

“The ABC’s of Flood-proofing Hoboken’s Historic Library”
presented at the
New Jersey Future 3/8/19 Redevelopment Forum, New Brunswick, N.J.
by
Allen Kratz and Ana Sanchez

Music: “Now I learn my ABC’s”

- 1 *As music plays, Ana and Allen walk to front; music fades.*

**The ABC’s of Floodproofing
Hoboken’s Historic Library**

Allen Kratz, Resilience Works, LLC
Ana Sanchez, Ana Sanchez Architects

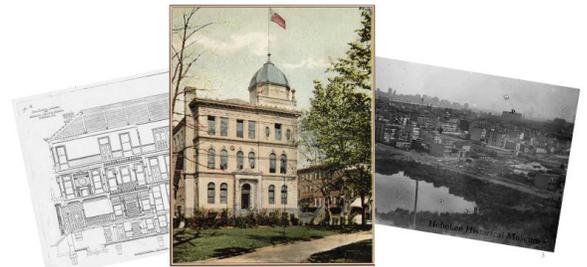
- 2 Allen: Hi. I’m Allen Kratz. I help communities find funding to redevelop property in ways that resist flooding from sea level rise, climate change and increasingly adverse rain events....

Hoboken Public Library – dry-floodproofed 2017



- 3 Ana: and I’m Ana Sanchez, historic preservation architect. Several years ago, as trustees of our public library in Hoboken, Allen and I learned how to flood-proof our 1897 National Register building with techniques from A to Z.

Hoboken Public Library – built near marsh 1897



- 4 Allen: Hoboken is at the edge of the Hudson River. We learned the hard way – from Irene, from Sandy even from increasingly heavy and frequent rains that we need to keep our building dry. That way, when it rains in Hoboken...

Irene, Sandy, ongoing sea-level rise.....



Ana and Allen open their push-button, spring-loaded umbrellas

... we can actually smile, because we installed...

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5 Allen: “**A**” – aerated wainscot with louvers that let dry air circulate behind the panels on our former basement’s walls – and they’re detachable for easy cleaning...

Aerated wainscot – lets air flow behind panels



6 Ana: “**B**” – backflow preventers to keep rain water from backing into our building’s interior waste lines from what’s typical in most older cities: a combined storm and sanitary sewer system that tends to back up in almost any heavy rain...

Backflow preventers – keep sewage outside



7 Allen: Check valves, which provide a similar protection in the former marsh area so that during heavy rains when our drainage works in reverse, these valves only allow water to leave the building so that we don’t have sewer water backing up and spouting from sinks and toilets.

Check valves – mitigate flooding on ex-marsh



8 Ana: Downspouts equipped to divert water from the roof during very heavy rains. Stormwater typically drains through a building’s interior on its way to the sewer connection. By diverting it away from the building during heavy storms, we protect the interior from catastrophic flooding.

Downspout diverters – push rain from building



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9 Allen: Yes, good point, and we added “E,”
Ejector pumps to push water into the city’s
combined sewer system through the new lateral
lines that we added to reroute away from our
building for better drainage ...

Ejector pumps – push water, waste into sewer



10 Ana: Flood gates four feet high at all below-
grade entrances because some of our flooding
came from the street as well as from our
drainage system. Typically used in Venice, this
approach is part of good flood-risk reduction
throughout the U.S.

Flood Gates – seal basement doors



11 Allen: A **G**arden that temporarily holds
rainwater in two feet of gravel buried beneath a
permeable top layer of artificial grass –
converting a former muddy, unusable space
into a popular reading alcove and outdoor
classroom.

Garden – detains rain in sunken cribbing, gravel



12 Ana: **H**, as in high above flood level, a
generator to power ejector pumps and to turn
the Library into a community refuge center if
extreme weather knocks out external electricity.
The next letter...

High-up generator – provides all-weather power



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- 13** Allen:**X**, as in Xypex, the liquid solution we used to waterproof the basement walls. Essentially, we turned our basement into a bathtub that keeps water out.
- Ana: Yes, a bathtub for protection and to expand our usable program space by 33% -- and, yes, to wrap this up, let’s go to...

Xypex – sealed floor, walls from rising damp



13

- 14** Ana: ...**Y**,” as in “Yes.” Yes is our message for you this morning: If you have a property, particularly a historic property, that’s in a low-lying, flood-prone, high-risk, vulnerable...

Yes...

You can floodproof!

14

- 15** Allen: ...**Z**, zone for flooding, we’ll be glad to chat later about the ways in which our library secured two million dollars in federal, state, county and city funding for this historic preservation and flood resilience project.

Historic Preservation & Rehabilitation Project

Four levels of government provided 2/3 of cost

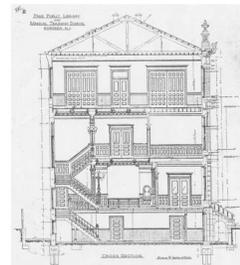
\$ 433,439	National Park Service
750,000	New Jersey Historic Trust
750,000	Hoboken municipal match
124,000	Hudson County*
\$ 2,057,439	

* Open Space, Recreation, Historic Trust Fund

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- 16** Ana: The project that we oversaw benefited from funding available to our library because it was a government property listed on both the New Jersey and National Registers of Historic Places for innovative architecture and historic significance.

Giving our past a future....



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17 **Allen:** For owners of commercial, income-producing historic buildings ripe for redevelopment, there’s also good news: Governor Murphy proposed three weeks ago a 16% to 20% historic preservation tax credit that can facilitate flood mitigation for historic projects.

Giving our past a future....



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18 **Ana:** During the library project that we oversaw as volunteer trustees in our flood-prone community, we strategically intervened to rebuild and revitalize the basement for our community. The ABC’s of floodproofing gave our historic building a future.

Giving our past a future....



Allen: I’m Allen Kratz...

19 **Ana:** ...and I’m Ana Sanchez. We hope we’ve ignited your thinking about how to help old buildings adapt to New Jersey’s new and future climate.

Giving our future a future



19 **Allen:** We value our communities and we are excited about giving our future a future – and helping you give your future a future come rain or shine!

Ana and Allen close their push-button, spring-loaded umbrellas

19

20 **Music:** *Ana and Allen walk off to reprise of “Now I Learn My ABC’s.”*

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