Parking

Alexandria Waterfront Plan Work Group – September 7, 2011

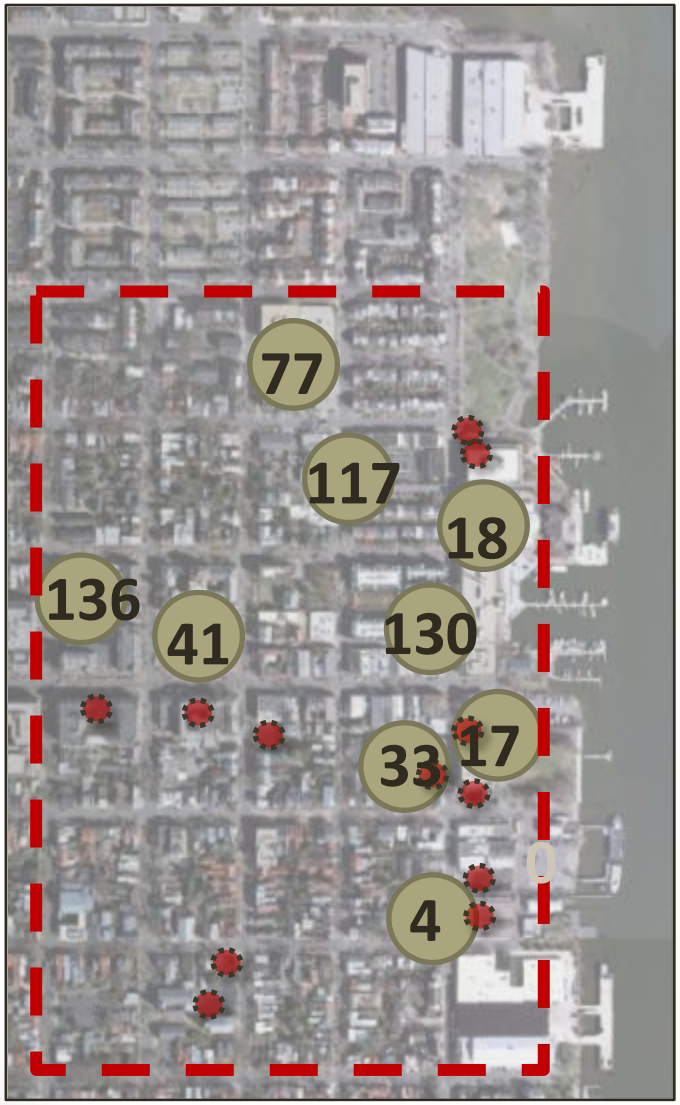
Parking statements

- Surface parking lots should be discouraged along the water's edge in favor of parks, plazas, and public spaces.
- New development should provide the parking it needs on-site and below grade.
- The City should implement initiatives to encourage visitors to park in garages, including by making it easier for visitors to find garages.
- The City should take steps to add parking garage capacity – through valet parking programs and by opening private garages - when monitoring shows that garage use is approaching capacity.
- Upon adoption of a plan, the City should use a Stakeholder Group to help implement the plan's parking recommendations, including evaluating increased residential parking protections.

Waterfront Parking Background

- Old Town Parking Study
  - Inventory of all spaces, public and private
  - Utilization by block, lot and garage (garages updated in June 2011)
  - Old Town Parking work group met and made recommendations to Council (fall of 2010)
  - Waterfront Plan uses peak period of the 21 studied: over 700 spaces available.
- Plan accounts for parking demand from new development, parking spaces lost

Accounting for Parking at the Waterfront



Current Conditions

Parking spaces today: 2,693

Parking spaces used today: 1,972

Parking spaces available today: 721

Changes due to Waterfront Plan

Added parking demand: ~~390~~ 260

Surface parking spaces reduced: 171

Needed for the future: ~~561~~ 431

Opportunities to Increase Supply

Public garage attendants: 633

Private garage spaces: 460

Private garage spaces (attendants): 337

Additional spaces: 1,430

The Waterfront Plan's Parking Principles

- The land adjacent to the water is for people, not cars.
- Do not build public parking; maximize use of existing spaces.
- Protect nearby neighborhoods from excessive parking impacts from Waterfront visitors.
- Direct traffic to garages and away from the foot of King Street.

The Waterfront Plan's Parking Principles

- New private development: park on-site and below grade.
- Track, report and manage:
  - Regularly measure supply, demand, and neighborhood impacts.
  - Increase capacity through valet, private garages well in advance of space shortages.
  - Use rates, signage, technology and other tools to manage parking.

Addressing parking demand

- Implemented or Under Way
  - Greater enforcement
  - New meters
  - Wayfinding and signage
  - Increased Trolley service
- Upon adoption: Parking Implementation Plan
  - Public garage capacity
  - Private development and growth in demand
  - Valet parking
  - Protect residential parking areas

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Traffic & Circulation

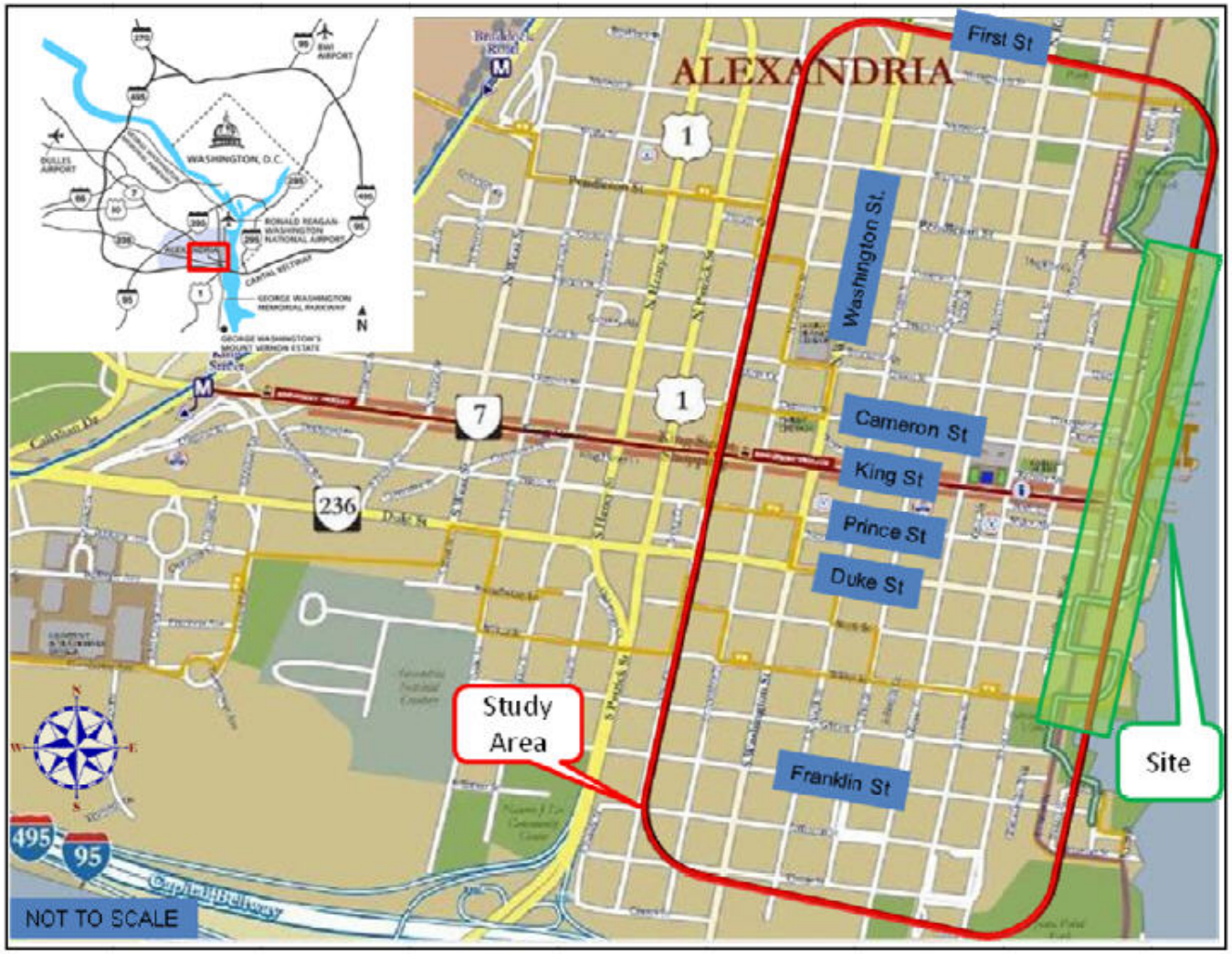
Alexandria Waterfront Plan Work Group – September 7, 2011

Traffic and circulation statements

- A plan should improve options for people arriving to the waterfront by means other than the automobile, especially by trolley, by boat, and by bike.
- A plan should keep drivers away from the most congested streets and intersections (such as King and Union Streets) and from circling neighborhoods by directing them to “interceptor” parking locations (garages and valet stations).
- A plan should further address pedestrian and traffic congestion at King and Union Streets by closing the unit block of King Street to most vehicular traffic.

Waterfront Circulation

FIGURE 1 – STUDY AREA AND SITE LOCATION



Pedestrian Volumes

Table 1 - Pedestrian volumes

Intersection	AM Peak Hour	PM Peak Hour	SAT Peak Hour
1. First Street/ Washington Street	9	41	28
2. Cameron Street/ Washington Street	48	103	163
3. King Street/ Washington Street	203	603	1569
4. Prince Street/ Washington Street	42	96	292
5. Duke Street/ Washington Street	33	60	136
6. Franklin Street/Washington Street	42	65	124

Union Street/King Street	**Avg. Daily 5100**

Findings and Issues

Vehicles
- Regional traffic growth
- Cars circulating looking for parking

Transit
- Good bus service to Waterfront
- King Street Trolley well-used

Pedestrian
- Old Town street grid is extremely walkable
- Pedestrian access along Waterfront not continuous
- High pedestrian volumes at certain locations

Bicycle
- Good bicycle access to Waterfront
- Limited bicycle parking

Water Taxis
- High ridership on Water Taxis

Recommendations

Vehicles
- Improve parking wayfinding signage
- Optimize signals on Washington Street

Transit
- Create a multimodal hub at Waterfront
- Expand King Street Trolley operating hours and frequency

Pedestrian
- Provide pedestrian safety improvements at intersections
  - Pedestrian countdown signals
  - Accessible curb ramps
- Provide pedestrian signals at Washington Street intersections
- Close unit block of King/Union to cars

Bicycle
- Deliniate the urban section of the Mount Vernon Trail
- Improve signage and wayfinding
- Provide safe and accessible bicycle parking facilities

Water Taxis
- Incorporate Water Taxi stop into design of Waterfront

Congestion at Union and King

- **Wayfinding** to guide drivers to garages – to get them out of their cars before they get to Union and King
- **Valet parking** at key location to intercept drivers before they get to the core area
- **Much more space for pedestrians** by closing unit block of King and 100 block of The Strand to most traffic.
- **Enhanced Trolley service**
- **Bike racks** so people arriving by bike can also explore the Old Town by foot
- **Active police presence** directing traffic at peak periods.

Traffic and circulation statements

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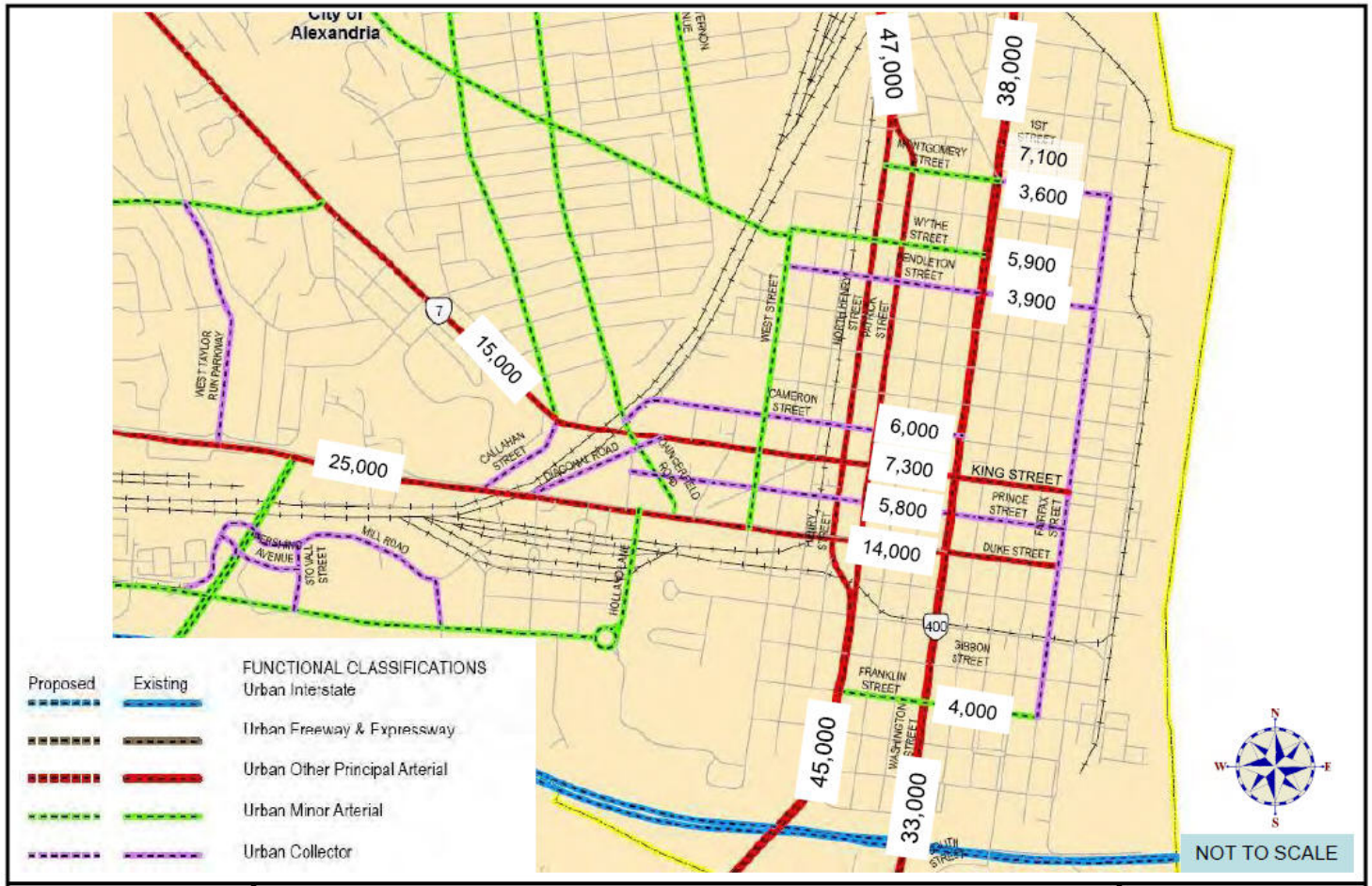
Reference slides

Alexandria Waterfront Plan Work Group – September 7, 2011

Average Daily Volumes



AECOM

FUNCTIONAL CLASSIFICATION AND 2008 ADT

ALEXANDRIA WATERFRONT TRAFFIC IMPACT STUDY

FIGURE 2

Flood Mitigation

Alexandria Waterfront Plan Work Group – August 10, 2011

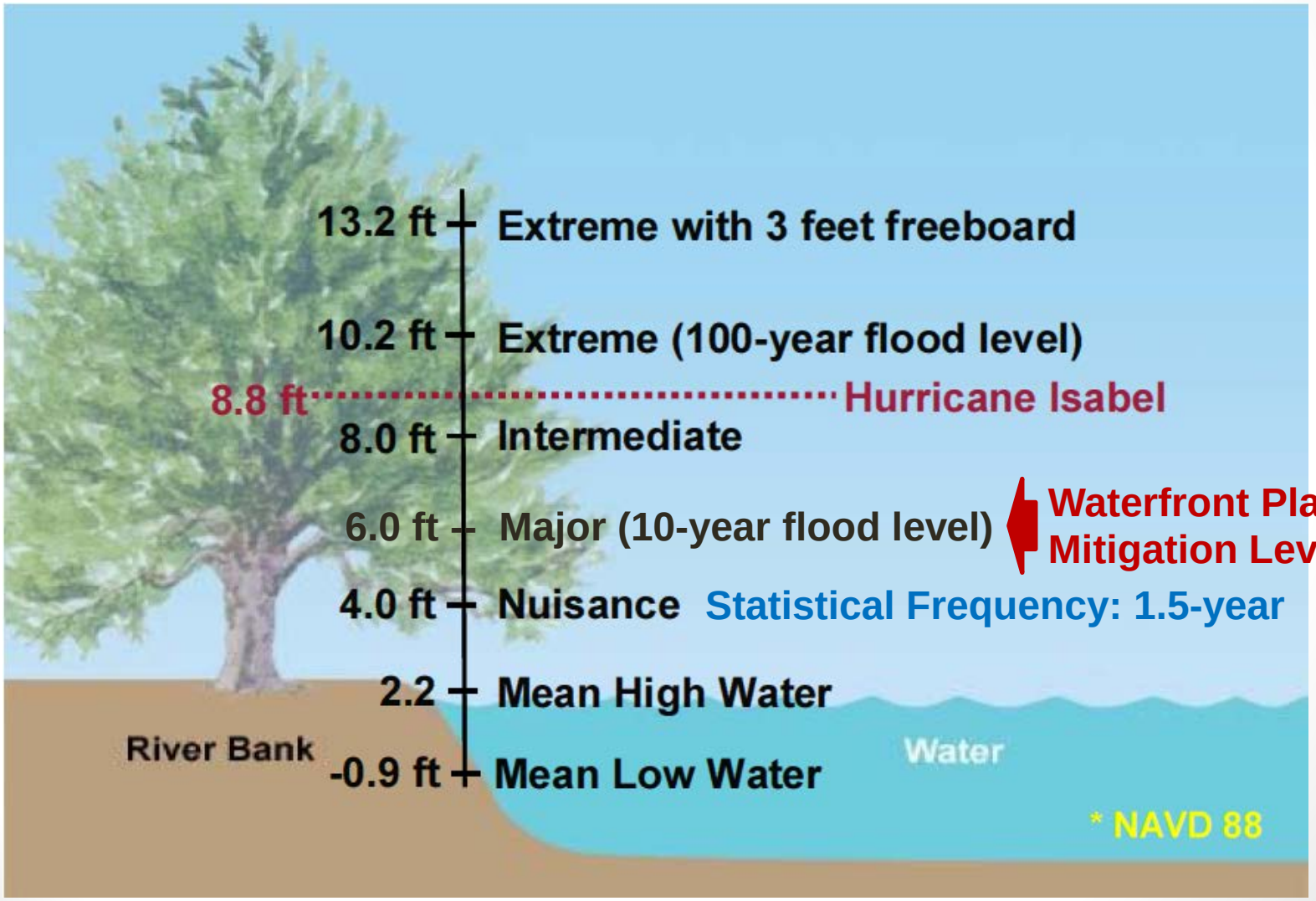
Flood mitigation statements

- A plan should include a proposal for flood mitigation.
- The amount and location of flood mitigation in the proposed Plan is about right – subject to the next, more detailed level of engineering.
- The project to elevate low-lying portions of King, Union and The Strand should take into consideration: drainage impacts on existing buildings, vehicle and pedestrian access issues, and historic character.
- The visual impact of flood mitigation should be minimized through incorporation of seating walls, berms and other features into the landscaping.

Flood Mitigation Recommended in the Waterfront Plan

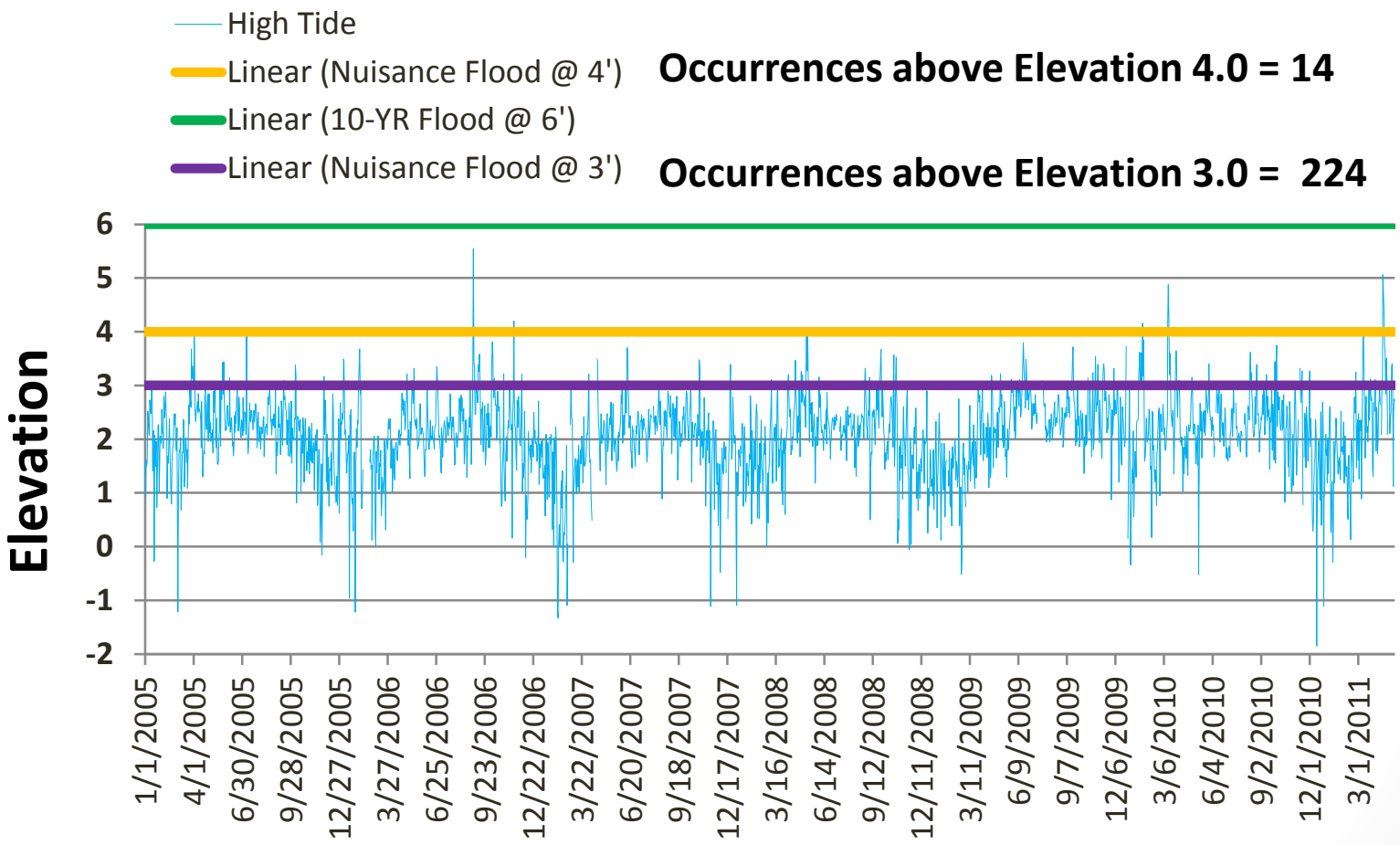
- Nuisance Flooding Mitigation to Elevation 6.0 from Duke Street to Queen Street
- Street and Drainage Reconstruction at King/Strand/Union Streets

Flood Levels considered in the Waterfront Flood Mitigation Study



Waterfront Nuisance Flooding

Daily High Tides @ Cameron St USGS Gauge

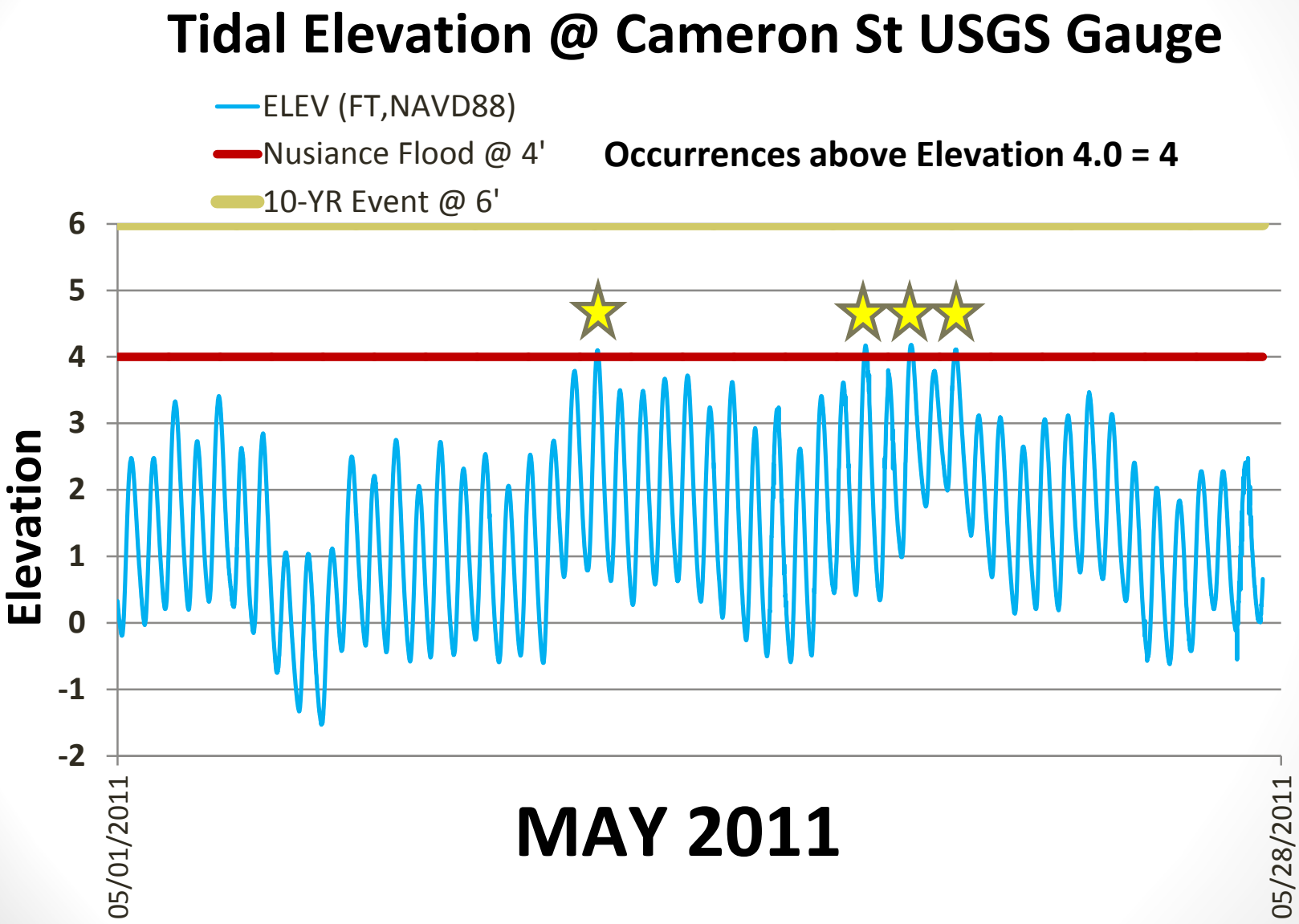


Occurrences above Elevation 4.0 = 14

Occurrences above Elevation 3.0 = 224

JAN 2005 - APR 2011

Waterfront Nuisance Flooding



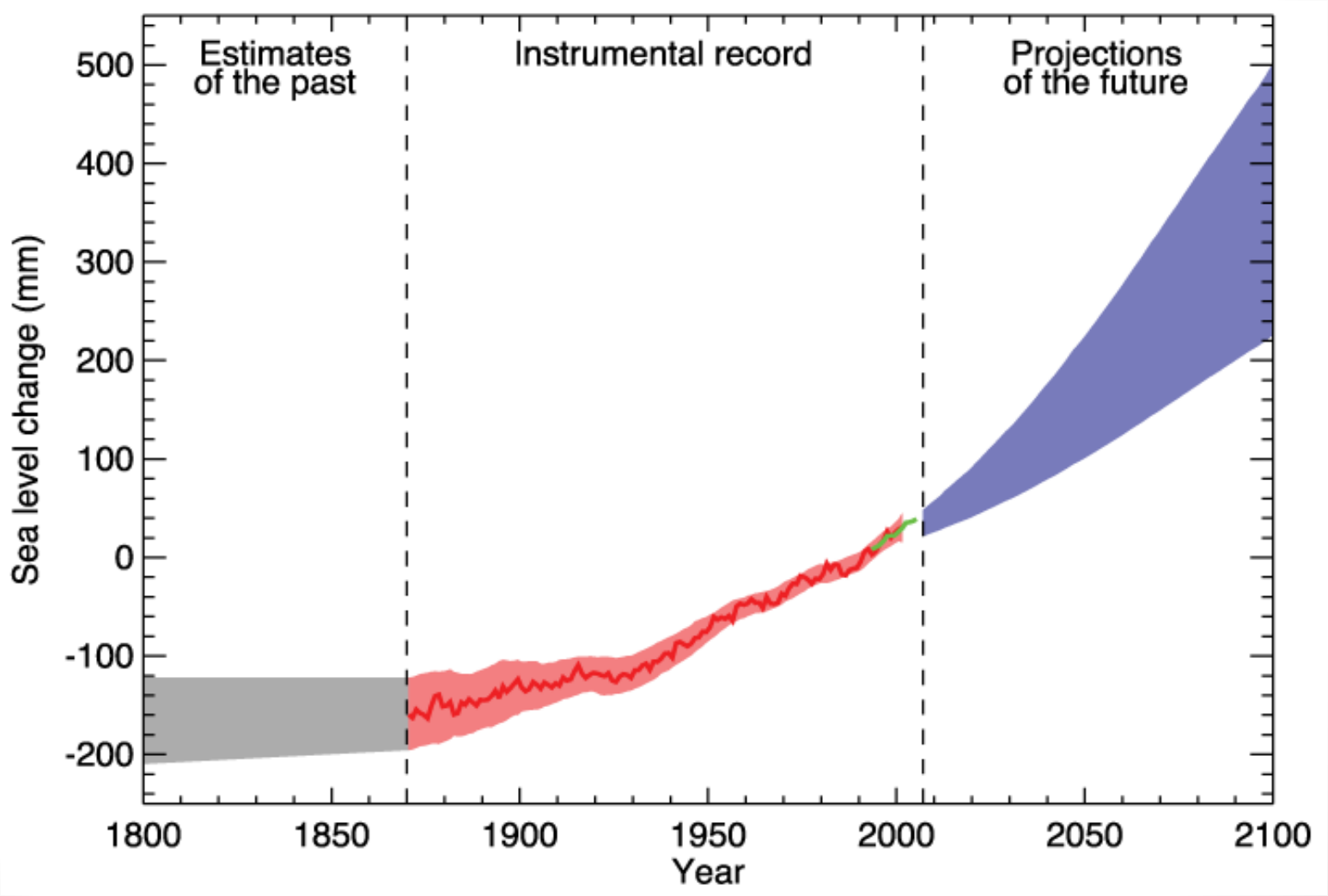
Waterfront Nuisance Flooding @ Elev. 4.0

May 19, 2011

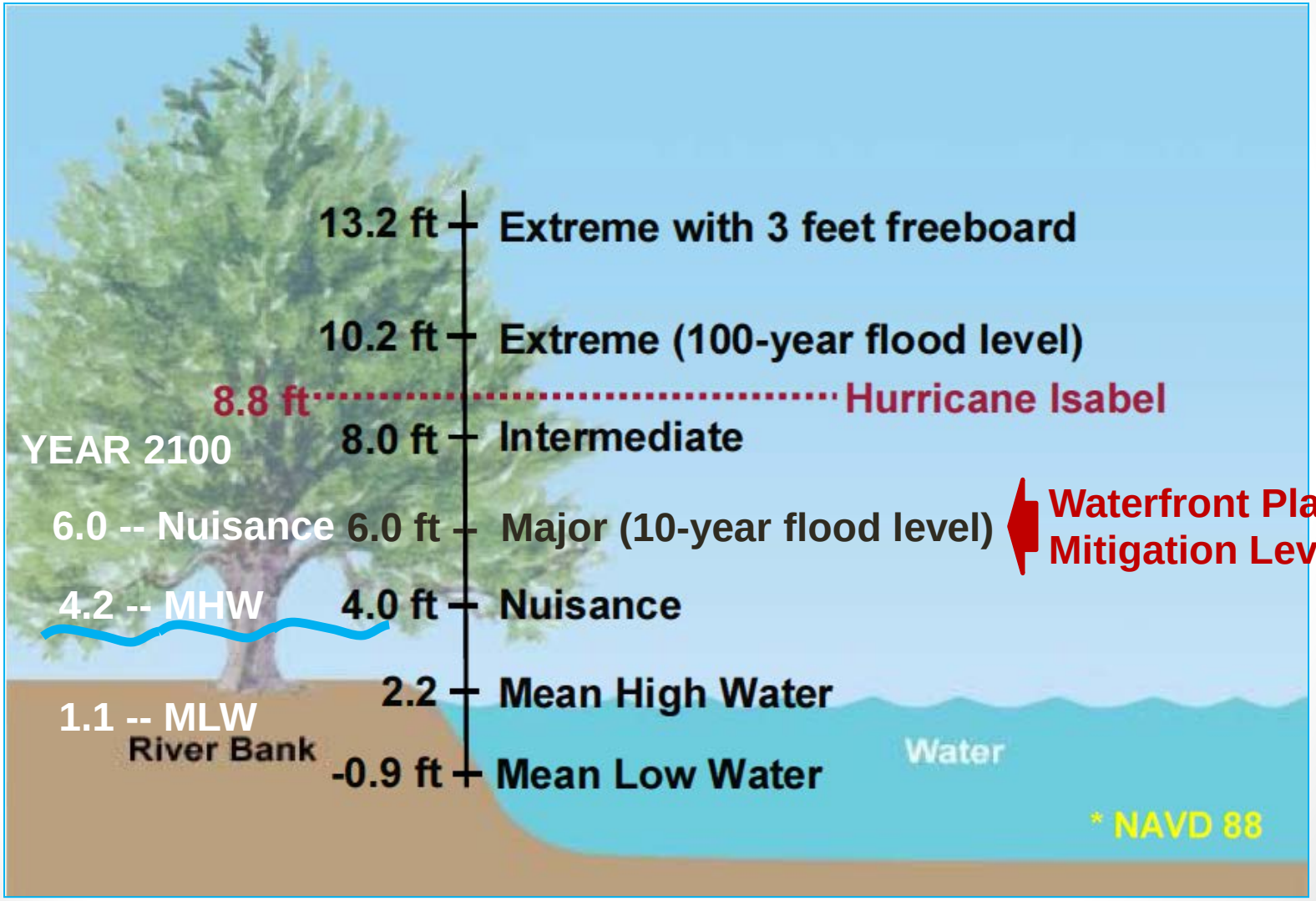
Waterfront Nuisance Flooding @ Elev. 4.0

The Strand
May 19, 2011

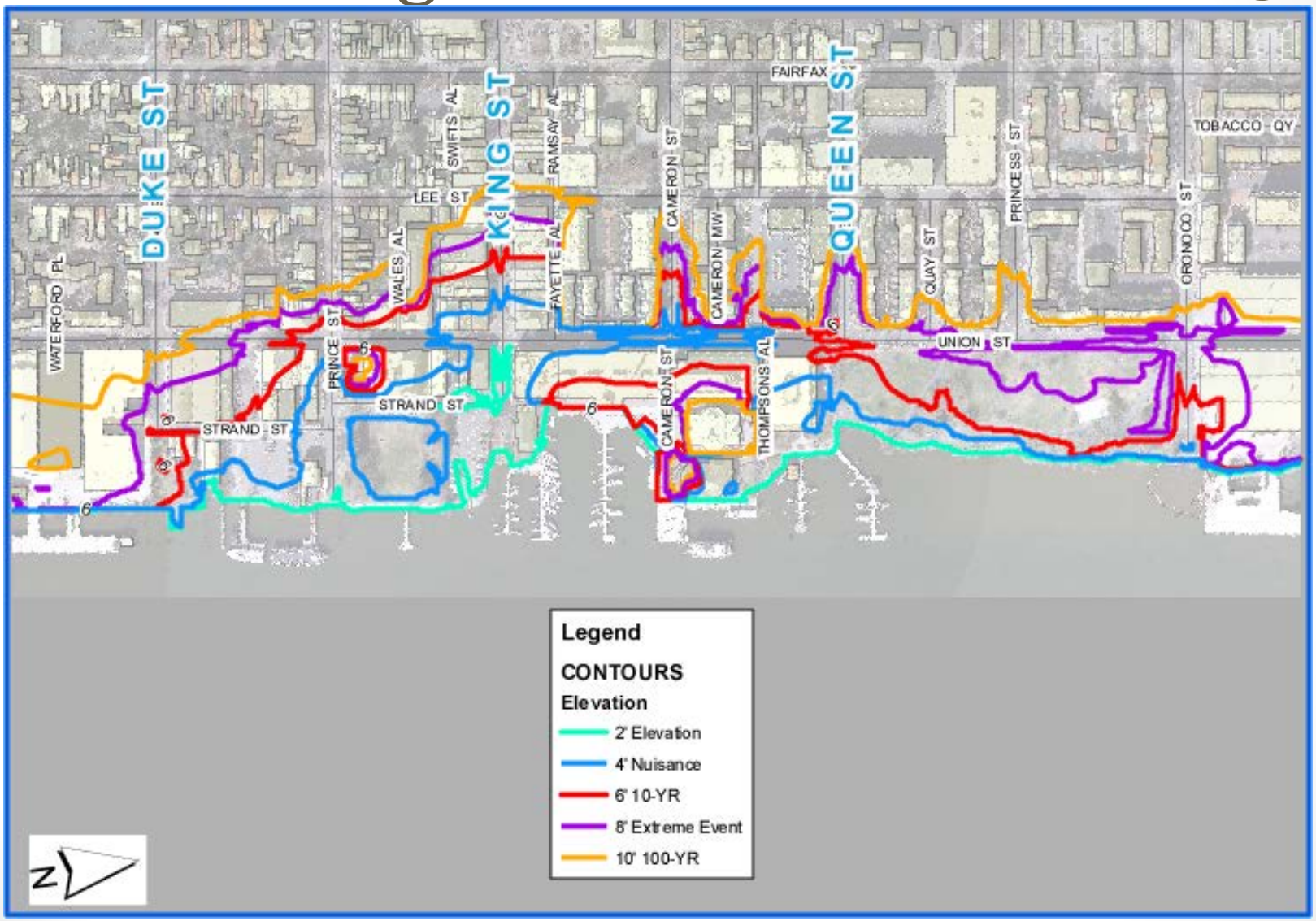
Waterfront Rising Tides



Waterfront Rising Tides



Flood Mitigation: Area of Nuisance Flooding



Flood Mitigation:

Proposed Flood Mitigation Measures

Flood Mitigation:
Proposed Flood Mitigation Measures

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