Master Development Plan
Utilities Report

South Weymouth Naval Air Station
Weymouth, Abington and Rockland

March 2023

Submitted to:
Southfield Redevelopment Authority
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South Weymouth, MA 02190

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1.0 INTRODUCTION

The redevelopment of the South Weymouth Naval Air Station (SWNAS) has been in progress for nearly 20 years. Capacity limitations on access and utilities have always been identified as constraints to redevelopment of the Base. Recent physical improvements and community decisions have changed the potential outlook. Traffic and access considerations are evaluated in the separate Preliminary Traffic Impact Study, but both the Parkway construction and Route 18 reconstruction are examples of recently completed improvements supporting the Base redevelopment; however, transportation improvements are only one form of needed infrastructure.

Water and wastewater system supply shortfalls and capacity limitations have been known from the early planning of the SWNAS Redevelopment. As more fully discussed below, there are multiple options/alternatives, to provide SWNAS with adequate water and sewer capacity, on both an interim and permanent basis. The ultimate solution can only be determined after further consultation with the community partners and the State Agencies. As contemplated in prior applicable MEPA filings, various alternatives must be studied, evaluated, and selected through such a collaborative process. Until recently, the water solution had always been to utilize the available capacity of Weymouth coupled with the Southfield Redevelopment Authority (SRA) and the Master Developer planning, designing and implementing a connection to supplement supply for the Base. There have always been and continue to be two alternative water supplies for the Base. One, a connection to the MWRA meter in Quincy coupled with a transmission main to the Base and, two, a similar connection to the Brockton system utilizing water from the Aquaria desalination plant to support such a connection.

What has changed is that the Town of Weymouth is assessing its growth needs, and is in the process of joining the Massachusetts Water Resources Authority (MWRA). The SRA has joined with the Town as a co-applicant and is participating in funding the application. While prior options are still available to the SRA, the long-term growth plan is town water supplied from a new Weymouth/MWRA connection. Sewer system and some public utility system expansions and upgrades will be necessary, but such upgrades are typical of any community growth. Weymouth's decision to join the MWRA water system would change the approach to having adequate future water supply as a community wide solution.

Memorandum of agreements for supplemental water supply are in review for interim water, if needed, or for permanent water supply. The Town of Weymouth agreement is a restatement of the prior agreement to provide interim water (the period before permanent water is available) of 600,000 gallons per day (gpd) and wastewater service of 540,000 gpd.

1.1 PROJECT SUMMARY

1.1.1 Existing Development

The existing permits and approvals (the "Existing Approvals") contemplate a development program of up to approximately 8,000,000 square feet (sf) of commercial space and 3,855 residential units resulting in a total of approximately 13,000,000 square feet (the "Total Approved SF") of approved development. To date, the former SWNAS has been developed to include approximately 1,274 homes (the "Existing Homes") and 73,000 square feet of commercial space (the "Existing Commercial Space" and, together with the Existing Homes, the Sports Center (as defined below), MBTA parking Area and three community entrances, collectively, the Existing Development") in the Completed Area identified on the 2023 Land Use Plan. The Existing Homes include a variety of attached and detached single family including townhomes,

condominiums and age restricted. There is a mix of for sale and for rented homes and approximately 10% of the homes qualify as 'affordable' or 'workforce'.

The Existing Commercial Space is comprised of approximately 33,000 sf of ground floor retail, and 40,000 sf of general commercial located in Fairing Way, the assisted living facility.

In addition to the Existing Development, there is a 25-acre sports and recreation facility in operation, which was built in 2018 (the "Sports Center").

1.1.2 Proposed Development

The proposed development under the new Mixed Use Development District (MUDD) zoning will produce a mix of residential, commercial, and open space uses reaching at buildout the same total gross development area of approximately 13,000,000 sf as allowed under the existing zoning. In order to determine transportation and infrastructure needs the following conceptual mix of uses were assumed and described in Table 1. These will be used in the MEPA process to compare the impacts and mitigations of the prior 2007 FEIR and the 2017 Notice of Project Change (NPC) proposal.

The proposed development mix for planning is shown in Table 1 below and includes approximately 1,274 existing homes.

Table 1 Proposed Development Mix

Use	Units/Square Footage
Single Family Detached	1,630 units
Single Family Attached	1,592 units
Multi-Family	3,882 units
Age Restricted	170 units
Life Science/Biopharma	300,000 sf
Warehouse	800,000 sf
Office	800,000 sf
Retail	100,000 sf

The above development would be built over a 13–15 year period beginning in 2025, after the current planning and permitting period.

As shown on Figure 1, the proposed development connects to the existing development and primarily occupies the same previously developed areas as the former Navy base. A series of open space greenways roughly aligned with the former runways connects northern open spaces to southern open spaces.

2.0 WATER

None of the three towns in which the Base (SWNAS) is located has sufficient current water supply capacity to supply the Base for the proposed development mix as described above. At full build-out, it is anticipated that the development at SWNAS (including the existing development) could require up to approximately 2.3 million gallons of water per day (mgd). Several options (and permutations of those options) for securing a reliable, affordable, permanent long-term water supply for SWNAS have been explored under the prior filings and studies, including (i) continued service from the Weymouth system, (ii) expanded service from the Weymouth system once it has joined the MWRA, (iii) the SRA joining the MWRA independent of Weymouth joining and (iv) buying water from Aquaria desalination plant or the City of Brockton.

The Master Developer and the SRA have been working closely with the Town of Weymouth regarding the Town's initiative to join the MWRA. The work has included SRA and State funding for engineering studies of the existing system's capacity, resiliency, and ability to supply existing and future demands, and participating in the MWRA/Weymouth Task Force to implement Weymouth joining the MWRA Water system.

While the schedule, costs and effects of the alternative water supplies will be evaluated in the comprehensive MEPA filing for the redevelopment of SWNAS, it seems clear that putting in place such a supply will take longer than securing the approvals for that redevelopment. In the interim period, between when the necessary transmission main connection is built and the long-term supply is operational and the early construction period of SWNAS, there are several water supply options. These include: using the capacity in the existing Weymouth system; working with the Abington Rockland Joint Water System, supporting the local systems in reducing unaccounted for water by leak detection surveys and old meter replacement; and expanding Weymouth's authorized withdrawal limit during relicensing.

With the progress in Weymouth joining the MWRA Water system and the Town's work to reduce unaccounted for water, DEP could safely expand the Town's licensed withdrawal limit to allow the Town to meet its growing demand during the period needed for the design and construction of the transmission main connection to the MWRA. The planned transmission main has an average day capacity of 10 mgd for Weymouth's future demand, as well as for some or all of the Redevelopment at the Base. The present cap of 5.00mgd is well below the 6.27 mgd safe yield rating of the current supply and the 10 mgd combined rated capacities of the Town's two water treatment plants. If in the pending relicensing DEP authorized a 10% increase in the withdrawal limit to 5.50 mgd the Town could stay well within its current safe yield capacity and within its license while meeting its internal and SWNAS growth demands. Such an increase would not overdraw the Town's supply during the period of the transmission main construction and the delivery of a completely new source.

3.0 WASTEWATER

At full build-out, it is anticipated that the development at SWNAS could generate an average daily wastewater flow of up to approximately 2.1 mgd including existing use. The Master Developer and the SRA have been working closely with the Town of Weymouth to analyze the sewerage systems capacities to meet future demands. The SRA has also funded the design and construction of the first of the needed improvements, the line crossing under the newly constructed Route 18 to meet the westerly trunk line flowing north.

All sanitary wastewater generated at SWNAS from development since the Base was closed, has been discharged to the Weymouth collection system and then conveyed to MWRA's Deer Island treatment facility for treatment and disposal as Weymouth is an MWRA sewer system community. The Redevelopment Project should implement an environmentally sustainable approach, consistent with the proposed re-use of SWNAS that uses existing infrastructure to the extent possible and proposes efficient additions. These principles will contribute to the overall goal of improved environmental and ecological conditions at SWNAS.

With the completion of the replacement sewer crossing in Route 18 in 2021, which has capacity for the buildout of SWNAS, and the design and pending construction of some immediate downstream replacement sewer enlargement, there will be new increased sewer capacity from SWNAS to the Town of Weymouth Mill Brook Trunk Sewer. Those improvements, combined with the pending inflow/infiltration (I/I) removal work at the existing Base pumping station and resulting reduction in flows to the town's other large sewer, the Swamp River Trunk system, will provide sufficient capacity in the Weymouth sewer system to allow continued redevelopment of SWNAS. There is, in place, a planned program of system upgrades to the two Weymouth trunk sewers and downstream connections to the MWRA South System that will be implemented as needed by the Town's growth and the SWNAS buildout wastewater demands.

While the Weymouth system improvements will allow all of the initial phases of the work and the entire Weymouth portion of the Base to be developed using the Weymouth sewers, the Abington and Rockland portions of the Base may not be able to discharge into the MWRA system.

The Abington and Rockland portions of the Base can proceed into development using their local sewer systems. Like in the Weymouth system, new discharges to those systems will require some capacity improvements. The Master Developer team has already begun meeting with those towns' public works officials. Some of the Abington sewer collection system discharges to the Brockton regional wastewater treatment plant. That plant has been upgraded and has capacity. The Rockland sewer system in places is old and has high inflow/infiltration (I/I) problems. These extraneous wet weather flows overburden the Rockland wastewater treatment plant. These system problems have been recently well studied with several problem areas identified. The SRA and the Master Developer will work with Rockland to eliminate enough of these excess system flows to allow the Rockland portions of the Base to be redeveloped without over burdening the municipal system.

The MEPA process requires alternative comparisons, therefore present planning for infrastructure is to continue to evaluate the MWRA regional water supply, the Aquaria plant and local systems for both water and wastewater. This planning assumes some interim service time as Base redevelopment would occur before the MWRA or Aquaria supply lines would be in service.

4.0 PRIVATE UTILITIES

The purpose of this section is to provide an understanding of the private utility capacities within the area. This includes the major utilities, electric, gas, telephone, and cable (communications.) Majority of these utilities are found adjacent to the site on Route 18 which was recently reconstructed by MassDOT with anticipated completion in 2023.

4.1 ELECTRIC

Electric service to the site is currently provided by National Grid. Based on existing survey information electric duct banks located in Trotter Road and Memorial Grove Avenue provide service to the existing development. A secondary electric feed through an existing corridor near the SRA office needs to be

completed. Electric service will continue as currently provided and will continue to be served through the program development and build out. We will continue to coordinate on provision and capacity as the development program is further refined.

4.2 GAS

Gas service to the site is currently provided by National Grid. Based on existing survey information gas is currently provided to the site by two gas mains, one located in Trotter Road and the other located in Memorial Grove Avenue. Gas service will continue as currently provided and will continue to be served through the program development and build out. We will continue to coordinate on provision and capacity as the development program is further refined.

4.3 COMMUNICATION

Communication service located with the project site is currently provided by Verizon, and cable providers Comcast and Crown Castle. Based on existing survey information, communication duct banks located in Trotter Road and Memorial Grove Avenue provide service to the existing development. Communication service will continue as currently provided and will continue to be served through the program development and build out. We will continue to coordinate on provision and capacity as the development program is further refined.

SHEA MEMORIAL DR.
MUDD
MUDD
MEMORIAL GROVE AVE.
MUDD
WEYMOUTH
ROCKLAND
RT. 18
T-STATION
TROTTER RD.
CORE DEVELOPMENT AREA
MUDD
PARKWAY
MUDD
RAIL LINE
RT. 18
WEYMOUTH
ABINGTON
CORE DEVELOPMENT AREA
MUDD
MUDD
ROCKLAND
ABINGTON

Notes

1. All development parameters apply only to the Mixed Use Development District (MUDD) as shown on the plan.
2. Roadway layout and uses shown for conceptual purposes only, subject to applicable Zoning By-law and Regulations and market demands.
3. Maximum MUDD Buildout: 12m square feet of Gross Floor Area:
   3a. Residential Maximum MUDD Buildout: 2581-6000 units
   3b. Commercial Maximum MUDD Buildout: 1,925,000 - 8,000,000 square feet.
4. Minimum MUDD Parking:

Residential:	1.25/unit
Commercial:	
Retail/Office	2.5/1000 SF
Light Industrial/Research/Development	0.5/1000 SF
Restaurant	10.0/1000 SF

5. Core Development Area (CDA) includes approximately 4,000 residential units and 1,000,000 square feet commercial

LEGEND

- MIXED USE DEVELOPMENT DISTRICT (MUDD)
- CORE DEVELOPMENT AREA
- CORE DEVELOPMENT AREA MIXED USE BLOCK
- OPEN SPACE
- EXISTING DEVELOPMENT

N

0 200' 400' 800'
SCALE: 1" = 400'

MARK	DATE	DESCRIPTION	BY

Client: Brookfield Properties / New England Development
Proj. Loc.: Weymouth, Rockland, and Abington Massachusetts

South Weymouth Naval Air Station

Master Development Plan
Mixed Use Development District
With Core Development Area

Project No.:	143-33244-21001
Designed By:	TAB
Drawn By:	TAB
Checked By:	JSH

Fig. 1

Bar Measures 1 inch