

Despite its healthy urban fabric, Lowell could still be described as a driving city. The current LRTA bus system, while fairly extensive and well run, serves principally those for whom driving is not a readily available option. This situation is the norm in most mid-size American cities, where traffic is not punishing enough nor parking expensive enough to make transit a preferred alternative. Few of these cities, however, share Lowell’s potential for changing their transit service from a system of need into a system of choice.

The proposed expansion of the current Park Service trolley system into a modern streetcar holds considerable promise as a transformative investment in the city’s future. This chapter discusses such a trolley system’s *drivers, requirements, benefits, and funding*.

Streetcar Demand Drivers

The large *student population*, the compact and generally *pedestrian-friendly downtown*, and the presence downtown of *key anchors* like the Gallagher Intermodal Center and the Tsongas Center are all factors that predispose Lowell to a more robust transit future.

Student Population

Given their younger age, limited incomes, and greater tendency to walk and bike, students are natural transit riders. In downtown Lowell, three distinct student populations are poised to take advantage of an expanded transit system, each for different reasons:

- Lowell High School students already make good use of the LRTA system, which takes the place of what would otherwise be a massive yellow bus program. Few cities of Lowell’s size experience this phenomenon, which is a positive outcome of the high school’s downtown location. The currently proposed path of the streetcar down Father Morrissette Boulevard makes it ideal for serving this population. A quick rail connection to the Gallagher Intermodal Center would make transit a more compelling choice for these



Three generations of public transportation in Lowell.

students, a large proportion of whom currently drive or are driven to school. Increased high school transit ridership would also remove some student and parent cars from downtown streets and parking lots.

- The student body of Middlesex Community College is currently 100% commuters. These students spend an inordinate amount of their income (or savings) on transportation, and many

of them spend two hours a day or more in traffic. Clearly, improving the connection from the Gallagher Intermodal Center to the heart of downtown would create a greater ridership among MCC students, many of whom would experience real financial and quality-of-life benefits from being able to efficiently commute without driving.

- The single greatest potential audience for a downtown trolley is the students at UMass Lowell, whose daily routine often takes them around three different campuses (North South and East) as well as to the new Inn and Conference Center on the Lower Locks. It is expected that a downtown trolley would replace a dominant portion of the University’s current bus service and, indeed, the latest design of the trolley route specifically works towards that objective. It would provide more consistent service than the current buses, which cannot help but get stuck in traffic during peak hours. And it would contribute significantly to the number of students who make use of the downtown, where uncertainty about parking—and re-parking on return—often discourages them from making the trip.

Transit

Pedestrian-Friendly Downtown

Almost every transit trip begins and ends as a walk. For this reason, new transit systems have failed to attract expected ridership in cities that offer a sub-par pedestrian experience. While this study is aimed at making downtown Lowell more walkable, it must acknowledge that a good portion of the areas to be served by the proposed streetcar are already decent pedestrian environments, if not excellent ones. The improvements suggested in this Plan will only make transit more likely to succeed.

Key Anchors

In addition to the Gallagher Intermodal Center and the academic campuses already mentioned, downtown contains a number of key anchors that are located at distances just far enough to greatly benefit from transit service. Most prominently, the Tsongas Center and LeLacheur Park frequently host the sort of large events for which attendees often seek alternatives to driving (and crowded parking). These are both located in good proximity to the proposed transit line. In addition, these destinations currently have few places to eat and drink nearby, so one can imagine the appeal of taking transit to a meal or drink before or after a sports event.

Streetcar Requirements

A properly executed system is one that provides a *comprehensive route*, a *comprehensible route*, and *frequent headways* around the clock.

A Comprehensive Route

If the new transit line is not long enough or located



The latest planned streetcar route serves key anchors including the Gallagher Intermodal Transportation Center, UMass Lowell, Middlesex Community College, the Tsongas Center, and LeLacheur Park. The important Phase 2 Broadway extension is shown as a dashed line.

properly to carry a significant ridership to meaningful destinations, then it will not be useful enough to succeed. Such appealing but inadequate

new systems have earned the pejorative moniker of “toy transit.” It is to avoid this outcome that the current trolley route has been increased in length to

reach all the way to the UMass South Campus. It should be noted that the proposed Phase II Broadway Extension, that provides efficient travel from points west to the Gallagher Intermodal Center, seems too important to be left out of phase I, especially considering its relatively low cost. Some people have suggested introducing a “trial run” public trolley along the current Park Service line, to gauge demand for rail transit downtown, but such a short route would only demonstrate its own limited value. Any new rail line must be comprehensive enough to serve a significant percentage of downtown visitors.

A Comprehensible Route

One of the reasons that people prefer rail to buses is that the route is fixed, and typically a simple line or loop clearly understood by riders. The currently proposed system is rather complex, so it is therefore essential that the path taken *by each train route* is uncomplicated and easily comprehended. Fare payment must also be made patently obvious, so that nobody is afraid to hop on board and find themselves without the proper means of payment.

Frequent Headways

It is easy enough to call for short waiting period between trains, only to have them lengthened as budgets inevitably tighten. For this reason, it is essential to state unequivocally that a streetcar system with headways longer than 15 minutes will fail to achieve its objective of becoming a transportation mode of choice, and should not be built. Most people will not look at schedules, and will not wait more than 15 minutes for a train—and this includes riders late at night, when the wait is perceived as more dangerous—

so a solid 18 hours of short-headway service is essential. And for waits longer than 5 minutes, which are the norm, GPS-enabled time-to-train clocks should be placed in all stations.

Streetcar Benefits

The introduction of a modern streetcar could have a profound impact on the success of downtown Lowell. If properly executed, a new streetcar line would benefit the downtown initially as a driver of *development demand*, eventually as a creator of *development potential*, and ultimately as a key to the city’s *future competitiveness*.

Development Demand

It has been well documented in places like Portland’s Pearl District how the introduction of a streetcar has led to dramatic increases in land development,



GPS-enabled clocks informing passengers about wait times are standard equipment in new systems.

property values, and tax base in underdeveloped neighborhoods in proximity to new transit stops. This is not a foolproof formula, and the disappointing experience in cities like Memphis suggests that the success of a trolley line depends on certain preexisting demand drivers and on proper execution of the new facility, as described above. But, when these conditions are met, the new system’s first impact will be as an amenity that increases the value and development potential of properties along the line, particularly industrial and underutilized sites. This impact is useful in the context of project funding, but does not speak directly to the success of heart of the downtown, where most sites are already substantially built out.

Development Potential

However, in the longer term, this picture can be expected to change to the direct benefit of downtown. Currently, the greatest physical constraint to increased activity and development downtown is parking provision. During the day, existing commercial and institutional activity largely fills most of the City’s five major parking structures, and any future development will have to identify (and eventually construct) expensive new parking to serve its anticipated users. As improved transit service allows residences, businesses, and institutions to become less dependent upon parking provision, this major development constraint will become less dominant. The same circumstances surround traffic: as trolley service makes roadways more efficient, Lowell’s existing street network will welcome more visitors and process more commercial activity. It is for this reason that America’s most productive cities are those in which people make the choice to take transit.

Transit

Future Competitiveness

Ultimately, though, an investment in transit today is best justified in the context of the City's long-term prosperity. It is well understood that the coming age of post-peak oil will make private automotive transport prohibitively expensive for a dramatically larger number of Americans. These circumstances will give an economic advantage to cities that do not require their citizens to drive. Similarly, commercial hubs well positioned to provide goods and services without inordinate dependence on cars will be the winners in the competition for business location and investment. Lowell has already remade itself once to remain a vital city despite the end of the industrial era and the disappearance of its original reason for being. The next great economic transformation will require a less profound transformation, but one that includes a more robust transit infrastructure.

Streetcar Funding

Given renewed federal support for transit—and the availability of other tools including Tax Increment Financing and Special Assessment Districts—the construction of the system is generally considered less difficult to finance than its operation. While additional funding sources will have to be identified, the following institutions should have reason and capacity to support the operation of the streetcar:

- UMass Lowell spends about \$700,000 annually on its bus and shuttle system, much of which could theoretically be eliminated with the introduction of a streetcar.

- The Park Service spends about \$300,000 annually on the operation and maintenance of their trolleys, which would be replaced entirely by the new system.
- The streetcar would probably allow for the elimination of the LRTA's downtown shuttle, downtown circulator, and perhaps other routes as well. The funding for those routes could be shifted to rail.

Even with all of these funding sources, the system is predicted to require a higher than average amount of subsidy unless additional sources can be identified. Given that transit success is tied to ridership, it is recommended that the City consider enacting a Transit Benefit Ordinance like the ones that have been imple-



Investment in a modern streetcar line has contributed significantly to vitality of downtown Portland, Oregon.

mented in such places as San Francisco and Chicago, in which employers of a certain size are required to offer a transit benefit program to employees. Far from hurting businesses, these programs take advantage of payroll tax benefits to reward companies that support employee transit use. More information about these programs can be found at transitbenefitordinance.com.

Additionally, for both construction and operations, the City may wish to consider a new financing technique recommended in a recent report from the Brookings Institution. Their unprecedented but promising proposal is for a limited-partnership contractual vehicle that allows cities to share in the property value increases that are caused by the rail construction. More on this proposal can be found in the Brookings' report: "Value Capture and Tax-increment Financing Options for Streetcar Construction."

Implementation Concerns

It is very easy to support a new streetcar as the right thing to do without fully considering the needs and the capacity of the institutions that are going to be asked to make it happen and then to make it run. In the case of Lowell, it is likely that the streetcar would be the responsibility of the Lowell Regional Transit Authority, an organization that does its job admirably but is constantly strapped for cash and, in the words of its director, "barely surviving." If the LRTA is to be asked to implement such a system, which is well outside of its experience and expertise, it must be provided with the resources it needs to do that job well without harming the financial well being of the institution.

In that light, it should not be taken as a foregone

conclusion that the responsibility for the streetcar should fall to the LRTA, or the LRTA alone. Other players, including the City, the National Park Service, and NMCOCG could potentially play a role, as could a new entity created explicitly for this sole purpose. As it proceeds, the study of streetcar implementation should approach this question of stewardship flexibly.

Finally, it must be noted that the Lowell streetcar is a proposal that has been much studied and much debated for many years. Over that time, federal funding for such facilities has become less available, then more available, and may soon become less available again, with none of it going to Lowell. Moreover, the citizens of Lowell seem to have reached a point of trolley discussion fatigue, where any further public discourse of the matter will have to be met with decisive action or be dismissed as time and money wasted. With that challenge in mind, it is recommended that City leadership make a firm decision by January of 2011 to move full-speed-ahead on a modern streetcar or to publicly reject the proposal as unfeasible.

