

Hamilton Affordable Housing Site Feasibility Study

Bay Road Municipal Site / 265 Bay Road, Hamilton, MA / Service Order - 01

Prepared For:

Town of Hamilton, Massachusetts / Planning Department
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Date: 07/21/17

hargidon





Report: Hamilton Affordable Housing Site Feasibility Study / Project 2016.03

Date: 07/21/17

Client: Town of Hamilton Planning Department
577 Bay Road, Hamilton, MA 01982

Site Location: Bay Road Municipal Site / 265 Bay Road / Service Order - 01

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A-1 Introduction

This report summarizes an initial analysis and feasibility study of the municipal site at 265 Bay Road in Hamilton, prepared by Hargidon Architecture + Design for the Planning Department of the Town of Hamilton, Massachusetts. The site was analyzed for its potential to support an affordable housing development.

After examining the conditions of the site through field visits, aerial photographs, historic maps, adjacent areas, soil testing, studies of existing plans and studies of local planning documents, as well as interviews and conversations with town officials and neighbors who border the property, findings are presented in the following main sections:

B / Project Background
C / Site Context
D / Site Analysis
E / Site Access + Connections
F / Feasibility Issues
G / Potential Schemes
H / Senior Housing
J / Conclusions

Some of the existing documents that helped us to understand the site and its conditions are listed below:

- Chapter 40B - Subsidized Housing Inventory / Department of Housing and Community Development / 12/05/14
- Housing Production Plans / Department of Housing and Community Development
- Hamilton Housing Production Plan Update / Metropolitan Area Planning Council / 04/13
- Hamilton Wenham Trails Guide / Essex County Trail Association / 2010
- Recreation Master Plan Report for Hamilton Wenham / Gale Associates / 09/27/12

The team consists of:

- Michael Arvid Hardiman, AIA NCARB
- Peter Conant, Architect

The team gratefully acknowledges the help, advice and guidance from the following individuals from the Town of Hamilton and with apologies to anyone we may have missed:

- Patrick Reffett, Director of Planning and Inspections
- Sean Timmons, Recreation Director, CPRP
- Dor Fox, Coordinator, Hamilton Affordable Housing Trust
- Mary Beth Lawton, Council on Aging
- Phillip Stevens, Fire Chief, Hamilton Fire Department
- Michael Harvey, Superintendent, Hamilton-Wenham Regional School District
- Jason Waldron, Director of Maintenance, Hamilton-Wenham Regional School District

B-1 Subsidized Housing Inventory

Meeting The Requirement For Subsidized Housing

The State Executive Office of Housing and Economic Development produces the Subsidized Housing Inventory (SHI) as a way to determine a town's standing with regards to the Chapter 40B state statute; the figures are as of 2014.

Hamilton Total Housing Units: 2783 Units
SHI Units: 84 Units
SHI as percentage of Total Housing: 3%

In order to meet the state mandated goal of 10% SHI Units (278 Units), an additional 7% (194 Units) would have to be built.

As the addition of new units would push up the total number of housing units, additional units required is more like 215.

Department of Housing and Community Development
Chapter 40B Subsidized Housing Inventory (SHI)
as of December 5, 2014

Community	2010 Census Year Round Housing Units	Total Development Units	SHI Units	%
Halifax	2,971	28	28	0.9%
Hamilton	2,783	124	84	3.0%
Hampden	1,941	60	60	3.1%

2793 Total Existing Units + 194 New Units = 2977 Total Units.

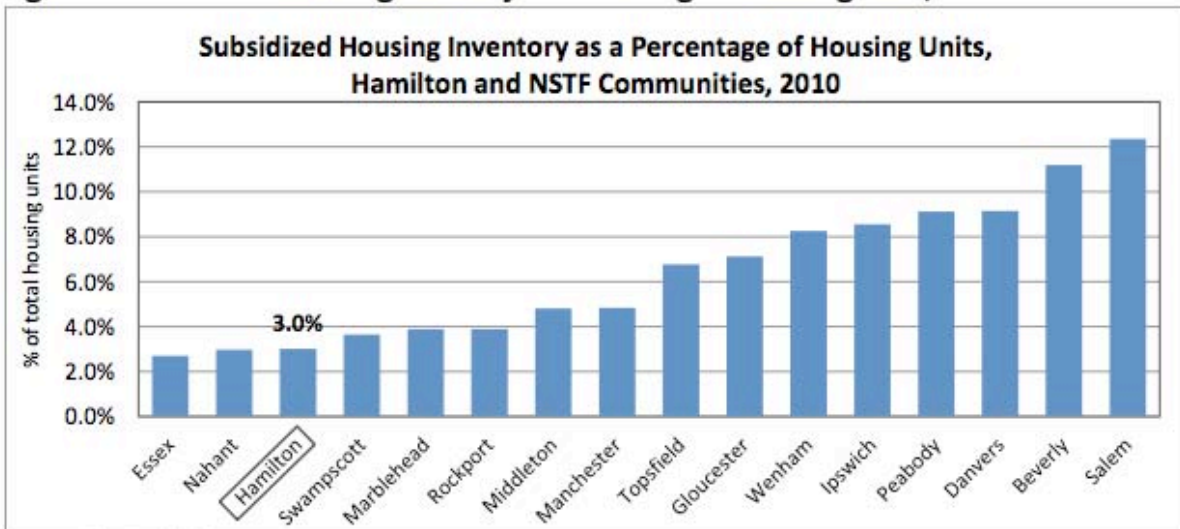
10% of Total Units would be 297 SHI Units required.

297 – 84 (the number that are built already) = 213 required.

Hamilton Subsidized Housing Compared to Other Towns

As of 2010, and at 3.0% (subsidized housing inventory as a percentage of total housing units) Hamilton is near the low end in terms of providing subsidized housing in comparison to other Northshore towns.

Figure 22: Subsidized Housing Inventory as Percentage of Housing Units, 2010



Source: DCHD, 2010

It should be noted that only 2 towns on the Northshore actually met or exceeded the minimum requirement SHI (10%) for affordable housing (Beverly and Salem) as of 2010.

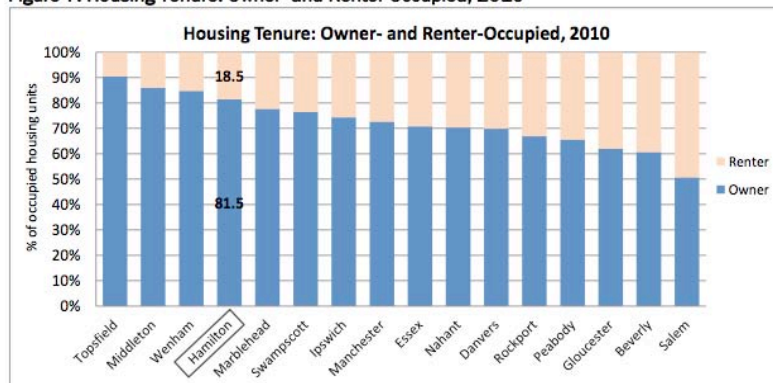
B-2 Housing Production Plan

In 2013, the Metropolitan Area Planning Council prepared an update report on the Housing Production Plan for Hamilton.

There are a few key items within the plan, which helped to educate us about the unique housing situation in Hamilton, and the specific kind of subsidized housing that town might require.

Owner-Occupied vs Renter-Occupied Housing

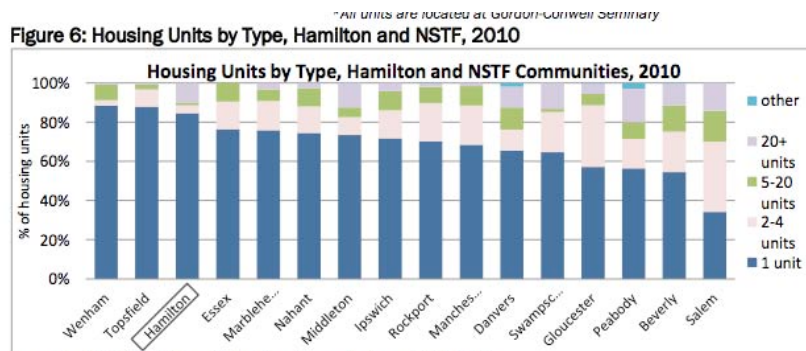
Figure 7: Housing Tenure: Owner- and Renter-Occupied, 2010



Source: American Community Survey 2006-2010

A high percentage of the town's housing has been owner-occupied, higher than all but 3 other towns on the Northshore.

Housing By Typology (number of units)

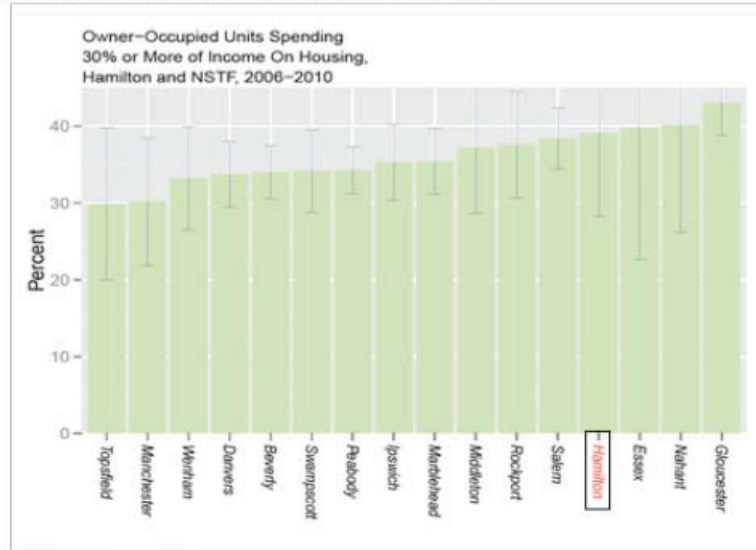


Source for Table 8 and Figure 6: American Community Survey 2006-2010

A high percentage (over 80%) of the town's housing has also been single family.

Percentage of Households that spend 30% (or more) of their Income on Housing

Figure 16: Cost Burdened Owner-Occupied Households

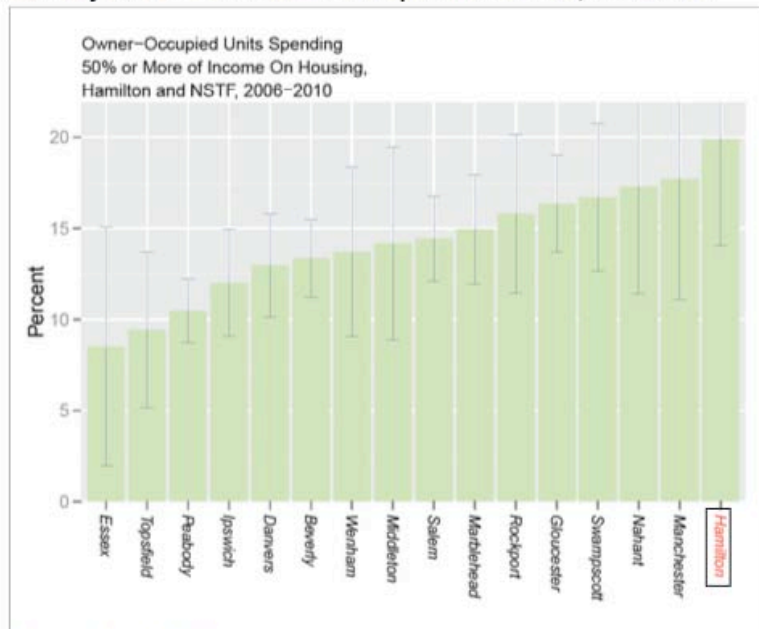


Source: ACS 2006-2010

From the period 2006 – 2010, just under 40% of Hamilton households spent 30% or more of their income on Housing, near the high end of towns surveyed.

Percentage of Households that spend 50% (or more) of their Income on Housing

Figure 17: Severely Cost Burdened Owner Occupied Households, 2006-2010

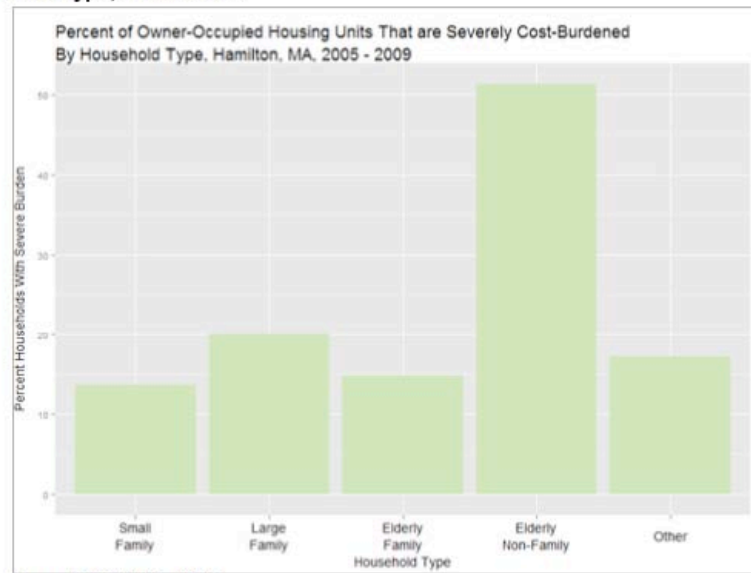


Source: ACS 2006-2010

Of the Northshore towns surveyed, Hamilton had the highest percentage (20%) of 'Severely Cost Burdened' Owners.

Severely Cost-Burdened Housing by Household Type

Figure 21: Owner-Occupied Housing Units that are Severely Cost-Burdened By Household Type, 2005-2009



Source: CHAS 2005 - 2009

This chart indicates that over 50% of Elderly people (in owner-occupied housing where they are not living with family) are severely cost-burdened in comparison to other social groups, whose percentage does not rise above 20%.

C-1 Historic Context

The Town & The Site

The Site is situated close to the center of town where Main Street, Walnut Street and the railroad station converge to form the 'knuckle' of the town center. See point 'A' on the map.

Boston & Maine Railroad / Main Line had passenger and freight stations in the town, the passenger service currently operated by the MBTA and in use mainly by commuters into Boston. Stop is the South Hamilton Station on the Newburyport Branch out of North Station, Boston.

A former Branch Line called the Essex Branch split off from the Main Line at South Hamilton and skirted the Southern edge of the site. The tracks have long since been removed and at least this section is now a walking / biking trail (not a formal rail trail) that connects the center of South Hamilton with the road to the Myopia Country Club. See point 'B'.

The Trolley Line ran up Main Street from Wenham, left on Railroad Avenue, right on Willow and Left again on Asbury Street, heading off in the direction of Asbury Grove. See point 'C'.

It's clear that in order to avoid conflict with the Boston and Maine tracks, the trolley did not continue northeast on Main Street and this may explain the somewhat light development in that direction. Most of the turn of the century residential development seems to have been concentrated to the western part of town, away from our site. See point 'D'.

The area immediately southwest of the 'knuckle' was characterized by light industry and commercial development. See point 'E'.

The zone to the east of the Boston and Maine tracks was characterized by farmland and woods and did not really get developed into a residential zone until the mid-twentieth century. Larger lots and houses that are spread out horizontally characterize the eventual suburban style development in that area. See point 'F'.

Historic maps seem to indicate that the pond (in what is currently Patton Park) drained by means of a stream heading nearly due south across the Site, eventually joining the Miles River. That same stream may currently run in an underground culvert in its traverse across the Site.

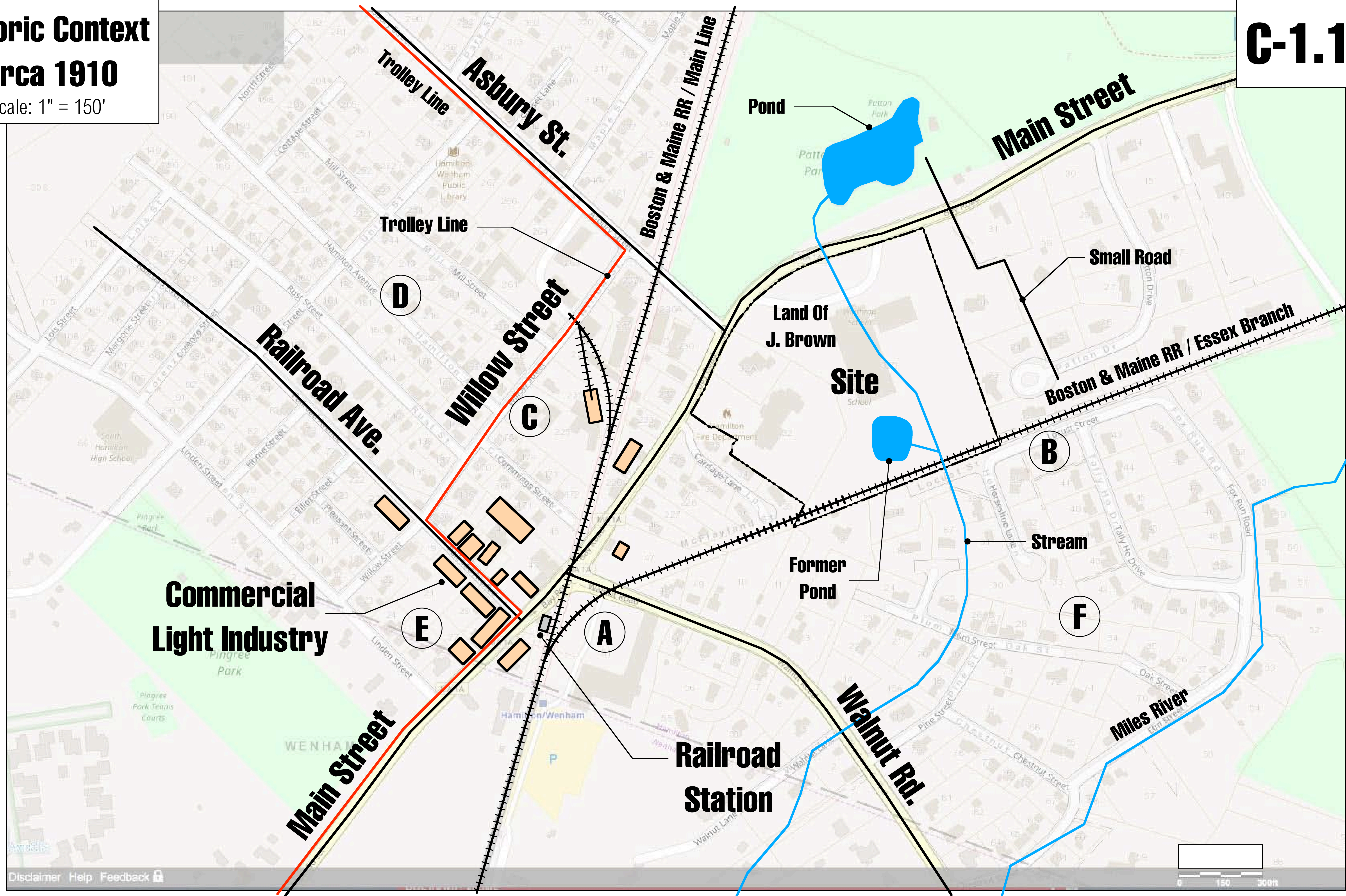
Historic Images

The Myopia Hunt Club, founded in 1882, is a neighbor to the site on the northeast side. Large open fields edged by woods characterize the grounds. The town has many old, stately houses dating back to the early to mid-18th century. The images of the B&M train & trolley give a good sense of the light demand placed on mass transit in the early days.

Historic Context Circa 1910

Scale: 1" = 150'

C-1.1



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Town Of Hamilton, Massachusetts



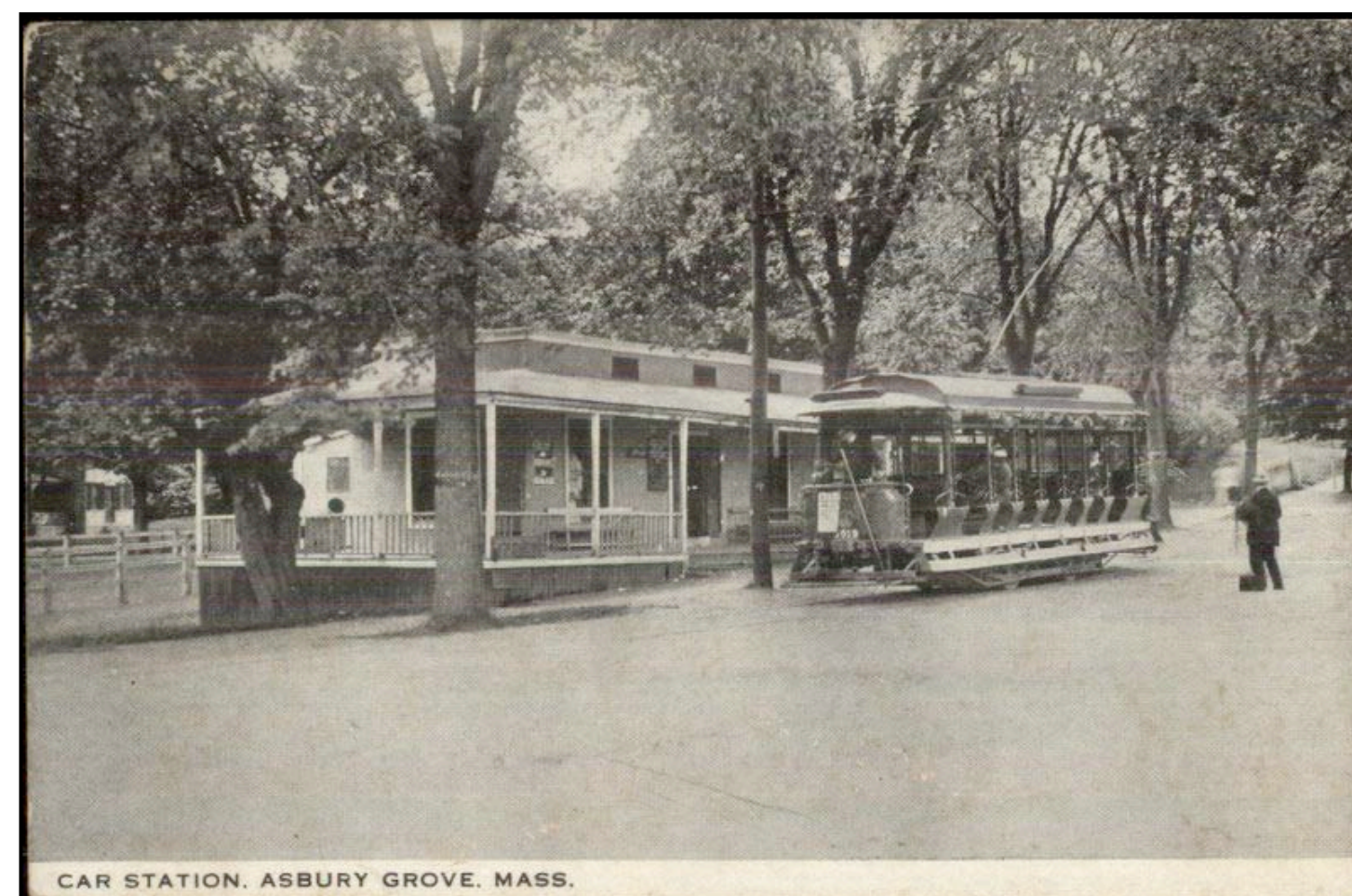
Myopia Hunt Club



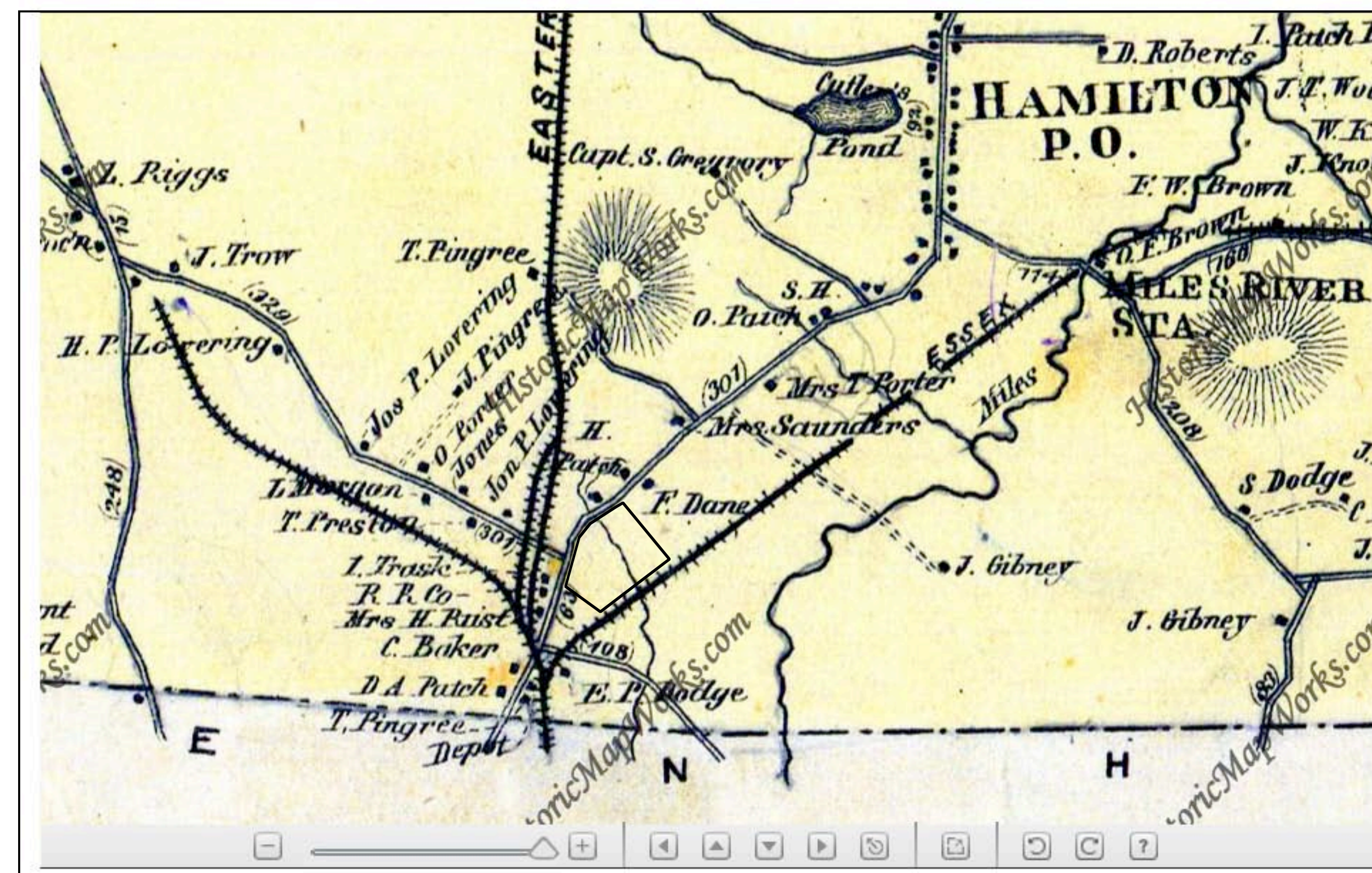
Boston & Maine Railroad



Myopia Hunt Club



Trolley Line



Hamilton Map, 1875



Oldest House in Hamilton

C-2 Land Use Today

Starting at the intersection of Walnut Road and Main Street, which can be considered the dead center of South Hamilton, the surrounding 2-3 blocks are characterized by commercial development centered on Main Street, and Railroad Avenue (yellow on the diagram).

Nineteenth century housing stock is concentrated in the 5 or so blocks to the west of the commercial development, with twentieth century housing surrounding that mainly towards the east.

The town is blessed with fingers (or pockets) of green space that reach almost into the very center of South Hamilton. These can be identified as:

- Patton Park
- Myopia Hunt Club
- Ledyard Farm
- Cheeseman Field
- Farm Property (between Main Street and the Rail Line)

The close proximity of the Miles River and its associated wetlands to the center of town (towards the southeast) lends another aspect of green space to the center of South Hamilton.

The acre or so of woods at the rear of the Site is another pocket of green that serves to increase the value of the Locust Street Trail in terms of a feeling of being in the woods.

The majority of the Site also serves to increase the presence of green space into the center of South Hamilton since it is:

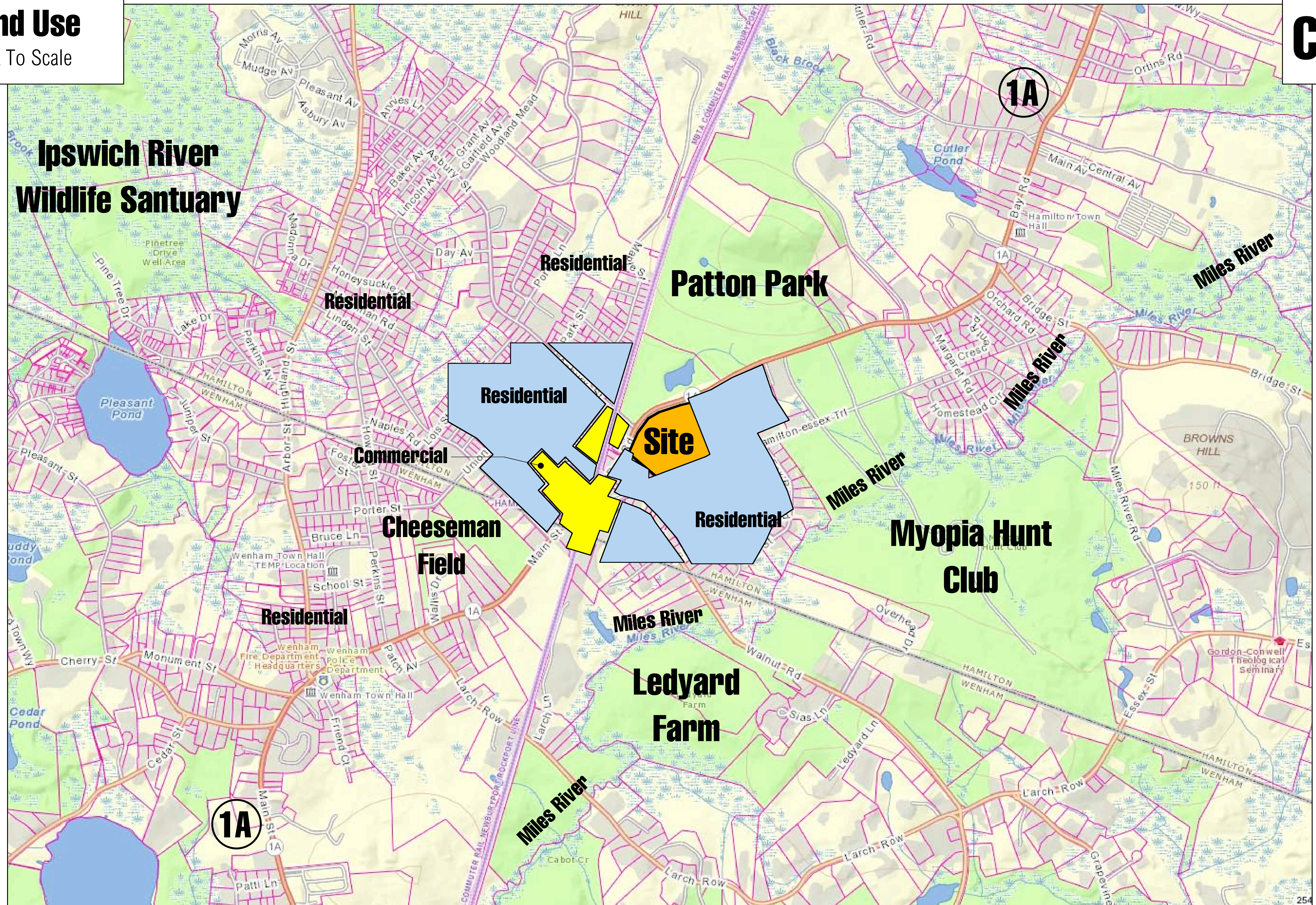
- 1) Directly adjacent to the main road (Bay Road)
- 2) Composed of quite a high quantify of green lawn

Since the presence of green space in the middle of the town is such a defining characteristic, we believe it could be argued that to reduce that green space by building over a large quantity of the Site or of taking down the wooded portion of the parcel, would go some way to changing the character of the town.

Land Use

Not To Scale

C-2.1



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Town Of Hamilton, Massachusetts

C-3 Landmarks

An overlay of the site surrounding area with concentric rings representing the time it takes to walk outward from the center of the site reveals the time it takes to walk to many of the town's landmarks:

- Public Safety Building 1.5 minutes
- Senior Center 2 minutes
- Community Center 3 minutes
- Post Office 5 minutes
- Railroad Station 5 minutes
- Food Shopping 4.5 minutes
- Catholic Church 8 minutes
- Public Library 9 minutes

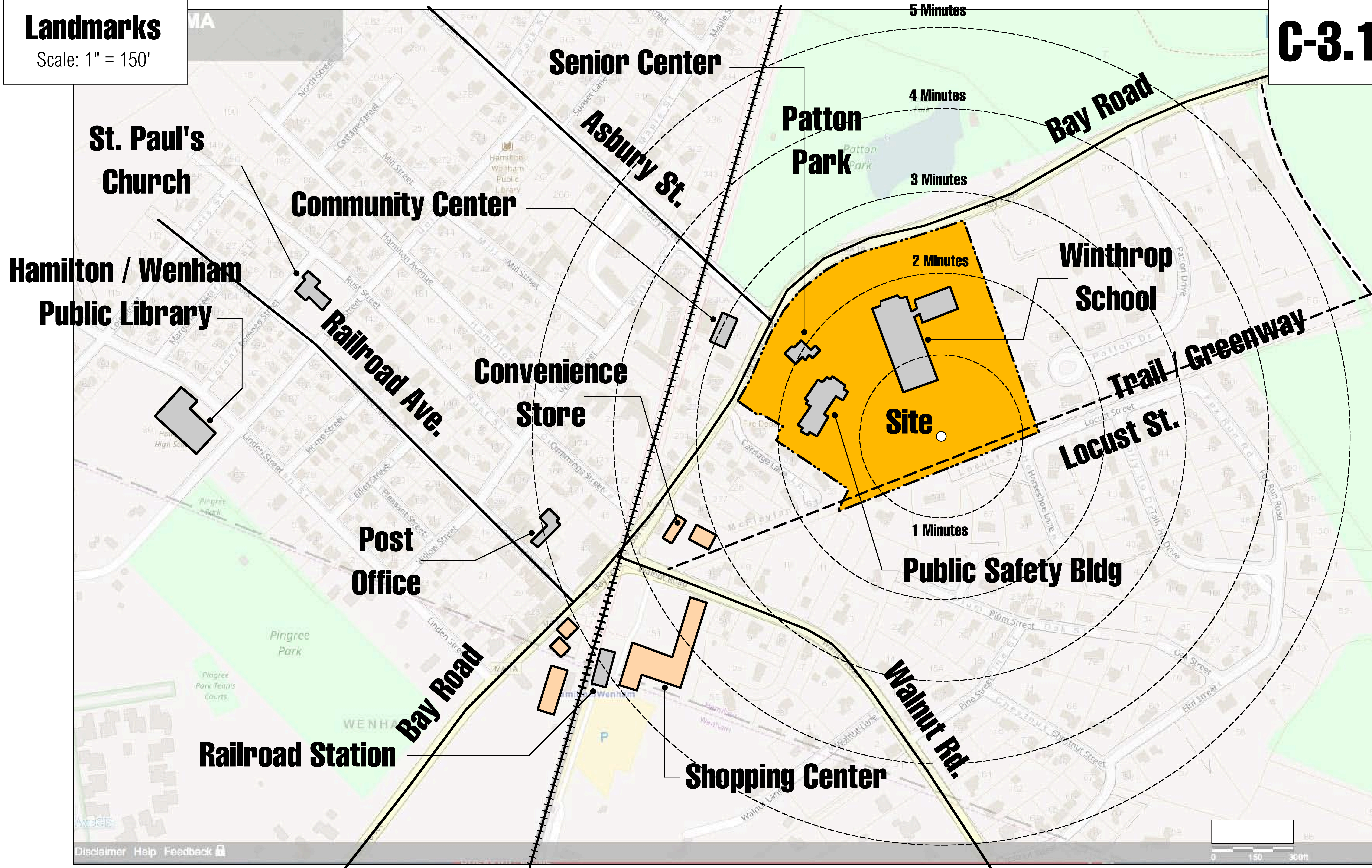
It does point up that the site is particularly strong in its connection to services that affordable housing dwellers would need and the particularly strong connection to mass transit for people who might choose or need to work in other communities or commute into Boston.

The diagram also indicates that maintaining or improving the Locust Street Greenway / Trail would serve to improve the ability of housing dwellers on the site to get to their destinations more efficiently.

Landmarks

Scale: 1" = 150'

C-3.1



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Town Of Hamilton, Massachusetts

D-1 Site Location

As has been previously pointed out, the Site is situated close to the center of town where Main Street, Walnut Street and the railroad station converge to form the 'knuckle' of the town center. See point 'A' on the map.

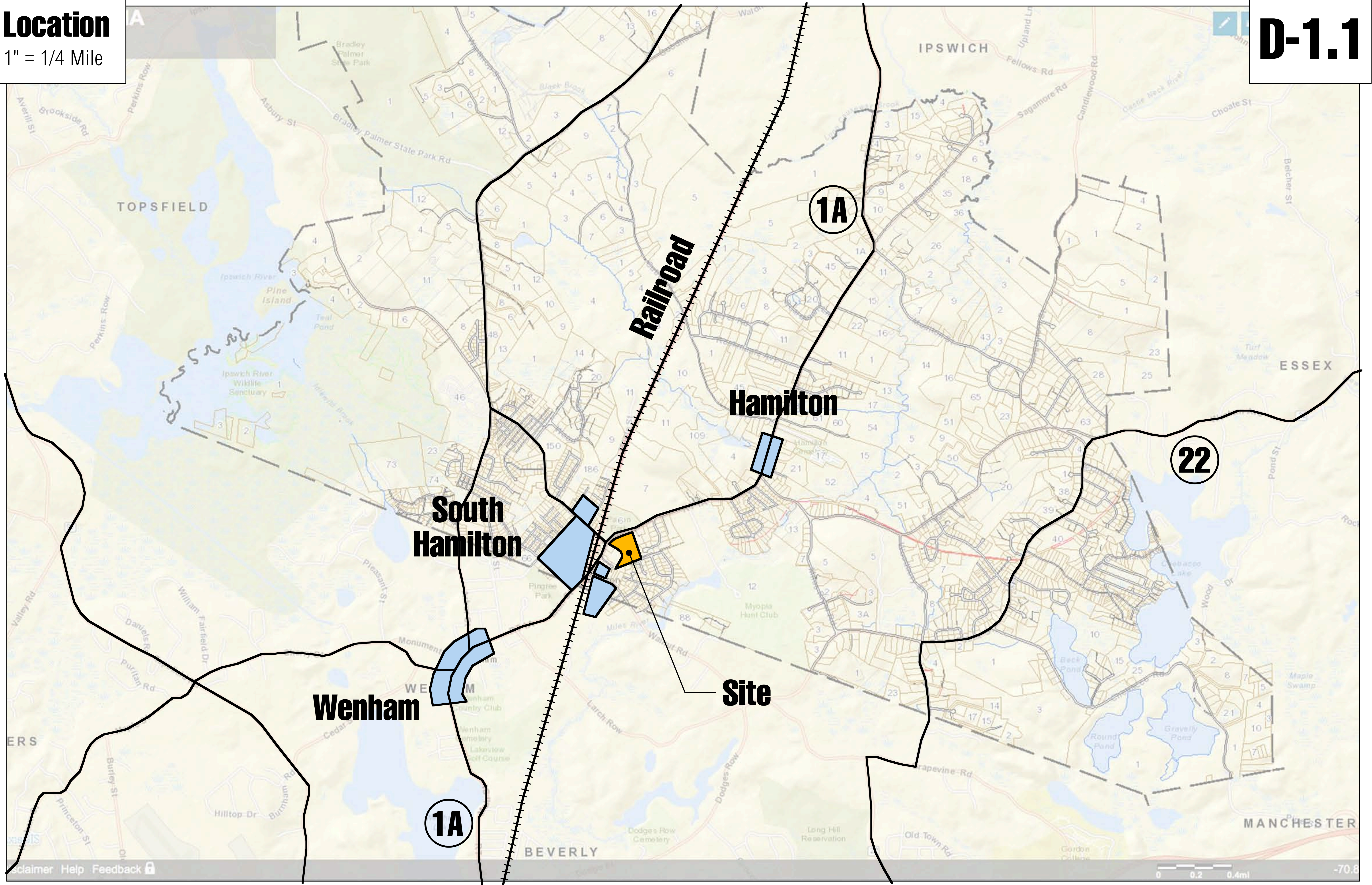
While the governmental heart of Hamilton is approximately at the center of the town, the more active commercial center of the town is about a mile to the southwest, very close to the town line with Wenham.

In terms of walkability and proximity to the services that will be most needed, this site (probably more than any other that could be found) is ideally located.

Site Location

Scale: 1" = 1/4 Mile

D-1.1



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D-2 Site Metrics

The Site is bounded on the northwest by Bay Road, on the south by the gas-line / trail and on both the southwest and northeast by it's boundary with residential development.

The entire Site is roughly 16.7 acres, of which a little over 4 acres is potentially available to be considered for further development.

A small portion of this 'available' area (roughly 1/2 acre) is located within the lot upon which sits the Public Safety Building. The larger part of the 'available' area (roughly 3-1/2 acres) sits upon the lot upon which sits the Winthrop School.

It should be noted that this 4 acres is prior to any real evaluation, which is following in the remainder of the study.

Site: Basic Facts

Scale: 1" = 75'

D-2.1

Total Site

Total Area:
727,360 Square Feet
16.7 Acres

Potential Usable Area:
4.08 Acres

Senior Center Lot

Total Area:
42,339 Square Feet
0.97 Acres

Potential Usable Area: *
0 Square Feet
0 Acres

School Lot

Total Area:
527,518 Square Feet
12.1 Acres

Potential Usable Area: *
156,202 Square Feet
3.58 Acres

Public Safety Bldg Lot

Total Area:
156,288 Square Feet
3.59 Acres

Potential Usable Area: *
21,872 Square Feet
0.50 Acres

Bay Road / 1A

Locust Street

Note: 'Potential Usable Area' is prior to evaluation of the site.

Disclaimer Help Feedback

0 100 200ft

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Town Of Hamilton, Massachusetts

D-3 Natural Features

Topography & Drainage:

To casual observation, the site is essentially flat; however it does slope ever-so-slightly from a high point in the north (along Bay Road) to the edge of the Trail in the southwest. The significance is that ground water present in the majority of open space will tend to run into the wooded section at the south edge, allowing recharge of ground water on the property, to some extent. (see Stormwater Sheets for more on this)

A pond, previously located nearby the proposed housing site, in these woods, has dried up but the depression where it existed is still visible.

Trees & Lawn:

While the south edge of the property is characterized by heavy woods, the north edge of the property (along Bay Road) has a much lighter 'sprinkling' of trees, that nevertheless, gives a definition to the edge of the road and is very much in character with the continued edging of trees further to the north.

Behind the trees that line the road, a fairly good expanse of lawn surrounds the three (3) main structures on the site. The combination of trees at the road and lawn behind gives a sense of expansiveness and depth that is key to providing a sense of open space in the center of town.

The proportion of open space to the overall area of the lot (once area for buildings and parking is subtracted) is approximately 60%.

While there is very little lawn area directly behind the PSB, due to the woods, there is quite a bit of open lawn area behind the school.

Sun Path:

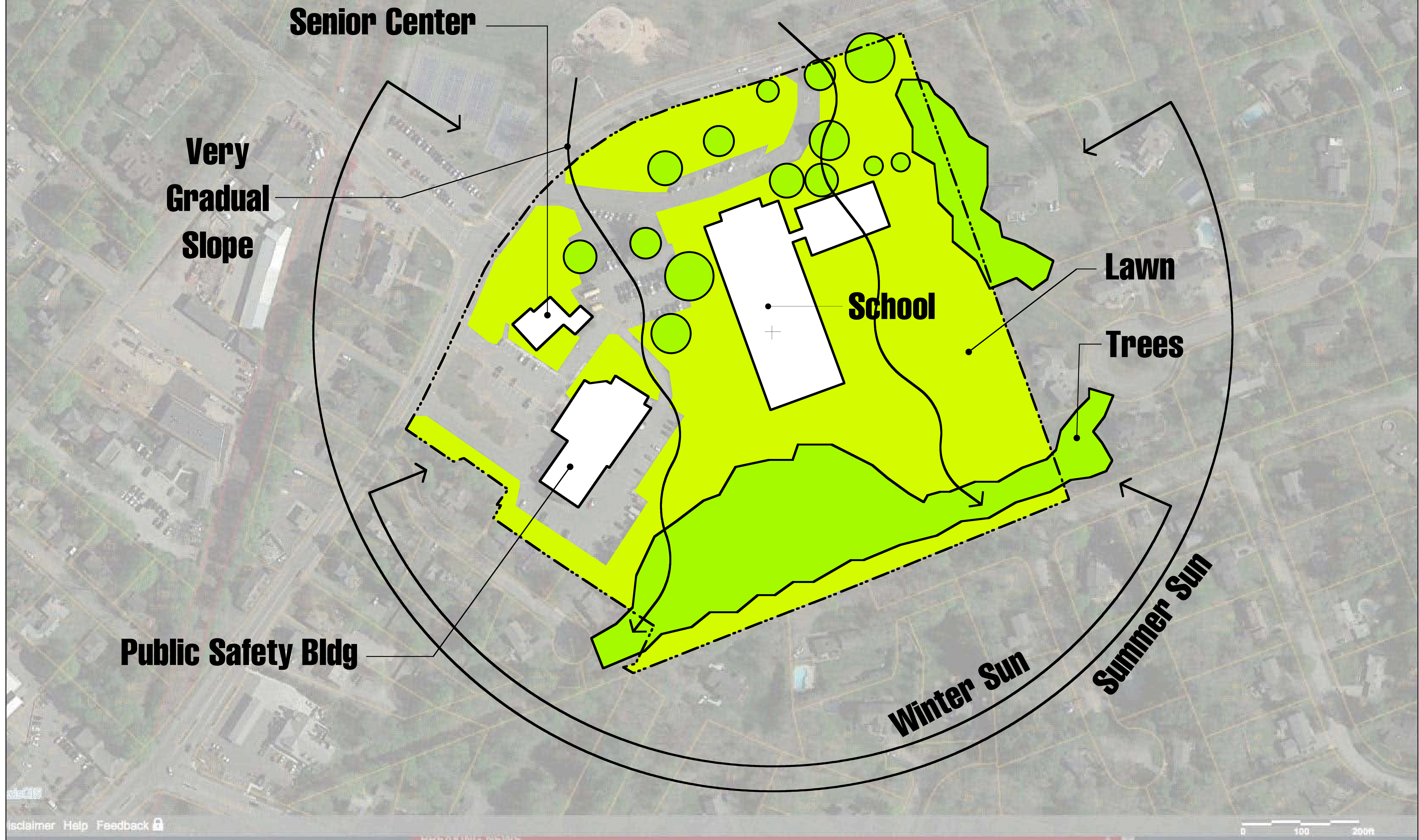
With the density of trees at the southern edge of the site, and the site's orientation to the sun path, the southern edge of the site gets quite a bit of shade, at least within 20 – 30' north of the treeline. The rest of the site to the north is fairly well exposed to full sun exposure.

In the early mornings and late afternoons, the site tends to get shaded (somewhat) by the trees on residential plots directly to the east and west.

Natural Features

Scale: 1" = 75'

D-3.1



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D-4 Soil Testing

A decision was taken to do soil testing in the area of the site where we felt there was the most promise for locating housing without exacerbating the storm water drainage situation. In order to not make the storm water situation any worse, the area directly behind the school was deemed to be the path of least resistance because of the possibility of disturbing the existing tree cover as little as possible.

The area directly behind the Public Safety Building does not afford this same possibility, being mostly thickly wooded.

A decision was taken to do soil testing on the site for two main reasons:

- 1) We had been alerted to the strained storm water situation in the western part of the site and we wanted to see if this same situation existed in the eastern portion directly behind the school.
- 2) We wanted to determine without any doubt, the suitability of the soil in terms of bearing capacity.

The Tests:

The team hired George Ricker, Jr. to assist us with the test pits, of which 4 were dug, each being approximately 18" wide and about 6' long. Each pit was dug to a depth of approximately 10'.

Results:

Water Level: For all 4 pits, water was encountered between 5'-6" and 8'-6", putting the level of water well below the bottom of potential concrete footings.

Soil Quality: In all 4 pits, the top layer was 1' of black topsoil. Below this, there was some variability in what was found but for the most part, we encountered either a mixture of reddish-brown subsoil and gravel to a depth of about 3' or 4'. In only 1 of the pits did we encounter a layer of clay between 1' and 2.5' below the surface. Below the 4' level, sand was primarily encountered- either wet, fine, riverbank sand or gravelly sand. Overall, the soil is quite ideal for locating housing, given the anticipated loads.

The details of the results of the tests can be seen from the graphic profiles on the next sheet.

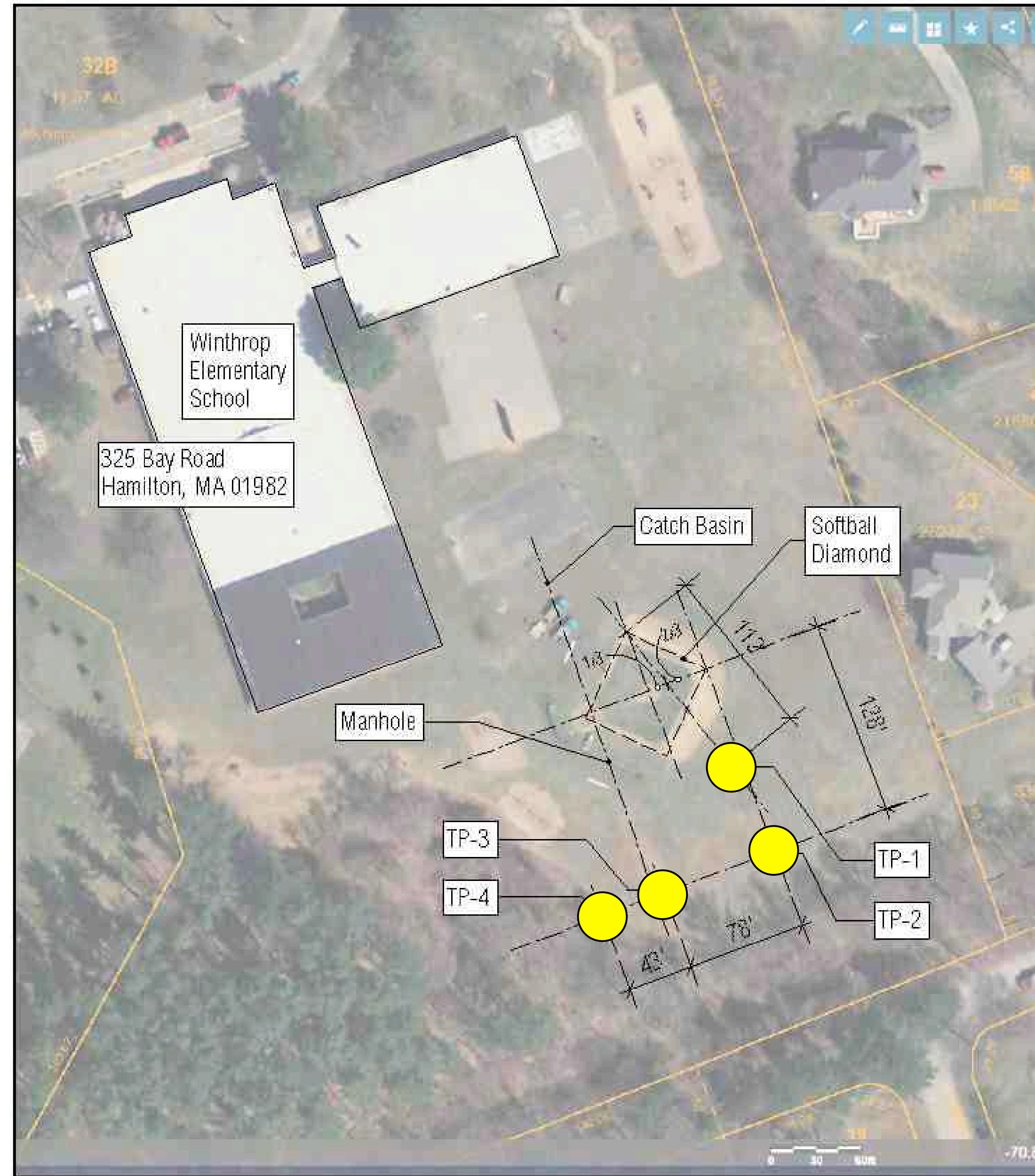
Possible Underground Stream:

Given the presence of a worn area over what was once an exposed stream on the site, it may be that there is an underground drainage structure containing the stream leading to further drainage on the other side of the gas line.

George Ricker also made us aware of a former small pond in the wooded area, where he used to ice skate as a boy. The pond is no longer present.

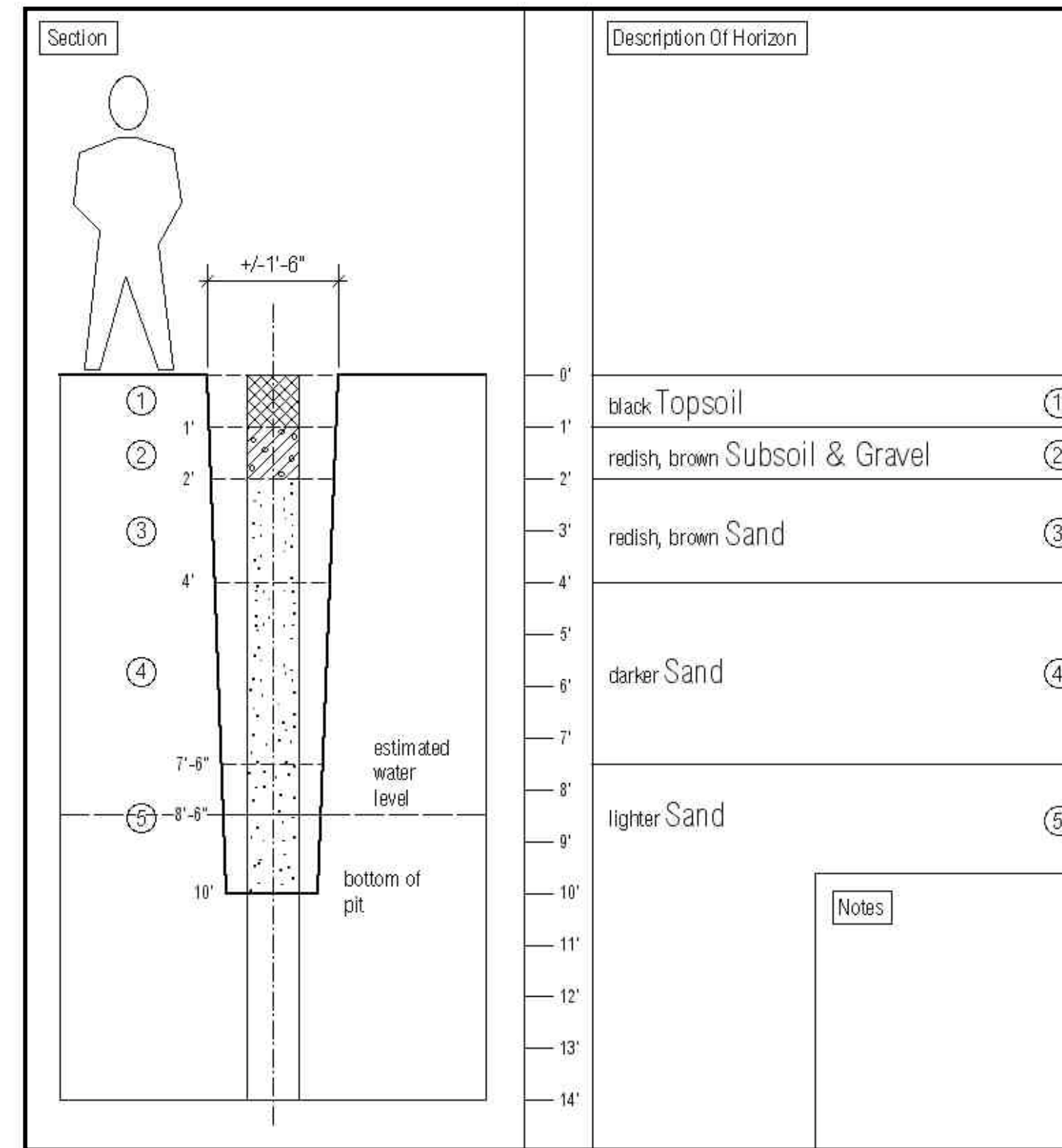
Soils

D-4.1

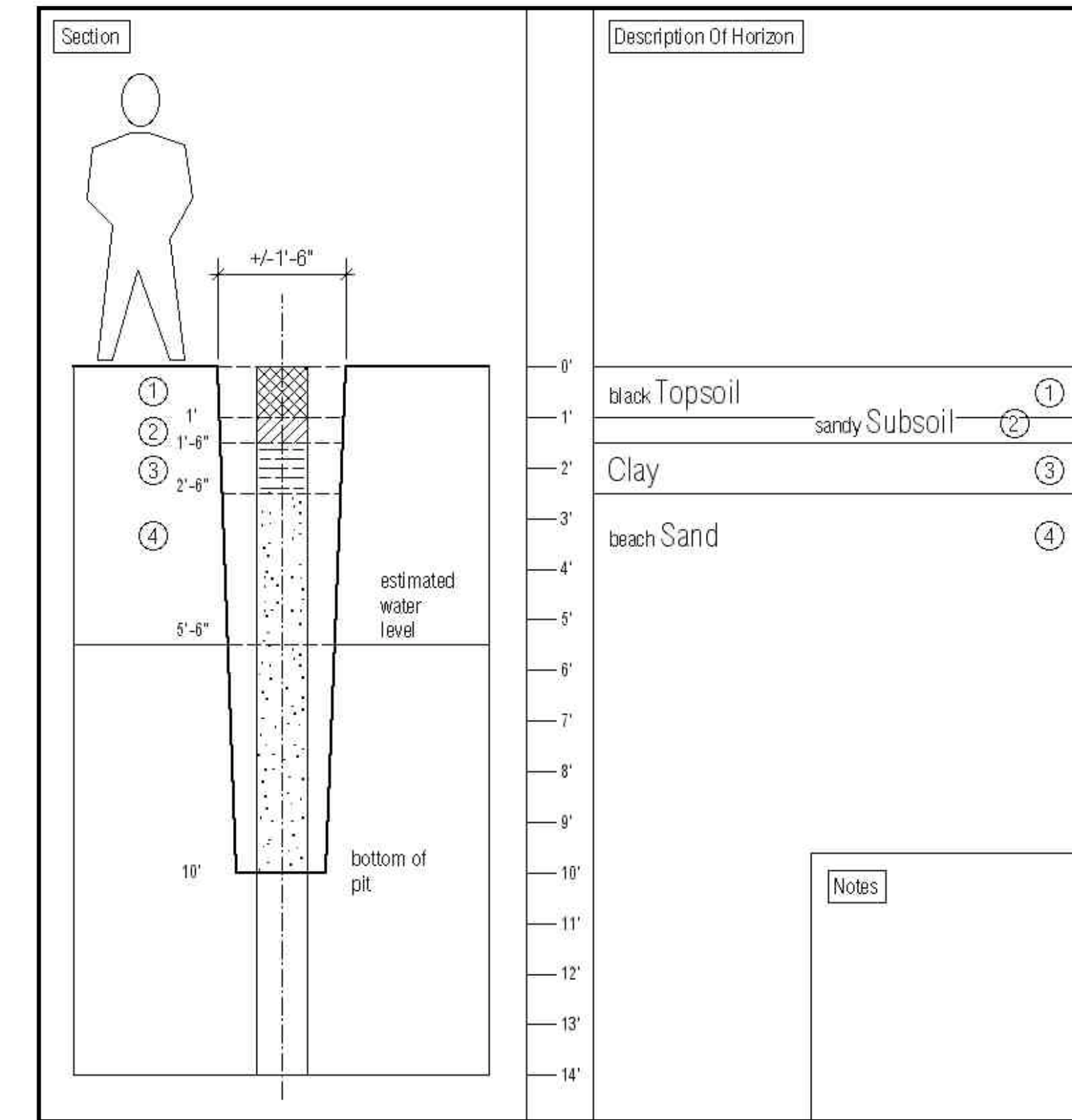


Test Pit Plan

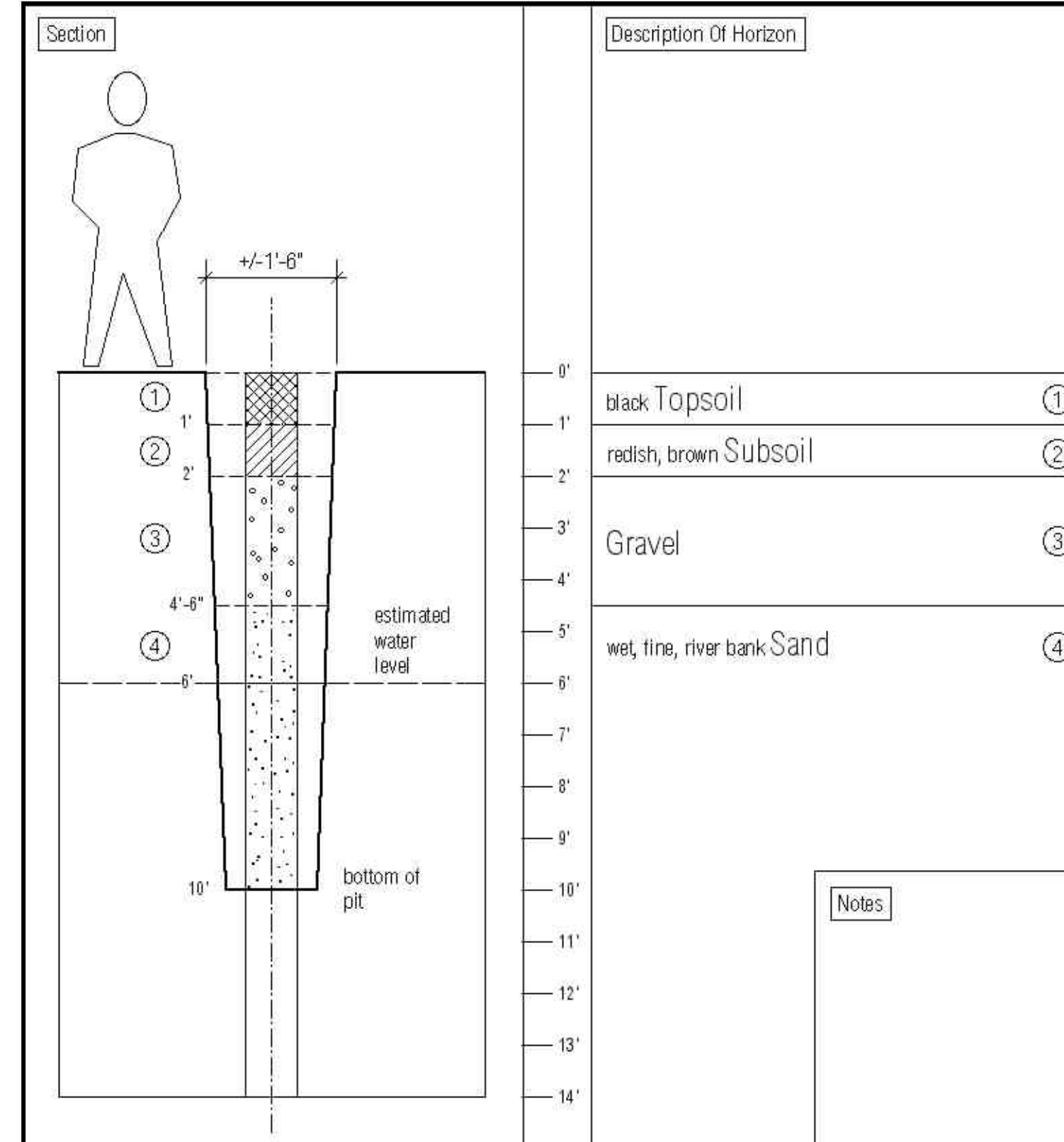
Test Pit #1



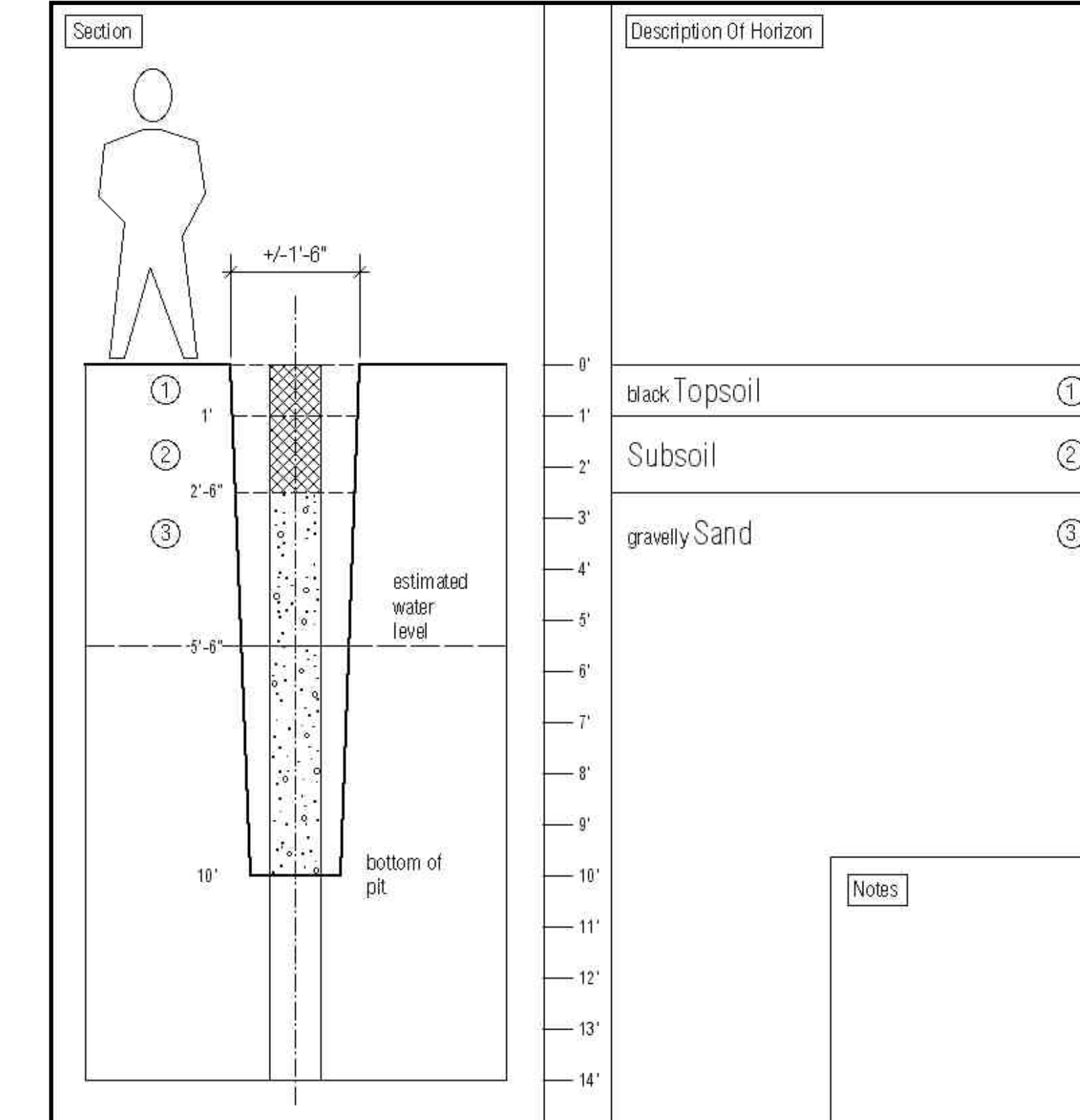
Test Pit #2



Test Pit #3



Test Pit #4



D-5 Site Utilities

Water, Gas, Electric

All three of these utilities are present at all three main structures at the site. Given the location of the PSB to the west and the School to the east, the availability of utilities to be extended on either side of the site is very good.

Septic

Septic for the PSB consists of distribution tanks and a leach field that is located in open lawn area behind the PSB. The location of the leach field takes up a significant area.

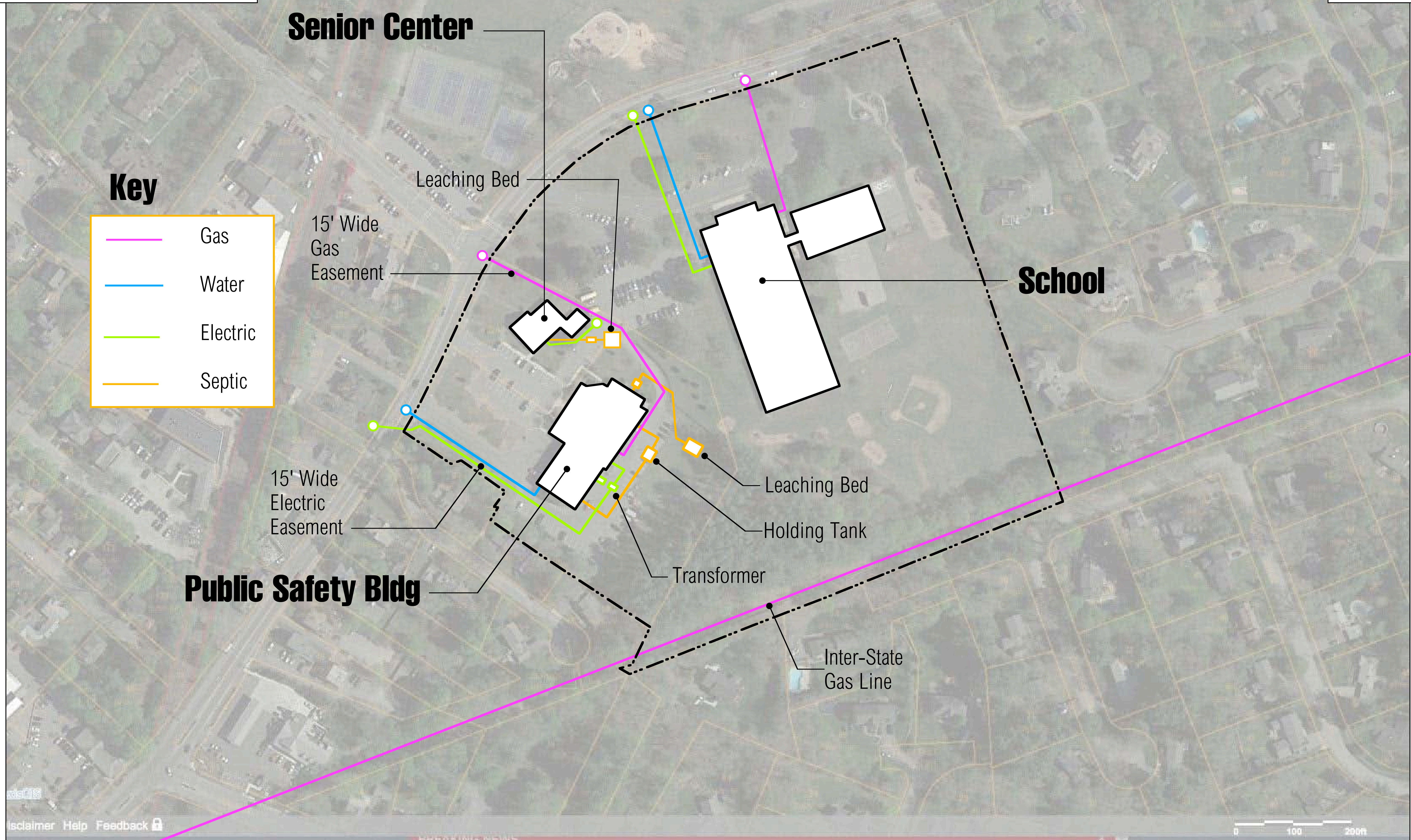
Septic for the Senior Center involves a leach field that is located in an area that would preclude any additional development in that area, were the existing senior center to be kept.

Septic for the School involves a leach field (we have been told and were not able to confirm) that is beneath the existing hard surface basketball court at the rear area of the school. This leachfield does not interfere with any housing that would be proposed for that area.

Site Utilities

Scale: 1" = 75'

D-5.1



Disclaimer Help Feedback

0 100 200ft

265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

D-6 Site Storm-water Prior to 1950

It is useful to look at how storm-water was handled on the site during two major eras: 1) prior to 1950 and 2) after 2003, upon building of the current Public Safety Building.

Ratio of Hardscape to Softscape:

Prior to 1950, the only structure on the parcel of land (15.95 acres) was the now former Police and Fire Station. The footprint of the building, combined with the modest parking area covered an area of about 0.75 acres, which produced a hardscape to softscape ratio of 1 / 21.

Tree Line:

We know by way of anecdote from Fire Chief – Phillip Stevens, that the front of the tree line was approximately where the front of the current PSB is today, which would put the tree line approximately 200' forward of where it is currently. It's not unreasonable to assume that there was at least 50% more tree cover on the site at this time than there is now. This would have provided robust capacity for ground water recharge within the site.

Stream and Pond:

We know from a map dating from circa 1875, that there was at one time a stream leading from the pond in what is now Patton Park, across the eastern part of the site and heading south to join with the Miles River further to the south. We know by way of anecdote from George Ricker, our soil test excavator, that there was at one time a second pond big enough for ice skating in the area of what is currently woods. That pond has since dried up but a depression remains. These two elements would have provided significant capacity for ground water to be absorbed.

An investigation of Patton Park Pond has revealed that there is only one drainage point; it is the outlet directly to the south, heading in a direction under Bay Road and under the Site. The pipe is 12" diameter. (Due to the drought, the pond is not current draining, the level of the pond being about 6" below the level of the pipe invert.)

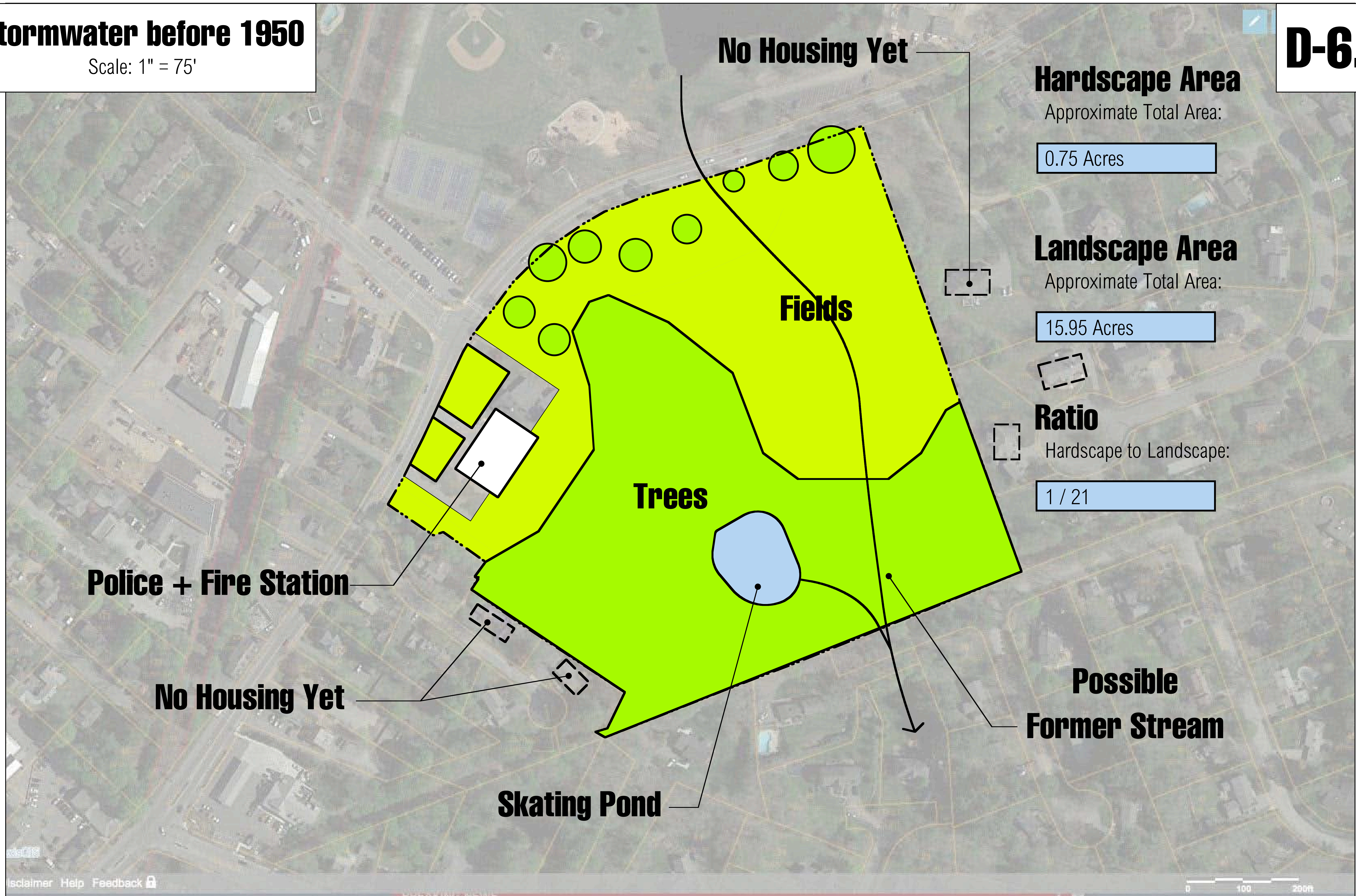
Other Conditions:

It should be noted that prior to 1950, there was no housing on either the west or the east of the site.

Stormwater before 1950

Scale: 1" = 75'

D-6.1



265 Bay Road Site Feasibility Study

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D-7 Site Storm-water After to 2003

The state of human activity on the site at the end of 2003 is vastly different and has a major affect on storm-water.

Change in Ratio Over Time:

Since 1950 and with the addition of the Public Safety Building, the Senior Center, the Winthrop School, and significant new parking, the statistics changed as follows:

Year	Hardscape Area (acres)	Softscape Area (acres)	Ratio (hard – soft)
1950	0.75	15.95	1 / 21
2003	3.8	12.9	1 / 3.4

This represents both an increase in the generation of storm-water on the site as well as a large reduction in the capacity of the site to recharge groundwater.

Tree Line:

With the construction of the PSB, parking in the front and rear of the building, the former tree-line was pushed back approx. 200'. The addition of the Winthrop School most likely also reduced the woodland area.

Storm-water Handling:

During the construction of the PSB, a stormwater exfiltration structure was created at the rear of the PSB. Into this feeds stormwater from the many locations as is clearly shown on the accompanying diagram (D-7.1).

With the increase in hardscape, the decrease in softscape and the very large area from which stormwater is gathered, the exfiltration structure is not nearly sufficient in capacity to handle the amount of stormwater that is now created. The water table on the west side of the site has been shown to be very high. The water simply has no where to go.

Additional Development:

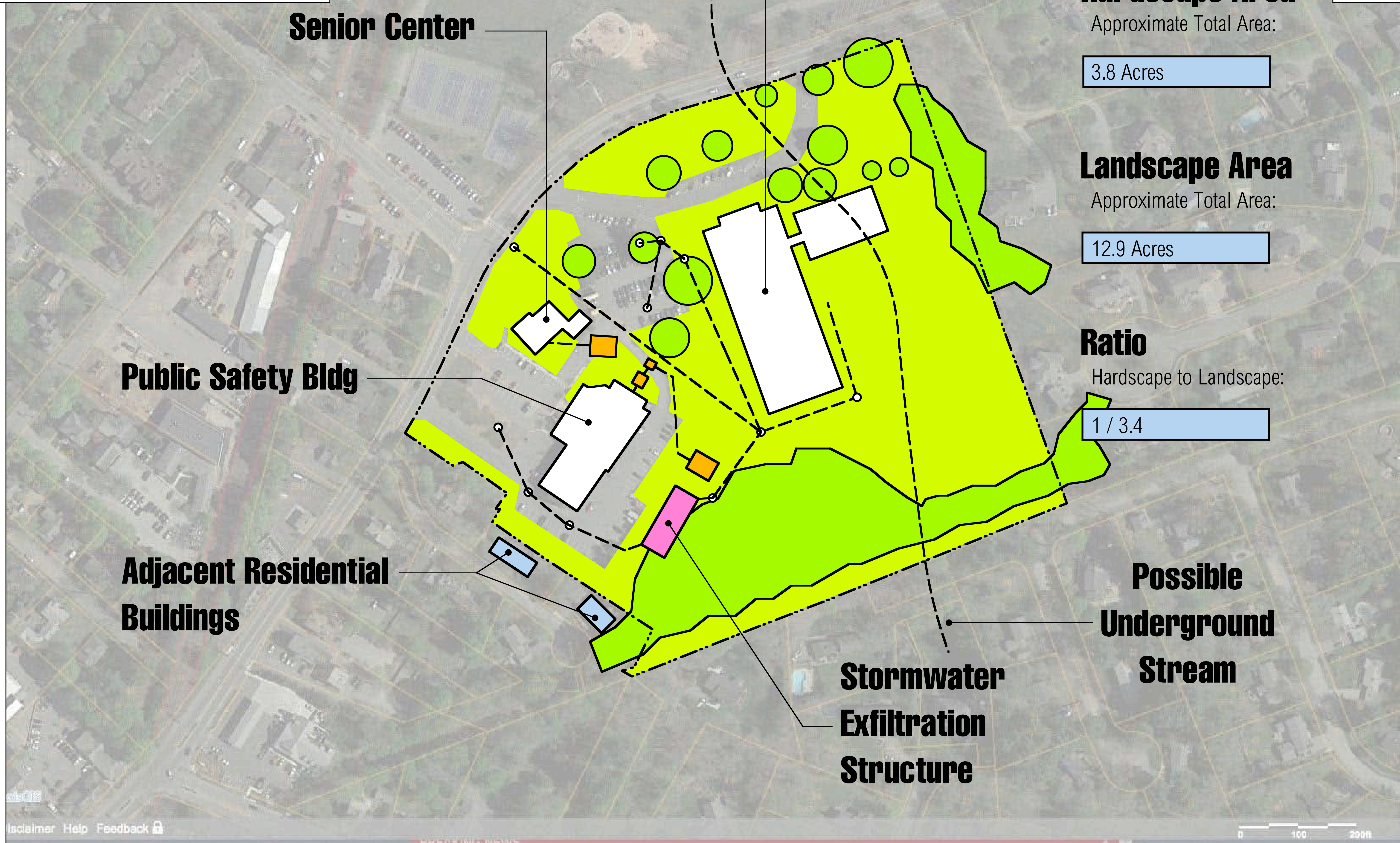
Since the 1970s, housing has been developed to the west and east of the site so that there is now development to receive the effects of stormwater that is not contained on site itself.

We know, having interviewed a neighbor living on Cottage Lane to the west (and having seen for ourselves), that storm-water has spilled over into the residential area to the west, with the result that the owner has had to install sump pits and sump drains to address cellar flooding that has occurred, only since the PSB has been around. It's our understanding that this same problem has occurred on more than one (1) property.

Stormwater after 2003

Scale: 1" = 75'

D-7.1



Senior Center

School

Hardscape Area

Approximate Total Area:

3.8 Acres

Landscape Area

Approximate Total Area:

12.9 Acres

Ratio

Hardscape to Landscape:

1 / 3.4

Public Safety Bldg

Adjacent Residential Buildings

Possible Underground Stream

Stormwater Exfiltration Structure

Disclaimer Help Feedback

0 100 200ft

265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

E-1 Mass Transit + Pedestrians + Cycling

The Site is situated close to the center of town where Main Street, Walnut Street and the railroad station converge to form the crossroads of the town center. See point 'A' on the map.

Commuter Train Line:

The town is served by the Newburyport / Rockport Branch of the MBTA Commuter Railroad. The train station serves both the towns of Wenham and Hamilton for both daily commuter and weekend service into North Station, Boston. The station is a 5-minute walk from the site.

Pedestrian Access To the Site:

The site is within what could be considered the pedestrian accessible part of South Hamilton. Sidewalks line both sides of Route 1A, Bay Road to a point about ½ along the site, with the nearside sidewalk dropping off northward of that point.

The other pedestrian access to the site is by way of a former railroad right-of-way / current high-pressure gas line / pathway that begins at Walnut Street and extends along the southern boundary of the site and extending past the site to the Myopia Hunt Club property. The Essex County Trail Association shows this on their maps as a real public trail, leading out the Myopia Hunt Club access road terminating at Patton Park. It seems quite possible that a public town effort could at some point improve this trail to make it a more obvious and officially supported pedestrian way.

Pedestrian Access Within the Site:

Pedestrian paths are limited to the front of the site for access to the 3 major buildings. Any housing development on the rear of the site should be accompanied with a revision to the circulation layout to the extent that there should be clearly marked pedestrian ways, connecting to the public sidewalk at Bay Road and also to the Gas Line Trail mentioned above.

Cycling:

Route 1A supports cycling insofar as there is a relatively usable shoulder of about 1'-3' feet width on both sides of the road, demarcated by a solid white painted line. The creation of an actual marked and protected cycle path along 1A would improve its usability for a wider section of the bike-potential public. Currently a limited selection of hardy cyclists would consider the road safe for cycling; the current condition of bike protection overall discourages the general public (including children who might cycle to school) from cycling to the site.

Bike Parking:

Currently there is minimal and not very well situated bike parking on the site. There is a 5-bike rack just outside the entrance to the COA, not user friendly or well positioned. There is also a 10-bike rack in the field to the west of the school building. This rack is badly positioned in the middle of a field (when it should be adjacent to a paved surface) and is of an older design that is difficult to attach a bicycle to.

Pedestrians, Cycling, Mass-Transit

Scale: 1" = 150'

E-1.1



265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

E-2 Roadway + Traffic

The ability of road traffic to get onto the site is heavily affected by the particular situation of traffic, railroad schedules and traffic-light timing at different times of the day.

For most of the time during the weekday (M-F), traffic is relatively unimpeded. However during the peak morning rush hour (M-F), a confluence of situations occurs to create traffic problems that reduce the ability to get onto and off the site. This same situation repeats itself at 3pm during the school day end and at the evening rush hour between 5-7pm.

Refer to exhibit 'E-2.1'.

Point 'A':

Traffic congestion at this point is heavily affected by train arrivals and departures at Hamilton / Wenham Station.

Example: A northbound train arriving at 5:12pm from North Station, Boston during a summer weekday will be a 6-carriage train, headed by a single locomotive. The train will fit within the bounds of the station. However, while it is at the station, it will trigger the crossing guard at 'A' on Bay Road, causing cars to backup for the duration of that time. During this time, we observed that approximately 50 cars were backed up.

Point 'B':

In the same train example, the crossing guard at point 'B' will also be triggered, stopping traffic in both directions.

Point 'C':

If this is during rush hour, cars will not be able to flow on Asbury Street and traffic from there may back up onto Bay Road, at point 'C', making it impossible for southbound Bay Road traffic to make any headway to the South.

Winthrop School Traffic:

During the morning rush hour, the above situation is compounded by the fact that school buses and parents dropping their kids off at school are out in force at the exact time that the roads, stoplights and grade-crossings are already being challenged.

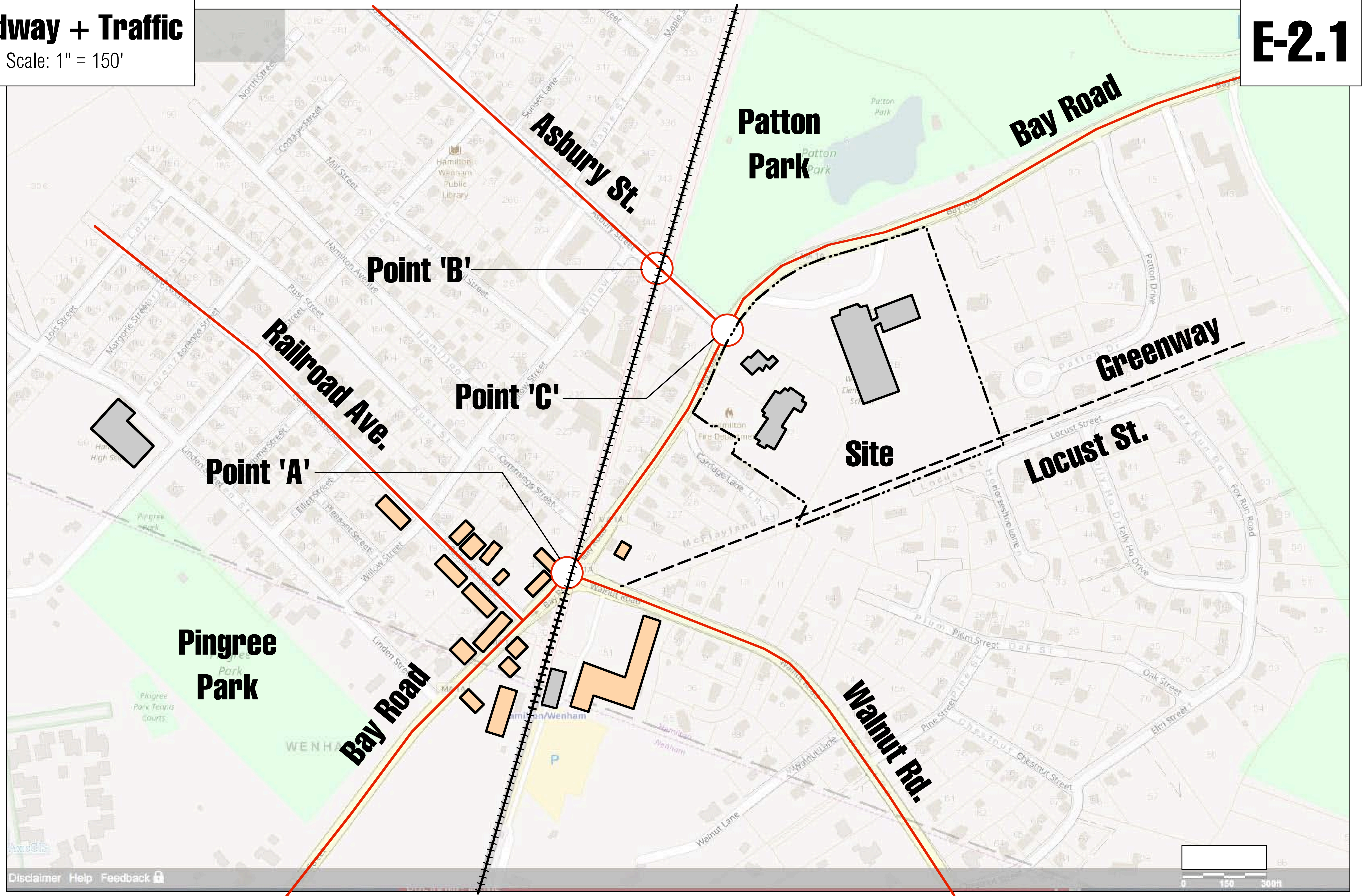
Increased Vehicular Traffic x More Frequent Train Service x More Frequent Grade-Crossing Barriers x Parents Dropping Off Kids x More School Bus Entry/Exit = great difficulty in terms of gaining access to the Site from Bay Road during rush hour.

Increased load to Bay Road due to new affordable housing on the site would increase the degree of the problem. If the Site is to be used for housing, we recommend finding another way for access that does not impact current traffic.

Roadway + Traffic

Scale: 1" = 150'

E-2.1



265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

E-3 Traffic + Site Access

Existing Points of Site Access:

Point '1': • This is a Public Safety Building official-use access point only.

Point '2': • This is the public point of access for the Public Safety Building; it is currently shared with the Senior Center. In addition, it is the official exit point for parents dropping off students to Winthrop School. It is heavily used at the peak times of the day. (7:30 – 8:30am + 3:00 – 3:30pm)

To consider this point for access to potential housing on the site is problematic. Any access to the rear part of the site is blocked by the PSB being directly in the way. Visitors to the senior center and to the PSB heavily use point '2'; an additional load would exacerbate the problem.

Point '3': • This is the entry access point for buses dropping off students, parents dropping off students by car, and the only access to parking for school staff and school visitors. It is probably the most heavily used point of access at the site during the peak school-year morning rush-hour.

Point '3A' • It is also the only logistically feasible point at which access to rear part of the site for housing (from Bay Road) could be obtained. However, because it is also the most heavily used entry point, adding to the vehicular load is not feasible, without exacerbating the current overload. Access from this point to potential housing is therefore not recommended.

Point '4': • This is the exit point for school buses, after having dropped off or picked up students. No other use for this point is feasible.

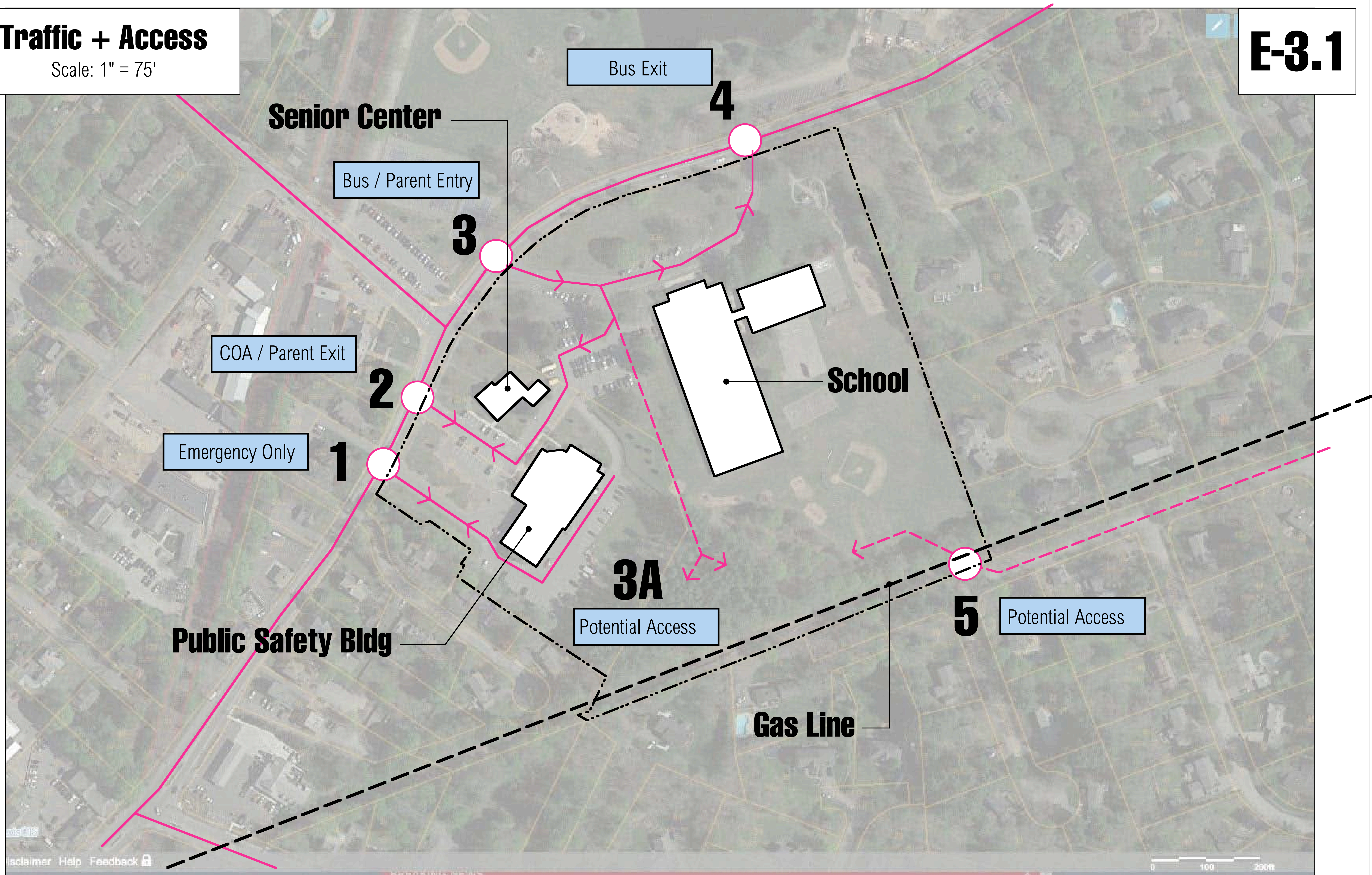
Conclusion:

- 1) There is not enough frontage on the Bay Road side to consider a new access point.
- 2) There is also not enough traffic capacity on the existing two (2) possible entry points to allow for access to an additional use.
- 3) It is not possible to build a road from Bay Road to housing at the rear of the site without going through an existing parking lot or subtracting from the existing parking count in some way. The distance is too far and the obstacles too many.

Traffic + Access

Scale: 1" = 75'

E-3.1



265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

E-4 Parking

Existing Parking:

Parking is provided on the site in the following general areas:

- Police / Fire Official Use: 41 spaces
- Council on Aging Senior Center / PSB Visitor Use: 27 spaces
- School Administrative / Teacher Parking: 66 spaces
- School Visitor Parking: 11 spaces

Total Existing On-site Parking: 145 spaces

Current Parking Load:

The ability of the site to handle parking loads is highly dependent on time of year, whether it is a weekday or weekend and what time of day.

Summer Weekday:

On a summer day at 4:45pm in the afternoon, we found that 8 parking spaces in the COA lot, 4 spaces in the school lot were occupied, no spaces in the handicapped school spaces and 6 spaces in the PSB lot were occupied, amounting to 12% occupancy.

Fall Weekday:

On a fall day at 2:00pm in the afternoon, (1 hour prior to school release) we found that 21 parking spaces in the COA lot, 63 spaces in the school lot were occupied, 4 spaces in the handicapped school spaces and 13 spaces in the PSB lot were occupied, amounting to 70% occupancy.

The school lot is the most heavily used; often there is no capacity in the school lot for visitor parking during school hours; visitors must therefore use parking in the COA lot.

While the COA lots generally has a small amount of extra capacity, on days when there is a major activity planned at the COA building or when a senior trip is planned, the lot can quickly reach its capacity. Because this lot is informally shared between the COA and visitors to the PSB, the PSB visitor parking can suffer as a result.

Potential New Parking:

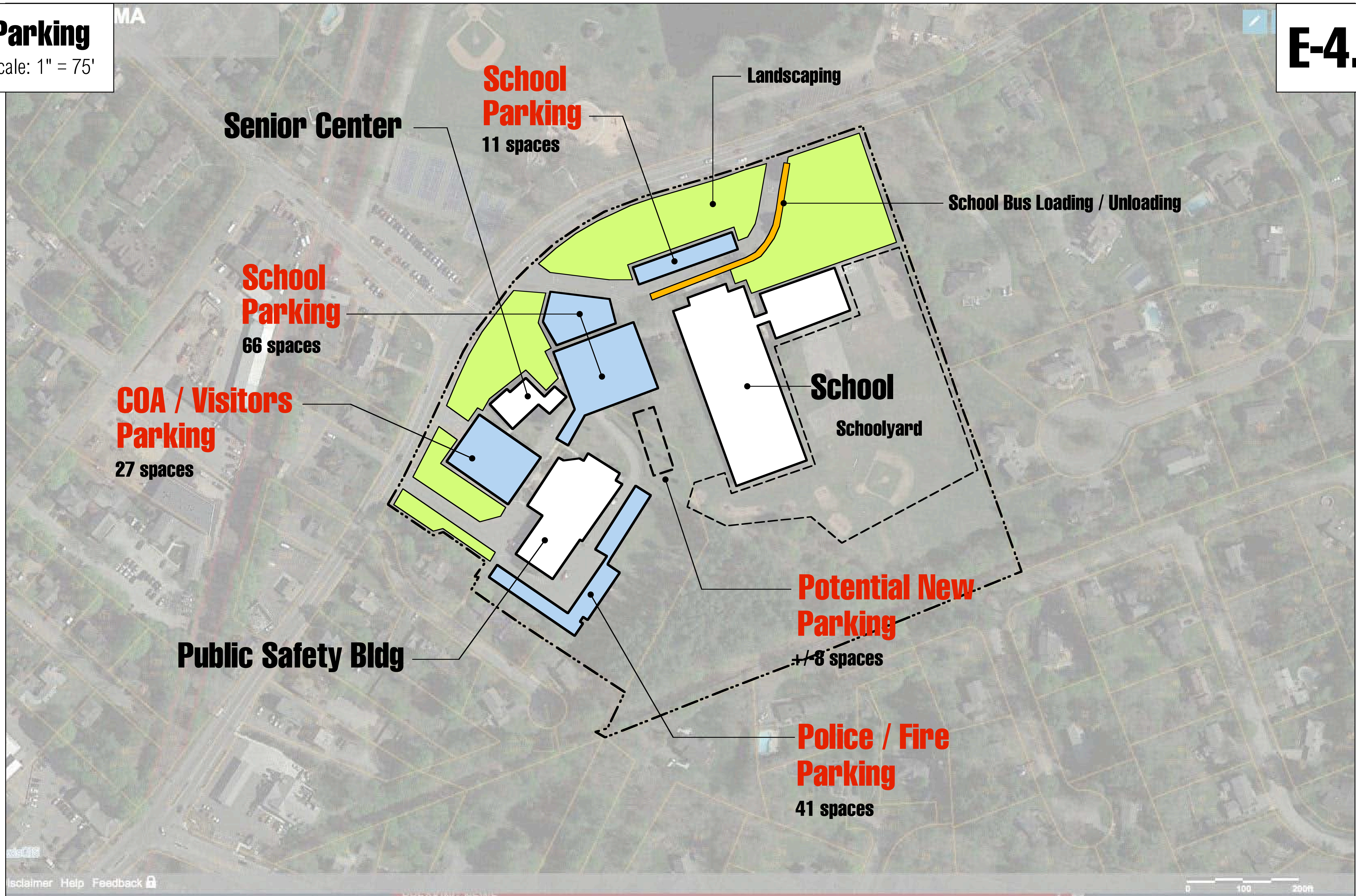
There does appear to be a location between the PSB and the School where it might be possible to arrange approximately 8 new parking spaces. See exhibit E-4.1. However, this is not recommended because of the creation of new impermeable surface area, which would further exacerbate the storm-water problem.

Parking

Scale: 1" = 75'

MA

E-4.1



265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

F-1 Zoning

Zoning in Hamilton is governed by the Hamilton Zoning By Laws; the latest addition was adopted Oct 22, 2016.

Chapter 40B of the Massachusetts State Laws for towns that do not meet the minimum requirement for affordable housing units- allows developers to bypass zoning with a Comprehensive Permit.

We present the zoning profile as a benchmark to understand what aspects of the zoning ordinance might be over-ruled in order to provide affordable housing at the site.

Building Type:

The site is located within zone R-1A that is the 'in-town' residential zone. While Single Family Dwellings are allowed as-of-right, multiple unit housing would require approval by the Planning Board. Refer to Row number '4' in the table below.

Setbacks:

Zone R-1A requires a minimum all-sides setback distance of 25', which is not an onerous requirement for any potential project on the site. There is however a vegetative buffer requirement of 20'.

There appear to be no other critical zoning issues that would be overruled by a Comprehensive Permit.

TABLE OF USE REGULATIONS

A. RESIDENTIAL	R-1a	R-1b	RA	B
1. One Single Family Dwelling	Y	Y	Y	Y
2. Conversion of a Single Family Dwelling existing at the time of the adoption of the ordinance (1954) into a Two Family Dwelling (see Section 3.5)	ZBA	ZBA	ZBA	ZBA
3. Open Space and Farmland Preservation Development (see Section 8.1)	PB	PB	PB	N
4. Senior Housing (see Section 8.2)	PB	PB	PB	PB
5. Long Term Care Facility	ZBA	ZBA	ZBA	N
6. Garage with more than 4 motor vehicle spaces	ZBA	ZBA	ZBA	ZBA
7. Two or more dwelling units, second floor and above when part of a mixed-use building or development	N	N	N	Y

Zoning
Scale: 1" = 75'

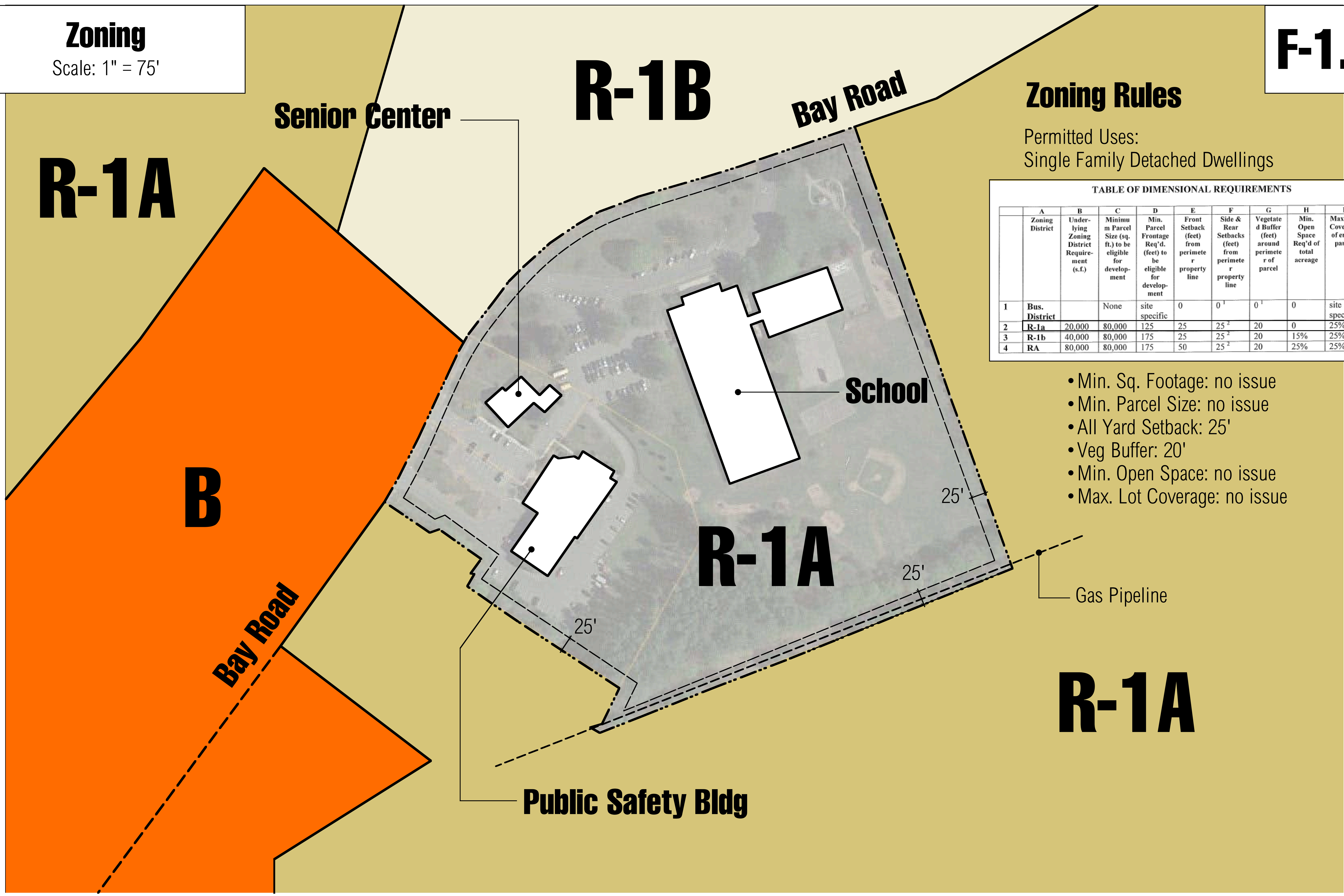
Zoning Rules

Permitted Uses:
Single Family Detached Dwellings

TABLE OF DIMENSIONAL REQUIREMENTS

	A	B	C	D	E	F	G	H	I
	Zoning District	Underlying Zoning District Requirement (s.f.)	Minimum Parcel Size (sq. ft.) to be eligible for development	Min. Parcel Frontage Req'd. (feet) to be eligible for development	Front Setback (feet) from perimeter property line	Side & Rear Setbacks (feet) from perimeter property line	Vegetated Buffer (feet) around perimeter of parcel	Min. Open Space Req'd of total acreage	Max. Lot Coverage of entire parcel
1	Bus. District		None	site specific	0	0'	0'	0	site specific
2	R-1a	20,000	80,000	125	25	25'	20	0	25%
3	R-1b	40,000	80,000	175	25	25'	20	15%	25%
4	RA	80,000	80,000	175	50	25'	20	25%	25%

- Min. Sq. Footage: no issue
- Min. Parcel Size: no issue
- All Yard Setback: 25'
- Veg Buffer: 20'
- Min. Open Space: no issue
- Max. Lot Coverage: no issue



265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

F-2 Site Access Strategy

From the Site Access analysis in E-3, it is clear to us that any attempt to access the site for a new housing development from Bay Road (Route 1A) is not feasible. There is however potential to access the site from the south side of the site.

Potential New Points of Site Access:

Point '5':

- At the point marked '5' on exhibit F-2.1, a new access point is feasible from Locust Street / Horseshoe Lane. This has several potential advantages:

A – Locust Street is very lightly used and could easily absorb additional access load.

B – Access from this part of the site would mean no added load imposed on the access points 1-4 or the traffic on Bay Road.

C – Access from point '5' would group the new housing logically with other existing housing, encouraging social intermingling and integration into a already established residential neighborhood.

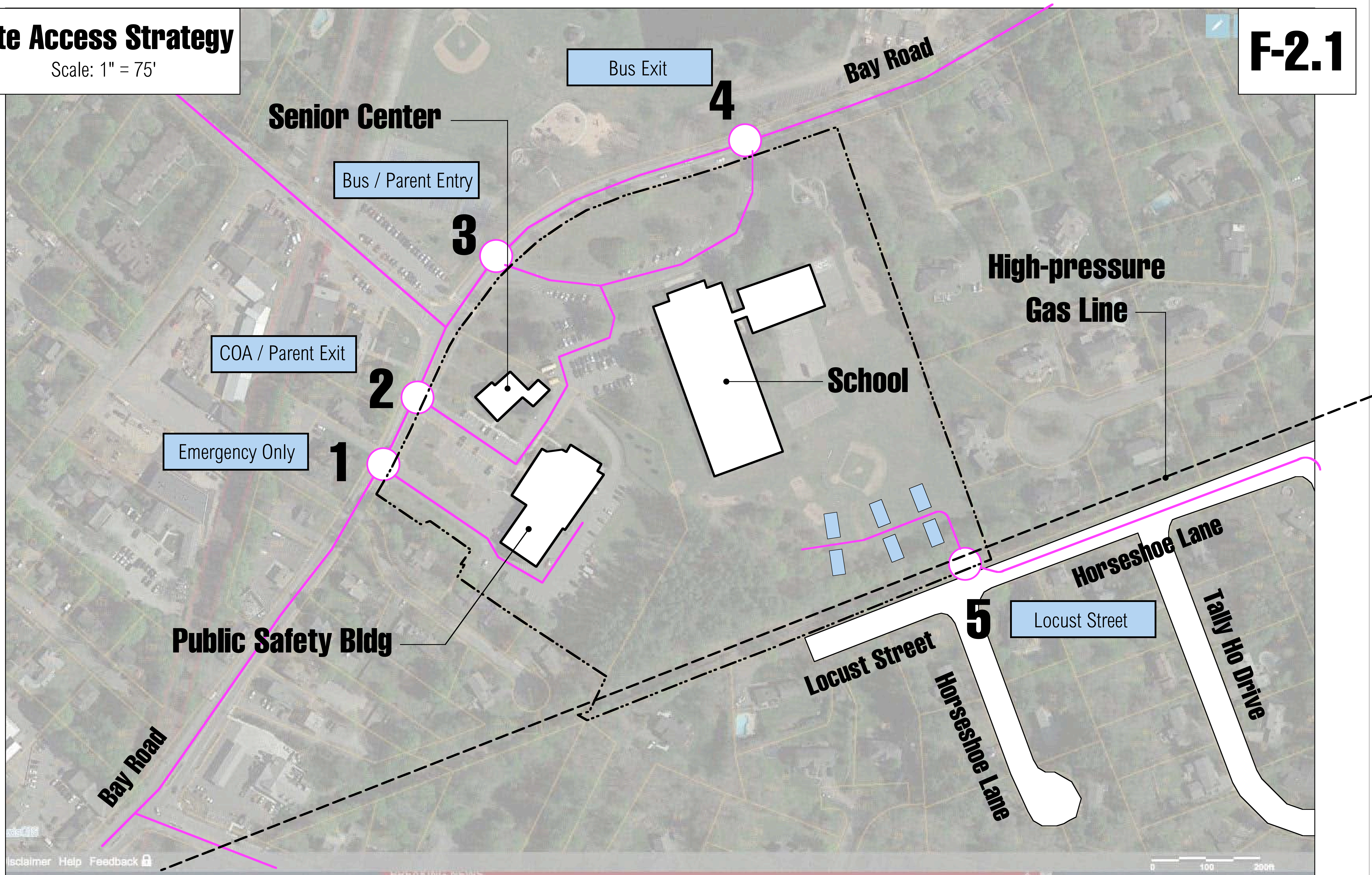
D – Access from point '5' would have to cross the high-pressure gas line. We have contacted the Gas Line company and have been told that crossing the gas line with a residential duty road is feasible and an application process is quite possible.

- On the 'con' list is the potential resistance by current residential neighbors to the south to the idea of accessing the site through that neighborhood.

Site Access Strategy

Scale: 1" = 75'

F-2.1



265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

F-3 Storm-water Strategy

Diagram F-3.1

- The problematic area in terms of current storm-water management is given a light gray tone on the diagram F-3.1.
- The existing culverts leading water from catch basins on the site to the storm-water exfiltration structure (shown in pink) at the rear of the PSB are shown.
- Existing septic systems are shown in Orange.

Western Half of Site

The historic and current issues with storm-water management at the site are identified in sections D-6 and D-7. The chief take-away is that the western half of the site is currently stressed in terms of storm-water management (the ability to handle storm-water within the site) and the repercussions of this fact (the overflow of ground water onto neighboring properties) are causing problems that have cost time and money for the site's neighbors.

Given this, it seems to us that it would be irresponsible to add to the problem of storm-water management either by creating more impermeable ground surface (by locating housing on the western rear of the site) or deleting permeable ground surface that already exists (by removing what is left of the woods) or some combination of both.

Eastern Half of Site

Existing conditions make for a relatively good situation when it comes to the prospect of handling the additional storm-water that would be created by a development on the eastern half of the site:

A – Some of the storm water on this half is diverted to the storm water exfiltration structure on the western half of the site by culverts, reducing the eastern half load.

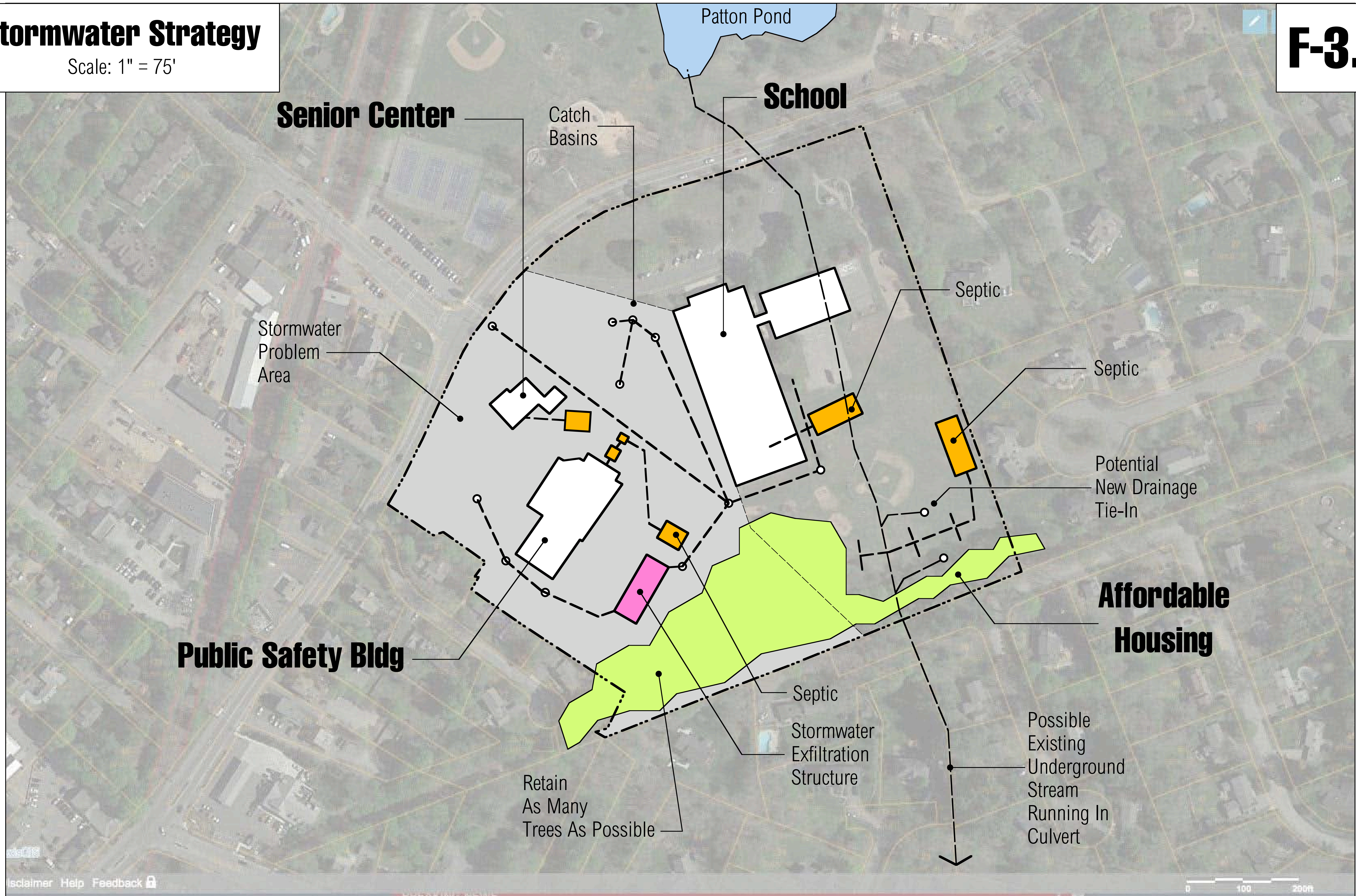
B – Neighbors bounding the site on the north side are at a higher elevation than the site itself, reducing the issue of spillage over the site boundary.

C – A stream coming from Patton Pond is potentially now carried in a culvert under the site (shown on the diagram F-3.1) and carrying water under the Gas Line R.O.W. and down to a connection with the Miles River to the south.

Stormwater Strategy

Scale: 1" = 75'

F-3.1



265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

F-4 School Grounds

The existing school yard, contains the following facilities:

- Little League Softball Layout
- Wall Ball Court
- Basketball Court
- Playground
- Swings
- Climbing Wall

We have talked with Jason Waldron, Facilities Manager of the Regional Schools Office and we understand that the schoolyard is used for the following activities during the following times:

- 8:15am / Start of School Day:
- 8:30am-12: 30pm / Morning Periods: • Gym Class • 20 Kids Per Class: BB Court, Wall Ball
- 1:00pm / Lunch / Recess: • General Play
- 3:00pm / Post School Day Activities: • Town Recreation Dept. Program

The facilities are arranged in what could be described as a loose fit. It seems to be quite feasible that the component parts could be rearranged in order to achieve a more compact layout, without diminishing their usability or capacity.

We realize that the playground area is currently undergoing a significant renovation. It does appear that the resulting design in no way would diminish the type of reorganization suggested above.

With this reorganization, we feel it would be possible to provide enough leftover space in order to create a layout for affordable housing.

Details:

While it would be necessary to remove some of the existing trees (see exhibit F-4.1), it may be possible to replant new trees that would act as a visual buffer between the affordable housing use and the schoolyard use.

Since the Gas Pipeline Trail serves as a way to and from school for many students, it would be important to incorporate pathways that navigate through the potential housing site in order to maintain that connection.

These constraints would naturally limit the number of units of housing that could be built.

School Yard Potential

Scale: 1" = 30'

Playground

Wallball

Basketball

Climbing

Swings

Swings

Baseball

Line of Underground Drainage

Trees To Be Removed

Existing

F-4.1

Basketball

Open Landscape Area

Current
Playground
Expansion

Septic

New
Tree Buffer

Baseball

Line of Underground
Drainage

Wallball

Climbing

New
Tree Buffer

Potential
Housing

Potential

Partial Tree Removal

265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

F-5 Town Recreation Department

The Town Recreation Department uses the Winthrop School grounds in conjunction with other town properties. The following sports take place at the Winthrop School:

- Fall (September, October, November):
 - Flag Football All Day Saturday (uses a space approx. 30yds x 70yds)
- Spring (March, April, May, June):
 - T-Ball 4 Times / Week (for practice & games) softball field
 - Softball

In addition, the fields are available to town residents for other informal play activities year-round. The fields here are heavily programmed.

In general, the field represents 1 out of 13 fields located in the town.
The baseball field represents 1 out of 5 baseball fields in the town.

Potential Housing Impact:

The location of housing in the rear of the school would require the relocation of the baseball field in the rear of the lot. As stated in F-4, it is likely that the outdoor recreation areas can be reorganized so that there is no real loss of usability or functionality. The attached diagram F-5.1 represents the initial thoughts on how this might take place.

G-1 Housing Scheme (for sale units)

Having established a reasonable location on the site for housing and having vetted most of the key issues surrounding the location of housing in that area, the team put together a layout and pro forma on a development based on Units for Sale.

(Note: After we did a study based on 'Units for Sale' and presented this to the town, we were told that the Hamilton Affordable Housing Trust would prefer to test the site for 'Units for Rent', which we then undertook.)

General Scheme

The location is able to support approximately 12 For Sale units, based on an assumption of 3-bedroom units, 1 garaged car parking space + 1 un-garaged space, as well as an assumption that paired, semi-detached units would be both socially acceptable and appropriate in terms of scale of the neighborhood.

The scheme utilizes a single access road (from Locust Street) in a double-loaded road layout with either a circular or three-point turn turnaround at the termination of the road.

Septic & Stormwater

Septic can be handled with a leachfield of approximately 40' x 100' footprint or 4000 sq ft. Stormwater can most likely be handled with a combination of minimization of hard-scape, potential use of bio-swales and drainage into an existing depression where a small pond was located.

The team arrived at three (3) different versions of the development as Units for Sale as a result of the slightly different economics of each situation.

Version G-1.2

With an assumption that there would be a \$150K land acquisition cost (the land being owned by the City of Hamilton) and an assumption that the profit from sales / revenue would hit the allowable 20% mark, the economics allow for a mix of 9 market rate units and 3 affordable units.

Version G-1.3

With the assumption that there would be no acquisition cost, \$150K is saved. Assuming the overall development cost does not otherwise change, this allows for a lower sales / revenue figure, which in turn permits a slight better mix of 8 market rate units and 4 affordable units.

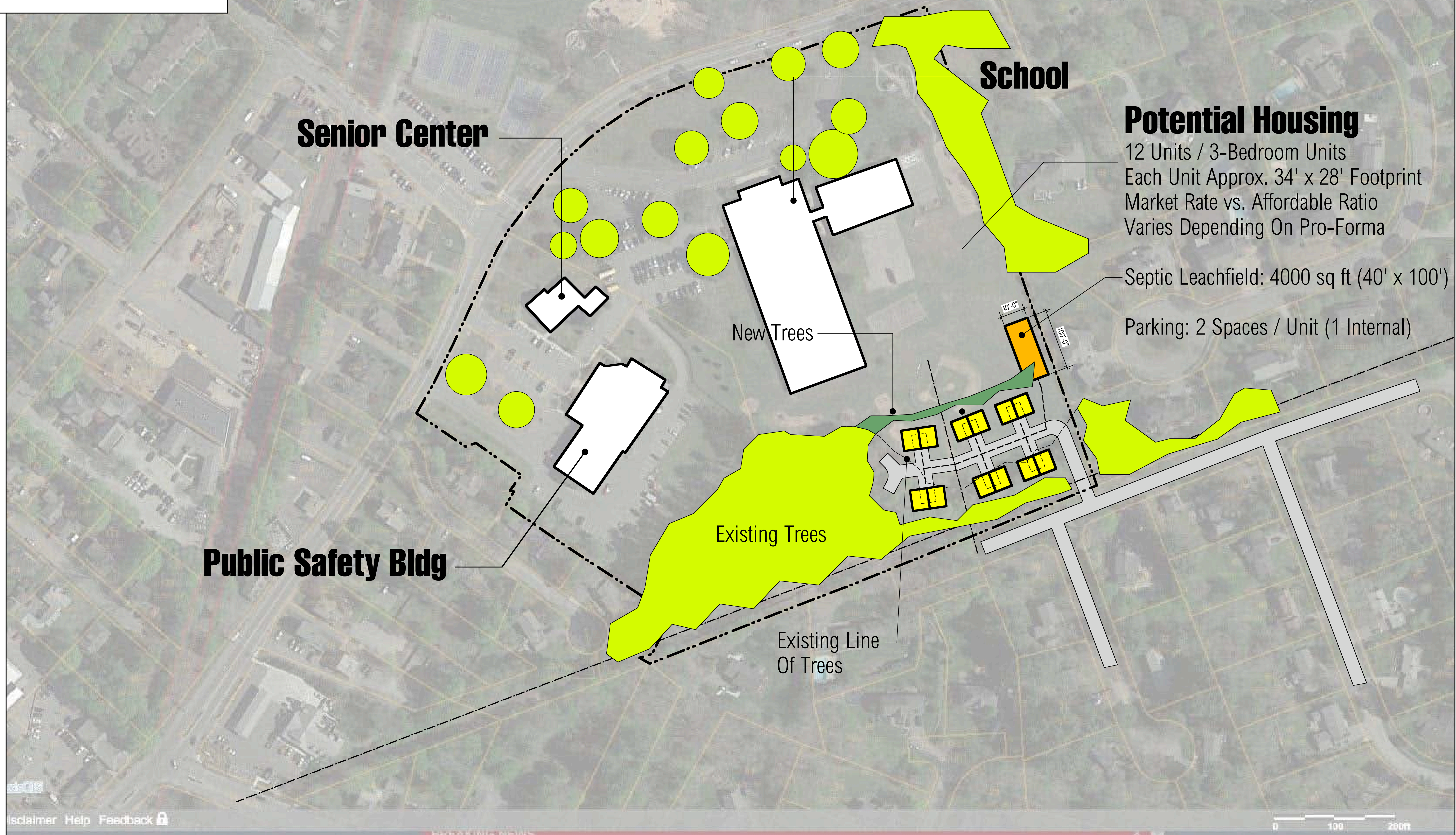
Version G-1.4

This version takes reduced costs to the project one step further. With the assumption that \$200k would be contributed from the Hamilton Affordable Housing Trust (HAFT), in addition to the \$150k savings on land acquisition, the economic equation permits a better mix of 6 market rate units and 6 affordable units.

Potential Housing Units for Sale

Scale: 1" = 75'

G-1.1



Potential Housing
12 Units / 3-Bedroom Units
Each Unit Approx. 34' x 28' Footprint
Market Rate vs. Affordable Ratio
Varies Depending On Pro-Forma
Septic Leachfield: 4000 sq ft (40' x 100')
Parking: 2 Spaces / Unit (1 Internal)

Disclaimer Help Feedback

0 100 200ft

265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

Housing Pro Forma

12 Units For Sale:
9 Market Rate
3 Affordable

Acquisition Costs

G-1.2

HAMILTON, MA November 28, 2016
Affordable Housing 12 Townhomes

FINANCIAL PRO FORMA		Totals	Per Unit
Sales/Revenue			
Market	9 Homes	\$3,321,000	\$369,000
Affordable	3 Homes	\$615,000	\$205,000
Total Sales/Revenue		\$3,936,000	
Acquisition Cost		\$150,000	\$12,500
Hard Costs			
<i>Construction Costs-Residential</i>			
		\$2,064,600	\$172,050
	Contingency	\$92,907	\$7,742
Subtotal-Residential Construction		\$2,157,507	\$179,792
<i>Construction Costs-Site Work</i>			
	Utilities, SDS and Drainage	\$300,000	\$25,000
	Excavation and Grading	\$55,000	\$4,583
	Landscape and Hardscape	\$65,000	\$5,417
	Site Contingency	\$35,000	\$2,917
Subtotal-Site Work		\$455,000	\$37,917
<i>Construction Costs-General Conditions, Builders Overhead and Profit</i>			
	General Conditions	\$75,513	\$6,293
	Builders Overhead + Profit	\$140,238	\$11,686
Subtotal		\$215,751	\$17,979
Soft Costs			
<i>General Development Costs</i>			
	Market Study	\$1,500	
	Lottery Consultant	\$7,500	
	Commissions/Advertising-Affordable	\$500	
	Commissions/Advertising-Market	\$116,235	
	Model Unit	\$1,000	
	Closing Costs	\$10,000	
	Real Estate Taxes	\$6,500	
	Utility Usage during Construction	\$1,500	
	Insurance	\$6,500	
	Inspecting Engineer	\$1,000	
	Construction Loan Interest	\$25,000	
	Fees to Construction Lender	\$2,500	
	Architectural	\$20,000	
	Engineering	\$35,000	
	Survey, Permits	\$6,000	
	Legal	\$7,000	
	Title and Recording	\$15,000	
	Accounting and Cost Certification	\$15,000	
	40B Site Approval Processing Fee	\$3,000	
	40B Monitoring Agent Fee	\$1,500	
Subtotal, General Development Costs		\$282,235	\$23,520

<i>Developer Overhead</i>	\$40,000	
Subtotal, Developer Overhead	\$40,000	\$3,300,493
SUMMARY OF SUBTOTALS		
Sales/Revenue	\$3,936,000	
Site Acquisition	\$150,000	
Residential Construction	\$2,157,507	Total
Site Work	\$455,000	Development
Builder's Overhead, Profit and Gen. Cond.	\$215,751	Costs (TDC)
General Development Costs	\$282,235	
Developer Overhead	\$40,000	
Summary		
Sales/Revenue	\$3,936,000	
Total Development Costs (TDC)	\$3,300,493	
Profit from Sales/Revenue	\$635,507	
Percentage of Profit over TDC	19.25%	20% Allowed



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265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

Housing Pro Forma

12 Units for Sale:
8 Market Rate
4 Affordable

No Acquisition Costs

G-1.3

HAMILTON, MA November 28, 2016

Affordable Housing 12 Townhomes

FINANCIAL PRO FORMA		Totals	Per Unit
Sales/Revenue			
Market	8 Homes	\$2,952,000	\$369,000
Affordable	4 Homes	<u>\$820,000</u>	\$205,000
Total Sales/Revenue		\$3,772,000	
Acquisition Cost		\$0	\$0
Hard Costs			
<i>Construction Costs-Residential</i>		\$2,064,600	\$172,050
	Contingency	<u>\$92,907</u>	\$7,742
Subtotal-Residential Construction		\$2,157,507	\$179,792
<i>Construction Costs-Site Work</i>			
	Utilities, SDS and Drainage	\$300,000	\$25,000
	Excavation and Grading	\$55,000	\$4,583
	Landscape and Hardscape	\$65,000	\$5,417
	Site Contingency	<u>\$35,000</u>	<u>\$2,917</u>
Subtotal-Site Work		\$455,000	\$37,917
<i>Construction Costs-General Conditions, Builders Overhead and Profit</i>			
	General Conditions	\$75,513	\$6,293
	Builders Overhead + Profit	<u>\$140,238</u>	<u>\$11,686</u>
Subtotal		\$215,751	\$17,979
Soft Costs			
<i>General Development Costs</i>			
	Market Study	\$1,500	
	Lottery Consultant	\$7,500	
	Commissions/Advertising-Affordable	\$500	
	Commissions/Advertising-Market	\$103,320	
	Model Unit	\$1,000	
	Closing Costs	\$10,000	
	Real Estate Taxes	\$6,500	
	Utility Usage during Construction	\$1,500	
	Insurance	\$6,500	
	Inspecting Engineer	\$1,000	
	Construction Loan Interest	\$25,000	
	Fees to Construction Lender	\$2,500	
	Architectural	\$20,000	
	Engineering	\$35,000	
	Survey, Permits	\$6,000	
	Legal	\$7,000	
	Title and Recording	\$15,000	
	Accounting and Cost Certification	\$15,000	
	40B Site Approval Processing Fee	\$3,000	
	40B Monitoring Agent Fee	<u>\$1,500</u>	
Subtotal, General Development Costs		\$269,320	\$22,443

Developer Overhead \$40,000
Subtotal, Developer Overhead \$40,000 \$3,333

SUMMARY OF SUBTOTALS			
Sales/Revenue	\$3,772,000		
Site Acquisition	\$0	\$3,137,578	
Residential Construction	\$2,157,507	Total	
Site Work	\$455,000	Development	
Builder's Overhead, Profit and Gen. Con	\$215,751	Costs (TDC)	
General Development Costs	\$269,320		
Developer Overhead	\$40,000		

Summary			
Sales/Revenue	\$3,772,000		
Total Development Costs (TDC)	<u>\$3,137,578</u>		
Profit from Sales/Revenue	\$634,422		
Percentage of Profit over TDC	20.22%	20% Allowed	

265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

Housing Pro Forma

12 Units For Sale:
6 Market Rate
6 Affordable

No Acq + HAFT Funds

G-1.4

HAMILTON, MA

November 28, 2016

Affordable Housing

12 Townhomes

FINANCIAL PRO FORMA

Totals Per Unit

Sales/Revenue			
Market	6 Homes	\$2,274,000	\$379,000
Affordable	6 Homes	\$1,230,000	\$205,000
Town Contribution	HAFT	<u>\$200,000</u>	
Total Sales/Revenue		\$3,704,000	

Acquisition Cost \$0 \$0

Hard Costs

<i>Construction Costs-Residential</i>	\$2,064,600	\$172,050
Contingency	<u>\$92,907</u>	\$7,742
Subtotal-Residential Construction	\$2,157,507	\$179,792

Construction Costs-Site Work

Utilities, SDS and Drainage	\$300,000	\$25,000
Excavation and Grading	\$55,000	\$4,583
Landscape and Hardscape	\$65,000	\$5,417
Site Contingency	<u>\$35,000</u>	<u>\$2,917</u>
Subtotal-Site Work	\$455,000	\$37,917

Construction Costs-General Conditions, Builders Overhead and Profit

General Conditions	\$75,513	\$6,293
Builders Overhead + Profit	<u>\$140,238</u>	<u>\$11,686</u>
Subtotal	\$215,751	\$17,979

Soft Costs

General Development Costs

Market Study	\$1,500	
Lottery Consultant	\$7,500	
Commissions/Advertising-Affordable	\$500	
Commissions/Advertising-Market	\$79,590	
Model Unit	\$1,000	
Closing Costs	\$10,000	
Real Estate Taxes	\$6,500	
Utility Usage during Construction	\$1,500	
Insurance	\$6,500	
Inspecting Engineer	\$1,000	
Construction Loan Interest	\$25,000	
Fees to Construction Lender	\$2,500	
Architectural	\$20,000	
Engineering	\$35,000	
Survey, Permits	\$6,000	
Legal	\$7,000	
Title and Recording	\$15,000	
Accounting and Cost Certification	\$15,000	
40B Site Approval Processing Fee	\$3,000	
40B Monitoring Agent Fee	<u>\$1,500</u>	
Subtotal, General Development Costs	\$245,590	\$20,466

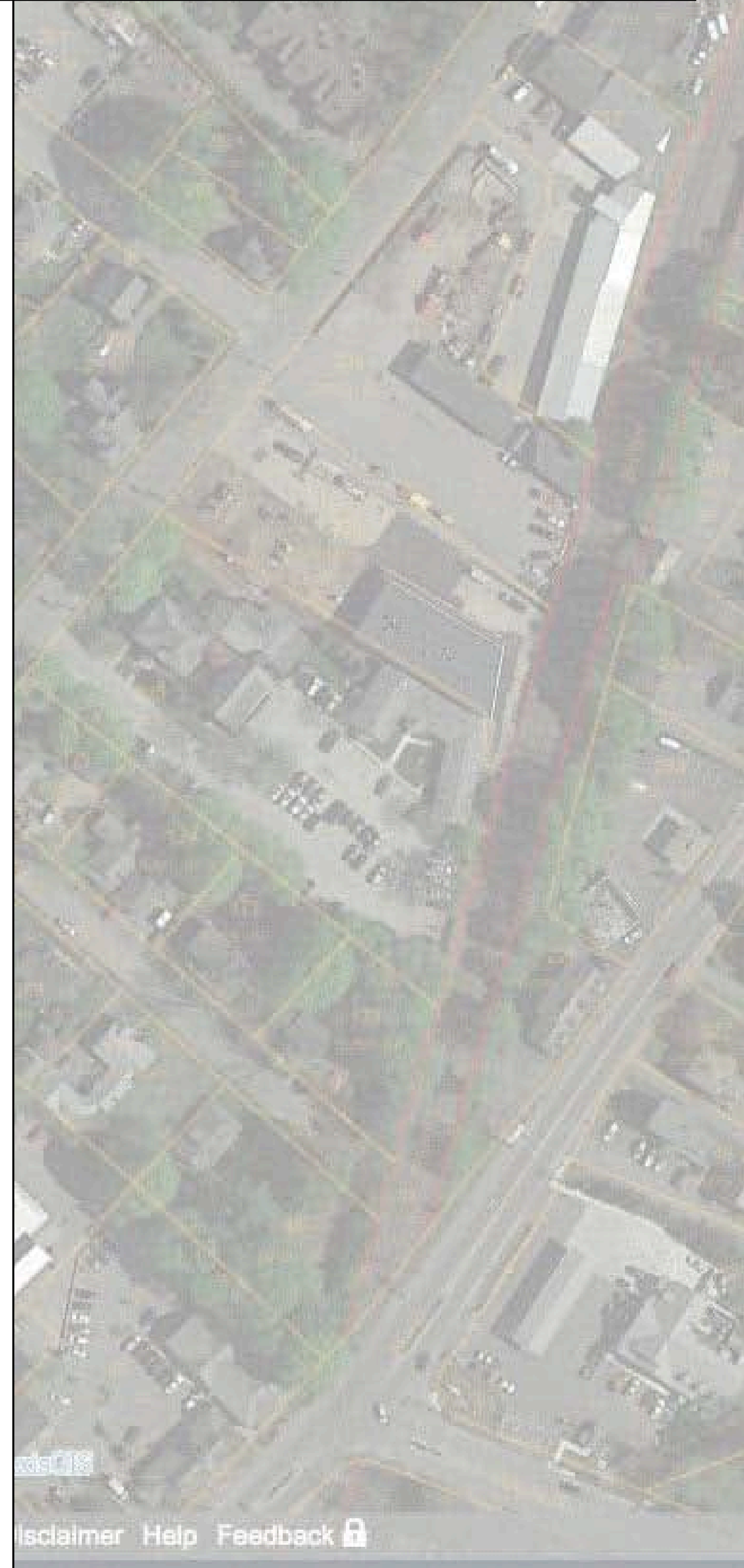
<i>Developer Overhead</i>	<u>\$40,000</u>	
Subtotal, Developer Overhead	\$40,000	\$3,333

SUMMARY OF SUBTOTALS

Sales/Revenue	\$3,704,000	
Site Acquisition	\$0	\$3,113,848
Residential Construction	\$2,157,507	} Total Development Costs (TDC)
Site Work	\$455,000	
Builder's Overhead, Profit & Gen. Cond.	\$215,751	
General Development Costs	\$245,590	
Developer Overhead	\$40,000	

Summary

Sales/Revenue	\$3,704,000	
Total Development Costs (TDC)	<u>\$3,113,848</u>	
Profit from Sales/Revenue	\$590,152	
Percentage of Profit over TDC	18.95%	20% Allowed



265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

G-2 Housing Scheme (for rent units)

Based on the HAFT's preference for Units for Rent, we came up with a following scheme.

General Scheme

This scheme also utilizes a single access road (from Locust Street) in a double-loaded road layout similar to the 'Units for Sale' Scheme.

In order to fit a considerably larger number of units, a fully attached layout was adopted as well as stacking of the units (one up / one down). With these adjustments, the location is able to support approx. 30 Rental Units, while maintaining all the other principles previously discussed. The units would be evenly divided between 1 and 2 bedroom units for both market rate and affordable units.

It is doubtful that any more land within the site could be taken over in order to increase the number of units without seriously compromising the (already compromised) state of the storm-water situation.

Septic & Stormwater

Septic can be handled with a leachfield of approximately 40' x 125' or 5000 sq ft, only slightly larger than the 'Units for Sale' scheme. Stormwater can most likely be handled with a combination of minimization of hard-scape, potential use of bio-swales and drainage into an existing depression on the site (former pond).

The team arrived at one (1) version of the development as Units for Rent.

Version G-2.2

With an assumption that there would be no acquisition cost for the land, the total development costs would amount to approx. \$4,384,625. A construction cost of \$2,354,625 over 19,500 sq ft assumes an average of about \$120 / square foot. The cost of development would be handled with \$4M construction loan / mortgage over 30 years, assuming 4.5% interest.

The annual rental expenses (including servicing of that loan debt) would amount to approx. \$516,209, requiring an annual income of \$567,830. The breakdown between 1) affordable and market rate and between 2) 1 and 2 bedroom units is shown on exhibit G-2.2.

For Sale vs. For Rent

Note: One of the key advantages of 'Units for Rent' over 'Units for Sale' is that with 'Units for Sale', only the actual affordable units (3,4 or 6 units as shown in the G-1 schemes.) can count be used towards the Town's official Affordable Housing Count, whereas with 'Units for Rent', the entire count of units can be used towards the official count (30 units as shown in the G-2 scheme) even though only 6 of the units are initially classified as 'affordable'.

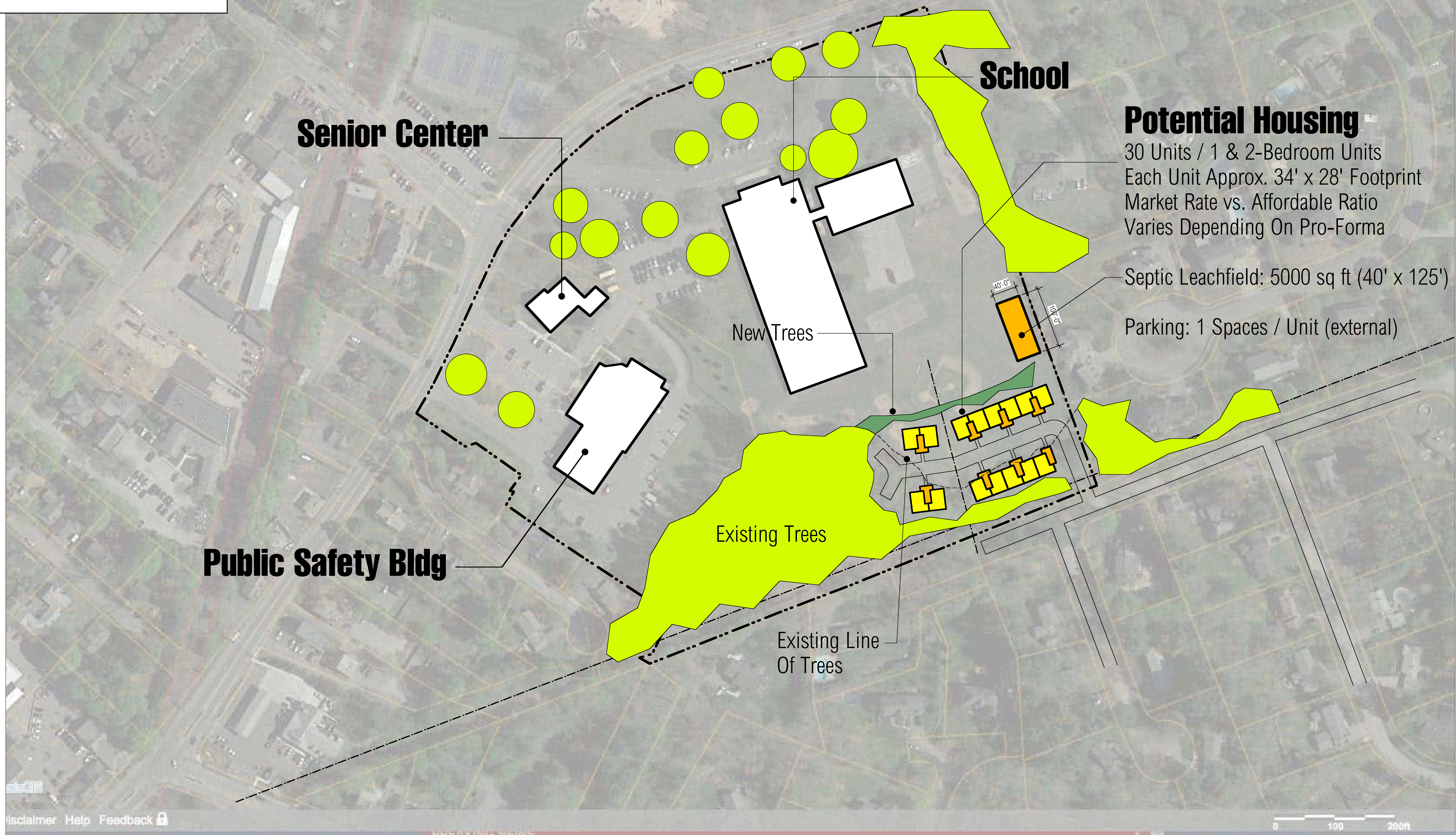
Scheme Details

Exhibit G-2.3 demonstrates the main plan differences between the For Sale and For Rent Schemes. While the For Sale scheme could be accomplished in 2 stories, the For Rent units would probably require 2-1/2 stories.

Potential Housing Units for Rent

Scale: 1" = 75'

G-2.1



Potential Housing
30 Units / 1 & 2-Bedroom Units
Each Unit Approx. 34' x 28' Footprint
Market Rate vs. Affordable Ratio
Varies Depending On Pro-Forma
Septic Leachfield: 5000 sq ft (40' x 125')
Parking: 1 Spaces / Unit (external)

265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

Housing Pro Forma

30 Units For Rent:
24 Market Rate
6 Affordable

No Acquisition Cost

G-2.2

Rental Housing, Hamilton, MA
Adjacent to Gas Easement, Horseshoe Lane

30 Rental Apartments
November 8, 2016

ESTIMATED COSTS

Site Acquisition	\$0
Site Development	\$850,000
Building Construction	\$2,354,625
Construction Contingency	\$200,000
Soft Costs	\$320,000
Marketing and Rental	\$200,000
Rentup Shortfall	\$350,000
Construction Interest	\$110,000

Utilities, Parking, Landscaping
30 apartments @ 650 SF avg.,
net. 15% Gross Factor, \$110 per SF
Architect, Engineer, Survey, Legal,
Developer, Cost Certification

TOTAL COSTS	\$4,384,625	\$146,154.17
		Per Apartment

Annual Rental Expenses

Vacancy Allowance	-40,000
Management Fee	-23,000
Building Maintenance	-50,000
Payroll	-50,000
Replacement Reserve	-45,000
Taxes	-40,000
Utilities	-25,000
Debt Service	-243,209

Non-Residential Electric, Gas, Telephone
\$4,000,000 @ 30 years, 4.5%

Total Annual Rental Expenses	-\$516,209
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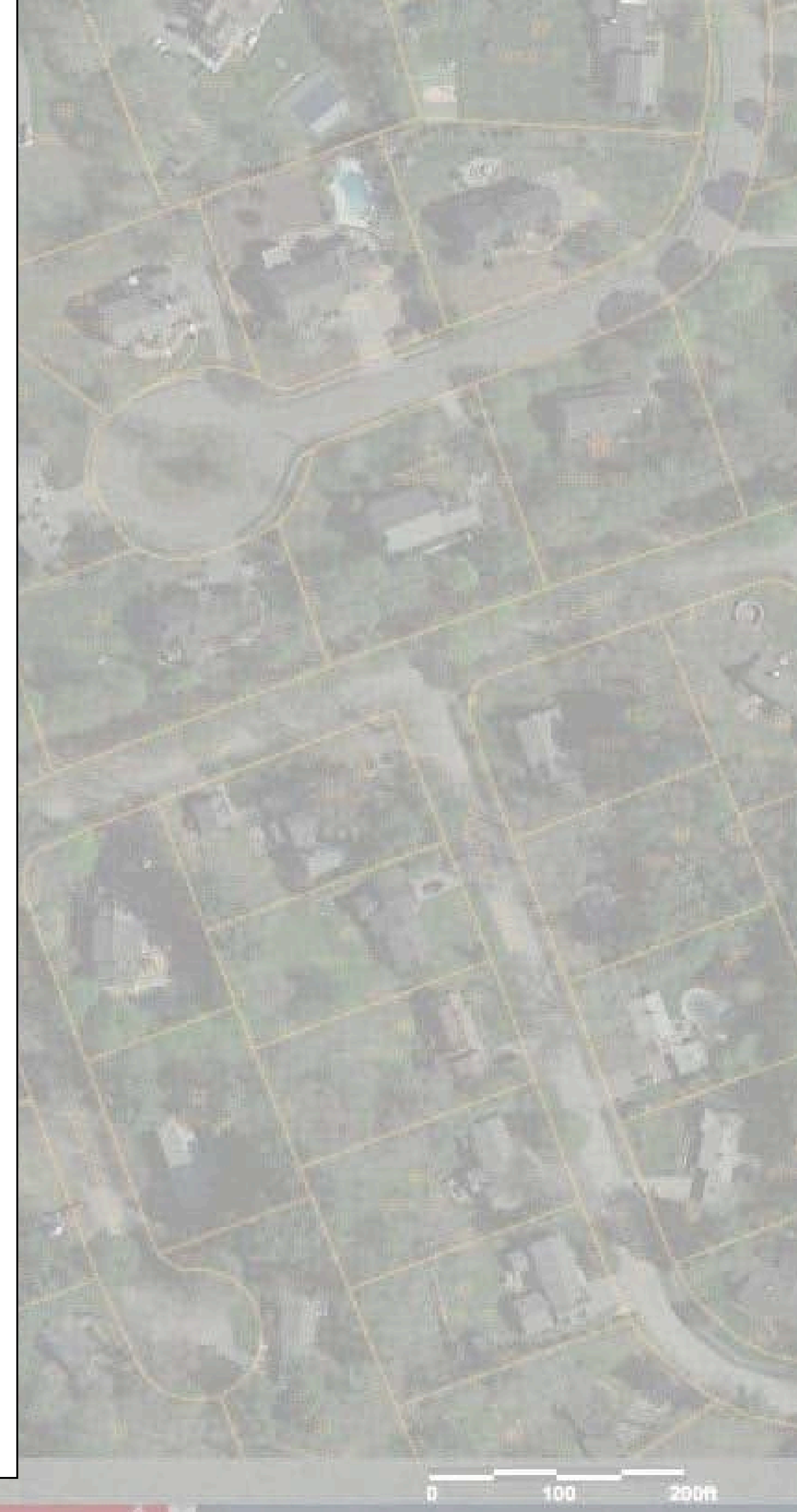
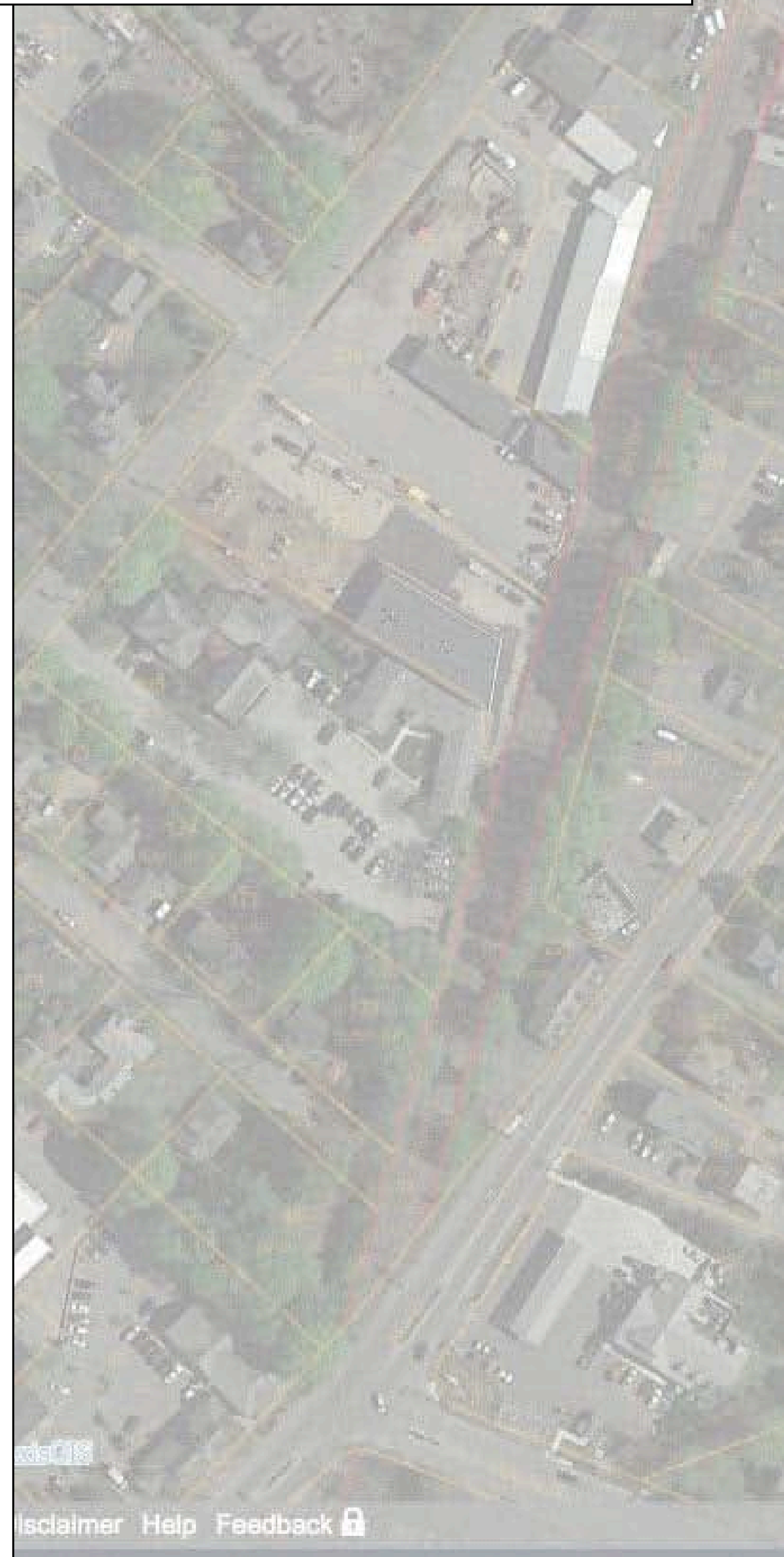
Annual Income Required	\$567,830
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1.10 coverage

Total Monthly Rental	\$1,577.31
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average per apartment required

	Breakdown	per apt per mo.	Annual Total
3 Affordable 1-BR		885	31,860
3 Affordable 2-BR		1,085	39,060
12 Market 1-BR		1,600	230,400
12 Market 2-BR		1,850	266,400
			567,720



Disclaimer Help Feedback

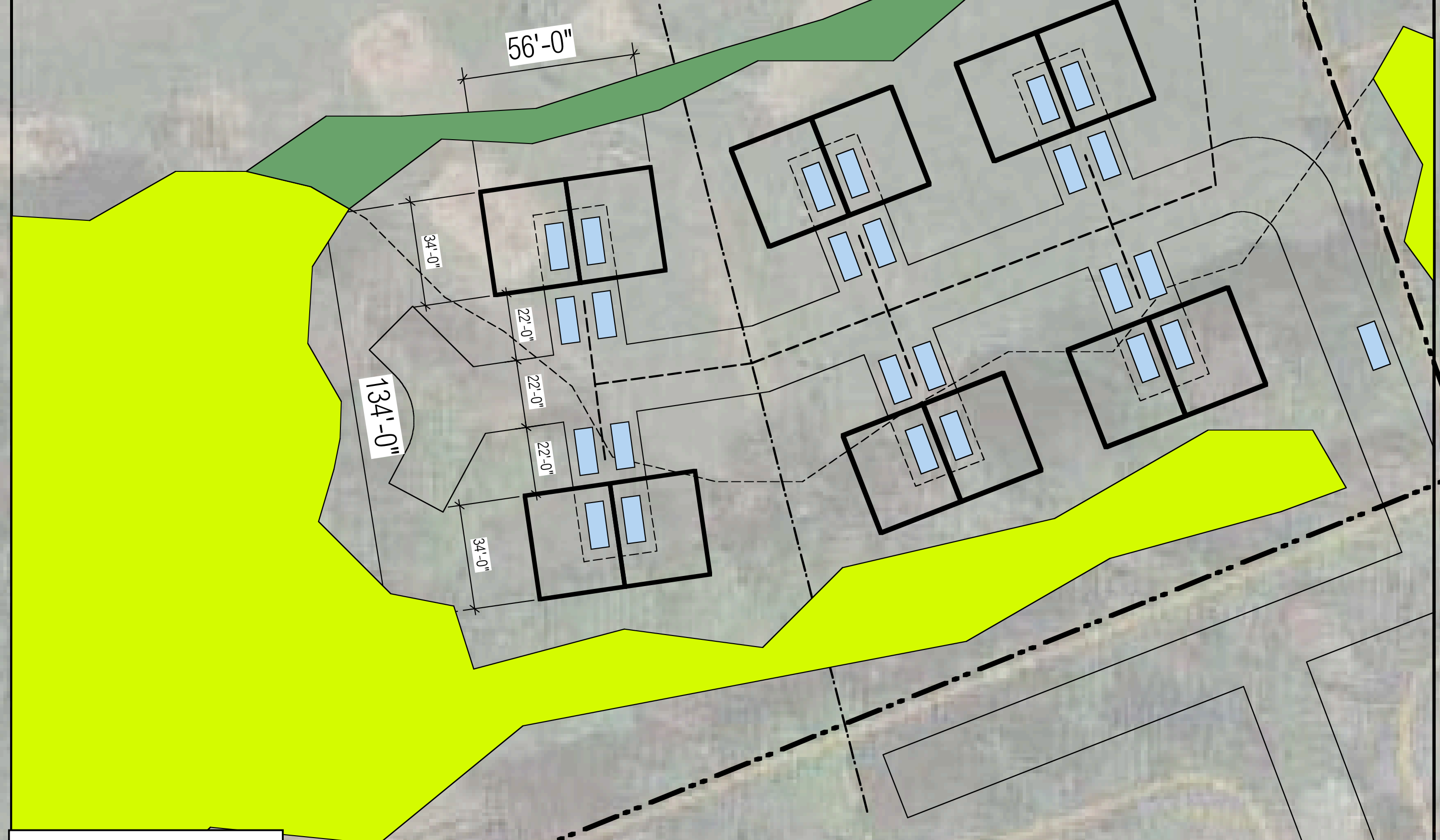
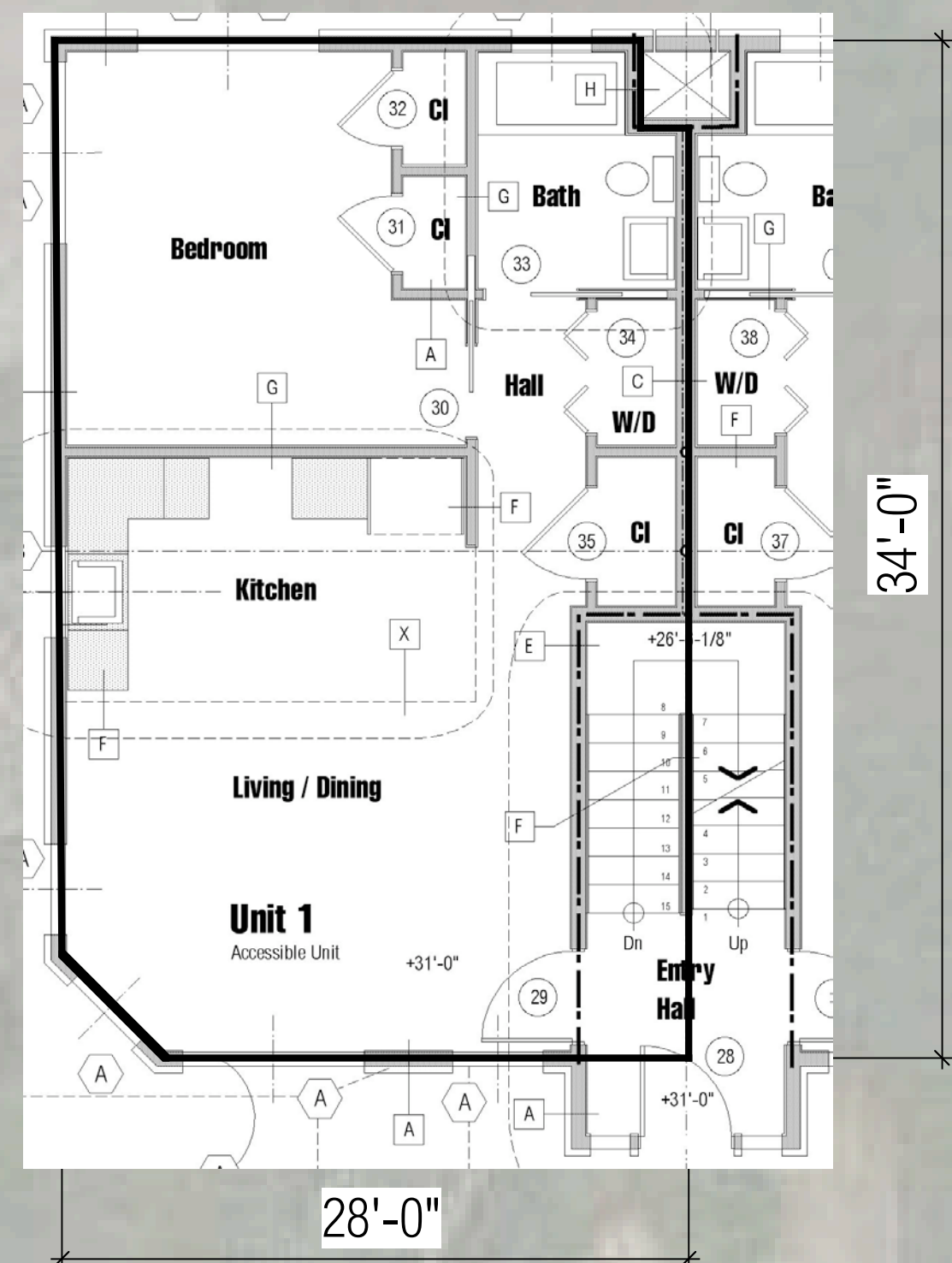
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265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

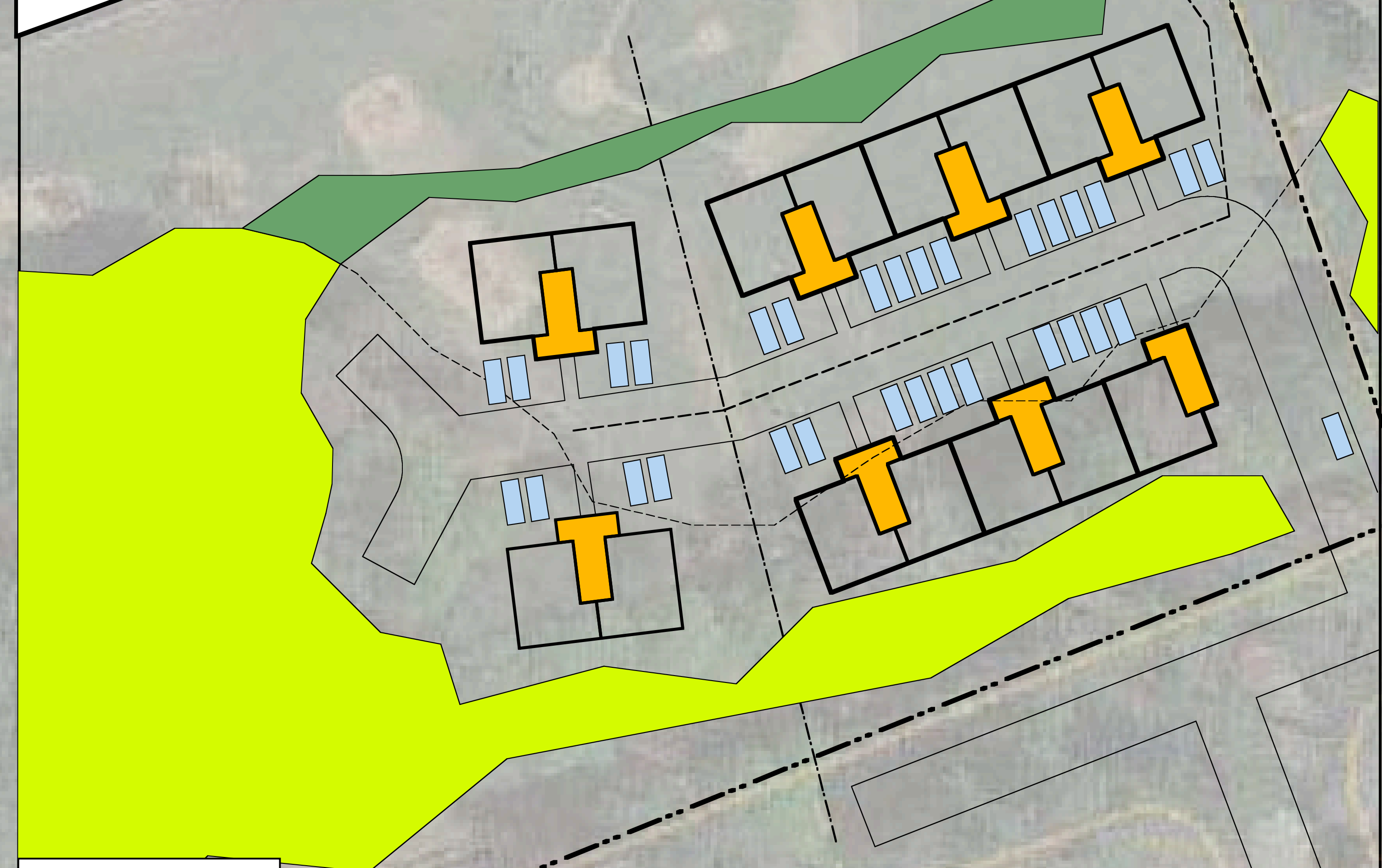
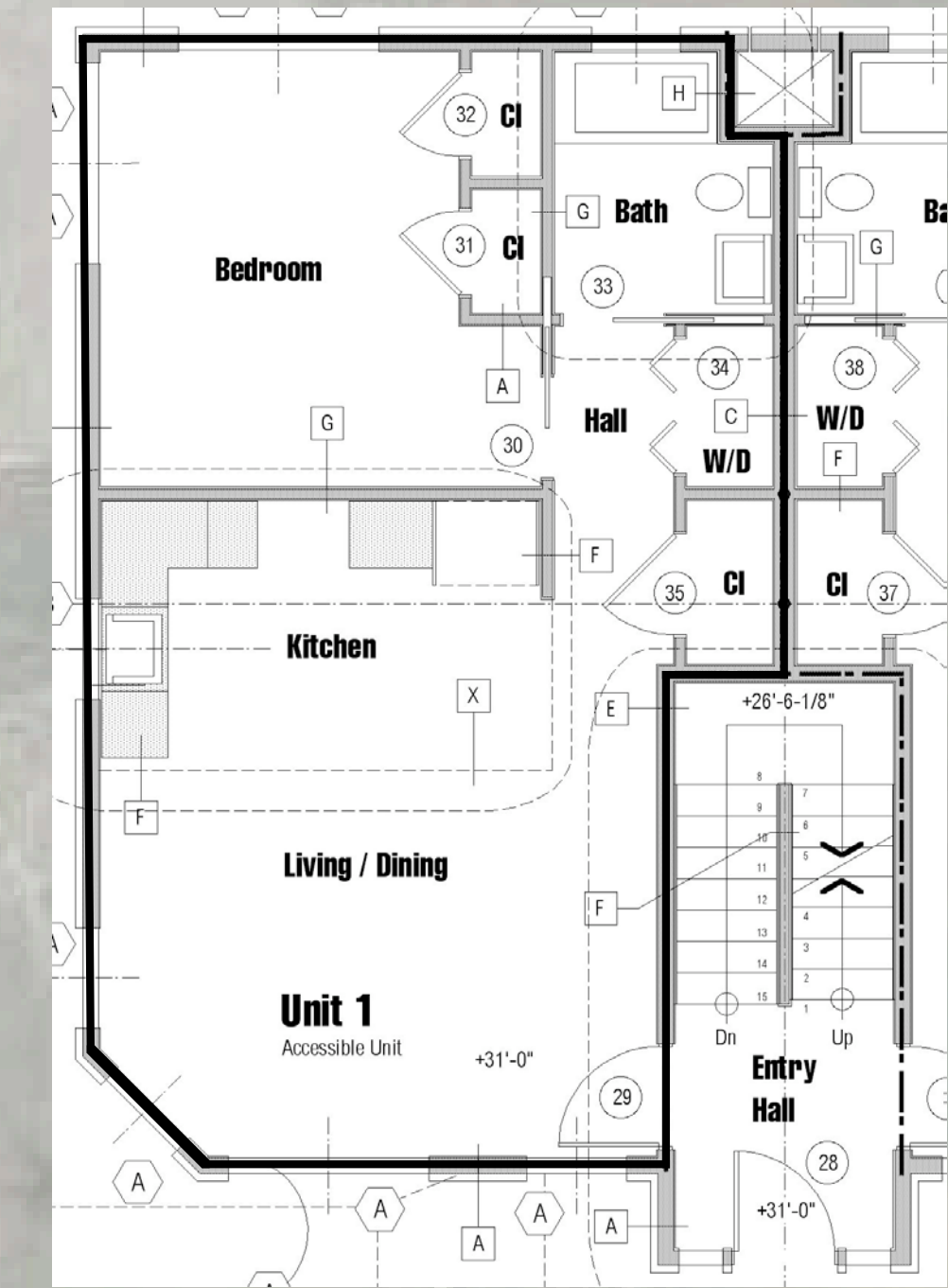
Plan Details

Scale: 1" = 30'



For Sale

G-2.3



For Rent

265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

H-1 COA Housing Scheme

We were also requested to take a look at a scheme for Senior Housing that would be located close to the Bay Road edge of the site, between the PSB and Winthrop School.

The Scheme:

The scheme consists of approximately 26 units of about 750 sf each, with most of the units occupying the second floor and the remaining units on the first floor. The new building would probably replace the existing Senior Center. It might be possible to incorporate some of the functions of the current senior center into the new building, but probably in a much more compact layout.

The accompanying functions of Senior Housing require that a large portion of the building is given over to the functions that enable senior housing to work, some of which are listed here:

- Dining Room
- Kitchen
- Indoor Gathering Space
- Manager's Office
- Library – Computer Room
- Outdoor Gathering Space
- Mail Room
- Elevator
- Reception
- Pantry
- Security Space

In addition, we are assuming that approximately 20 additional parking space than currently existing would be required.

Site Considerations:

In terms of it's impact on the site, new Senior Housing is problematic. Here are the main issues:

- With the combination of reduction of current parking capacity (because of the much larger building) and the requirement to not only compensate for this by finding new spaces but the need to add 20 spaces for the new building itself, it would reduce the green space on the site significantly and make it more difficult to circulate by vehicle.
- The resulting increase to non-permiable surface area would further exacerbate the current storm-water drainage problem, and have knock-on effects to surrounding neighbors, who are very well aware of the current issues.
- A much larger building on the site, so close to the road, would alter the current sweep of green space that separates the road experience from the current buildings. Our feeling is that this green-space serves as a transition to the more rural character of the town to the north/east. We feel this is an important quality to recognize and an important one to keep.

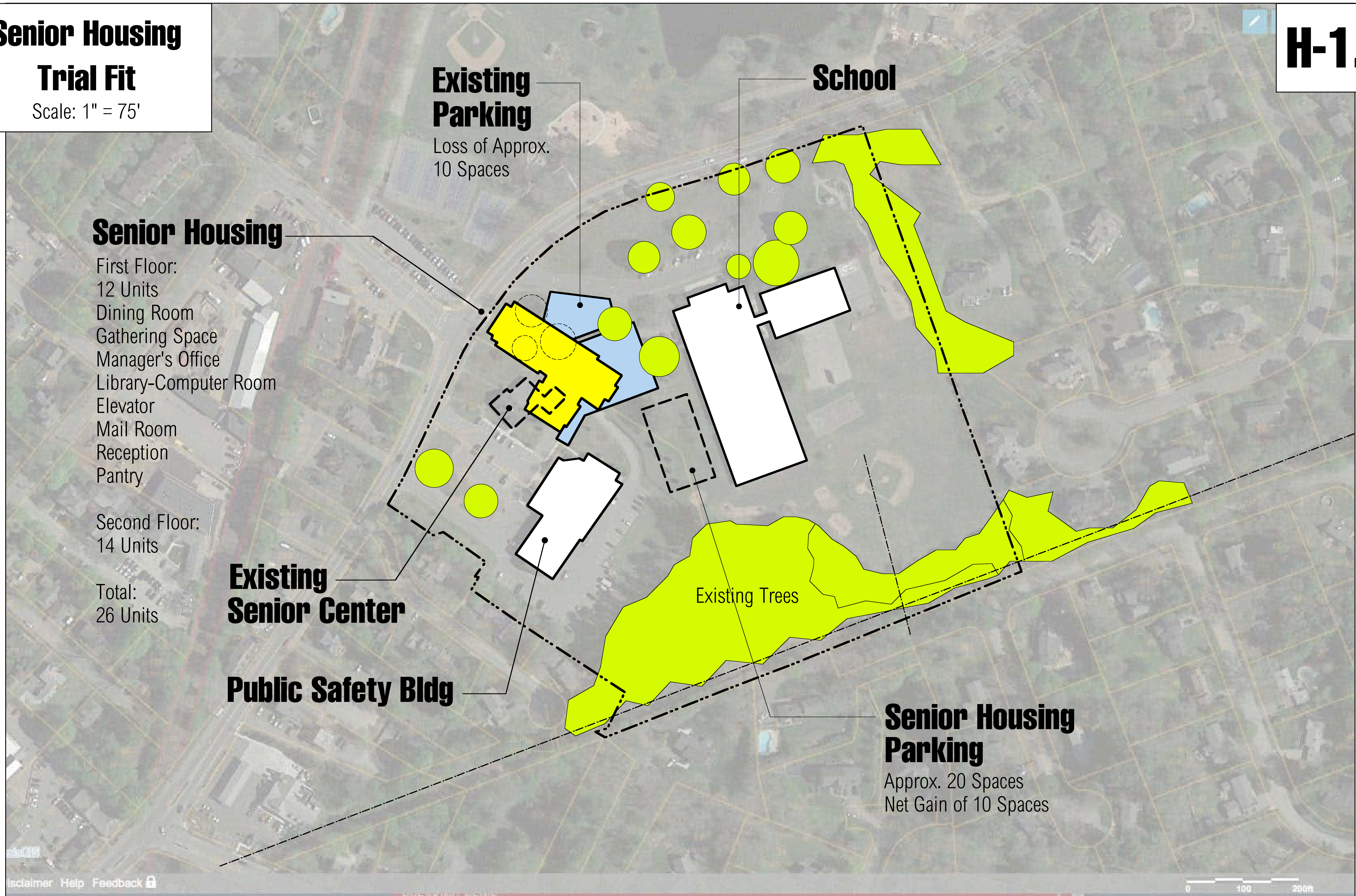
Economic Considerations:

It's estimated that the total development costs could range around \$9M. The economic issue is that a senior center has a magnitude of capital and ongoing expenses which require a large number of rental units to offset those costs which therefore make individual units affordable. A development here could not support the number of units required; in order to be economically viable, each unit would have to rent for approx. \$3083 / month, putting this outside the affordable.

Senior Housing Trial Fit

Scale: 1" = 75'

H-1.1



265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

Senior Center Site Pro Forma

Scale: 1" = 75'

Hamilton, MA

Contact

H-1.2

Existing Senior Center

Senior Housing

School

Public Safety Bldg

Senior Housing, Hamilton, MA
Adjacent to Council on Aging

30 Rental Apartments
November 8, 2016 Financial Estimates

ESTIMATED COSTS

Site Acquisition	\$200,000
Site Development	\$850,000
Building Construction	\$5,928,750
Construction Contingency	\$675,000
Soft Costs	\$450,000
Marketing and Rental	\$200,000
Rentup Shortfall	\$400,000
Construction Interest	\$200,000
Fit Up	\$100,000

TOTAL COSTS \$9,003,750

Utilities, Parking, Landscaping
30 apartments @ 750 SF each, net. Service space to include community room, kitchen laundry, management, etc.
Architect, Engineer, Survey, Legal, Developer, Cost Certification

\$225,094 PER APARTMENT

Annual Rental Expenses

Vacancy Allowance	-45,000
Management Fee	-26,000
Superintendent	45,000
Staff	-50,000
Grounds	-25,000
Building Maintenance	-50,000
Replacement Reserve	-75,000
Taxes	-60,000
Utilities	-85,000
Debt Service	-516,819

Total Annual Rental Expenses -\$887,819

Non-Residential Electric, Gas, Telephone
\$8,500,000 @ 30 years, 4.5% (\$43,068.25)
-73,984.92 per month

Annual Income Required \$1,065,000

1.20 debt service coverage

Average Monthly Rental \$2,958
Plus Utilities \$125

Total Monthly Rental \$3,083

per apartment

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265 Bay Road Site Feasibility Study

Town Of Hamilton, Massachusetts

J-1 Conclusions

Location

In terms of its location in the town, the site could not be more ideal: close to shopping, across from the community center, near churches, the town library and Railroad Avenue- the location of many key services. The commuter train station is a 5 minute walk.

This the great conundrum of the site. Its nearly ideal in terms of location within the town to take advantage of a low impact, smart growth development, but once we start to look at the qualities of the site in more detail, the viability of significant affordable housing becomes more challenging.

Access

None of the current entry points along Bay Road are viable, being either 1) emergency only, 2) too busy and blocked by the PSB, 3) too heavily programmed by school use and 4) exit only. There is no other potential for an additional access point along that road. There is however potential access from the rear of the site, via Locust Street. It does mean crossing the high pressure gas pipeline; however the team has determined by talking to the company that owns the line, this is possible.

Natural Features

The overall character of the site is a flat, grassed field, gently sloping towards the rear of the site. We know from conversations with older residents that the site was once more heavily wooded. Upon construction of the PSB, the woods in the western half of the site were greatly reduced to a much smaller area. At the same time, much hardscape for parking was also built, increasing stormwater runoff dramatically.

Stormwater

The western half of the site is hampered by an ongoing storm-water drainage issue, which was not addressed with the building of the PSB. The PSB introduces a small recharge structure in the rear of the building, to which all runoff from the PSB, the front and rear parking areas, the school roof and Council on Aging property is directed. This (in combination with the high water table) has resulted in an inability of the site to recharge its runoff and the consequent knock-on effects in terms of flooding to adjacent neighbors basements.

This situation eases off considerably in the eastern half of the site both because the neighboring properties are slightly uphill and because there is more softscape to deal with the stormwater.

Available Land

There is no available area of land on the western half of the site, large enough for even a modest size development, without removing what remains of the woods to the rear of the PSB. Given its important role in mitigation of the stormwater issue, we think removal of these woods is not a good idea and can only lead to addition problems. The eastern half of the site has enough land for a modest development if re-design of schoolyard features is accepted.

Soils

Soil tests performed by the team on the eastern half of the site revealed a gravelly course sand below topsoil, extending down to twelve feet below the surface. Estimated percolation rate is under two minutes per inch, making this an

excellent material for septage leaching trenches and recharge for surface runoff. Groundwater is estimated to be only four to five feet below the existing surface, which needs to be taken into consideration when designing foundations.

Septic System Strategy

A pumped system for septic effluent to a common leaching area is our proposed design solution. A preliminary layout of this area indicates that the required area as well as its required setback distances can be accommodated. We have successfully utilized this design in several other affordable housing developments. Good percolation rates in the sandy soil are ideal for this solution.

Protection of Natural Resources

A small area of woodland adjacent to the depression (former pond) would be cleared. This will not affect the already overloaded recharge area behind the PSB. Runoff water from new impervious areas for the proposed housing will be directed toward this depression. Mitigation of the natural increase to stormwater runoff that any new development causes can be offset on the site with the use of pervious parking areas (drivable grass), bioswales, rain gardens and dry wells as well as re-use of roof drainage for irrigation in cisterns, if desirable.

Potential Development Schemes

Looking at the traffic volumes on Bay Road and lack of practical access has convinced us that the best point of access to any new residential development should avoid Bay Road. Having determined that we can get permission to cross the Gas Easement from Horseshoe Land / Locust Street, we feel that access to the new homes through an area of existing homes should promote a sense of connectedness between the two residential areas.

Having recommended an access to the site from the Residential neighborhood to the south, much of the success of this approach will depend on the town's approach to promoting the idea and the idea of affordable housing in general.

While the team initially proposed a For Sale scheme that could support 12 units, we subsequently developed a For Rent scheme that could support as many as 30 units. As well as being more in line with market needs, the For Rent scheme has the advantage of having all the units count towards the town's affordable housing tally.

Hamilton Affordable Housing Goals

The town currently counts approximately 84 units of affordable housing or 3% of its 10% minimum requirement. A further 197 units would have to be built to achieve 10% in addition to a few more, given that the base overall housing count will increase.

Construction of some 215 units of new affordable housing will bring the town of Hamilton up to their 10% threshold whereby further 40B development can be avoided. By producing ½ to 1% of the 215 affordable units each year (under a plan approved by the DHCD) further development pressure for affordable housing from outside influences can also be avoided. Construction of 30 units of Rental Affordable Housing would represent roughly 14% towards the minimum affordable housing threshold.

Council on Aging for Senior Housing

As can be seen on the H-1.1 site plan, a 26-unit assisted living facility could be constructed, possibly designed to incorporate a new COA building. The disadvantages of increased stormwater runoff, increased traffic, lack of physical area to site the building, displacement of existing parking and lack of space for new parking make this a difficult proposition. These difficulties are compounded on the economic side by the need for support functions which limit the ability of the site to include the number of rental units that would make this viable. We also feel that another large building on this site, so close to the road will push the character of the site in a distinctly urban direction, out of character with the qualities that make Hamilton a special place.