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St. Roch Drainage Upgrades and Green Infrastructure

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ST. ROCH
Drainage Upgrades and Green Infrastructure
FEMA Hazard Mitigation Grant Program

Neighborhood Association Meeting
April 27, 2017
Facing the Threat of Climate Change and Sea Level Rise – Net Loss of 9mm/yr

New Orleans is a coastal city.

New Orleans’ location, where the Mississippi River Delta becomes the Gulf of Mexico, is strategic for commerce, but also defines our most existential threat.
New Orleans City Resilience Strategy Released August, 2015

resilientnola.org
Hazard Mitigation Grant Program (HMGP) Project Locations

1. Academy Park Drainage Upgrades
2. Algiers Drainage Upgrades
3. Broadmoor Drainage Upgrades/Green Infrastructure
4. Hagan-Lafitte Drainage Upgrades
5. Lakeview Drainage Upgrades
6. Mirabeau Garden Stormwater Management/Flood Mitigation
7. Pointe à Pierre Stormwater HMGP
8. St. Roch Drainage Upgrades
St. Roch Presentation Agenda

- Project Background & Status
- The Problems – Existing Drainage & Street Conditions
- The Solution – Improved Subsurface Drainage
- The Solution – Green Infrastructure
- Project Benefits – Reduced Flooding & Functional Streets
- Project Opportunities – Traffic Patterns
- Next Steps
St. Roch Character
St. Roch Project Status

- 10% Concept Design and Probable Cost Estimate Approved
- 30% Project Scope Report supporting a Benefit-Cost Ratio (BCR) >1.0 Approved by DPW & FEMA
- Survey and Geotechnical investigations completed
- 60% Draft Design Phase Complete
- Current Construction = $5.7M
Project Agency Coordination

- Coordination Between Multiple Agencies / Owners
  - DPW (Maintenance, Traffic, Engineering, Construction, Stormwater, Green Infrastructure)
  - S&WB (Water, Sanitary Sewer, Stormwater Utilities)
  - LA DOTD Orleans District
  - Entergy (Electric, Gas)
  - AT&T (Telecommunications)
  - Cox Cable (Telecommunications)
  - Planning Department
  - Department of Parks and Parkways
  - FEMA
  - Recovery Roads (N-Y Associates)
St. Roch Drainage Problems
St. Roch Street Conditions
St. Roch Street Conditions

Pavement from stoop to stoop
St. Roch Drainage Pattern & Area of Intervention
St. Roch Proposed Design Elements – Street Cross Section
St. Roch Proposed Design Elements – Street Cross Section
St. Roch Proposed Design Elements – Subsurface Drainage
Benefits of New Streetscape

- Reduced Impervious Surfaces (less runoff)
  - Existing Condition = 90% Impervious
  - Proposed Condition = 64% Impervious
  - 30% Reduction
- On Street Parking More Organized
- Plants & Shade – Walkability
- Safety – Traffic Calming
- Improved Aesthetics
- Storage Spaced Eliminate Standing Water
St. Roch
Proposed
Design
Elements – BEFORE
St. Roch
Proposed Design Elements – AFTER
St. Roch Project Benefits – Flood Reduction

Predicted Flood Elevations – 2-yr Storm

EXISTING

PROPOSED
St. Roch
Project
Benefits –
Street Trees
St. Roch Project
Benefits – Street Trees

Distribution of Street Trees - Proposed
St. Roch Project Benefits – Scalable to Transform Entire Neighborhood
• Reduce Flooding & Improve Water Quality
• Increase Public Safety
• Reduce Mosquitoes and Associated Health Risks
• Improve Resident Quality of Life
• Enhance Community & Neighborhood Morale
• Reduce Resident Financial Burden
• Public Education & Community Outreach
• Increase Community Resilience
St. Roch Project – Next Steps

- Design through October 2017
- Utility coordination with SWBNO and Entergy
- Modeling and design refinement
- Constructability reviews
- Coordination with Capital Improvements Program
- Construction Begins: March 2018