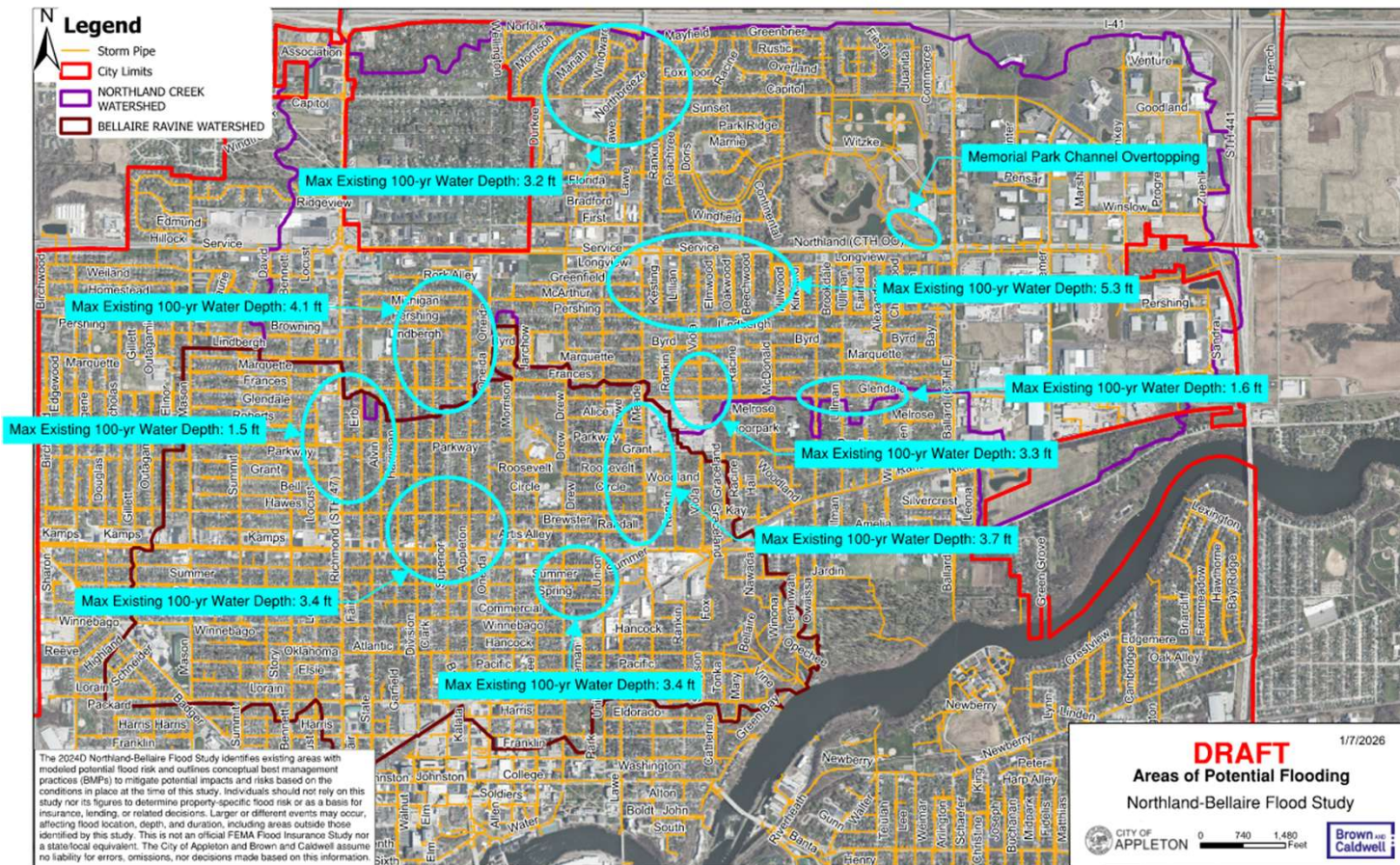


# 2024D Northland-Bellaire Stormwater Evaluation

January 27, 2026

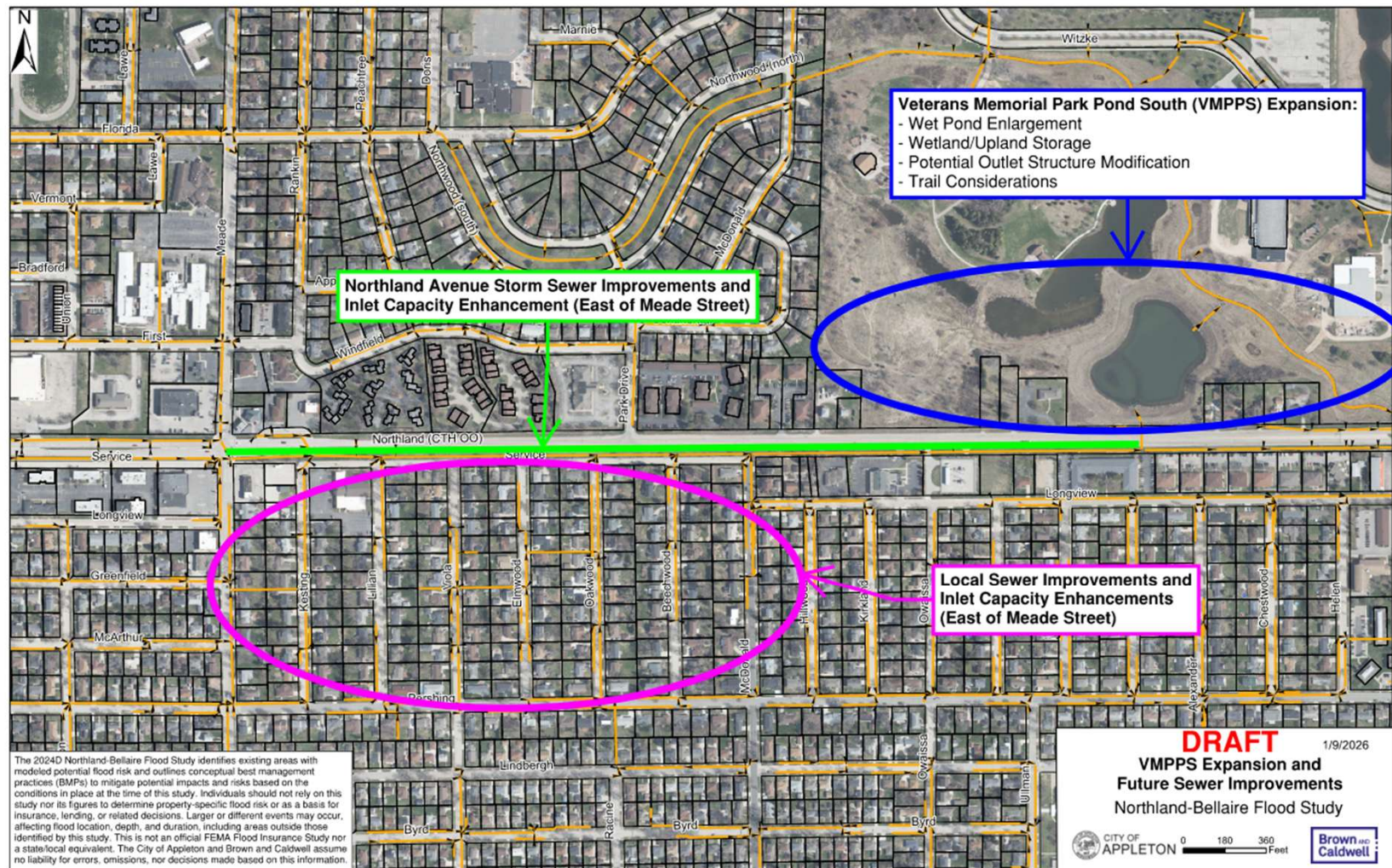
# Northland-Bellaire Watershed Flooding

- Flood reports were used to identify potential flooding locations, focusing on areas with water outside the right-of-way or structure flooding, and compared with XPSWMM nodes indicating a water depth of greater than 1-foot.
- Circles represent areas with a concentration of identified issues (combination of flood reports & model results).
- The maximum water depth shown is the XPSWMM node with the highest recorded depth in the circled area.





# Initial System Improvements Recommendations

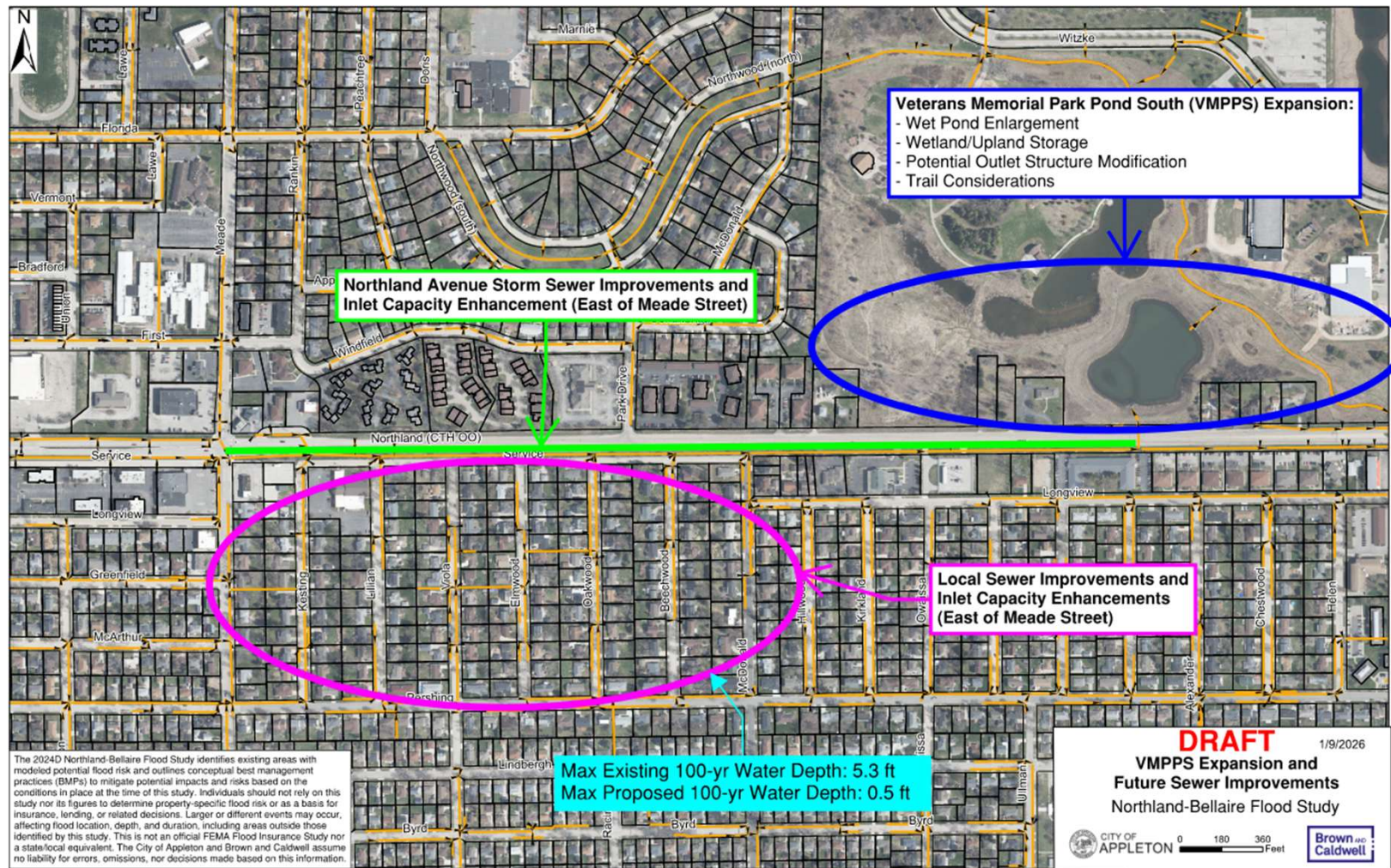


# Initial Improvements Recommendations Driving Factors

- Early modeling sensitivity analysis suggested that storage in upstream areas could not provide meaningful reductions in flooding
- Mainline/backbone conveyance improvements provide capacity
- Localized improvements convey peak flows to the mainline system and reduce overland flows and ponding
- Expanded storage in VMPPS mitigates peak flows due to increased conveyance and avoids “pushing the problem downstream”



# Initial System Improvements Benefits

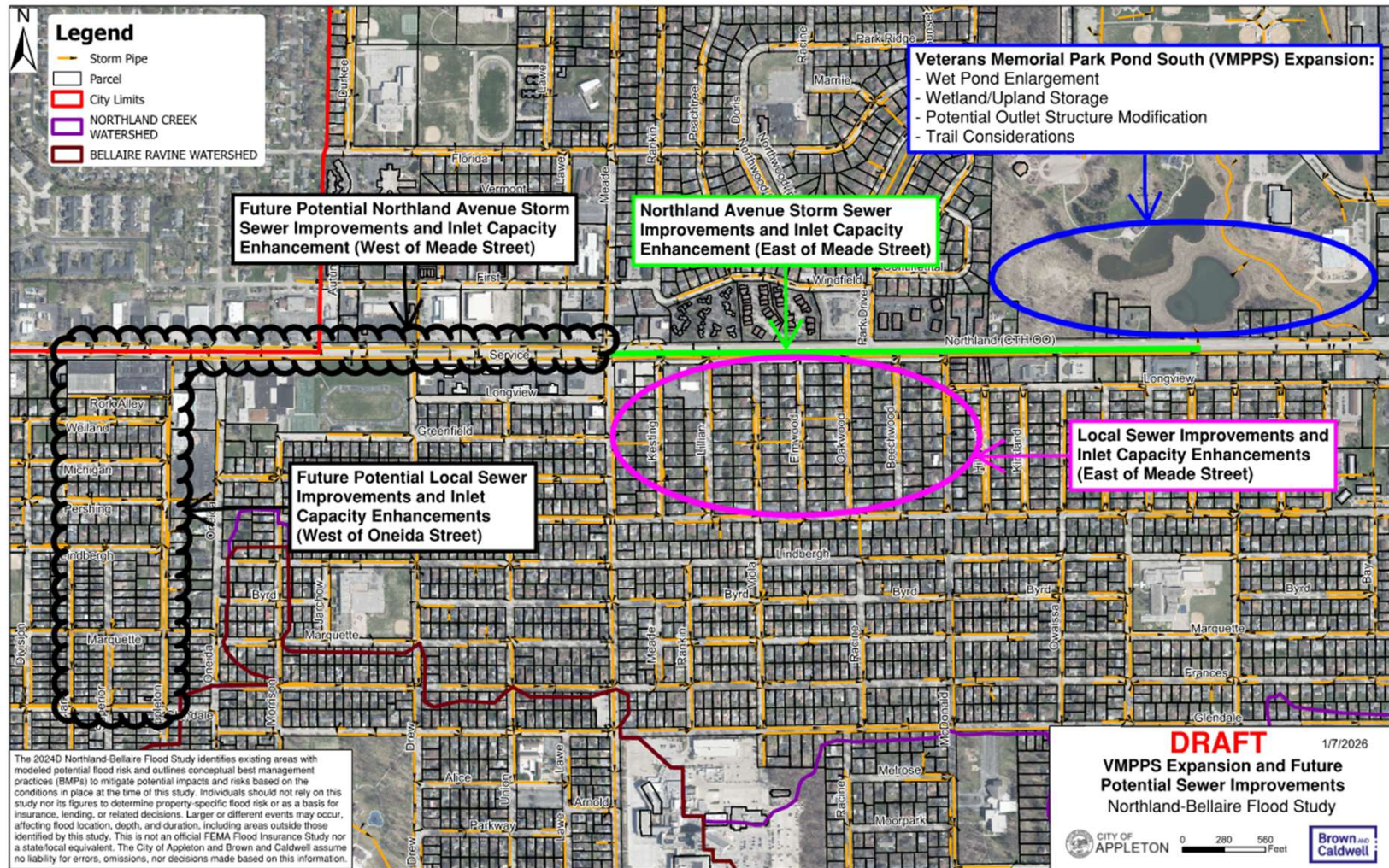


## Initial Improvements Designed for the Future

- Northland Avenue Storm Sewer sized to accommodate potential future improvements west of Meade Street/south of Northland Avenue
- VMPPS expansion increases pollutant removal, meets anticipated future development needs for the area, and meets TMDL / MS4 Permit goals
- VMPPS includes consideration for park use/trails

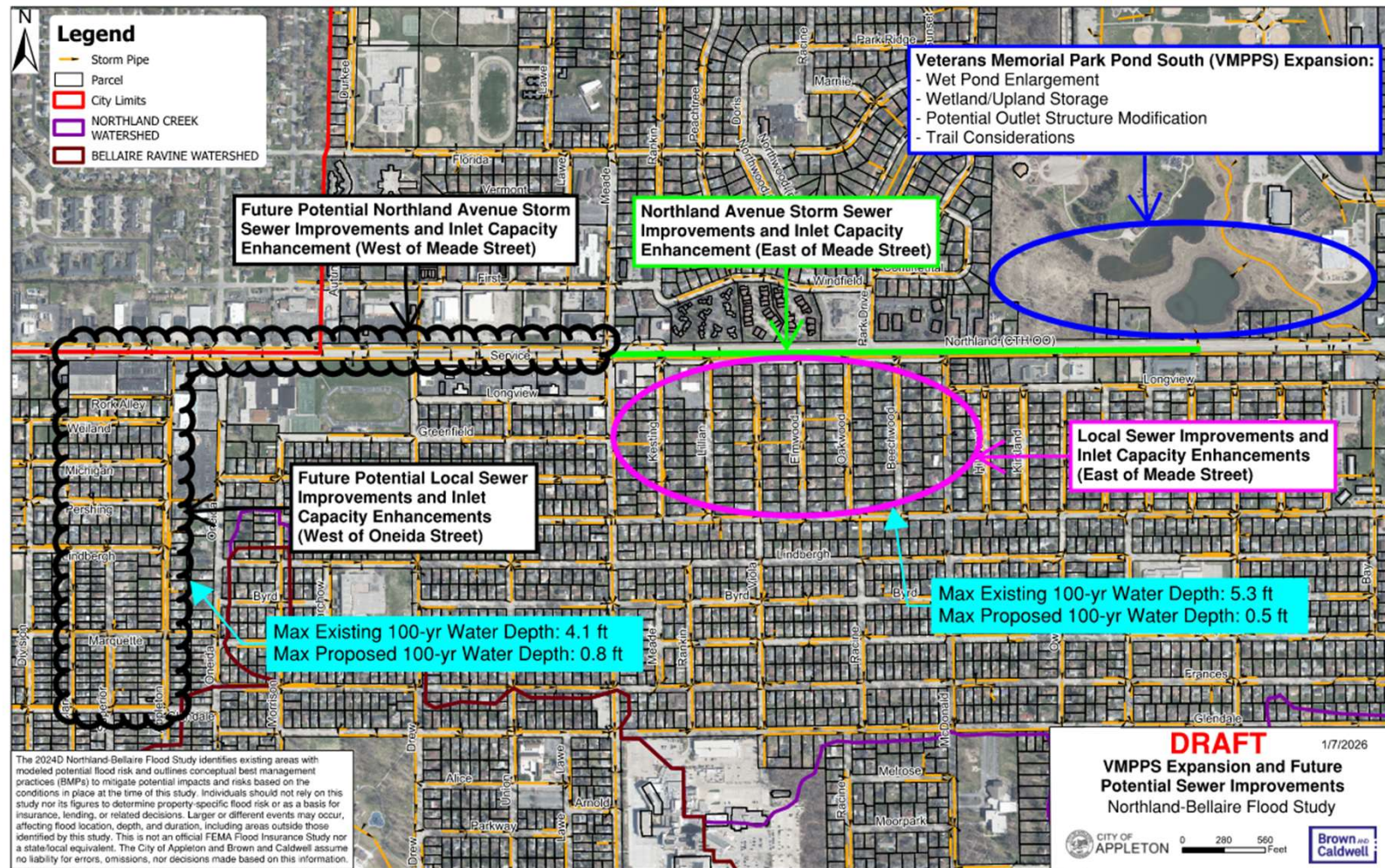


# Future Potential System Improvements





# Future Potential System Improvements Benefits





# Initial Improvements Estimated Cost/Budget

## **Estimated Construction Cost**

- VMPPS Expansion - \$10,000,000
- Northland Avenue Storm Sewer - \$8,200,000
- Local Storm Sewer - \$3,800,000
- **Total Estimate - \$22,000,000**

## **Anticipated Budget Requests**

- 2025 Special Consideration Carry Over Request - \$2,500,000
- 2026 Flood Mitigation Projects (approved budget) - \$3,600,000
- 2027+ Flood Mitigation Project budget request - \$15,900,000
- **Total Budget - \$22,000,000**



# Summary Takeaways, Discussion, and Next Steps

- What we know
  - There are no easy or perfect solutions
  - Local and regional conveyance and storage are needed
  - Design with resiliency/expansion potential in mind
- Requesting approval for DPW to move forward with contract scope for design engineering of Initial Improvements Recommendations per DPW memorandum.