Agenda

Public Meeting #2 Debrief  7:00 - 7:15
  - Results of Meeting
  - Community Outreach
  - Schedule and Approach to Upcoming Meetings

City of NY Coordination Update  7:15 – 7:30
  - Lanark Road
  - E. 12th Road
  - Other City coordination issues

Economic Develop Support Strategy  7:30 – 7:45

CDBG Eligibility Update  7:45 – 7:55

Sitting a Healthcare Facility on Broad Channel  7:55 – 8:05

Power and MicroGrid Opportunities for Recovery Campus  8:05 – 8:15

Break-Out Sessions  8:15 – 8:45
  - Sunset Cove Dept of Interior Grant Discussion
  - Lanark Road and E. 12th Road Design Discussion
  - Community Facility CDBG Eligibility Discussion

Wrap-Up and Next Steps
Public Meeting #2 Debrief

- Results of Meeting
- Community Outreach
- Schedule and Approach to Upcoming Meetings
New York City Agency Coordination

- Lanark Road Sewer and Water Connection (DEP, DOT)
- East 12th Road Boardwalk (DEP, DOT) (DEC)
- Cross Bay Blvd Culvert at 4th Road (DEP, DOT)
- E. 9th Road Backflow Preventer (DEP)
- Extending W. 10th Road – 13th Road Street raising project (DEP, DOT).
- Cross Bay Blvd Complete Street Pilot btwn 9th and 10th Roads (DOT, DEP)
- Resiliency Campus Berm (NYC DPR)
- Sunset Cove DOI Grant Application (NYC DPR)
Manhole connection point (existing)

New sewer connection

New water connection
Mitigate flooding to Northeast section of Broad Channel

North-side Culvert
Replace culvert at Crossbay Boulevard and 4th Road with flood control gate

West Rd Back Flow Preventer
Replace/repair backflow preventor at West Street
9th Road – Complete Street Pilot – Future Proposed
Expand the street-raising pilot that will be implemented on West 10th–13th Roads to other similar areas on the island

Images from RBA Group design for DEP
Broad Channel Planning Committee Meeting

Breakwater Reef

Sunset Cove

Restored Wetland

Coastal Forest

Broad Channel American Park

Big Egg Island

Restored Wetland

Subtidal Reef

Wetland restoration

Landscaped berm/wall

Planning Area

Zone impacted by waves

500 year floodplain
CDBG– DR Assistance

Main Requirements:
I. Connection to disaster relief
II. Eligible recovery efforts:
   ▪ Housing
   ▪ Economic Development
   ▪ Infrastructure and prevention of further damage
III. Meet National Objectives:
   ▪ Benefit persons of low/moderate income
   ▪ Aid in the prevention or elimination of slum/blight
   ▪ Meeting urgent community development need
Examples of Eligible Efforts *(in housing, economic development, infrastructure)*:

- Real property activities
- Economic development
- Public services
- Public facilities
- Planning and administration
- Code enforcement
- Brownfields
- Hard infrastructure
- Others
## Example Strategy and Illustrative Recommendations

<table>
<thead>
<tr>
<th>Illustrative Near-Term Projects &amp; Recommendations</th>
<th>Illustrative Long-Term Projects &amp; Recommendations</th>
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<tbody>
<tr>
<td>Increase business resiliency</td>
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<td>• Implement an East 9th Road complete street retail and public realm improvement</td>
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<td>• Extend ‘Complete Streets’ to other key commercial corridors</td>
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<td>• Provide training on best practices and approaches for helping existing local businesses become more resilient</td>
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<td>• Fund economic study to assess new businesses/retail strategies and opportunities in Broad Channel</td>
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<td>• Fund a program for providing technical assistance to small businesses for emergency preparedness and response</td>
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<td>• Fund a pilot technical assistance and auditing program for resiliency improvements</td>
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<td>• Create and provide grant to a merchant entity for district/corridor resiliency improvements or shared capital such as generators, pumps</td>
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<td>• Fund upgrades to former BCVFD to become BC Cultural Center</td>
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Current conditions: very limited healthcare services

Hospitals

- There are no hospitals and limited healthcare services in Broad Channel
- Peninsula hospital was the closest hospital, but it closed in 2012. The next closest hospitals are:
  - St. John’s Episcopal Hospital
  - Jamaica Hospital Medical Center

Outpatient/Ambulatory

- Peninsula hospital sponsored an on-island office but it has not been replaced
- Outpatient facilities in Broad Channel include one diagnostic/treatment facility providing light imaging and physical therapy
- Broad Channel also includes an inpatient mental health facility and a nursing home

<table>
<thead>
<tr>
<th>Facility</th>
<th>Patient volume*</th>
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<tr>
<td>Peninsula Hospital Center (closed 2012)</td>
<td>22%</td>
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<tr>
<td>St. John’s Episcopal Hospital</td>
<td>21%</td>
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<tr>
<td>Long Island Jewish Medical Center</td>
<td>7%</td>
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<tr>
<td>North Shore University Hospital</td>
<td>6%</td>
</tr>
<tr>
<td>South Nassau Communities Hospital</td>
<td>3%</td>
</tr>
<tr>
<td>Jamaica Hospital</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>38%</td>
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*By inpatient days
Source: Statewide Planning and Research Cooperative System (SPARCS), New York Department of Health
Types of Healthcare Facilities & Services

- **MOBILE MEDICAL VAN**
  - Basic primary care
  - Prescriptions
  - Can serve areas that lack larger medical facilities

- **WALK-IN URGENT CARE**
  - Treatment of variety of non-life-threatening injuries
  - Minor medical procedures
  - Limited on-site diagnostic equipment

- **AMBULATORY CENTER**
  - Mix of medical and surgical specialties
  - Outpatient procedures and surgeries
  - Comprehensive diagnostic equipment

- **HOSPITAL**
  - Severe trauma and life-threatening injuries, as well as less serious conditions
  - Surgical services

Any size population, Less funding, More flexible & near term

Larger population, More funding, Longer term
Potential approaches

Temporary/Mobile Service
- Fund a mobile medical van which will travel to areas with vulnerable populations

Utilize Existing Facility
- Include health services at the planned community center or pharmacy

Create Regional strategy
- Potential for regional hospital to buy or rent space in Broad Channel and operate clinic on certain days of week
- Evaluate opportunities to expand ambulatory care centers in nearby areas

Lower level of service
- Any size population, Less funding, More flexible & near term

Higher level of service
- Larger population, More funding, Longer term
Develop a Resiliency Campus at the Northern end of Broad Channel
Microgrids

Pros
- Can disconnect from the larger grid if there is a widespread problem
- Excess power can be sold back to utilities

Cons
- Long term only
- Still in pilot phase around the country and the world
- Legal and regulatory hurdles
Cogeneration uses a fossil fuel-powered engine to simultaneously produce electricity and heat. This is more efficient than purchasing grid power and natural gas/oil separately.

**Pros**
- Reliable
- Efficient
- Proven
  - Starrett City (Brooklyn)
  - NYU (Manhattan)
- Gas prices at historic lows

**Cons**
- Require highly skilled maintenance
- Powered by fossil fuels
Components

- Panel for generation
- Battery for storage and smoothing fluctuation
- Connection to grid
- Smart inverters
- Meter
- Fossil generator for hybrid systems

Alternatives

- Arrays for large roofs, parking areas, etc
- Storage mechanisms
- Hybrid systems
- Deployable / mobile charging stations

Pros

- Resilient: can function when grid goes out
- Retains benefit of using grid power during normal operations
- Can reduce electricity costs
- Low maintenance
- Both benefits and negatives to the grid

Cons

- High up-front costs
- Intermittent
- Expensive energy storage (batteries)
- Space requirements and FDNY
Solar: In an Emergency

4 Options

- Single outlet: Daylight emergency power
- Full output: Daylight emergency power
- Backup battery: fully off-grid emergency power
- Hybrid solar and fossil fueled generator with a battery system: fully off-grid emergency power

Emergency Hub

- Designated emergency center that can be supported by solar
Solar panel on public building, NYC
Solar Carport

Solar Plug-in Parking in Silicon Valley, CA
Source: http://jcwinnie.biz/wordpress/?p=1945

Solar Carport
Source: http://in.preview.juwi.com/solar_energy/services/solar_carports.html

Solar paneled carport at Agilent’s Santa Rosa site, CA
There are three types of wind energy: small wind, on-shore, and off-shore. Wind feeds into the grid during normal operations but can continue to function when the grid goes out.

**Pros**
- Easy ownership structure by Co-op
- Strong winds, high capacity factors

**Cons**
- Upfront costs
- Avian & other environmental impacts
Wind

Rickenbacker Air Base (UGE case study)

Two wind turbines supplying US border station

Barcelona, Spain (UGE case study)
Wind and Solar Combined

Turbine + solar panel+ LED lighting, Plainfield, IL (UGE case study)

PingQuan, China (UGE case study)
Emergency power service (micro-grid technology)

Street lighting & orientation for resiliency campus during emergency (solar & wind)

Solar carport on parking lot (solar energy)

Lighting in case of emergency (micro-grid technology)
Break-Out Sessions

1) Sunset Cove Dept. of Interior Grant Discussion

2) Lanark Road and E. 12th Road Design Discussion

3) Community Facility CDBG-DR Eligibility Discussion