



# FAQs- FREQUENTLY ASKED QUESTIONS

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## Rising Above the Risk

**Audience:** This document is intended for residents and property owners in the City of Miami Beach.

**Purpose:** This document describes the set of stormwater, water, and sewer- related infrastructure projects currently underway in the City of Miami Beach, and answers commonly asked questions posed by residents.

**Types of Projects:** Water Main Replacement, Sanitary Sewer Replacement, Stormwater System Upgrades

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The City of Miami Beach is committed to investing wisely and properly maintaining your public infrastructure. Infrastructure projects in neighborhoods are tailored to the age, condition, and capacity needs. Three main underground infrastructure projects typically planned include:

1. **Water Main Replacement** - to protect public health and safety, including the provision of adequate water pressure throughout the entire City, the 80-year old water main and service lines are being replaced and new fire hydrants being installed.
2. **Sanitary Sewer Replacement** - to ensure the necessary level of service and address increasing frequency of sewer failures while limiting impact to landscape and hardscape structures that have been placed on the easements behind many homes, a new sanitary sewer is being constructed in the right of way in front of homes.
3. **Stormwater System Upgrades** - to keep our streets and sidewalks dry now and into the future, Miami Beach is redesigning catch basins and piping, expanding storm drain capacity and flow-through rates, raising roads, installing stormwater pumps, and raising sea walls.

Each of these three projects requires roads, swales and sidewalks to be under construction. The city recognizes that these projects are disruptive and unpleasant to residents while they are underway. To minimize this, the city has strategically aligned the execution of all three so as to perform them simultaneously, hopefully avoiding breaking up roads in each neighborhood more than once.

As an existing property owner, you may have questions about how these projects will affect you and your private property. Whether you are new to Miami Beach, or you have spent your whole life here, the city understands this is a change to your neighborhoods. It's important that your questions are answered. Check out the following frequently asked questions on the pages that follow. They cover topics such as how elevated roads will transition into private property, flood insurance and personal property adaptation.

## FREQUENTLY ASKED QUESTIONS

### 1. Will the roads be elevated in my neighborhood?

- The goal of the City of Miami Beach is to have all roads reach 3.7' NAVD88. Some roads are already this high, or higher. Some are lower and require elevation. The 3.7' NAVD88 standard is based on minimizing potential flooding associated with tides, rainfall, and sea level rise, to around the year 2055. This estimate is based on engineering models and the Southeast Florida Regional Climate Change Compact Unified Sea Level Rise Projection. It is not necessary for every homeowner to understand the NAVD terminology. Identifying the



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current elevation of your home relative to the future elevation of the road in front of it is adequate for you to make your own plans and decisions.

- To help you understand this relative elevation, the city is creating an “Adaptation Calculator.” Armed with your home elevation certificate, you will be able to determine the actual elevation (in inches) of the public right-of-way adjacent to your property. You can then take a yard stick and easily see the actual future road elevation in comparison to your driveway and your home’s finished floor elevation.
- The City of Miami Beach Adaptation Calculator will be available on the City website very soon. In the meantime the City has LIDAR maps showing the current elevation of all streets that can give you a very good idea. These maps can be viewed by a trip to City Hall or you can use the Adaptation Calculator once live.

### 2. How will the newly elevated roads transition to my driveway and property?

- Streets are currently connected to private property by driveways and grass. The driveways and ground will be sloped and harmonized, with the majority of this being fill and grass-matching to what is typically seen in a single family residential neighborhood.
- **The city is committed to meeting with each property owner on a case-by-case basis** in regards to planned construction to elevate roads in their neighborhood. The project team will determine how much driveways will need to be gently sloped from the right of way line at the rate of one foot vertical per each seven feet horizontal. Special exceptions are being made in certain conditions that exist such as sidewalks and landscaping.
- The city will pay for the section of driveways and walkways on private property that will be harmonized in either asphalt or concrete. If an existing driveway/walkway has a decorative feature such as pavers the resident would like to reinstall, then the contractor will rebuild the harmonized area and leave a prepared base for the property owner to have their own contractor finish with that decorative feature. Any impact to hardscape such as walls is paid for by the homeowner. The city will restore swales.
- In some neighborhoods homeowners have placed encroachments on public property. Generally, these have to be removed although exceptions are made in certain circumstances. You will have a chance to discuss your unique situation with the city prior to construction.

### 3. Will elevating the roads flood my property?

- Elevating roads does NOT mean you are at increased flood risk. On the contrary, your flood risk is reduced because of the new advanced drainage system designed to remove stormwater from the public right of way and personal property.
- Street improvement stormwater projects are designed across the country to capture and manage water within the public right-of-way. Engineers analyze and calculate the appropriate infrastructure for a specified rainwater capacity. Preliminary models are used



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to determine the size of the infrastructure, such as pipes. These models are fine-tuned throughout design, planning, permitting, and construction process- so that the optimal infrastructure solutions are tailored to each property.

- Understanding that some private properties on Miami Beach were built without adequate on-site drainage, the project is being designed to capture rainwater from both public and private properties. The city will allow homeowners to tie their private property in to the city's stormwater system at no charge.
- The project is being designed to capture water at the lowest points, and specifically not to cause flooding on private properties. In critical areas such as driveways where the adjacent property is low, the city will either install a hydraulic break point or drain to capture the water before it can get to the private property.
- In the initial stages of the stormwater program, the city intended for private property owners to maintain their own rainwater on their own property. This is consistent with Florida Building Code requirements. However, due to the needs of some Miami Beach residents, the city will allow homeowners to tie their private property in to the City's stormwater system at no charge. This will be accomplished by providing secondary catch basins for extremely low lying properties that will make that process as simple as possible.
- The project costs are covered by the stormwater fees, paid for by residents.

#### 4. What impact will the water and sewer projects have on my property?

- Some homes are connected to the sanitary sewer system, nearly 80 years old, located in the easement behind their property. If this is your situation, you will have a choice between connecting to the new system by re-routing plumbing from the rear of your home to the street front, or staying connected to the old system.
- If you choose for your sanitary sewer connection to be relocated, the city will pay for trenching, re-plumbing, and filling, as well as sod replacement.
- If you choose to defer connection to the new system, then the city will have no role or financial obligation for the future when the new connection is eventually made. Homeowners should be aware that the old system is not going to be maintained and will eventually fail. The above photo illustrates tree root damage in an existing pipe.



## 5. What will it look like in the end?



- The city is working on a rendering to help residents envision what neighborhoods will look like after these projects. Since each neighborhood is unique, it is a challenge to communicate this visually. The city is not forcing a one-size fits all streetscape on each neighborhood. What makes each neighborhood special is documented during the design project to preserve each neighborhood's unique identity. To take a look at in-progress projects, you can visit:

- West Avenue at 14th Street, which was elevated approximately 2 feet.
- The Northwest side of Palm Avenue on Palm Island, where the road was raised approximately 1.2 feet.

## 6. Is this project obsoleting the older homes that are below sea elevation and seriously hurting their value?

- No, in fact we are providing an additional level of protection for these older or low lying homes. Miami Beach is, and always has been, a low-lying coastal community. Investing in infrastructure to reduce flooding is a benefit to the community- and will prepare us for years to come.

## 7. Will elevating the roads impact flood insurance?

- According to the city's floodplain manager and Federal Emergency Management Agency (FEMA), elevating roadways and improving stormwater drainage in Miami Beach is not a criteria of the National Flood Insurance Program (NFIP).
- Elevating roadways is one of many positive steps a community can take to mitigate risks and increase their resilience to natural hazards.

## 8. Once the program is complete, will road elevations impact future FEMA modeling and Flood Insurance Rate Maps?

- Currently, FEMA is updating Flood Insurance Rate Maps in Miami-Dade County, including the City of Miami Beach. Our road elevation changes will be shared with FEMA during this updating process to fully illustrate how we have reduced flood risk.



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- FEMA expects to release draft maps for comment by 2018 and final maps by 2021. The city will make sure that FEMA has the best and latest available data before the maps are finalized. Existing maps are located here: <https://gisweb.miamidade.gov/floodzone/>

### 9. What can I do to help prevent flooding on my property?

- As a property owner in a floodplain community like Miami Beach, there are available options to reduce the risk of flood damage to your property. Similar to reducing the risk of hurricane damage through home improvements, such as hurricane impact windows and shutters, there are several retrofitting options that can be explored:
  - **Wet flood proofing** makes uninhabited parts of your building resistant to flood damage when water is allowed to enter during flooding. This retrofitting method is only appropriate for uninhabitable areas such as garages and limited storage areas.
  - **Using flood resistant materials**, such as concrete or tile as opposed to wood, can reduce damage and make cleanup quick in the case of water entering your home or garage.
  - **Dry-flood proofing** is sealing your building to prevent flood waters from entering. This retrofitting method is a good alternative when a non-residential building cannot be elevated. In order to obtain the same flood insurance rating as a building that would be elevated to Design Flood Elevation, the building must be dry-flood proofed to 1 foot above BFE (Base Flood Elevation).
  - **Flood wall protection** means constructing barriers to prevent flood waters from entering your property.
  - **Increasing the height of your lowest floor can reduce flood risk.** Elevation means adjusting the lowest floor of a building, equipment and appliances above the Base Flood Elevation (BFE). Base Flood Elevation, established by FEMA, is the computed elevation to which floodwater is anticipated to rise during the base flood. Base Flood is the flood having a one percent chance of being equaled or exceeded in any given year. This is the National Flood Insurance Program regulatory standard also referred to as the "100-year flood." Base Flood Elevations (BFEs) are shown on Flood Insurance Rate Maps (FIRMs) and on the flood profiles.
  - The BFE is the regulatory requirement for the elevation or floodproofing of structures. The relationship between the BFE and a structure's elevation determines the flood insurance premium.
  - This can mean adapting your floor elevations wherever possible. In addition, you can raise mechanical, electrical and plumbing without elevating an entire building to reduce the risk of flood damage. This is the most effective way to protect buildings against flood events.

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- **Landscaping** design and grading can help retain water onsite. Increasing the amount of pervious area on your property by removing unnecessary pavement can increase the amount of water that can be captured naturally. Also, selecting native, salt tolerant vegetation is recommended.

### 10. What about seawalls?



- Unlike other parts of the world, we cannot protect our homes with only levees or seawalls: ground water levels are rising and coming up from underneath us through the small holes and cracks in the bedrock.
- Of the 63 miles of seawalls in Miami Beach, only three miles are publicly owned. A private seawall owner can expect to spend \$1000-\$1500 per linear foot to bring an old seawall up to code (this is a general rule of thumb).
- While homeowners are not being required by the city to replace seawalls at this time, all new seawalls are being required to be more resilient. New seawall construction guidelines have been changed to ensure that all new seawalls can be elevated to a height of 5.7' NAVD.
- To see what the new regulations for seawall construction are like, you can visit the city's new seawall at 23rd and North Bay Road, or the Cherokee Avenue street end.

### 11. What is the city doing to reduce your personal flood insurance premiums?

- The city participates in the NFIP's Community Rating System (CRS). Miami Beach's performance score currently saves residents 20% on their NFIP flood insurance premiums — an estimated \$6 million annually.
- Flood Insurance is required for buildings with federally backed mortgages and encouraged for all buildings. Ninety-three percent of existing buildings on Miami Beach are in the Special Flood Hazard Area (SFHA) as defined by FEMA.
- The most effective way to reduce the cost of flood insurance is for the lowest floor of the building to be above the Base Flood Elevation (BFE) identified on the effective Flood Insurance Rate Map. For more information about flood insurance rates, contact your flood insurance agent.

### 12. How urgent is it for me to retrofit my property to reduce flood risk?



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- There is not an easy, short answer for this. Similar to any other home renovations or retrofits, this is a personal decision. However, knowing your home's elevation, and past history of any flooding issues will help you make that determination. The city wants you to make an informed decision about your property. To obtain your unique elevation information, you can obtain an elevation certificate.
- We know there are global and local projections that the sea level is rising over time, however, the city is preparing for this through elevating roads and implementing storm water pumps, and requiring higher elevation for new or significant construction. Any personal property improvements to reduce flood risk will also reduce risk in the future as sea levels rise over time. More information on the Unified Sea Level Rise Projection can be found at: <http://www.southeastfloridaclimatecompact.org/>

### 13. When Is the City Coming to My Neighborhood?

- Current Schedule:
  - In Progress: Palm Island, Hibiscus Island, Sunset Islands III & IV, Sunset Harbor, Venetian Islands, West Avenue Phase 1, Central Bayshore, Indian Creek, City Center/Convention Center
  - 2017 Start: Central Bayshore South, West Avenue Phase 2, Lakeview, Upper & Middle North Bay Road
  - 2018 Start: North Shore, First Street, City Center drainage collection system
  - 2019 Start: Normandy Isle, Orchard Park/Nautilus, Flamingo, La Gorce/Allison Islands
  - 2020 Start: Alton Road from Michigan to 63rd, Normandy Shores, Biscayne Point, Belle Isle, Sunset Islands I & II, and Star Island.
- These schedules are subject to change, but this is the best information available today.
- The total duration of each "Neighborhood Improvement" project is typically 24 months start to finish.

### 14. How can I obtain technical assistance from city staff?

- Public Works staff can provide you information on the utility improvements, road improvements and how these improvements will connect with your personal property, such as driveway harmonization. Please contact Public Works at 305.673.7080 for further information.
- Building Department and Floodplain Management staff can provide you information on flood zone determination, the Florida Building Code and flood damage prevention regulations and requirements, and the 50% rule. Elevation certificates for buildings that were built after 1995 and FEMA retrofitting technique guides are available. Please contact the building department at 305.673.7610 ext. 6770 or 6165.
- If you would like to understand your property's specific elevation, obtain a copy of your elevation certificate of your property from a professional surveyor. A copy of an elevation



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certificate for buildings that were built after 1995 may be available at the building department. Providing your elevation certificate to your flood insurance agent may reduce your flood insurance premium.

- The city also recommends you consult with a professional architect or engineer for detailed professional recommendations to protect your property from water damage. You can also consult with a Florida licensed contractor to provide specific retrofitting options and cost estimates for your property.

### **15. How is the city paying for these projects? How can I pay for my own?**

- The public infrastructure upgrades are a commitment to investing in the City of Miami Beach to reduce flood risk. This is a significant advantage to you, as a homeowner, in protecting your property values and reducing risk.
- The city has prepared a funding plan for the implementation of the Citywide Stormwater improvements. The \$400M-\$500M program will be funded over multiple years and broken into three tranches of rate increases (two of which have already occurred). Each tranche will generate the revenue for \$100M bond issues. The first bond was issued in 2015, the second bond is set to be issued later in 2017. The third tranche of rate increases will likely take place in 2018 for a 2019 bond issue. The city is also using tax increment funding through an agreement with the County to generate an additional \$50M-\$100M depending on the market over the next five years. The remaining funding of \$100-\$150M is as yet to be identified.
- The city does not pay for renovations or retrofits on private property. Similar to hurricane retrofitting, it is your obligation as a property owner to invest based on your personalized needs. Part of Miami Beach's older housing stock, like much of South Florida, was built with a lower floor elevation that will be in transition for years to come.
- South Florida cities and counties are lobbying the State of Florida to allow Property Assessed Clean Energy (PACE) financing to be used for home and seawall elevation. PACE is a financial platform that eliminates the barrier of high upfront costs by allowing property owners to pay off energy efficient and storm mitigation home improvements through an assessment on their property tax bill.

### **16. How is this system different from the system at Sunset Harbour?**

- The differences between the systems in Sunset Harbour in comparison to single family residential communities are many, but some of the main differences are that:
  - Sunset Harbour was raised higher, up to 3ft, whereas residential elevations will occur between zero to 24 inches (estimate);
  - In single family home areas, there are significant front yard set-back areas between the right of way and the buildings, and





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- Residential areas have substantial pervious green space, that allows water to percolate.

The combination of these factors means that there will be very gradual slopes that are accomplished with a small amount of sod and dirt rather than concrete retaining walls. We also will not need dual (split-level) sidewalks, so the amount of green space will remain the same or very similar. In addition, the reliance on the pumped systems is reduced due to the ability to percolate water (drain) into the ground.

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Thank you for taking the time to read these Frequently Asked Questions!  
We hope they were informative, and we will continue to update them  
to be current and reflective of community needs.



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### Helpful websites and links:

- City of Miami Beach Capital Improvement Projects Update Information:  
[//mbplannedprogress.com/projects/neighborhood-improvements](http://mbplannedprogress.com/projects/neighborhood-improvements)
- City of Miami Beach Flood Awareness:  
[//www.miamibeachfl.gov/building/kiosk7/scroll.aspx?id=38768](http://www.miamibeachfl.gov/building/kiosk7/scroll.aspx?id=38768)
- Miami-Dade County Flood Zones Determination: <https://gisweb.miamidade.gov/floodzone/>
- Southeast Florida Climate Change Compact [//www.southeastfloridaclimatecompact.org/](http://www.southeastfloridaclimatecompact.org/)
- South Florida Water Management District:  
[www.sfwmd.gov](http://www.sfwmd.gov)
- Federal Emergency Management Agency:  
[www.fema.gov](http://www.fema.gov)
- National Flood Insurance Program:  
[www.floodsmart.gov](http://www.floodsmart.gov)
- Insurance Institute for Business and Home Safety:  
[www.disastersafety.org](http://www.disastersafety.org)
- Ready:  
[www.ready.gov](http://www.ready.gov)
- Association of State of Floodplain Managers:  
[www.floods.org](http://www.floods.org)
- Florida Friendly Plants Guide:  
<http://www.floridafriendlyplants.com>