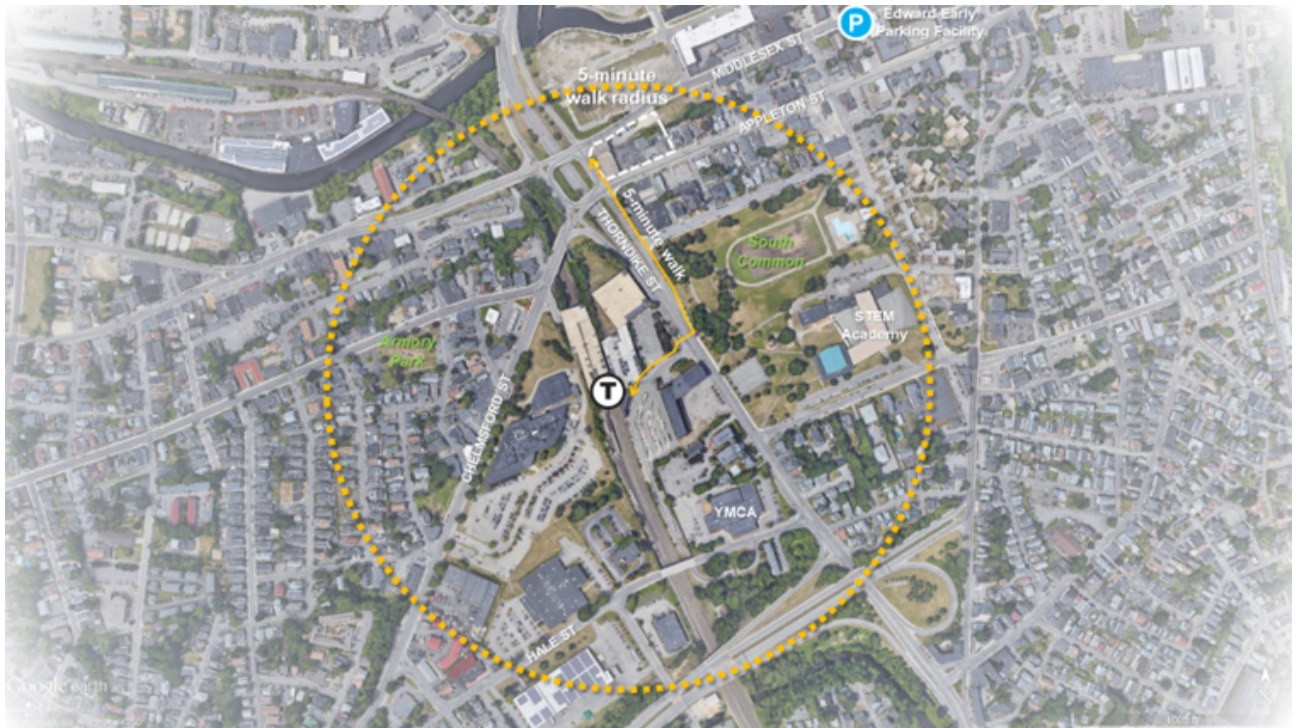


Lowell Gallagher Terminal TOD Study



Prepared by
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Lowell Planning and Development Department and
MassDevelopment
16 June 2020

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Appendices

Appendix 1: Commercial B and Residential B Financial Analysis

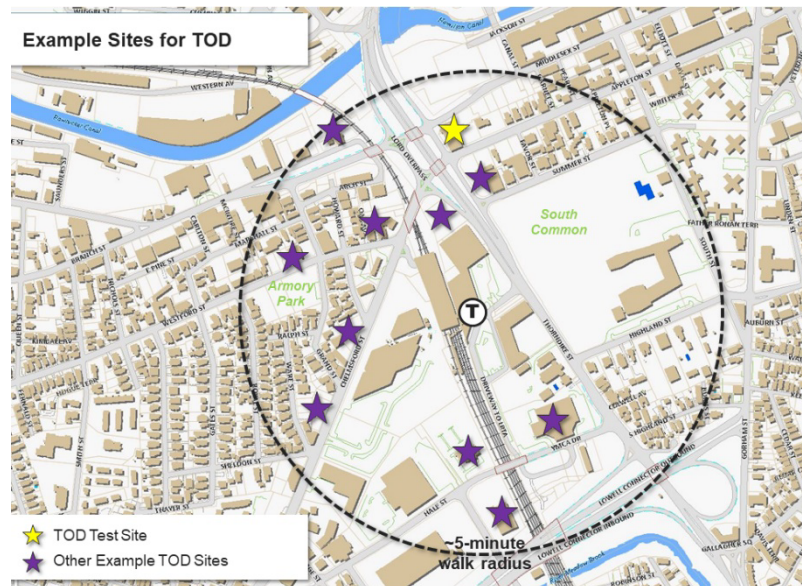
Appendix 2: “Key Findings—Zoning, Market and Proformas” memo

Executive Summary

Transit-Oriented Development (TOD) describes higher density, mixed-use development in close proximity to transit. The core characteristics of TOD are summarized by the 3 D's: density, design, and diversity.

- **Density**, which describes the intensity of land use and is often but not always correlated with building height, is highest at the station and within a quarter mile, a typical five-minute walk that most people find convenient. It should be calibrated to the local context – high density in Downtown Lowell is much less than high density in Downtown Boston.
- **Design** is critical to create a high-quality, amenity-rich public realm that encourages safe pedestrian and bicycle trips throughout the area. Roadways should incorporate Complete Streets elements that accommodate all users. Buildings should be set close to the sidewalk with zero front setbacks and transparent, actively used ground floors with frequent entrances and minimal blank walls. Good design helps higher density projects blend into the local context in a more natural, seamless way.
- **Diversity** describes several key characteristics. A complementary mix of uses, including both housing and jobs, should be provided around the station to bring life to sidewalks throughout the day and week. TOD should also provide for affordable and workforce housing to ensure benefits of TOD like reduced transportation costs are available to those who need it most.

The goal of the Lowell Gallagher Terminal TOD Study is to determine the feasibility of Transit-Oriented Development in the vicinity of the Lowell Gallagher Transportation Terminal and determine what government actions might be necessary to achieve feasible TOD. The Lowell Planning and Development Department identified eleven example TOD sites within a five-minute walk/quarter-mile radius of the Terminal. These sites represent a variety of challenges and opportunities developers might face when considering projects with density appropriate for TOD.



One site was selected as a representative test site to analyze in more detail. Stantec devised two concept plans, 'Commercial A' with office mixed-use and 'Residential A' with multifamily mixed-use, and prepared a high-level financial proforma for each. After these initial analyses, we tested revised concepts, 'Commercial B' and 'Residential B', with greater square footage. The proforma analysis found that all concepts would likely require additional financing assistance to be financially viable. The Commercial concepts require a significantly greater amount of financial assistance than the corresponding Residential concepts and that requirement is a greater proportionate share of the Total Development Cost for the Commercial vs. the Residential concepts. The increased scale of the Commercial B and Residential B concepts increases the need for financial assistance, but the need is roughly proportionate to the increase in scale. To "fill the gap" between Total Project Costs and the sum of conventional debt and equity, we identify several potential

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funding sources that might be used. We identified several programs that could potentially “fill the gap” for Residential concepts, but “filling the gap” for the Commercial concepts is much more difficult, as rents are lower relative to development costs compared with Residential.

Stantec also reviewed existing zoning in the station area to identify potential regulatory barriers to high-quality TOD. We present best practices to consider, including the possibility of creating a 40R Smart Growth zoning district or TOD overlay district around the station to establish appropriate controls for density, parking, and other key project characteristics.

1. Introduction

The goal of the Lowell Gallagher Terminal TOD Study is to determine the feasibility of Transit-Oriented Development (TOD) in the vicinity of the Lowell Gallagher Transportation Terminal and determine what government actions might be necessary to achieve feasible TOD. The first step in the analysis was preparation of a “Key Findings—Zoning, Market and Proformas” memorandum dated March 5, 2020. That report identified an example TOD test site, reviewed zoning and the real estate markets, devised potential development programs, and prepared preliminary proforma financial analyses of those programs to ascertain likely feasibility of market-driven development and the scale of financing gaps, if any. This report builds upon that analysis and its subsequent review with Planning and Development and MassDevelopment, held on March 6, 2020 in Lowell.

The Lowell Planning and Development Department identified eleven example TOD sites within a five-minute walk/quarter-mile radius of the Terminal. These sites represent a variety of challenges and opportunities developers might face when considering projects with density appropriate for TOD. For the analysis, we selected a representative site from this set to test development feasibility. The site was selected for its characteristics, disregarding specific ownership.

The test site provides an example of appropriate site development that can be generalized to others within a walkable distance of Gallagher Terminal. The site was selected because of its locational characteristics, noted below, and the modest density of existing development in contrast to what might be possible. Its use does not indicate an interest in acquisition or expectation that any of the private owners would necessarily assemble the balance of the site and develop it. Two site plan scenarios for two different programs were developed and analyzed—one oriented towards office use and the other oriented towards residential use, both with ground-floor retail space.

Gallagher Transportation Terminal

Commuter rail:

- MBTA service to North Station
- 45-minute trip with 8 stops
- Approx. 20-30 minute peak hour headways between trains

Bus:

- 18 LRTA local/regional bus routes
- 1 MVRTA regional bus route

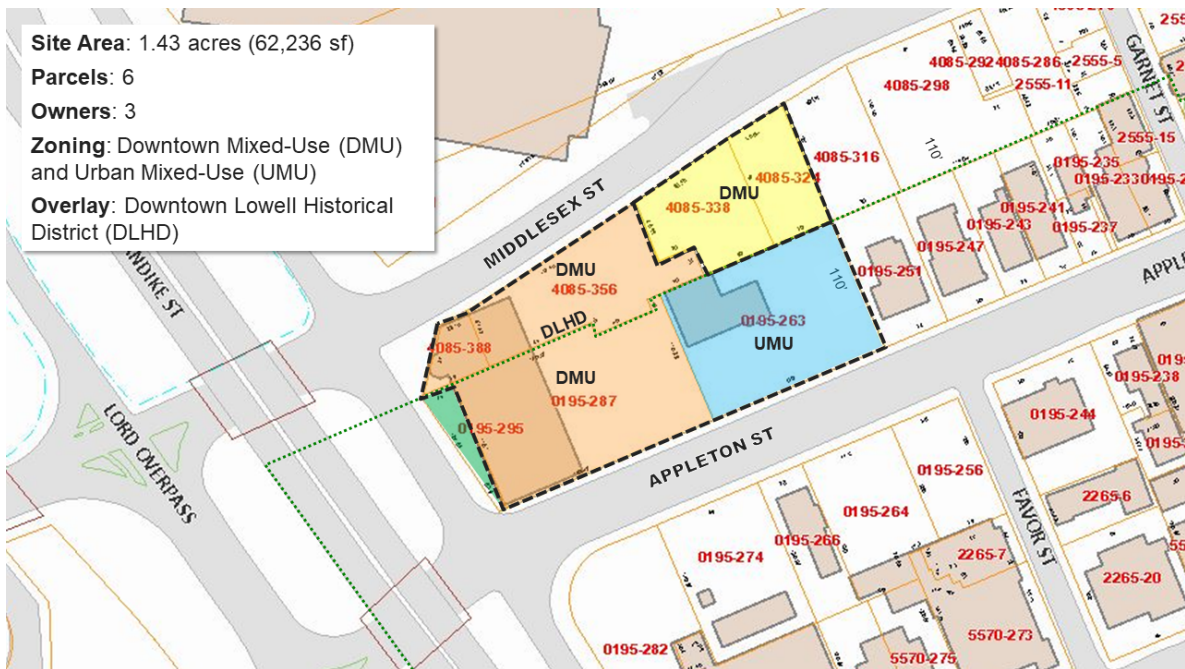
Commuter parking:

- 695 parking spaces
- Bike racks



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The site, bounded by Thorndike Street, Middlesex Street, Appleton Street, and Garnet Street as shown in the aerial above and photos below, is across from the new Lowell Justice Center and will be positively impacted by plans for the reconstruction of Thorndike Street. It is within a five-minute/quarter-mile walk of the Terminal, is large enough for mixed-use development, has good street frontage and visibility, and has attributes that might make it desirable from a market perspective. The blue, orange, and yellow shading on the plan, below, represent three different property owners. The small green-shaded parcel is owned by the City of Lowell and has not been included in the scenario layouts as we did not know if it might be needed for the major reconstruction of Thorndike Street, but the redevelopment plans might marginally benefit from its inclusion.



2. Analysis

Stantec initially prepared a “Key Findings—Zoning, Market and Proformas” memorandum (Appendix 2). The Zoning analysis is included in Section 3. Zoning Considerations. Please note that in that memorandum the Concepts analyzed were labelled Concept 1: Office Mixed-use and Concept 2: Residential Mixed-use. We the addition of a second set of concepts, the name has been changed to Commercial A and Residential A and the second set have been named Commercial B and Residential B (for Bigger—as the concepts are larger than set A).

Market Understanding

Residential Multi-family

Residential rental rates have been growing consistently since 2009, according to CoStar data, and are projected to continue to rise slightly through 2023. As of the second quarter of 2019, asking rents were approximately \$1.85/sf or \$1,522 per unit. Review of asking rents of five nearby new or recently renovated apartment projects (Thorndike Exchange, Jackson Street Lofts, 24 Merrimack Street, Apartments at Boott Mills, and Massachusetts Mills) were in line with the CoStar statistics.

Per CoStar, multi-family vacancy rates have fluctuated, generally decreasing since 2009 but projected to rise from 3.75% in 2019 to over 4.5% in 2023. With only a few large deliveries between 2015 and 2019, and no new deliveries projected until 2022, we believe that some new residential product could reasonably be absorbed in the near term.

Most larger scale apartment development in Lowell is retrofitted mill buildings. There are few comparable new construction multi-family buildings in the area. Following the conversation at the kick-off meeting, smaller residential conversions (i.e. conversion of a 9-unit building to a 15-unit building) are more typical than large new construction projects.

Office

Office rental rates took longer to recover after the recession but have been rising since 2012 to \$19.60/sf in the second quarter of 2019 according to CoStar. Office rents are not expected to continue to rise over the next four-year period.

In 2019, office vacancy was at a 10-year low of 4.3%, projected to rise slightly over 6% by the end of 2023. There has been effectively no office space delivered over the last 10 years, and no office space is anticipated in the upcoming four years. While these are strong office fundamentals to absorb new office space, developers will look to have a tenant in place rather than pursue speculative development. The most likely tenants for large blocks of new office space may be existing office occupants in the city, such as MA-COM, or those users who may have work associated with the new judicial center.

Retail

According to CoStar, retail rental rates in 2019 were \$17.29/sf and had a 10-year average of \$15.62/sf. Annual rent growth has averaged only 1.2%. Despite a high retail vacancy rate in 2019 of 20.0%, 10-year average retail vacancy was closer to 9%. New retail development should be expected to serve the office and residential tenants in its immediate vicinity.

Initial Analysis: Commercial A and Residential A

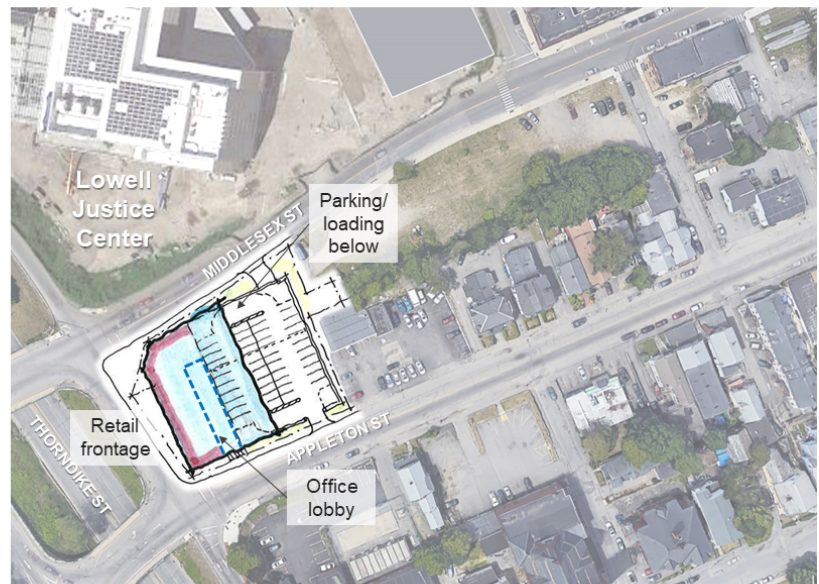
Stantec devised two initial concept plans and prepared a high-level financial proforma for each. **Commercial A** is office mixed-use and **Residential A** is multifamily mixed-use. The difference in building footprints between office and residential, and the difficulty in providing cost-efficient parking—the change in grade played a major role both good and bad—were determining factors for how much land is needed for each Concept. We utilized the market assumptions above, as well as reasonable cost assumptions in order to create the proforma model.

Commercial A is mixed-use with 30,000 SF of professional office space on two floors over 5,500 SF of retail and parking. Parking (60 spaces) takes advantage of the difference in grade and uses a relatively inexpensive deck over at-grade parking with a separate entry at each level (lower level from Middlesex and the upper from Appleton, with no ramp between levels). This concept uses parcels under single ownership since the site is able to accommodate the program and parking. We considered adding additional land along Appleton further from Thorndike but doing so would add acquisition cost and complexity and provided for a much larger project that would be difficult to absorb quickly in a constrained market.

Concept: Commercial A

Commercial Mixed-Use: 35,500sf

- Retail: 5,500sf
- Office: 30,000sf over 2 upper floors
- 77 spaces required
 - 44 spaces provided Appleton level
 - Up to 20 spaces Middlesex level
- 3 parcels, 1 owner
- Site area: 33,953 sq ft (0.78 ac)



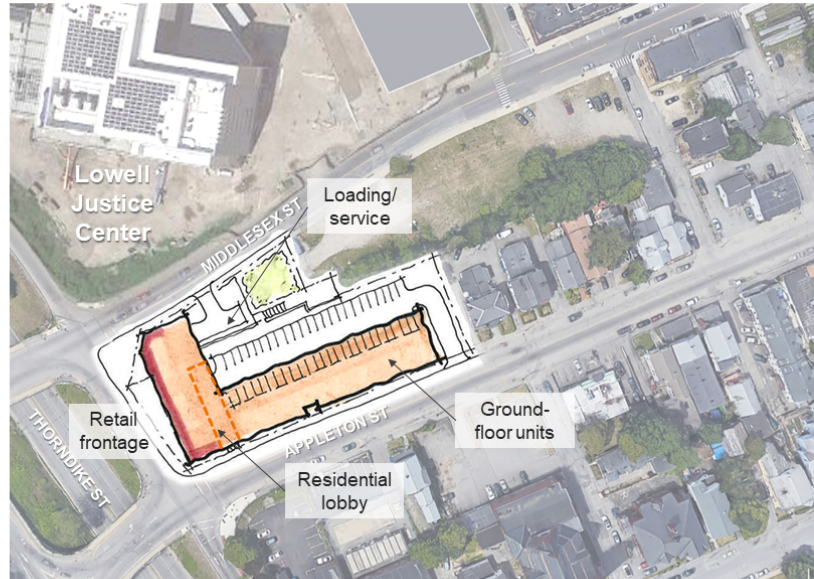
Residential A is a mixed-use development with 60 units of housing and 6,000 SF of retail. The building is three stories with ground-floor retail facing Thorndike and housing along Appleton. Fifty parking spaces are provided at-grade, with a portion of these located beneath the upper two floors of the building. This concept uses the property of two owners for a slightly larger site area than Commercial A.

Concept: Residential A

Residential Mixed-Use: 64,300sf

- Retail: 6,000sf
- Housing: 56,300sf / 50 units
@ 1,100sf per unit
- 3 floors
- 62 spaces required
50 spaces provided

- 4 parcels, 2 owners
- Site area: 50,492 sq ft (1.16 ac)



We analyzed the financial feasibility of both concepts. While neither project was financially viable on its own, **Residential A** came relatively close and showed a modest gap, \$1,725,000 (8.6% of Total project Cost) but **Commercial A** showed a much larger gap, \$4,685,000 (31.8% of Total Project Costs). To achieve a financially feasible project, we determined that gap financing programs may be needed. These were investigated in subsequent analysis, discussed below.

The initial analysis was based upon capital markets at the beginning of March prior to the impact of Covid-19 and the major drop in the stock market and related changes in the real estate markets, cost of construction, and financial markets. At this point in time we are not able to judge the longer-range impacts of the pandemic on these markets and therefore are basing our current assumptions on pre-Covid-19 markets. Over time we expect markets to return to a similar state and therefore these findings still provide useful insights.

Revisions to the Initial Analyses: Commercial B and Residential B

With review of the analysis at our March 6 meeting, we discussed the rents used in our models and determined that both our retail and office rents might be somewhat aggressive. In turn, after further review of market comps, we reduced retail rents from \$20/SF to \$18/SF and we have reduced office rents net of operating costs by \$3.50/SF. From \$22.50 to \$19.00. While the residential rents previously projected may be achievable, we thought it best to be more conservative on both residential rents and operating expenses, in line with Thorndike Exchange, the residential lofts adjacent to the Gallagher Station. These changes reduced financial feasibility of the analyzed concepts. We also found an error in the summation of Total Acquisition Cost in the Office Mixed-use proforma that resulted in an understating of the Total Project Cost by \$345,400 (2.3%). That resulted in a similar increase in the financing gap. The error has now been corrected.

At the same time, to determine feasibility we needed to incorporate a benchmark for developer and financial markets expectations for performance. We used Return on Equity (ROE) as that measure for our analysis. For our initial analysis of Commercial and Residential concepts, we used an 11.0% ROE for our ROE Target. We felt that was conservative and, and appropriate for our pass analysis, since this was a high-level analysis, and it might account for uncertainty within the analysis. However, after talking with developers

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working in Lowell and other developers, we heard that their working target was currently in the 9.0-10.0% range for them to consider a project. Therefore, we have reconsidered and revised our Target ROE to 10.0%, still allowing for some cushion for uncertainty.

With these changes:

- Commercial A shows an estimated Total Project Cost of \$14,716,073 and a Financing Gap of \$4,685,000 (31.8%)
- Residential A shows an estimated Total Project Cost of \$20,125,940 and a Financing Gap of \$1,725,000 (8.6%)

At the March 6th meeting, we also discussed increasing the scale of both concepts to promote greater density, and therefore devised two modified concepts:

Commercial B

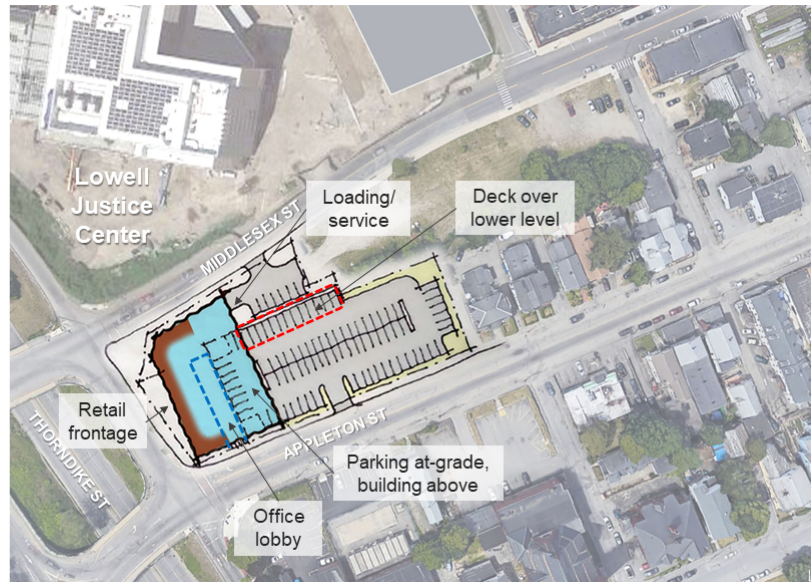
Commercial B is mixed-use with 45,000 RSF of professional office space on three floors over 5,500 RSF of retail and parking. Parking (95 spaces) takes advantage of the difference in grade to avoid ramps and uses at-grade parking, with some located beneath upper floors of the building, and a separate entry at each level (lower level from Middlesex and the upper from Appleton). The site area increased to accommodate parking required for the larger program. **Commercial B** is 4 stories, 45,000 RSF vs. 3 stories, 30,000 RSF of office for **Commercial A**.

Commercial B performs similarly, financially, to **Commercial A**, in our proforma analysis. That is, the financing gap is proportionally similar relative to Total Development Cost. Because of the more substantial scale, which better meets TOD objectives, we have elected to use **Commercial B** for our Gap analysis. However, while this is a more desirable project, we note that it will be more challenging to lease and absorb 45,000 SF than the 30,000 SF of office space in Commercial A. Achieving a viable project will depend on being able to substantially pre-lease office space. If the hypothetical developer is able to find a tenant for much of the 45,000 SF, they can proceed with a project similar to Commercial B, if not, they could develop a project similar to Commercial A. While vacancies in Lowell are relatively low, rents are significantly below what would be necessary for a new market-viable project and office developments will need to rely on tenants that have specific reasons to be or stay in Lowell, cannot find suitable office space in Lowell and therefore will pay significantly higher rents.

Concept: Commercial B

Commercial Mixed-Use: 50,500sf

- Retail: 5,500sf
- Office: 45,000sf on 3 upper floors
 - 4 floors/~56'
 - 110 spaces required: 99 for office, 11 for retail
 - 95 spaces provided on-site: 88 spaces at Appleton level, 7 spaces + service at Middlesex level
- 4 parcels, 2 owners
- Site area: 50,492 sq ft (1.16 ac)



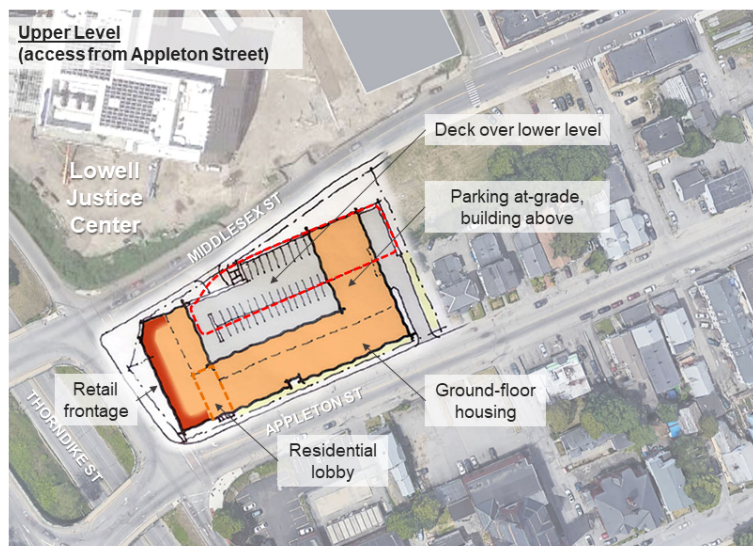
Residential B

Residential B is a four story, “U”-shaped residential mixed-use development with 111 units of housing over 6,000 SF of retail facing Thorndike. 128 parking spaces are provided, both at grade and using a relatively simple deck structure that extends over the lower portion of the property along Middlesex. Some at-grade parking is beneath upper floors of the building, similar to **Commercial B**. Two small parcels along Middlesex Street have been added to the **Residential A** site in order to accommodate the larger program. The residential component of **Residential B** is 85% larger than **Residential A**. **Residential B** is 4 stories, 111 units vs. 3 stories, 60 units for **Residential A**.

Concept: Residential B

Residential Mixed-Use: 110,250sf

- Retail: 6,000sf
- Housing: 104,250sf / 111 units @ 940sf per unit
 - 4 floors/~45'
 - 123 spaces required: 111 for housing, 12 for retail
 - 128 spaces provided: 88 spaces at Appleton level, 40 spaces + service at Middlesex level
- 6 parcels, 3 owners
- Site area: 62,236 sq ft (1.43 ac)

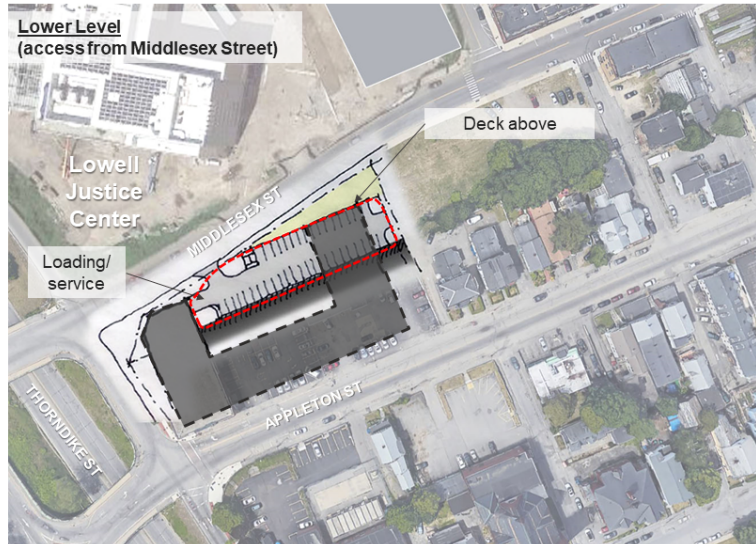


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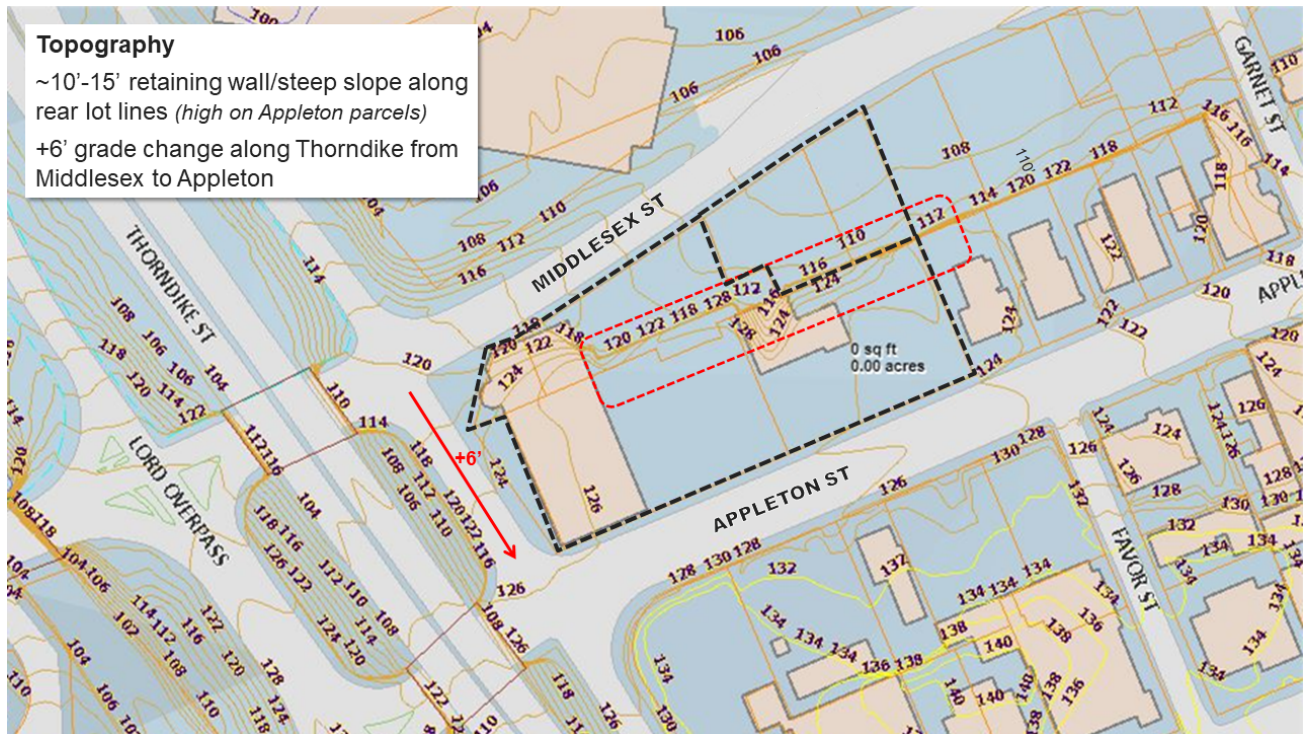
Residential B performs similarly, financially, to **Residential A**, in our proforma analysis. That is, the financing gap is proportionally similar relative to Total Development Cost. Because the larger scale of **Residential B** better meets TOD objectives for density, we have elected to use it for our Gap analysis. We have fewer concerns about trying to lease residential than we do trying to lease office as the residential market is significantly stronger and we see new residential development but no new office space.

For these revised concepts:

- **Commercial B** has a Total Project Cost of \$21,312,630 and a Financing Gap of \$7,100,000 (see Appendix 1: Financial Proformas Commercial B and Residential B).
- **Residential B** has a Total Project Cost of \$36,130,750 and a Financing Gap of \$2,925,000 (see Appendix 1: Financial Proformas Commercial B and Residential B).

Note the significant difference in size of the Financing Gap relative Total Project Cost for **Commercial B (33.3%)** relative to **Residential B (8.1%)**.

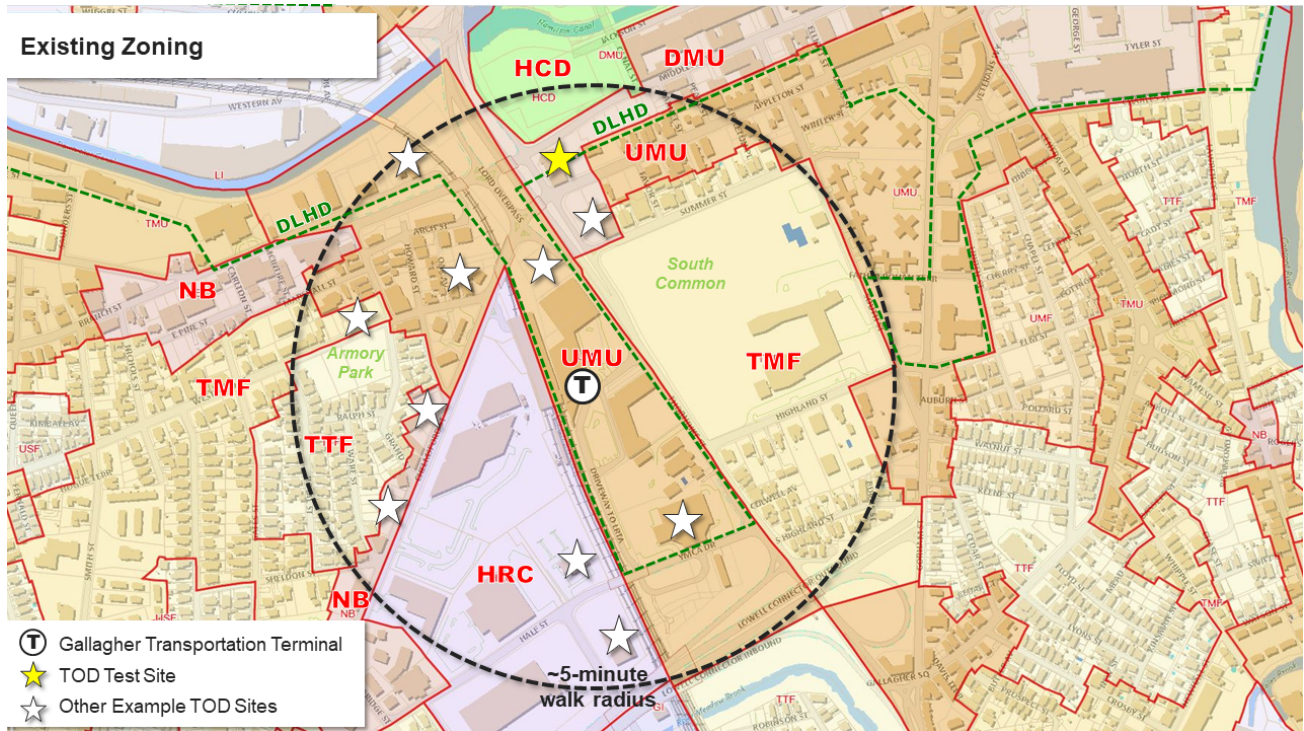
Other Site-Specific Issues



Parking schemes for this particular site were able to take advantage of the difference in grade between Appleton and Middlesex Streets. The concepts use a small, relatively inexpensive deck structure to extend the parking area accessed from the higher Appleton Street over at-grade parking accessed from the lower Middlesex Street. The two levels each have a separate entry and no ramp between them. At-grade surface parking is the least expensive with construction costs typically between \$8-10,000/space. A single level metal or concrete deck is simpler structurally than a multi-story parking structure and does not have to provide land and cost for a ramp system. It can cost \$15-20,000/space. A multi-story parking structure could cost closer to \$30,000/space. For this analysis, we assumed the Residential B concept spaces would have a blended cost of \$15,000/space and the commercial concept spaces would have a blended cost of \$20,000. If a parking garage were needed it would add \$10-15,000/space. With 20% for soft costs on top, the estimated total project cost would increase by \$12,000-18,000/space.

We analyzed the impacts on feasibility of these higher parking costs through a proformas analysis. The gap increased from \$7,100,000 to \$8,275,000 for Commercial B and from \$2,925,000 to \$5,550,000 for Residential B. If a site could provide all surface parking, the gap would decrease to \$5,525,000 for Commercial B and \$1,725,000 for Residential B.

3. Zoning Considerations



TOD Test Site. The site falls within two zoning districts, DMU (Downtown Mixed-Use) and UMU (Urban Mixed-Use). The DMU zoning district “promotes a vibrant urban environment in the heart of Downtown Lowell” and the UMU “focuses on revitalizing the commercial areas in urban neighborhoods near downtown”. The parcels fronting Middlesex Street are also within the Downtown Lowell Historic District (DLHD) which guides rehabilitation and new construction to preserve the integrity of Lowell’s 19th century setting.

The concept plans generally meet existing zoning requirements with the only exceptions being residential lot area requirements of 1,000 sf of lot area /unit in the UMU zone and residential parking requirements in the UMU zone. These could be changed by remapping those parcels into the DMU zone. For Commercial A and Commercial B, these schemes would be short of required parking except for the relief provided by the site’s proximity to the Edward Early public parking garage. That relief does not reduce the requirement for residential and Residential A would not comply. The proximity to the Gallagher Transportation Center parking garage could provide a reservoir of evening and weekend residential parking, and residential TOD could have a reduced on-site parking requirement due to its transit access. The zoning ordinance does permit shared parking reductions (Article VI Section 6.1.5.4) according to a prescribed formula which could slightly reduce the parking requirement. It also has an allowance for car share spaces that modestly reduces the parking requirement for residential projects, including mixed-use, at a rate of 4:1 (Article VI Section 6.1.5.1).

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TOD Test Site Zoning

District	Uses	Max FAR	Min Lot Size	Min Lot Area/Unit	Min Frontage	Front Yard	Min Side Yard	Min Rear Yard
DMU	All permitted uses	4	---	---	25'	---	---	---
UMU	Residential Dwellings	---	3,400 SF	1,000 SF	55'**	*	3 SUM 17	15'
	All other uses	4	---	---	25'	---	---	---

--- Denotes no dimensional requirement

* Front setback shall be consistent with existing setbacks on block

** Min residential frontage may be reduced by special permit

TOD Test Site Parking Requirements

Uses	Zone	Min. Parking Req.	Notes
Multifamily dwelling including 7 or more units	DMU	1 space per unit	Plus 2 spaces for each curb cut above one per 10 dwelling units
	All other permitted zones	2 spaces per unit or .75 spaces per bedroom, whichever is greater	
Business or professional office, with a gross floor area greater than 5,000 SF	Where permitted	1 space per 400 sq ft	
Retail operation, Service Business	UMU, TMU, NB, INST	1 space per 900 sq ft	
	All other permitted zones	1 space per 500 sq ft	
Restaurant, other than Take-Out Restaurant	UMU, TMU, NB, INST	1 space per 100 sq ft	
	All other permitted zones	1 space per 50 sq ft	
Take-Out Restaurant	UMU, TMU, NB, INST	1 space per 300 sq ft	
	All other permitted zones	1 space per 200 sq ft	

Other Sites Within Walking Distance of Gallagher Terminal. We reviewed current zoning within a 5-minute walk of the Terminal (approximately a quarter-mile/1320' radius from the Terminal) to identify potential zoning issues that might impact similar residential, commercial or mixed-use TOD projects. The Lowell Planning and Development Department had identified eleven example TOD sites, one of which was selected as the TOD test site described in the preceding section. The other ten sites are within the DMU, UMU, HRC, NB, TMF or TTF zones. The first two districts have been described above. Issues with the other zoning districts are indicated below. In all districts besides the DMU, the residential minimum parking requirement (the greater of 2 spaces per unit or .75 spaces per bedroom) is too high for a multi-family TOD project.

TOD Area Zoning

District	Uses	Max FAR	Min Lot Size	Min Lot Area/ Unit	Min Frontage	Front Yard	Min Side Yard	Min Rear Yard	Max Height/ Stories	Min Usable OS/Unit
HRC	Residential Dwellings	3	43,560 SF	---	25'	25'	20'	25'	200'/15	100
	All other uses	5	---	---	25'	---	---	---	200'/15	---
NB	Residential Dwellings	1	6,000 SF	2,500 SF	40'	*	0	20'	35'/3	250
	All other uses	4	---	---	25'	---	---	---	40'/3	---
TMF	All other uses (besides 1 family dwelling)	---	6,000 SF	4,000 SF	80'***	15' min 20' max	10 SUM 25	20'	35'/3	500
TTF	All other uses (besides 1 family dwelling)	---	6,000 SF	4,000 SF	80'***	15' min 20' max	10 SUM 25	20'	35'/2.5	500

--- Denotes no dimensional requirement

* Front setback shall be consistent with existing setbacks on block

** Min residential frontage may be reduced by special permit

HRC (High Rise Commercial): This district allows similar densities as DMU. The one-acre minimum lot size is large for smaller projects but likely suitable for larger projects allowed by the high-rise height limit. The yard setbacks create a buffer from adjacent properties that may not be conducive to creating a walkable urban environment near transit. The 25' minimum front yard setback is deep, but good design that creates an appealing urban plaza or park-like setting for pedestrians could be acceptable.

NB (Neighborhood Business): This district allows a Floor Area Ratio (FAR) of 1.0 and 35'/3-story height limit for residential uses, and 4.0 FAR and 40'/3-story height limit for all other uses. These limits would not permit sufficient density, due primarily to lot area per dwelling unit requirement, but FAR and height are likely an issue as well. Multi-family residential use, and therefore residential mixed-use, requires a special permit from the Planning Board.

TMF (Traditional Neighborhood Multifamily): This district would only allow a residential TOD project with less than 7 units. Retail and office uses are not permitted.

TTF (Traditional Neighborhood Two-family): This district on the western edge of the TOD area is not appropriate for high density TOD projects. It allows only single and two-family houses with a 35'/2.5-story height limit.

Because of the constraints identified in each of these zones, the City may want to consider establishing a TOD overlay zone that will reduce parking requirements and provide greater height and density similar to the DMU zone. The Commonwealth's 40R Smart Growth zoning is another tool to tailor zoning requirements to creating a higher-density, mixed-use walkable environment near the station. Alternatively, the City could consider changing the UMU zone west of Thorndike as well as the UMU zone between Middlesex and Summer to DMU.

TOD Zoning Best Practices

The core characteristics of TOD-supportive zoning should address the 3 D's: density, design, and diversity. **Density** should be highest at the station and within a quarter mile and should be calibrated to the local context. **Design** should create a high-quality, amenity-rich public realm that encourages safe pedestrian and bicycle trips throughout the area. Buildings should shape the sidewalk and street with zero front setbacks and transparent, actively used ground floors with frequent entrances and minimal blank walls. **Diversity** should allow a complementary mix of uses, including both housing and jobs, to provide activity throughout the day and week. It should also provide for affordable and workforce housing to ensure benefits of TOD like reduced transportation costs are available to those who need it most.

MAPC, MassDOT and the MBTA provide useful TOD guidance that is summarized below:

- MAPC's "Growing Station Areas" (2012) document classifies Lowell as an Urban Gateway station typology, similar to places like Downtown Haverhill and Brockton. These areas should have a moderate-intensity balance of residential and commercial development to provide both jobs and housing accessible by transit.
- MassDOT and the MBTA published "Transit-Oriented Development (TOD) Policies and Guidelines" in 2017 that builds on MAPC's station typologies. It describes four foundational principles: density and mixed-use, equitable development, public realm, and a TOD approach to parking.

To facilitate TOD near stations, the report recommends adopting a 40R Smart Growth district or a TOD overlay in station areas. For Urban Gateway stations, allowable density should be between 1.5 to 5.0 FAR, calibrated to the local context and highest at the station and within a quarter mile. Mixed-use should be allowed by right. Parking requirements should be stated as maximums instead of minimums, with an upper limit between .75 to 1.5 spaces per housing unit, 1.0 to 2.5 spaces per 1,000 square feet of office, and 1.5 to 3.0 spaces per 1,000 square feet of retail. The appropriate limit for an Urban Gateway station area is likely in the middle of those ranges. Parking should also be provided for bicycles, car-share, and electric vehicles.

Equitable development principles should be incorporated to ensure affordable and workforce housing as appropriate, encourage employment in TODs, and provide convenient last-mile connections between the station and nearby job centers.

Safe, comfortable pedestrian access to the station is critical for the success of TOD. Public realm guidelines recommend sidewalks with 8-12 feet of clear width for pedestrians. Where space allows, curbside amenity and furniture zones and/or supplemental activity zones for outdoor dining and retail displays along building frontages should be included.

4. Programs that Might be Used to Fill the Financial Gap

As noted in Section 2, conventional funding sources cannot fully support the sample test site projects given the financial characteristics of the market. There must be financial sources that equal the Total Project Cost (Uses) of the development program. If conventional debt and equity provided by the sponsor are insufficient, the developer will need to identify and secure other funding sources to “fill the gap” between the Total Project Costs and the sum of the conventional debt and equity. We have identified potential additional sources below and have analyzed the impact of select sources—those that would have a big impact on the project feasibility while limiting the strain on City financial resources-- to determine the likely amounts that might be provided from each source for Concepts Commercial B & Residential B.

For instance, Commercial B could fill the Gap of \$7,100,000 using a combination of New Markets Tax Credits (NMTC) worth about \$3,900,000 (at 20% of the eligible costs), Opportunity Zone investment worth approximately \$1,275,000 (combined worth approximately \$5,225,000) and “patient equity” from Healthy Neighborhoods Equity Fund (HNEF) that would fill the remaining Gap. Residential B could fill the Gap estimated at \$2,925,000 with Opportunity Zone investment (approximately \$2,000,000, which, because of the lower equity target, would be sufficient), or a combination of MA Housing Development Incentive Program (HDIP, as much as \$2,000,000) and HNEF. These are explained in greater detail below.

There are numerous other sources that might be used, such as MassHousing’s Workforce Housing program, Massachusetts Economic Development Incentive Program (EDIP), tax increment financing (TIF), and district improvement financing (DIF) which are also discussed below. Some of these programs are loan programs and some have an impact on local or state tax revenue. We selected programs, above, that would have limited impact on Lowell’s financial resources.

The table following the discussion of potential financing sources illustrates the financial impact and how these sources might be put together. In some cases, such as HNEF, HDIP and TIF, it is difficult to provide a precise analysis of the funds that might be provided.

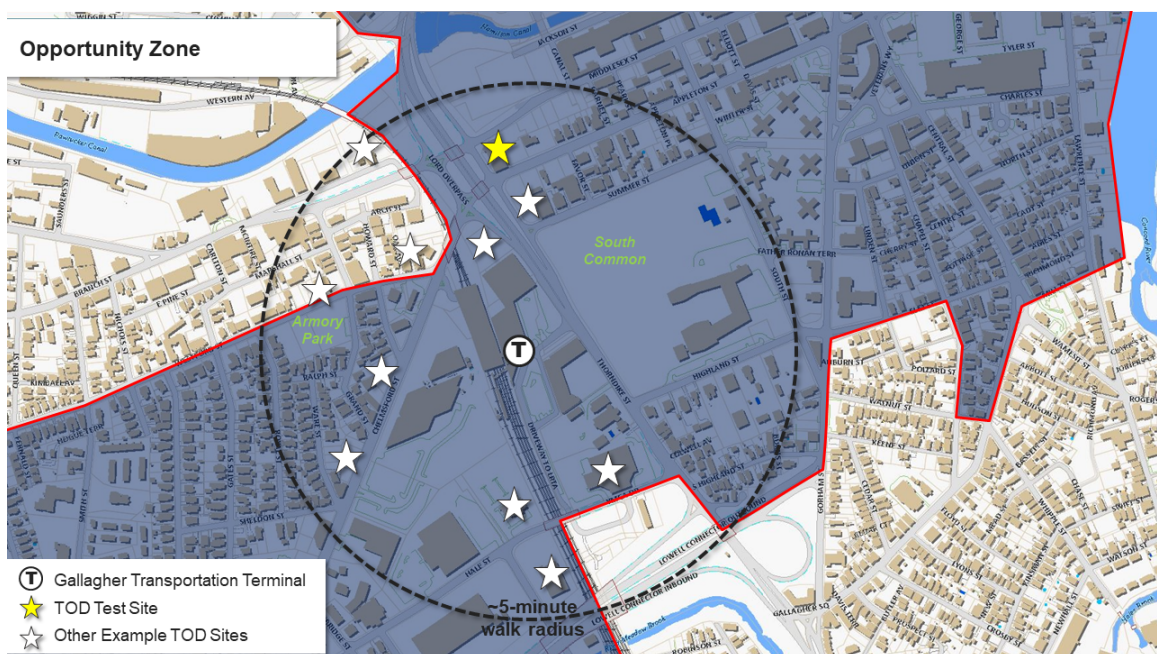
Potential Financing Sources

- New Markets Tax Credits (NMTC)

New Market Tax Credits is a Federal program designed to encourage qualifying investment in commercial development in low-income neighborhoods. It can only be used in qualifying census tracts and 75% of the allocations are pledged to severely distressed census tracts. The census tracts within a quarter mile of Gallagher terminal all qualify as severely distressed. The development must obtain an allocation of tax credits from a Community Development Entity (CDE) holding such allocations that then reviews the application for suitability and viability. Establishing the appropriate entities and documenting the transaction is a complex process and ends up requiring a significant amount of accounting, legal, and consultant time, all of which carries substantial fees. Therefore, pursuing NMTCs is typically only cost effective for projects who total development costs exceed \$10 million. As a rule of thumb, we generally calculate the value of the NMTC at 20-22% of the qualified development costs. The program expires December 31, 2020 but it has been extended in the past (most recently in 2019 for \$5 billion). There are House and Senate bills, both with bipartisan support, that are proposing to remove the expiration date of the program, but their passage and adoption are uncertain as of this writing.

- Opportunity Zones

The Opportunity Zone program is designed to spur economic development and job creation in economically distressed communities, defined by census tracts. Investors take advantage of tax benefits (tax deferrals and change of basis) for qualifying investment within Opportunity Zones. They generally make long term (10+ year) investments, as the program is less beneficial for short-term investments. The tax benefits allow an investor to accept a lower Return on Equity (ROE) than they might otherwise find attractive. The value to the developer approximates 250 basis points of ROE. If a developer's ROE target is typically 10.0% for a development project of similar risk, more equity can be contributed with Opportunity Zone Investments, as a target of 7.5% will likely be acceptable. Most of the area within a quarter mile of Gallagher terminal is located in an Opportunity Zone, as shown on the map below.



- Healthy Neighborhoods Equity Fund (HNEF)

The HNEF was established by Massachusetts Housing Investment Corporation (MHIC) and Conservation Law Foundation (CLF). The Fund provides patient, lower cost, long term equity capital for development projects that meet its criteria. One of the major reasons for this fund was to promote TOD and fill the financing “gap” for TOD projects. From the HNEF website (www.hnefund.org/projects-eligibility-screening):

- Project Eligibility: Demonstrated neighborhood and community support, within ½ mile of transit (or MXD neighborhood with potential for increased walkability), >\$5million total development costs (TDC), Uses: mixed use development, residential, commercial office, retail, and industrial space.

- Project Screening: Performance on a “HealthScore rating system”. Increased transit use, reduced Vehicle Miles Traveled, access to multi-modal transportation and transit-supportive development are important criteria.
- Key Financing Terms:
 - Term up to 10 years
 - HNEF Ownership position
 - Typically provides 5-25% of TDC
 - Projects expected to deliver $\geq 10\%$ IRR (generally less difficult than 10% ROE as it’s provided over time.)
- Housing Development Incentive Program (HDIP)

The Housing Development Incentive Program is targeted at market rate housing in Gateway municipalities. It is a competitive program that can provide State tax credits of up to \$2,000,000 per project (not to exceed 25% of Qualified Project Expense of the market rate residential units). It can also include real estate tax deferral. Per the City of Lowell Planning and Development website—HDIP Program Fact Sheet 2018:

“Housing Development Incentive Program (HDIP) provides Lowell with a development tool to increase residential growth, expand diversity of housing stock, support economic development, and promote neighborhood stabilization in designated areas. The program provides two tax incentives to developers to undertake substantial rehabilitation of properties for lease or sale as multi-unit market rate housing within the Lowell Housing Development (HD) Zone...”

- “A local-option real estate tax exemption on all or part of the increased property value resulting from improvements (the increment), and
- State tax credits for Qualified Substantial Rehabilitation Expenditures (QSREs) that are awarded through a rolling application process.
- The following exemption percentages have been pre-approved by the Lowell City Council: **FY 1: 25%; FY 2: 20%; FY 3-15%; FY 4-7: 10%**

Eligible Activities

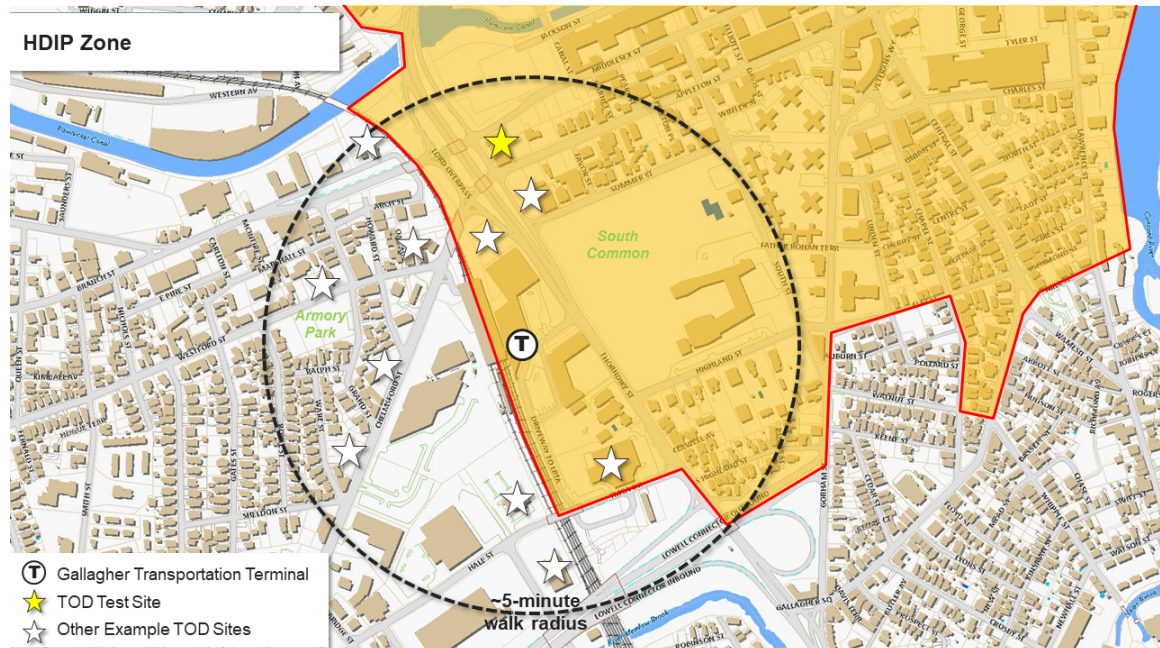
Substantial rehabilitation of a property that will result in multi-unit housing development, containing a minimum of 80% market rate units. There are no restrictions on the size of projects. A proposed project may be comprised of one or more buildings on one or more contiguous parcels of land, provided they are permitted and financed as a single undertaking. Eligible construction activities include:

- Major redevelopment, repair and renovation of properties
- Limited new construction such as construction of upper stories, expansion of a building’s footprint, and redevelopment of a site after demolition

Eligible development costs include both hard and soft construction costs associated with the development of the market rate units. Acquisition costs are ineligible expenses.”

Lowell Gallagher Terminal TOD Study

Relevant to Gallagher Terminal-oriented TOD, only properties lying Northeast of the MBTA/Pan-Am tracks fall within this zone, as shown on the map below.



- **MassHousing Workforce Housing Initiative**

MassHousing Workforce Housing fund supports the creation of rental housing that is affordable for moderate income households that earn too much to qualify for subsidized housing but are unable to afford prevailing market rents. The program:

- Supports housing with rents affordable to individuals and families with incomes of generally between 60% and 120% of Area Median Income (AMI)
- Provides up to \$100,000 of subsidy per workforce housing unit
- Requires workforce housing units to be deed restricted as affordable
- Requires 20% of units be affordable for households earning at or below 80% of AMI

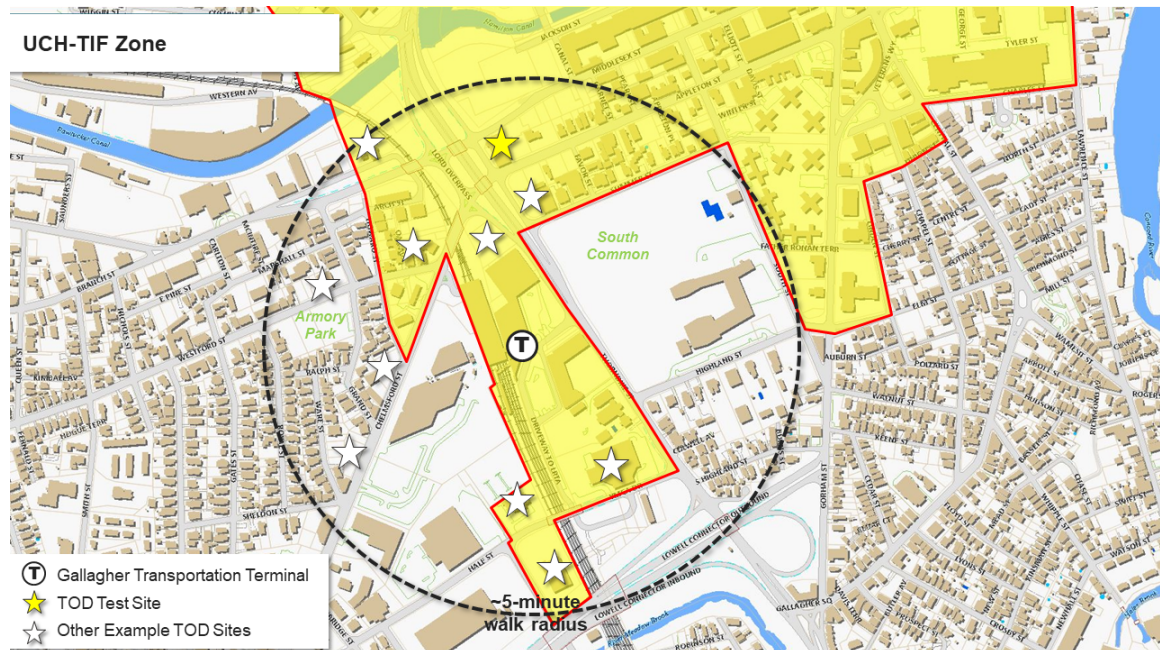
- **Urban Center Housing Tax Increment Financing (UCH-TIF)**

The concept of Tax Increment Financing (TIF) would have a municipality provide a developer with a full or partial tax exemption, over a limited period of time, in order to obtain a specific private development project. The developer can use the projected annual reduction of tax payments to increase the financial performance of their project and thus obtain additional debt and/or equity to make the project feasible. The municipality may get some tax revenue in the near term and full taxes when the tax exemption period ends. The municipality also benefits because of the realization of a desired project which may bring other benefits, such as economic development and job creation to the neighborhood and the municipality. TIFs can be provided for industrial and commercial projects as part of the EDIP discussed below.

UCH-TIF is a new economic tool that can be used to promote housing and commercial development in commercial centers through tax increment financing for municipalities that have adopted plans.

Lowell Gallagher Terminal TOD Study

Lowell adopted a UCH-TIF Plan in October 2019 for the district shown in yellow below. A portion of the land within a quarter mile of the Gallagher Terminal is within the eligible zone, including the relevant property for the Concept Plans and all but three of the other example TOD sites, as shown on the map below. The developer will enter into a TIF agreement with the municipality, which specifies the amount of the tax exemption and the period (up to 20 years, in the case of the UCH-TIF). There are also requirements to provide a certain amount of affordable housing and to maintain 25% of the housing provided as affordable housing over the longer of 40 years or the useful life of the housing.



- **Economic Development Incentive Program (EDIP)**

EDIP is a tax incentive program focused on job creation, private investment and economic development, that has been used successfully in Lowell. There are a number of subcategories of eligible projects that have different requirements related to job creation, level of private investment, out-of-state sales, and municipal involvement. The program can provide a number of tax incentives including but not limited to:

- State Investment Tax Credit (ITC)
- State's 10% Abandoned Building Renovation Deduction
- ≤\$5,000/new job (\$1 million cap) for "Job Creation Projects", those that create ≥100 new jobs within 2 years of approval.
- Local TIF may be used for qualified projects (job creation is not a requirement)

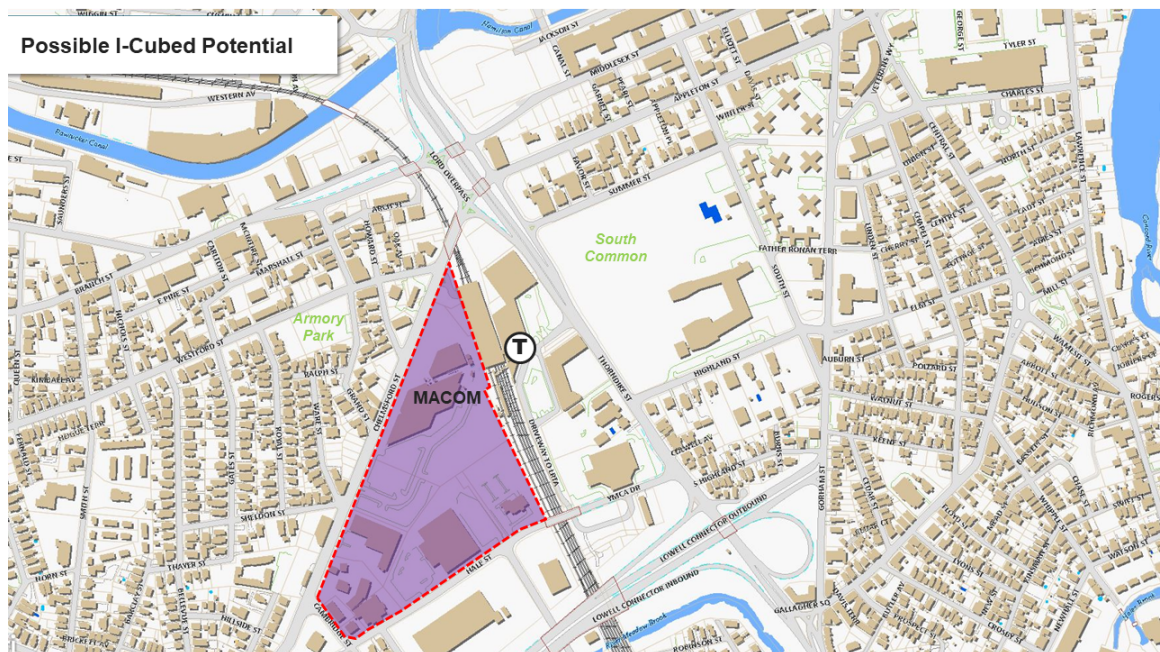
The program might be suitable for office development for a specific tenant or user and possibly industrial development. Speculative commercial development and rental housing may take advantage of a Local TIF.

- District Improvement Financing (DIF)

Redevelopment of a district is likely to significantly increase property values for both specific properties that are being redeveloped and the district as a whole. District Improvement Financing (DIF) uses the increment of increased valuation to finance and/or fund improvements in the district, including potentially financing for development projects within that district. This financing is not suitable for a single small project but can be very effective for a large project or modest-sized district.

- Infrastructure Investment Incentive Program (I-Cubed)

The I-Cubed program’s goal is “to spur economic development and job growth in the Commonwealth through support for large-scale private real estate development projects”. It provides bond financing for public Infrastructure, in the range of \$5-\$50 million. The development must create new jobs and sufficient new state tax revenue to cover the cost of the public infrastructure. It has been used for large-scale projects such as Fan Pier in Boston, Boston Landing in Brighton, Assembly Square in Somerville. It would not be suitable for the smaller scale conceptual projects studied for this analysis. The only site within walking distance of the Terminal that may be of sufficient scale is the MACOM Technology Solutions property west of the station combined with the other properties in the triangle bounded by Hale, Cambridge, Chelmsford and the Commuter Rail tracks. Other than the difficulty of assembling such a site, the project would need to create new jobs and new tax revenue, not relocate jobs and tax revenue generation from elsewhere in Massachusetts or provide retail businesses that would displace other similar businesses in Massachusetts. For example, it might be a useful program if MACOM undertook a major expansion or relocated facilities outside of Massachusetts, but not if they relocated offices or facilities elsewhere in Massachusetts.



Lowell Gallagher Terminal TOD Study

Potential Funding from Financing Programs									
	Financing Gap	NMTC	OZ	NMTC + OZ	HNEF	HDIP	TIF	EDIP	WHI
Concept 1A	\$ 7,100,000	\$ 3,900,000	\$ 1,275,000	\$ 5,225,000	\$ 2,100,000	na	\$ 1,875,000		na
Concept 2A	\$ 2,925,000	na	\$ 2,000,000 In 2A, removes gap because of lower target return despite being less than gap amount	na	\$ 2,925,000 Assmed the lesser of 10% of TDC or gap amount. Requires more detailed analysis	\$ 2,000,000		na Array of options, requires more detailed analysis	up to: \$ 11,100,000 Requires 20% affordable and 80% workforce which will reduce revenue and debt and equity

5. Best Practices: Case Studies

Stantec has worked with many developers on Transit Oriented Developments providing a variety of architectural, engineering and design / development consulting services. Each project is, of course, unique in its program and capital structure. We have provided short descriptions of four TOD projects. The first two projects in Milbrae, CA and Babylon, NY, are examples of “Best Practices” of Transit Oriented Development that takes advantage of market dynamics, Transit Agency-controlled property and flexible structuring. The second two projects in Beverley and Braintree, MA have market dynamics and issues more closely related to Lowell.

Republic Urban’s Gateway at Millbrae Station

Submarket Information:

This neighborhood is characterized by transportation, located near freeway access to Hwy 101 and in proximity to BART, Caltrain and the San Francisco Airport. The San Francisco Peninsula is one of the most vibrant commercial locations in the country, home to the established global centers for technology, cloud-based software, biotechnology, and venture capital. The region is also at the epicenter for clean technology companies, including the solar industry and the emerging electric vehicle and automobile research industries. These industries are the growth sectors of today as well as the future and they will continue to expand payrolls and footprints as they innovate, disrupt and control global markets.

Property Information:

The site totals 9.6 acres and is made up of four different parcels located at the largest transit station in the Bay Area. The 7-story project will include 320 apartment units and 13,749 square feet of retail space. Also, to be developed at the site are three other components - a 151,538 square foot office building which will include 22,586 square feet of retail, an 80 unit affordable Veterans housing building, and a 163-room hotel which will also feature a 7,840-square foot of retail. The office and apartment retail entries will open onto Garden Lane, envisioned as a vibrant, pedestrian-only paseo with an exciting array of boutiques, restaurants, cafes, and plenty of outdoor dining.

Transaction Structure:

This project is structured as a public-private partnership between Republic Urban and the Bay Area Rapid Transit Agency in the form of a long-term ground lease of the property owned by the Agency. Through a transparent process by which the developer shared their underwriting of the project, which had to include certain elements stipulated by the Agency and the City of Millbrae, a ground lease payment was negotiated that was reflective of the costs associated with the development and operations of the project and also provided fair market value for the leased real estate.

Project Highlights

Address:

200 Rollins Rd. Millbrae CA

Product Type:

Mixed Use Master Plan Site

Status:

Final Entitlements

Appraised Value:

TBD

Project Costs:

\$400+ Million

Financing:

\$238 Million Agency Loan

\$131 Million Equity

Start of Construction:

December 2019

Delivery:

July 2022

Albanese Corporation's Wyandanch Rising

Intriguing about this project is its focus on ways Transit Oriented Development can support affordable housing, a challenge many municipalities have and one that can be met with creative approaches to development and densification along transit corridors.

Submarket Information:

Babylon, NY is a suburb an hour from Penn Station and is served by the MTA's Long Island Railroad. For many years it was ranked by the Suffolk County Planning Department as the most economically distressed community on Long Island. As part of a larger downtown revitalization effort that included densification of the areas around the transit station with new commercial office, apartments, new sidewalks and streetscapes and a larger LIRR station, the local community, elected officials and Transit Agency leadership came together to support a plan that, at its center, focused on leveraging transit access.

Property Information:

Wyandanch Village is a 40-acre, \$500 million, master-planned community and has been referred to by the New York Times as a "downtown from scratch," consisting of a blend of residential, retail, office, cultural and civic uses. Capitalizing on the site's proximity to an existing Long Island Railroad train stop, Wyandanch Village has been designed as a comprehensive, "smart growth" transit-oriented development. The first phase of Wyandanch Village is a 177-unit apartment community including 91 units of affordable housing. The five-story building has 17,000 square feet of street-level retail. Albanese decided that none of the 15 commercial spaces would be more than 5,000 square feet, a decision meant to encourage local retailers.

Transaction Structure:

Albanese Corporation partnered with Community Development Corporation of Long Island to help stabilize the significant affordable housing component and worked with Capital One Bank's Community Finance group to organize \$50 million for construction, including a \$14 million loan and a \$33 million equity investment for the first mixed-income building. This project highlights the importance of organizing multiple financing sources to help underwrite a project, including, in this case, Community Reinvestment Act debt and equity from a lender, affordable housing tax credits from the Federal government and a Payment in Lieu of Taxes ("PILOT") to the developer/owner granted by the local municipality.



Lessons Learned:

While both the California and New York projects may have stronger real estate markets than Lowell, the developers, transit agencies and municipalities worked together to meet public objectives: affordable housing components, mixed-use, local retail as part of a vibrant, densified plan, and solving financial issues partially through the structure of the property cost, which was controlled by the agencies. The quality of the plan and mix of uses were vital for the project successes. While we do not know if site acquisition will be a major issue in Lowell, it is something to be considered.

The following two projects, both in Eastern Massachusetts are ones that have faced problems similar to many TOD projects in Massachusetts and have been able to solve the myriad range of issues that face such projects:

Barnat Development's Holmes Beverly

A mixed-use development on public land adjacent to the commuter rail station is helping to revitalize a faded commercial center, using an array of financing vehicles.

Submarket Information:

Beverly, a North Shore city of approximately 40,000, has changed over the years. Once heavily industrial, it is now 85% residential with educational institutions and cultural venues. But, as noted in the HNEF description of the project on their website:

“the city also has a number of underutilized commercial areas in need of revitalization and higher than average rates of poverty and unemployment.

Downtown Beverly is served by two commuter rail lines — Newburyport and Rockport. The Beverly Depot commuter rail station is the second busiest in the state. Public transportation is also provided by the Cape Ann Transportation Authority which operates a Beverly local shuttle.

Rantoul Street has been targeted by the city and Beverly Main Streets for redevelopment. In fact, the overall downtown revitalization plan depends in large part on turning Rantoul Street into a “main street” similar to Cabot Street which runs parallel. To advance that goal, the city embarked on a “Complete Streets” renovation of the Rantoul corridor which included creation of bike lanes, new sidewalks and streetlights, landscaping, utilities and roadway improvements. Holmes Beverly was built on a formerly vacant MBTA-owned parcel at the center of the Rantoul Street Urban Center Housing (UCH) and Tax Increment Financing (TIF) zone... To qualify, the city submitted a plan identifying this part of Beverly as part of its strategy to attract investment in Transit-oriented housing and commercial development.”

Property Information:

After a new 500-car parking garage at the Beverly Depot commuter rail station was completed in 2014, the MBTA sought developers for the adjoining site. Barnat Development was designated as developer. and represents a true public-private partnership between the city, the Commonwealth, Barnat Development, and local civic and business organizations.



Holmes at Beverly is a six-story 67-unit apartment building with approximately 4,500 sq. ft. of ground floor retail/commercial space. Seventy parking spaces in the adjacent commuter rail garage are accessible to building residents through a covered walkway. Residents will have easy access to beaches and public parks, a grocery store, a farmer’s market, theaters and other entertainment venues, as well as the various retail amenities along Rantoul Street.

This development created more than 150 construction jobs and it is expected to create approximately 12 new permanent jobs in the new retail stores.

Transaction Structure:

The project was financed by:

- Debt:
 - \$16,000,000 Construction/Permanent loan from Boston Private Bank,
 - \$600,000 Federal Home Loan Bank Loan
- Equity:
 - \$550,000 General Partner
 - \$4,900,000 HNEF equity
- Other Sources:
 - \$1.600,000 MassHousing Workforce Housing Funds

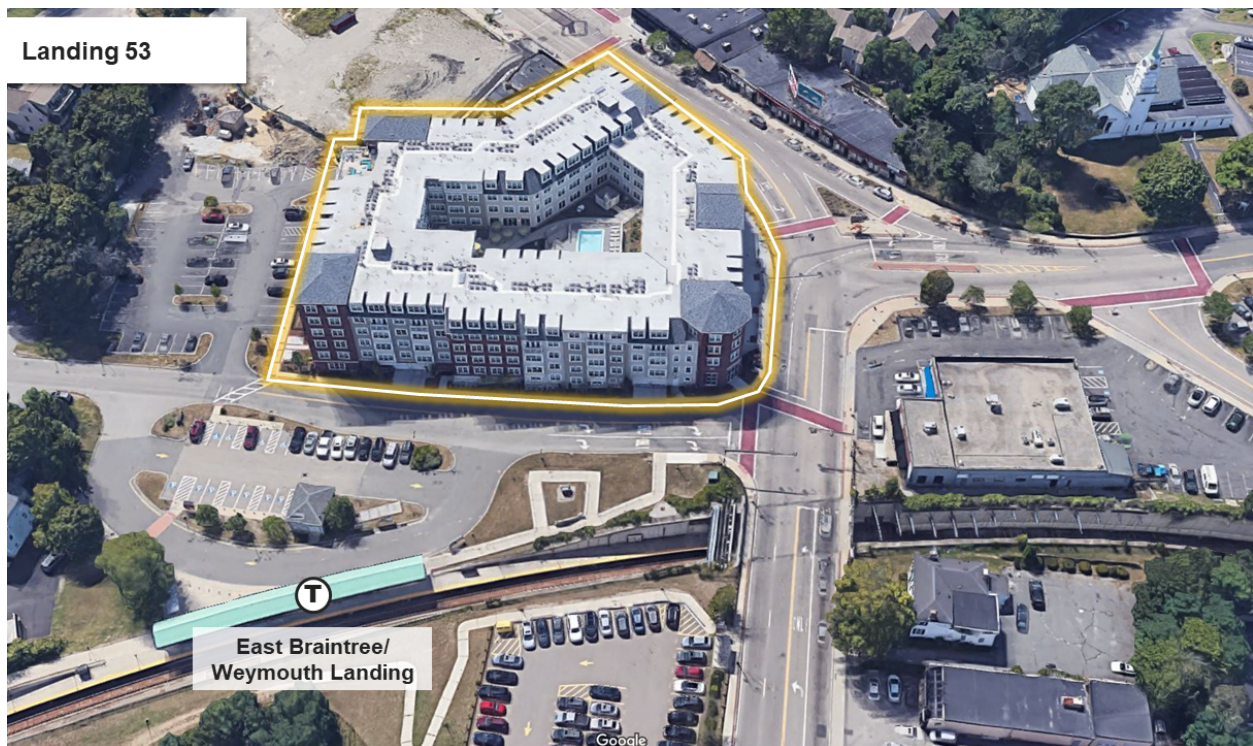
MassHousing required 16 units of Workforce housing – 14 of the apartments must be rented to households earning at or below 80% of the AMI, and two to households earning at or below 110% of AMI.

Katzen Development's Landing 53

Former single-story commercial block with significant vacancy transformed to take advantage of its location across from a commuter rail station and on the Riverfront Walk and in turn helped to transform the underdeveloped commercial area into a revitalized mixed-use neighborhood with appropriate density

Submarket Information

Weymouth Landing/East Braintree is, twelve miles south of Boston and a 30-minute ride from the MBTA's Weymouth Landing-East Braintree commuter rail stop, located across the street from Landing 53. The area was formerly a thriving industrial and commercial district but had seen better times. Yet the area had tremendous potential. In addition to commuter rail access, it had views of the Monaquot and Fore Rivers, potential for recreation access and the potential to build on a somewhat denser version of Braintree's strong residential character. The City had strong interest in the area once again becoming a vibrant mixed-use neighborhood. The Landing is one of the first projects to utilize a new zoning ordinance intended to spur walkable mixed-use development and builds on recommendations of the Monaquot Riverfront Plan.



Property Information

Landing 53 was built on a 2-acre lot that was formerly occupied by single-story, semi-vacant buildings. The project was constructed on 4 adjoining parcels on Commercial Street. Taking advantage of a sloped site, the building is 2½ stories on the front and 5 stories on the back. Its 172 rental apartments are affordable to middle income households with starting rents targeted for those earning 90–110% of Area Median Income. The building includes amenities such as a health club, lounge, common space, elevated patio and indoor storage for bicycles, canoes and kayaks. On the ground floor the property contains retail stores occupying a total of 12,000 sf of commercial space. In addition, improvements to sidewalks and other pedestrian

Lowell Gallagher Terminal TOD Study

amenities had been recently completed with support from a \$1.4 million grant from the Commonwealth of Massachusetts.

Landing 53 was designed to enhance the environment and encourage outdoor activity. The developer connected the pedestrian pathways around the property to the network of paths of the Monaquot River and canoe launch, encouraging people to exercise and enjoy nature.

Transaction Structure:

The project was financed with:

- Debt:
 - \$39,000,000 Commercial loan
 - \$600,000 Federal Home Loan Bank Loan
- Equity:
 - \$6,000,000 Private Partners
 - \$5,000,000 HNEF equity

As HNEF has noted on its website:

“HNEF’s \$5 million investment provided crucial equity gap financing, enabling the developer to move forward. When screening this project, HNEF focused on its potential for transformative impacts. The project makes excellent use of property that was in a good location, but semi-vacant, old, and underutilized. Landing 53’s proximity to public transportation makes it an attractive place for people to live with better access to employment opportunities. Its 172 apartments and the new businesses on the ground floor will energize the area and create up to 25 permanent jobs. Healthy housing, in addition to new retail and restaurants, enhanced landscaping, lighting, and Riverwalk paths make the neighborhood more appealing. With ready access to the river for kayaking and canoeing, area residents have the benefit of healthy recreation at their front door.”

Lessons Learned:

For the two Eastern Massachusetts projects, the quality of the environment was important for the transformation near the train stations. Landing 53 worked with the community and the municipality to achieve a better environment and connection to the Station and the river. Local retail and restaurants at the base of its building were important to the revitalized and active center next to the station. Holmes Beverley was part of a downtown plan and Complete Streets was an important component. These helped create a vibrant Main Street environment near the station. Holmes Beverley benefitted from a land transaction with the MBTA, similar to the CA and NY projects above. Creative financing tools were important to both projects

6. Conclusion

The goal of the study was to determine if there is potential for the development of Transit-Oriented Development within walking distance of Gallagher Terminal. To do this we selected a site to serve as a test to understand what it would take to develop either a market-rate multifamily-oriented development or an office-oriented development. We examined a range of issues including market potential, site configuration, topography, and zoning.

The initial financial analysis was based upon capital markets at the beginning of March 2020 prior to the impact of Covid-19 and the major drop in the stock market and related changes in the Real Estate and financial markets. We do not have a good way of including these impacts and therefore are basing our current assumptions on pre-Covid-19 markets. Over time we expect markets to return to a similar state and therefore these findings still provide useful insights.

We found that both programs were not financially feasible on their own and required one or more government financing programs to provide the additional financial resources needed to bring Sources and Uses statements in balance and achieve financial viability.

- Commercial A/Commercial B, the office-oriented concept, has a substantial gap to fill and the one program that might have the potential to cover more than half of the gap, New Market Tax Credits, is set to expire at the end of the year and may or may not be extended. As with most commercial projects in Lowell it is likely to take putting together a number of sources including Opportunity Zones, EDIP, HNEF, TIF, MassDevelopment tax-exempt bond financing, etc. Most importantly, a successful office development needs a pre-committed tenant. A Commercial project is more challenging because the size of the financing gap is much larger relative to Total Project Cost (33%) than a residential project (8%)
- Residential A/Residential B, the residential-oriented concept, has a smaller gap and there are a number of programs that have reasonable probability of “closing the gap”: An Opportunity Zone may be sufficient on its own, and HNEF may as well. HDIP might fill 2/3 of the gap and other sources such as Workforce Housing Initiative or a small HNEF equity contribution might fill the balance.

City support for these programs will be critical and the City might consider instituting DIFs for redevelopment areas as the impact of significant new development can generate new tax more new tax revenue as well as increased tax revenue for other property in the District to far offset revenue that will be provided to support the District Improvements.

We also looked at zoning within a quarter mile of the Station to determine its compatibility with Transit-Oriented Development. The DMU district works reasonably well if there is the ability to make use of a public garage like the Edward Early Parking Facility or the one at Gallagher. The UMU district has some features that impede high-quality TOD. The TTF, TMF and NB zones will not provide sufficient density for TOD projects. The City should consider creating a TOD overlay zone or 40R Smart Growth district that will reduce parking requirements and provide greater height and density similar to a DMU zone. Alternatively, the City may want to consider changing the UMU zone west of Thorndike as well as the UMU zone between Middlesex and Summer to DMU.

Appendices

Appendix 1: Commercial B and Residential B Financial Analysis

Appendix 2: “Key Findings—Zoning, Market and Proformas” memo

Gallagher Terminal TOD Analyses
Concept Commercial B: Office Mixed Use

Uses				Notes
Uses	Price per Unit	Units	Totals	
Acquisition				
Land		50,492	\$1,124,000	<i>assessed value</i>
		Subtotal Acq.	\$1,124,000	
Hard Costs				
Site Work	\$500,000		\$500,000	<i>total</i>
Resi Construction	\$200	0	\$0	
Retail	\$165	5,500	\$907,500	
Office	\$231	46,875	\$10,828,125	
Parking	\$20,000	95	\$1,900,000	<i>/space</i>
HC Contingency	10%		\$1,413,563	
		Subtotal HCs	\$15,549,188	
Soft Costs				
Soft Costs	20%		\$3,109,838	
SC Contingency	0%		\$0	
		Subtotal SCs	\$3,109,838	
Developer Fee, Financing & Rentup Loss				
Developer Fee	4%		\$746,361	
Financing costs			\$315,000	
Rentup Loss			\$468,244	<i>12 months</i>
Total Project Costs			\$21,312,630	
Sources				
Debt			\$10,405,423	
Equity			\$3,807,207	
Gap			\$7,100,000	
Total Sources			\$21,312,630	
Analysis				
Return on Equity			10.02%	
Value	6.75% Cap Rate		\$13,873,898	

Program			
	RSF	Total Units	GSF
Retail	5,500		5,500
Office	45,000		46,875
Total SF			52,375
Parking		88	
Net Income			
	Rate	unit	
Revenue			
Retail (NNN)	\$18 per year		\$99,000
Retail Vacancy	5%		(\$4,950)
Office (N util.)	\$24		\$1,080,000
Office Vacancy	8%		(\$86,400)
Parking	\$90 per month		\$95,040
EGI			\$1,182,690
Expenses			
Expenses Office	\$5.00		\$234,375
Expenses per Retail SF	nnn		\$0
Total Expenses			\$234,375
NOI			
EGI			\$1,182,690
Less: Expenses			(\$234,375)
Less: Reserves	1%		(\$11,827)
NOI			\$936,488

Loan Summary		
Loan Amount		
NOI		\$936,488
DSCR	1.25	
Available for Debt Service		\$749,190
Rate	3.35%	
Amortization	30	
DSCR Loan Amount		\$14,041,793
LTC Loan Amount	75%	\$15,984,473
LTV Loan Amount	75%	\$10,405,423
Development Period Interest		
Loan Amount		\$10,405,423
Rate	3.35%	
Period (months)	18	
Avg Outstanding	55%	
Total		\$287,580
Loan Fee		
Loan Amount		\$10,405,423
Fee	0.25%	
Total		\$26,014
Financing cost		\$313,593
Annual Loan Payment		\$555,174
CF after DS		\$381,314

Gallagher Terminal TOD Analyses
Concept Residential B: Residential Mixed Use

Uses *Notes*

Uses	Price/Unit	Units	Totals	
Acquisition				
Land		62,236	\$1,218,500	<i>assessed value</i>
		Subtotal Acq.	\$1,218,500	
Hard Costs				
Demo & Site Work	\$10	62,236	\$622,360	<i>total</i>
Resi Construction	\$200	104,250	\$20,850,000	
Retail	\$165	6,000	\$990,000	
Parking	\$15,000	128	\$1,920,000	<i>/space</i>
HC Contingency	10%		\$2,438,236	
		Subtotal HCs	\$26,820,596	
Soft Costs				
Soft Costs	20%		\$5,364,119	
SC Contingency	0%		\$0	
		Subtotal SCs	\$5,364,119	
Developer Fee, Financing & Rentup Loss				
Developer Fee	3%		\$965,541	
Financing costs			\$730,000	
Rentup Loss			\$1,031,993	<i>12 month rentup</i>
Total Project Costs			\$36,130,750	

Sources *Notes*

Debt		\$26,921,554
Equity		\$6,284,195
Gap		\$2,925,000
Total Sources		\$36,130,750

Analysis *Notes*

Return on Equity		9.99%
Value	5.75% Cap Rate	\$35,895,405

Program

	RSF	Total Units	GSF
Average Unit	798	111 85%	104,250
Retail	6,000		6,000
Total SF			110,250
Parking		128	

Revenue	Rate	unit	
Average Unit	\$2,171	per month	\$2,892,046
Residential Vacancy	5%		(\$144,602)
Retail	\$18	per SF/year	\$108,000
Retail Vacancy	5%		(\$5,400)
Parking	\$90	per month	\$131,760
EGI			\$2,981,804

Expenses		
Expenses per Unit	\$8,000	\$888,000
Expenses per Retail SF	nnn	\$0
Total Expenses		\$888,000

NOI		
EGI		\$2,981,804
Less: Expenses		(\$888,000)
Less: Reserves	1%	(\$29,818)
NOI		\$2,063,986

Loan Summary

Loan Amount		
NOI		\$2,063,986
DSCR	1.25	
Available for Debt Service		\$1,651,189
Rate	3.35%	
Amortization	30	
DSCR Loan Amount		\$30,947,603
LTC Loan Amount	80%	\$28,904,600
LTV Loan Amount	75%	\$26,921,554

Development Period Interest		
Loan Amount		\$26,921,554
Rate	3.35%	
Period (months)	16	
Avg Outstanding	55%	
Total		\$661,373

Loan Fee		
Loan Amount		\$26,921,554
Fee	0.25%	
Total		\$67,304

Financing cost		\$728,677
Annual Loan Payment		\$1,436,381
CF after DS		\$627,604

To:	Lowell Community Development Recipient's Office	From:	Drew Leff Boston (Causeway St) MA Office
File:	Key Findings – Zoning, Market, and Proformas	Date:	March 4, 2020

Reference: Lowell Gallagher Terminal TOD Analysis

Stantec is providing a summary of key findings of the zoning review, market understanding, and scenario proforma analysis. The study attempts to outline two possible development scenarios that are likely to achieve the City of Lowell's goals to create Transit Oriented Development (TOD) near the Lowell Gallagher Commuter Rail Terminal. TODs should not only be within a walkable (quarter mile) radius of a transit hub but should also be the types of developments that are also mixed-use and create a great sense of place for residents and office workers. The City's best tool for promoting TOD is zoning that allows for sufficient density as well as reduces parking requirements. However, the market fundamentals, including rents, market expectations for space and parking, development costs and financing, also heavily affect the ability for developers to achieve required returns, and whether they would pursue development in a given location.

Site Identification

For this analysis we have selected one site on which we have devised and analyzed two site plan scenarios. The City of Lowell does not own a site of sufficient size within the walkable radius to the transit station. Therefore, for the purposes of this study, our team disregarded specific parcel ownership, instead preferring to select a site that fulfills the following characteristics:

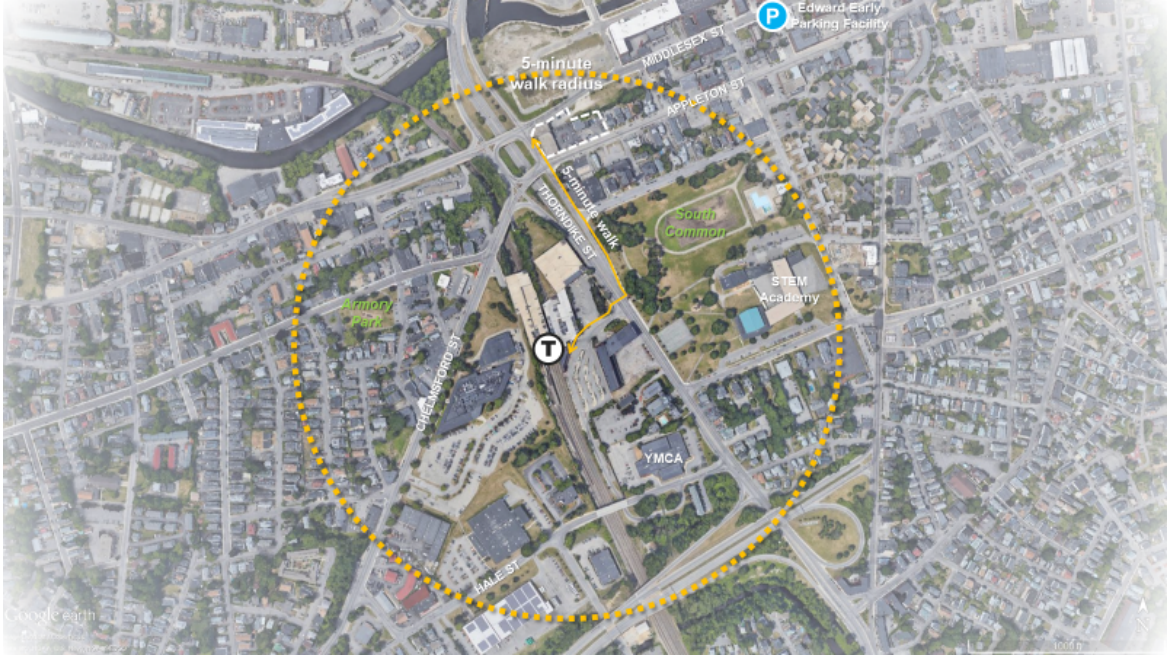
- Large enough for mixed-use development
- Within a quarter mile of the Terminal
- Good street frontage
- Attributes that might make it desirable from a market perspective

March 4, 2020

Lowell Community Development

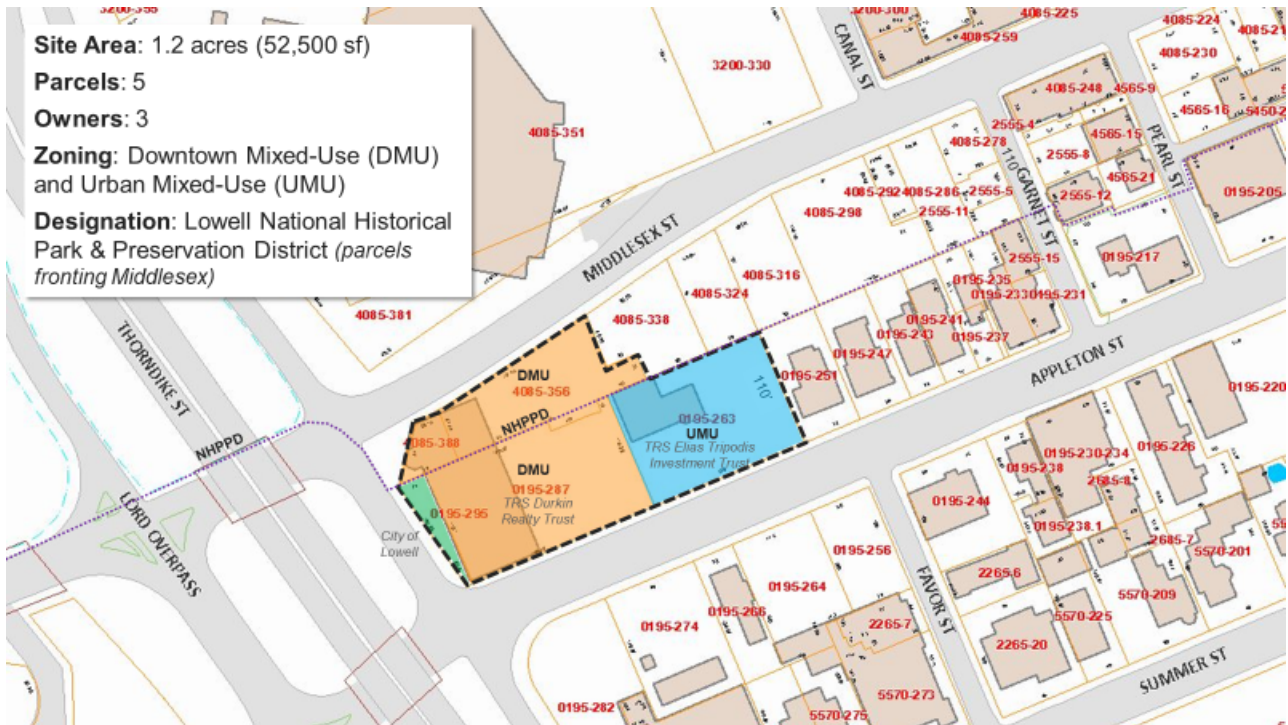
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Reference: Lowell Gallagher Terminal TOD Analysis



The site selected is bounded by Thorndike Street, Middlesex Street, Appleton Street, and Garnet Street. It will be positively impacted by redevelopment plans for Thorndike Street and is across from the new Judicial Center. The blue, orange, and green shading represent three different property owners. The 2,010-sf green parcel is owned by the City of Lowell and has not been included in the scenario layouts as we did not know if it might be needed for the major rebuilding of Thorndike Street. But the plans might marginally benefit from its inclusion.

Reference: Lowell Gallagher Terminal TOD Analysis

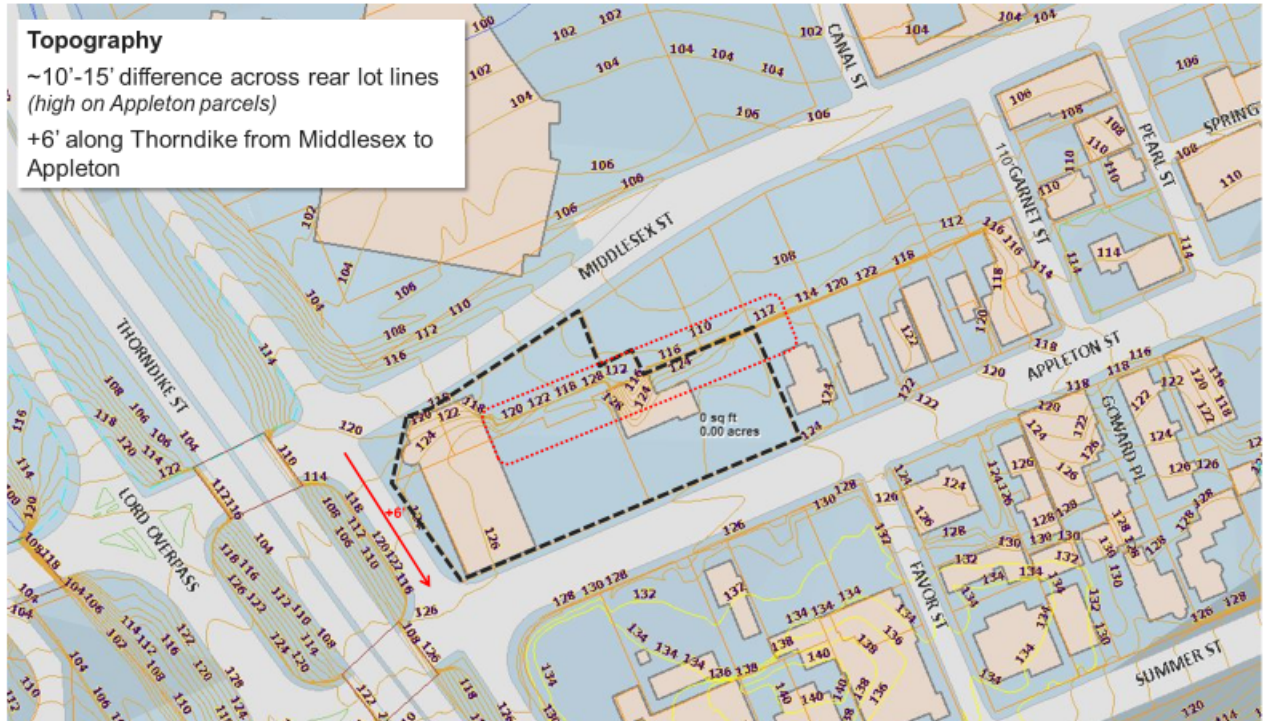


Reference: Lowell Gallagher Terminal TOD Analysis



We also note that there is a significant grade change between Appleton and Middlesex as shown in the diagram below:

Reference: Lowell Gallagher Terminal TOD Analysis



Zoning Review

The site is 1.2 acres and falls within two zoning categories, DMU and UMU. The parcels fronting Middlesex Street are designated as Lowell National Historical Park & Preservation District.

DMU: Downtown Mixed-Use

Promotes a vibrant urban environment in the heart of Downtown Lowell

Max FAR: 4.0

No height limit or open space requirement

Parking

Residential:

- MF dwelling w/ 7+ units: 1 space per unit
- Car share parking spaces may reduce a project's parking requirement at a rate of 4:1 up to the lesser of 25% or 20 spaces

Non-residential uses:

- Exempt from parking if publicly-owned off-street parking is located within 1,500' of entrance*

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Reference: Lowell Gallagher Terminal TOD Analysis

- Office >5,000sf: 1/400 sf (2.2/1,000sf)
- Retail & Service: 1/500sf (2/1,000sf)
- Restaurant (non-take out): 1/50 sf
- Restaurant (take out): 1/200sf

Parking w/ 10+ spaces must have 5% area as open space

UMU: Urban Mixed-Use

Focuses on revitalizing the commercial areas in urban neighborhoods near downtown.

Max FAR: 4.0 (non-residential)

Residential dwellings: 1,000sf lot area per unit, 15' min rear yard setback, front setback consistent with existing setbacks on block

No height limit or open space requirement

Parking

Residential:

- MF dwelling w/ 7+ units: greater of .75 sp/BR or 2 sp/unit
- Car share parking spaces may reduce a project's parking requirement at a rate of 4:1 up to the lesser of 25% or 20 spaces
- Reduced by up to 50% if publicly-owned off-street parking is located within 1,500' of entrance

Non-residential uses:

- Reduced by 50% if publicly-owned off-street parking is located within 1,500' of entrance
- Office >5,000sf: 1/400 sf (2.2/1,000sf)
- Retail & Service: 1/900sf (1.1/1,000sf)
- Restaurant (non-take out): 1/100 sf
- Restaurant (take out): 1/300sf

Parking w/ 10+ spaces must have 5% area as open space

There is a zoning provision that non-residential uses in this location are exempt from parking requirements if the building entrance is within 1,500' of a publicly-owned off-street parking facility. The Edward Early Parking Facility at Middlesex/Marston is just about 1500' from where the office entrance would want to be in Concept 1 (shown below) so on-site parking could potentially be reduced or eliminated.

Market Understanding

Residential Multi-family

Design with community in mind

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Lowell Community Development

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Reference: Lowell Gallagher Terminal TOD Analysis

Residential rental rates have been growing consistently since 2009, according to CoStar data, and are project to continue to rise slightly through 2023. As of the second quarter of 2019, asking rents were approximately \$1.85/sf or \$1,522 per unit. Review of asking rents of five nearby new or recently renovated apartment projects, Thorndike Exchange, Jackson Street Lofts, 24 Merrimack Street, Apartments at Boott Mills, and Massachusetts Mills, were in line with the CoStar statistics. Thorndike Exchange and Massachusetts Mills were significantly above that with Thorndike Exchange, the closest and best comp, with units approaching 1,000 sf achieving approximately \$2.40/sf and rents of \$2,425/month

Per CoStar, multi-family vacancy rates have fluctuated, generally decreasing since 2009 but projected to rise from 3.75% in 2019 to over 4.5% in 2023. With only a few large deliveries between 2015 and 2019, and no new deliveries projected until 2022, we believe there some new residential product could be reasonably be absorbed in the near term.

Most larger scale apartment development in Lowell is retrofitted mill buildings. There are few comparable new construction multi-family buildings in the area. Following the conversation at the kick-off meeting, smaller residential conversions (i.e. conversion of a 9-unit building to a 15-unit building) are more typical than large new construction projects.

Office

Office rental rates took longer to recover after the recession but have been rising since 2012 to \$19.60/sf in the second quarter of 2019 according to CoStar. Office rents are not expected to continue to rise over the next four-year period.

In 2019, office vacancy was at a 10-year low of 4.3%, projected to rise slightly over 6% by the end of 2023. There has been effectively no office space delivered over the last 10 years, and no office space is anticipated in the upcoming four years. While these are strong office fundamentals, to absorb new office space, developers will look to have a tenant in place rather than pursue speculative development. The most likely tenants for large blocks of new office space may be existing office occupants in the city, such as MA-COM, or those users who may have work associated with the new judicial center. While rents are modest, low vacancy rates may allow increases to the point that they may support new office development other than build-to-suits, but with significant pre-leasing

Retail

According to CoStar, retail rental rates in 2019 were \$17.29/sf and had a 10-year average of \$15.62/sf. Annual rent growth has averaged only 1.2%. Despite a high retail vacancy rate in 2019 of 20.0%, 10-year average retail vacancy was closer to 9%. New retail development should be expected to serve the office and residential tenants in its immediate vicinity.

Scenarios and Proforma Financial Analysis

Stantec devised two concept plans: Concept 1 is commercial mixed-use and Concept 2 is residential mixed-use. We also prepared high-level financial proformas for the two development scenarios. The development of the financial models and the physical plans in concert allowed us to go back and forth modify both to determine what might produce feasible plans. The difference in building footprints between office and residential, the difficulty in providing efficient and cost-efficient parking—the change in grade played a major

Reference: Lowell Gallagher Terminal TOD Analysis

role both good and bad—all played a part in determining the land needed for each Concept. We utilized the market assumptions described above, as well as reasonable cost assumptions in order to create the model.

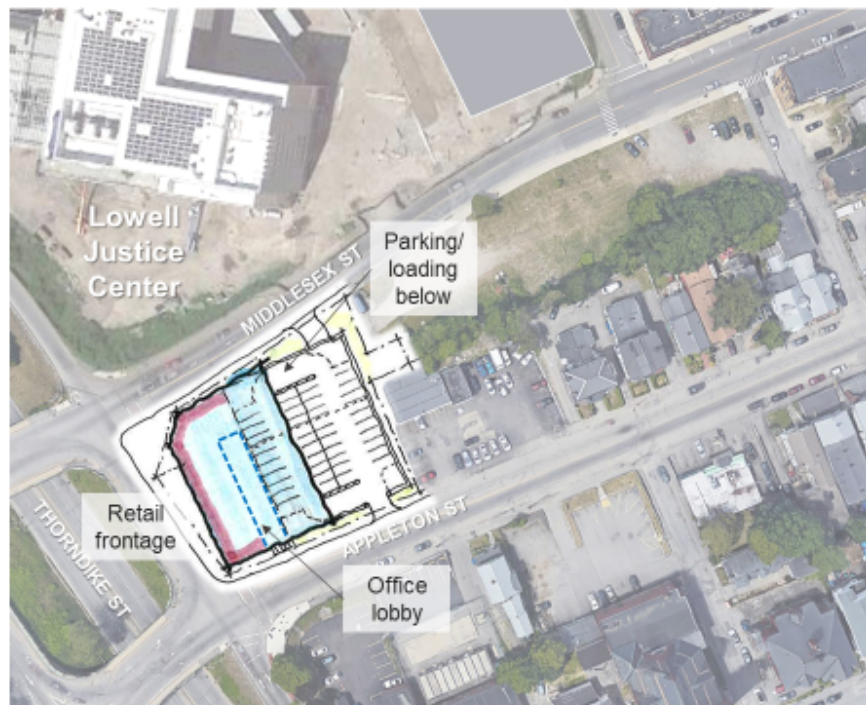
Concept 1 is commercial mixed-use with 30,000 SF of professional office space on two floors over 5,500 SF of retail and parking. Parking (60 spaces) takes advantage of the difference in grade and uses a relatively inexpensive deck over at grade parking with a separate entry at each level (lower level from Middlesex and the upper from Appleton, and no ramp between. Because the end of the site closest to Thorndike was able to accommodate the program and adding the narrower parcel added acquisition cost and complexity and provided for a much larger project that would be difficult to absorb quickly in a constrained market, we elected to just use the property of one owner. If a large user could be identified, it might be worth examining providing larger floorplates and adding the smaller parcel plus the adjoining vacant parcel on Middlesex.

Concept 1

Commercial Mixed-Use

Commercial Mixed-Use: 35,500sf

- Retail: 5,500sf
- Office: 30,000sf over 2 upper floors
- 77 spaces required
 - 44 spaces provided Appleton level
 - Up to 20 spaces Middlesex level
- 3 parcels, 1 owner
- Site area: 33,953 sq ft (0.78 ac)



Concept 2 is a residential mixed-use development with 60 units of housing over 6,000 SF of retail; three-stories on Thorndike and a townhouse-style building along Appleton. 50 parking are at grade and under the building.

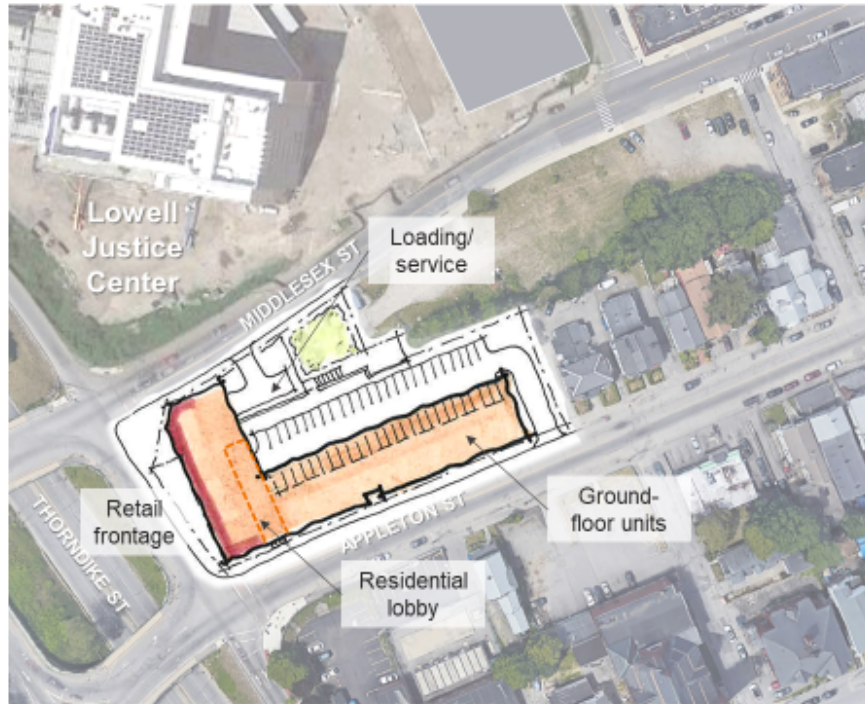
Reference: Lowell Gallagher Terminal TOD Analysis

Concept 2

Multi-Family Residential

Residential Mixed-Use: 64,300sf

- Retail: 6,000sf
- Housing: 56,300sf / 50 units @ 1,100sf per unit
- 3 floors
- 62 spaces required
50 spaces provided
- 4 parcels, 2 owners
- Site area: 50,492 sq ft (1.16 ac)



We analyzed both concepts. While neither project was financially viable on its own, Concept 2 came close. We have been checking assumptions to see if we can be a bit more aggressive. Our working proforma financial analyses are attached at the end of this memo. Where proformas were producing a reasonable to return we provided for gap funding to achieve those returns. Concept 2 shows a more modest gap of \$350,000, but Concept 1 shows a very large gap of \$2.8 million even with an aggressive office rental rate of \$30 gross.

Stantec Consulting Services, Inc.

Drew Leff

Attachment: Attachment

c. C.C.

Design with community in mind

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