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MEMORANDUM

TO: Arlington Land Trust

FROM: Indrani Ghosh, Resiliency Technical Leader, Weston & Sampson

DATE: January 20, 2021

SUBJECT: Resiliency review consultation services related to the East Arlington Mugar site

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Weston & Sampson Engineers, Inc. (Weston & Sampson) is pleased to present this memorandum to the Arlington Land Trust to summarize climate resiliency considerations of the Thorndike Place proposed design at the East Arlington Mugar site (the "Site") being developed by OakTree Development and designed by BSC Group.

Executive Summary

The Arlington Land Trust (ALT) engaged Weston & Sampson to evaluate the climate resiliency of the Thorndike Place design at the East Arlington Mugar site. This was presented through production of talking points for the Zoning Board of Appeals (ZBA) meeting on December 22, 2020 and this memorandum summarizing the review comments. The key considerations described in this memorandum include the following:

1. Use of FEMA Data Compared to Neighboring Communities Standards
    a. Current design relies solely on regulatory FEMA base flood elevation (Zone AE, 100-yr floodplain, 6.8 ft NAVD88 elevation) and does not consider that the site is also located in the FEMA 500-yr floodplain, nor does it consider the effects of sea level rise and storm surge due to climate change.
    b. The Amelia Earhart Dam actively affects flood elevations around the site. As reported in the City of Cambridge's Climate Change Vulnerability Assessment (CCVA), the Boston Harbor Flood Risk Model (BH-FM) shows that the dam will likely be flanked in 2045 and overtopped by 2055. This overtopping or circumventing could cause the flow of water to be reversed, increasing the flood vulnerability of upstream communities.
    c. Regional coordination is a crucial component of climate resiliency, and neighboring communities of Cambridge and Boston have already considered future flooding for resilient design.
2. Design Storm Depths

   a. The stormwater management system presented by the BSC Group meets current rainfall conditions, but it does not consider the increased magnitude of storm events in the future, such as the climate change projections for the 2070s planning horizon.
   b. Future MassDEP wetlands regulations will likely incorporate the NOAA Plus Method for design storm depth, increasing the stormwater basin design size for most locations.
   c. Future Climate Resilience Design Standards, as developed by the Resilient Massachusetts Action Team (RMAT), include design standards for future extreme precipitation. As demonstrated further in this memorandum, these percent increases in precipitation exceed the design storm depths considered in the proposed design of the Site.
3. Additional Resilient Design Issues:
   a. Deployable flood barriers are not recommended for precipitation flooding due to time needed for deployment and cost of retrofitting.
   b. Buildings proposed to be in any flood hazard area must be designed in Base Flood Elevation + 1 ft of freeboard, or the Design Flood Elevation, whichever is higher according the Massachusetts State Building Code.
   c. Provision of a compensatory flood storage ratio of 2 to 1 will minimize the area of Bordering Land Subject to Flooding and regrade a portion of the Site, impacting flood recovery.
   d. Site design does not consider or propose methods to mitigate and protect against future projections for extreme heat.

Background

History

The Site is located within a protected wetland in both a FEMA established 100-year floodplain and 500-year floodplain. OakTree Development is utilizing the Chapter 40B statute to seek to bypass the protected wetlands zoning regulations by providing a certain percentage of affordable housing in the Thorndike Place development. These wetlands serve as flood storage, and there is concern that developing on the wetlands will exacerbate an area that has already experienced extreme flooding events in recent decades. Figures 1 through 7 depict scenes after some of these previous extreme storm events. More images and videos of flooding events near the Mugar wetlands can be found at the following link: https://www.youtube.com/watch?v=1QyLmZv1hAs

Figure 1. People canoeing down Herbert St. & Lafayette St. after 1996 storm

Figure 2. Flooding on Thorndike St. after 1996 storm

Figure 3. *Flooding on Alewife Brook Parkway after 1996 storm*

Figure 4. *Car submerged on Herbert St. and Lafayette St. after 2001 storm*

Figure 5. DPW pumping from Route 2 to into Mugar site wetlands during 2001 storm

Figure 6. Flooding seen on Fairmont St. after 2010 storm

Figure 7. *People canoeing at Magnolia Playground after 2010 storm.*

Current Design

The planned project will include a 176-unit multi-family housing complex, a percentage of which will be designated as affordable housing. There will be 239 parking spaces, with 204 of these spaces located below ground. The current design of the Thorndike Place development meets regulatory requirements, with a 2 to 1 compensatory flood storage ratio, as well as a design flood elevation (DFE) in accordance with FEMA's 100-year base flood elevation (BFE). The first floor of livable units has a DFE of 13 feet NAVD88, while the DFE of the underground parking garage is unknown. Various stormwater management systems are included in the current design such as a rooftop detention system, a trench drain, a deep sump catch basin, porous asphalt, and deployable flood barriers. A HydroCAD model was used to model the watershed, comparing both pre-development and post-development conditions of the Site. However, the proposed design does not consider sea level rise (SLR), storm surge (SS), and precipitation effects that are very likely to occur during the useful life of the proposed development due to climate change. With the current design of the proposed development, it is likely that the residents who will be inhabiting the planned affordable housing units as well as neighboring Arlington residences may be subject to significant flooding effects when an extreme storm hits.

Figure 8. BSC Group's conceptual site plan, as of September 2020

FEMA Regulations vs. Neighboring Communities

Portions of the Site lie in both the 100-year floodplain and the 500-year floodplain, as established by the Federal Emergency Management Agency (FEMA). Current Massachusetts legislature requires that buildings be designed to the 100-year BFE, which is the elevation that Thorndike Place design relies on at 6.8 feet NAVD88. Although this is the regulatory DFE for Massachusetts developments, FEMA published that, "BFEs reflect estimates of flood risk, but there are many unknown factors that can cause flood heights to rise above the BFE, such as wave action, bridge and culvert openings being blocked by debris, and development in the floodplain. It is important to remember that floods more severe than the 1- percent-annual-chance event can and do occur."[1] This indicates that designing to the 100-year base flood elevation area may not be enough to prevent flood damage, especially in areas that are prone to flooding. Since the Site is additionally located within the 500-year floodplain, there are further concerns about the current design of the Thorndike Place development. According to flood profiles of

[1] FEMA , *Building Higher in Flood Zones: Freeboard – Reduce Your Risk, Reduce Your Premium* https://www.fema.gov/media-library-data/1438356606317-d1d037d75640588f45e2168eb9a190ce/FPM_1-pager_Freeboard_Final_06-19-14.pdf

Alewife Brook (Little River)[2] created by FEMA, the 500-year elevation for the Site is 10.75 feet NAVD88. Furthermore, all of FEMA's elevations for the Site are based on data collected up to June 4, 2010, and do not consider SLR or SS effects due to climate change. The first floor living space for the Thorndike Place development is designed at an elevation of approximately 13 feet-NAVD88, making it suitable for projected SLR and SS effects, but the underground parking area is at a severe risk of flooding.

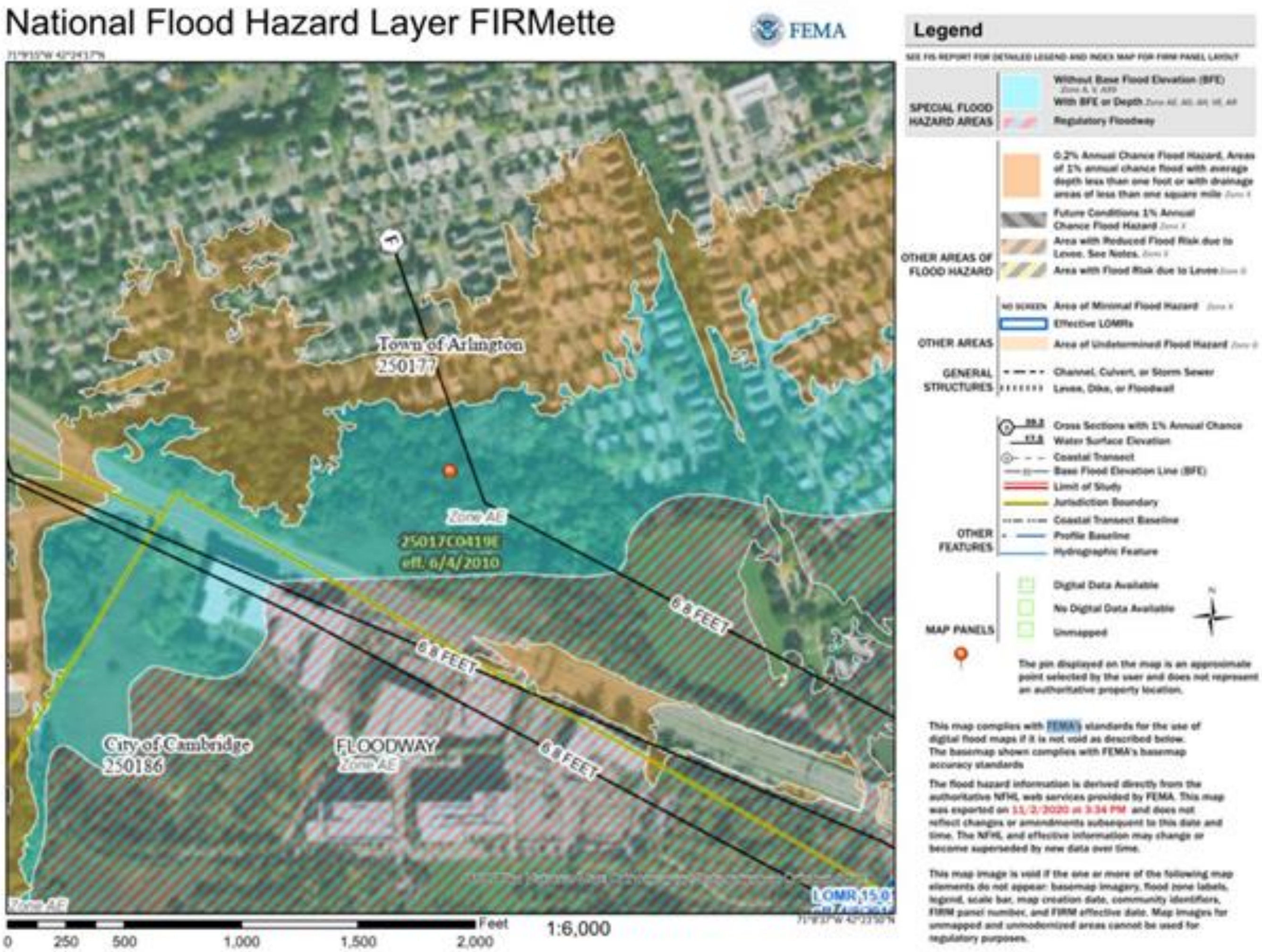

Figure 9. *FEMA FIRMette for Site*

One factor that FEMA's 100-year BFE does not consider is the effect that SLR and SS are predicted to have on nearby infrastructure such as the Amelia Earhart Dam (AED) in Somerville. This dam affects flood elevations along the Mystic River, Lower Mystic Lake, and Alewife Brook (Little River). According to the Cambridge Climate Change Vulnerability Assessment, which utilizes the Boston Harbor Flood Risk Model (BH-FRM), the AED is likely to be flanked by 2045 and overtopped by 2055. If the AED is flanked and overtopped, it implies that the coastal flooding from the Boston Harbor will affect the

[2] FEMA, Flood Profiles, Alewife Brook (Little River), p. 11P – 13P.
https://map1.msc.fema.gov/data/25/S/PDF/25017CV003C.pdf?LOC=78020f32f89217822e61ed46a9aab90e

proposed development site, and the site is likely to experience a greater than 20% annual probability of flooding by 2070.[3] The Department of Conservation and Recreation (DCR) is actively undertaking a Feasibility Analysis on raising and extending the AED and pursuing this effort in coordination with regional resiliency efforts. The timeline for these improvements is uncertain, which is why the Thorndike Place Development should consider these future flooding impacts. Figure 10 shows a map of the 1% annual chance flood depth projected throughout Arlington for 2070 by the BH-FRM, which was the model used in the Cambridge Climate Change Vulnerability Assessment. This map indicates a projected flood depth of at least 10 feet throughout the Mugar site.

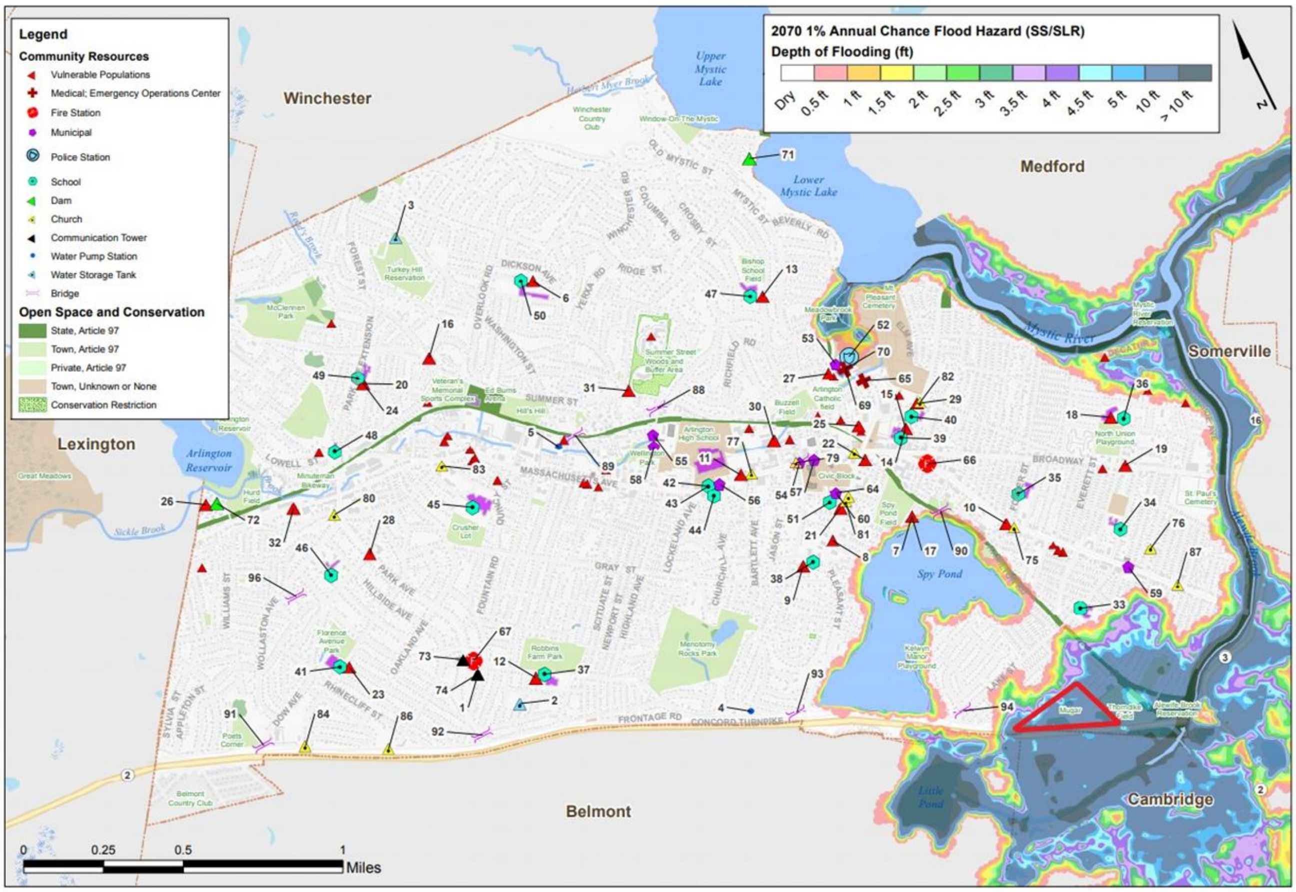

Figure 10. Map from the BH-FRM showing the 2070 1% Annual Chance Flood

Regional coordination is a crucial component of climate resiliency. Coordination and collaboration across communities, State Agencies, and jurisdictions can help strengthen resilient designs and implementation. Similar to Cambridge conducting a Climate Change Vulnerability Assessment, other neighboring communities have taken advantage of updated climate change data in designing new developments. Boston has included coastal flood resilient design that accounts for SLR and SS projections from the BH-FRM developed by the Woods Hole Group for MassDOT. These projections

[3] "Climate Change Vulnerability Assessment. Part 2." February 2017. https://www.cambridgema.gov/-/media/Files/CDD/Climate/vulnerabilityassessment/finalreport_ccvapart2_mar2017_final2_web.pdf

are currently being updated as part of the Massachusetts Coastal Flood Risk Model (MC-FRM), which will serve as new design standards for buildings and infrastructure projects across the Commonwealth and will be recommended that cities and towns adopt. Prior to the MC-FRM flood elevations being available, the BH-FRM elevations can serve as a minimal estimate of future projections at the proposed site, as the MC-FRM has consistently projected higher elevations for adjacent areas. Additionally, the City of Cambridge is recommending that all new developments build to the higher of the precipitation or SLR/SS 2070 10-year flood elevation, as well as having the ability to recover from the higher of the precipitation or SLR/SS 2070 100-year flood elevation.

Design Storm Depths

In the November 2020 Stormwater Report, prepared by the BSC Group, design of the stormwater management system was stated to exceed the provisions of the Department of Environmental Protection (DEP) Stormwater Management Standards. HydroCAD Stormwater Modeling Software was used to model the watershed, comparing both pre-development and post-development conditions of the Site. The HydroCAD model analyzed the following recurrence intervals and inches of precipitation over 24 hours, shown in Table 1, below. The design storm depth values that were used for the HydroCAD analysis may meet the rainfall conditions outlined by the current regulatory DEP standards, but they do not accurately consider the increased magnitude of storm events predicted out to the 2070s planning horizon. For example, research on what climate change projections neighboring communities of Cambridge and Boston are using demonstrates that the present-day 100-yr storm event is comparable to the 25-yr storm in 2070.

As discussed in the MassDEP Stormwater Advisory Committee Meeting on September 22, 2020, MassDEP is currently evaluating updating the wetlands regulations to "incorporate the risk observed in the current data to reflect the range of larger observed storms and provide greater resiliency for infrastructure than National Oceanic Atmospheric Administration (NOAA) Atlas 14 design values."[4] These updated statewide stormwater standards would include the NOAA Atlas 14 Plus Method for determining design standards for precipitation. The NOAA Atlas 14 Plus Method uses 0.9 times the upper confidence interval of the NOAA Atlas 14 estimate of the 24-hour rainfall depth as a standard for resilient design. MassDEP states that these larger stormwater controls will be better able to accommodate runoff from larger storms and therefore will likely increase the stormwater basin size at most locations.[5]

Expected in early 2021 is the release of the Climate Resilience Design Standards and Guidelines on ResilientMA.org developed by the Resilient MA Action Team (RMAT). Led by the Executive Office of Energy and Environmental Affairs (EEA) and the Massachusetts Emergency Management Agency (MEMA), the RMAT is an interagency steering committee responsible for implementation, monitoring,

[4] *MassDEP Stormwater Advisory Committee Meeting 3*. September 22, 2020. https://www.mass.gov/doc/stormwater-advisory-committee-meeting-3-presentation/download

[5] *MassDEP Meeting Summary.* September 22, 2020. https://www.mass.gov/doc/stormwater-advisory-committee-meeting-3-summary/download

and maintenance of the State Hazard Mitigation and Climate Adaptation Plan (SHMCAP)[6]. These design standards and guidance are for State projects and expected as a resource for MVP projects and other grants. While not regulatory for this project, these standards will be implemented statewide and provide recommendations for design for extreme precipitation.

Climate resilient design for the average level of effort ("Tier 2"), as proposed by the RMAT Standards, include percent increases for NOAA Atlas 14 estimates. These percent increases for the mid-century (2030/2050) and late-century (2070/2090) show greater design storm depths than used for the proposed project. A comparative representation of the precipitation depths discussed in this memorandum is shown in Figure 11, with the corresponding values indicated in Table 1, below. It is recommended that these updated precipitation depths be evaluated within the HydroCAD model to appropriately design a stormwater management system at the Site that will be effective in the 2070s planning horizon.

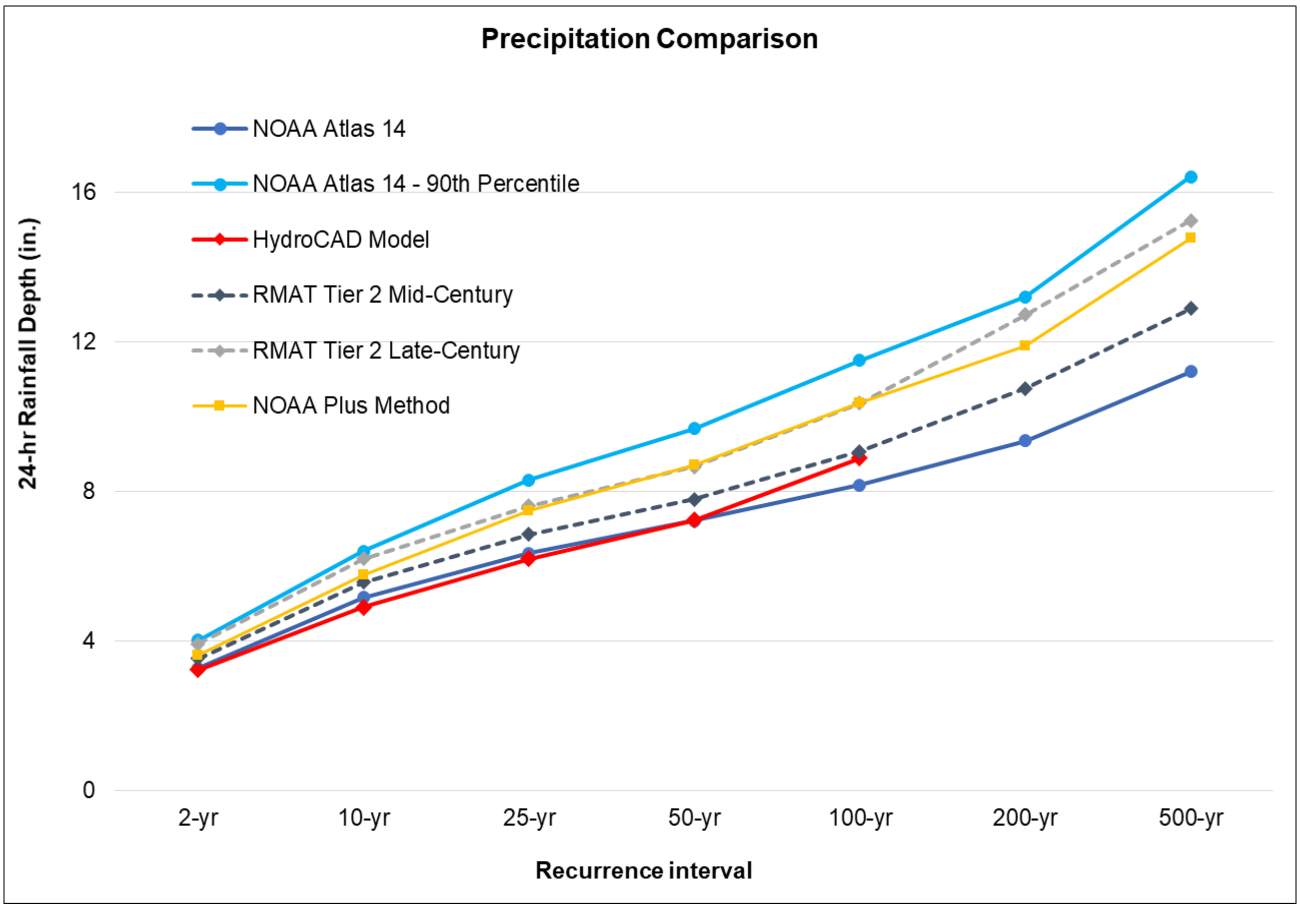

Figure 11. Comparison of Total Storm Depths

[6] Resilient Massachusetts Action Team (RMAT), 2020. https://www.mass.gov/info-details/resilient-ma-action-team-rmat

Table 1. Total Storm Depth (inches/24-hours) comparison across sources and standards.

Recurrence Interval	NOAA Atlas 14 (in/24-hr)[7]	Values used in the HydroCAD Model (in/24-hr)	NOAA Plus (in/24-hr)	RMAT Tier 2 Mid-Century (in/24-hr)	RMAT Tier 2 Late-Century (in/24-hr)
2-yr	3.27	3.23	3.62	3.53	3.92
10-yr	5.16	4.90	5.76	5.57	6.19
25-yr	6.34	6.20	7.47	6.85	7.61
50-yr	7.21	7.23	8.70	7.79	8.65
100-yr	8.16	8.89	10.35	9.06	10.36
200-yr	9.35	NA	11.88	10.75	12.72
500-yr	11.2	NA	14.76	12.88	15.23

Additional Resilient Design Issues

Deployable Flood Barriers

The BSC Group stated in the December 8, 2020 ZBA Meeting that they had considered projections for extreme precipitation and consequent flooding in 2070 and proposed the use of deployable flood barriers to protect the Site against flood waters. Deployable flood barriers, however, are not recommended for precipitation flooding due to installation time in preparation of the storm event and preliminary cost of retrofitting. There are pre-installation site modifications required for use of these barriers with structural considerations that have not yet been acknowledged or specified by the BSC Group.

Operational capacity is essential for the effectiveness of deployable flood barriers. Example operational considerations include installation needs (time range for deployment, manpower, installation cost, etc.), repair during storm event, retraction needs, storage, and re-use of the products. Furthermore, the use of deployable flood barriers does not consider how barrier protection will impact adjacent properties and affect the stormwater management system design. Please refer to the Boston Public Works Department Climate Resilient Design Standards and Guidelines for Protection of Public Rights-of-Way for further considerations[8].

[7] NOAA Atlas 14 Point Precipitation Frequency Estimates. https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html

[8] *Climate Resilient Design Standards & Guidelines for Protection of Public Rights-of-Way* https://www.boston.gov/sites/default/files/embed/file/2018-10/climate_resilient_design_standards_and_guidelines_for_protection_of_public_rights-of-way_no_appendices.pdf

Base Flood Elevation

Buildings proposed to be located in any flood hazard area must be designed in accordance with ASCE 24 guidelines[9]. ASCE 24 requires a minimum elevation of the lowest floor as the BFE + 1 foot of freeboard, or the DFE, whichever is higher.

Compensatory Flood Storage Ratio

Provision of a compensatory flood storage ratio of 2 to 1 in southeast quadrant of the Site will minimize the area of Bordering Land Subject to Flooding and regrade a portion of the Site, impacting flood recovery. More detail into how the 2:1 compensatory storage ratio was achieved should be provided.

Urban Heat Island Effect

Review of available design documents for the Site does not indicate how development will change land surface temperatures or mitigate the already increasing urban heat island effect. Furthermore, the current Site design does not consider or propose methods to mitigate and protect against future projections for extreme heat.

Taken from the Town of Arlington Community Resilience Building 2018 Report, Figure 12 depicts the current heat island analysis for the Arlington area based on land surface temperature[10]. This figure demonstrates that the Site is one of limited areas within the Town that has lower land surface temperatures. The Cambridge CCVA further shows that ambient air temperatures are projected to increase through 2070, becoming dangerous to human health, worsening the situation for already vulnerable populations expected to be living on the Site[11].

With changes in land cover and removal of existing vegetated species, it is essential to evaluate how extreme heat could be exacerbated or mitigated at the Site. The proposed building footprint is approximately 1.2 acres, not including the paved parking area with 35 parking spots located adjacent to the building.

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[9] https://ascelibrary.org/doi/book/10.1061/9780784413791

[10] *Town of Arlington Community Resilience Building Workshop Summary of Findings & Recommendations.* May 2018. https://www.mass.gov/doc/2017-2018-mvp-planning-grant-report-arlington/download

[11] "Climate Change Vulnerability Assessment. Part 1." November 2015. https://www.cambridgema.gov/-/media/Files/CDD/Climate/vulnerabilityassessment/ccvareportpart1/cambridge_november2015_finalweb.pdf

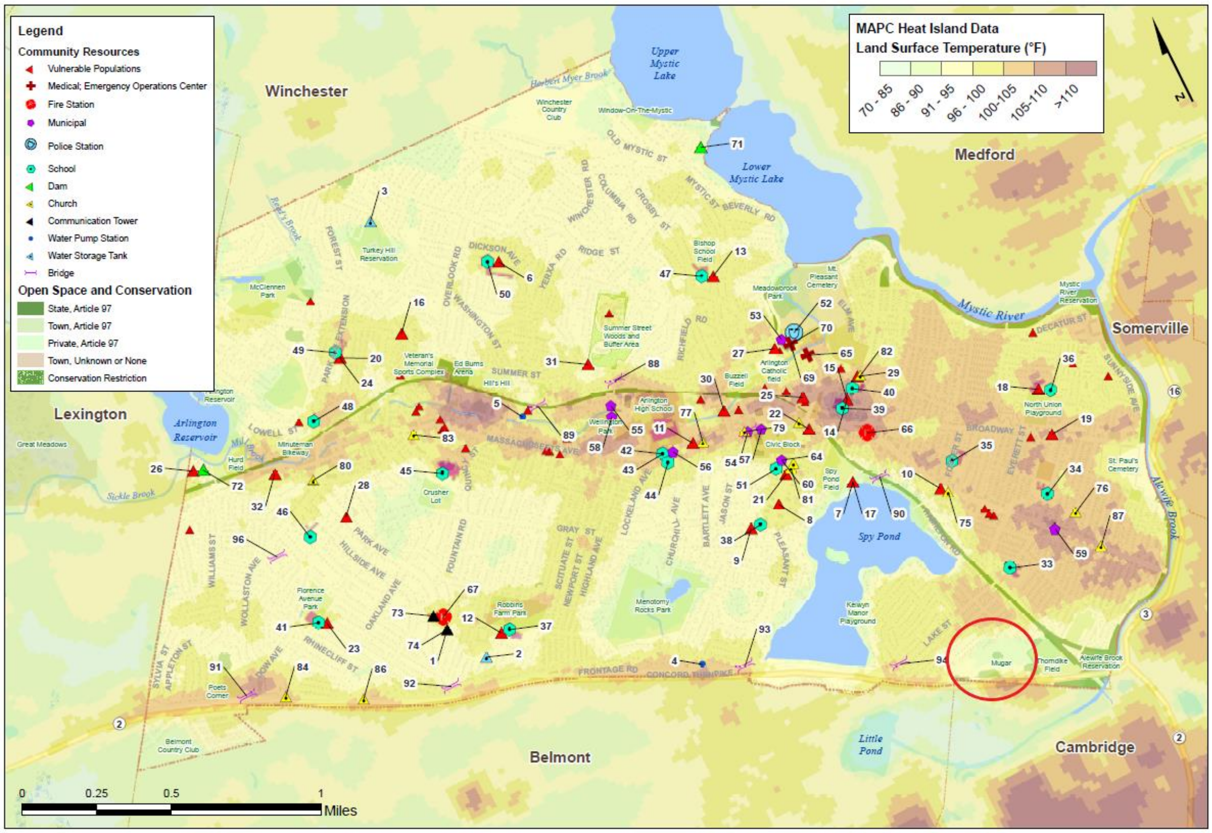

Figure 12. Arlington Land Surface Temperature Map, 2018

Summary of Recommendations

The Town of Arlington has historically experienced extreme flood events and therefore, the design of future developments within the Town should consider increased sea level rise, storm surge, and precipitation projections due to climate change. The Mugar site has previously been used as an area for flood storage, and as such should use extreme caution in development planning. The current design of the Thorndike Place Development does not utilize the best available climate data for this location, and therefore the impacts of the proposed development under future climate scenarios should be assessed. Weston & Sampson Engineers, Inc. provides the following recommendations regarding the design of the Thorndike Place Development:

1. Coordinate to discuss flood elevation findings from Climate Change Vulnerability Assessments conducted by surrounding municipalities and utilize the findings to come up with a DFE that would provide flood protection for the 2070s planning horizon.
2. Utilize updated 24-hr design storm depths in the HydroCAD model to appropriately design a stormwater management system that will be effective in the 2070s planning horizon. The RMAT Tier 2 Methodology provides percent increases to the NOAA Atlas 14 design depths used in the current design of the Thorndike development. The efficacy of the proposed stormwater management at the Site should be assessed using the recommended RMAT Tier 2 Late Century percent increases.
3. Consider alternative means of flood protection since relying on deployable flood barriers are not recommended for precipitation flooding due to installation time in preparation of the storm event and preliminary cost of retrofitting.
4. Consider how provision of a compensatory flood storage ratio of 2 to 1 in the southeast quadrant of the Site will minimize the area of Bordering Land Subject to Flooding and regrade a portion of the Site, impacting flood recovery.
5. Provide information on how development of the Site will change land surface temperatures to prevent exacerbating the already increasing urban heat island effect.

Limitations

Weston & Sampson has completed this memorandum for the Arlington Land Trust based on the level of information provided about the project to this date. The opinions presented within the memorandum are not intended for final opinions for construction and will continue to be vetted with future design changes. Within the limitations of scope, schedule, and budget, our services have been executed in accordance with the generally accepted practices in this area at the time this memorandum was prepared. No warranty, expressed or implied, is given.

List of Acronyms

AED – Amelia Earhart Dam

ALT – Arlington Land Trust

BFE – Base Flood Elevation

BH-FRM – Boston Harbor Flood Risk Model

CCVA – Climate Change Vulnerability Assessment

DCR – Department of Conservation and Recreation

DEP – Department of Environmental Protection

DFE – Design Flood Elevation

EOEEA – Executive Office of Energy and Environmental Affairs

FEMA – Federal Emergency Management Agency

MC-FRM – Massachusetts Coastal Flood Risk Model

MEMA – Massachusetts Emergency Management Agency

NOAA – National Oceanic Atmospheric Administration

RMAT – Resilient Massachusetts Action Team

SHMCAP – State Hazard Mitigation and Climate Adaptation Plan

SLR – Sea Level Rise

SS – Storm Surge

ZBA – Zoning Board of Appeals

Glossary

Terms	Description
100-year floodplain	Area with a 1% annual chance of flooding (or 1 in 100 chance)[1]. Also known as a 1% Annual Exceedance Probability (AEP) flood event (see definition for Annual Exceedance Probability below).
500-year floodplain	Area with a 0.2% annual chance of flooding (or 1 in 500 chance).[1] Also known as a 0.2% Annual Exceedance Probability (AEP) flood event (see definition for Annual Exceedance Probability below).
Accommodate	Adaptation strategy that mitigates the potential impact of a hazard by making space for, or buffering, the associated climate condition.
Adaptation	An action that seeks to reduce vulnerability and risk to an anticipated climate impact. For the Tool, this term is focused on the design of physical assets only.
Annual Exceedance Probability (AEP)	Probability of a flood event being equaled or exceeded in a given year.
Base Flood Elevation (BFE)	The elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year.
Best Practices	Successful activities exemplified in case studies. Available to provide examples for how the Guidelines are best applicable to a project.
Boston Harbor Flood Risk Model (BH-FRM)	A hydrodynamic model created in 2015 to identify projected flood risk and depth from coastal storms and sea level rise.
Climate Change	According to SHMCAP, climate change refers to "a change in the state of the climate that can be identified by statistical changes of its properties that persist for an extended period, whether due to natural variability or as a result of human activity."
Design Flood Elevation (DFE)	The anticipated flood elevation to which an asset should be designed, to protect the asset.
Design Storm	The magnitude and temporal distribution of precipitation from a storm event defined by probability of occurrence (e.g., five-year storm) and duration (e.g., 24 hours), used in the design and evaluation of stormwater management systems.
Flood Insurance Rate Map (FIRM)	Official map of a community on which FEMA has delineated the Special Flood Hazard Areas (SFHAs), the Base Flood Elevations (BFEs), and the risk premium zones applicable to the community, based on historic information.
Freeboard	Freeboard is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management.
Risk	According to SHMCAP, risk is defined as "the potential for an unwanted outcome resulting from a hazard event, as determined by its likelihood and associated consequences; and expressed, when possible, in dollar losses. Risk represents potential future losses, based on assessments of probability, severity, and vulnerability."
Sea level rise (SLR)	The worldwide average rise in mean sea level, which may be due to a number of different causes, such as the thermal expansion of sea water and the addition of water to the oceans from the melting of glaciers, ice caps, and ice sheets; contrast with relative sea-level rise.

Storm Surge (SS)	An abnormal rise in sea level accompanying a hurricane or other intense storm, whose height is the difference between the observed level of the sea surface and the level that would have occurred in the absence of the cyclone.
Tidal Benchmarks	Tidal datums are standard elevations defined by a certain phase of the tide and are used as reference to measure local water levels. Such datums are referenced to known fixed points called tidal benchmarks.

References

"Alewife Area Floods Near Mugar Wetlands". May 13, 2015. https://www.youtube.com/watch?v=1QyLmZv1hAs

"Climate Change Vulnerability Assessment. Part 1." November 2015. https://www.cambridgema.gov/-/media/Files/CDD/Climate/vulnerabilityassessment/ccvareportpart1/cambridge_november2015_finalweb.pdf

"Climate Change Vulnerability Assessment. Part 2." February 2017. https://www.cambridgema.gov/-/media/Files/CDD/Climate/vulnerabilityassessment/finalreport_ccvapart2_mar2017_final2_web.pdf

Climate Resilient Design Standards & Guidelines for Protection of Public Rights-of-Way https://www.boston.gov/sites/default/files/embed/file/2018-10/climate_resilient_design_standards_and_guidelines_for_protection_of_public_rights-of-way_no_appendices.pdf

FEMA , *Building Higher in Flood Zones: Freeboard – Reduce Your Risk, Reduce Your Premium* https://www.fema.gov/media-library-data/1438356606317-d1d037d75640588f45e2168eb9a190ce/FPM_1-pager_Freeboard_Final_06-19-14.pdf

FEMA, Flood Profiles, Alewife Brook (Little River), p. 11P – 13P. https://map1.msc.fema.gov/data/25/S/PDF/25017CV003C.pdf?LOC=78020f32f89217822e61ed46a9aab90e

NOAA Atlas 14 Point Precipitation Frequency Estimates. https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html

MassDEP Stormwater Advisory Committee Meeting 3. September 22, 2020. https://www.mass.gov/doc/stormwater-advisory-committee-meeting-3-presentation/download

MassDEP Meeting Summary. September 22, 2020. https://www.mass.gov/doc/stormwater-advisory-committee-meeting-3-summary/download

Resilient Massachusetts Action Team (RMAT), 2020. https://www.mass.gov/info-details/resilient-ma-action-team-rmat

Town of Arlington Community Resilience Building Workshop Summary of Findings & Recommendations. May 2018. https://www.mass.gov/doc/2017-2018-mvp-planning-grant-report-arlington/download