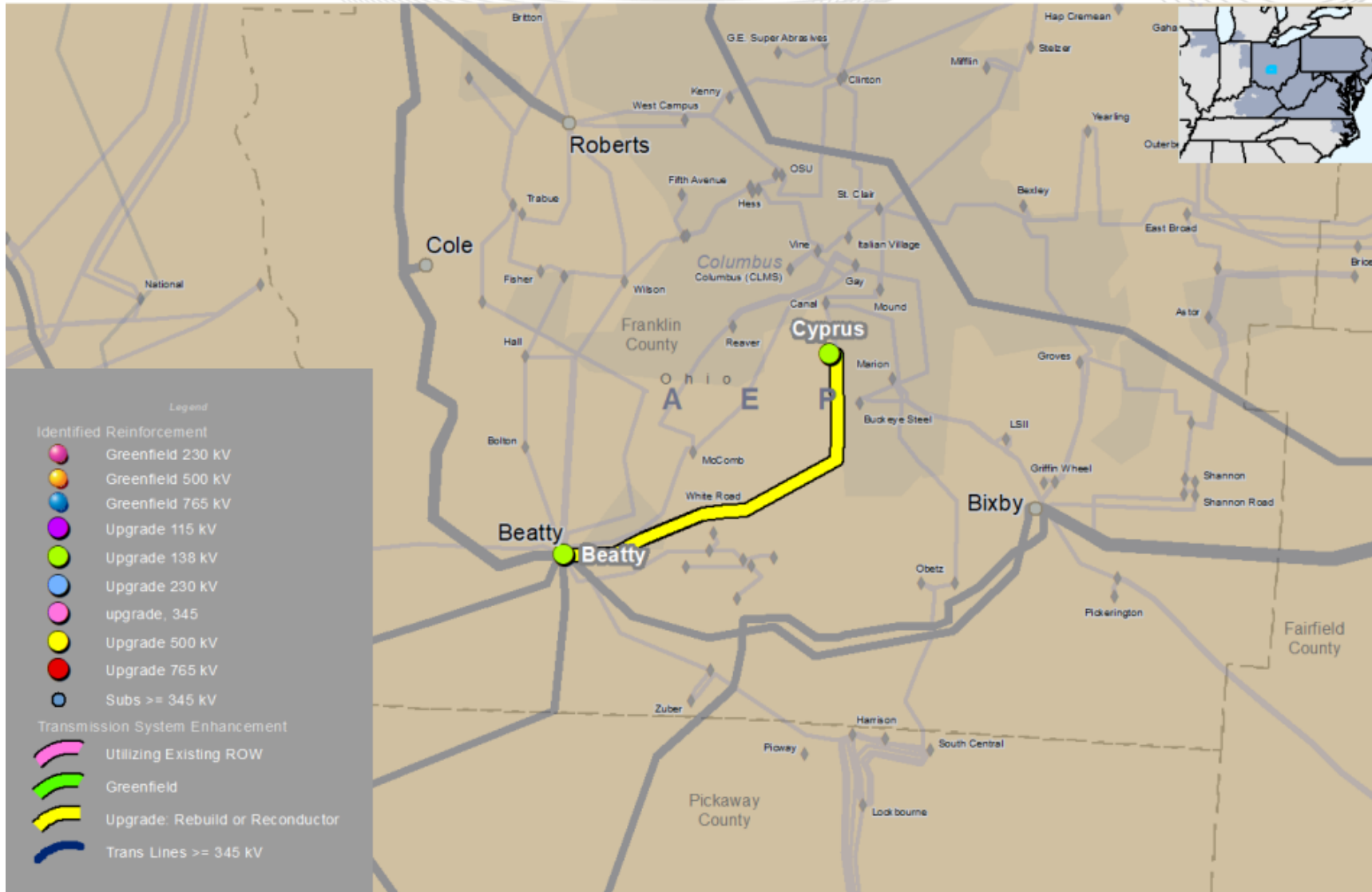






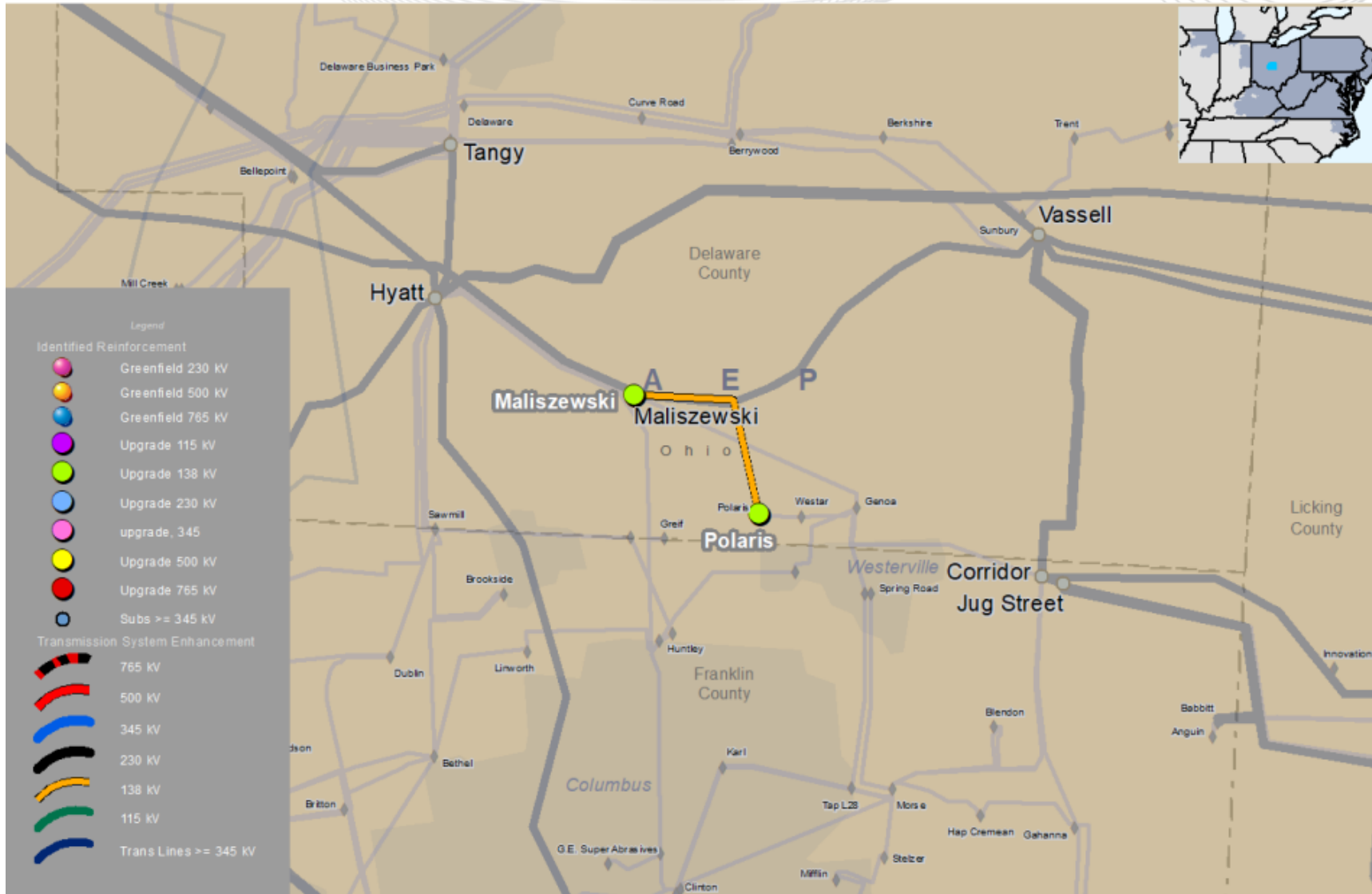


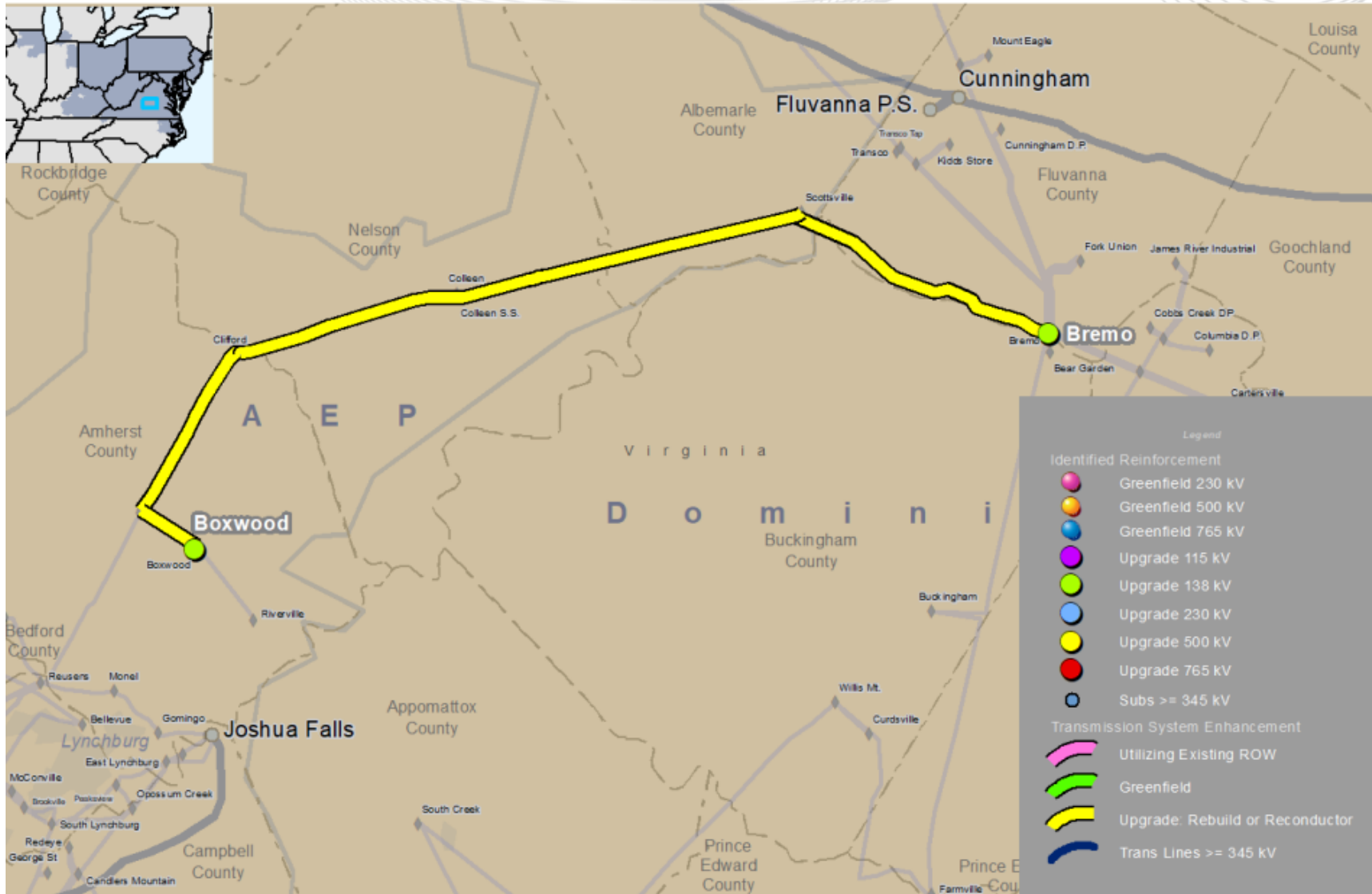
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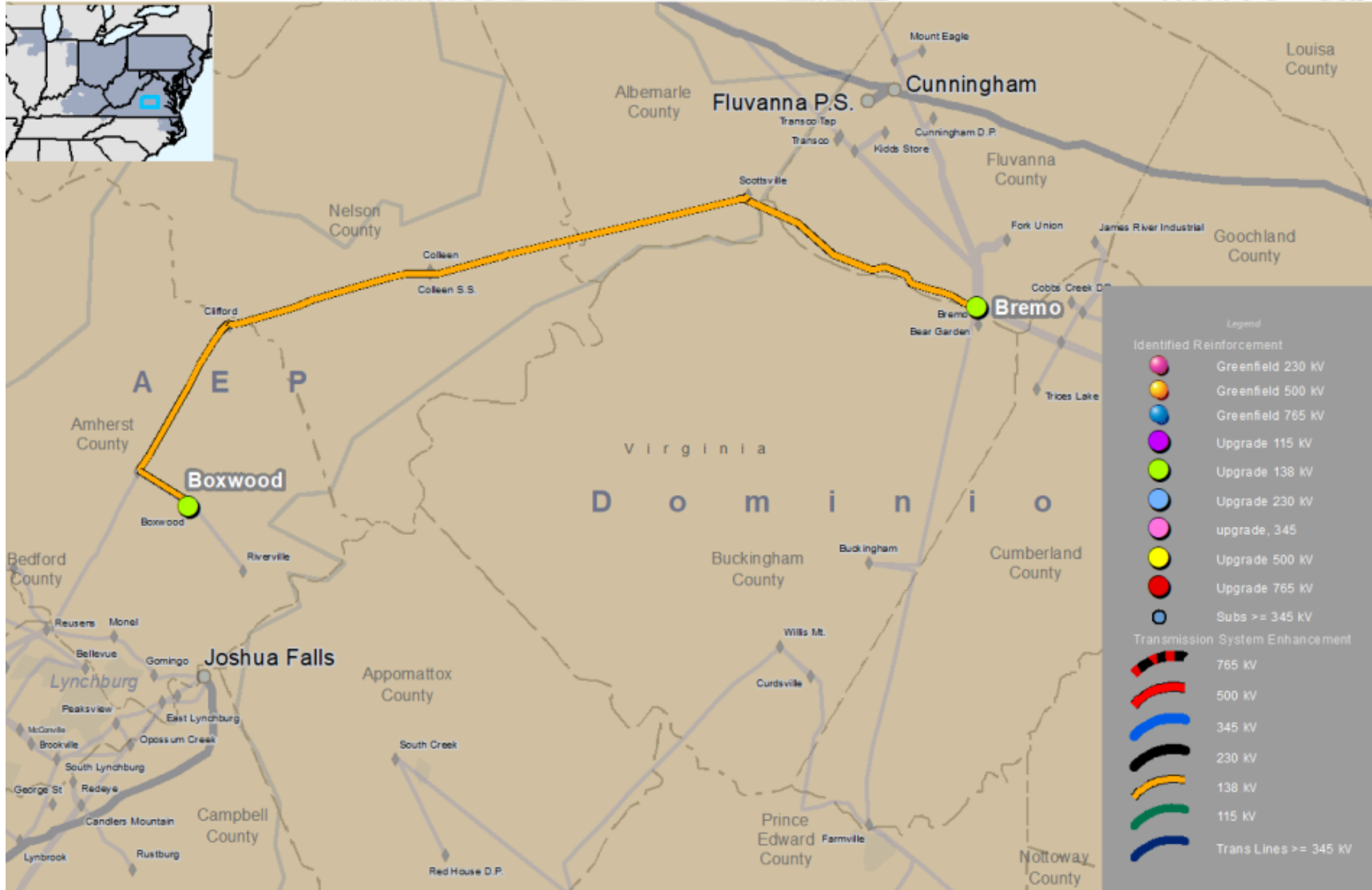


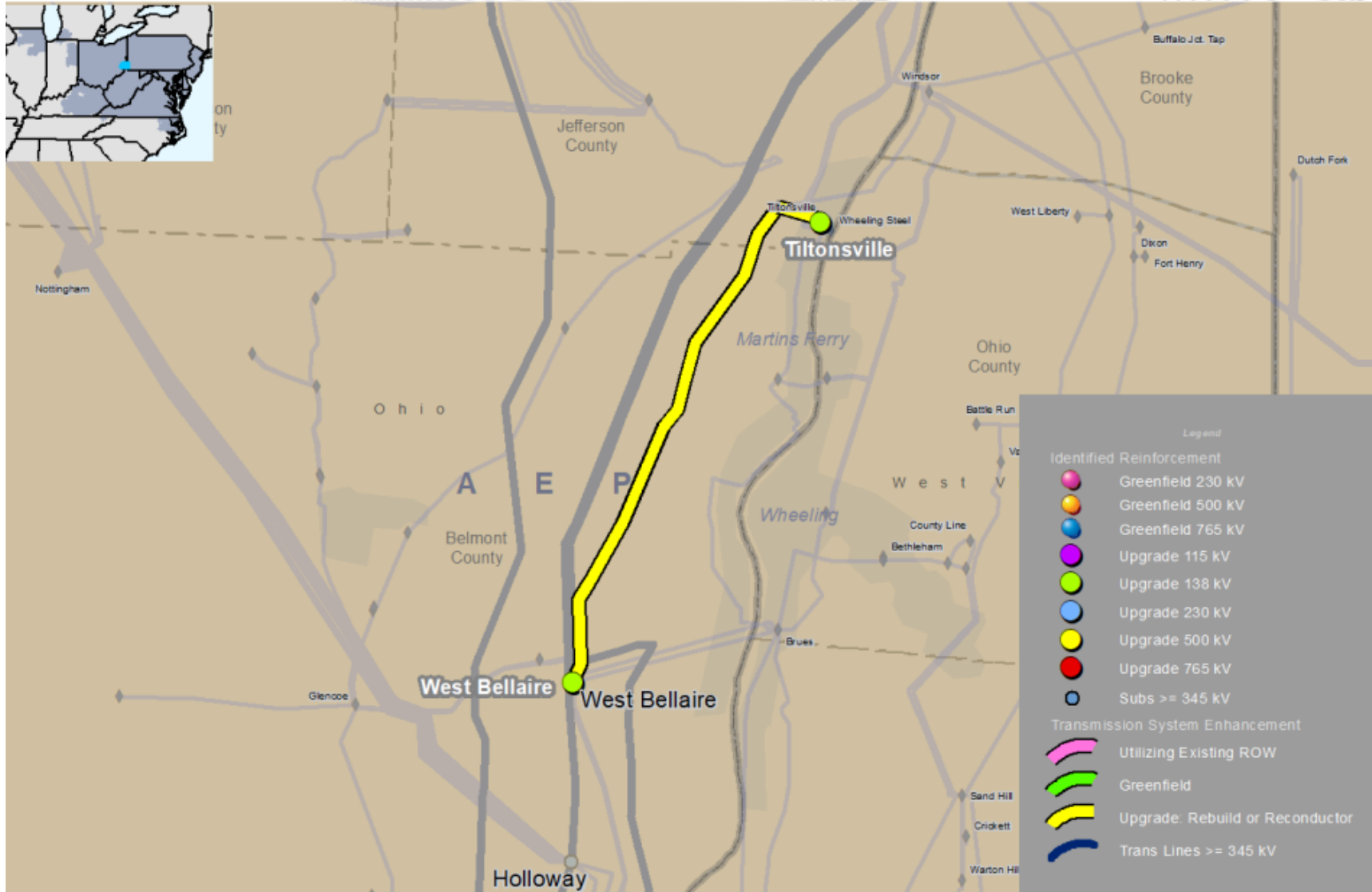




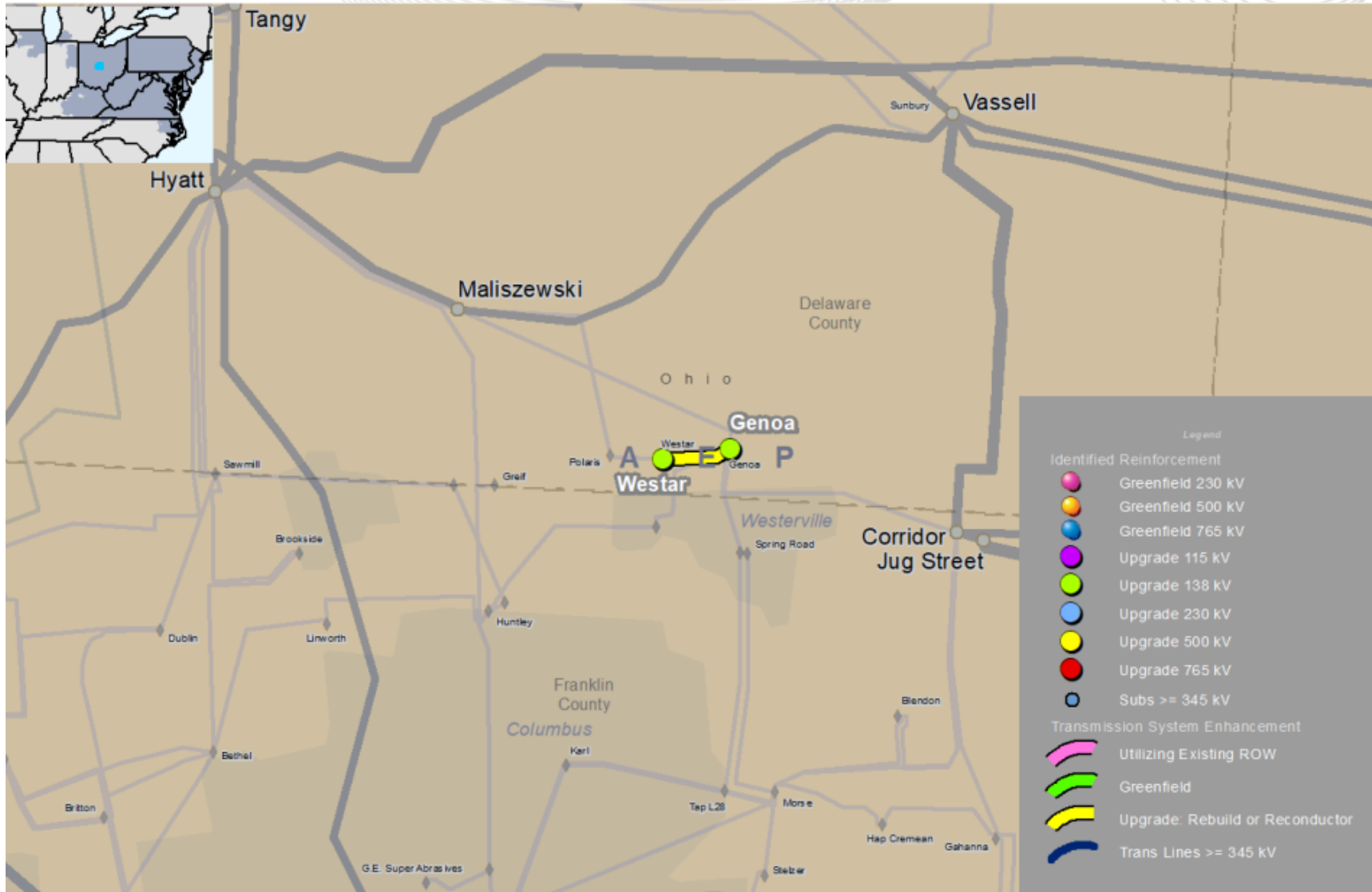


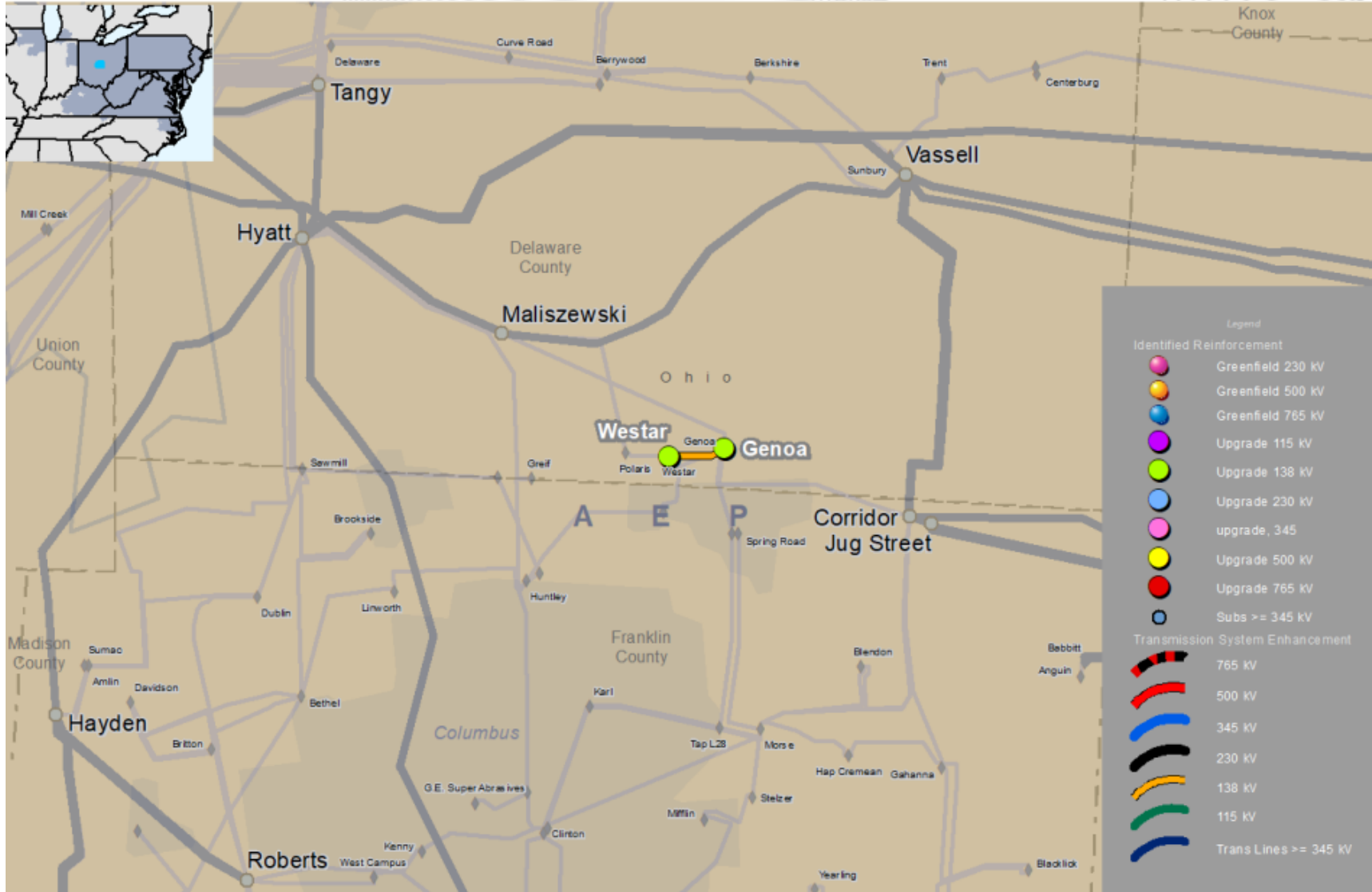


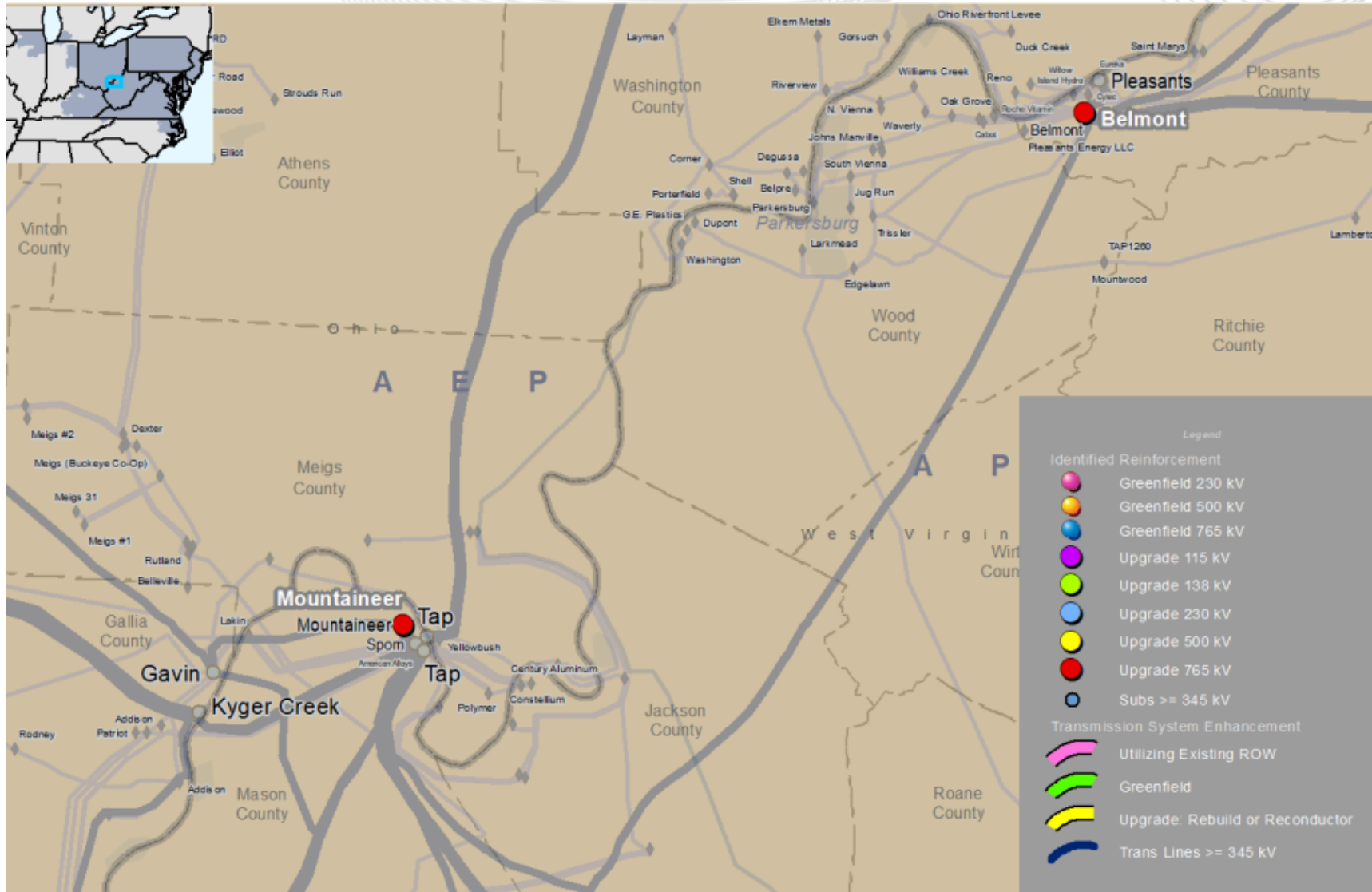




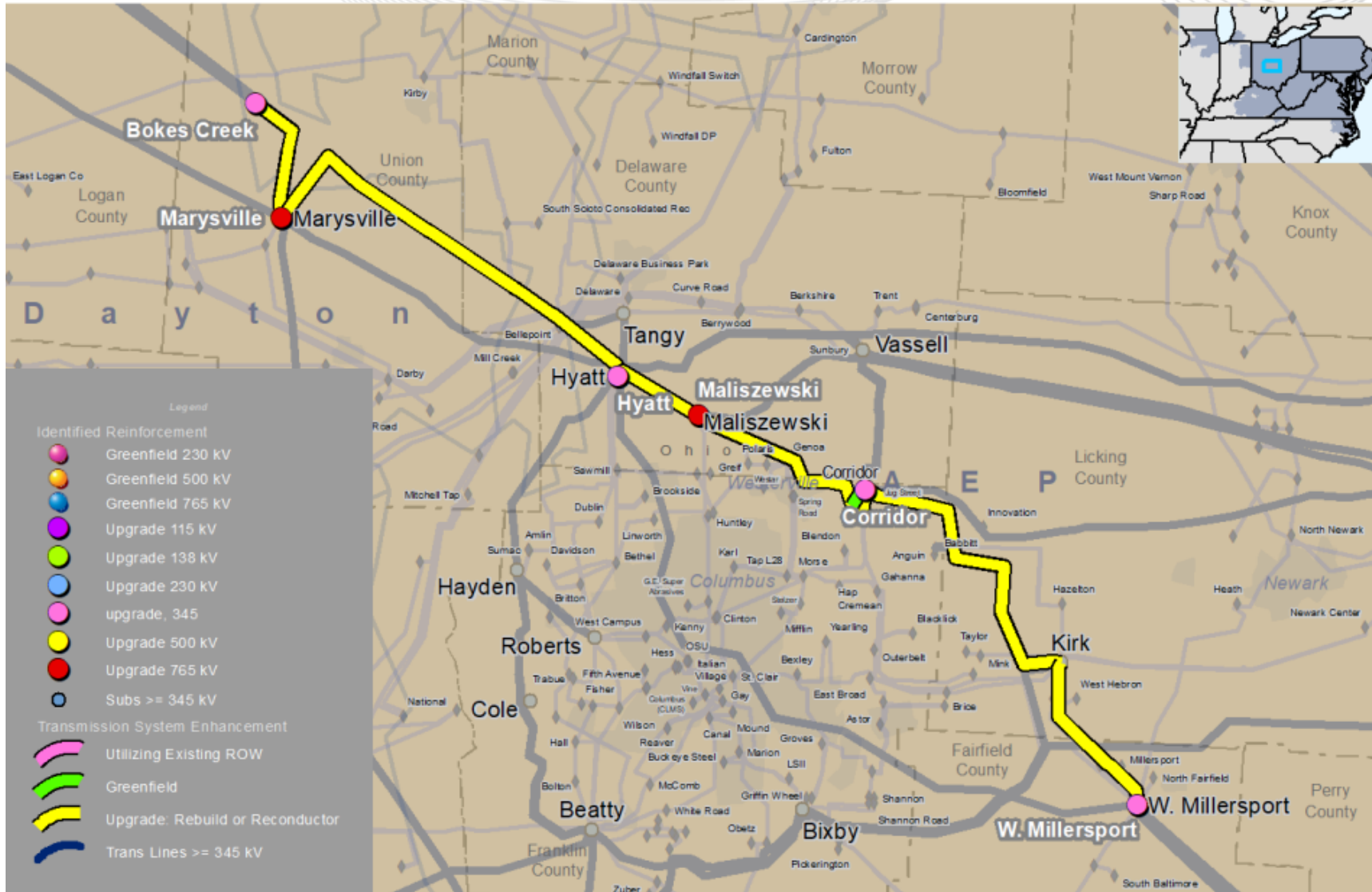


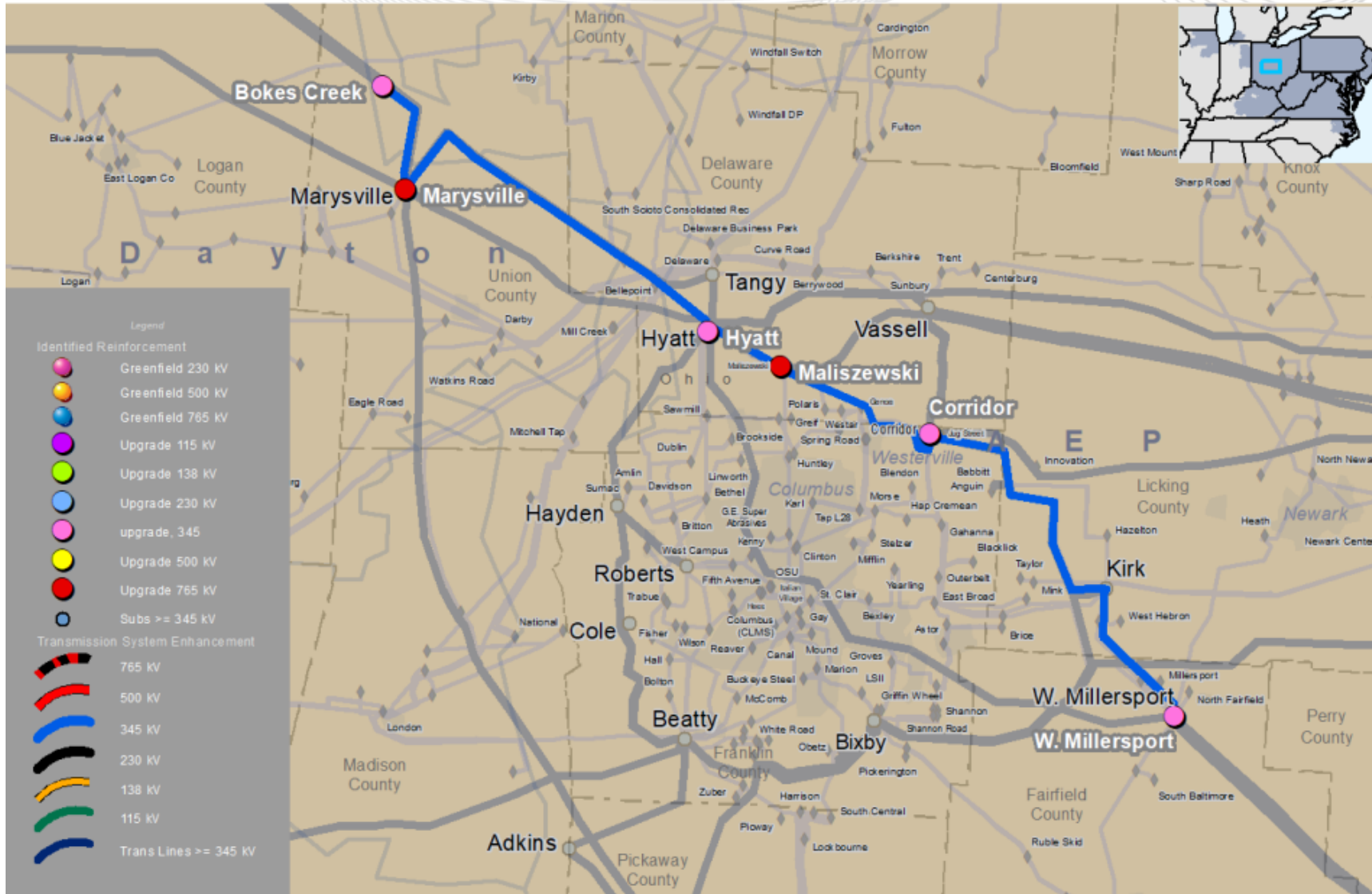


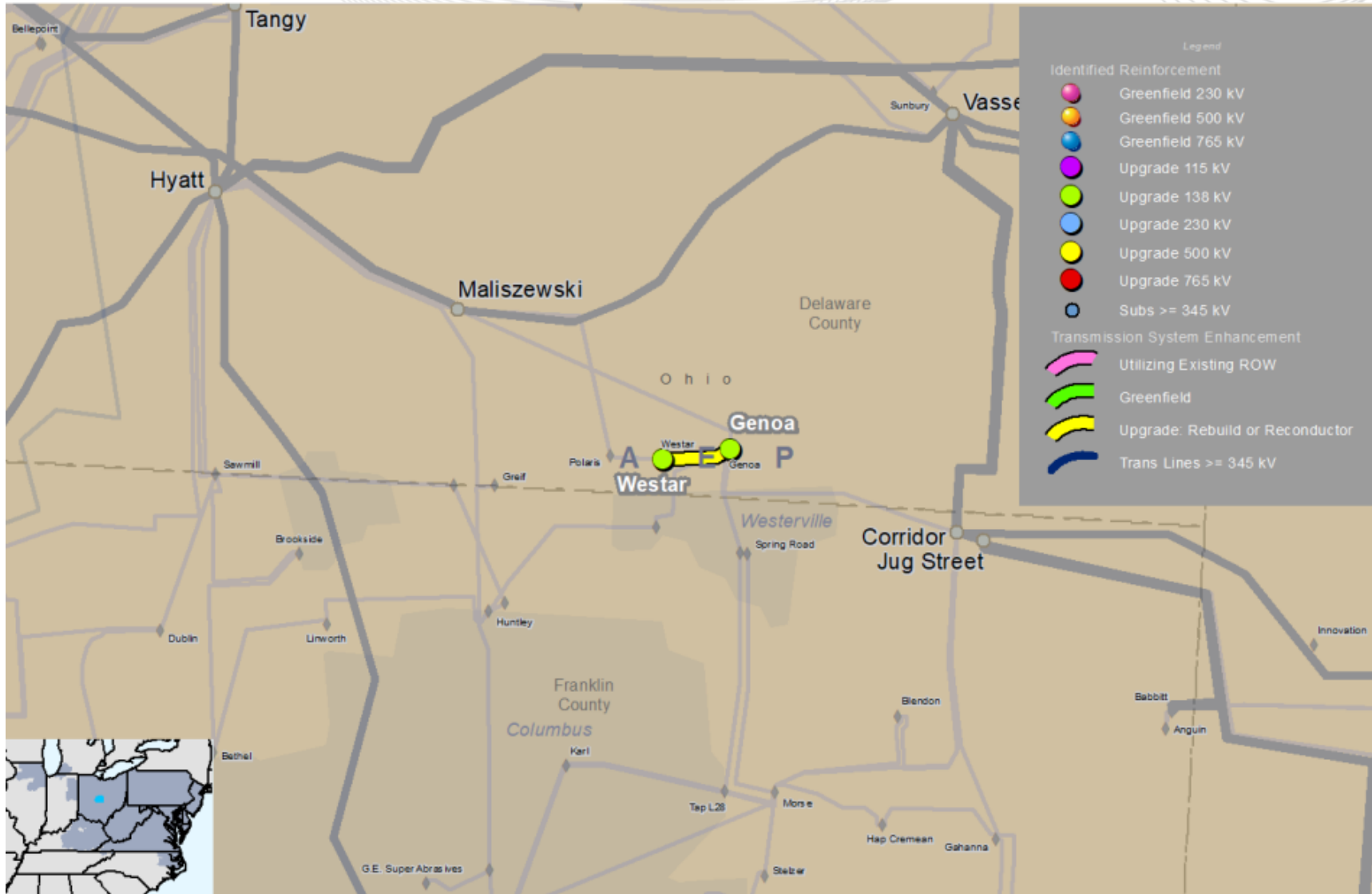


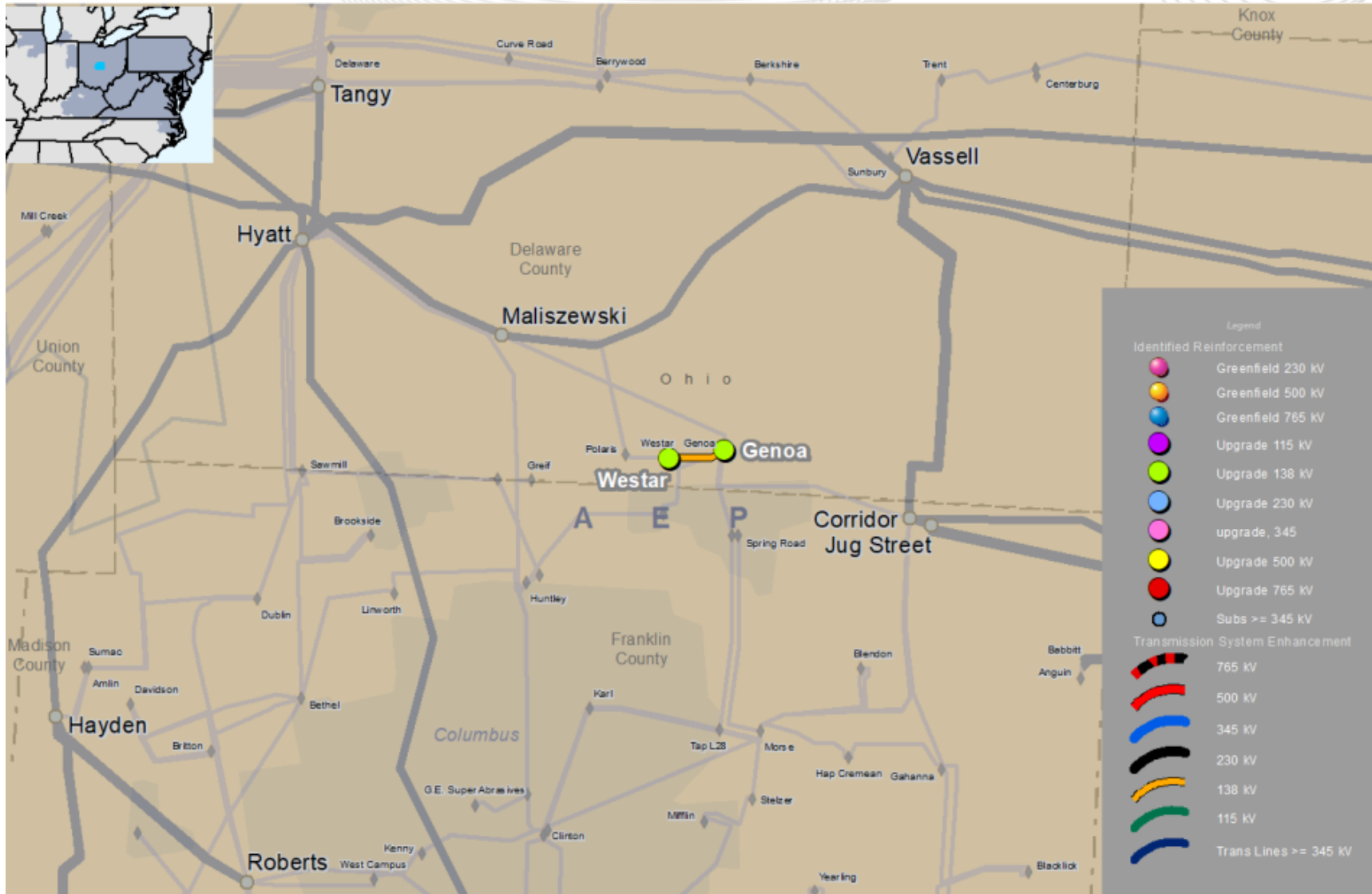


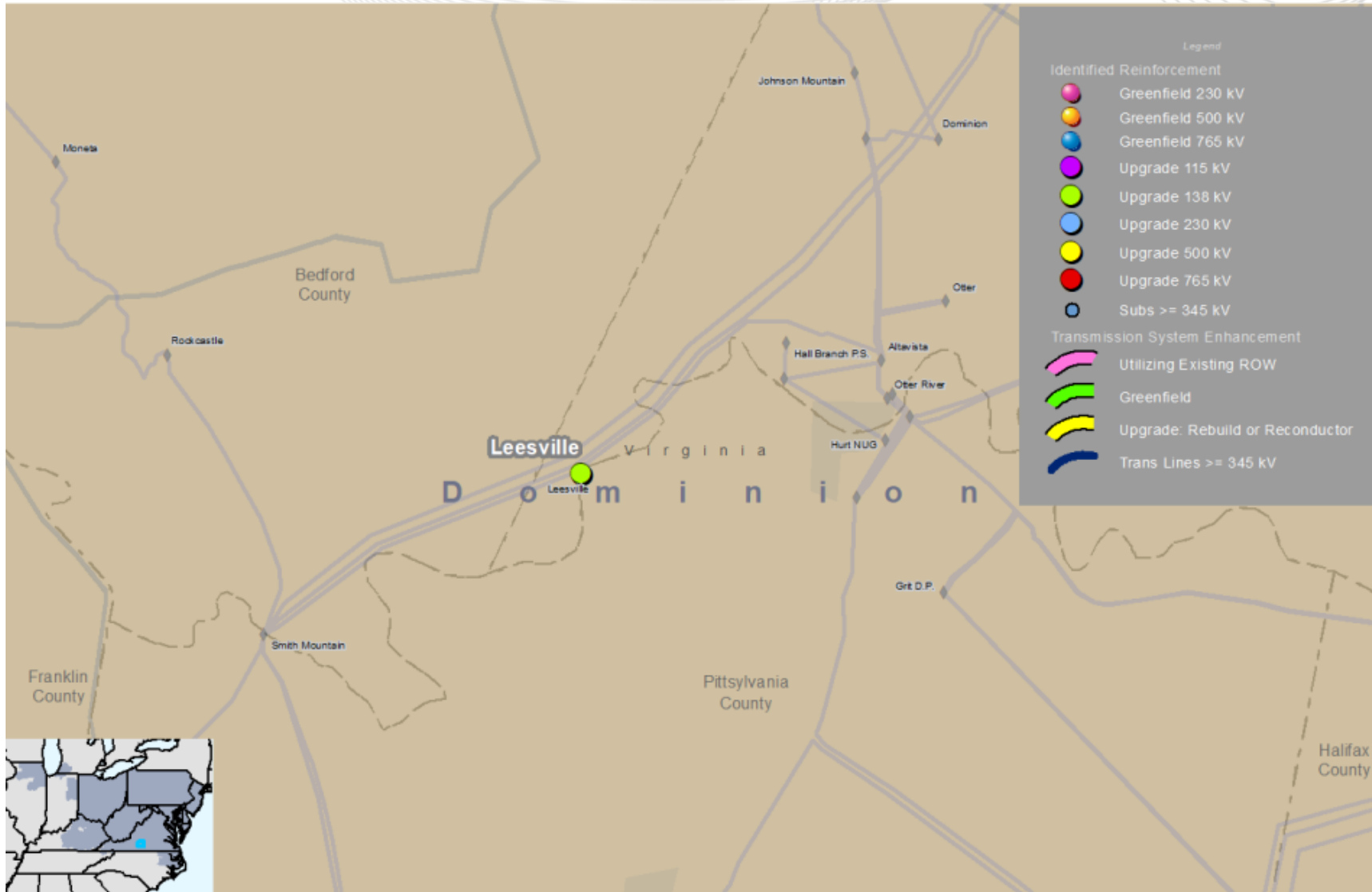


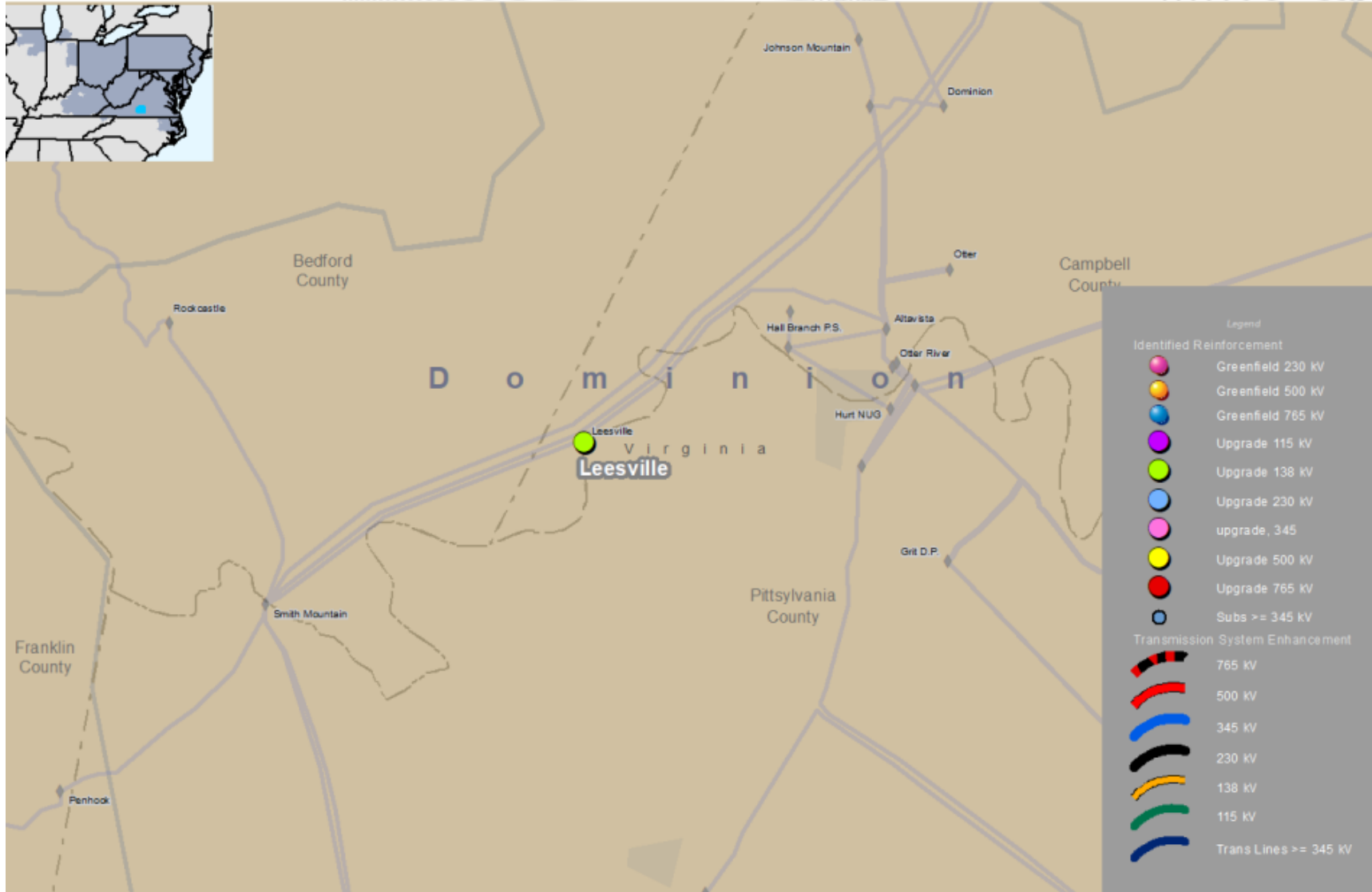


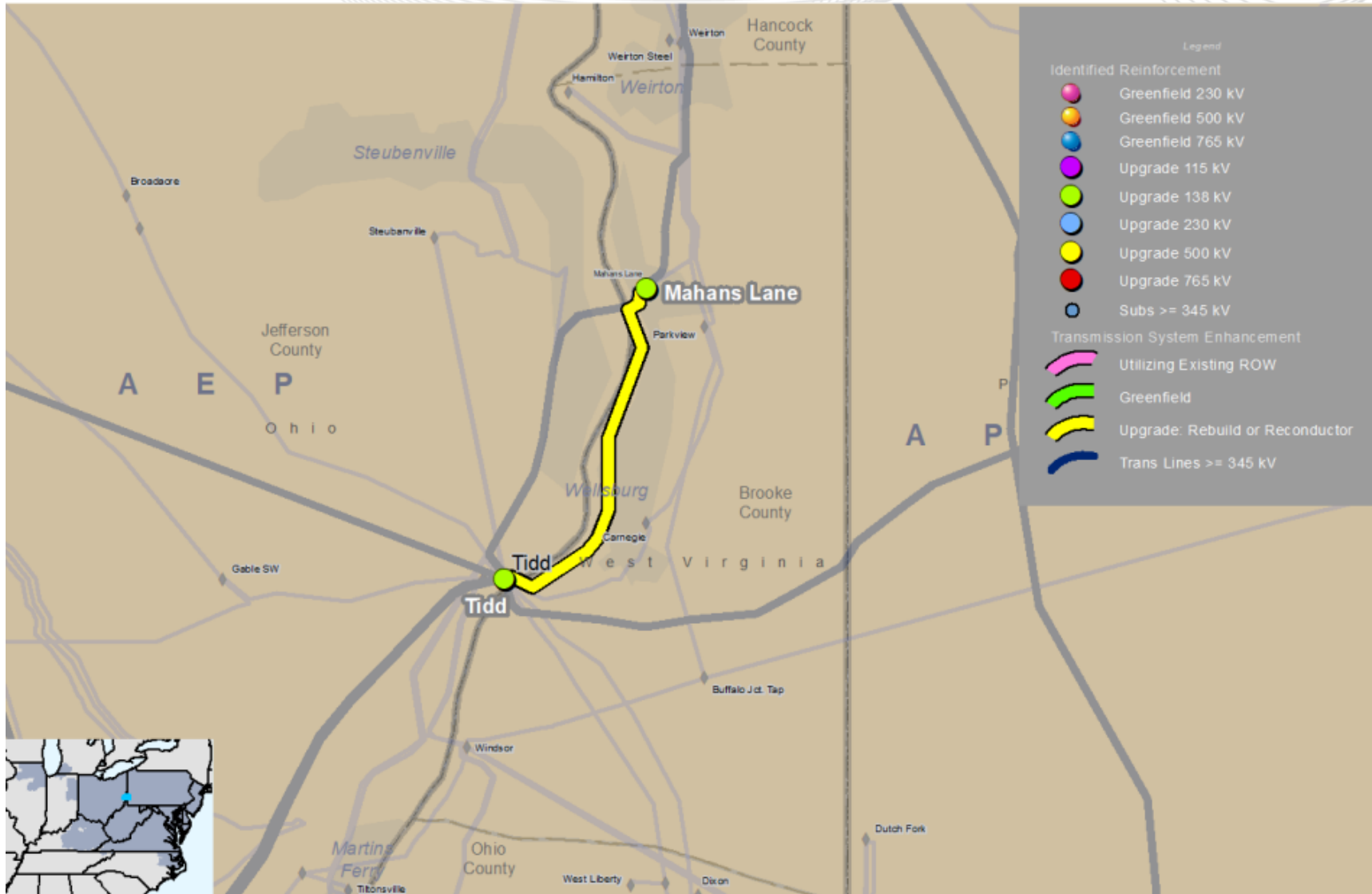


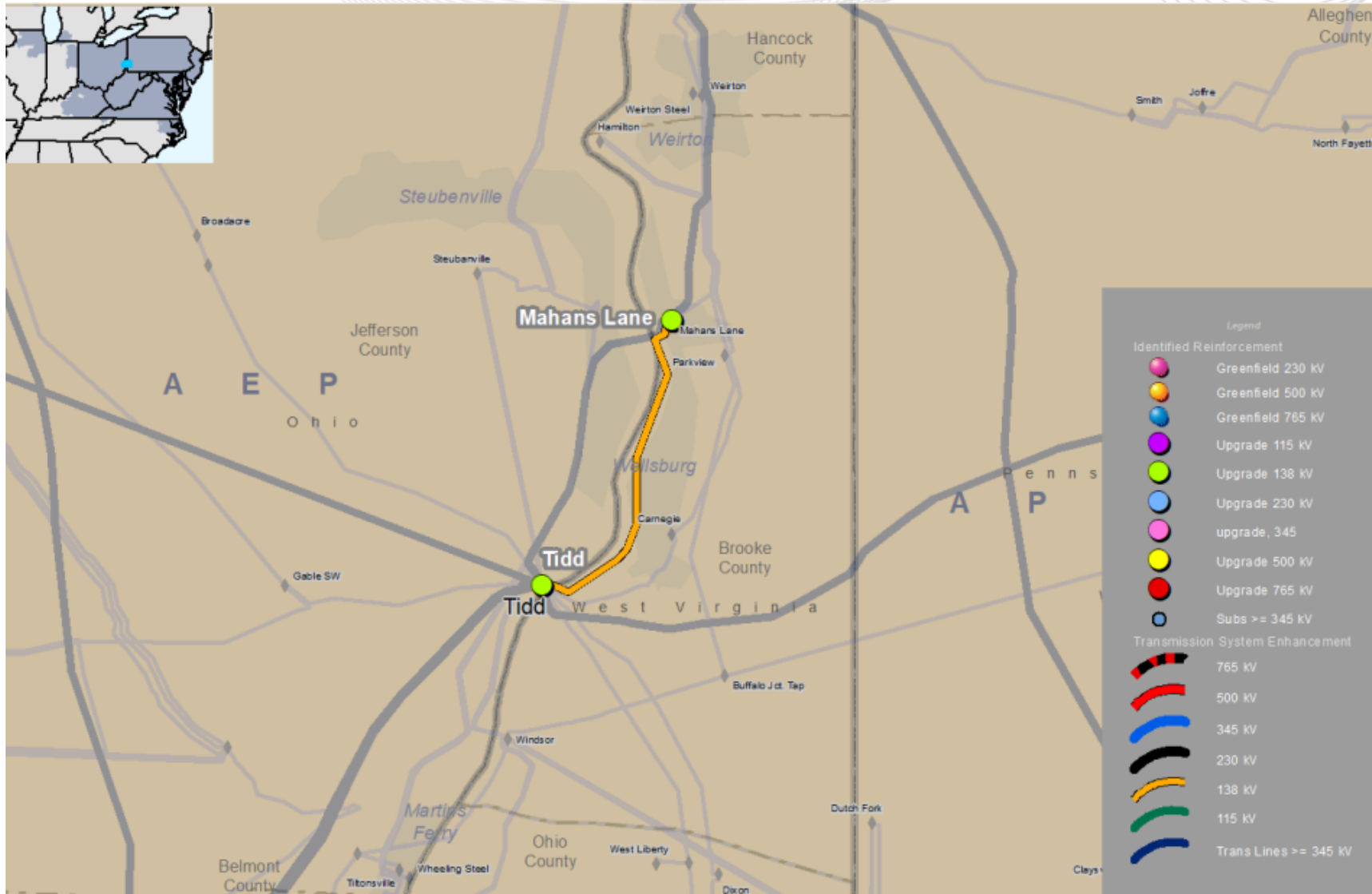


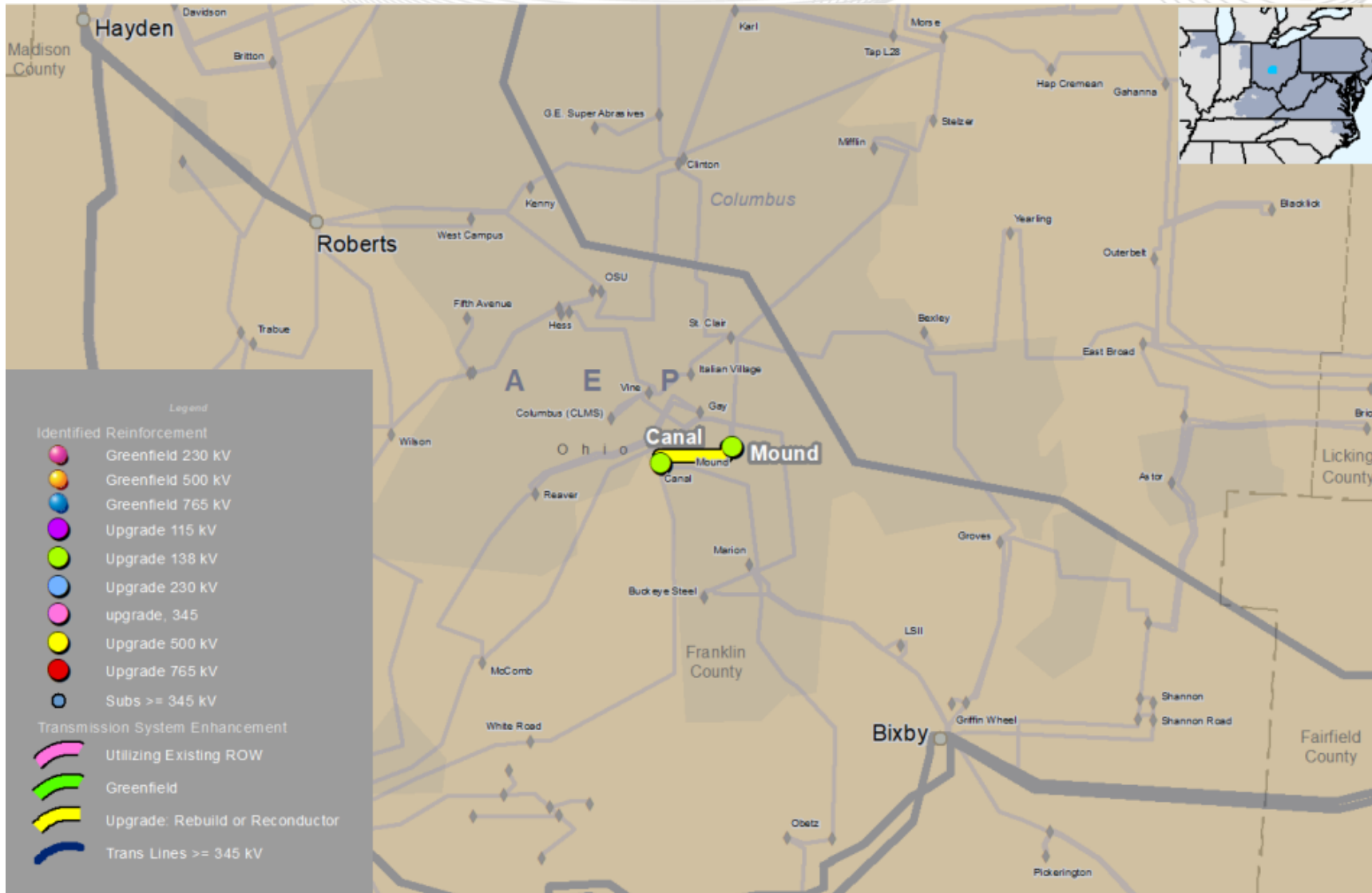


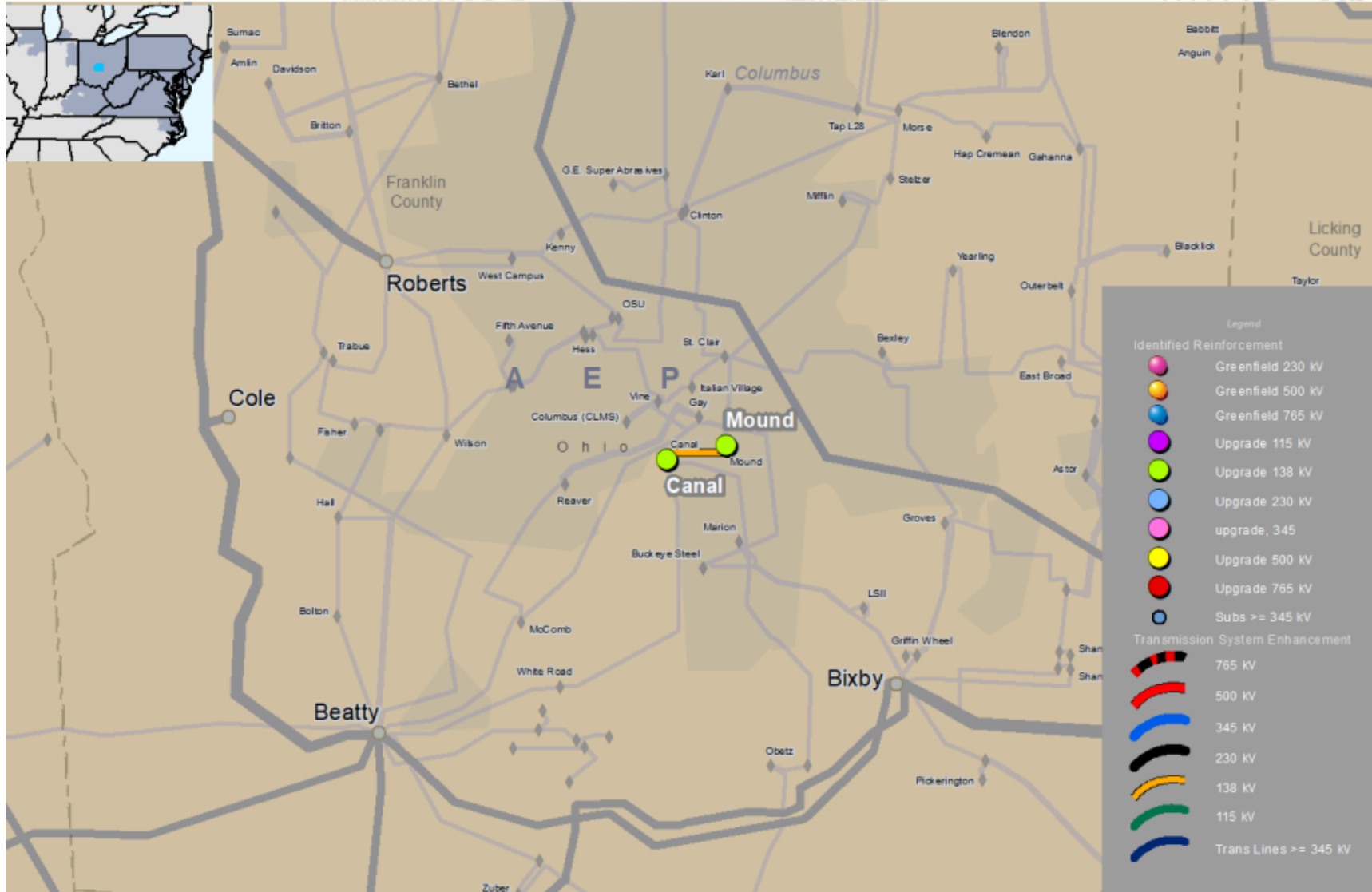


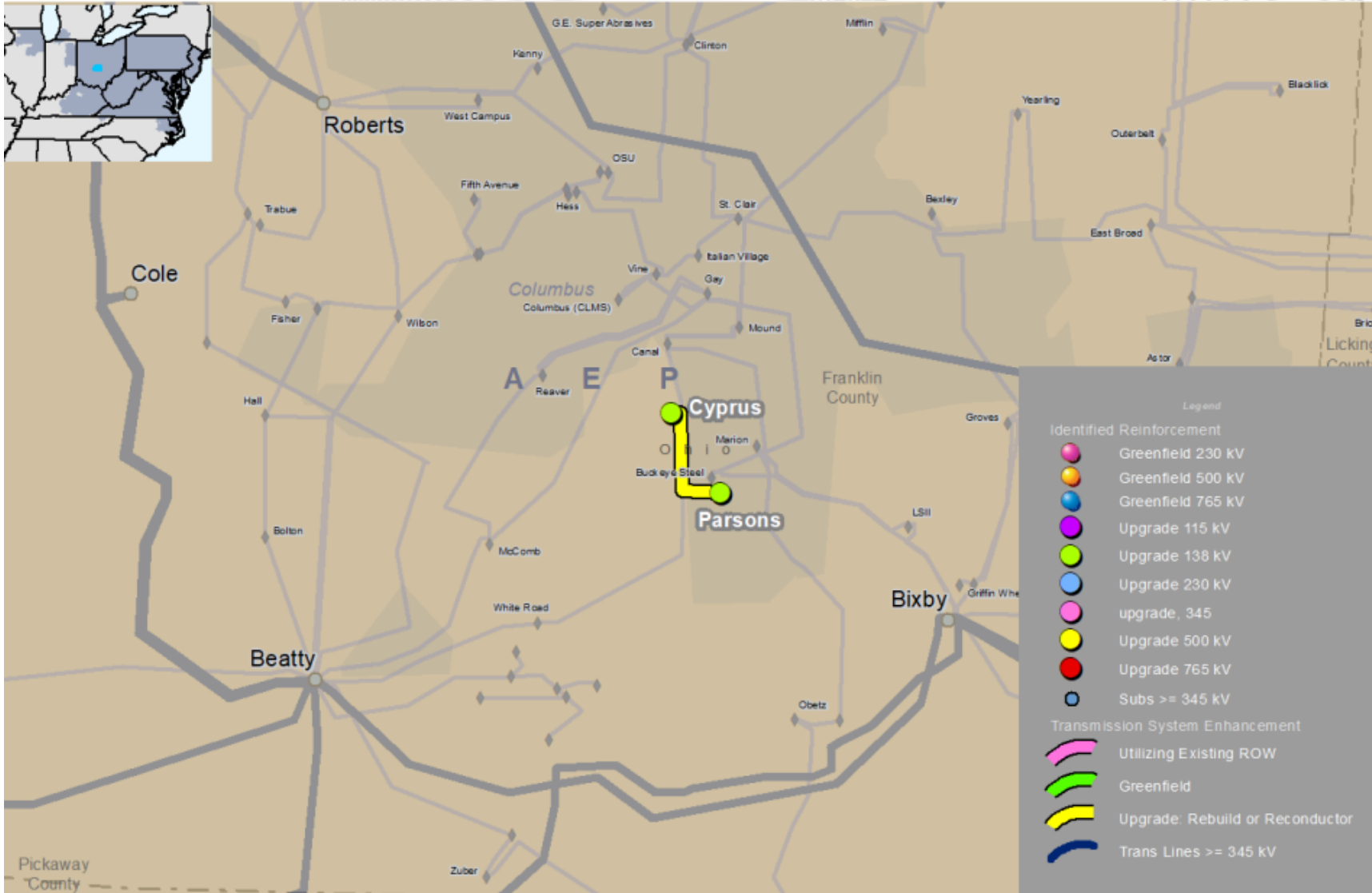




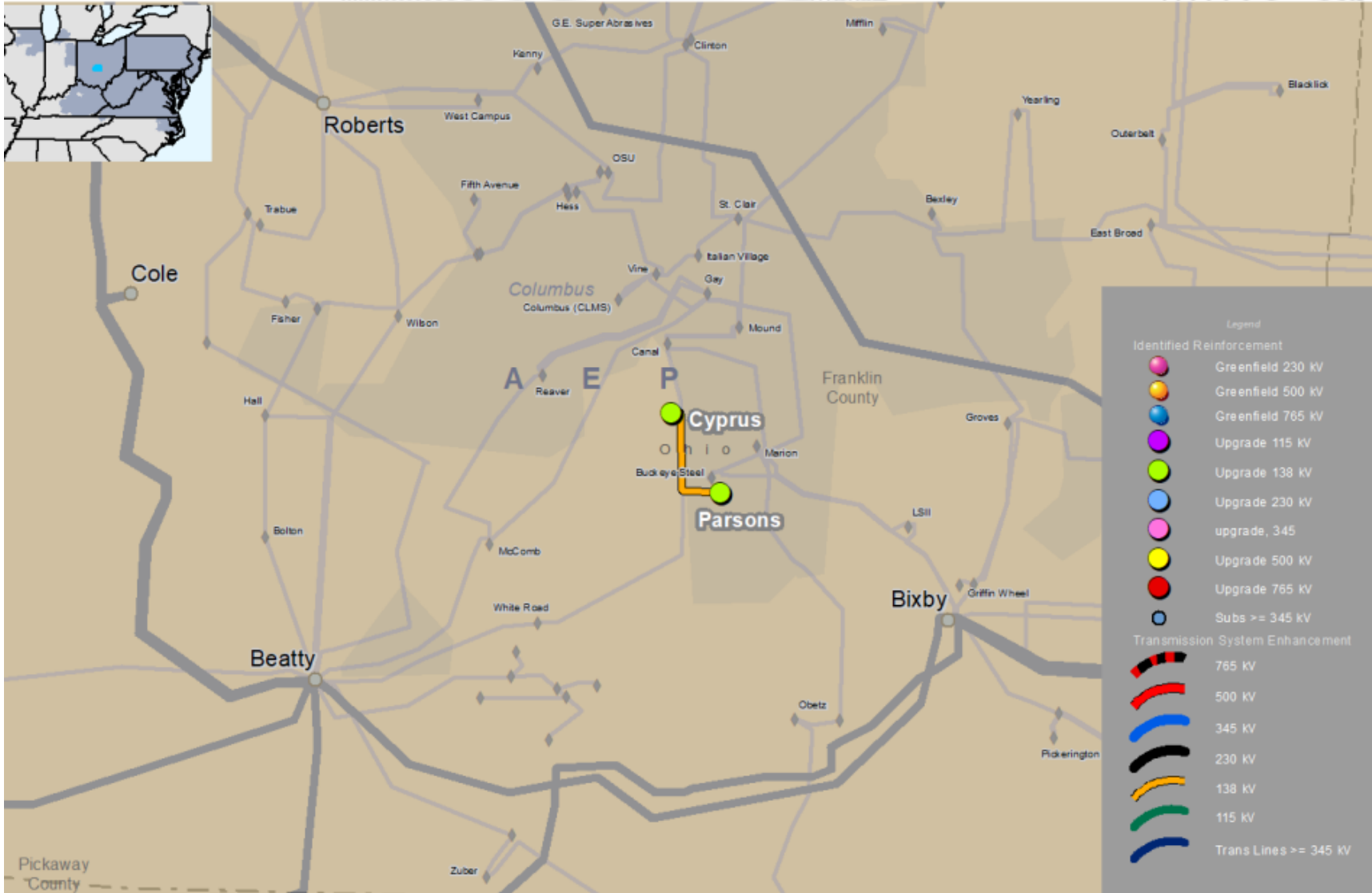




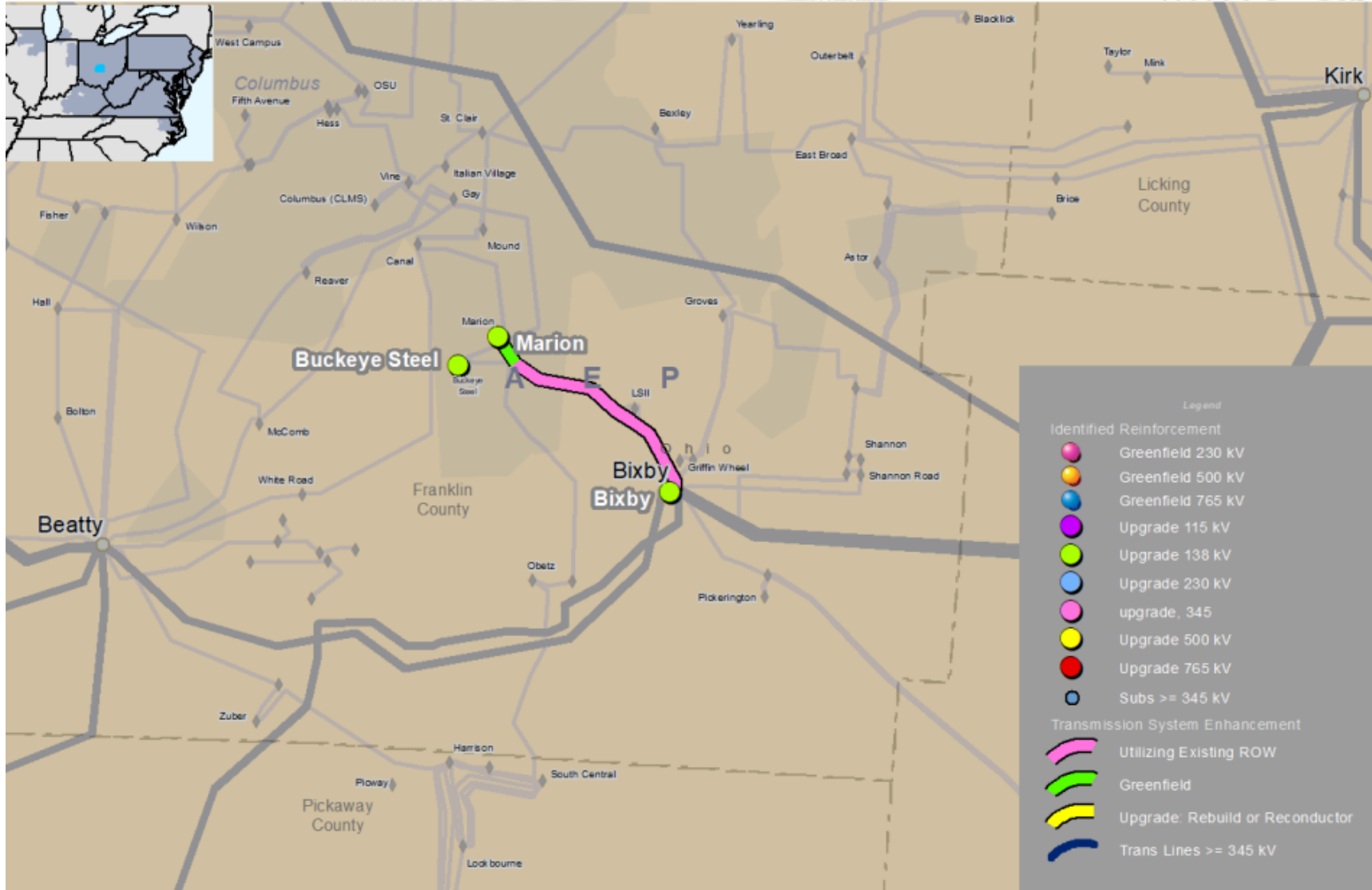




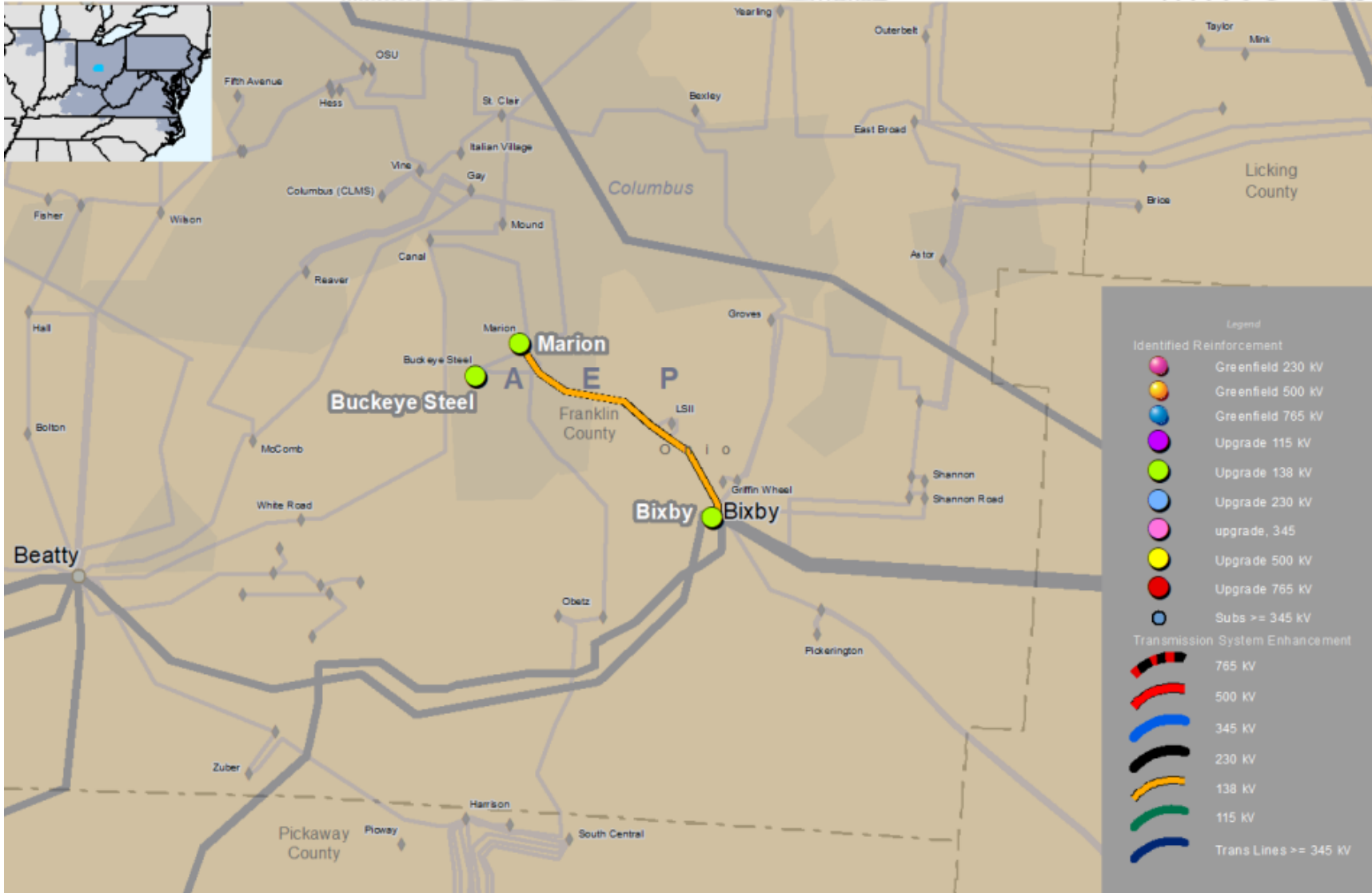
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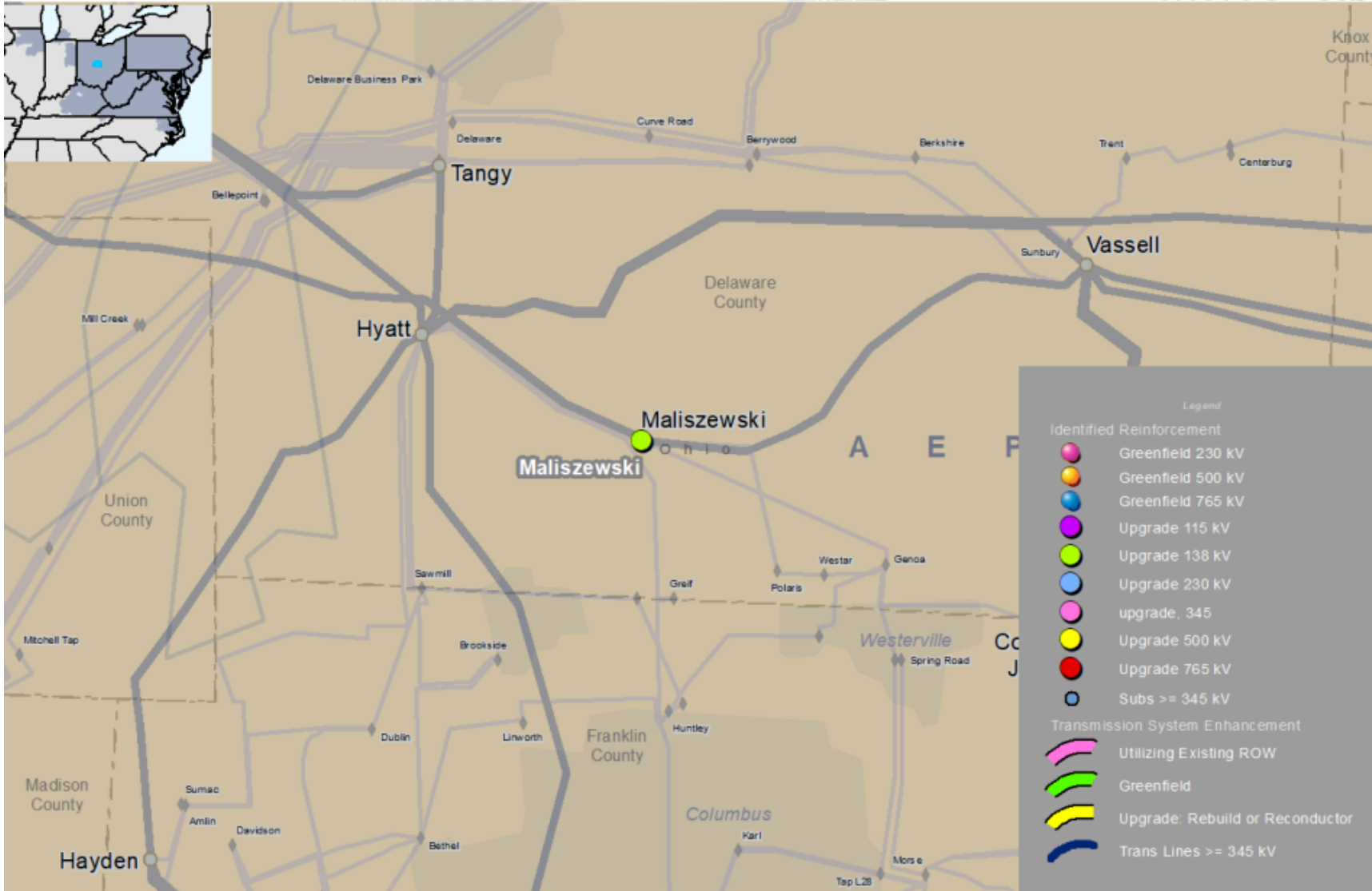
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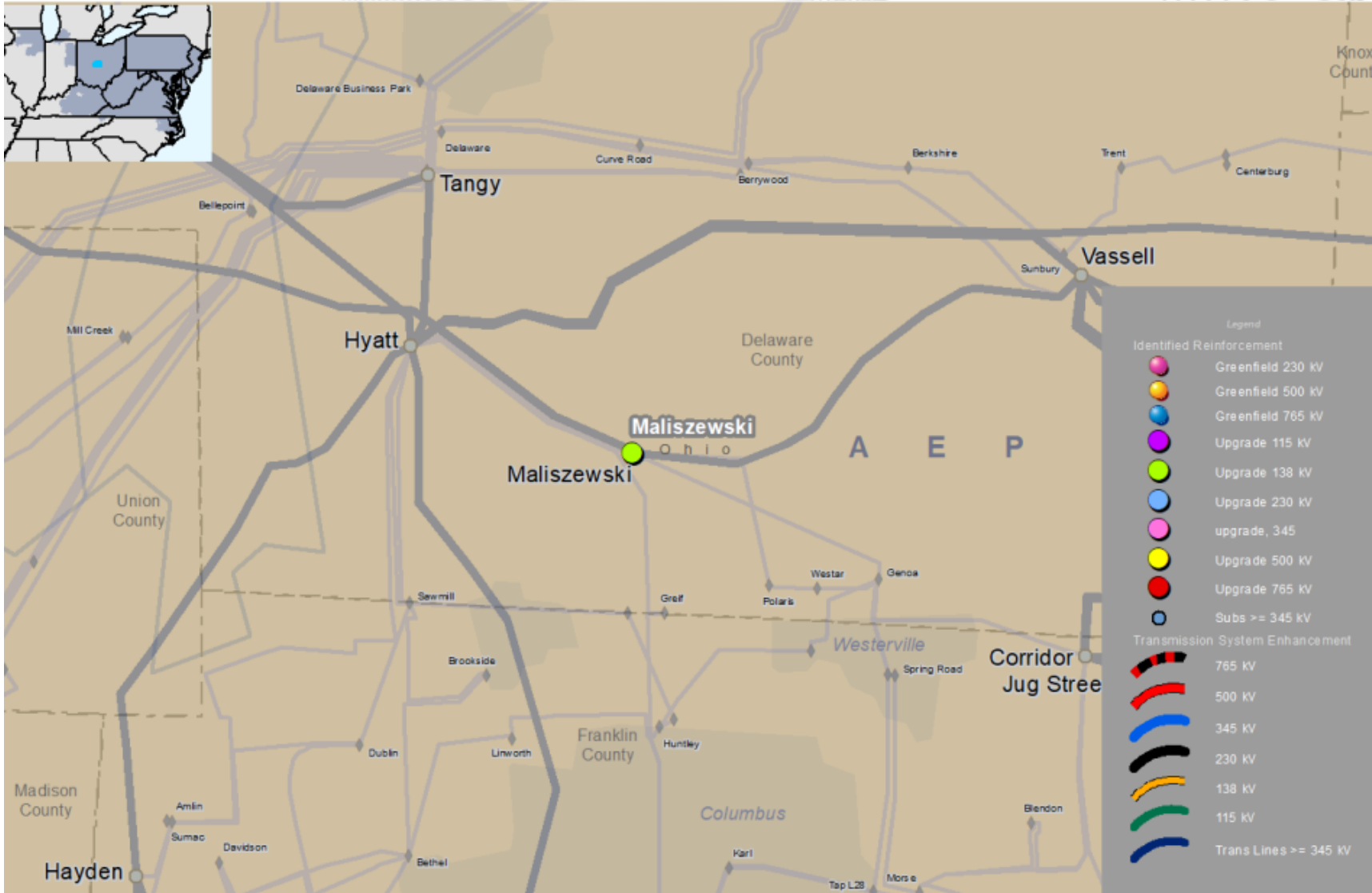
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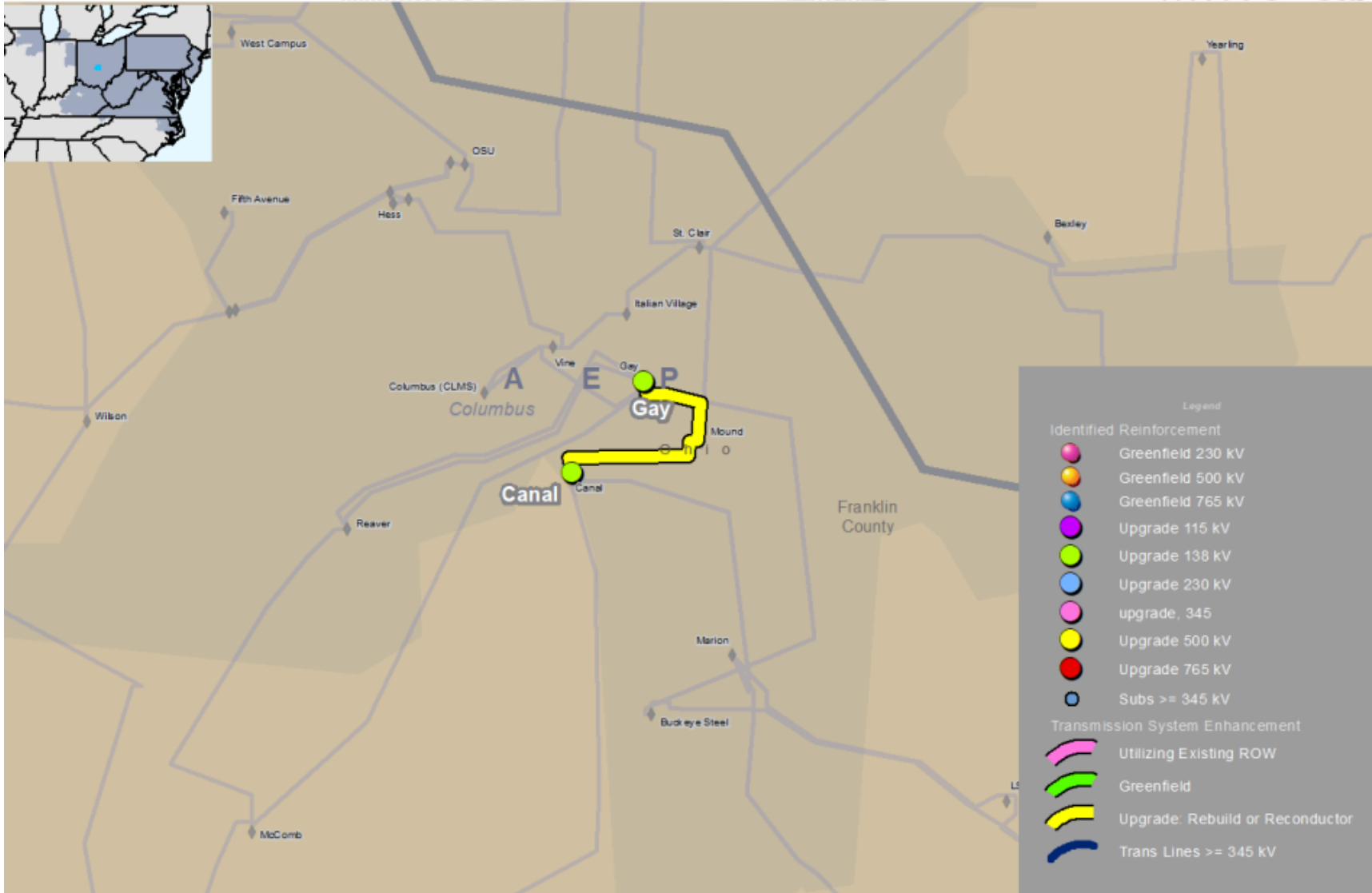
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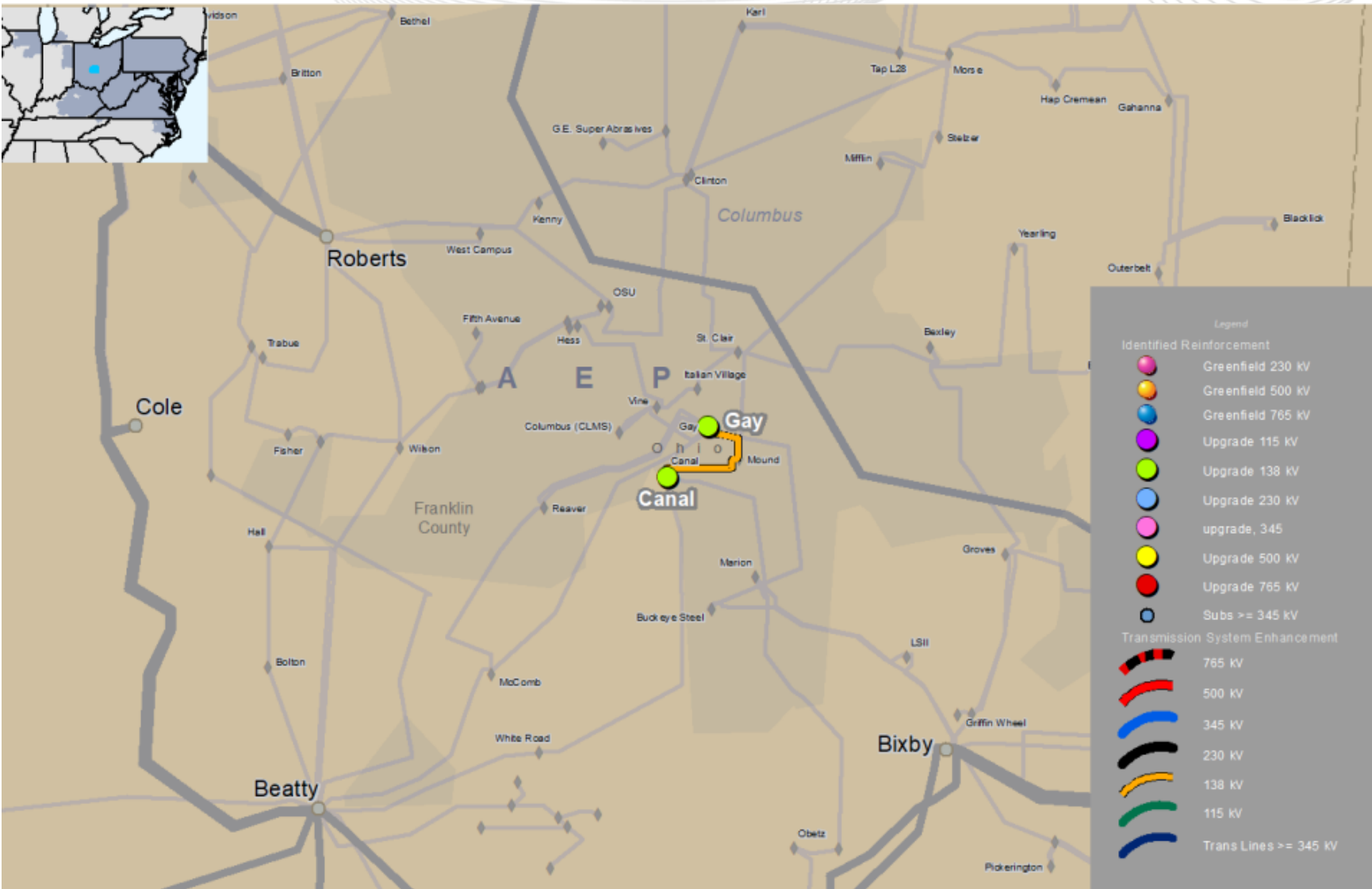
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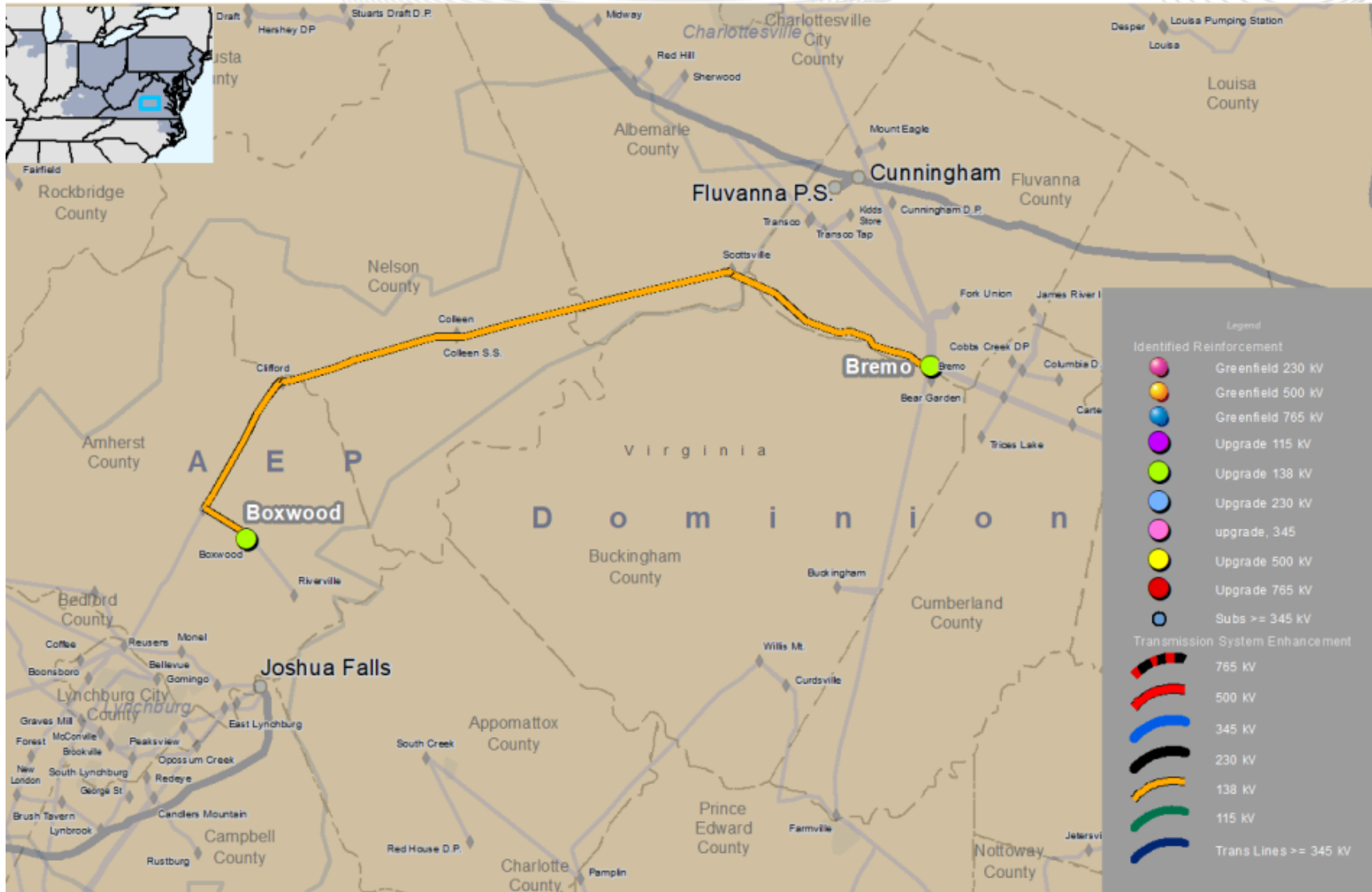
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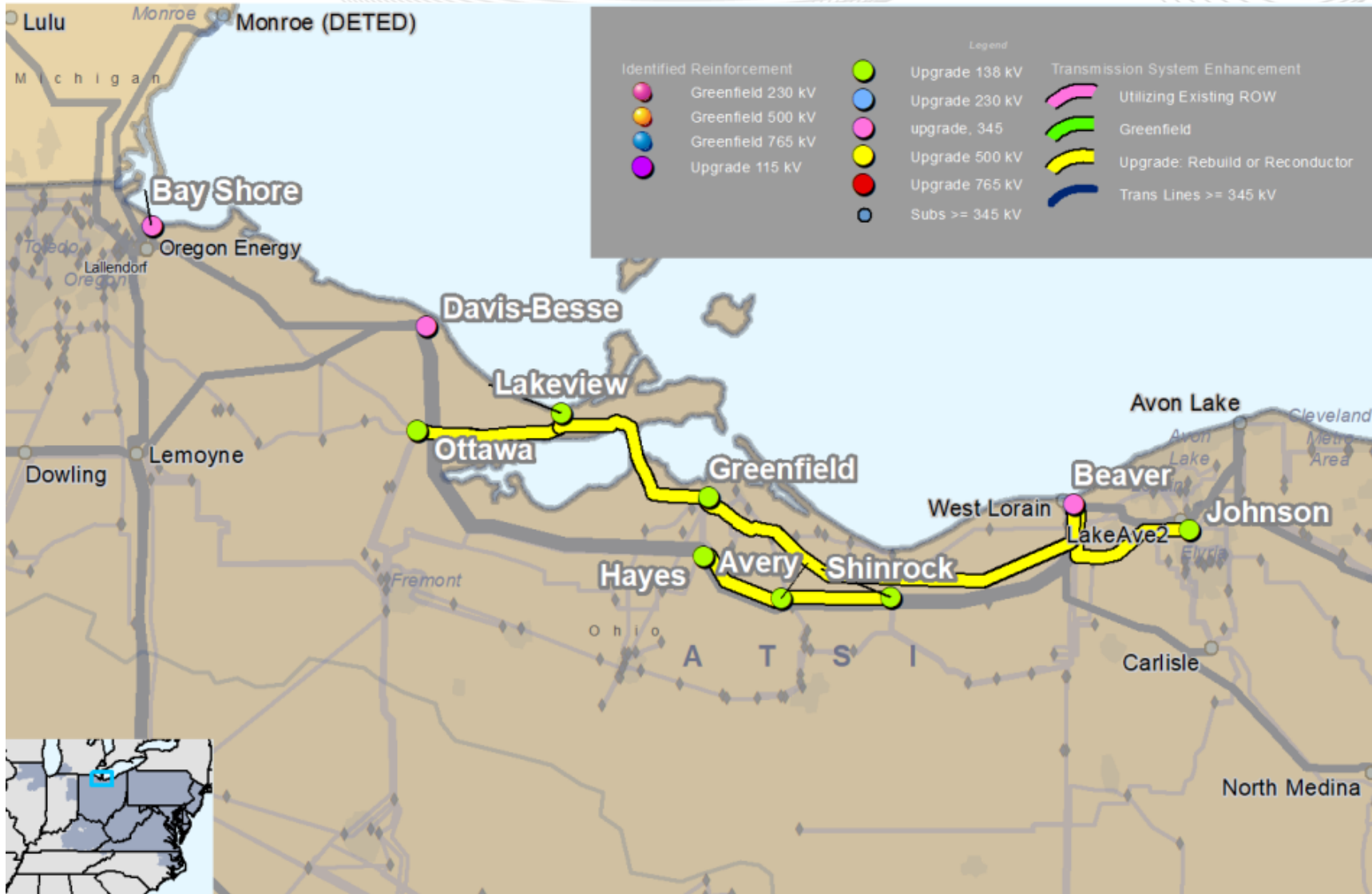


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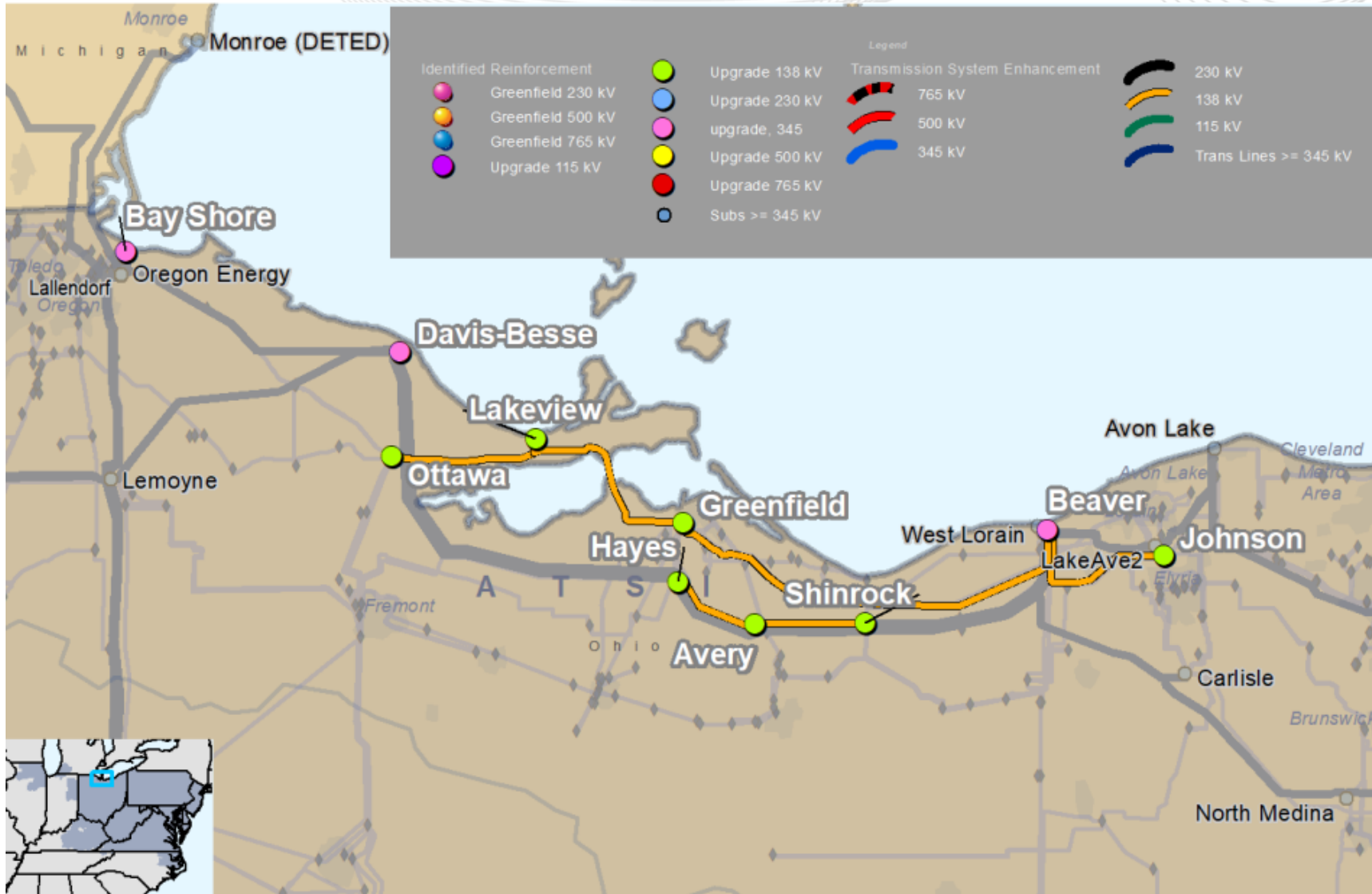


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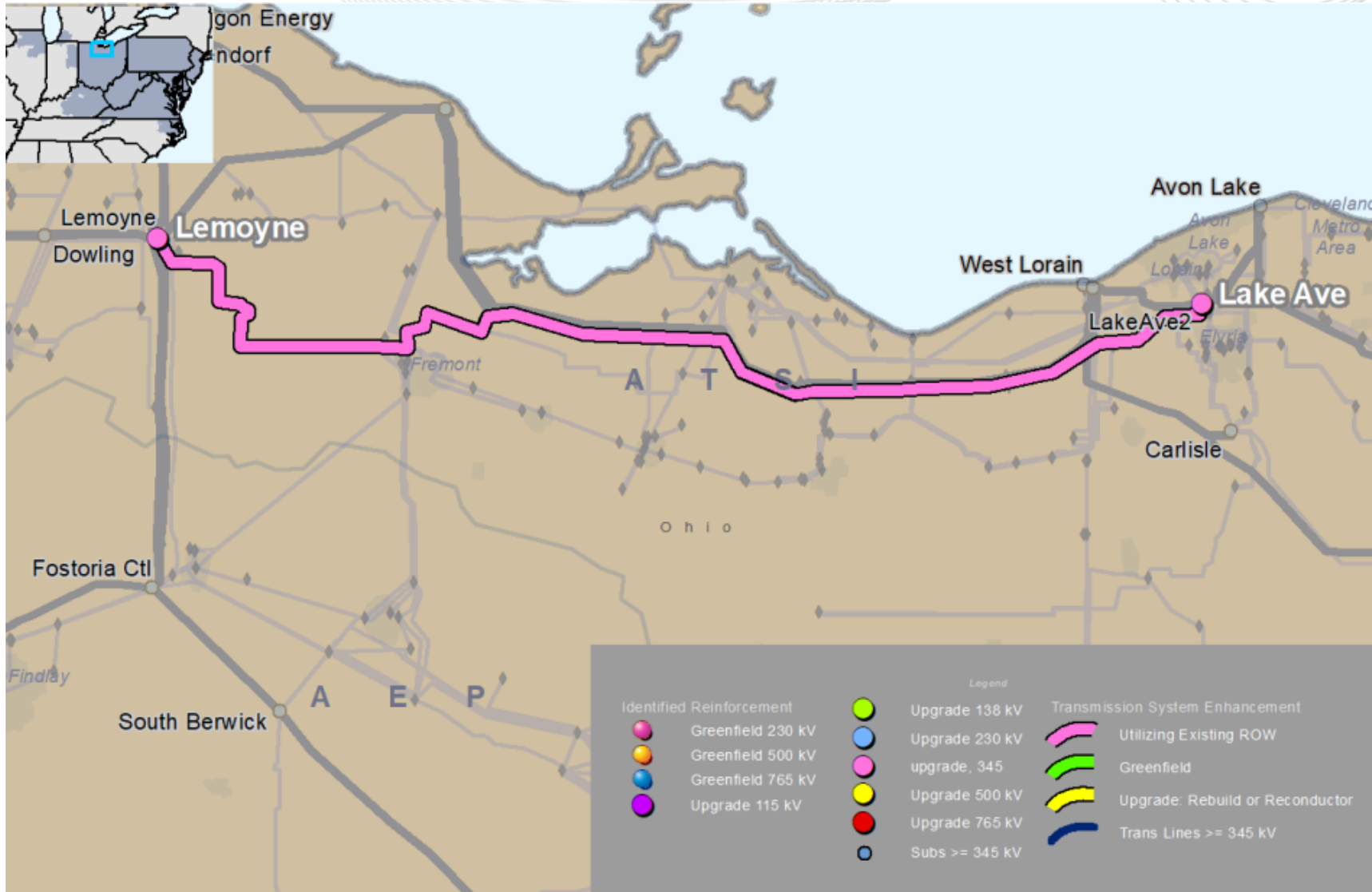
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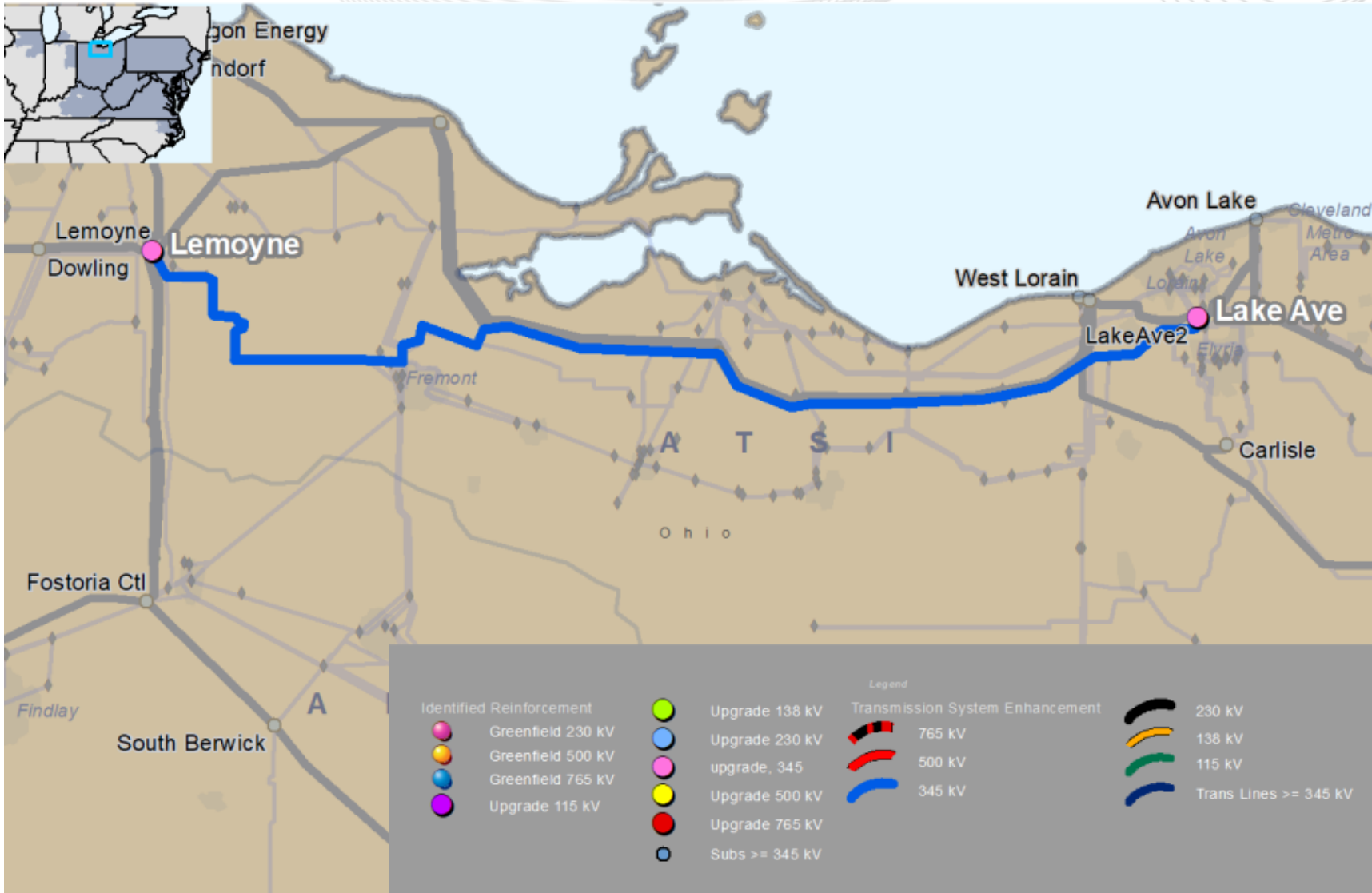
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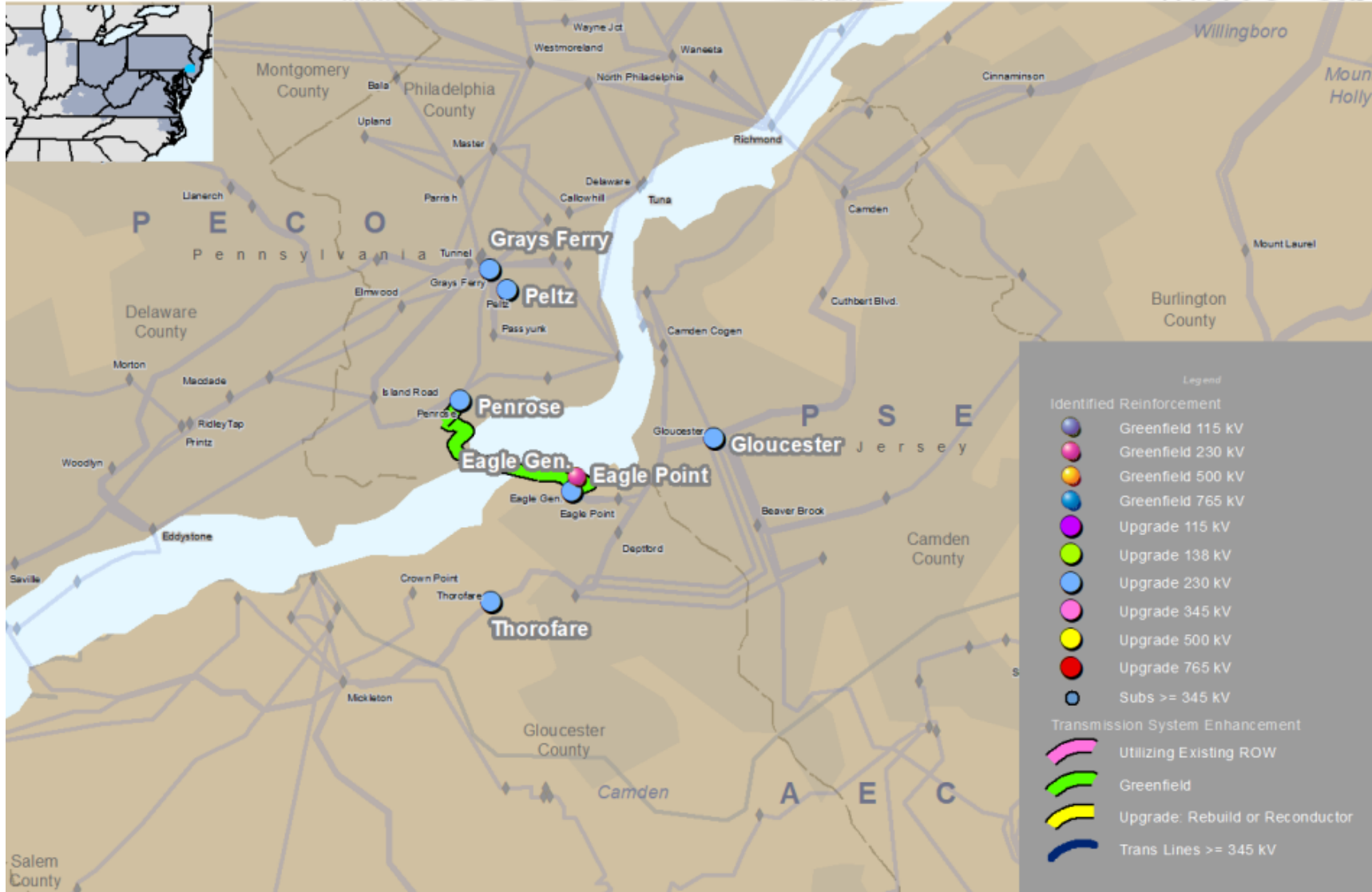


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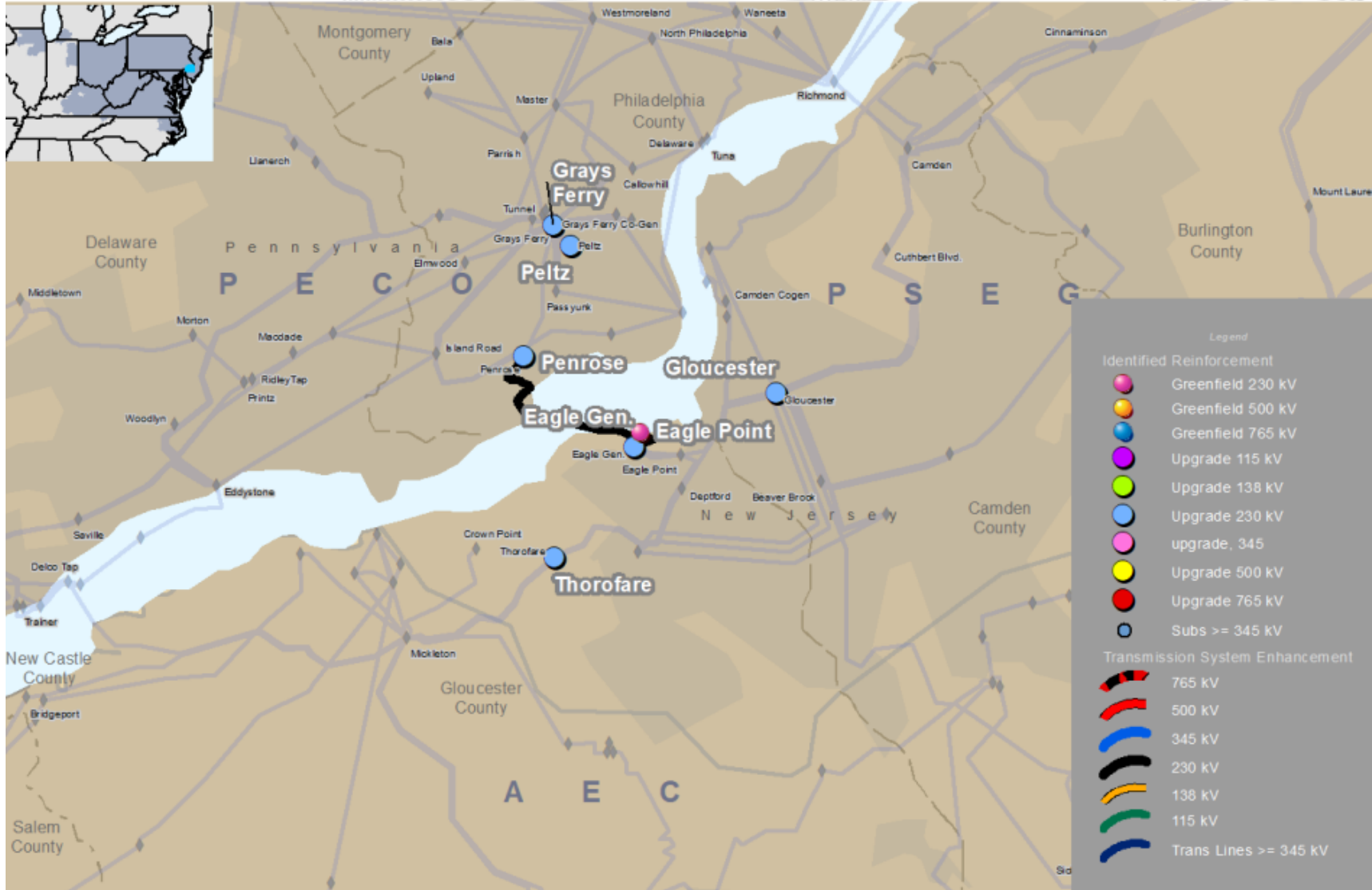


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PSEG

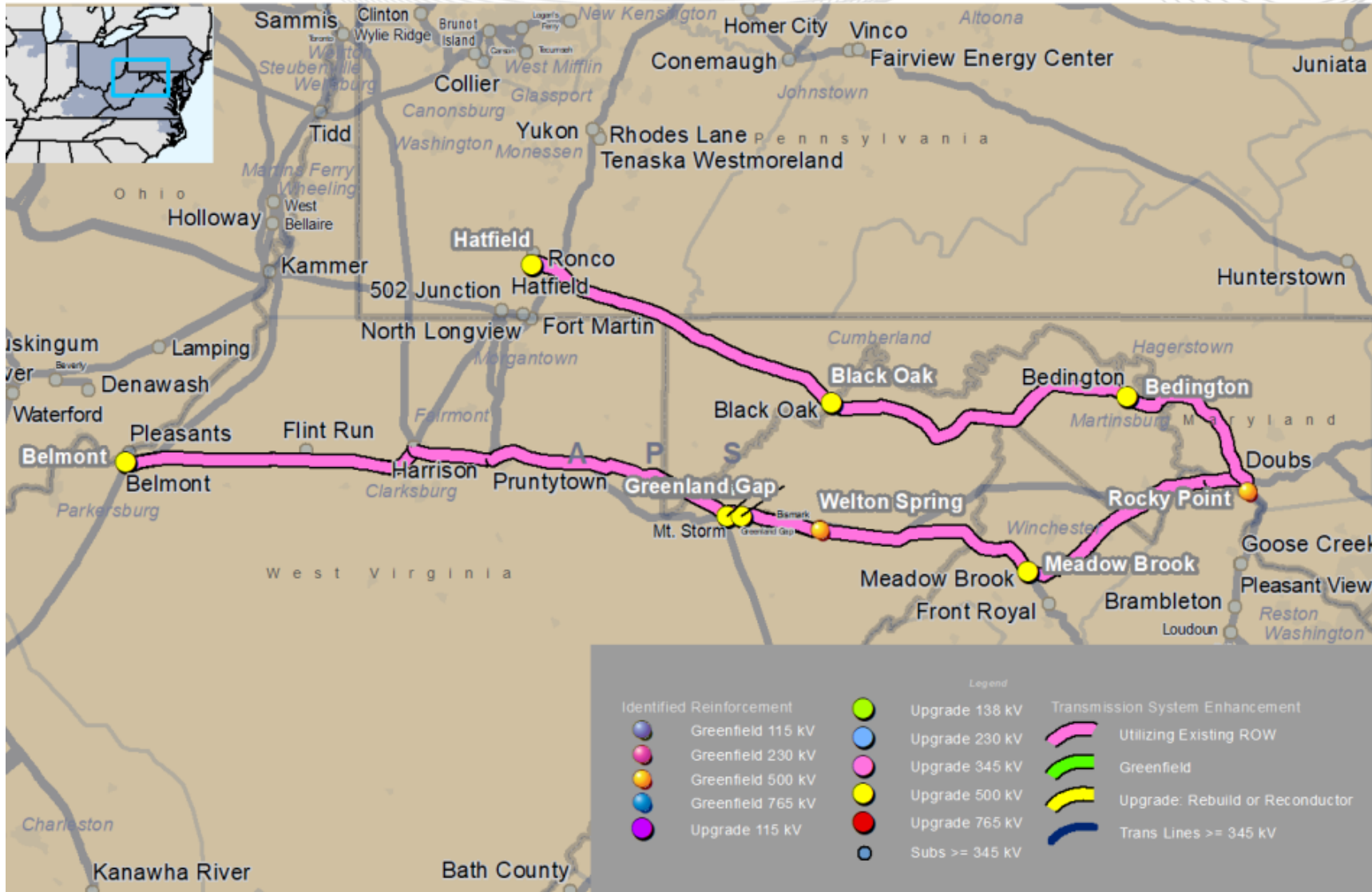


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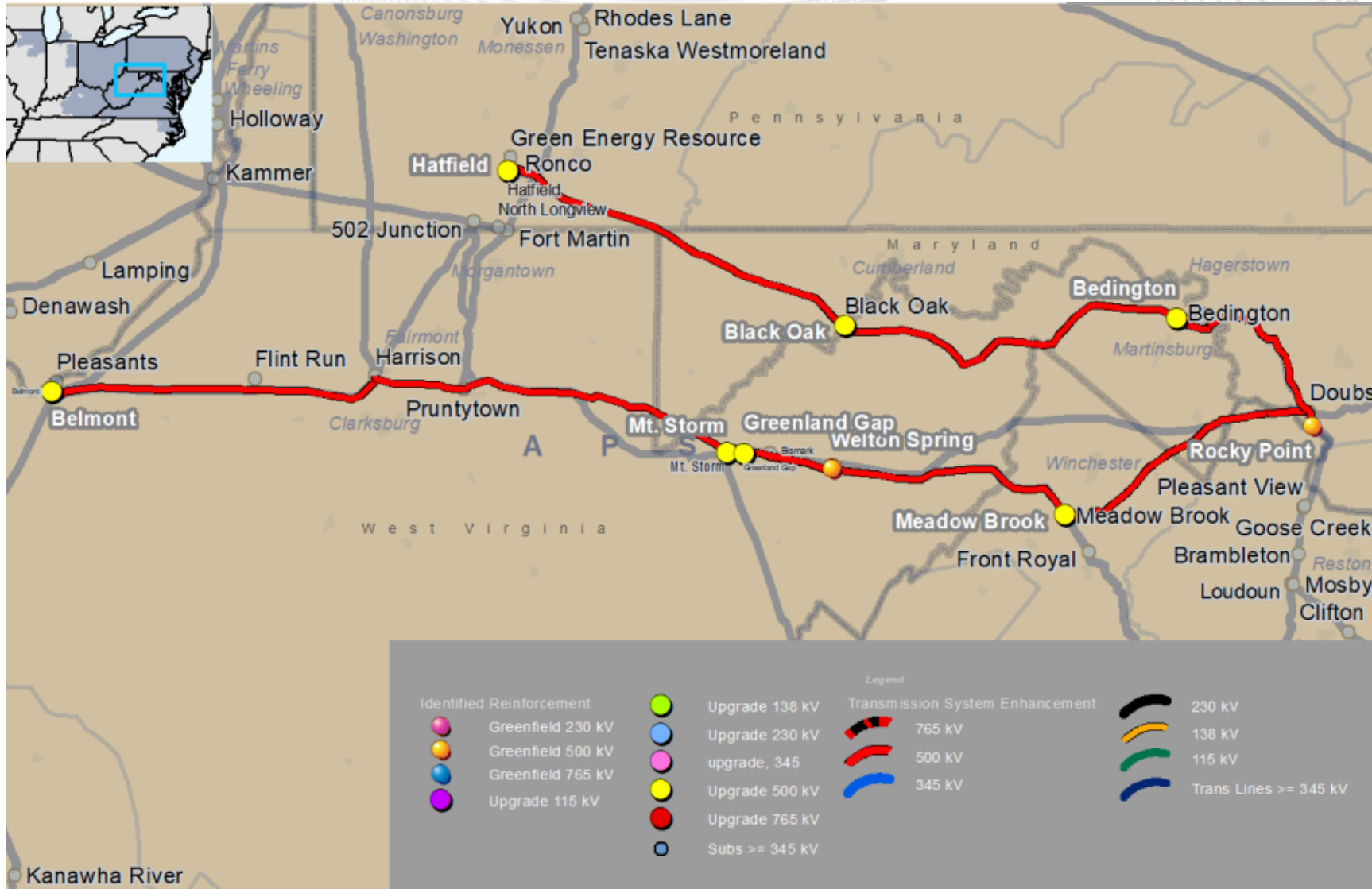


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TRAIL

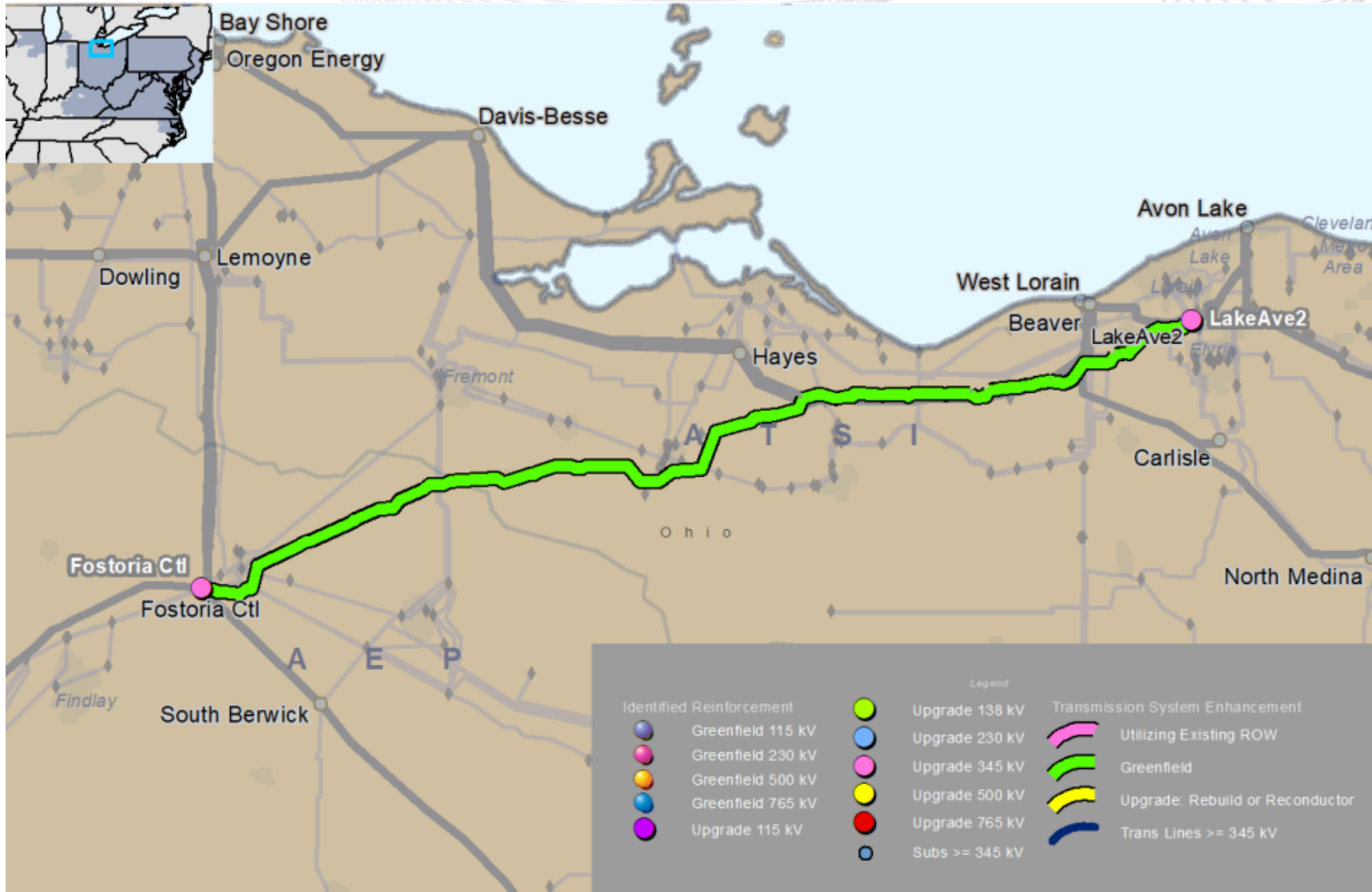


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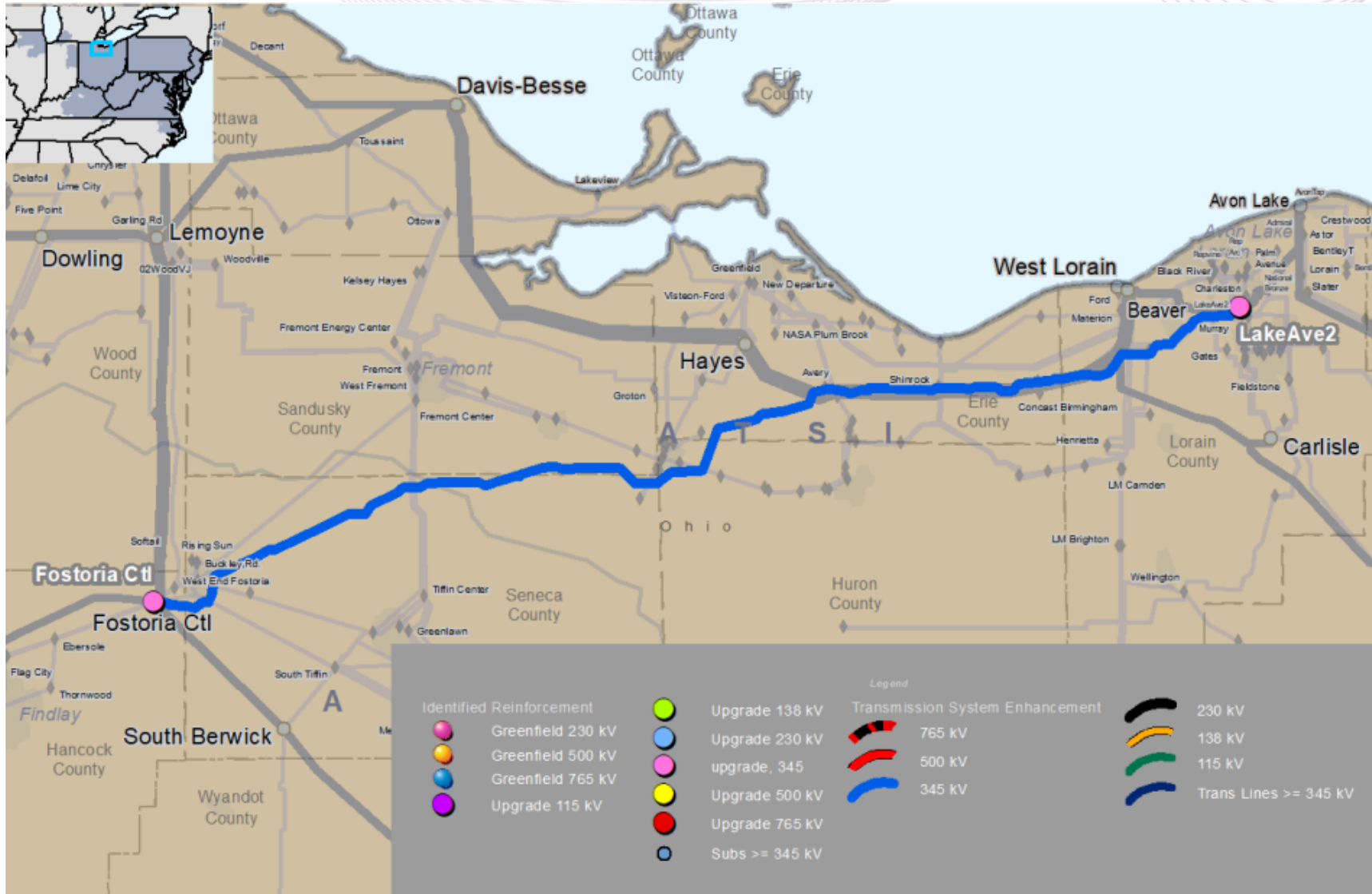


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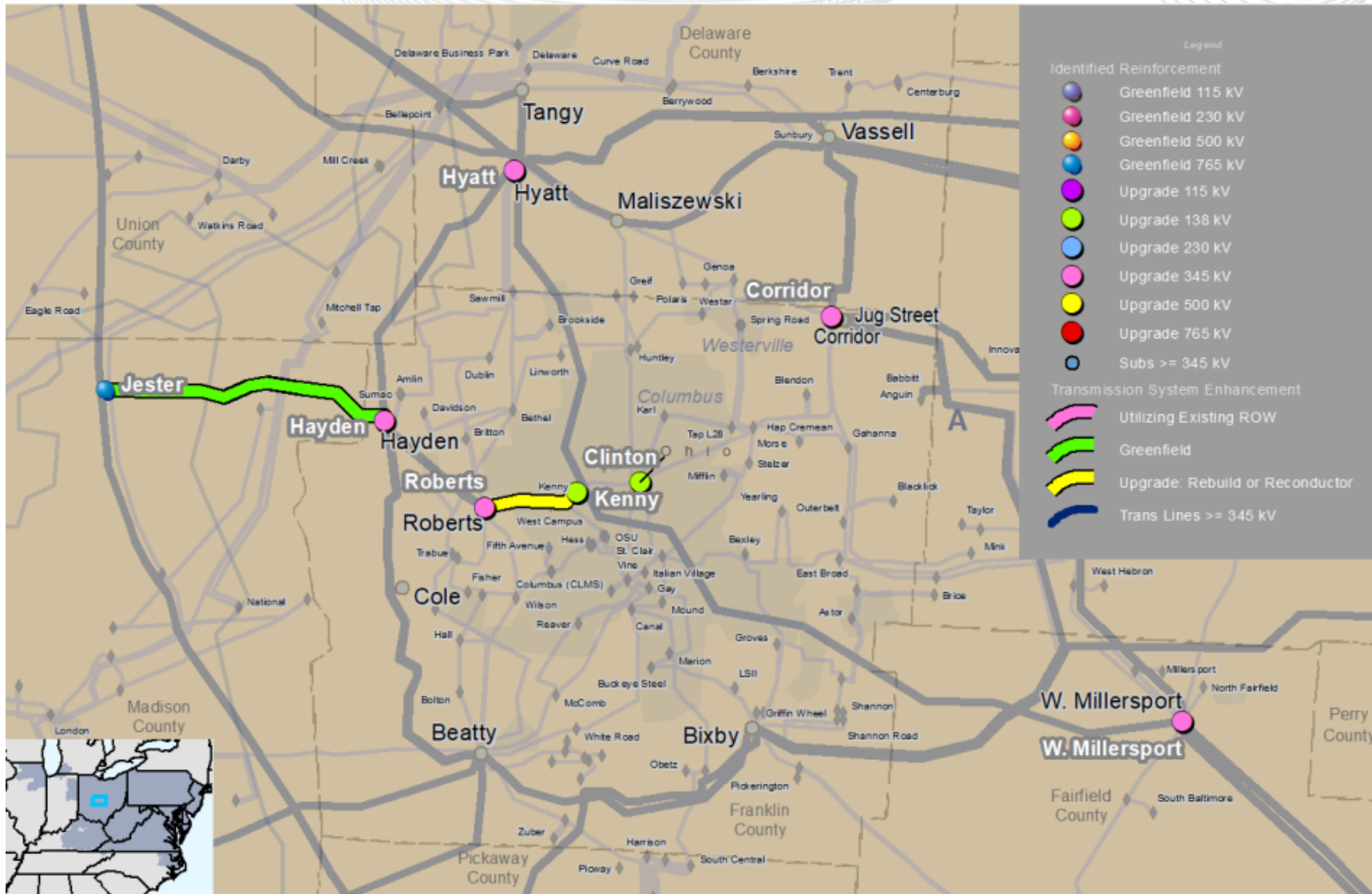
TRANSOURCE



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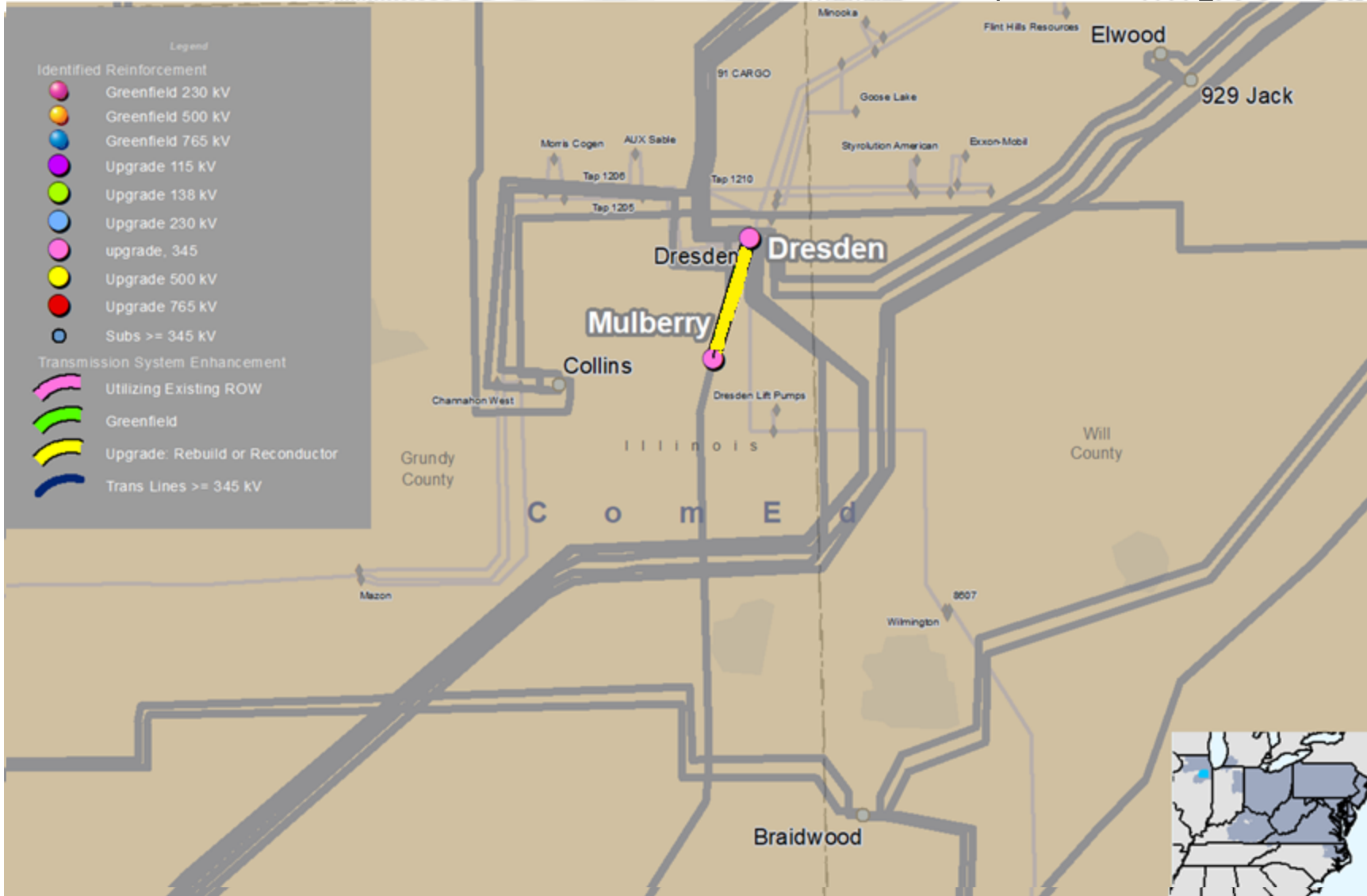


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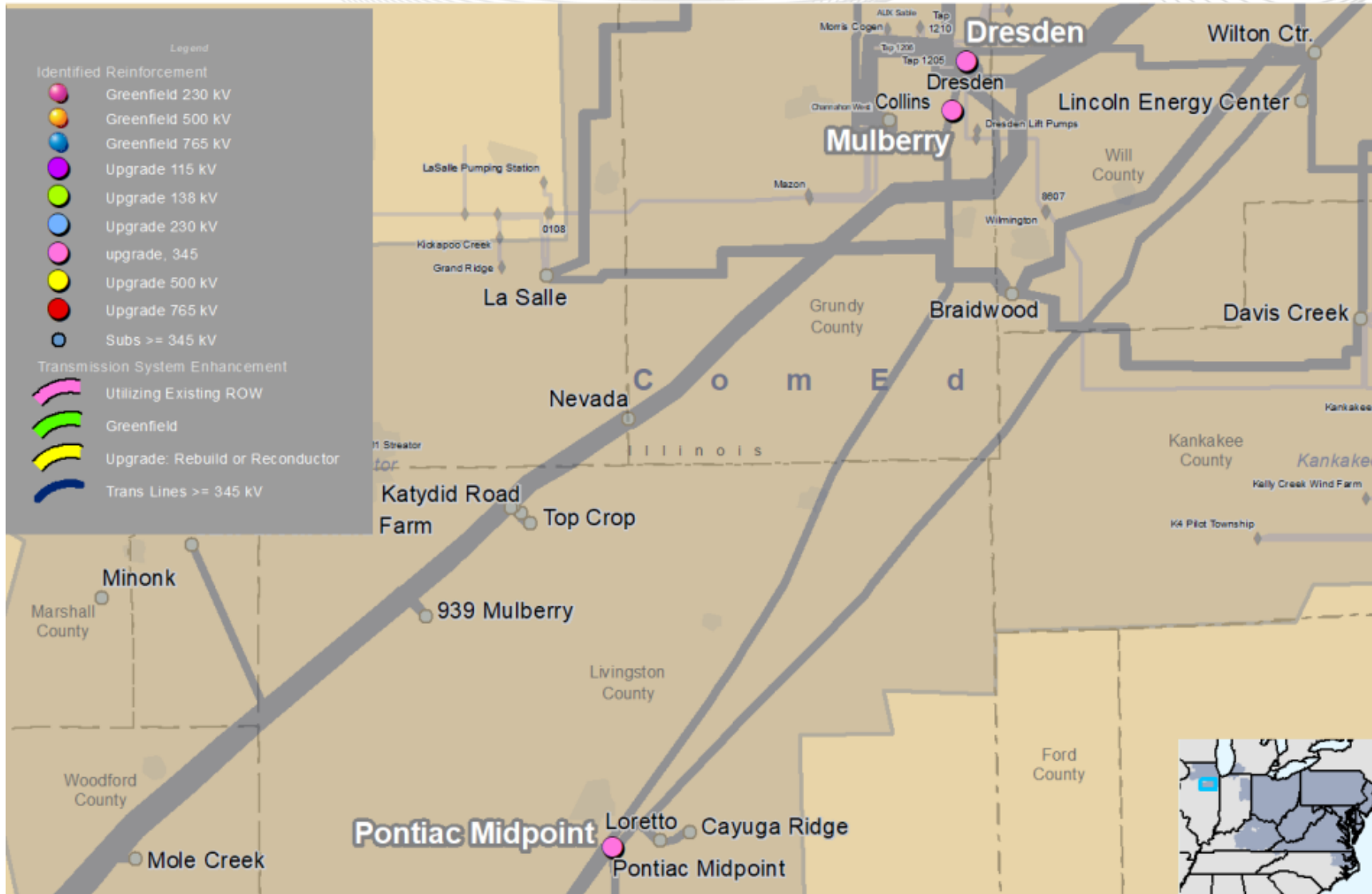
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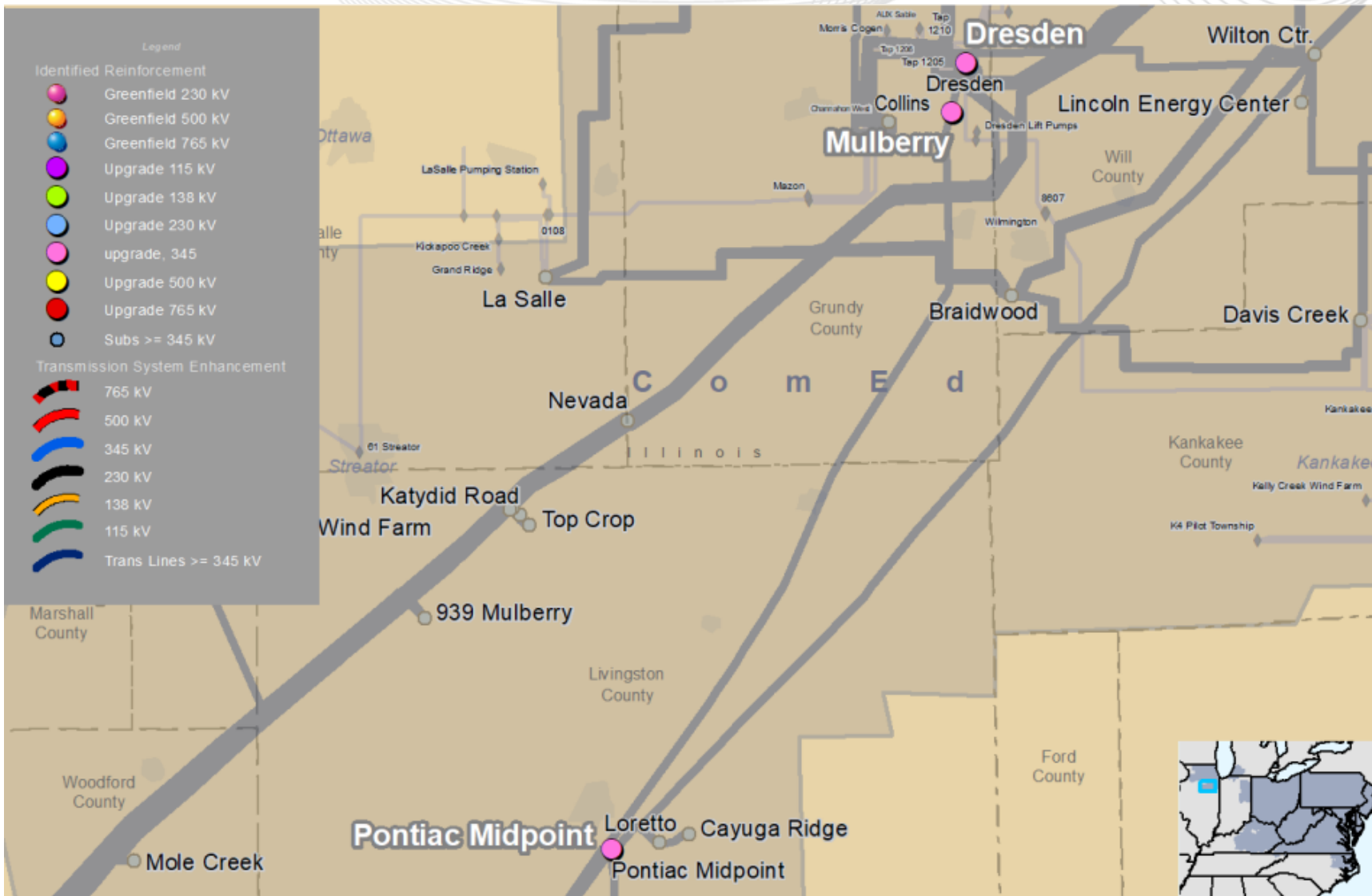
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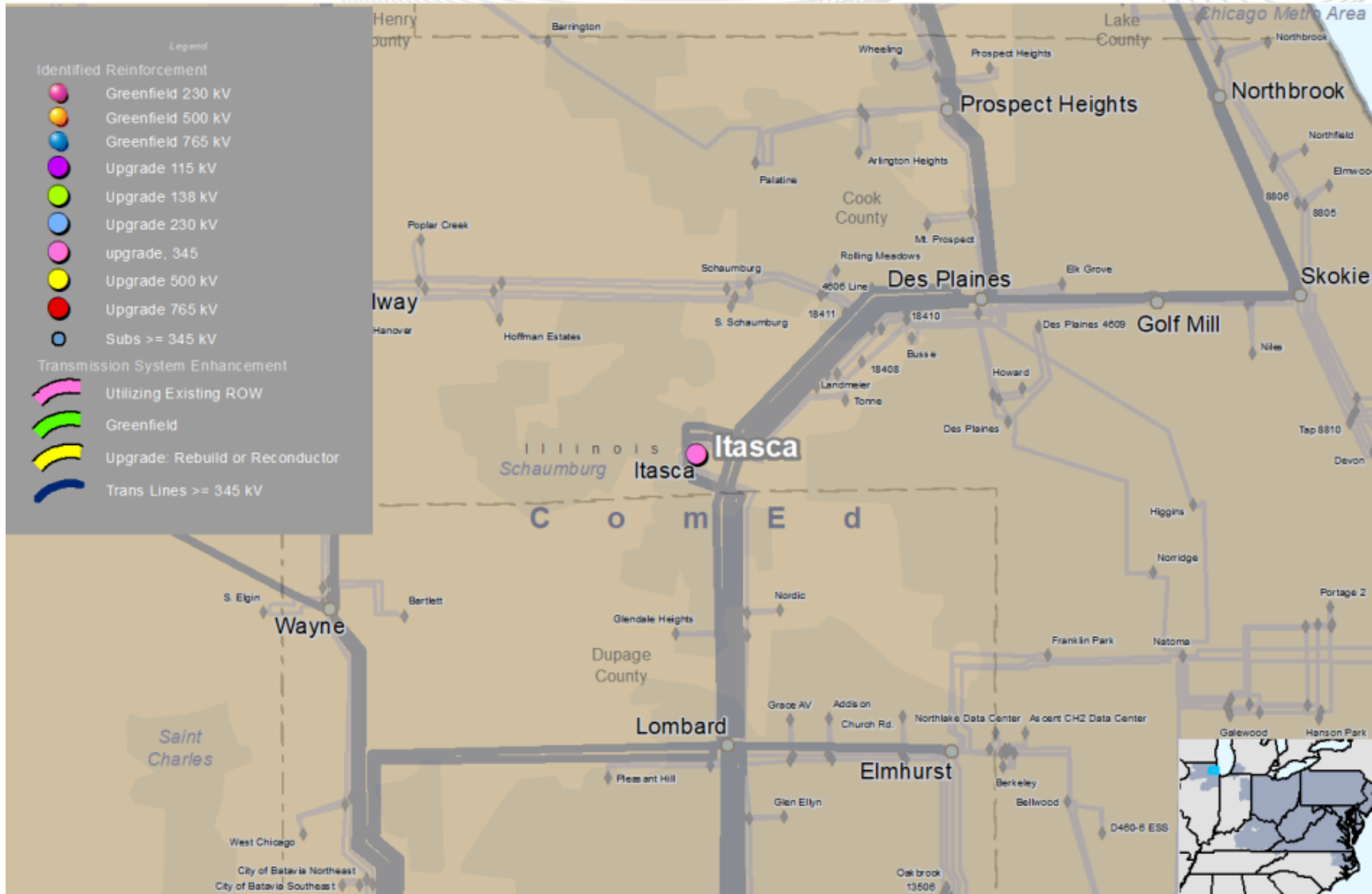
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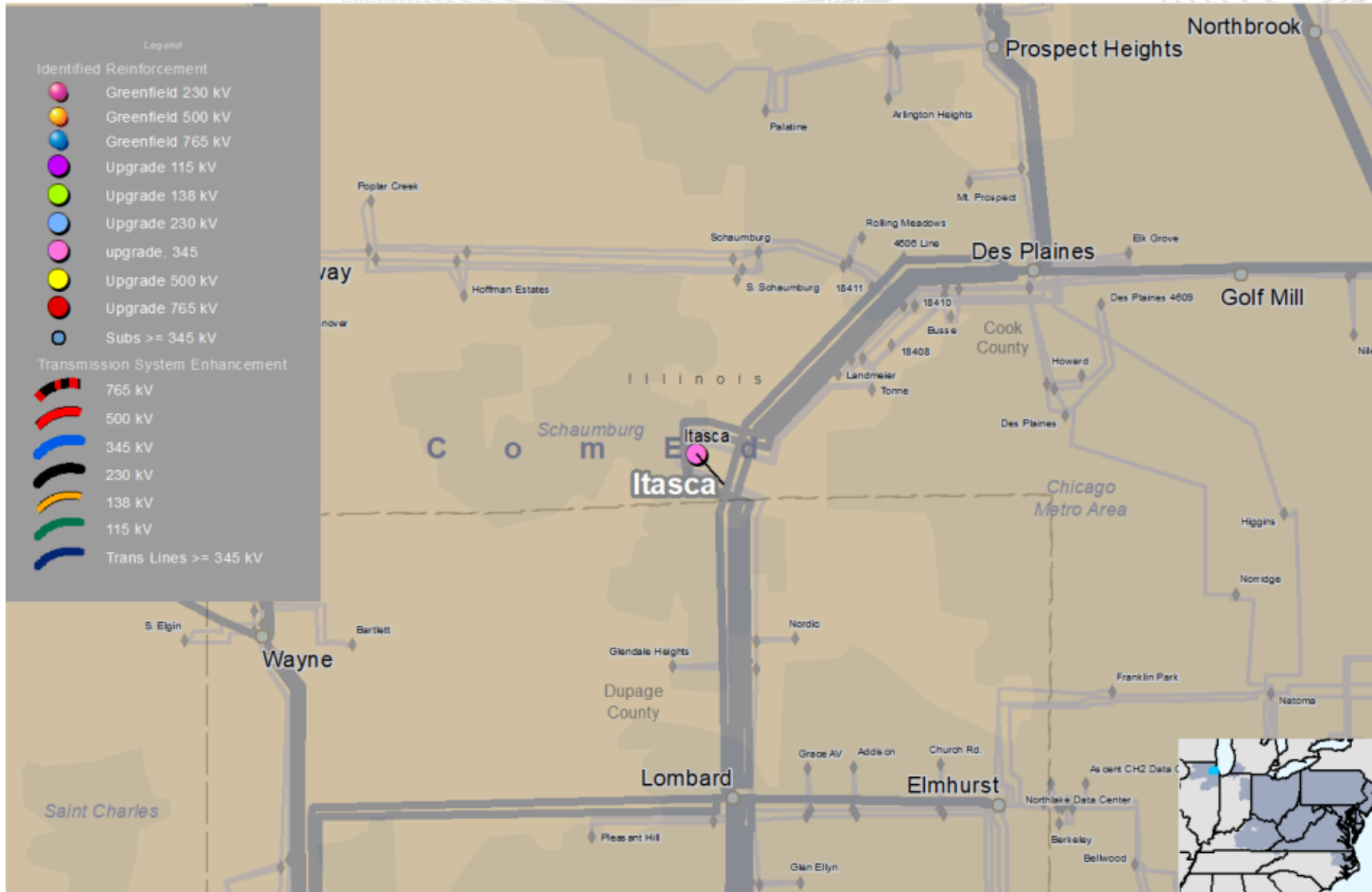


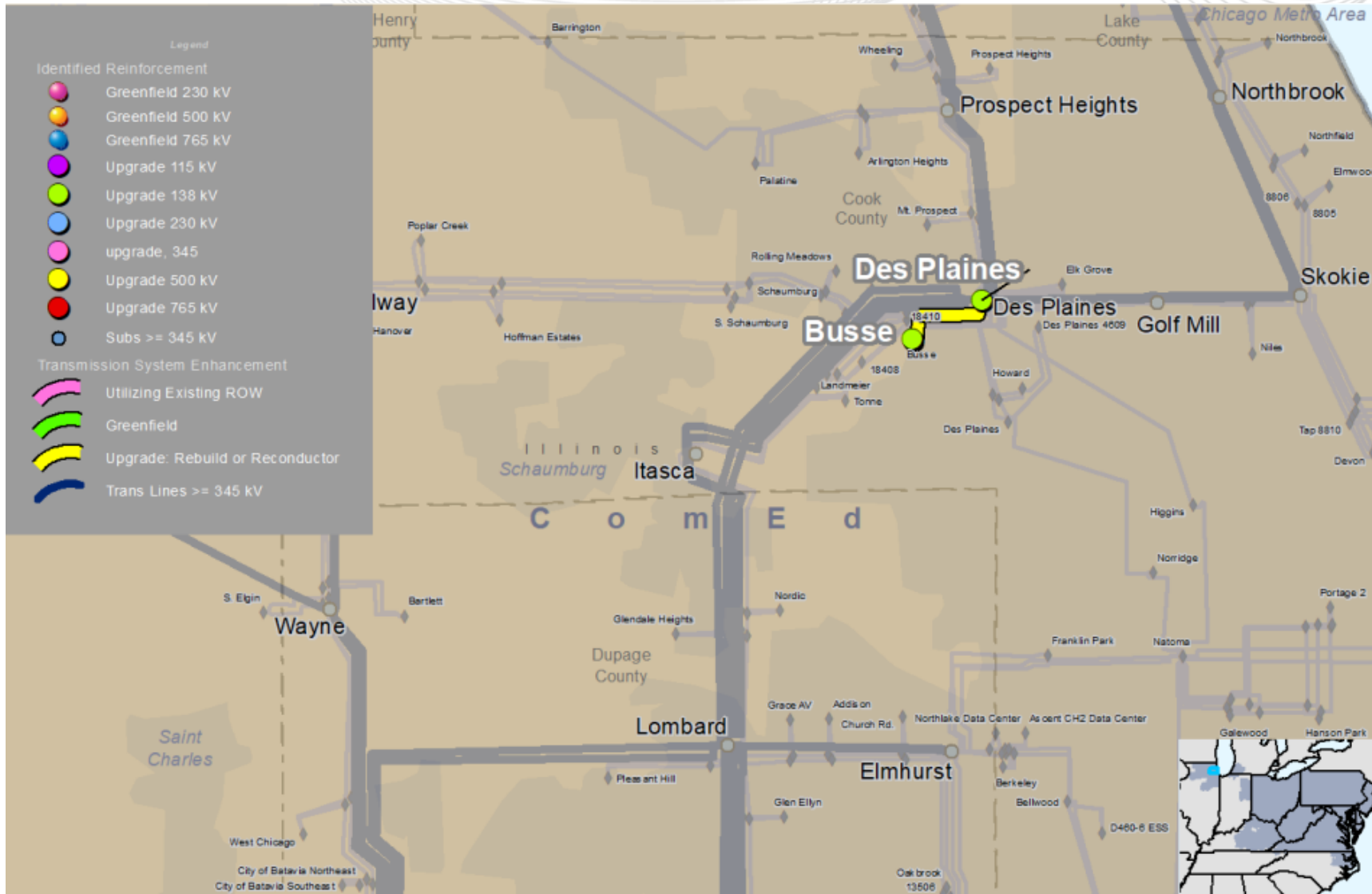
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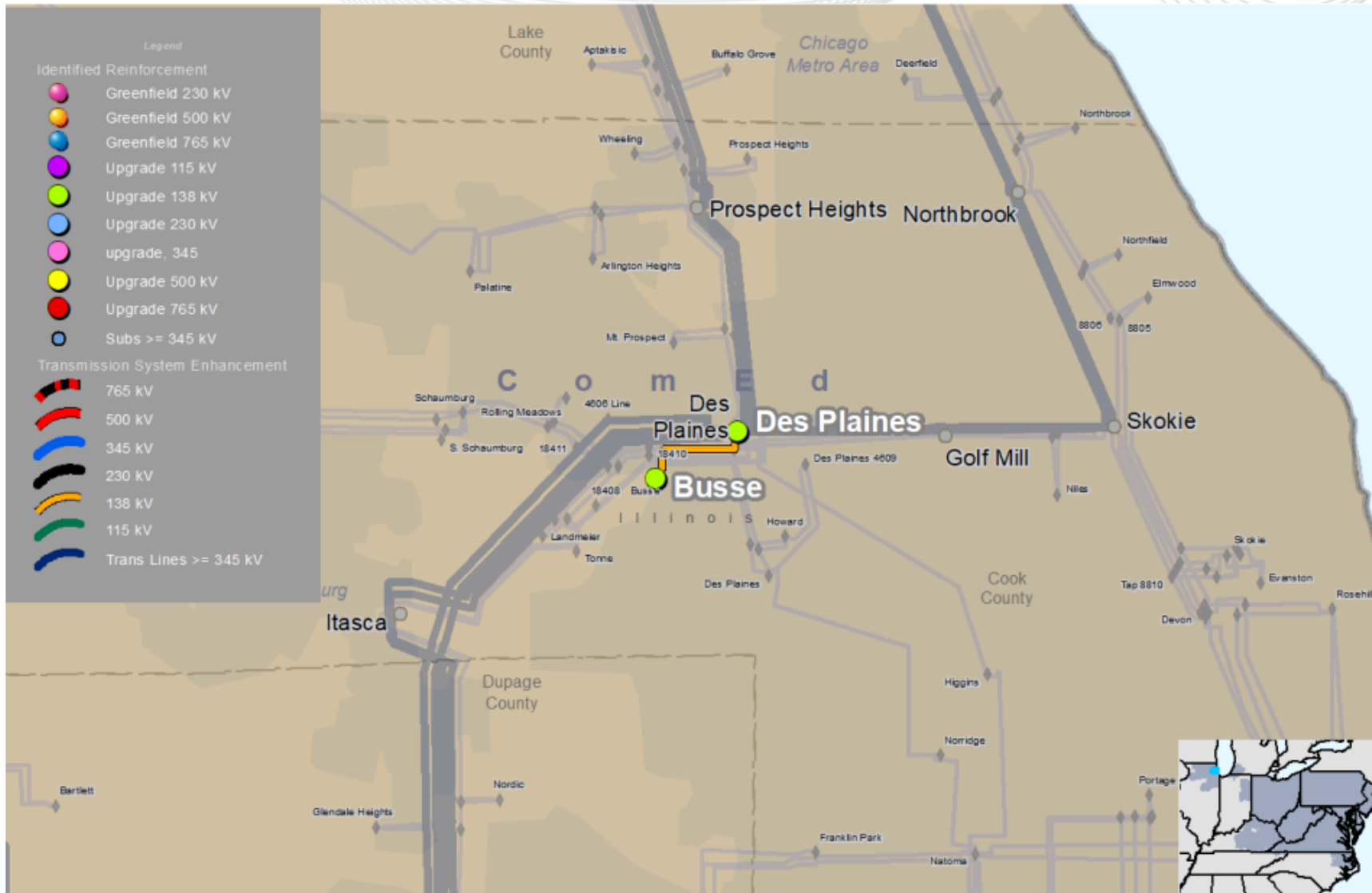
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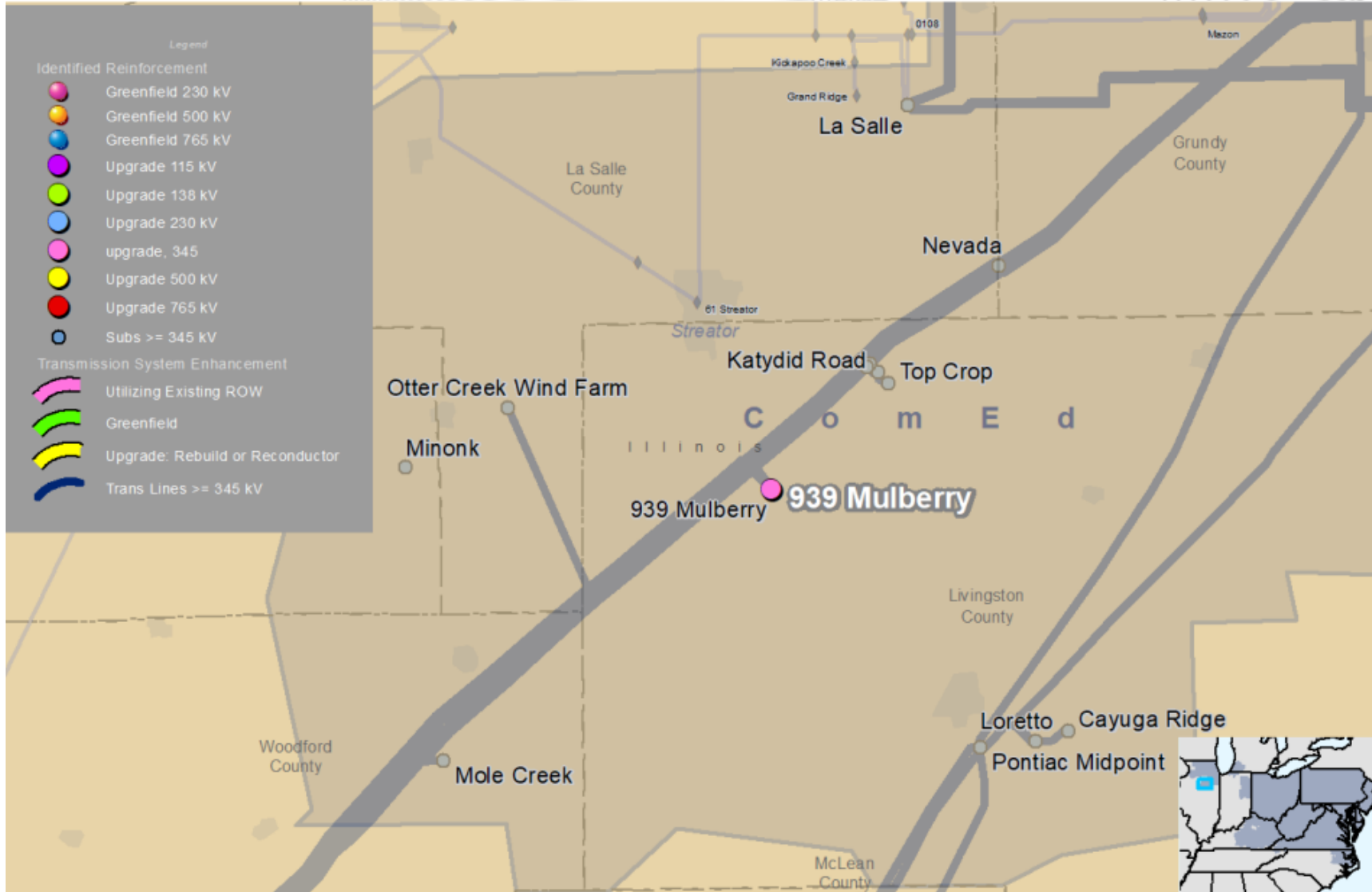


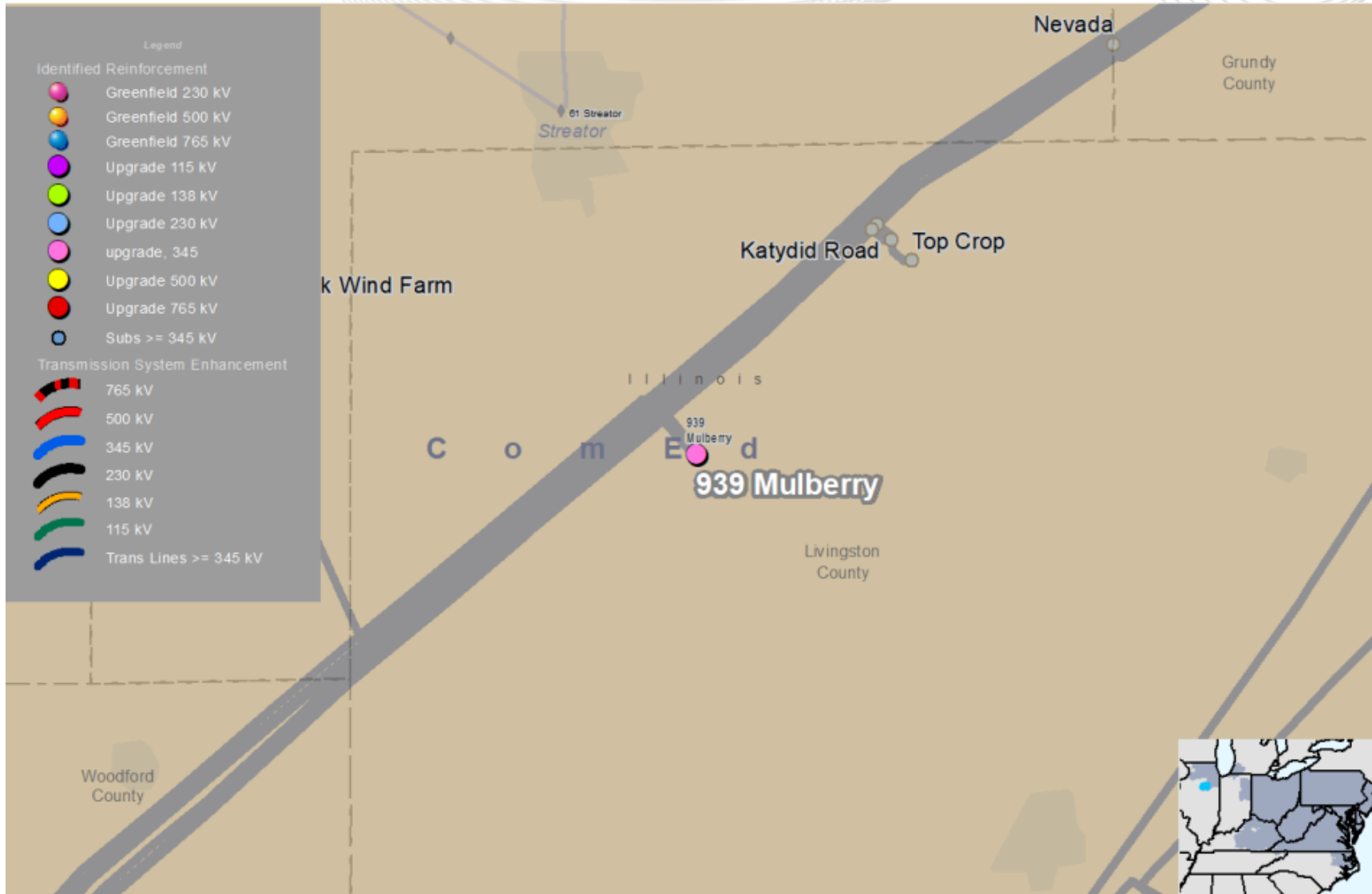


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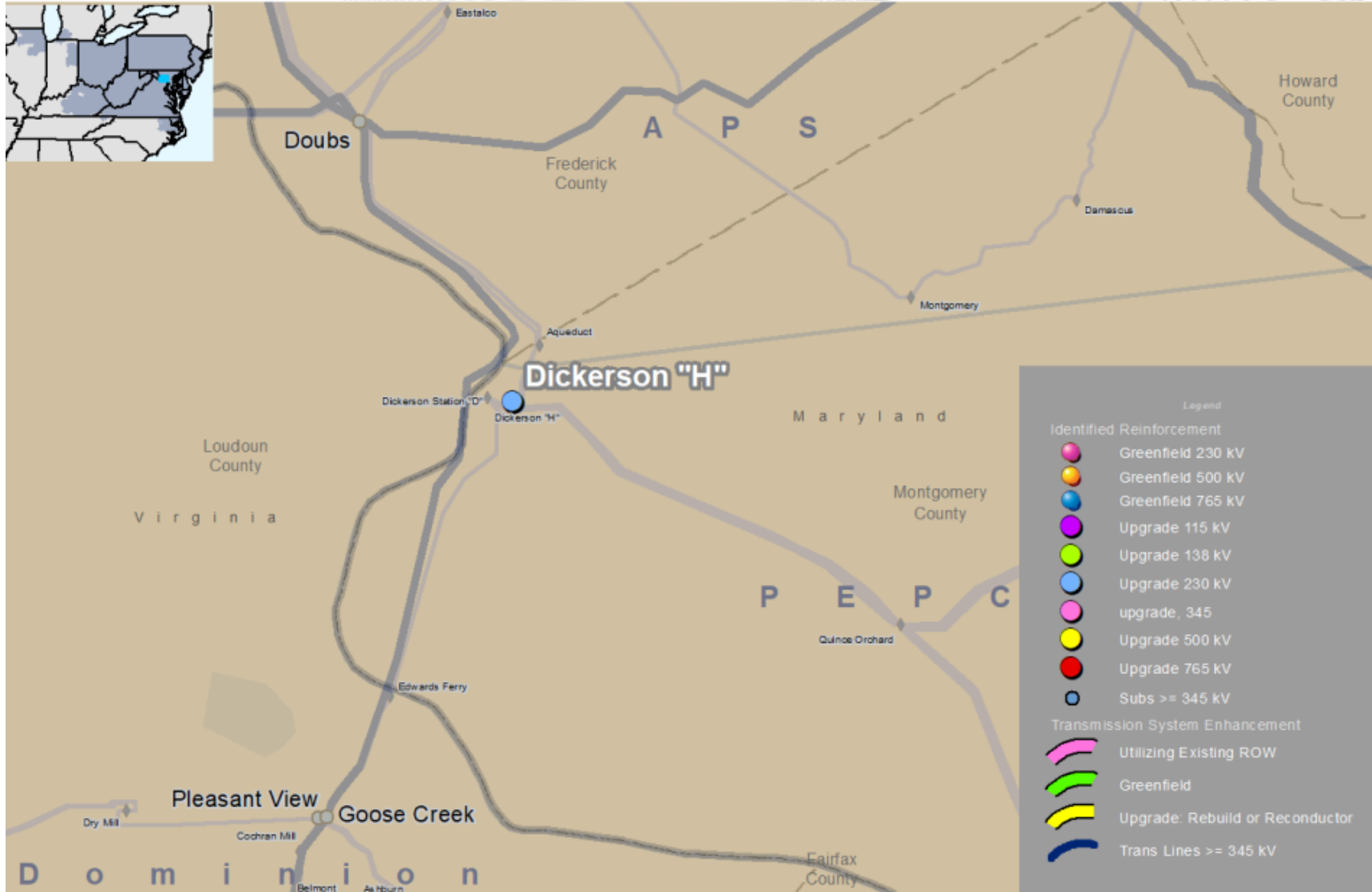


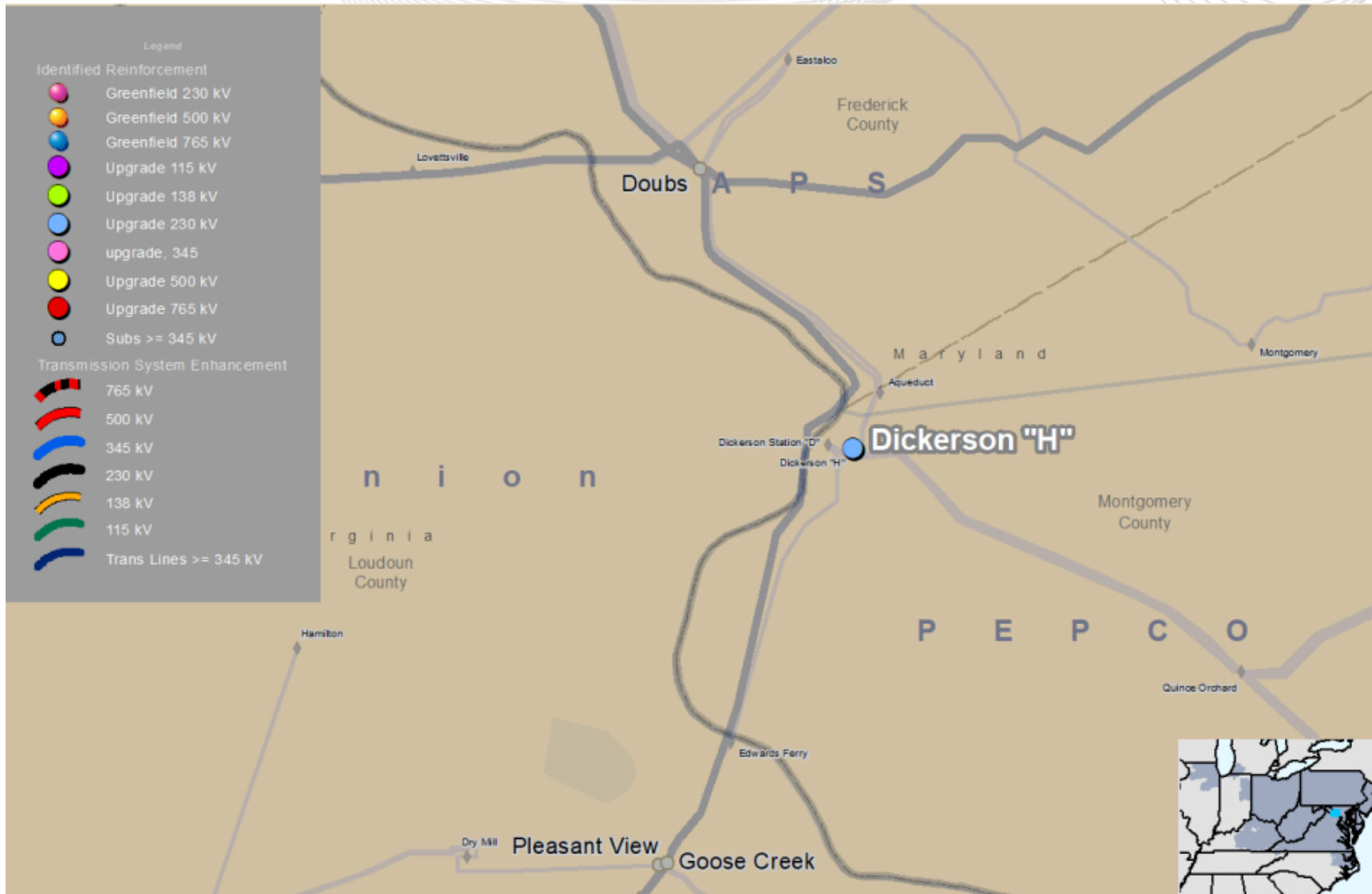
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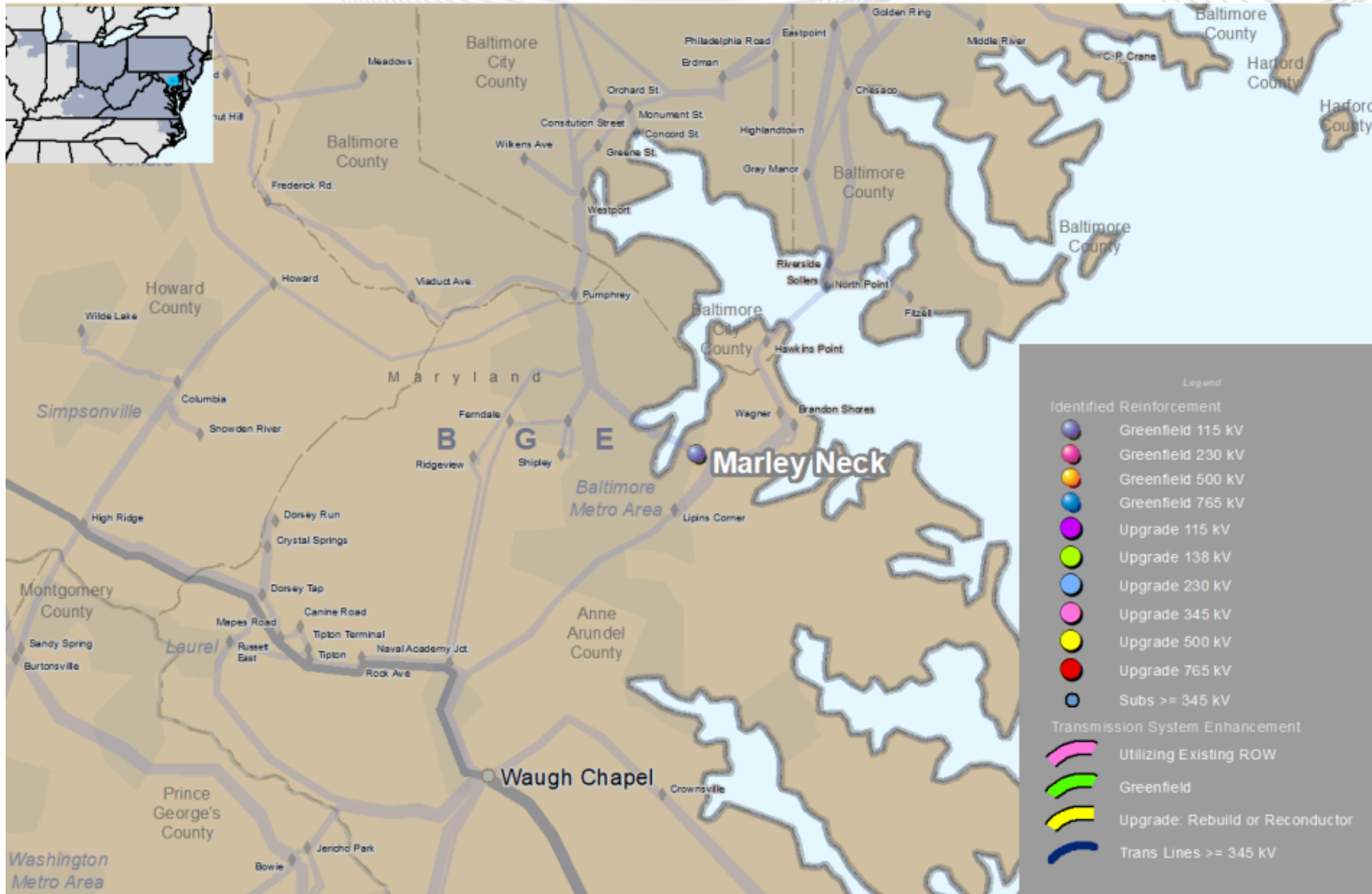




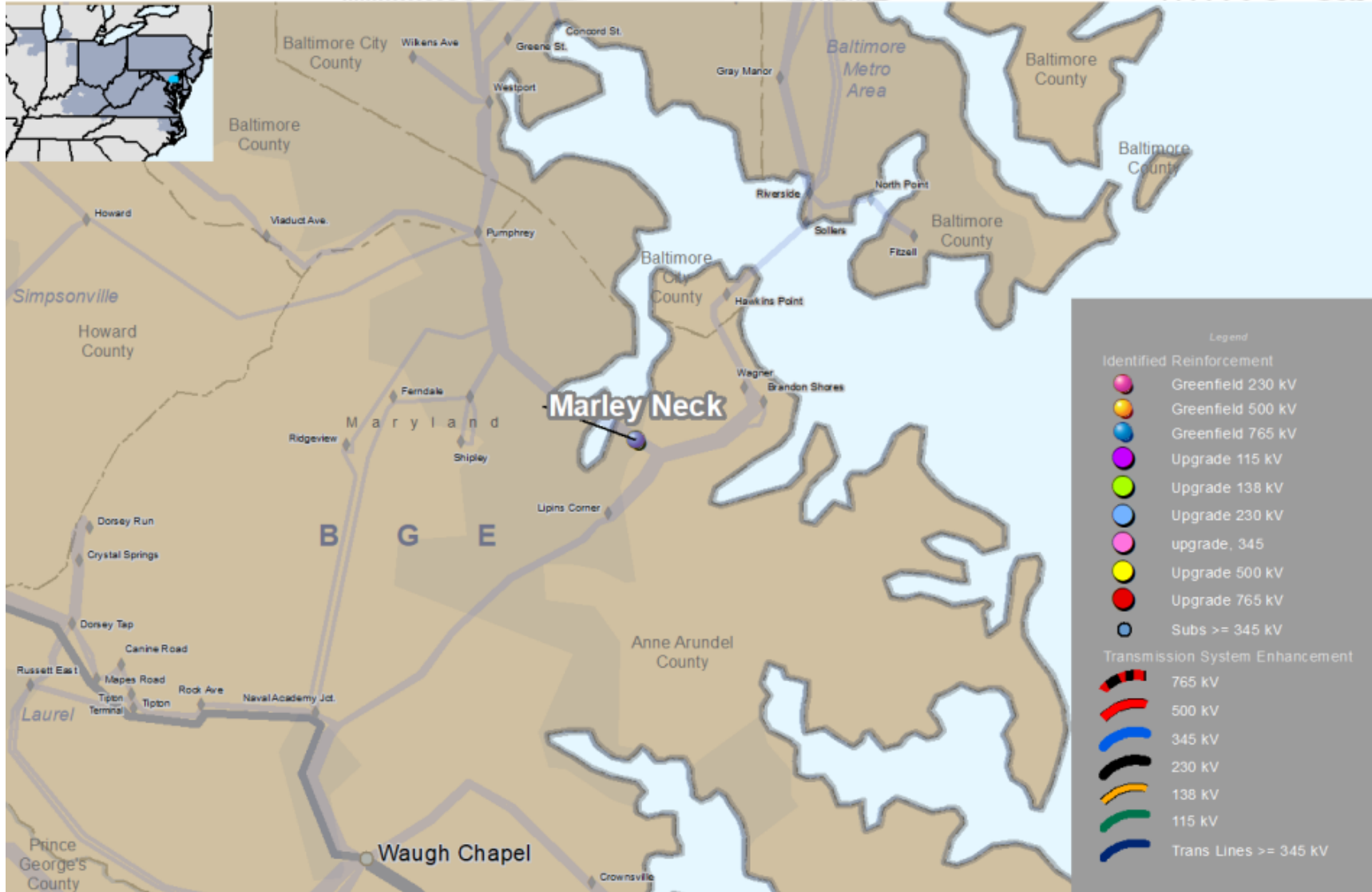
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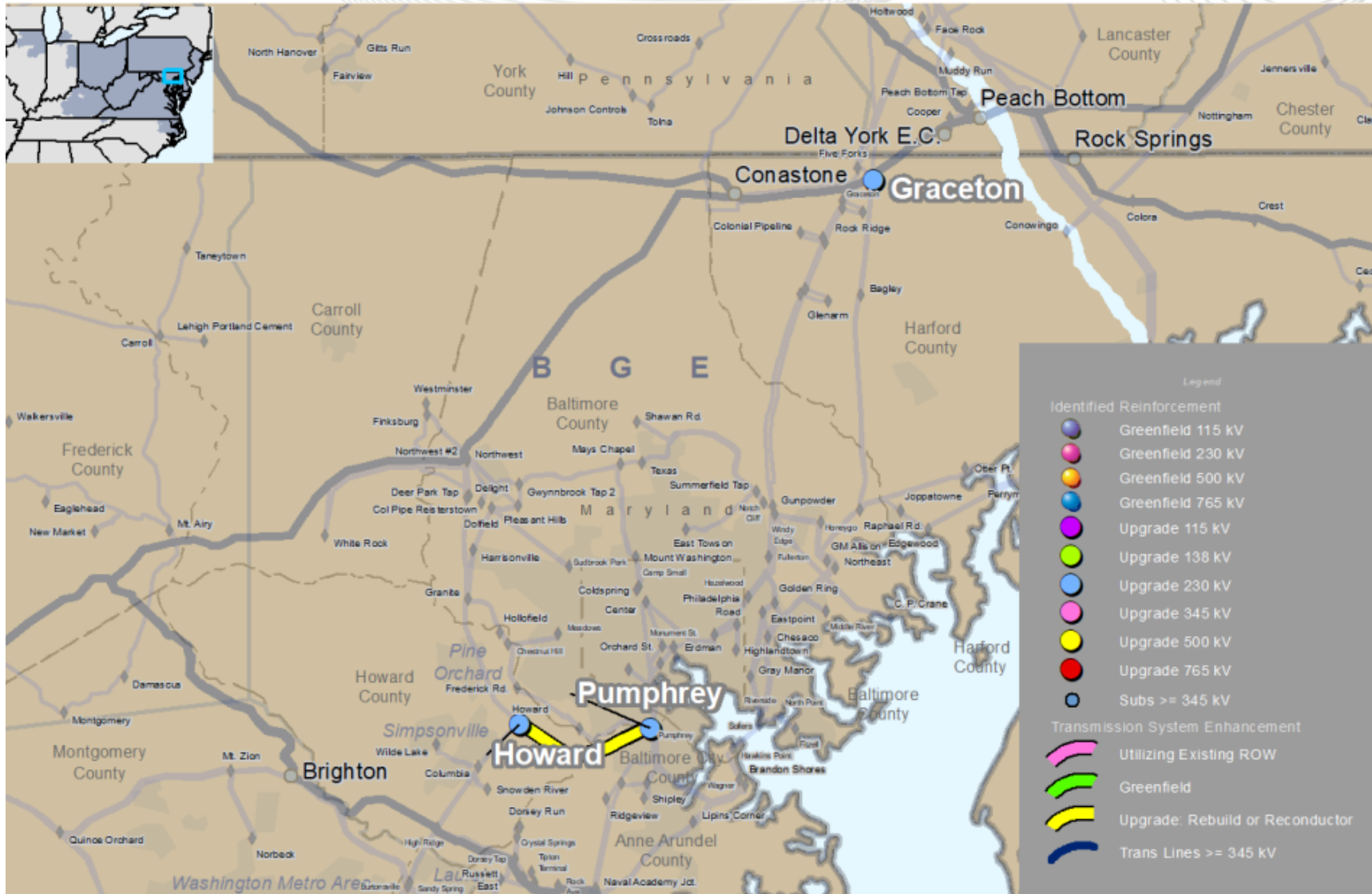




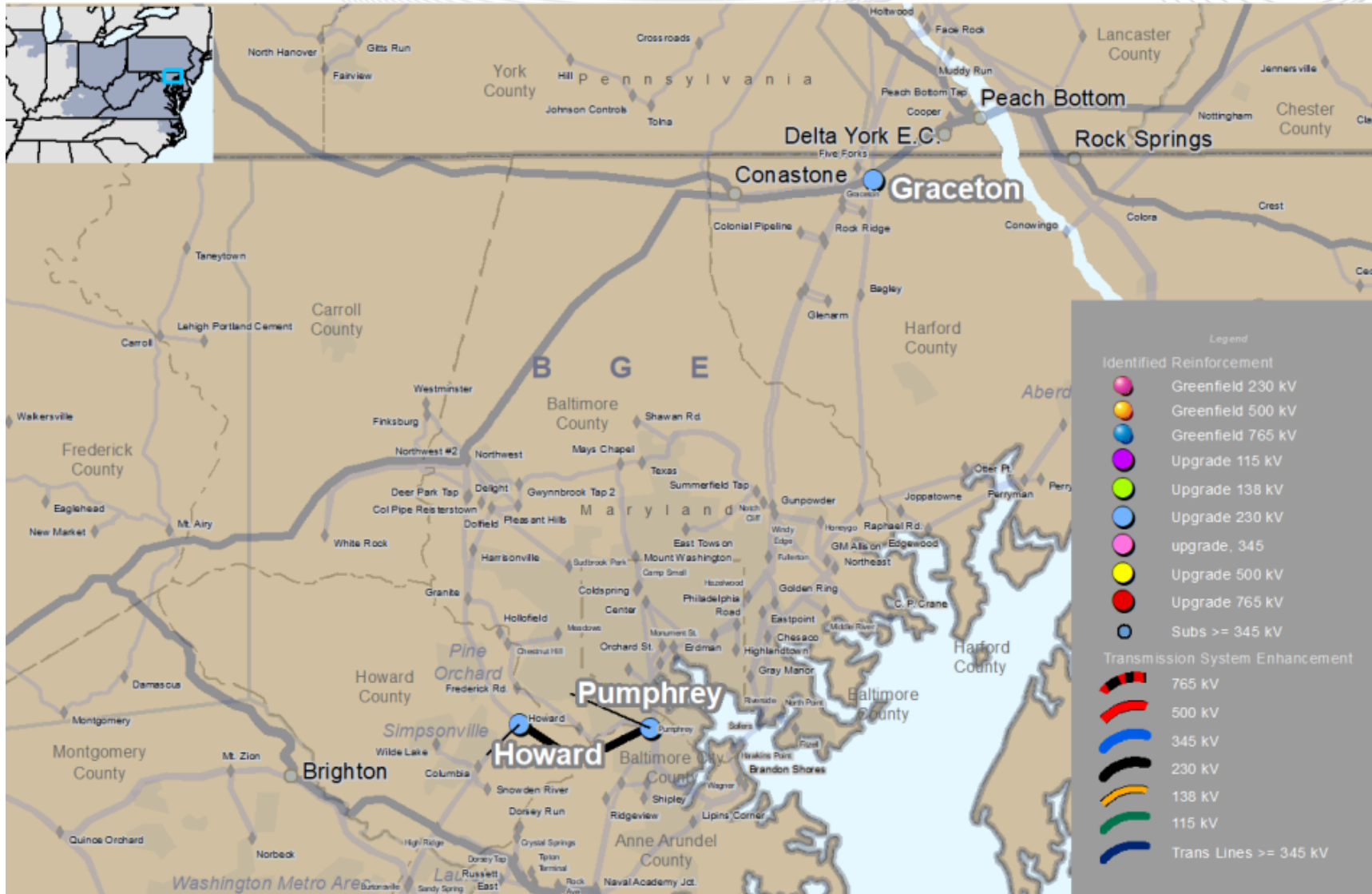
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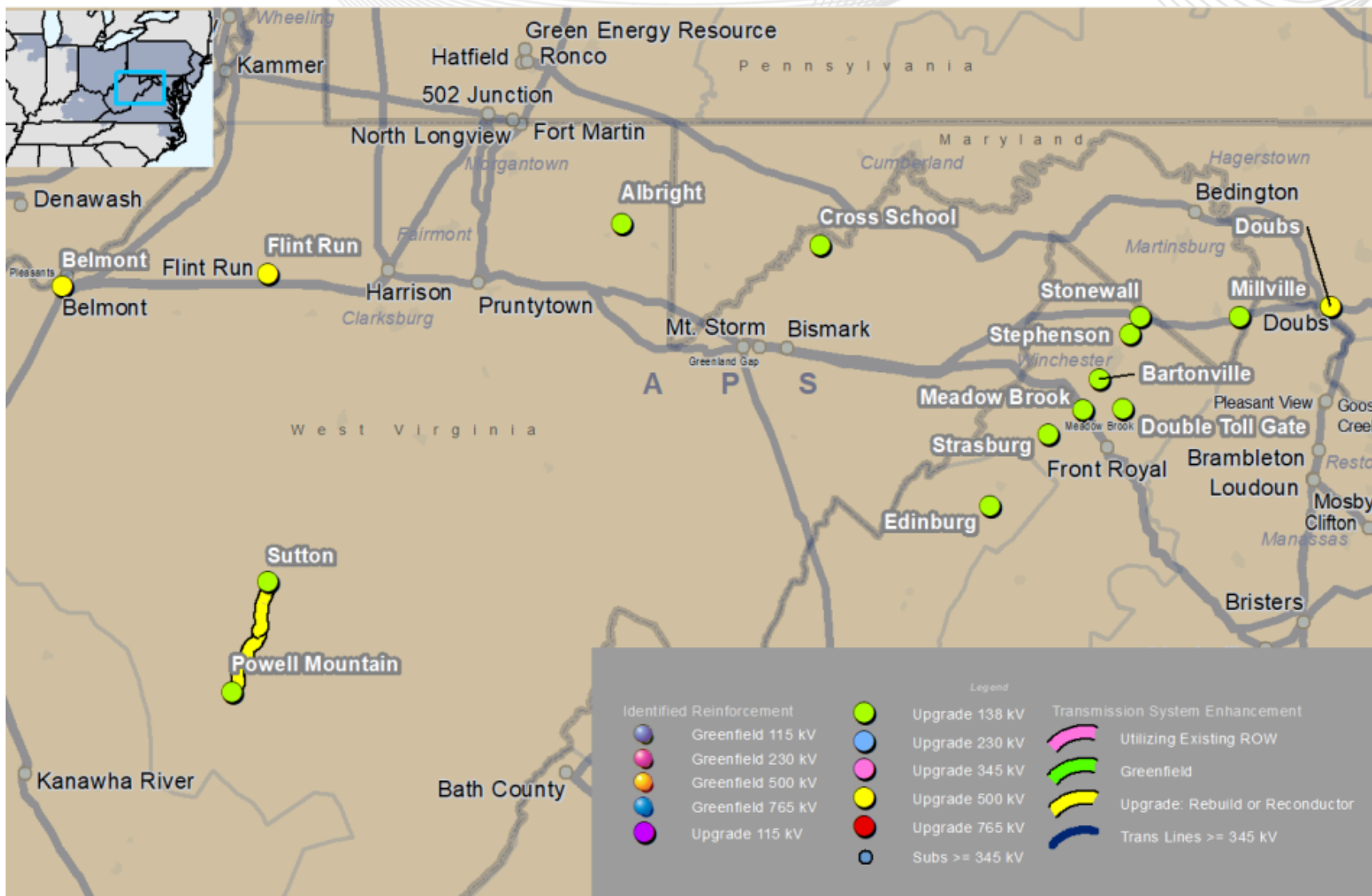


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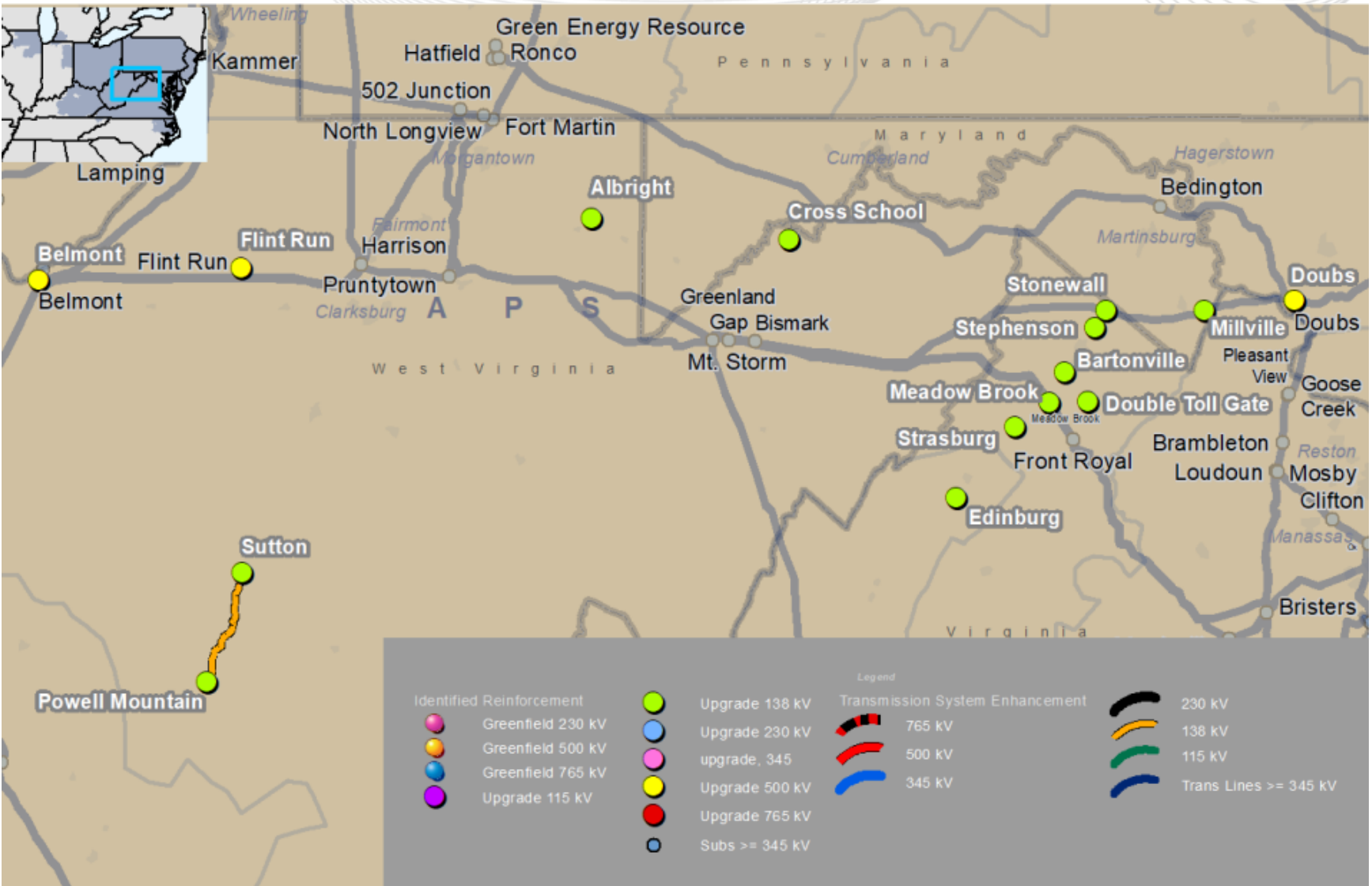


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POTOED



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Questions?

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