NAS South Weymouth Sustainability Standards and Guidelines

ARTICLE 1 – GENERAL PROVISIONS

1.1 Authority

These NAS South Weymouth Sustainability Standards and Guidelines (the "Sustainability Guidelines") are part of the Regulations for NAS South Weymouth and are adopted in accordance with Section 14(h) of Chapter 291 of the Acts of 2014 (the "Enabling Legislation"), which vests Southfield Redevelopment Authority (the "Authority") with the broad regulatory authority to develop and adopt "[r]egulations for the effective implementation and enforcement of the zoning by-laws and revisions thereof." These Sustainability Guidelines shall be implemented and interpreted keeping in mind the purpose of the Enabling Legislation to "promote the expeditious and orderly conversion and redevelopment of NAS South Weymouth."

1.2 Scope; Interrelationship with Zoning and Reuse Plan

The scope of the Sustainability Guidelines and the intended interrelationship of these Sustainability Guidelines with the Zoning and Land Use By-Laws for NAS South Weymouth (the "By-Laws") is set forth in Section 1.4.C of the By-Laws which provides as follows:

> "The Regulations shall be consistent with [the] By-Laws and shall provide additional substantive and procedural controls over the reuse of NAS South Weymouth. In the event of any inconsistency between [the] By-Laws and the Regulations, [the] By-Laws shall control. The Regulations shall contain detailed land-use controls, including, but not limited to, procedures and standards for development plans, special permits and site plan review, sign standards, streetscape and landscape standards, parking and loading designs, building design guidelines, open space guidelines, affordable housing regulations, subdivision control standards, infrastructure standards, watershed and water resource protection standards, and standards and procedures required to ensure full compliance with Commonwealth of Massachusetts wetlands protection laws."

1.3 Interrelationship with Other Laws

In case of contradiction with applicable state or federal laws, rules or regulations, including, without limitation, state building codes or life safety codes, the applicable state and federal laws, rules and regulations shall govern. In no way does compliance with these Sustainability Guidelines

exempt a structure from conformance with other applicable laws, rules or regulations.

1.4 Adoption/Amendments

The procedure for adoption of these Sustainability Guidelines is set forth in Section 14(h) of the Enabling Legislation, which provides that "[n]o regulation shall be adopted by the authority without first publishing notice of same in a newspaper of general circulation within the NAS South Weymouth Region, holding at least one public hearing in the NAS South Weymouth redevelopment area or in any one of the towns, and affording the opportunity for public comment." No separate approval by the towns of Abington, Rockland and Weymouth (the "Towns") of any Regulations adopted by the Authority in accordance with Section 14(h) is required. Amendments to these Regulations shall require the same procedure.

1.5 Intent of Sustainability Guidelines

Sustainability is the principle of that construction, operation and maintenance of buildings and places can meet the needs of present users without compromising the interests of adjacent or future users regarding natural resources and the environment. The intent of these Sustainability Guidelines is to ensure the creation of a sustainable, smart growth development at NAS South Weymouth based on the principles of:

- Sustainable Site Planning – Promoting a diverse, mixed-use, pedestrian-oriented environment with multiple options for alternative transportation;

- Natural Resource Conservation – Conserving the energy, water and material resources that will be used in the development of the site and used by its future occupants;

- Environmental Protection – Protecting environmental quality and human and ecosystem health by avoiding or limiting development impacts; and

- Green Building Design – Creating buildings that conserve water, reduce energy use, improve indoor environmental quality, and use environmentally preferable building materials.

These Sustainability Guidelines are not intended to be the exclusive mechanism for ensuring the sustainability of NAS South Weymouth, as not all aspects of sustainability can be addressed through the By-Laws, these Sustainability Guidelines and the Administrative Rules and

Regulations of NAS South Weymouth. Article III and Article IV of the Subdivision Rules and Regulations of Naval Air Station (NAS) South Weymouth (the "Subdivision Regulations") additionally incorporate important aspects and principles of sustainability. Other issues of sustainability are addressed through non-zoning mechanisms including mitigation requirements adopted pursuant to state environmental review under the Massachusetts Environmental Policy Act.

1.6 How to Use These Sustainability Guidelines

These Sustainability Guidelines contain mandatory and recommended provisions. Mandatory provisions are obligatory and failure to incorporate mandatory provisions shall constitute independent grounds for denial of an application or approval unless an exemption is granted by the Applicable Subdivision Board, as such term is defined in the Subdivision Regulations, or the Zoning Enforcement Officer. Recommended provisions provide guidance on preferred sustainability standards and elements, but failure to incorporate recommended provisions shall not be independent grounds for denial of an application or approval.

1.7 Administration

The provisions of these Sustainability Guidelines shall apply in both the Central Redevelopment Area and the Perimeter Areas. The Authority shall administer and enforce these Sustainability Guidelines within the boundaries of the Central Redevelopment Area, and the Towns shall administer and enforce these Sustainability Guidelines within the boundaries of that portion of the Perimeter Area located within such Town. Areas outside NAS South Weymouth shall remain entirely within the jurisdiction of the Towns and shall continue to be administered by officials of the Towns in accordance with all applicable laws, including the municipal laws and regulations applicable to the Towns.

The Applicable Subdivision Board and the Zoning Enforcement Officer shall serve as the enforcers of these Sustainability Guidelines. Approvals shall not be unreasonably withheld; however, non-compliant projects which do not obtain an exemption from the Applicable Subdivision Board or Zoning Enforcement Officer will be rejected and must be redesigned to conform to these Sustainability Guidelines. Exemptions from compliance with the mandatory provisions of these Sustainability Guidelines may be granted at the sole discretion of the Applicable Subdivision Board or Zoning Enforcement Officer, based on considerations including but not limited to technical or economic feasibility. Any exemption shall be subject to review by the Permit Granting Authority.

1.8 Definitions

Capitalized terms not otherwise defined in these Sustainability Guidelines shall have the meanings ascribed to such terms in the By-Laws. All terms used in these Sustainability Guidelines that are defined in the By-Laws shall have the meanings ascribed to such terms in the By-Laws. The following terms used in these Sustainability Guidelines shall be defined as set forth below:

ACTIVITY AND USE LIMITATION: A title document created pursuant to the Massachusetts Contingency Plan, 310 CMR 40.0000, which allows a land owner to voluntarily restrict the future use of the subject property as part of achieving site closure.

BASELINE WATER USE: A calculated amount of water that would be used for landscape irrigation in the absence of measures to reduce Potable Water use for irrigation; provided, however, that no Baseline Water Use need be calculated if an Applicant proposes to use only non-Potable Water (including rainwater, Graywater and/or Reclaimed Water) for landscape irrigation.

CONSTRUCTION WASTE MANAGEMENT PLAN: A plan for the management of construction and demolition debris, as defined by the Massachusetts Department of Environmental Protection, which has been approved by the Authority.

ENERGY STAR: The Energy Star program developed by the federal Environmental Protection Agency to help businesses and individuals protect the environment through superior energy efficiency.

ENERGY STAR FOR HOMES STANDARD: The federal Environmental Protection Agency's Energy Star performance guidelines for energy efficiency in newly constructed homes.

GRAYWATER: Wastewater from lavatories, showers, bathtubs, washing machines and sinks that are not used for disposal of hazardous or toxic ingredients or wastes from food preparation.

HEAT ISLAND: A developed area that tends to be warmer than nearby undeveloped areas as a result of solar energy retention on constructed surfaces.

HIGH ALBEDO MATERIALS: Materials with high solar reflectance, being the ratio of the reflected solar energy to the incoming solar energy.

LEED: The United States Green Building Council's Leadership in Energy and Environmental Design standards, which are consensus-based voluntary national standards for developing high-performance, sustainable buildings.

LEED CERTIFIABLE: A project that the Zoning Enforcement Officer determines has the necessary number of points to qualify for LEED certification, but for which the applicant has not initiated the formal process of becoming LEED certified.

LOW VOC MATERIAL: Material that is best-in-class in terms of reduction of the amount of volatile organic compounds (VOCs) that they emit after they are installed in new construction. The LEED standards for new construction recommend levels of VOCs for adhesives, sealants, paintings, coatings, carpet, and composite wood products.

OXIDATION CATALYSTS: A device similar to a standard catalytic converter than can be added to a diesel vehicle to convert certain pollutants, such as carbon monoxide, particulate matter and volatile organic compounds, into non-polluting by-products.

PREFERRED PARKING: Parking spaces in parking lots that are closest and most readily accessible to entrances of the buildings serviced by the parking lots.

POTABLE WATER: Water that has been treated to meet federal and state regulatory standards for drinking water. Water from any on-site well that may be capable of meeting standards for drinking water but has not been treated shall not be considered Potable Water.

RECLAIMED WATER: Wastewater that has received tertiary-level treatment to be suitable for reuse in non-potable applications.

SHUTTLE BUS: A clean-fueled, on-site transit shuttle that, once operation begins, will be designed to provide service every fifteen (15) minutes within a quarter mile of ninety percent (90%) of homes, shops, offices and other businesses within the development and will connect to the Massachusetts Bay Transportation Authority ("MBTA") South Weymouth commuter rail station.

UN-MORTARED UNIT PAVERS: Pavers with sand or other fine, loose material used in place of mortar to allow on-site recharge of stormwater.

ARTICLE 2 – SUSTAINABLE SITE PLANNING

2.1 Intent

2.1.1 The aim of the roadway system is to provide an efficient, safe, multi-modal network of public streets that accommodates vehicular, pedestrian, and bicycle traffic and encourages transit ridership. All streets shall be consistent with Article III of the Subdivision Regulations and shall be designed so that, in the opinion of the Authority, they will provide safe travel for vehicles, pedestrians and bicyclists and an attractive street layout that maximizes the livability of all zoning districts.

2.1.2 This section of the Sustainability Guidelines is also intended to ensure a "green streets" approach that makes the most efficient use of water, fertilizer, building materials and labor to create a sustainable landscape approach to street trees and planting areas.

2.1.3 This section of the Sustainability Guidelines should be read in conjunction with the requirements of Article III and Article IV of the Subdivision Regulations.

2.2 Multi-Modal Transportation Opportunities

MANDATORY	
1.	Applicants shall commit to participating in any existing or planned transportation management association and providing support for transit and shared vehicle use.
RECOMMENDED	
A.	Buildings should be located within one-half (½) mile of the MBTA South Weymouth commuter rail station or within one-quarter (¼) mile of a Shuttle Bus route.

2.3 Parking Demand Management

MANDATORY	
1.	For parking lots associated with non-residential uses (office, light industrial or biopharmaceutical manufacturing), applicants shall designate at least five percent (5%) of all parking spaces as Preferred Parking that are reserved for carpools or car sharing service.
RECOMMENDED	
A.	Applicants should provide the minimum, rather than maximum, number of parking spaces permitted by the applicable provisions of the By-Laws.

2.4 Pedestrian and Bicycling Facilities

MANDATORY	
1.	Pedestrian facilities (sidewalks and trails) and bicycle facilities (including bicycle lanes) shall be provided as required by Article III of the Subdivision Regulations.
2	Buildings with office uses shall provide bicycle racks for five percent (5%) of all "Full-Time Equivalent" building occupants; multi-family residential buildings shall provide covered bicycle storage facilities such that fifteen percent (15%) of all bedrooms can store one (1) bicycle.
RECOMMENDED	
A.	To encourage bicycling, buildings with office uses should provide shower and changing facilities in the building (or within 200 yards of the entrance) for one-half percent (0.5%) of building occupants and covered bicycle storage for five percent (5%) of all allowed building occupants.

2.5 Green Streets

MANDATORY	
1.	Potable Water use for irrigation of street trees and planting strips shall be reduced by fifty percent (50%) of calculated Baseline Water Use through use of rainwater, Graywater, Reclaimed Water, non-potable groundwater, non-potable surface water, plant selection and irrigation efficiency. Interim or temporary use of Potable Water for irrigation should be reduced to the extent practicable.
2.	Bioswales and planting buffers shall be used along streets as required by Article III of the Subdivision Regulations in order to mitigate stormwater runoff and promote natural irrigation.
RECOMMENDED	
A.	Solar orientation, exposure and drainage patterns should be used to guide planting locations and palettes.
B.	Plants should be grouped according to irrigation needs. Drought-tolerant and/or native plants that will spread and naturalize should be used.

2.5 Pedestrian Access to Open Space

MANDATORY	
1.	All buildings will be located within one-half (½) mile of a public Open Space or Common Open Space.

ARTICLE 3 – NATURAL RESOURCE CONSERVATION AND ENVIRONMENTAL PROTECTION

3.1 Intent

The intent of this section of the Sustainability Guidelines is to conserve the energy, water and material resources that will be used in the development of NAS South Weymouth and used by its future occupants, as well as to protect environmental quality and human and ecosystem health by avoiding or limiting adverse environmental impacts associated with the development of NAS South Weymouth.

3.2 Construction Waste Management

MANDATORY	
1.	All applicants shall have available, in writing, a Construction Waste Management Plan which quantifies material diversion goals and methods to recycle and/or salvage at least seventy-five percent (75%) of construction, demolition and land clearing waste by weight; provided, however, that the seventy-five percent (75%) reduction requirement shall be calculated excluding any wastes that may not be recycled or salvaged due to federal and state environmental laws and regulations, Activity and Use Limitations and/or deed restrictions.
2.	At least seventy-five percent (75%) of all construction and demolition wastes shall be reused or recycled.

3.3 Materials Reuse and Recycled Materials

MANDATORY	
1.	Area(s) will be designated for stockpiling topsoil removed or disturbed during site preparation and development so that stockpiled soil can be reapplied in final site finishing and landscaping; provided, however, that the topsoil stockpiling requirement shall not apply to any topsoil that requires specialized treatment and/or disposal pursuant to federal and state environmental laws and regulations, Activity and Use Limitations and/or deed restrictions.

RECOMMENDED	
A.	Common and public infrastructure such as sidewalks, roads, grading, subbase, paving, curbs, and sewers should use material with recycled content such that the sum of post-consumer recycled content plus one-half (½) of the post-industrial recycled content constitutes at least ten percent (10%) of the total value of the materials.
B.	Outdoor site furnishings such as benches and playground equipment should incorporate recycled-content material such that the sum of post-consumer recycled content plus one-half (½) of the post-industrial recycled content constitutes at least ten percent (10%) of the total value of the materials.

3.4 Water Use Reduction

MANDATORY	
1.	Buildings including residential uses shall be designed to use less than sixty-five (65) gallons of Potable Water per residential occupant per day.
2.	Potable Water use for irrigation of street trees and planting strips should be reduced by fifty percent (50%) of calculated Baseline Water Use through use of rainwater, Graywater, Reclaimed Water, non-potable groundwater, non-potable surface water, plant selection and irrigation efficiency. Interim or temporary use of Potable Water for irrigation shall be reduced to the extent practicable.
RECOMMENDED	
A.	Potable Water use for irrigation of street trees and planting strips should be eliminated through use of rainwater, Graywater, Reclaimed Water, non-potable groundwater, non-potable surface water, plant selection and irrigation efficiency.
B.	Soil should be prepared according to site conditions. Soil compaction should be prevented around street trees and street landscaping through tree grates or Un-mortared Unit Pavers.
C.	For office and retail uses, Potable Water should be reduced through the use of water-conserving appliances such as toilet, sinks, faucets and showerheads.

3.5 Air Quality Protection

	MANDATORY
1.	Emission controls, such as Oxidation Catalysts, shall be installed on heavy construction equipment to reduce diesel pollutants.
2.	Construction vehicles shall not idle engines for more than five minutes.
	RECOMMENDED
A.	Low sulfur fuel and/or fuel additives that reduce air emissions should be used in construction equipment used on-site.

3.6 Heat Island Reduction

	MANDATORY
1.	At least fifty percent (50%) of a site's hardscaped, non-roof areas shall be treated (including parking lots and walkways) to reduce Heat Islands by providing shade (within five (5) years of initial planting) and/or using light-colored/High Albedo Materials (reflectance of at least 0.3) or open grid paving.
	RECOMMENDED
A.	The Heat Island effect should be further reduced by maximizing the tree canopy to paving ratio and using light-colored and reflective materials in outdoor surfaces.

3.7 Impervious Surfaces and Stormwater Runoff

	MANDATORY
1.	When surface parking is permitted, there shall be no more than one row of parking between the principal façade of the building and the street.
	RECOMMENDED
A.	The impervious footprint of development should be minimized.
B.	Permeable pavement materials such as open grid systems should be used for the construction of parking lots and other hardscape.

ARTICLE 4 – GREEN BUILDING DESIGN

4.1 Intent

4.1.1 The intent of this section of the Sustainability Guidelines is to encourage the construction and operation of high-performance, sustainable buildings.

4.1.2 These Sustainability Guidelines are patterned in part on the LEED standards. There are LEED standards for both individual buildings (LEED for Building Design and Construction (LEED-BD&C); LEED for Homes (LEED-HOMES)) and a standard for entire development projects (LEED for Neighborhood Developments (LEED-ND)).

4.1.3 These Sustainability Guidelines do not require applicants to obtain LEED certification for either buildings or entire developments, but instead are designed to ensure that applicants can obtain needed points under the LEED scoring system if they voluntarily choose to obtain such certification.

4.2 Fast Track Permitting for Green Buildings

In order to encourage applicants to make voluntary commitments to construction of sustainable, high performance buildings that go beyond the mandatory requirements of these Sustainability Guidelines, the Authority may create a "fast track" process for buildings or development plans that are determined by the Zoning Enforcement Officer to be LEED Certifiable. If created, such fast tracking shall minimize, to the extent practicable and consistent with applicable law, the number of days prior to public hearing for a Development Plan or Special Permit review as well as the number of days between the Authority's approval of a Development Plan, Special Permit or Site Plan and the issuance of a written decision.

4.3 Energy Efficiency

RECOMMENDED	
A.	All buildings, other than buildings including residential uses which are less than (3) three stories in height, should set and meet performance targets for energy intensity as the primary means for achieving superior energy efficiency in the design process. The use of energy modeling/simulation tools and energy performance target setting software may assist in this process. Eligible building types should consider meeting criteria designed to earn Energy Star recognition. Buildings not eligible for Energy Star recognition should be designed to meet or exceed energy intensity

	performance targets equivalent to fifteen percent (15%) less energy than the simulated energy use of a similar building meeting the minimum state building code requirements.
B.	Buildings with residential uses which are less than three (3) stories in height should be designed to meet the Energy Star for Homes Standard.
C.	Building designs should incorporate natural daylight to the greatest extent possible for ambient indoor lighting, to achieve a minimum glazing factor of two percent (2%) or at least twenty-five (25) foot candles for seventy-five percent (75%) of all regularly occupied areas.
D.	Flat roof surfaces should be green, vegetated roofs and/or Energy Star high emissivity, high reflectivity roof membranes for a minimum of seventy-five percent (75%) of the roof area or green roof for at least fifty percent (50%) of roof area.

4.4 Sustainable Materials

RECOMMENDED	
A.	Buildings should incorporate recycled-content material such that the sum of post-consumer recycled content plus one-half of the post-industrial recycled content constitutes at least ten percent (10%) of the total value of the materials.
B.	Buildings should incorporate locally produced materials such that ten percent (10%) of the materials used (by cost) are extracted, processed and manufactured within five hundred (500) miles of the project site.
C.	Selection of building materials for the construction of building walls should consider reclaimed or recycled material or salvaged masonry brick or block.
D.	Low VOC Material should be specified in construction documents with clear VOC limits or material standards for products including, but not limited to, adhesives, sealants, paints, coatings, carpet, and composite wood products.
E.	Buildings and building complexes should provide dedicated space for collection of separated recyclables if dedicated space for trash collection is also provided. Collection of paper, corrugated cardboard, glass, plastics and metals should be provided.

4.4 LEED Design

RECOMMENDED	
A.	Commercial and industrial buildings should be designed and constructed to qualify for certification under the most current version of the LEED-NC standards.
B.	Residential buildings should be designed and constructed to qualify

for certification under the most current version of the LEED Homes standard (for single family residences or multi-family buildings with three (3) stories or fewer) or LEED-NC standards (for multi-family residences with more than three (3) stories).