AI Reading Exercise: Class 5

From Digital to Physical Infrastructure
PLAN A6613: AI and the Future of Cities

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February 17, 2026
Spring 2026

Tool & Process

I used Claude Opus 4.6 with extended thinking via the Antigravity IDE.[1] The AI produced initial findings on AI managing physical infrastructure. I then directed over 140 iterative corrections, each timestamped: downloading vendor, government, and independent sources; cross-checking statistics across stakeholders; and rewriting every unsupported claim. The most productive step was comparing vendor-reported outcomes against city government data, which revealed discrepancies the AI had not flagged.

Key Findings

1. Curb Space: Automotus in Pittsburgh. Pittsburgh's Smart Loading Zone program is the closest I found to AI that actively manages a city asset. The city deployed Automotus computer vision cameras across 75 commercial loading zones, reading license plates, enforcing tiered time limits, and automating payment without meters. Funded by a $3.8 million DOE grant (Lazo, 2021) and SaaS revenue, what makes this case distinct is the closed operational loop: the AI observes, decides, and acts without a human in between. Yet the numbers do not agree. Automotus claims 40% higher turnover and 95% less double-parking; the city reports 70% turnover and only 40% less double-parking (Automotus, 2023; City of Pittsburgh DOMI, 2024). Both parties have reason to frame results favorably, making independent verification essential.

2. Traffic Signals: Flow Labs in North Carolina. North Carolina's statewide traffic signal program shows what happens when AI monitors but does not control. NCDOT deployed Flow Labs AI across 2,500 intersections in July 2025, the largest such deployment in the U.S. (Nyczepir, 2024). The system uses connected vehicle GPS data to flag signal timing problems without field studies. Procured as a SaaS contract in existing operations budgets (Nyczepir, 2024; Flow Labs, 2025), it required no capital appropriation. Yet Flow Labs' own documentation clarifies that the system only recommends changes; a human engineer makes the final call (Flow Labs, 2025). Aaron Moody, NCDOT's assistant director of communications, confirmed that the platform "supports data-informed decisions while maintaining oversight by engineering staff" (Raths, 2025).

3. Power Grid: Google Tapestry & PJM. Google X's Tapestry partnership with PJM Interconnection is the most ambitious of the three, but also the least real. Tapestry uses DeepMind AI to model grid topology across PJM's 67-million-person, 13-state network (PJM, 2025), aiming to accelerate the years-long interconnection queue for renewables. Tapestry has not yet been deployed: it is a multi-year development partnership where Google funds AI and PJM provides grid data (X, 2025). Faster interconnection directly serves Google's own data centers, and as Berreby (2024) documents in Yale Environment 360, AI data centers are themselves a major driver of the demand straining the grid; Google is partly solving a problem its own infrastructure creates.

Verification and Reflection

In all three cases the AI made the same error: it took each system at face value without interrogating stakeholder interests, autonomy, or deployment status. For Automotus, it missed the vendor-versus-city statistical discrepancy and conflated parking with commercial loading management. For Flow Labs, it described the system as controlling signals when three sources confirm it only recommends changes. For Tapestry, it equated a pre-deployment partnership with operational systems and noted Google's energy needs only in passing, without framing the conflict of interest or citing independent reporting.

The AI was a useful starting point for assembling an inventory of who is doing what, but it required extensive correction to reach a product a planner could trust. Left unchecked, a reader would have concluded that all three systems actively control city assets, when in fact only one does, one merely advises, and one does not yet exist. The harder questions, how real is this, whose numbers are these, and who benefits, were invisible to the AI and required cross-checking every statistic against multiple stakeholders' accounts.

[1] Verbatim prompt log, downloaded sources, annotations, and a claim-by-claim verification audit are archived at https://github.com/dhardestylewis/plan-a6613-ai-reading-class-3/tree/main/week5.

References

[1] Automotus. (2023). Smart loading zones: Pittsburgh. Retrieved February 17, 2026, from https://automotus.co/pittsburgh

[2] Berreby, D. (2024, February 6). As use of A.I. soars, so does the energy and water it requires. Yale Environment 360. https://e360.yale.edu/features/artificial-intelligence-climate-energy-emissions

[3] City of Pittsburgh, Department of Mobility and Infrastructure. (2024). Smart loading zones. City of Pittsburgh. https://pittsburghpa.gov/domi/smart-loading-zones

[4] Flow Labs. (2025). NCDOT statewide AI traffic signal deployment. https://www.flowlabs.ai

[5] Lazo, A. (2021, August 12). Pittsburgh gets $3.8 million from feds for smart loading zones. Pittsburgh Post-Gazette. https://www.post-gazette.com/business/development/2021/08/12/

[6] Nyczepir, D. (2024, July 16). NC deploys AI traffic signal software statewide. StateScoop. https://statescoop.com/north-carolina-ai-traffic-signals-flow-labs/

[7] PJM Interconnection. (2025). PJM, Google announce multi-year AI collaboration [Press release]. https://www.pjm.com/about-pjm/newsroom

[8] Raths, D. (2025, January 14). North Carolina taps AI to help manage traffic signals statewide. Government Technology. https://www.govtech.com/transportation/north-carolina-taps-ai-to-help-manage-traffic-signals-statewide

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