

# POTENTIAL CONCERNS

*When recommending adaptation or mitigation options, developers may be reluctant to implement them. The list below addresses potential reasons why they would make the decision not to implement a strategy.*

<b>Adaptation Strategy</b>	<b>Concerns from Developers</b>
<b><i>Elevate the building above flood levels</i></b>	<ul style="list-style-type: none"> <li>• Pipe materials can no longer be PVC if the building is over 60ft tall (This can be a costly change)</li> <li>• Insurance premium is less expensive than adding handicapped accessibility</li> <li>• Insurance premium is less expensive than elevating the building</li> <li>• Developers have skepticism of the new FEMA flood maps and the need to adapt</li> </ul>
<b><i>Install a rain garden</i></b>	<ul style="list-style-type: none"> <li>• Some companies do not want to give up the parking spaces</li> <li>• Rain gardens can be complicated to keep alive</li> <li>• Development may lack space for a rain garden, trade-offs between parking space and stormwater management</li> </ul>
<b><i>Raise electrical and mechanical equipment</i></b>	<ul style="list-style-type: none"> <li>• Building/Structure is visually unappealing because of this</li> <li>• Change can have added cost</li> </ul>
<b><i>Reduce impervious surfaces (Use “cool roofs” or “cool pavements”)</i></b>	<ul style="list-style-type: none"> <li>• Initial cost of materials can be high</li> <li>• Roofs can have some added maintenance</li> <li>• Some materials are not good for high-traffic areas</li> </ul>
<b><i>Install or increase below grade storage for stormwater runoff</i></b>	<ul style="list-style-type: none"> <li>• Larger than required storage is not necessary to have</li> </ul>
<b><i>Use efficient electrical and mechanical equipment</i></b>	<ul style="list-style-type: none"> <li>• Initial cost of these materials may be too high</li> </ul>
<b><i>Install a green roof</i></b>	<ul style="list-style-type: none"> <li>• Green roofs may be hard to maintain</li> <li>• Initial cost of creating a green roof can be high</li> </ul>
<b><i>Other Miscellaneous Solutions to Potential Climate Change / Green Problems</i></b>	
<b><i>Become LEED certified</i></b>	<ul style="list-style-type: none"> <li>• LEED Certification can be expensive</li> </ul>

**NOTE:** It is recommended that this table be updated to include future concerns that developers may have as they are discovered in meetings with them. New concerns may be brought up by specific developers

*This document was designed and produced by Jillian Hennessy, Lauren Richard, Santiago Rojas, and Keith Guay as part of an Interactive Qualifying Project at Worcester Polytechnic Institute with the help of the Massachusetts Institute of Technology Sea Grant College Program and the City of Chelsea, Massachusetts.*

# RESPONSES TO CONCERNS

*Some concerns that developers have may be addressed through the use of incentives or trade-offs. Here possible ideas are listed that can reduce developers' concerns and promote the decision to adapt.*

## **If developers believe the cost is too high to implement adaptations:**

- Initial cost to adapt can end up saving money in other areas, for example by reducing energy costs with cooler buildings, or reducing the cost of repairing or replacing aspects of the building damaged in storms
- Some options have aesthetic value which makes developments more appealing
- Adaptation options that have been implemented can increase the resale value of the development
- Some adaptations may be promoted through various grant programs (Developers/ the city could potentially get some funding to help implement options)
- Encourage the developer to think about the added cost of the building being temporarily unusable due to storm damage and cost of repair

## **If developers do not want to put in a rain garden or add vegetation due to cost/ lack of space:** Consider reducing the number of parking spaces required for a development.

- Some developers believe the number of parking spaces required is more than their development would need
- Replacing some parking spaces with a rain garden would aid in stormwater management while working to reduce the excess heat the development produces (It would also allow developers to spend less money on the materials needed for parking spaces)

**Note: Being LEED certified is something to check for in developments; however, some developers believe that it is too expensive to get LEED certification.** Consider recommending that developers follow the standards to be LEED certified even without the certification.

- If a developer follows LEED standards, even without certification, they can be considered "LEED certifiable" which can be explained as an attractive qualification to those they are proposing building plans

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