



Collaborative Communities: City of Pinellas Park

Critical Infrastructure Flood Vulnerability Assessment

March 12, 2026
City Council Meeting



Purpose



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- Present the Flood Vulnerability Assessment (VA) approach and results
State-mandated for compliance with Resilient FL Statute 380.093

VA Objectives

- Inform communities about the flood vulnerability of their public assets
- Prioritize the flooding related risks to public infrastructure
- Recommend adaptation planning strategies
- Ensure communities are eligible to apply for resilience related grant funding (specifically the Resilient Florida program)

Topics



- What is the flood Vulnerability Assessment (VA)?
- What methods and approaches were used in the assessment?
- How was community engagement incorporated into the process?
- What are some of the results?
- What are next steps in the process?



What is the Vulnerability Assessment (VA)?



- A study that evaluates potential flood impacts to critical public infrastructure now and in the future
 - Enhances understanding of flood risks in the community
 - Identifies areas of improvement for flood mitigation
 - Focuses on impacts to public and regionally significant infrastructure, not residential homes or private businesses
 - Includes public assets owned/maintained by the City and select potential collaborators (medical facilities, hospital, PSTA)



***11 communities included in this Resilient Florida Planning Grant – other communities also doing VAs under other grant workplans**

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Pinellas Park

Data included in VA



- Infrastructure data was organized into 4 categories, as defined by the State:

Critical Community & Emergency Facilities

- Community centers
- Fire stations
- Local government facilities

Critical Infrastructure

- Water & wastewater facilities
- Electric & natural gas supply facilities
- Communications

Natural, Cultural, & Historical Resources

- Parks & conservation lands
- Surface waters and wetlands
- Historical & cultural assets

Transportation Assets & Evacuation Routes

- Major roadways
- Bridges
- Ports & airports
- Bus terminals & transit

How is this work funded?



- 2021 Gaming Compact Between the Seminole Tribe of Florida and the State of Florida
 - Funding for wildlife corridor, uplands, endangered species, water quality, and flooding
 - **\$100M deployed annually statewide** to guard communities against the impacts of flooding (RF Program)
- Example projects that have been awarded this grant:
 - Utilities Reliability Improvements (\$3.4M)
 - MHP Wastewater Collection System Improvements (\$25M)
 - Phillippe Park Shoreline Protection (\$129,200)
 - Joe's Creek Restoration (\$27.9M)
 - Cross Bayou Canal Improvements (\$12.9M)



Resilient Florida (RF) Program developed in accordance with Section 380.093, Florida Statutes (F.S.)

What is the Community Benefit?



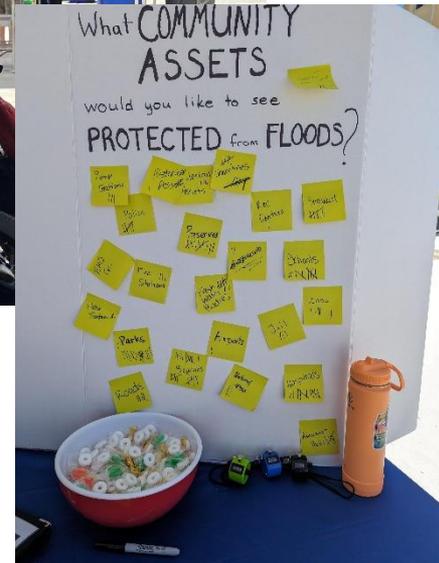
- ✓ Achieves compliance with RF Program Statute*
 - ✓ Ensures eligibility for RF Program funding
- ✓ Maps out critical public infrastructure with associated flood risk scenarios
- ✓ Helps communities prioritize and plan for infrastructure investments
- ✓ Emphasizes resilient infrastructure design and operation

* Resilient Florida (RF) Program Statute: 380.093

Public Engagement 2023 - 2026



- Countywide VA Workshop
 - > 50 participants from local agencies
- Online and in-person surveys
 - > 500 responses countywide
- Multiple events across the county
 - Attended 10 community events
 - Spoke directly with over 600 people
- Virtual public meeting
 - Presented draft results; answered questions
 - 62 registrants



Technical Stakeholder Reviews



- Technical Stakeholder Reviews
 - Multiple City departments and City staff
 - St. Pete-Clearwater International Airport
 - Tampa Bay Estuary Program
 - Climate Science Advisory Panel
 - Florida Housing Coalition
 - Forward Pinellas
 - Tampa Bay Regional Planning Council
 - Florida Department of Health
 - Consultant and non-profit reviewers
 - +more!



City of Pinellas Park Steering Committee



Name	City of Pinellas Park
Kyle Arrison	Director Transportation, Stormwater, Construction Services
Keith Sabiel Jr.	Public Works Administrator
Erica Lindquist	Director, Planning and Development Services
Aaron Petersen	Assistant Community Development Administrator
Ginger Tiling Range	GIS Specialist
Dylan Luke	Stormwater Inspector
Kevin Marlow	GIS Coordinator
Angelyn Davis	Information Technology Manager
Amanda Ergler	Transportation and Stormwater Analyst
Name	Pinellas County
Josie Benwell, MS, CPM, ENV SP	Section Manager, PM Office, CIP Division Public Works/Project Manager

VA Steps

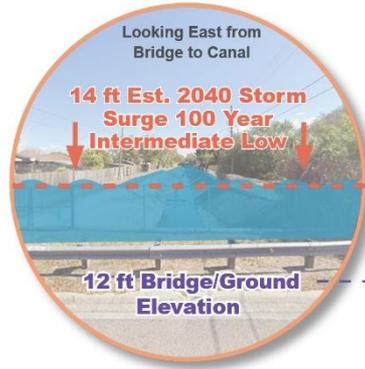


- Data Collection
- City GIS, desktop and field checks
- Exposure
- Means an asset is impacted by floodwaters.
 - ✓ 21 flood scenarios in Ph II VA
 - 2018 base year, 2040, 2070
- Sensitivity
- Considers characteristics and criticality of an asset + flood severity.



Field check verification 2025 – asset elevation considerations (ground elevation used to evaluate most assets)

Exposure and Sensitivity Example



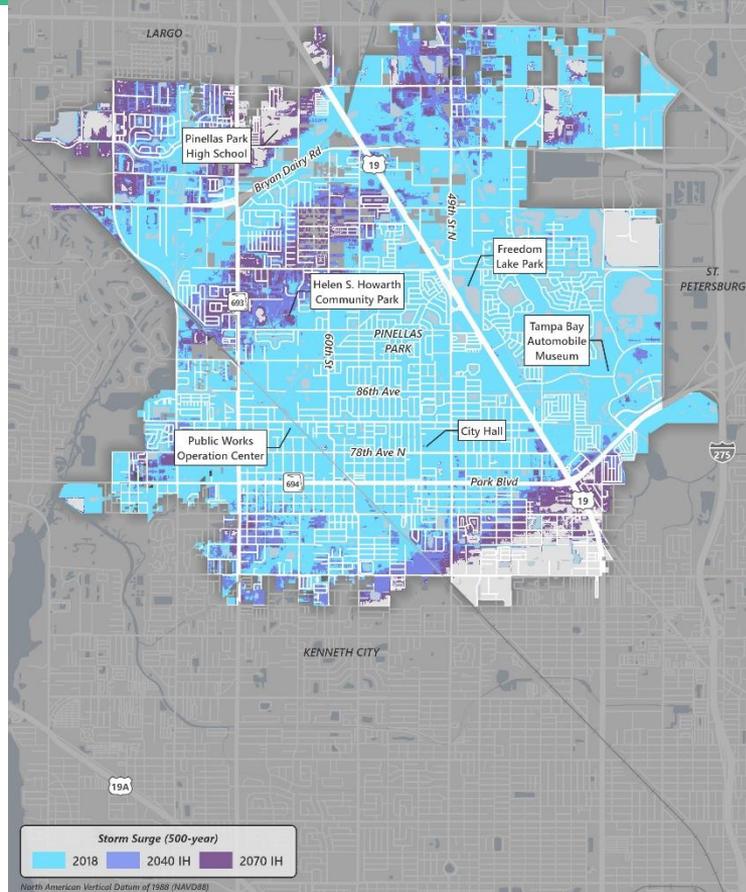
9-10 ft ground elevation
on approach from
97th Terrace



Exposure and Sensitivity Example



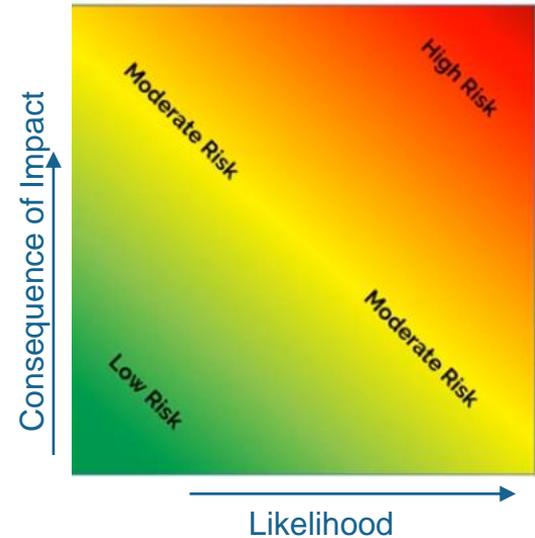
Flood Scenarios Overview – City View



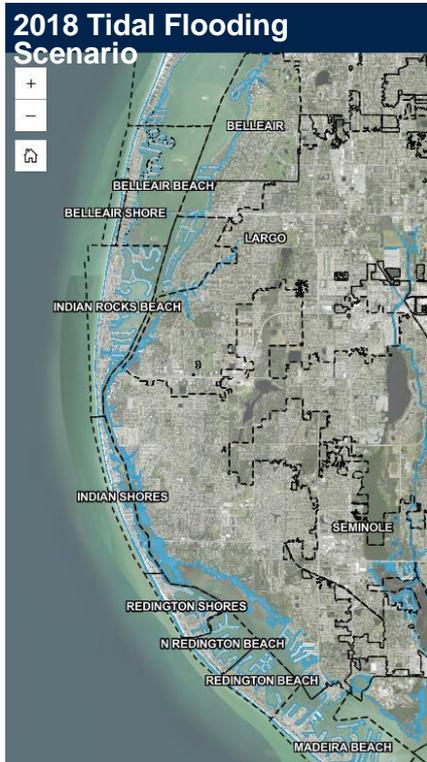
Countywide Takeaways



- Storm Surge tends to have higher flood severity and impact more assets.
 - This is based on available flood models; keep in mind there are many scenario combinations as well as mitigating factors not shown - like elevated structures and stormwater infrastructure.
- Regionally significant assets like the St. Pete-Clearwater International Airport, County Solid Waste Disposal Complex, and evacuation routes have flood impacts across most flood scenarios.
- Significant numbers of assets across all classes are impacted, although **emergency shelters** were one asset type that did not show impacts



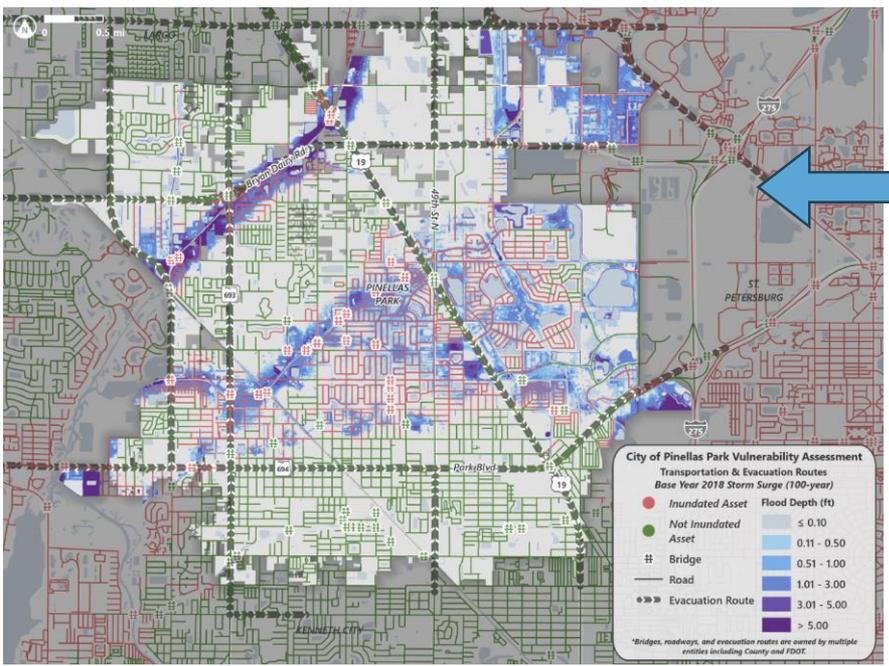
Collaborative Communities



- Tidal flooding in coastal communities.
 - 10% - 40% of area 2018 through 2070.
- Storm Surge 100-Year in coastal communities.
 - about 100% of area for all scenarios.
- Town of Belleair more inland and at higher elevation – different trends.
 - Extreme rainfall shows more impact.
- City of Pinellas Park – extreme rainfall and storm surge impacts.

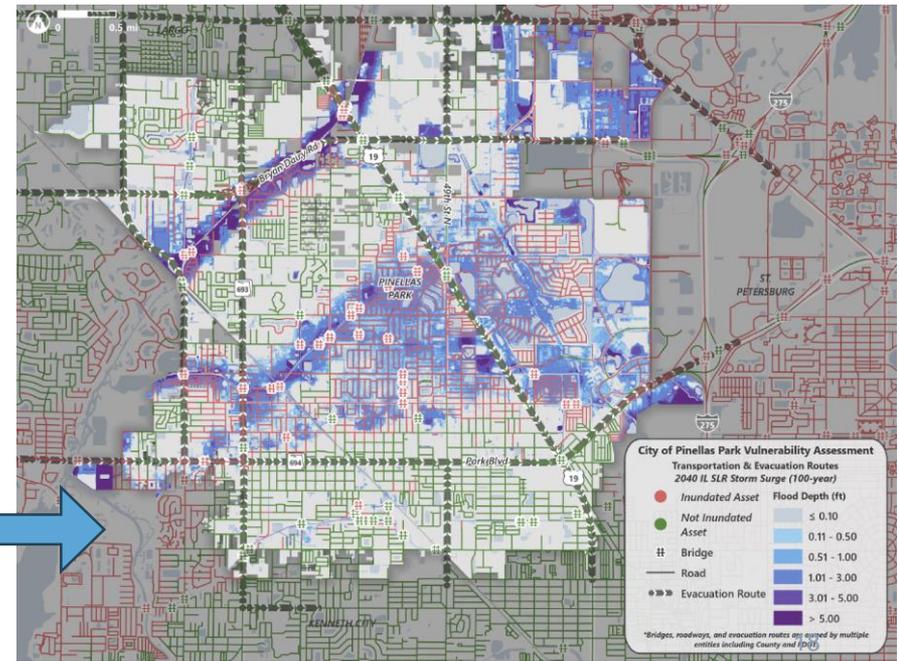
**Base Year 2018 Storm Surge
100-Year Scenario**

- 39% Bridges Exposed
- 37% Roads Exposed



**2040 Storm Surge 100-Year
Intermediate Low**

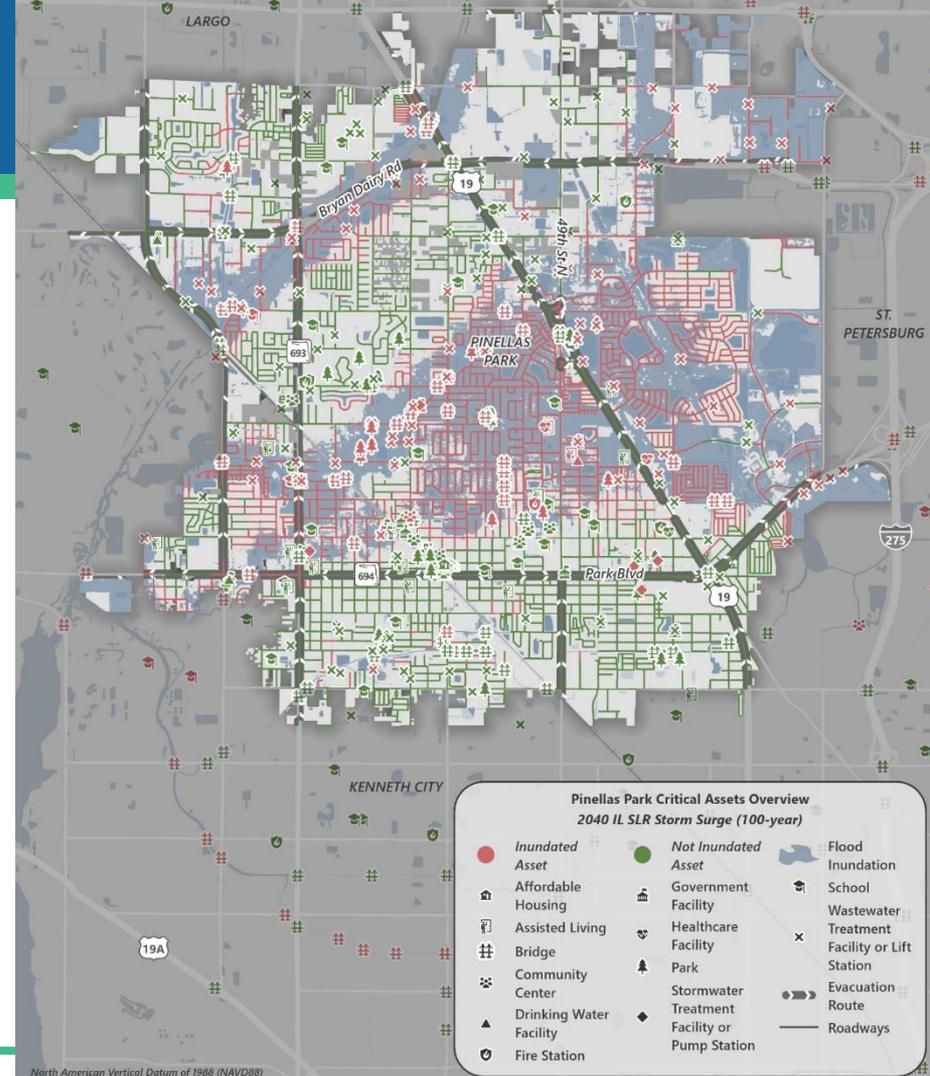
- 49% Bridges Exposed
- 45% Roads Exposed



Likely Scenarios Subset

Asset Type	Total	Storm Surge IL 2040 Assets Exposed	% of Assets	Extreme Rainfall 2040 Assets Exposed	% of Assets
Community Center	14	2	14%	2	14%
Fire Station	12	3	25%	3	25%
Stormwater Facilities and Pump Stations	5	5	100%	5	100%
Drinking Water Facility	4	0	0%	0	0%
Park	36	13	36%	17	47%

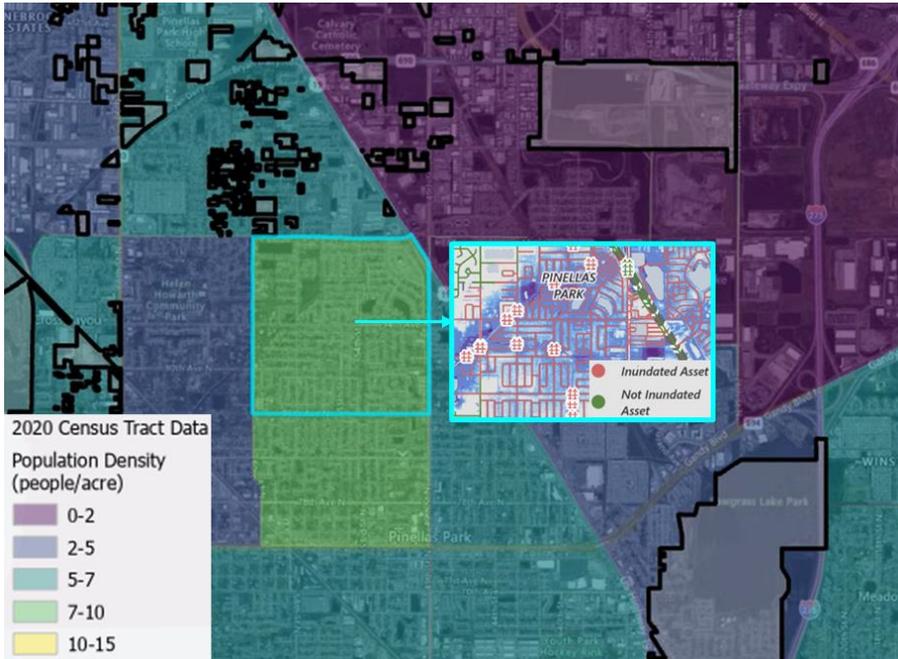
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Identify Focus Areas



Example area with high population density and notable exposure to storm surge for roadways



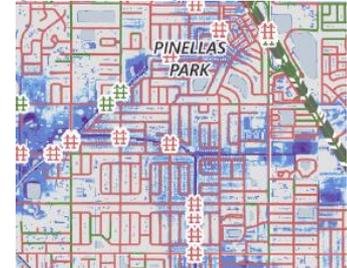
Tidal Flooding No/Low Risk



2040 IL Storm Surge 100 Yr Exposure – pockets >6 in



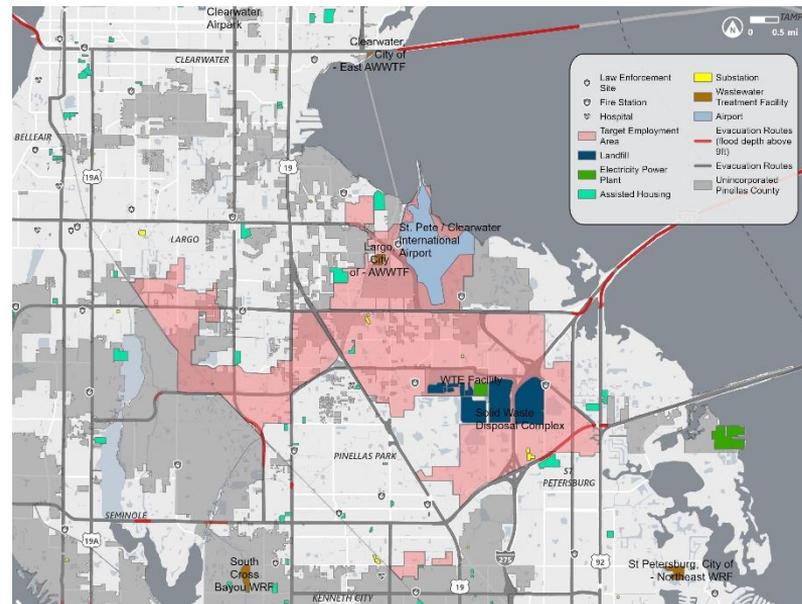
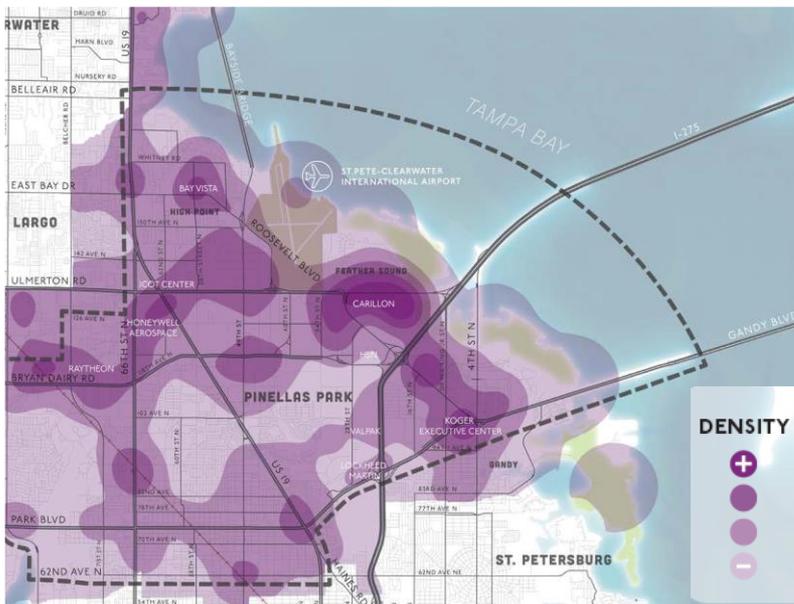
2040 Extreme Rainfall Exposure – pockets >6 in



Identify Focus Areas

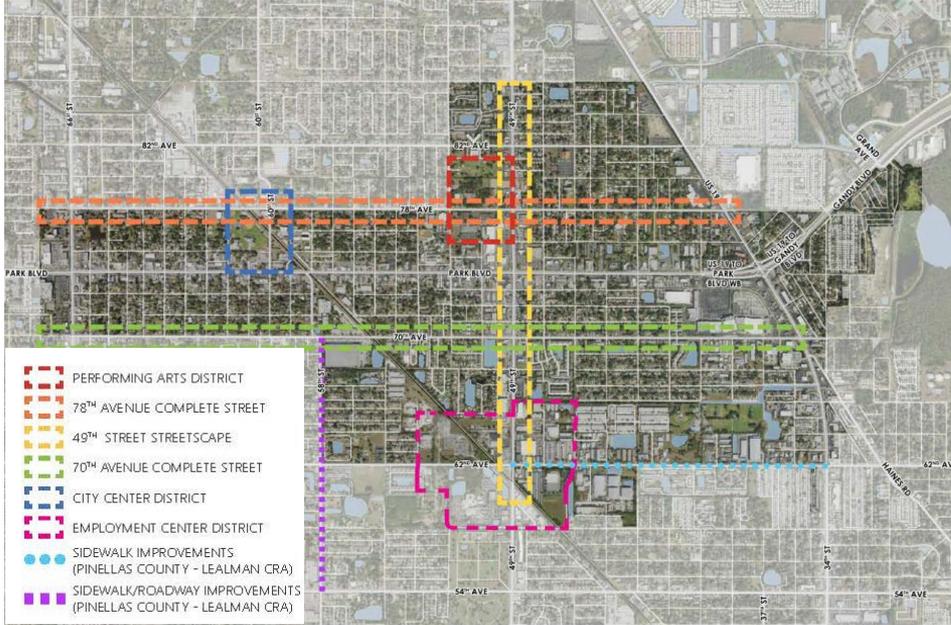


➤ Synergies with Target Employment Area, Gateway Master Plan, City's Community Redevelopment Plan



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Next Steps



- Focus areas and adaptation planning
- Submit final VA to FDEP March 2026
- Submit adaptation plan to FDEP September 2026
- Ongoing funding strategies and grant applications

Thank You



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The views, statements, findings, conclusions, and recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of the State of Florida or any of its subagencies.