BUILDING SCALE RESILIENCY STRATEGIES

Manhattan Beach Community Group

March 22, 2017

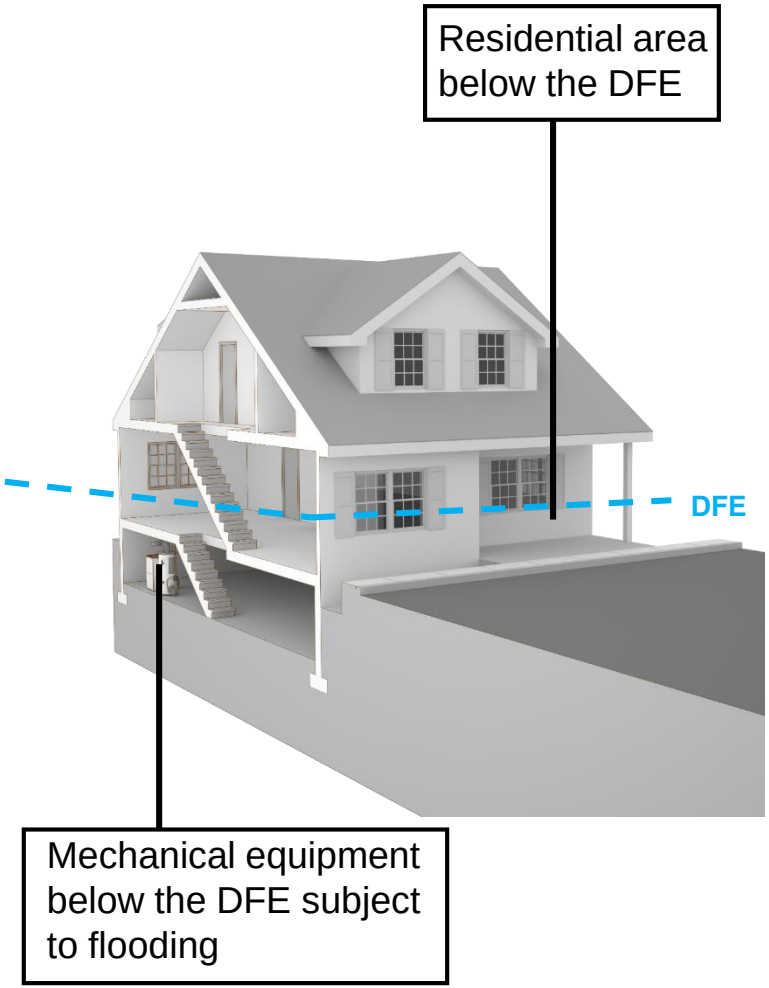
NYC PLANNING

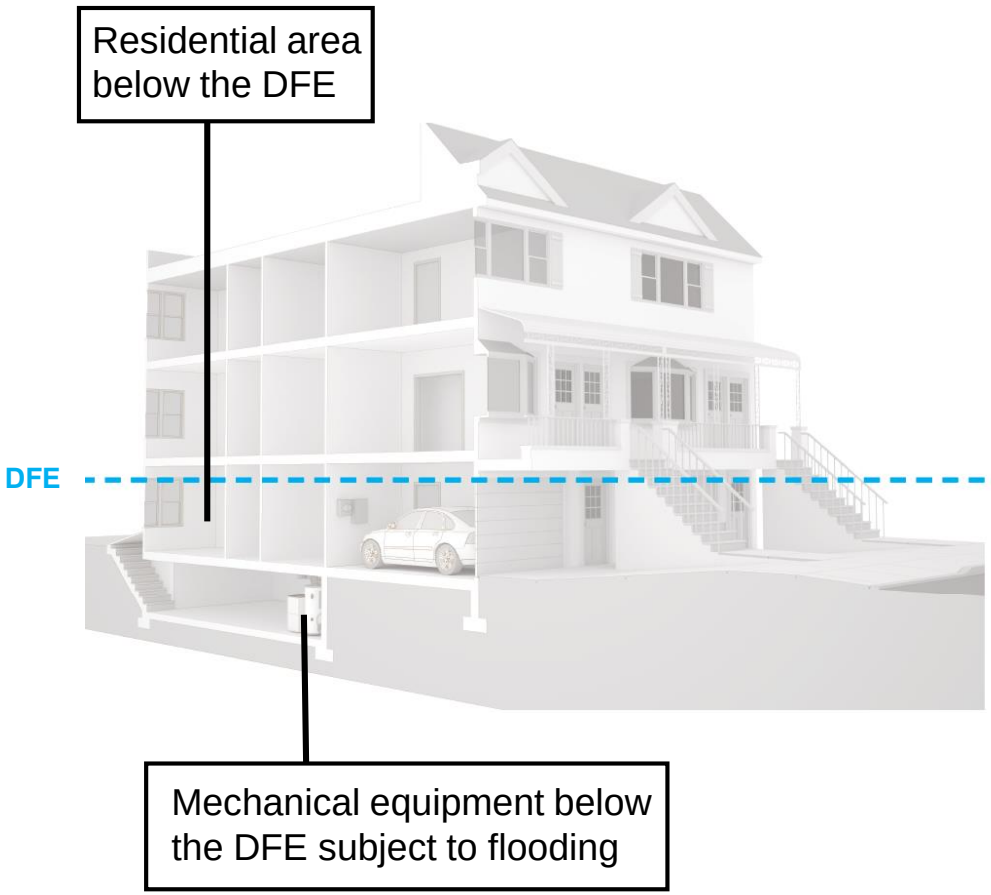
2007 Flood Insurance Rate Map

2015 Preliminary Flood Insurance Rate Map

FEMA is working in revising the New York City flood maps with more precise flood risk data for current conditions, in addition to creating a new map product for future conditions that account for climate change.

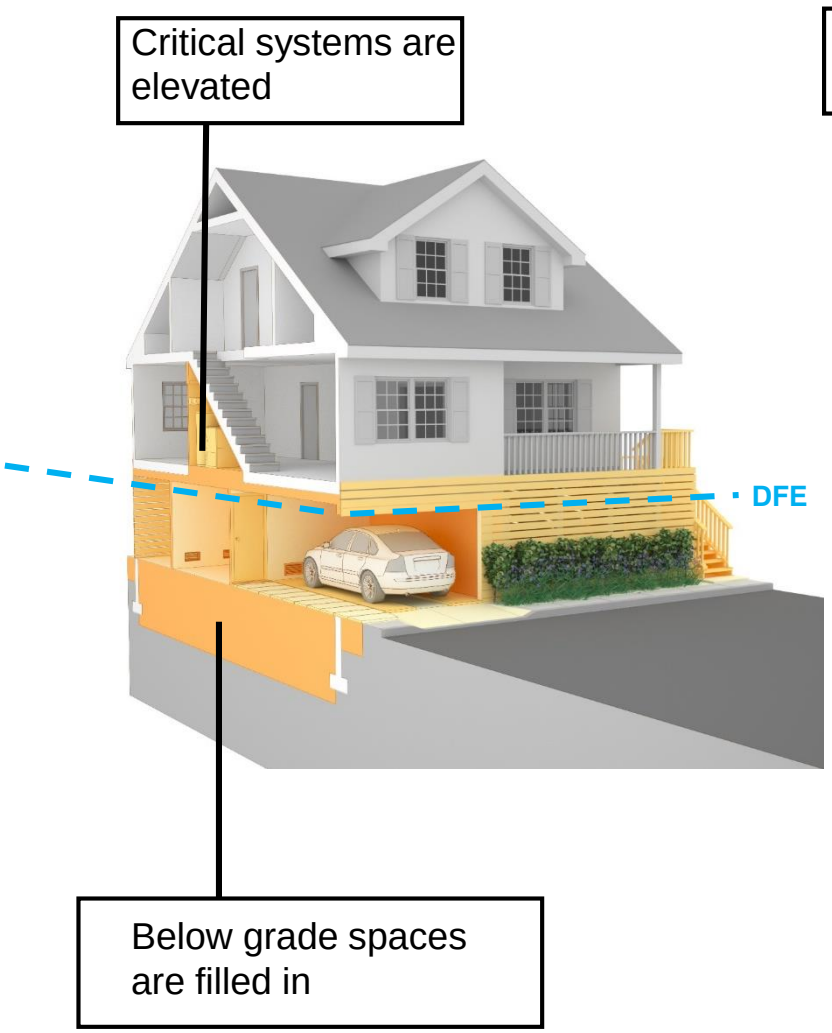
Existing Conditions

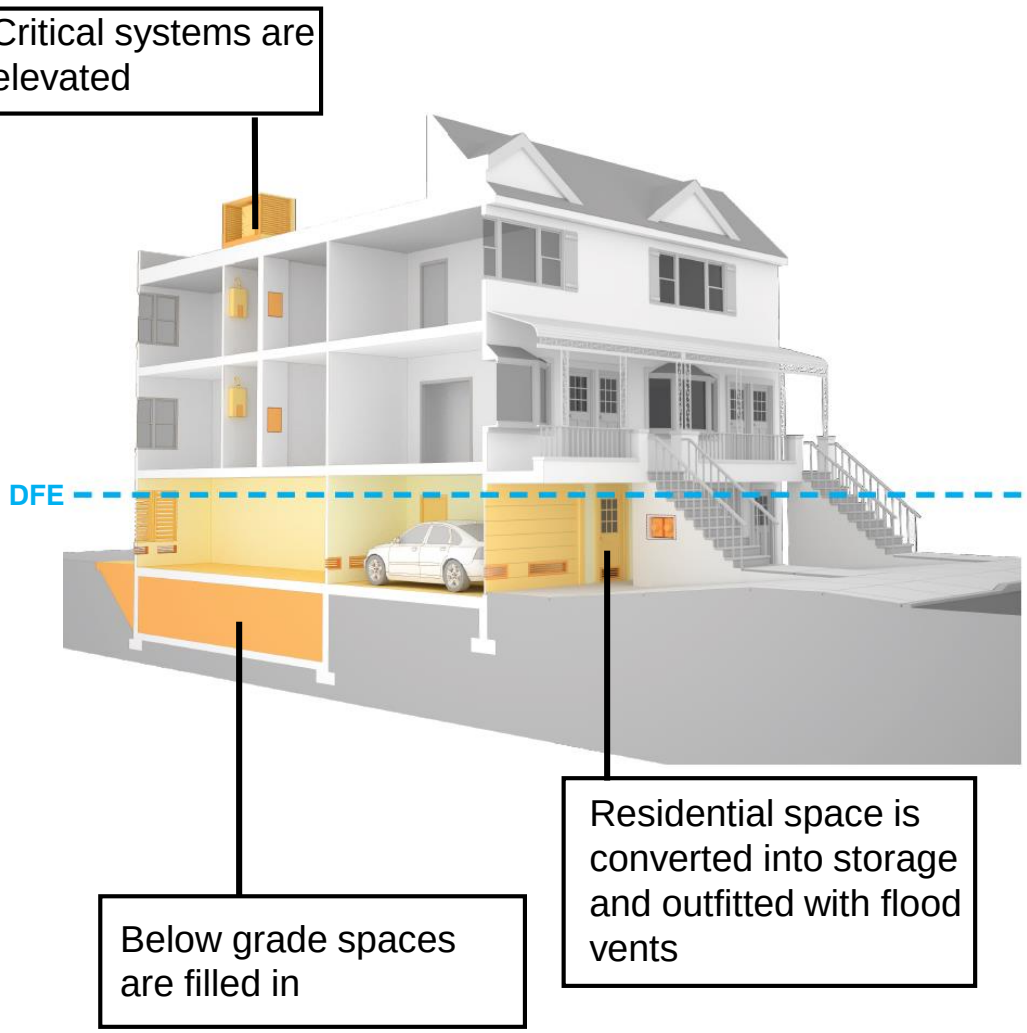




Design Flood Elevation (DFE) = **Base Flood Elevation (BFE)** height of flooding from the 1% annual chance flood as shown on FEMA maps + **1 to 2 feet to account for future flood risk** from sea level rise

Full FEMA Compliance Retrofit



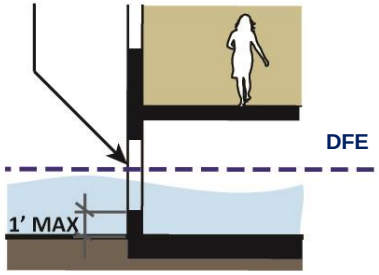


Wet Floodproofing vs Dry Floodproofing

A ZONE

WET FLOODPROOFING

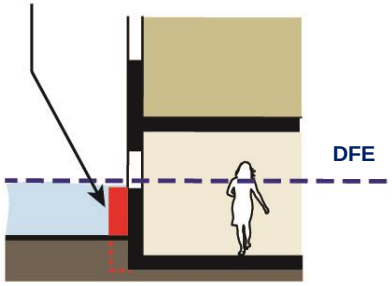
1 INCH OF NET OPEN AREA PER 1 SQ. FT. OF ENCLOSED AREA



- ✓ PARKING
- ✓ ACCESS
- ✓ STORAGE
- ✗ RESIDENTIAL
- ✗ COMMERCIAL

DRY FLOODPROOFING

FLOOD SHILEDS PREVENT WATER FROM ENTERING



- ✓ PARKING
- ✓ ACCESS
- ✓ STORAGE
- ✗ RESIDENTIAL
- ✓ COMMERCIAL

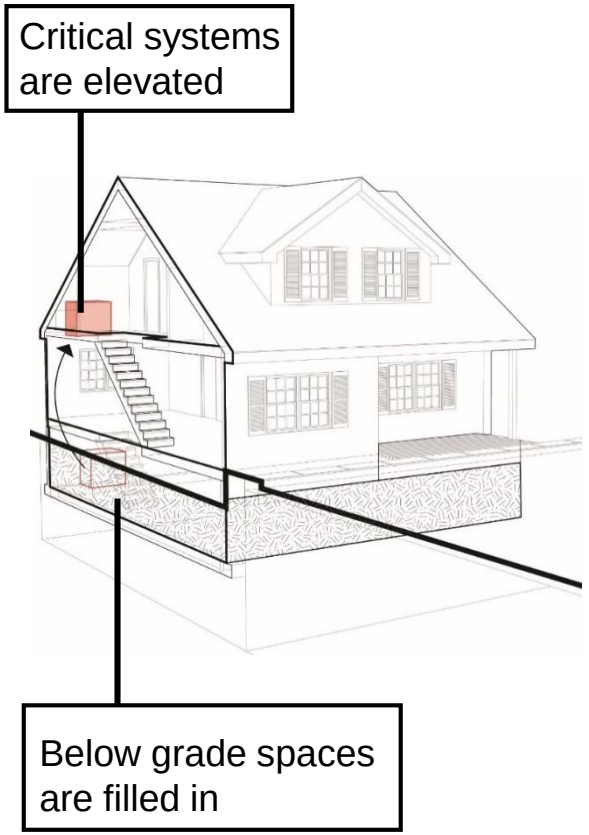
Dry Floodproofing residential spaces does not lower flood insurance premiums

Relocation of Critical Systems above the DFE

Reduces time it takes to get back into home after flood

Results in potential loss of useable space

Building has to be able to withstand flood-related forces



Note: These strategies do not directly lower flood insurance premiums

Relocation of Critical Systems to New Structure

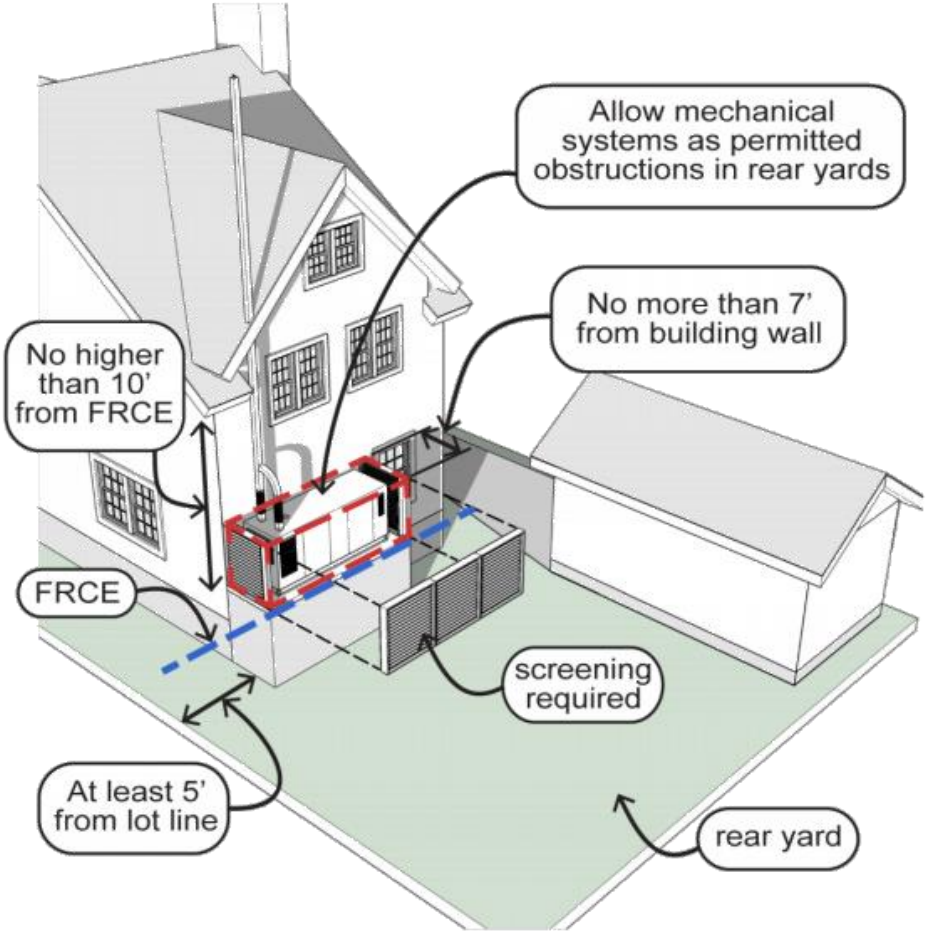
Reduces time it takes to get back into home after flood

No loss of space inside building

Potential loss of space in a yard

Must accompany a full retrofit project

Building has to be able to withstand flood-related forces



Note: This strategy <u>may slightly</u> lower flood insurance premiums

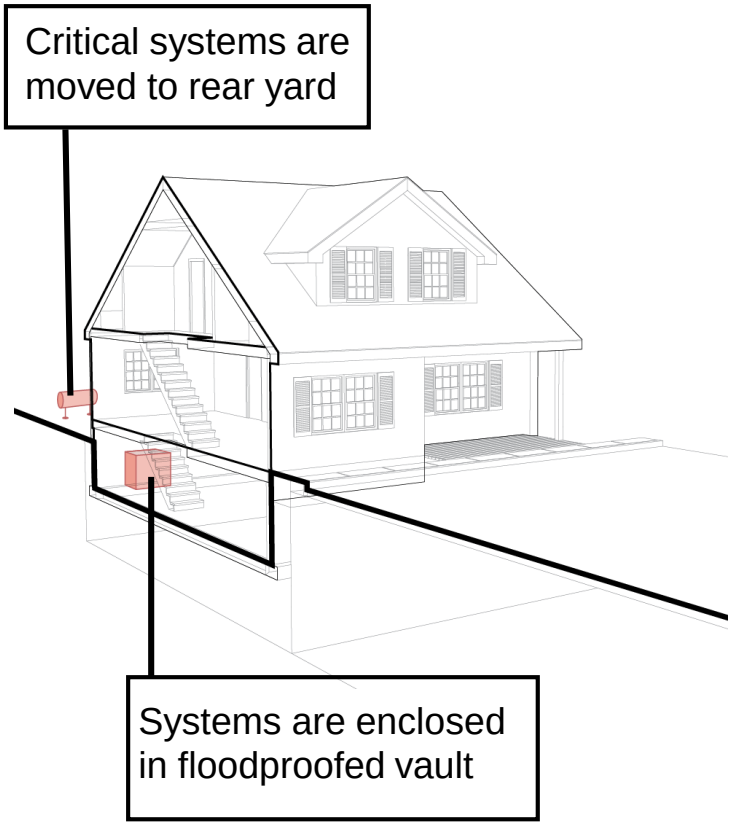
Enclosing Mechanicals in Vault/Wet Floodproofing

Provides flood protection for the mechanical and electrical equipment in the basement/cellar

Minimizes material replacement post flood

Equipment remains below the base flood elevation, may still be a risk

Building has to be able to withstand flood-related forces



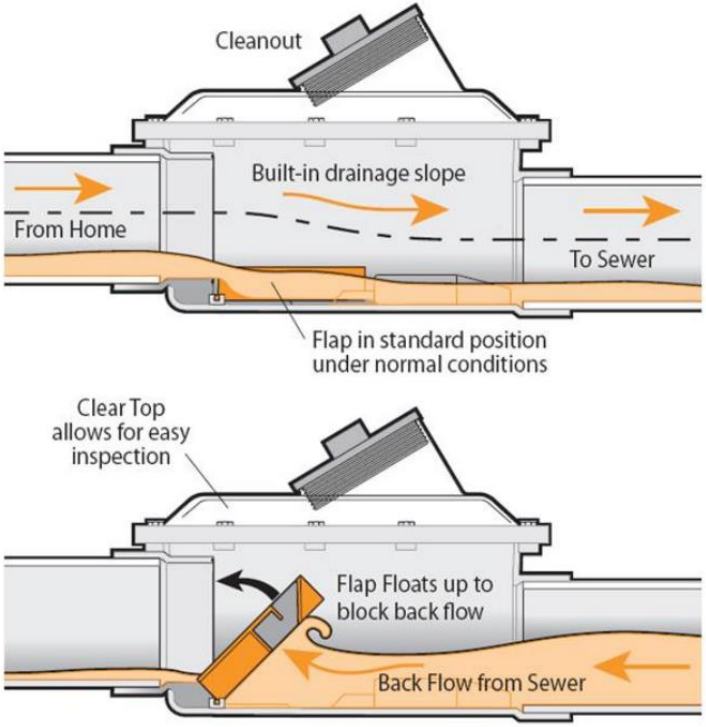
Note: These strategies do not directly lower flood insurance premiums

Backflow Prevention Devices

Mitigates backflow of sewer into cellar, but unless building is properly sealed flooding can still occur from gaps in building structure.

Backflow preventers require regular maintenance

Doesn't prevent flooding from street



Note: These strategies do not directly lower flood insurance premiums

Door Shields

Mitigates flooding into the cellar from street level

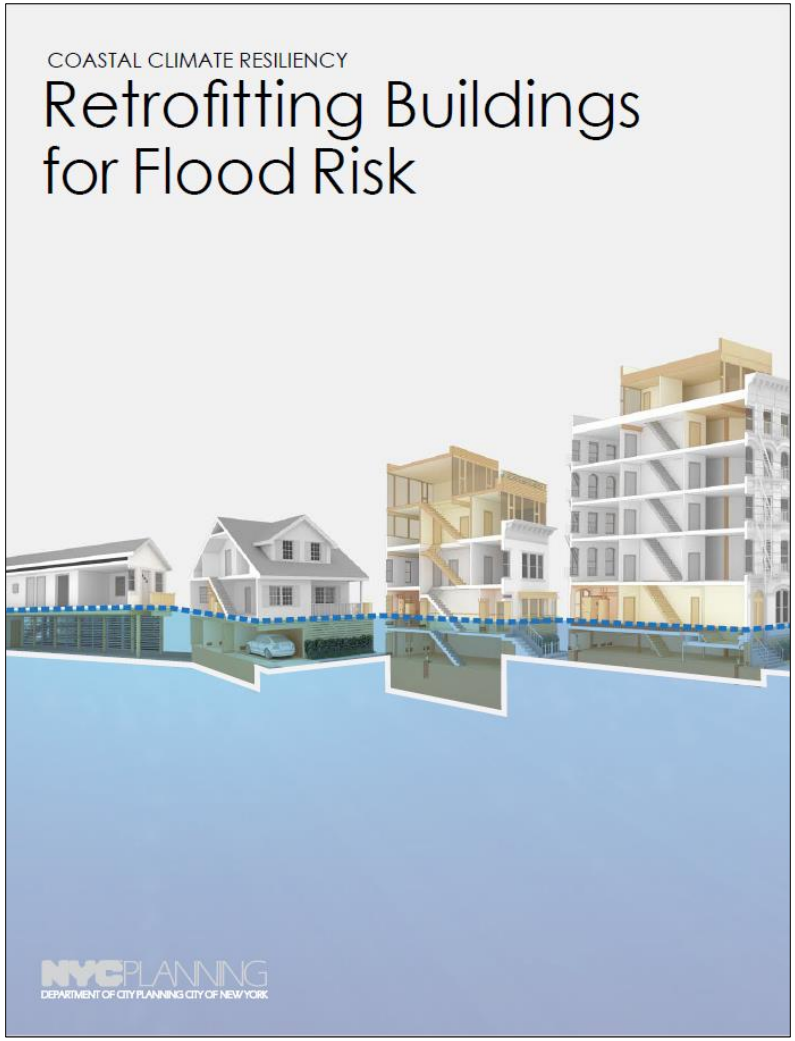
Barriers must be manually installed before flooding event

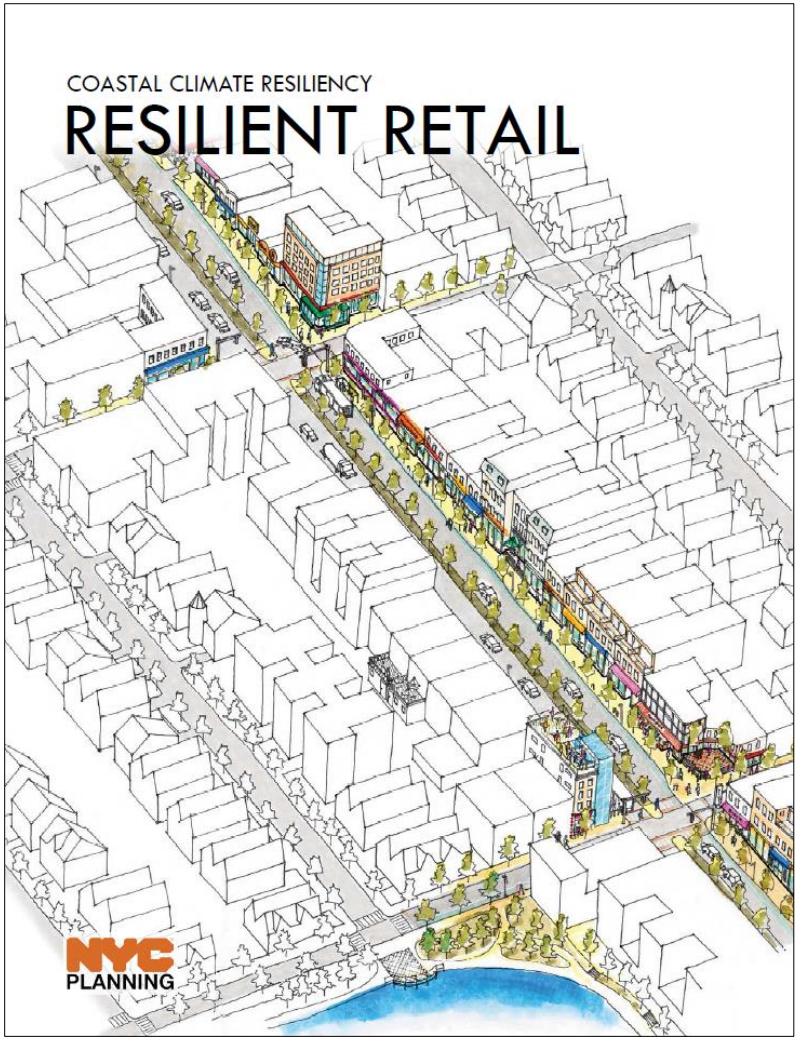
Building and foundation system has to be able to withstand the expected flood-related forces

Doesn't prevent flooding from sewer backup

Note: These strategies do not directly lower flood insurance premiums

Retrofitting Resources





www.nyc.gov/resilientneighborhoods

Always consultant an architect or engineer before making major improvements

Flood Insurance and Retrofitting Resources

Flood risk information and address lookup: FloodHelpNY.org
Flood insurance agent lookup: floodsmart.gov
FEMA Map questions: 1-877-FEMA MAP (1-877-336-2627)
FEMA Flood Insurance agent referral: 1-888-435-6637

For more information and updates visit our website:
www.nyc.gov/resilientneighborhoods

or email us:
ResilientNeighborhoods@planning.nyc.gov