RESEARCH ON PROPERTY VALUES AND RAIL TRANSIT

Included below are a citations and abstracts of a number of research papers focusing on the impact of rail transit on property values. Some of these papers are available online, and in those cases, we have also included a link. While the circumstances in each study are different, and there isn’t a perfect corollary for the Peninsula Rail Program, the research offers some insight into how the project and other planning efforts might be able to maximize community benefits while minimizing negative impacts. If you are aware of other research work, please let us know at prp@caltrain.com.

LINK: http://www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=1866
This report presents the findings of a study of economic impacts resulting from the construction of the Hiawatha Line, the first major investment in a Twin Cities transitway system that will eventually include a mix of light rail, heavy rail, and Bus-Rapid-Transit. In particular, the researchers look at three major areas: impacts on property values by proximity to the line; land-use changes that have occurred around the line’s transit stations; and changes in the level of housing investment within the corridor.

LINK: http://www.reconnectingamerica.org/public/show/ctodvaluecapture110508
Over the past decade, it has become increasingly clear that the presence of transit can increase property values and result in valuable development opportunities. In this era of constrained transit funding and widespread demand for new and expanded transit systems, policy makers, transit planners and elected officials are increasingly interested in harnessing a portion of the value that transit confers to surrounding properties to fund transit infrastructure or related improvements in station areas. This idea, known as “value capture,” is much discussed in planning, transit, and local government circles. However, confusion abounds. Where does the value come from? What is the best way to measure it? And, most importantly, what is the best way to capture this value? This purpose of this report is to offer a more nuanced and meaningful understanding of value capture strategies, focusing specifically on the potential to capture increased property values for the purpose of funding transit.

Railway stations function as nodes in transport networks and places in an urban environment. They have accessibility and environmental impacts, which contribute to property value. The literature on the effects of railway stations on property value is mixed in its finding in respect to the impact magnitude and direction, ranging from a negative to an insignificant or a positive impact. This paper attempts to explain the variation in the findings by meta-analytical procedures. Generally the variations are attributed to the nature of data, particular spatial characteristics, temporal effects and methodology. Railway station proximity is addressed from two spatial considerations: a local station effect measuring the effect for properties within 1/4 mile range and a global station effect measuring the effect of coming 250 m closer to the station. We find that the effect of railway stations on commercial property value mainly takes place at short distances. Commercial properties within 1/4 mile range are 12.2% more expensive than residential properties. Where the price gap between the railway station zone and the rest is about 4.2% for the average residence, it is about 16.4% for the average commercial property. At longer distances the effect on residential property values dominate. We find that for every 250 m a residence is located closer to a station its price is 2.3% higher than commercial properties. Commuter railway stations have a consistently higher positive impact on the property value compared to light and heavy railway/Metro stations. The inclusion of other accessibility variables (such as highways) in the models reduces the level of reported railway station impact.


We estimate spatial hedonic price functions to examine local and regional accessibility benefits of commuter rail service in Eastern Massachusetts, while controlling for proximity-related negative externalities and other confounding influences. The data include 1,860 single-family residential properties from four municipalities with commuter rail service, and three municipalities without commuter rail service. We find some evidence of the capitalization of accessibility to commuter rail stations. Two model specifications suggest that properties located in municipalities with commuter rail stations exhibit values that are between 9.6% and 10.1% higher than properties in municipalities without a commuter rail station. With a third model we detect weak evidence of the capitalization of auto access time or walking time to the stations, suggesting that properties located within a one-half mile buffer of a station have values that are 10.1% higher than properties located outside of this buffer area and that an additional minute of drive time from the station is related to a decrease of 1.6% in property values. Our results also indicate that proximity to commuter rail
right-of-way has a significant negative effect on property values, which suggests that for every 1,000 ft. in distance from the commuter rail right-of-way, property values are between $732 and $2,897 higher, all else held equal. At the mean sample values, this result translates into an elasticity of between 0.03 and 0.13, depending on the functional form of the hedonic price equation.

Diaz, Roderick B. Impacts Of Rail Transit On Property Values.
Introducing rail transit into a region often creates expectations about the impact of the rail project on property values. Information on the impact of rail on property values is often incomplete and limited to anecdotal evidence, leaving regions planning for rail investments without a firm basis to judge the future impact of such an investment. In addition, this lack of complete information limits the extent to which transit agencies can develop strategies to maximize positive property value impacts. This paper summarizes a comprehensive survey of recent research on the impact of rail transit and property values.
The impact of twelve rail projects (including both heavy rail and light rail) throughout North America is compared to develop general conclusions about the impact of rail on property values. In general, proximity to rail is shown to have positive impacts on property values. This conclusion is based on several measures of property value such as sales prices of single-family homes, apartment rents, and median home value. This survey of recent experience also reveals that the relative impact of rail transit is affected by a number of factors. The relative increase in accessibility provided by the new transit investment is the primary factor in increasing property values. In addition, some studies show that such factors as proximity to industrial uses or to highway facilities may limit the extent to which property values are increased. These conclusions suggest a number of strategies that transit agencies can undertake to ensure maximum property value benefit for land along future rail alignments.

Levinson, David. Economic Development Impacts of High Speed Rail. 5 June 2010.
This paper reviews the state of high-speed rail (HSR) planning in the United States c. 2010. The plans generally call for a set of barely inter-connected hub-and-spoke networks. The evidence from US transit systems shows that lines have two major impacts. There are positive accessibility benefits near stations, but there are negative nuisance effects along the lines themselves. High speed lines are unlikely to have local accessibility benefits separate from connecting local transit lines because there is little advantage for most people or businesses to locate near a line used infrequently (unlike public transit). However they may have more widespread metropolitan level effects. They will retain, and perhaps worse, have much higher, nuisance effects. If high-speed rail lines can create
larger effective regions, that might affect the distribution of who wins and loses from such infrastructure. The magnitude of agglomeration economies is uncertain (and certainly location-specific), but presents the best case that can be made in favor of HSR in the US.

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Transit-oriented development has gained favor as a means of reducing traffic congestion, promoting affordable housing, and creating more efficient urban arrangements. Real estate markets reflect the degree to which concentrating development around transit facilities yields benefits. This study models the effects of proximity to light and commuter rail stations as well as freeway interchanges on commercial-retail and office properties in fast-growing Santa Clara County, California. Hedonic price models are used to control for other factors, such as regional accessibility and neighborhood quality, in isolating the effects of proximity to transit on land values. Substantial capitalization benefits were found, on the order of 23 percent for a typical commercial parcel near an LRT stop and more than 120 percent for commercial land in business district and within a quarter mile of a commuter rail station. Such evidence is of use not only to commercial developers and lenders but also to rail transit agencies embroiled in legal battles over purported negative externalities associated with being near rail. It can also help in designing creative financing, such as value capture programs. Understanding the market value of properties near rail transit stops can also inform and elevate the practice of joint public-private development.

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Los Angeles County has the worst traffic congestion in country, which on the surface could be expected to increase the value of parcels near major transit stops. This report empirically investigates this proposition using hedonic price models. While some instances of land-value premiums were found, overall impacts were uneven and inconsistent. In the case of the Red Line, multi-family housing near subway stations accrued benefits; for other uses, nearby properties tended to sell for less. Stronger premiums were found for the Metrolink commuter rail system, with the exception of the Orange and Ventura corridors.
Light-rail transit services conferred the largest benefits to multi-family housing and commercial uses. Residential properties near Bus Rapid Transit stops generally sold for less whereas commercial properties generally sold for more. One possible explanation for lower land value is that many major transit stops in the County lie within redevelopment districts.


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Using hedonic price models, appreciable land-value premiums were found for different land uses in different rail-transit corridors that serve San Diego County, though incidences of land-value discounts were also found in the case of single-family housing. The most appreciable benefits were: 46% premiums for condominiums and 17% for single-family housing near Coaster commuter rail stations in the north county; 17% and 10% premiums, respectively, for multifamily housing near East Line and South Line stations; and for commercial properties, 91% premiums for parcels near downtown Coaster stations and 72% for parcels near Trolley stations in the Mission Valley. Positive capitalization impacts were found for multi-family parcels along all Trolley and Coaster corridors, generally in the range of 2% to 6%. Except for the Coaster downtown stations and the Mission Valley corridors, where premiums were very large, commercial properties accrued small or even negative capitalization benefits in other rail-served corridors.