

Submitted to:

Massachusetts Department of Conservation and Recreation



Nantasket Beach Reservation Facilities Utilization Report

Hull, MA



Submitted by:



THE Louis Berger Group, INC.

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Executive Summary

This report assesses the maintenance operations and associated facilities at the Nantasket Beach Reservation owned by the Massachusetts Department of Conservation and Recreation (DCR). Several options are developed to improve operations on the site and at the same time allow for vacating some of the buildings for other potential uses. Options were developed jointly with DCR staff during a workshop in December 2013.

Key findings consist of the following:

- **Maintenance operations:** Maintenance operations at the Nantasket Beach Reservation ('Reservation') are ongoing year-round to keep the facility functioning as expected for public use. The busiest time of year is during the summer months from Memorial Day to Labor Day but the area is open year-round from dawn to dusk. During the winter months the staff is responsible for snow removal. Storm management is necessary year-round. The maintenance crews are currently using all garage and yard space available and are in need of additional covered/heated storage for critical equipment.
- **Buildings:** There are a number of buildings on site that are not used to capacity. The Dormitory Building is currently utilized by DCR as office space. The Clocktower Building is leased out and the Police Station is closed due to asbestos and major water damage. Maintenance of the buildings on site is a major factor in any future planning. The buildings are generally 100+ years old and need substantial repairs and upgrades as summarized by DCR maintenance staff and documented in the report. Cost estimates for repairs are not included at this time as they require a more in-depth assessment of the work to be done.
- **Traffic Alternatives for Improvements to the Maintenance Yard:** Three alternatives were examined to re-configure traffic in the vicinity of the yard and thereby increase yard space:
 - *Alternative A:* The existing condition remains.
 - *Alternative B:* Realignment of the cut-through portion of roadway from George Washington Boulevard westbound.
 - *Alternative C:* Relocation of the cut-through portion of roadway from George Washington Boulevard westbound to the current intersection of George Washington Boulevard and Nantasket Avenue. The southeastern terminus of Hull Shore Drive would be shifted to align with this proposed intersection.
- **Facilities Layout Options:** Four layout options were considered to meet the anticipated needs of DCR staff. Key features of each option are summarized in the table below. Each option may be modified using elements from other options. Under each option at least two buildings would be available for lease to an outside party whose purpose and goals match that of the DCR mission at the Reservation.





Summary of Facilities Layout Options				
Description	Option 1: Full Build-out of Upper Garage	Option 2: Partial Build-out of Upper Garage	Option 3: No Build-out of Upper Garage	Option 4: No Action
Traffic Alternative	B or C	B or C	A	A
Dormitory Building	Lease	Lease	Lease	Office Space
Clocktower Building	Lease	Lease	Lease	Lease
Police Station	Lease/Office Space	Office Space	Office Space	Lease
Yard Area	On site	On site	Parking Lot 8	On site
Small Garage	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate
Boilermaker's House	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate
Laundry Building	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate
Upper Garage	10' expansion, 2 nd story addition	10' expansion	No change	No change
Lower Garage	No change	No change	No change	No change
Additional Covered Storage	None	None	3-bay prefabricated garage	3-bay prefabricated garage

Facilities Layout Options 1 and 2 include modifying traffic along George Washington Boulevard (i.e., Traffic Alternatives B or C) to create additional yard space for maintenance activities. Traffic Alternatives C would create the largest amount of yard space and has been suggested by the Town of Hull in previous studies.

- Near-term Modifications:** Aside from long-term layout changes, several modifications to the facilities are recommended to be implemented soon. Building modifications include repairs to existing buildings; inspection and needed repairs to roofs, doors, and windows; relocation of the generator from the basement of the Dormitory Building to an area protected from flooding; upgrade of the heating, cooling, and electrical systems in the Clocktower Building; and other types of activities. Yard modifications include construction of temporary cover or the salt storage bin; re-routing of the current garage waste disposal drains to connect to the town sewer line under Nantasket Avenue; and a covered dumpster to reduce odors.





1.0 Introduction

The goal of this assessment is to improve the use of space at the Nantasket Beach Reservation in a way that is most beneficial to the visitors of the Department of Conservation and Recreation (DCR). The assessment was prompted by a request from the State of Massachusetts Legislature and the Town of Hull to investigate the possibility of the DCR operations team vacating some or all of the buildings on site to allow for development options.

Existing conditions and potential layout options were discussed during a workshop at the Reservation with staff from DCR, the Louis Berger Group, Inc., and Crosby, Schlessinger & Smallridge, LLC. on December 3, 2013.

2.0 Current Conditions

2.1 Services Provided by DCR

Maintenance operations at the Nantasket Beach Reservation are ongoing year-round to keep the facility functioning as expected for public use. The busiest time of year is during the summer months from Memorial Day to Labor Day but the area is open year-round from dawn to dusk.

Year-round Services

A number of services are required year-round. During the busy summer months the year-round staff is assisted by seasonal staff to complete some of these tasks. Tasks that are not time-sensitive may be pushed off into the colder months to focus on the more crucial operations items. The year-round services include:

- Beach maintenance (cleaned by hand daily)
- Solid waste removal (see further details below)
- Landscaping
- Mechanical services for truck and equipment repairs
- Mechanical services for bicycle repairs
- Carpentry services
- Repairs to picnic tables, benches, and chairs
- Building maintenance
- Catch basin cleaning
- Patching of asphalt sidewalks and roadways
- Welding as needed
- Traffic management during storm events or as needed
- Maintenance, cleaning, and supplies delivery for the four restroom facilities
- Ranger patrol as needed
- Hosting lecture series, nature walks and other events
- Massachusetts State Police patrols





Seasonal Services – Summer

During the summer months (defined as Memorial Day to Labor Day), operations ramp up considerably to serve visitors of the Reservation enjoying the beach weather. The following services are provided exclusively during these busy months:

1. Parking operations including attendants for parking fee collection and the use of four variable message signs to direct visitors to available spaces.
2. Four on-site park rangers patrol the facility to promote compliance with rules and regulations, protect natural and park resources, and provide visitor information.
3. Lifeguard services are provided for swimmer safety.
4. Park passes are sold to hundreds of residents for all DCR parks.

Seasonal Services – Winter Snow Removal

The year-round maintenance staff is responsible for snow removal at public parking lots and throughout the maintenance yard. They currently meet this obligation with a 1-ton dump truck equipped with a plow and sander and a smaller pick-up truck equipped with a plow and pony sander. Large amounts of snow are generally stored in Parking Lot 7 (or 'G' per the new lettering system). The Reservation is also a snow removal depot for DCR providing equipment, materials and support for snow removal activity throughout the district. All salt and ice melt used in the district is stored and distributed from the Reservation maintenance yard.

Solid Waste Removal

A single dumpster with 30 cubic yards of storage space is parked at the facility year-round. A ramp has been built for ease of access for daily collection of trash throughout the reservation. During the summer this dumpster is emptied three times a week on a schedule of Monday, Wednesday and Saturday. During the fall, spring and winter months, pick-ups of the dumpster are only scheduled once per week.

A single recycling bin with 8 cubic yards of storage space is parked at the facility year-round. This smaller bin is used exclusively for recycling and emptied once per week, generally on Monday.





2.2 Current Equipment and Maintenance Storage Needs

In order to adequately provide all services required, the DCR staff utilizes specialty equipment. Table 1 outlines the equipment currently used by DCR's Reservation staff and stored on site as well as storage needs as described by DCR staff. While the available equipment meets the needs of the facility, additional equipment and/or upgraded equipment may be necessary in the future.

Description	Make, Model & Year	Primary Use	Storage Needs
Pick-up truck	Ford F-250, 2008	Plowing and sanding	Heated
Pick-up truck	Ford F-250, 2008	Trash removal	Covered
1-Ton dump truck	Ford F-550, 2007	Plowing and sanding	Heated
1-Ton dump truck	Chevrolet 3500, 2000	Trash removal	Covered
5-Ton dump truck	International, 2002	Trash removal	Covered
Plow		Plowing	Covered
Plow		Plowing	Covered
Sander		Sanding	Covered
Pony sander		Sanding	Covered
Packer	International 4700 T444E, 1996	Trash removal	Covered
Loader	Hyundai 730 TM-7, 2007	Heavy load lifting, debris clean up	Heated
Skid-steer loader	Bobcat S205, 2007	Salt and sand loading	Heated
Sweeper	Elgin Pelican, 2001	Sweeping	Heated
Backhoe	Ford 455D, 1993	Earthwork	Heated
4x4	Kubota RTV 500, 2010	General utility	Heated
4x4	Kubota RTV 900, 2013	Utility, parking program	Heated
ATV	Polaris Sportsman 400	Transportation	Heated
Trailer	Tow Master T-12DD, 2007	Skid-steer transport	Covered
Trailer	Cross Country 61435, 2005	Landscaping	Covered
Trailer	Cross Country 3HD12, 2008	Hydroseeding	Covered
Jet ski and trailer*	Kawasaki 900TX, 1998	Water patrol	Heated
Compressor	Ingersol Rand		Heated
Cement mixer	Canoga		Heated

*The jet ski is stored at the Reservation during the winter months only.

Only some of the equipment tabulated is currently in covered or heated storage. This is a key factor in maintaining reliable equipment and extending the useful life of mechanical equipment. The facility now has, and uses to the fullest extent, two brick garage buildings with a total of seven bays. Staff estimates that ten bays would be needed to store and protect all sensitive equipment from the elements. The two garage buildings are shown in Figures 1 to 5.





Figure 1: Lower Garage exterior, yard side



Figure 2: Lower Garage storage area



Figure 3: Carpentry area in Lower Garage



Figure 4: Upper Garage exterior, along Nantasket Avenue



Figure 5: Upper Garage interior

Yard space is also limited for storage and maneuvering. Figure 6 shows the tight circulation area in the yard. Two fuel pumps are located behind the maintenance buildings. Access to these pumps is acceptable but the location of the large trash dumpster has been an issue. Specifically, when a dumpster is being picked up or dropped off, the pumps are within the maneuvering area and in danger of being hit.



Figure 6: Yard area; circled are the dumpster and ramp (left) and the gas pumps (right)



2.3 Staffing Requirements

The staffing requirements at the Reservation vary considerably depending on the season. As stated above, the summer months are the busiest time of year for this operation; a total of 74 employees were active during the summer of 2013. This section summarizes needs of both full-time (year-round) staff and summer staff, as described by DCR.

▶ 2.3.1 Full-Time Staff (Year-round)

Currently the Reservation has six full-time employees. These employees require limited office space and are focused on the maintenance and repairs necessary to maintain the Reservation. The year-round staff is responsible for various services listed in Section 2.1 above.

▶ 2.3.2 Summer Staff

During the summer of 2013, 68 seasonal employees were working at the Reservation. Table 2 provides a breakdown by title and description of duties.

Title	Number of Positions	Description of Duties
Lifeguard	38	Provide emergency response and enforcement of beach/swimming policies
Parking Clerk	10	Collect parking fees and direct visitors to unoccupied spaces
Parking Supervisor	2	Supervise parking operations
Laborer 1	5	Assist with maintenance operations
Worker 1	6	Provide cleaning services and supplies to rest rooms and bath house
Ranger	4	Promote compliance with rules and regulations, protect natural and park resources, and provide visitor information
Clerk	2	Sell, organize, and record sales of park permits for the region
Maintenance Equipment Operator	1	Operates heavy equipment and holds a hoisting license

2.4 Office Space Needs and Current Usage

The Reservation campus consists of bath houses, a maintenance yard, maintenance garages, and a number of buildings used for storage and office space. During the winter months, a majority of the space is used for storage. Conversely, in the summer, most of the space is used for offices and break rooms. Table 3 provides an estimate of the area necessary to conduct operations efficiently and protect sensitive equipment from the elements, as well as the ideal locations for each space.

The buildings of interest for the purpose of this report are shown in Figure 7; their current uses are described below. A number of the facilities are aging and some are protected due to historical relevance; their historical relevance and anticipated repairs are also briefly described. Buildings on the Reservation not described include the bath houses and the pavilion, as they are used at full capacity and do not require major rehabilitation.





Table 3: Reservation Area Requirements¹

Function	Ideal Location	Area
Park Supervisor's Office	Office building ²	12'x12'
Clerk's Office	Office building	10'x20'
Engineer's Office	Office building	12'x12'
State Police Office	Office building	12'x12'
Parking Supervisor's Office	Office building	12'x12'
Conference Room	Office building	10'x20'
Kitchen / Break Room	Office building	10'x10'
Men's Restroom	Office building	10'x8'
Women's Restroom	Office building	10'x8'
Janitorial Closet	Office building	10'x8'
Ranger's Office	Within MJM Bath House	10'x12'
Lifeguard Supervisor's Office	Within MJM Bath House	10'x12'
Lifeguard Break Room	Within MJM Bath House	10'x20'
Permit sales	MJM Bath House or current Ice Cream Shop	12'x12'
Heated dry storage	Garage buildings	17'x62'
Unheated dry storage	Garage buildings	24'x24'
Heated garage space	Garage buildings	10 bays
Unheated garage space	Garage buildings	24'x49'
Heated secured storage	Garage buildings	10'x10'
Work shop	Garage buildings	17'x62'
Shower	Garage buildings	8'x8'
Restroom	Garage buildings	10'x8'
Uncovered bulk storage	Yard area ³	(6) 40 yard bins
Covered bulk storage	Yard area	(1) 75 yard bin
Dumpster / Ramp	Yard area	85'x30'
Parking spaces	Yard area	10 each (minimum)
Fuel pumps	Yard area	8'x15'
Outdoor storage	Yard area	50'x126'

¹ Space needs documented were provided by DCR Staff.

² Must meet current ADA accessibility requirements if moved, or if current locations are substantially renovated.

³ The space needs described do not include driving lanes or areas for maneuvering vehicles.





Figure 7: Buildings of the Reservation discussed in the report



▶ 2.4.1 Dormitory Building

The Dormitory Building (Figure 8) has an area of approximately 9,000 square feet and is in overall poor condition. The main floor is currently used as the DCR operations office building with some space available for dry and hazardous materials storage. The upper floor is largely vacant. During the summer of 2013 parking passes were sold from a folding table in front of the building and paperwork was filed in an office inside the building.



Figure 8: Dormitory Building exterior

Historic Relevance

Although the MHC has not undertaken any formal survey or analysis of historical relevance for the Dormitory Building, it is likely that it would be considered eligible for listing as a contributing structure within a potential Nantasket Beach Reservation Historic District.

Maintenance Status and Requirements

Support columns in the basement have been repaired recently after showing severe damage. These repairs were reportedly 'mostly cosmetic' and the structural integrity of the building is still in question.

A visual inspection showed water damage on the walls and ceilings remaining from roof leaks that were recently patched.

The basement of this building experiences severe flooding once every 3 to 5 years. Water is regularly pumped from the basement but during larger storm events infiltration outpaces the removal capacity of the pump. A generator is currently stored in the basement and should be moved as soon as possible to avoid flood damage. The building is heated by a recently purchased gas-fired boiler, installed in the basement.

DCR maintenance staff recommends the following repairs to the Dormitory Building:

- Inspection and possible repairs to the roof
- Assessment of structural integrity of the building
- Inspection and repair of the brick foundation and support columns due to salt damage
- Re-pointing of all brick work
- Extensive gutter and fascia replacement on both porches





▶ 2.4.2 Laundry Building

The Laundry Building (Figure 9) has an area of approximately 900 square feet and is in overall adequate condition. It is currently used for dry storage of lumber and is sometimes referred to as the “wood storage room”.



Figure 9: Laundry Building exterior

Historic Relevance

The MHC has not undertaken a formal survey or analysis of historical relevance for the Laundry building. It was likely moved to the location and therefore would not be an original contributing element within a potential Nantasket Beach Reservation Historic District.

Maintenance Status and Requirements

A visual inspection found the building to be in adequate condition. A 1993 report found the building to contain asbestos and no records of abatement were located as part of the research for this report.

DCR maintenance staff recommends the following repairs to the Laundry Building:

- Asbestos abatement (if not completed previously)
- Inspection and repair of rotten sills
- Replacing of windows





▶ 2.4.3 Small Garage

The small wooden garage building (Figure 10) has an area of approximately 1,000 square feet and is in overall poor condition. It is currently used for cold storage of parking supplies such as signs and posts.



Figure 10: Small Garage exterior

Historic Relevance

The MHC has not undertaken a formal survey or analysis of historical relevance for the Small Garage.

Maintenance Status and Requirements

It is recommended that the building be demolished or relocated to allow for additional yard space. If historical importance prevents this option, DCR maintenance staff recommends the following repairs:

- Inspection and repair of rotten sills
- Replacement of doors and windows



▶ 2.4.4 Lower Garage

The Lower Garage (Figures 1 and 11) has an area of approximately 5,000 square feet and is in overall good condition. Its major use is vehicle and maintenance storage but the facility also provides heated storage and houses the carpentry shop. The building is not prone to flooding, making it ideal for storage of sensitive goods such as toilet paper and waste oil. There are two bathroom facilities and a shower in the building.

All available floor space for vehicles and maintenance storage is used to its fullest extent. There is currently no pedestrian door to access the main part of the garage; only overhead garage doors. This decreases the energy efficiency of the building and causes unnecessary wear and tear to the motorized overhead door equipment.



Figure 11: Lower Garage exterior, yard side

Historic Relevance

The Lower Garage building is included in the MHC Inventory of Historic and Archaeological Assets of the Commonwealth. MHC has also determined that the building appears to be eligible for listing as a contributing structure within a potential Nantasket Beach Reservation Historic District. The building was constructed in 1903.

Maintenance Status and Requirements

The structure is heated but not insulated. Roof leaking has been reported by on-site staff.

DCR maintenance staff recommends the following repairs:

- Inspection and possible repairs to the roof
- Repair of overhanging eaves
- Re-pointing of all brick work
- Repair or replacement of all windows
- Insulating the structure
- Installation of a pedestrian-sized door to access the building
- Inspection, repair and mitigation of floor drains to ensure proper discharge
- Replacement of the brick arch between the Lower and Upper Garages.





▶ 2.4.5 Upper Garage

The Upper Garage (Figures 4 and 12) has an area of approximately 2,750 square feet and is in overall good condition. Its major use is vehicle and maintenance storage. Due to current space restrictions, the garage cannot accommodate a truck equipped with a plow and sander. The building is prone to flooding; during large storm events up to 1.5 feet of water may be seen on the floor. This may be due to the overhead doors on the Nantasket Avenue side of the building that do not seal well with the concrete slab floor. There is no bathroom located in this building.

All available floor space for vehicles and maintenance storage is used to its fullest extent. The heated garage provides the best shelter for sensitive equipment. Desired improvements for this building include additional overhead doors on the George Washington Boulevard side of the building and expanded floor space.



Figure 12: Upper Garage exterior, yard side

Historic Relevance

Although the MHC has not undertaken any formal survey or analysis of historical relevance for the Upper Garage building, it is likely that it would be considered eligible for listing as a contributing structure within a potential Nantasket Beach Reservation Historic District. In addition, it is possible that the inventory form for the Lower Garage also includes this building. It was constructed around year 1900.

Maintenance Status and Requirements

Roof leaking has been reported by on-site staff.

DCR maintenance staff recommends the following repairs for the Upper Garage:

- Inspection and possible repairs to the roof
- Repair of eve supports and gutters
- Re-pointing of all brick work
- Inspection, repair and mitigation of floor drains to ensure a proper final discharge.





▶ 2.4.6 Clocktower Building

The Clocktower Building (Figure 13) and the adjacent land for the carousel have been leased to the “Friends of Paragon Park”. The long-term lease expires in 2016. The basement currently houses the mechanical equipment for the carousel and a workshop where the carousel horses are maintained. The first floor houses a museum from Paragon Park and an ice cream parlor. The upstairs is used for storage but has no electricity, heat or plumbing.

The expiration of the lease in 2016 creates an opportunity for DCR to find alternative uses for the building. Regardless of the uses on the first and second floor, DCR would like to allow the mechanical equipment for the carousel to remain in the basement and the carousel itself to remain on the adjacent land.



Figure 13: Clocktower Building exterior

Historic Relevance

The building is included in the MHC’s Inventory of Historic and Archaeological Assets of the Commonwealth. MHC has also determined that the building appears to be eligible for listing as a contributing structure within a potential Nantasket Beach Reservation Historic District. It was constructed in 1903 as a restaurant and waiting area for the ferry.

Maintenance Status and Requirements

The roof is new but had been damaged for over 10 years causing possible unidentified damage to the ceiling and walls. Lead and asbestos have reportedly been abated throughout the building.

DCR maintenance staff recommends the following repairs for the Clocktower building:

- Testing of the second floor for lead and asbestos
- Complete remodeling of both floors
- Roof repairs
- Possible upgrade of the heating, cooling, and electrical systems.

Any repairs completed should be done in a manner that maintains the historical significance of the building.





▶ 2.4.7 Police Station Building

The former Police Station (Figure 14) has an area of approximately 4,000 square feet and is in very poor condition. It is currently vacant and entry is prohibited due to high levels of asbestos. There is no full basement under the building, just a crawl space.



Figure 14: Police Station exterior

Historic Relevance

The MHC has determined that the building appears to be eligible for listing as a contributing structure within a potential Nantasket Beach Reservation Historic District. It was constructed in year 1901.

Maintenance Status and Requirements

A portion of the flooring on the first floor is reportedly unsound. There are visible cracks on the exterior and the paint and plaster are flaking. Overall the roof seems to be water-tight. There is no heat, water, or electricity. Major rehabilitation work would be necessary for this building to be used.



▶ 2.4.8 Yard Area

The yard area (Figures 6 and 15) has an area of approximately 25,000 square feet but maneuverability is very limited due to the layout, small buildings, and staff parking. The major use of the yard is maintenance storage. Due to the undersized garages a multitude of items that do not take priority are stored outside. The major assets within the storage yard are:

- A ramp and dumpster which consumes roughly 2,550 square feet
- Two gas pumps
- An uncovered salt bin
- An uncovered storage area for loam, sand, mulch, stone, seaweed and debris (contents vary depending on the season)
- Two underground storage tanks (capacity: 2,300 gallons each; one gasoline, one diesel)
- 30 employee parking spaces



Figure 15: Yard area

Historic Relevance

Not applicable.

Maintenance Status and Requirements

The major constraint within the maintenance yard is limited space for storage and limited opportunities to improve circulation and maneuverability. There is a main entrance/exit drive on Wharf Avenue that is just over 20 feet wide. It serves either two passenger cars or one tractor trailer. An alternate entrance/exit drive located between the Upper and Lower Garages on Nantasket Avenue has been fenced off and the space is currently used for storage.

Maneuverability is particularly restricted for the solid waste collection company which arrives three times a week during the summer months to drop off an empty dumpster and pick up the full one. DCR staff acknowledges that the gas pumps are very near the turning radius for the dumpster placement.

DCR maintenance staff recommends the following improvements to the maintenance yard:

- Moving or re-orienting the dumpster and access ramp to protect the gas pumps.
- Covering the salt bin to meet environmental regulations.





▶ 2.4.9 Mary Jeanette Murray (MJM) Bath House

The Mary Jeanette Murray (MJM) Bath House (Figure 16) has an area of approximately 3,460 square feet and is in good condition overall. It was recently renovated.



Figure 16: MJM Bath House Building exterior

The MJM Bath House is currently underutilized by the public as the main doors are locked when there are no scheduled events. As an alternative, local art and historic relics could be displayed in the large open space with the main doors left open to invite visitors in during normal operating hours rather than just during special events. Another option could be to sell parking permits from a stand within the MJM during the summer which would require a phone line for credit card transactions. The wings of the building, which contain restrooms and changing rooms, are currently open to visitors regardless of event scheduling.

Space within the MJM is also currently underutilized. There is a large, empty open space reserved for gatherings and a utility room in both wings that is either largely empty or used for minimal storage. If windows were retrofitted to the utility rooms, the rooms could be utilized as office space for the lifeguard supervisor and rangers. There is also a large vacant room in the women's wing that could serve as a break room for the lifeguards. The room has a large door that opens directly to the beach and a number of lockers that could be used for storage. This layout would allow the rangers and lifeguards to stay closer to the beachfront to serve visitors.

The manager's office on the beach side of the building is partially used for cleaning supplies and first aid supplies (including an automated external defibrillator [AED]). This office could be used for storage of materials that are currently located in the utility rooms proposed.

Historic Relevance

The MHC has determined that the building appears to be eligible for listing as a contributing structure within a potential Nantasket Beach Reservation Historic District. The building was constructed in year 1935 and reconstructed in the late 1900s.

Maintenance Status and Requirements

No repairs have been identified at this time.





▶ 2.4.10 Boilermaker's House

The Boilermaker's House (Figure 17) has an area of approximately 780 square feet and is in overall poor condition. It is currently used as a break room for lifeguards and as office space for the lifeguard supervisor. There is a functioning bathroom in the building.



Figure 17: Boilermaker's House exterior

Historic Relevance

The MHC has not undertaken a formal survey or analysis of historical relevance for the Boilermaker's House. It was likely moved to the location and would not be an original contributing element within a potential Nantasket Beach Reservation Historic District.

Maintenance Status and Requirements

Per DCR records, no asbestos was found in a 1993 inspection.

It is recommended that the building be demolished or relocated to allow for additional yard space and create an opportunity for lifeguards to be situated closer to the beachfront and visitors. If the building is not demolished, DCR maintenance staff recommends the following repairs:

- Inspection and repair of rotten sills
- Inspection and repair of the foundation.





3.0 Future Options

3.1 Traffic Alternatives

Two options to re-configure traffic in the Reservation maintenance area were examined to increase available yard space. As stated above, the yard area is limited and vehicle movements are hindered, particularly for larger vehicles. Due to the limited covered storage space a significant amount of machinery, equipment and materials are stored in the yard. DCR staff has indicated that both safety and efficiency could be improved with an updated yard layout and a larger space to work in.

Specifically, the traffic alternatives considered were as follows:

- *Alternative A* (Figure 18): The existing condition remains.
- *Alternative B* (Figure 19): The cut-through portion of roadway from George Washington Boulevard westbound (referred to hereafter as 'Cut-through Road') is re-aligned to increase yard space.
- *Alternative C* (Figure 20): The Cut-through Road is re-located to the current intersection of George Washington Boulevard and Nantasket Avenue. The southeastern terminus of Hull Avenue is shifted to align with this proposed intersection.

It is noted that not all of the roadways under consideration are owned by DCR so any changes would need to be a collaborative effort that has the best interests of DCR, the Town of Hull, and Massachusetts Department of Transportation (MassDOT) in mind (Figure 21).

Another concern is the historical relevance of the roadways affected. For instance, the cast concrete curbing inset with cobblestones along Hull Shore Drive have been noted as historically significant.

The traffic analysis was completed by taking the traffic and pedestrian operations into account. Details of traffic volumes, growth rates, and analysis methods are documented in a separate report⁴. For the purposes of this report, a brief discussion of the inputs and analysis are provided below, followed by an in-depth discussion of the findings.

The traffic analysis program VISSIM, manufactured by PTVAmerica, was used to analyze vehicle movements and pedestrian interaction in the region surrounding the DCR maintenance facility. The study area included portions of Nantasket Avenue, Hull Shore Drive, George Washington Avenue, and most specifically the intersections of the three roadways.

In 2006 traffic volumes were counted on Thursday, August 3rd from 4 pm to 6 pm and Saturday, August 5th from 11 am to 2 pm. The Saturday counts occurred during low tide on a seasonably warm day. Additional counts were performed at the intersection of George Washington Boulevard and Bay Street on Wednesday, September 4th, 2013 from 4 pm to 6 pm and Saturday, September 7th from 11 am to 2 pm. The 2006 counts were significantly higher than the corresponding 2013 counts due to the time of year, weather conditions, and the economic climate.

⁴ The Louis Berger Group, Inc. (2014), Nantasket Beach Reservation, Traffic Analysis Report, Prepared for DCR.





Figure 18: Traffic Alternative A





Figure 19: Traffic Alternative B





Figure 20: Traffic Alternative C



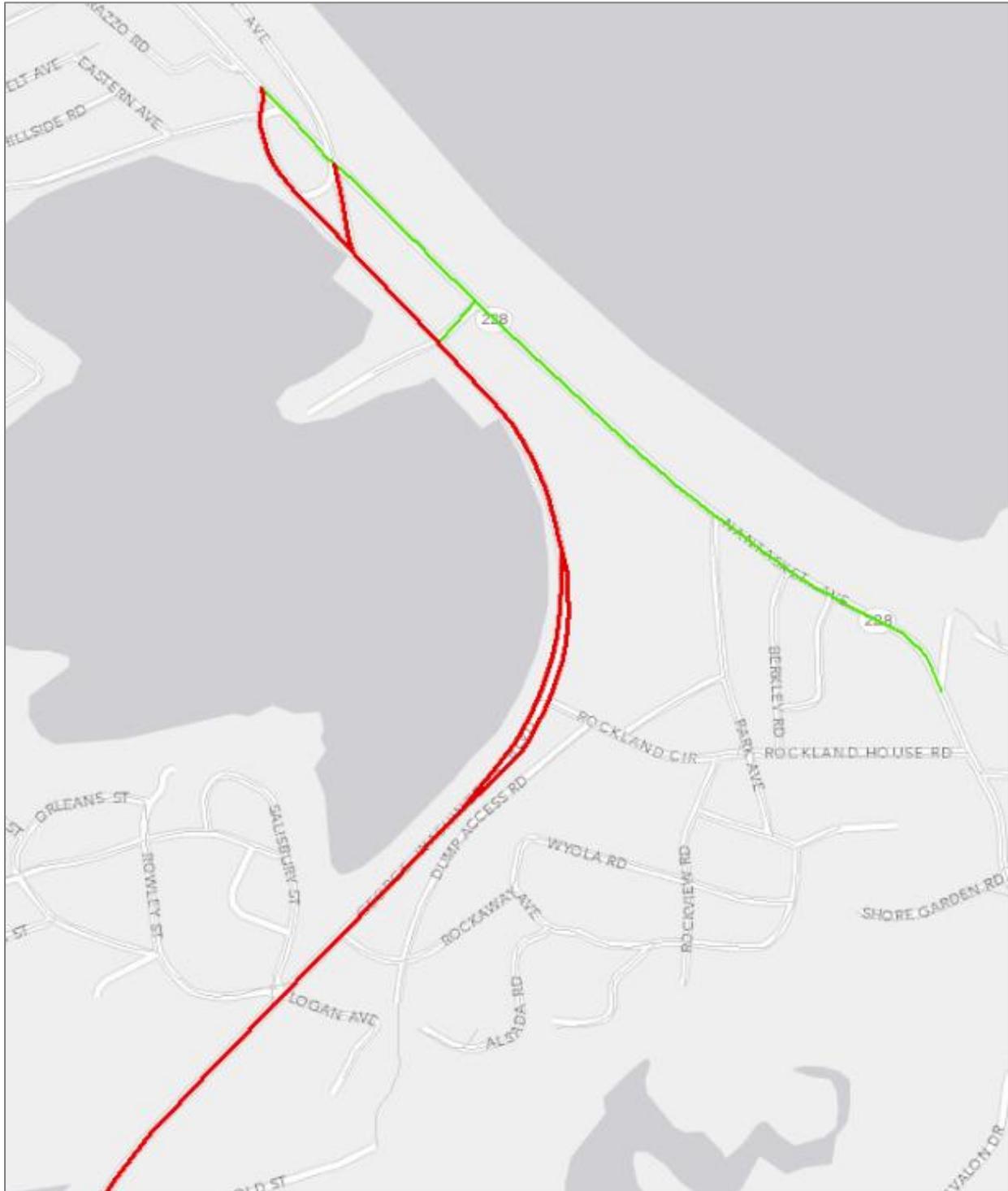


Figure 21: Roadway ownership in the area of the Reservation. George Washington Boulevard and the Cut-through Road belong to MassDOT (red). Nantasket Avenue to the intersection with George Washington Boulevard belongs to DCR (green). Hull Shore Drive and Bay Street belong to the Town of Hull (white). Source: MassDOT





Historic changes in traffic volumes were researched for areas similar to Hull, MA. Based on the data compiled it was found that traffic in a number of similar beach communities has actually decreased from 2005 to 2009. Additionally, Cape Cod traffic has decreased on average by 0.91% per year from 2000 to 2010. For the purposes of this study, a conservative growth rate of 0.75% per year was chosen. The volumes counted in 2006 were used to analyze 2013 conditions; this conservatively assumes that traffic has remained constant rather than decreased in the area. A future year condition was also analyzed as a planning tool to ensure that any changes made in the near future would also accommodate traffic for years to come. The future year analyzed was 2033 and the growth rate of 0.75% annually was used to inflate the 2013 volumes to the 2033 level.

While a number of intersections were analyzed, the conclusions discussed in this report focused on the intersections affected by the proposed layout changes. The full traffic analysis report⁵ discusses other locations in the area as well as pedestrian effects on traffic.

▶ 3.1.1 Traffic Alternative A

Traffic Alternative A is the ‘no-build’ condition (Figure 18). This alternative would not affect traffic flow around the maintenance yard and would not increase the size of the yard area available for maintenance services. Alternative 1 serves as a baseline to compare the build alternatives to.

Traffic operations were analyzed based on methods outlined in the Highway Capacity Manual (HCM). Results are reported in three ways: average delay experienced by a vehicle, 95th percentile queue length, and Level of Service (LOS) which is based on delay. LOS is reported similar to letter grades with a rating system of A through F, with A being the best and F being the worst. The HCM lists the following definitions for each grade:

- A = Free flow
- B = Reasonably free flow
- C = Stable flow
- D = Approaching unstable flow
- E = Unstable flow
- F = Forced or breakdown flow

Level of Service delay values are slightly different for signalized and unsignalized intersections. This is because drivers are more willing to accept a slightly longer delay at signalized intersections, realizing that they will inevitably ‘get their turn’. The level of service assignments for signalized intersections as compared to delay values are shown in Table 4.

Table 4: LOS Criteria for Signalized Intersections	
Level of Service	Delay per Vehicle (sec)
A	0.0 to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	Greater than 80.0

⁵ The Louis Berger Group (2014), Nantasket Beach Reservation, Traffic Analysis Report, Prepared for DCR.





The results of the no-build analysis for the 2013 and 2033 weekday PM peak hour and Saturday afternoon peak hour are presented in Tables 5 and 6.

Table 5: Alternative A Delay and LOS					
Intersection	Year	Weekday PM		Saturday Afternoon	
		Delay	LOS	Delay	LOS
Hull Shore Drive, Nantasket Avenue, & Cut-through Road	2013	18.8	B	24.2	C
	2033	19.7	B	30.5	C

Table 6: Alternative A Queue*						
Intersection	Approach	Weekday PM		Saturday Afternoon		
		2013	2033	2013	2033	
Hull Shore Drive, Nantasket Avenue, & Cut-through Road	Nantasket Westbound	7	8	9	11	
	Nantasket Eastbound	6	6	6	8	
	Cut-through Northbound	6	9	9	10	

*Queue is documented in number of vehicles

The signalized intersection of Hull Shore Drive, Nantasket Avenue and the Cut-through road from George Washington Boulevard currently operates at an acceptable level of service and is expected to continue to do so in year 2033. The queues documented are minimal on each approach leg ranging from 6 to 9 vehicles (150-225 feet) in 2013, to 6 to 11 vehicles (150-275 feet) in 2033.

▶ 3.1.2 Traffic Alternative B

Traffic Alternative B adjusts the alignment of the Cut-through Road from George Washington Boulevard to Nantasket Avenue to create a larger yard area for maintenance activities (Figure 19).

The results of the Alternative B traffic analysis for the 2013 and 2033 weekday PM peak hour and Saturday afternoon peak hour are presented in Tables 7 and 8.

Table 7: Alternative B Delay and LOS					
Intersection	Year	Weekday PM		Saturday Afternoon	
		Delay	LOS	Delay	LOS
Hull Shore Drive, Nantasket Avenue, & Cut-through Road	2013	18.2	B	18.4	C
	2033	18.6	B	22.3	C





Table 8: Alternative B Queue*

Intersection	Approach	Weekday PM		Saturday Afternoon	
		2013	2033	2013	2033
		Hull Shore Drive, Nantasket Avenue, & Cut-through Road	Nantasket Westbound	7	8
Nantasket Eastbound	5		5	5	5
Cut-through Northbound	9		10	11	14

*Queue is documented in number of vehicles

Because Alternative B does not change the volumes or lane configurations from the existing condition, the results are similar. The only change is to the roadway alignment of George Washington Boulevard approaching the intersection. The small discrepancies in the traffic analysis results are due to the randomness of the analysis program and the volume of vehicles approaching the intersection during any given second. Based on Alternative B results, the intersection would operate at an acceptable level of service similar to the existing conditions. The queues documented are minimal on each approach leg, ranging from 5 to 10 vehicles (125-250 feet) in 2013, to 5 to 14 vehicles (125-350 feet) in 2033.

► **3.1.3 Traffic Alternative C**

Traffic Alternative C closes off the Cut-through Road and routes the George Washington Boulevard traffic to an expanded intersection at Nantasket Avenue (Figure 20). The Hull Shore Drive approach is also realigned through the parking lot. This creates the largest yard area opportunity for maintenance activities.

The results of the Alternative C traffic analysis for the 2013 and 2033 weekday PM peak hour and Saturday afternoon peak hour are presented in Tables 9 and 10.

Table 9: Alternative C Delay and LOS

Intersection	Year	Weekday PM		Saturday Afternoon	
		Delay	LOS	Delay	LOS
		Hull Shore Drive, Nantasket Avenue, & George Washington Boulevard (<i>Proposed</i>)	2013	17.1	B
2033	17.8		B	22.0	C

Table 10: Alternative C Queue*

Intersection	Approach	Weekday PM		Saturday Afternoon	
		2013	2033	2013	2033
		Hull Shore Drive, Nantasket Avenue, & George Washington Boulevard (<i>Proposed</i>)	Nantasket Westbound	6	7
Nantasket Eastbound	10		11	10	13
George Washington Northbound	7		9	9	11

*Queue is documented in number of vehicles





Alternative C eliminates one intersection and installs a signal at a previously stop-controlled intersection. The proposed signalized intersection analyzed in Alternative C is expected to operate at an acceptable level of service and would continue to do so in year 2033. The queues documented are slightly higher than under existing conditions due to higher traffic volumes: queues range from 6 to 11 vehicles (150-275 feet) in 2013, to 9 to 13 vehicles (225-325 feet) in 2033.

▶ 3.1.4 Traffic Analysis Summary

From a traffic capacity perspective all three of the alternatives discussed would operate at a level of service “B” during the current year and a level of service “C” in year 2033. A preliminary cost estimate to implement each alternative was completed in 2013 dollars. Estimated costs of construction for each alternative are:

- Alternative A (No-build): \$0
- Alternative B (Squaring off the Cut-through Road): \$320,000
- Alternative C (Closing the cut-through road): \$1,000,000

Alternative C would provide the largest amount of yard space for maintenance operations. The decision to move forward with any of the alternatives would require considerations of a number of factors such as property ownership, concerns by local residents, and long-term plans for the community.

3.2 Facilities Layout Options

Four layout options were considered to better utilize the yard area and consolidate DCR operations. Two of the four layouts incorporate an increased yard area based on roadway reconfigurations (Traffic Alternatives B and C). The other two options are based on the no-build Traffic Alternative A.

▶ 3.2.1 Facilities Layout Option 1 – Full Build-out of Upper Garage

Layout Option 1 utilizes the current facilities with an expanded maintenance area by implementing Traffic Alternatives B or C (Figures 22 and 23).

3.2.1.1 Office Buildings and Uses

In an effort to consolidate DCR operations a second floor is proposed to be added to the Upper Garage for office space. An elevator would need to be installed to allow the second floor offices to be ADA-accessible. A pedestrian entrance from Nantasket Avenue to the second floor office space would be ideal to isolate the maintenance area from the general public.

Option 1 recommends abandoning operations in the Dormitory Building and searching for another use of the building that aligns with DCR's mission at the Reservation. The building may be used by DCR internally or leased to an outside party. The Clocktower Building and Police Station may also be leased or repurposed by DCR as part of this option. All building lease agreements should maintain strict guidelines of expected maintenance, improvements and upkeep that will retain the historical significance of the area while improving the safety and aesthetics of the buildings. The Small Garage and Boilermaker's House are recommended for removal or relocation to increase available yard space.





3.2.1.2 Maintenance Buildings

Due to the overall good condition of the brick maintenance buildings (i.e., the Upper and Lower Garages), it is recommended that both be used. Option 1 would expand the back-wall of the Upper Garage by 10 feet to the south (towards George Washington Boulevard) for additional storage. Garage doors should be included on the addition to create a convenient 'pull-through' area for the operators. This would eliminate the need for drivers to stop traffic on Nantasket Avenue to either back into or out of the garage. A second floor addition is also suggested for office space above the Upper Garage, as stated above. The Lower Garage should be improved, as described in Section 2.4.4. A brick arch between the two maintenance garages with the DCR logo is recommended to maintain the architectural intent of the original design.

3.2.1.3 Yard Area

Due to current restrictions of the yard space, it is recommended that the dumpster and ramp be relocated as shown in Figure 22 for easier access during pickup. The proposed location allows for a trash truck to pull into the maintenance yard from Wharf Avenue and exit to Nantasket Avenue while avoiding the gas pumps. To improve the available area in the maintenance yard, the Boilermaker's House and Small Garage have been removed. For outside storage of materials and equipment, various locations around the site have been strategically chosen to leave open space for vehicle movement.

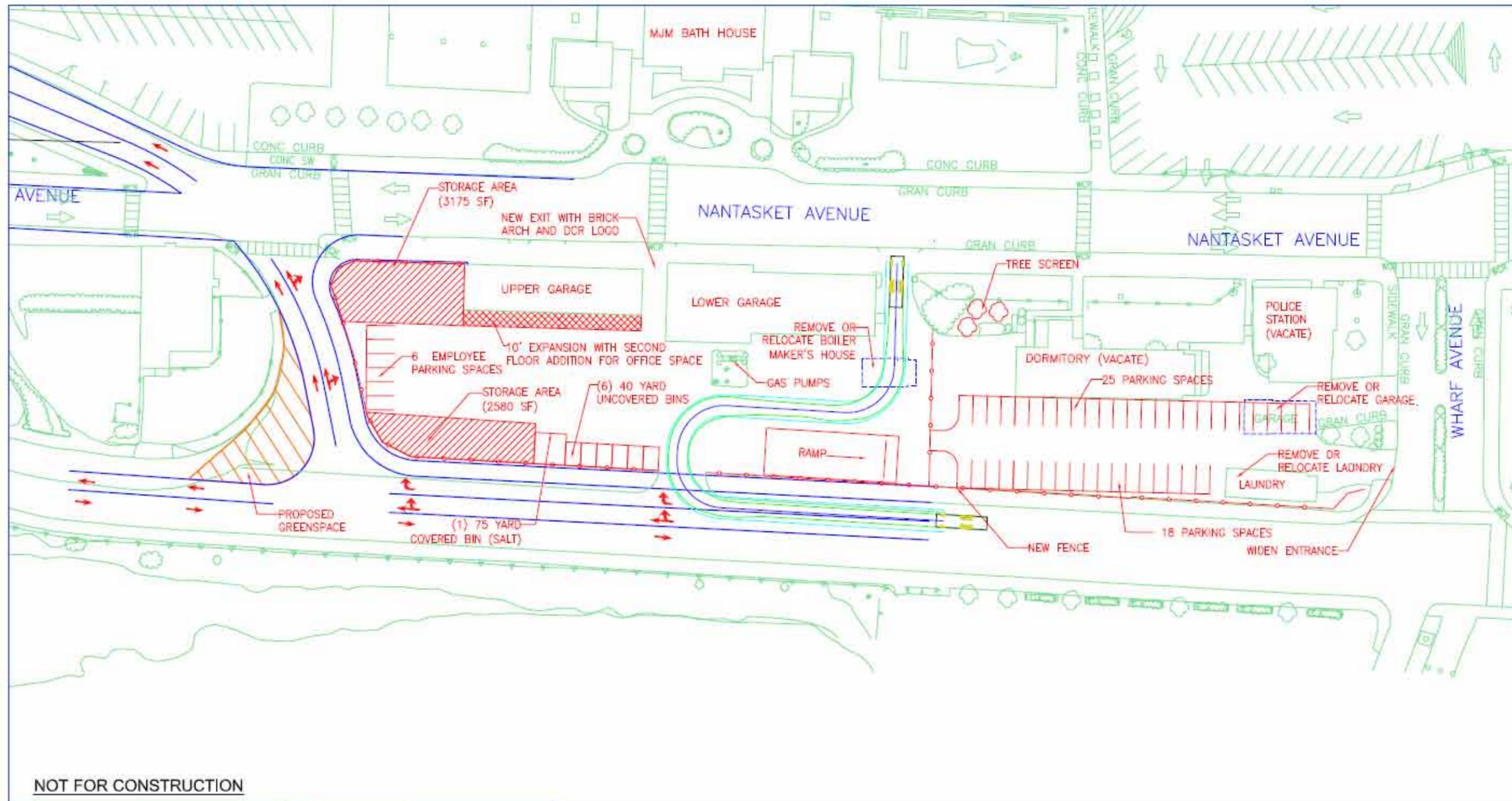
One covered salt bin with a capacity of 75 cubic yards and six bins with a capacity of 40 cubic yard are located on the site for storage of materials throughout the year. A total of 43 parking spaces are provided near the Dormitory Building. Part-time staff parking would be moved to Parking Lot 7 during the summer months. The entrance from Wharf Avenue should be reconfigured to increase the area for turning movements of large trucks. A new fence is shown around the site to increase usable area.

3.2.1.4 Traffic Alternatives

Layout Option 1 in Figure 22 is based on an implemented Traffic Alternative B. This traffic alternative increases the yard area substantially and "squares off" the yard. An exit onto Hull Shore Drive from the maintenance yard was considered in our analysis, but the sight distance for a vehicle pulling out of the maintenance yard was not sufficient.

Under Layout Option 1 combined with Traffic Alternative C (Figure 23) even more yard area would be available. The storage bins are moved to the northern side and the number of additional employee parking spaces within the yard area are increased to 10 (compared to 6 spaces under Traffic Alternative B). Traffic Alternative C also allows for additional storage for beach-related materials or equipment.





NOT FOR CONSTRUCTION

OPTION 1 WITH TRAFFIC ALTERNATIVE B

Nantasket Beach
Seawall Repair and Restoration
Hull, Massachusetts



1. TOPOGRAPHIC MAP: COPYRIGHT 2006, CLE ENGINEERING, INC.
2. ALL PROPERTY LINES, UTILITY PLACEMENT, AND RIGHT OF WAY LOCATIONS ARE APPROXIMATE.

Figure 22: Facilities Layout Option 1 under Traffic Alternative B

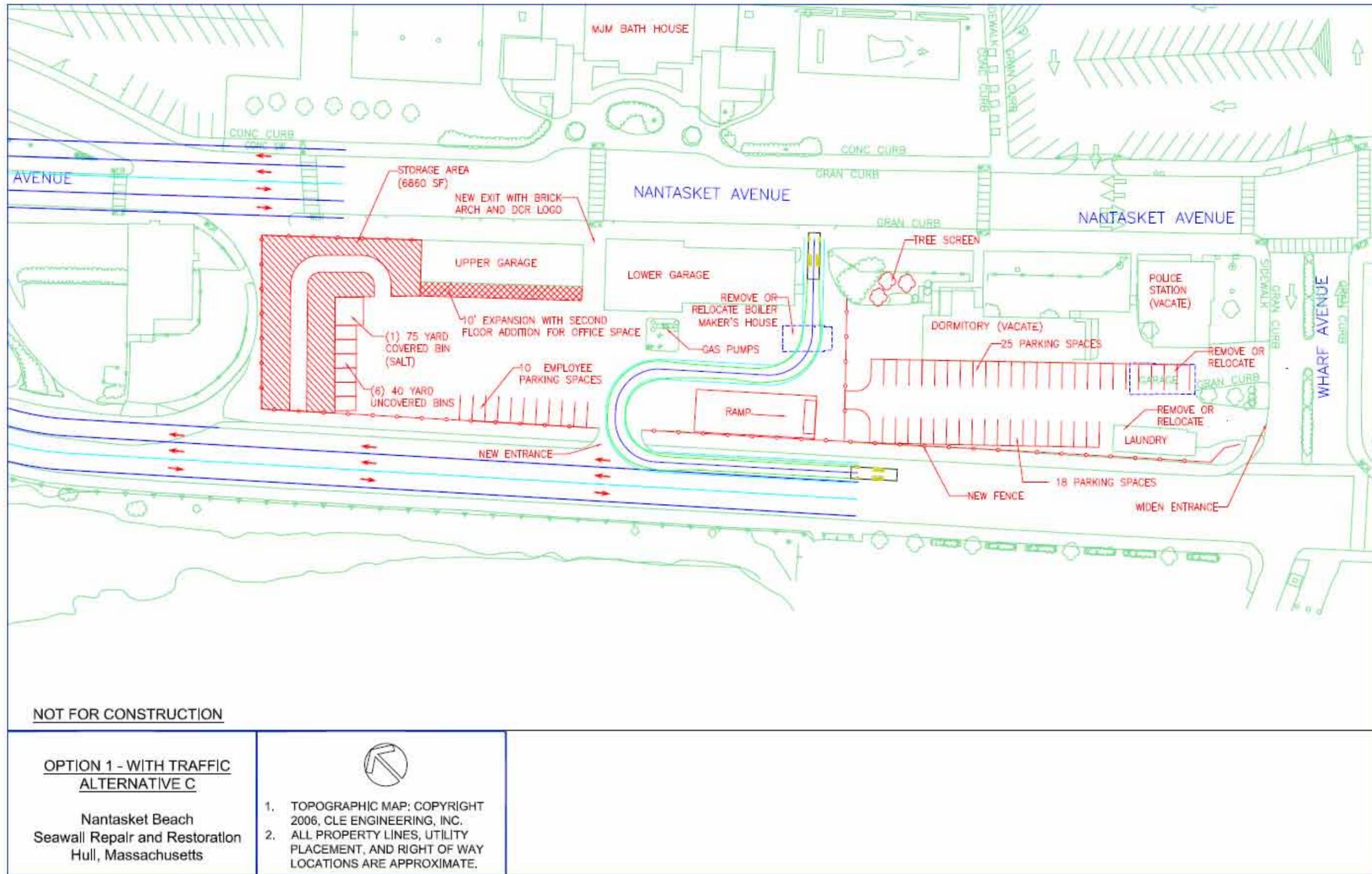


Figure 23: Facilities Layout Option 1 under Traffic Alternative C



3.2.2 Facilities Layout Option 2 – Partial Build-out of Upper Garage

Layout Option 2 is similar to Option 1. It also employs Traffic Alternative B or C and keeps all maintenance facilities on site. The main difference is the location of the office space which would be located in a separate building on site (rather than on the second floor to be added to the Upper Garage). The proposed layout of Option 2 is presented in Figures 24 and 25.

3.2.2.1 Office Buildings and Uses

Option 2 utilizes the Police Station for office space. While the Police Station needs extensive repairs to serve this purpose, DCR staff agrees that the central location and ease of access make it an appropriate 'face' of DCR's operations on the Reservation. The building is also slightly removed from the brick garages and would aid in separating the public from the maintenance operations and equipment. The Dormitory Building would be available for lease to a user and use that aligns with DCR's mission. The Clocktower Building would be available for a similar lease as well. The Small Garage, Boilermaker's House, and Laundry Building are recommended for removal or relocation to increase available yard space.

3.2.2.2 Maintenance Buildings

Due to the overall good condition of the brick Upper and Lower Garages, Option 2 suggests reuse of both with some improvements. Like Layout Option 1, Option 2 expands the back wall of the Upper Garage by 10 feet to the south (towards George Washington Boulevard) for additional storage. Garage doors should be included on the addition to create a convenient 'pull-through' area for the operators. This would eliminate the need for drivers to stop traffic on Nantasket Avenue to either back into or out of the garage. The Lower Garage should be improved as suggested in Section 2.4.4 above. A brick arch between the two maintenance garages with the DCR logo is recommended to maintain the architectural intent of the original design.

3.2.2.3 Yard Area

Due to the current restrictions of yard space it is recommended that the dumpster and ramp be relocated to provide easier access during pickup and avoid the gas pumps. Additional yard space under Alternatives B and C can accommodate a truck entrance to the yard from Washington Boulevard. Trucks would exit to Nantasket Avenue.

To improve the available area in the maintenance yard the Boilermaker's House, Small Garage, and Laundry Building have been removed or relocated. For outside storage of materials and equipment, various locations around the site have been strategically chosen to leave open space for vehicle movement. One covered salt bin (capacity of 75 cubic yards) and six bins (capacity of 40 cubic yards) are located on the site for storage of materials throughout the year.

Under Traffic Alternative B, a total of 26 parking spaces are provided near the Dormitory Building; Alternative C can accommodate 43 spaces. Partial staff parking would be moved to Parking Lot 7 during the summer months. For Traffic Alternative B, the entrance from Wharf Avenue should be reconfigured to increase the area for turning movements of large trucks. A new fence is shown around the site to increase usable area.





3.2.2.4 Traffic Alternatives

Layout Option 2 under Traffic Alternative B (Figure 24) increases the yard area substantially and "squares off" the yard. An exit onto Hull Shore Drive from the maintenance yard was considered but the sight distance for a vehicle pulling out of the maintenance yard was not sufficient.

Under Traffic Alternative C (Figure 25), even more yard area would be available. Aside from a truck entrance from Washington Boulevard and additional parking spaces near the Dormitory Building, the storage bins under Traffic Alternative C are moved to the northern side of the yard and the number of additional employee parking spaces within the yard area are increased to 10 (compared to 6 spaces under Traffic Alternative B). Traffic Alternative C also allows for some future expansion of the maintenance area, if needed.



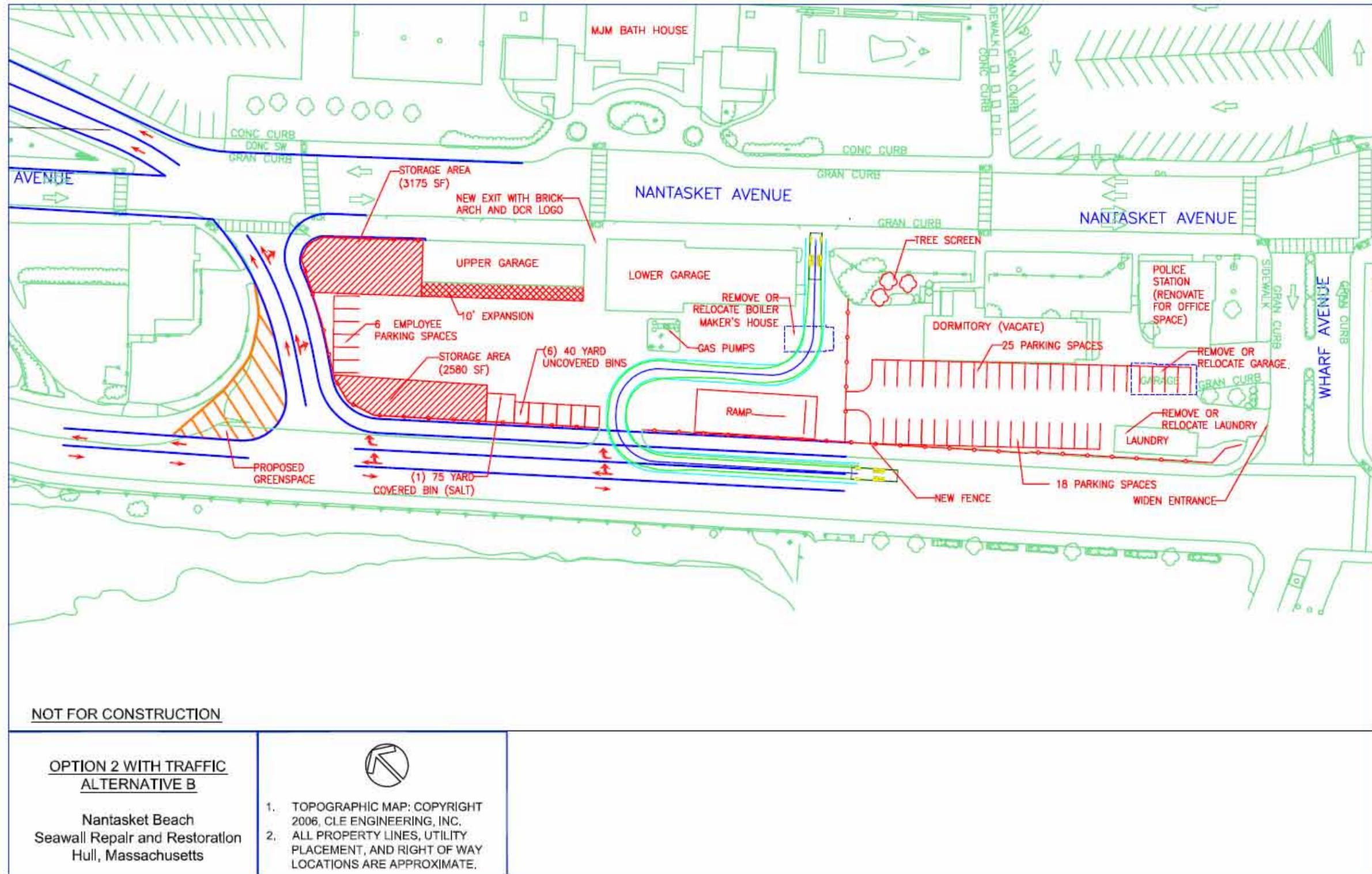


Figure 24: Facilities Layout Option 2 under Traffic Alternative B

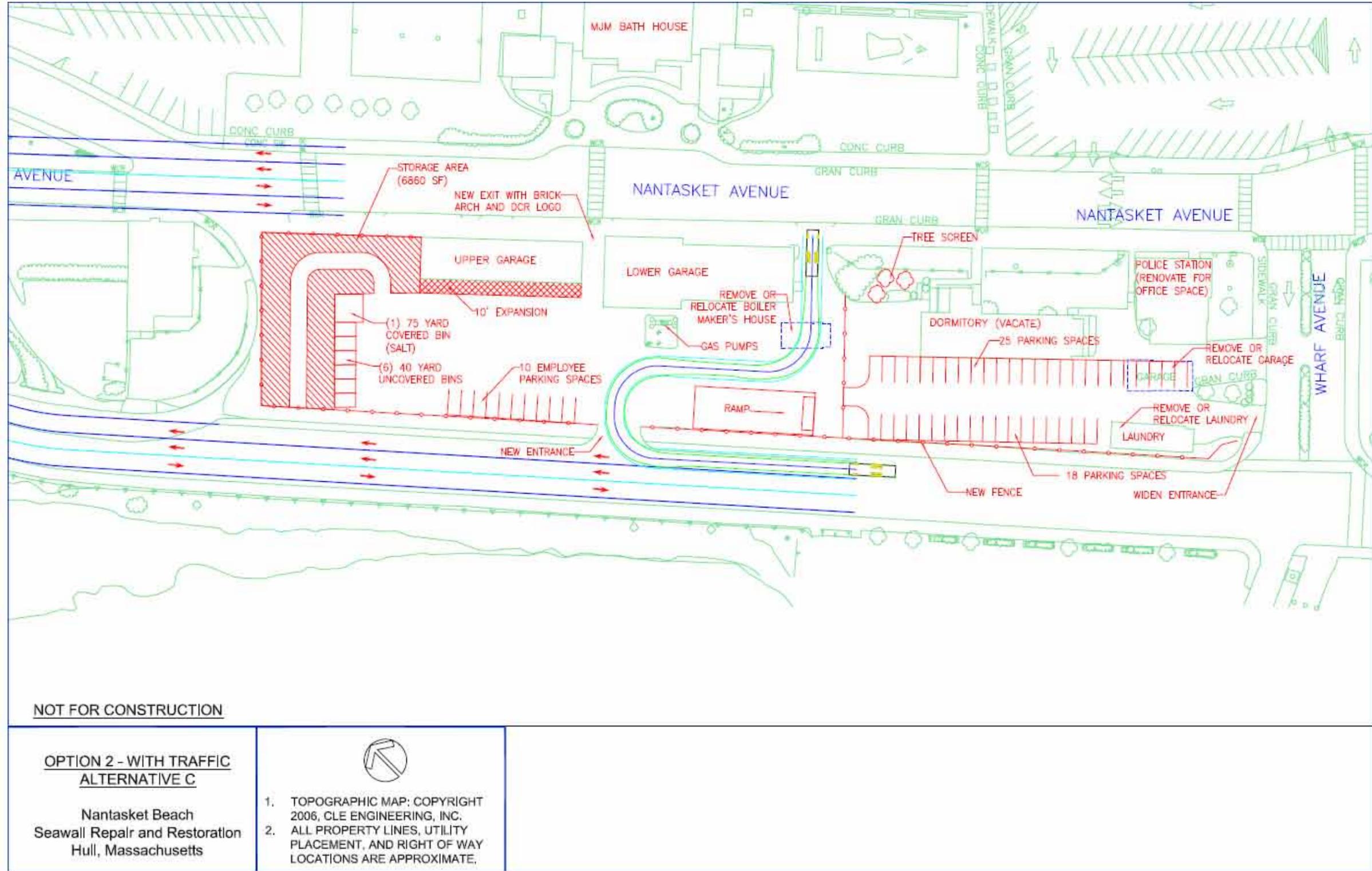


Figure 25: Facilities Layout Option 2 under Traffic Alternative C



▶ 3.2.3 Facilities Layout Option 3 – No Build-out of Upper Garage

Layout Option 3 utilizes the existing maintenance facility yard space with no changes to traffic flow or adjacent roadways (i.e., Traffic Alternative A). To increase open space for maneuvering, the open storage and dumpster have been relocated to Parking Lot 8. The proposed layout for Option 3 is presented in Figure 26.

3.2.3.1 Office Buildings and Uses

Option 3 utilizes the Police Station for office space. While the Police Station needs extensive repairs to serve this purpose, DCR staff agrees that the central location and ease of access make it an appropriate 'face' of DCR operations on the site. It is also slightly removed from the brick garages and would aid in separating the public from the maintenance operations and equipment. The Dormitory Building would be abandoned and available for lease to a user and use that aligns with DCR's mission statement. The Clocktower Building would be available for leasing as well. The Small Garage, Boilermaker's House, and Laundry Building are recommended for removal or relocation to create more yard space.

3.2.3.2 Maintenance Buildings

Due to the overall good condition of the Upper and Lower Garages, Option 3 suggests the reuse of both with some improvements, as suggested in Sections 2.4.4 and 2.4.5. A prefabricated three-bay garage with a heating system is recommended to help alleviate the capacity limitations of the two existing garages.

3.2.3.3 Yard Area

The majority of the outdoor storage is moved to Parking Lot 8. This includes the 75 cubic yard salt storage bin, the six 40-yard storage bins, and all outside storage. By moving the cold storage off site, a larger maneuvering area is created at the current maintenance yard. The Boilermaker's House, Small Garage, and Laundry Building are recommended for removal or relocation to create parking areas and increase mobility on site. The decision to move the outdoor storage to Parking Lot 8 should be coordinated with the Town of Hull to address any neighborhood concerns. A total of 48 parking spaces are shown in the modified yard area.

Appropriate security features are suggested for Parking Lot 8 since it is removed from other DCR operations. A security gate, fence around the site, lights, and cameras are shown in Figure 26 to help secure DCR's property.

Due to the use as a yard area, the 46 public parking spaces would be lost from Parking Lot 8.

3.2.3.4 Traffic Alternatives

Option 3 requires no changes to traffic flow or adjacent roadways.



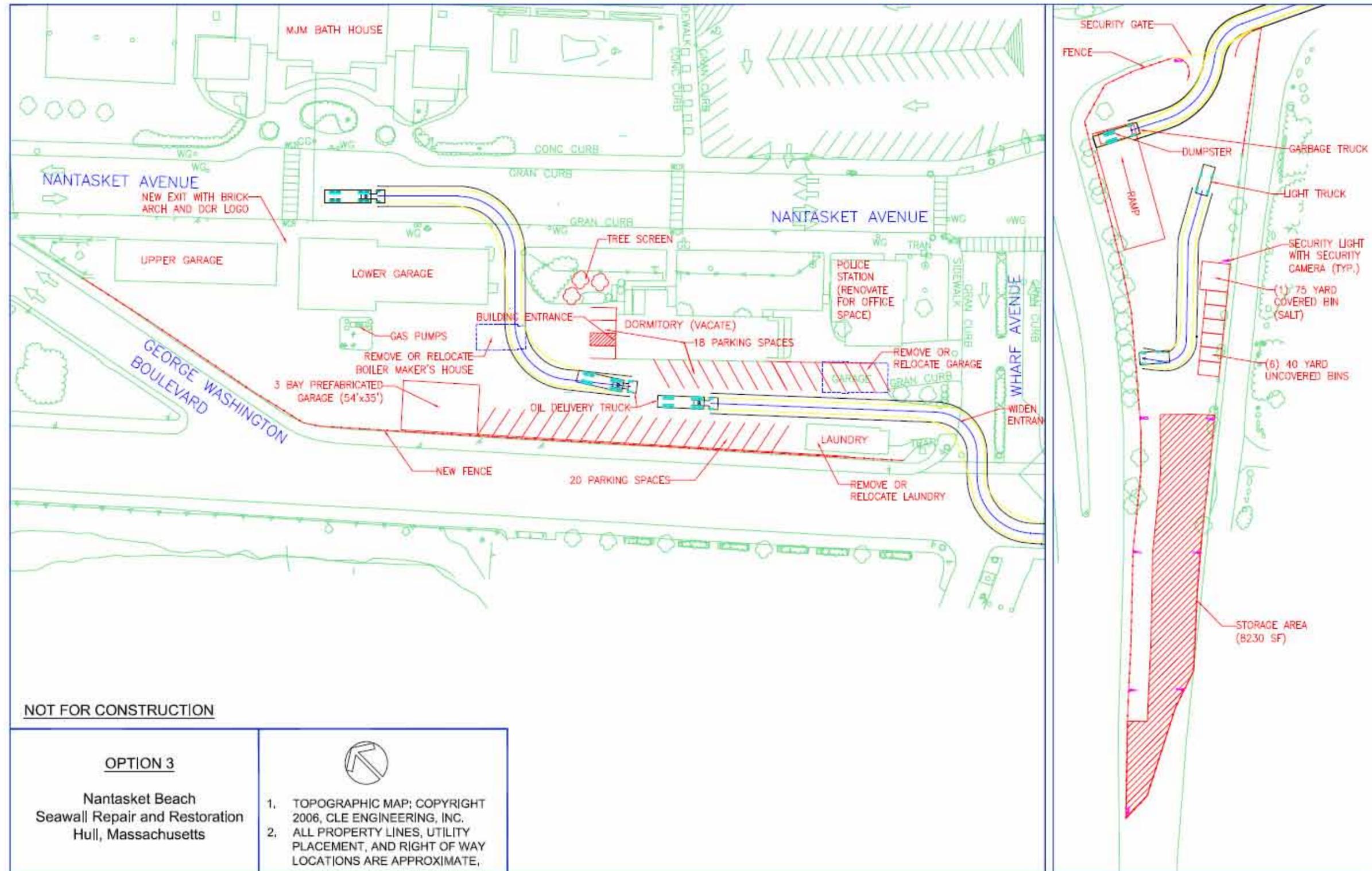


Figure 26: Facilities Layout Option 3 under Traffic Alternative A



▶ 3.2.4 Facilities Layout Option 4 – No Action

Layout Option 4 keeps much of the current facility amenities intact with a few changes to help with the flow of traffic and storage limitations. The proposed layout for Option 4 is presented in Figure 27.

3.2.4.1 Office Buildings and Uses

Option 4 maintains the current operations in the Dormitory Building with remodeling upgrades to the building, as suggested in Section 2.4.1. Option 4 recommends leasing the Clocktower Building and Police Station for causes that align with DCR's mission. The Small Garage, Laundry Building, and Boilermaker's House should be demolished or relocated to improve yard area and mobility.

3.2.4.2 Maintenance Buildings

Due to the overall good condition of the Lower and Upper Garages, Option 4 suggests reuse of both with some improvements, as suggested in Sections 2.4.4 and 2.4.5. A prefabricated three-bay garage with a heating system is also recommended to help alleviate the capacity limitations of the two existing garages.

3.2.4.3 Yard Area

Option 4 utilizes the same amount of space as the current maintenance yard with a few modifications. The dumpster and ramp have been realigned to create a safer path for the pick-up and drop-off of dumpsters. One covered storage bin for salt (capacity of 75 cubic yards) and six storage bins (capacity of 40 cubic yards) have been placed on site for storage of materials. Open storage areas have been strategically placed around the site to leave as much open space as possible for truck movements. The Boilermaker's House, Laundry Building, and Small Garage are removed to help create more yard area as well.

A total of 16 parking spaces are shown in the yard area. The majority of staff parking would be moved to Parking Lot 8. The entrance from Wharf Avenue should be reconfigured to increase the area for turning movements of large trucks. A new fence is shown around the site to increase usable area.

3.2.4.4 Traffic Alternatives

Option 4 requires no changes to traffic flow or adjacent roadways.



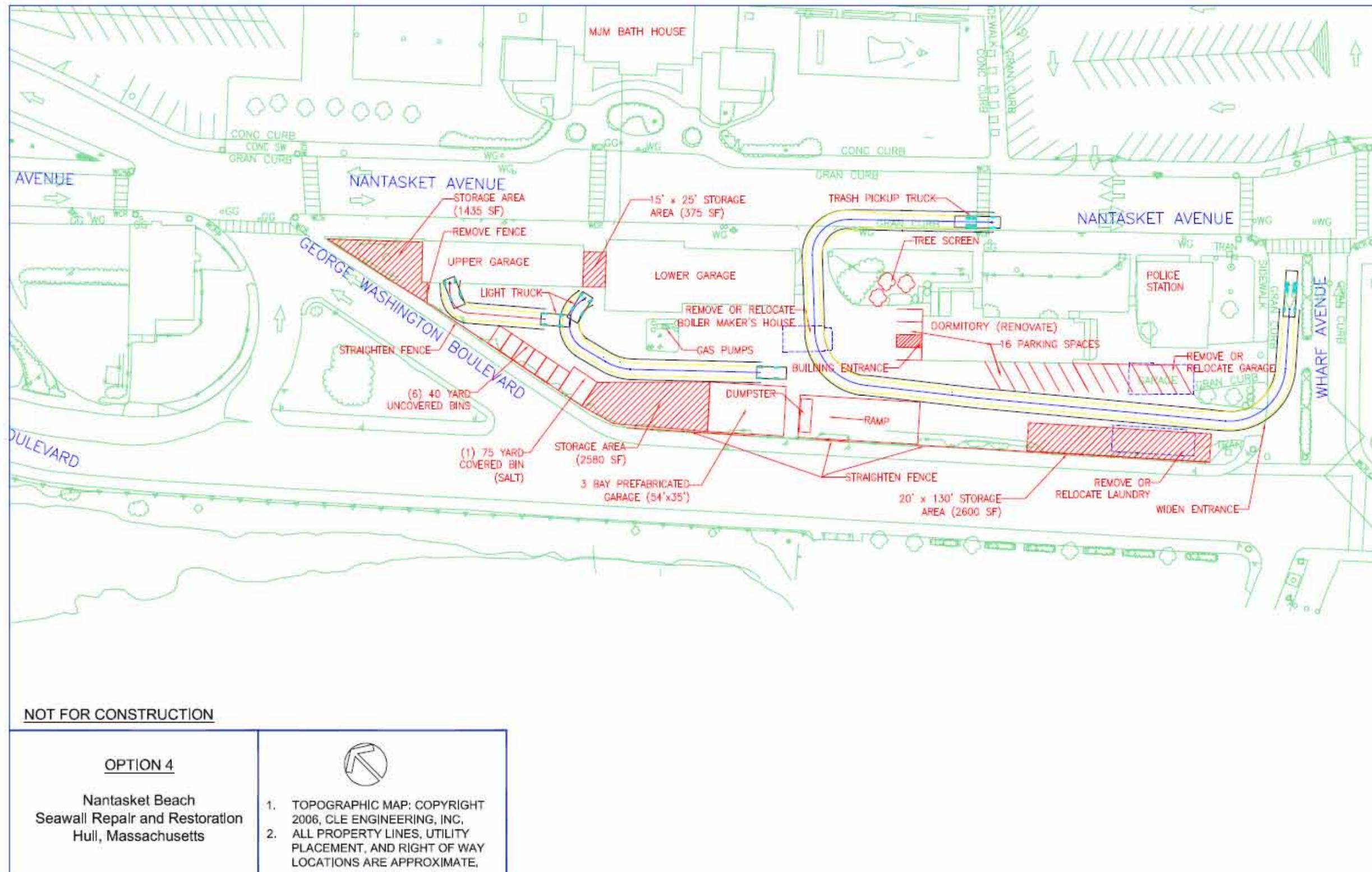


Figure 27: Facilities Layout Option 4 under Traffic Alternative A



▶ 3.2.5 Summary of Facilities Layout Options

Table 11 compares the major components of each option in a summarized form.

Table 11: Summary of Facilities Layout Options				
Description	Option 1: Full Build-out of Upper Garage	Option 2: Partial Build-out of Upper Garage	Option 3: No Build-out of Upper Garage	Option 4: No Action
Traffic Alternative	B or C	B or C	A	A
Dormitory Building	Lease	Lease	Lease	Office Space
Clocktower Building	Lease	Lease	Lease	Lease
Police Station	Lease/Office Space	Office Space	Office Space	Lease
Yard Area	On site	On site	Parking Lot 8	On site
Small Garage	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate
Boilermaker's House	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate
Laundry Building	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate	Demolish/Relocate
Upper Garage	10' expansion, 2 nd story addition	10' expansion	No change	No change
Lower Garage	No change	No change	No change	No change
Additional Covered Storage	None	None	3-bay prefabricated garage	3-bay prefabricated garage

It is not the intent of this document to imply that any option needs to be used as written. This report is expected to be a working document that allows DCR to choose the most advantageous portions from each option, as appropriate. Each stage of an option may be implemented over months or years, thus the document is primarily designed to facilitate discussions for long-term planning of the maintenance operations at the Reservation.





▶ 3.2.6 Considerations for all Future Options

A number of building and yard maintenance improvements discussed in the preceding sections are recommended for near-term consideration. The buildings on site are in need of fairly major repairs just to maintain the deteriorated conditions expected of buildings over 100 years old. Specifically, recommended improvements include the following:

- Build a temporary cover for the salt storage bin to meet environmental run-off regulations until a permanent structure can be constructed.
- Demolish or relocate the Small Garage to allow for additional yard space and to improve circulation.
- Demolish or relocate the Boilermaker's House to allow for additional yard space and to improve circulation.
- Re-route the current garage waste disposal drains to connect to the town sewer line under Nantasket Avenue.
- Relocate the generator from the basement of the Dormitory Building to an area protected from flooding.
- Investigate options for a covered dumpster to reduce odors.
- Work with local public transportation services to coordinate the timing of routes to allow for more convenient access to the Reservation.

While no maintenance repairs are needed at the MJM Bath House, a number of changes were suggested for the near future:

- Hang historical pieces and artwork in the open meeting space to create a more inviting atmosphere.
- Open the doors and invite the public in during normal operating hours.
- Create a station in the open meeting space to sell DCR parking permits.
- Add windows to the utility rooms in each wing of the building to create office space for the rangers and the lifeguard supervisor.
- Reconfigure the currently empty room with the large door to the outside to be a break room for the lifeguards. The inside door would need to be secured to prevent access to the ladies room – lifeguards would be allowed access through the large outer door.





4.0 Uses of Available Buildings

Under all facilities layout options, at least two buildings are available to be leased to interested parties that would help to maintain the buildings and act within the intent of DCR's mission statement. If no satisfactory lease candidates are selected for a building, DCR could use the buildings for internal programs. Possible options for either of these scenarios were discussed for each building by the DCR team and consultants during a workshop on December 3, 2013. The resulting options are described in the following sections and are expected to be expanded upon in years to come.

4.1 Maintained and Operated by DCR

Maintaining the historic value and essence of all buildings on site is a priority of DCR. If maintenance and upkeep of selected buildings is not agreed to in a lease agreement, the repair and remodeling responsibility would fall to DCR. In this circumstance, appropriate uses for each building would need to be found.

The Dormitory Building could be used by DCR as a headquarters for the youth program Student Conservation Association (SCA). The first floor would be used as office space and the second floor would serve as rooming for students visiting the site to participate in the SCA program.

The Police Station could be used by DCR as a visitor's center. It is centrally located and has extensive historical documentation that would be of interest to the public.

The Clocktower Building could be used by DCR for a variety of activities. The current ice cream stand within the building would make a convenient permit sales location. The adjacent first floor area could serve as a visitor's center, office space, storage space, and/or a museum. The second floor would be better suited for office space or storage space.

4.2 Leased by DCR

The project team agreed that the first step in leasing any of the spaces abandoned is to create a public forum to collect ideas on how visitors would like to see the spaces used in the future. All proposals submitted would be required to account for historic preservation and maintenance tasks while fitting within the DCR mission statement. Possible uses that the team felt were appropriate for the area and follow the mission statement have been documented for each building. The intent was only to brainstorm and inspire ideas, not to limit the proposals that are received.

The team felt that the dormitory may be a suitable hostel for international youths visiting the area. The Clocktower Building is historically relevant so use as a museum was suggested to complement the existing carousel. The Police Station building is also historically relevant and could be used as a museum or perhaps as a studio for artists.

A few relevant details pertaining to the possible leasing of these sites for interested parties are:

- Consideration should be given to the adjacent maintenance facility with respect to visitors and lessors.
- Flood insurance would be required for leased occupants. The area is classified as a "high velocity" zone by FEMA and flooding is common.
- Retail uses have historically struggled in the region.





5.0 Summary

Findings and recommendations from the assessment are as follows:

- **Maintenance operations:** Maintenance operations at the Reservation are ongoing year-round to keep the facility functioning as expected for public use. The busiest time of year is during the summer months from Memorial Day to Labor Day but the area is open year-round from dawn to dusk. The maintenance crews are currently using all garage and yard space available and are in need of additional covered/heated storage for critical equipment.
- **Buildings:** There are a number of buildings on site that are not used to capacity. The Dormitory Building is currently utilized by DCR as office space. The Clocktower Building is leased out and the Police Station is closed due to asbestos. Maintenance of the buildings on site is a major factor in any future planning. The buildings are generally 100+ years old and need substantial repairs and upgrades as summarized by DCR maintenance staff and documented in this report. Cost estimates for repairs are not included at this time as they require a more in-depth assessment of the work to be done.
- **Facilities Layout Options:** Four layout options were considered to meet the anticipated needs of DCR staff. Key features of each option are summarized in Table 11 above. Each option may be modified using elements from other options. Under each option at least two buildings would be available for lease to an outside party whose purpose and goals match that of the DCR mission at the Reservation. In all four options the Boilermaker's House and Small Garage are recommended for demolition or relocation to increase yard area.
- **Traffic Alternatives:** Facilities Layout Options 1 and 2 include modifying traffic along George Washington Boulevard to create additional yard space for maintenance activities. Specifically, Traffic Alternative B would re-align the cut-through portion of George Washington Boulevard; Traffic Alternative C would close this cut-through section and instead relocate the intersection between Nantasket Avenue and George Washington Boulevard to the west. Traffic Alternatives C would create the largest amount of yard space and has been suggested by the Town of Hull in previous studies.
- **Repairs to existing buildings:** Aside from long-term layout changes, several repairs and modifications to the facilities are needed, as summarized below:
 1. Dormitory Building
 - Inspection and possible repairs to the roof
 - Assessment of structural integrity of the building
 - Inspection and repair of the brick foundation and support columns due to salt damage
 - Re-pointing of all brick work





- Extensive gutter and fascia replacement on both porches
- Relocate the generator from the basement of the Dormitory Building to an area protected from flooding.
- 2. Laundry Building (if not planned to be demolished)
 - Asbestos abatement (if not completed previously)
 - Inspection and repair of rotten sills
 - Replacing of windows
- 3. Small Garage (if not planned to be demolished)
 - Inspection and repair of rotten sills
 - Replacing of doors and windows
- 4. Lower Garage
 - Inspection and possible repairs to the roof
 - Repair of overhanging eaves
 - Re-pointing of all brick work
 - Repair or replacement of all windows
 - Insulating the structure
 - Installation of a pedestrian-sized door to access the building
- 5. Upper Garage
 - Inspection and possible repairs to the roof
 - Repair of eve supports and gutters
 - Re-pointing of all brick work
- 6. Clocktower Building
 - Testing of the second floor for lead and asbestos
 - Complete remodeling of both floors
 - Roof repairs
 - Possible upgrade of the heating, cooling, and electrical systems.
- 7. Police Station
 - Major rehabilitation work
- 8. Boilermaker's House (if not planned to be demolished)
 - Inspection and repair of rotten sills
 - Inspection and repair of the foundation
- **Other building and yard maintenance improvements:**
 - Construction of temporary cover for the salt storage bin
 - Re-route the current garage waste disposal drains to connect to the town sewer line under Nantasket Avenue.
 - Investigate options for a covered dumpster to reduce odors.



