IMPLEMENTATION OF THE WATERFRONT SMALL AREA PLAN

CITY COUNCIL HEARING
Waterfront Landscape and Flood Mitigation Design

June 14, 2014

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PROJECT SCHEDULE

- WATERFRONT COMMISSION MEETING
- COMMUNITY MEETING
- WORKSESSION
- PUBLIC HEARING

ODBC DECISION
OUTCOME OF THE CITY & ODBC NEGOTIATIONS – MOVE OFFER
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MOVE OFFER
ILLUSTRATIVE SITE PLAN
developed through City of Alexandria and Old Dominion Boat Club negotiations 3/14/2014

NEW ODBC PARKING LOT 45 SPACES
NEW ODBC CLUBHOUSE
NEW ODBC PIERS
FOCAL POINT

GATHERING SPACE AT THE INTERSECTION OF KING + STRAND
NORFOLK & WASHINGTON STEAMBOAT CO.

CIRCA 1900
CORE AREA - DESIGN ALTERNATIVE D

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WATER FEATURE - INTERACTIVE

TORONTO, ONTARIO
WATER FEATURE - REFLECTIVE
SEASONAL PROGRAMMING

WATERFRONT WINTERFEST – PHILADELPHIA, PA
FITZGERALD SQUARE - PERFORMANCE (750 PEOPLE STANDING)
VIEW FROM WALES ALLEY TO RIVER
FOOT OF KING STREET LOOKING NORTH

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FOOT OF KING STREET LOOKING NORTH
FITZGERALD SQUARE – INTERACTIVE WATER FEATURE

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FITZGERALD SQUARE – INTERACTIVE WATER FEATURE
FITZGERALD SQUARE WATER FEATURE - REFLECTIVE
FITZGERALD SQUARE – DURING EVENTS
VIEW SOUTH FROM OVERLOOK

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FLOOD MITIGATION

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Flood Mitigation Study

- July 2010
- Comprehensive evaluation of flood levels and mitigation
- Protect to Elevation 6.0’
- Elevated walkway concept
- Balances flood mitigation, cost and maintaining views

www.alexandriava.gov/waterfront
Flood Levels

Figure 2-2: Flood Levels Studied

- 13.2 ft: Extreme with 3 feet freeboard
- 10.2 ft: Extreme (100-year flood level)
- 8.8 ft: Hurricane Isabel
- 8.0 ft: Intermediate
- 4.0 ft: Nuisance
- 2.2 ft: Mean High Water
- 0.9 ft: Mean Low Water

River Bank

Water

* NAVD 88
EXISTING CONDITIONS
RIVER ELEVATION = 2.0 FT
EXISTING CONDITIONS
RIVER ELEVATION = 3.0 FT
EXISTING CONDITIONS
RIVER ELEVATION = 4.0 FT
EXISTING CONDITIONS
RIVER ELEVATION = 5.0 FT
EXISTING CONDITIONS
RIVER ELEVATION = 6.0 FT
Recent Flooding

River elevation 4.4’
Flood Mitigation

- URS Corporation
- Build upon 2010 study
- Incorporate into Olin Landscape Design
- 15% Design for the core area
- Drainage and infrastructure analyses
- 3 main components
  - Raised bulkhead
  - Pump stations (2)
  - Isolated storm sewer system
Bulkhead/Promenade

• Flood mitigation bulkhead to Elev. 6’
• Enhancements
  • Promenade
  • Lower boardwalk
• Is Elev. 6’ the “right” number?
  • Climate change
  • Cost/benefit
  • Infrastructure life-cycle
Flood Extents
USGS – Recent River Data

Maximum Monthly Water Surface Elevations

100 YEAR STORM ELEVATION: 10.2'

FLOOD WALL ELEVATION: 6'

Date

Maximum Water Elevation, ft
Pump Stations Schematic

- Emergency generator, located above 100 yr. flood
- Stormwater runoff into system from core area
- Submersible pumps
- Wet well
- Valve vault
- Discharge into Potomac River
CONCEPT DESIGNS OUTSIDE CORE AREA

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RIVERGATE PARK - PROPOSED
SUSTAINABILITY

OLIN
<table>
<thead>
<tr>
<th>SUSTAINABILITY &amp; ECOLOGICAL SYSTEMS</th>
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<tr>
<td><strong>SOCIAL</strong></td>
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<td>• Quality of the space</td>
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<td>• Opportunities for interaction</td>
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<td>• Financial</td>
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| WILKES - DUKE |  |  |  |  |
| DUCHE - KING |  |  |  |  |
| KINGS - QUEEN |  |  |  |  |
| QUEEN - ORONOCO |  |  |  |  |
| PENDLETON - MADISON |  |  |  |  |
| MADISON - MONTGOMERY |  |  |  |  |

**HIGH POTENTIAL**

**MID POTENTIAL**

**LOW POTENTIAL**
CONTINUOUS WATERFRONT PATH
CONTINUOUS PATH WITH STEPPING STONE PATH ABOVE RIPRAP
CONTINUOUS PATH WITH BOARDWALK OVER BREAKWATER
CLAY BRICK

STONE DUST

STONE COBBLE

BOARDWALK

EXPOSED AGGREGATE

CONCRETE

GRANITE PAVING

STEPPING STONES IN STONE FINES

RESIN BONDED

AGREGATE

GRANITE CURB
FURNISHINGS

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