

CAPITOL HILL

Light Rail Station Sites Urban Design Framework Technical Appendix and Related Resources

RELATED RESOURCES

- Capitol Hill Chamber of Commerce Broadway Transit Oriented Development web page: <http://www.caphillchamber.org/resources-2/tod/>
-Includes links to “Capitol Hill – Broadway Transit Oriented Development, Development Guidelines and Urban Design Recommendations Report” (February 2010)
- Sound Transit Capitol Hill Station Transit Oriented Development website: <http://projects.soundtransit.org/Projects-Home/University-Link/Capitol-Hill-TOD.xml>
- Sound Transit Community Forum Summaries (2009): <http://projects.soundtransit.org/Projects-Home/University-Link/Capitol-Hill-TOD.xml>
- Sound Transit Baseline Report (2008): <http://projects.soundtransit.org/Projects-Home/University-Link/Capitol-Hill-TOD.xml>
-Click on link to Sound Transit Capitol Hill Stations TOD Sites Baseline Report
- The Broadway Economic Vitality Action Agenda (BEVAA), June 2006, <http://www.caphillchamber.org/>
-Click on link to Broadway Action Agenda
- Market and Development Feasibility Analysis (2003): http://www.seattle.gov/economicdevelopment/pdfs/BroadwayBusinessDistrict_FinalAnalysis_121003.pdf
- City of Seattle Concept-Level Station-Area Planning Recommendations (2000): http://www.seattle.gov/transportation/ppmp_sap_neigh.htm#capitol
- Capitol Hill Neighborhood Plan (December 1998): <http://www.seattle.gov/neighborhoods/mpi/plans/caphill/>
- Snapshot Seattle, A Survey for an accurate picture of Seattle’s LGBTQ Community. Seattle LGBT Commission Report of Needs Assessment Survey 2010, June 2011: http://www.seattle.gov/LGBT/documents/Rpt_SnapShotSEATTLE.pdf

HOUSING CAPACITY ESTIMATES

**Estimates only for comparison, not to be used to calculate exact square footage of parcels nor to develop financial pro formas.*

Existing Zoning	Site A-1	Site A-2**	Site B-1	Site B-2**	Site C	Site D	Subtotal
Zoning	NC3-65	NC3-65	NC3-40	NC3-40	NC3-65	NC3-65 / MIO 105	
Approx. Site Area	13,088	10,288	15,715	9,186	17,248	10,832	
FAR Max	5.75	5.75	4	4	5.75		
Max Allowable GSF (Site based)	75,256	59,156	62,860	36,744	99,176		333,192
Floorplate	13,000	10,000	15,000	9,000	17,000		
GSF comm. or work space Ground Floor	12,500	9,500	7,000	4,000	16,000		49,000
Housing (upper floors some ground on B)	62,256	49,156	40,860	23,744	83,176		
Approx. Max Housing Unit* Estimate	58	52	44	25	89		268

* Assumes 20% floorplate for unusable/circulation on B sites and A2, and 30% on site A1 and D. 750 sf avg. housing unit size.

** Site could contain community / cultural center. If so, would reduce amount of potential housing.

HOUSING

One City of Seattle program incentivizing affordable housing production in market rate housing project is the **Multi-Family Tax Exemption Program**. The MFTE program allows developers to receive a property tax exemption on the residential portion of a development for up to 12 years. In exchange, they set aside 20 percent of their units to people making up to a certain percentage of area median income. The set aside units must match the overall bedroom distribution of the project and are restricted as follows: up to 65% of area median income for a studio unit (\$39,000 for an individual, \$45,000 for a couple), up to 75% area median income for a one-bedroom unit (\$45,000 for an individual, \$51,000 for a couple), and up to 85% area median income for a two-bedroom or larger unit (\$51,000 for an individual, \$58,000 for a couple).

COMMUNITY CENTER

LGBTQ Civic Center. A community based steering committee has formed to explore programming needs and options for a LGBTQ civic center as well as to investigate the feasibility of locating such a center within the Capitol Hill Light Rail Station TOD.

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AUTOMOBILE PARKING

Neighborhood Development Comparables:

Development Name	The Broadway Building	Brix Building	Joule Building
Housing Units	118 units (27 units of student housing)	141 units	295 units
Retail sq ft	13,440 sq ft	7,765 sq ft	About 30,000 sq ft
Office sq ft	12,470 sq ft	N/A	N/A
Parking Stalls	166 total stalls	150 total stalls	357 total stalls
	Housing = 110 stalls (1.2 stalls/unit)	Housing = about 1 stall/unit	Housing = 292 stalls (.99 stalls/unit)
	Student housing = 24 stalls (.9 stalls/unit)	Retail = About 1.1 stalls/1000 sq ft	Retail = 65 stalls (2.2 stalls/1000 sq ft)
	Retail = 21 stalls (.64 stalls/1000 sq ft)		
	Office = 11 stalls (.9 stalls/1000 sq ft)		

Analyzing the above information, the Joule Building provided the least amount of parking per housing unit (.99 stalls/unit) – besides the student housing at the Broadway Building with .9 stalls/unit – but increased their retail parking to 2.2 stalls/1000 sq ft. This amount of parking does not reflect the desire of those participating in the workshops to have less total parking than typical mixed use developments. Another comparable is the Pike-Pine neighborhood, which also does not have minimum parking requirements within the urban center boundary. On average, about 0.7 stalls were built per housing unit of the numerous new mixed use developments that have been constructed within the past few years. Pike-Pine neighborhood developers have been more progressive in terms of the amount of parking that they deemed necessary to provide for their tenants and retail uses.

Precedent

- Sound Transit’s first TOD project, developed by the Korean Women’s Association: 62 senior housing units, 30% of median income – about 19 total parking stalls (.3 stalls/unit)
- From Sound Transit’s RFP for TOD – Firestone Property Development at the Mt. Baker Link Light Rail Station: “residential parking at no more than .5 stalls per unit, or at zero stalls per unit; and/or with no on-site retail/office parking”

Facts

- Developers are not required to provide any parking (SAO legislation)
- Developers will not provide commuter (park and ride) parking
- Parking cannot be accessed off of Broadway

Code and Policy Requirements

- Station Area Overlay (SAO) – City Council passed the SAO legislation in July 2001. The legislation established SAO districts and rezones to support TOD development and walkable neighborhoods. It prohibits uses that are not supportive of walkable neighborhood business areas or uses that are automobile related. SAO prohibits single-purpose parking structures. There are no parking maximums and minimum parking requirements were eliminated in order to allow developments to take advantage of site conditions and build only the amount of parking that is determined to be needed.
- Pedestrian zone designation (P Zone designation) – requires pedestrian-oriented uses on the ground floor and a reduction of some parking requirements to help encourage alternative means of accessing the district – by foot, bike, or transit. The P Zone designation also limits driveways across sidewalks along principal pedestrian streets. Access to parking would not be allowed from Broadway. The P Zone designation favors developments built to the front property line, minimal pedestrian/ automobile conflicts and a minimum of auto-oriented uses of interruptions.
- Seattle Municipal Code – Land Use Code, CH 23.54 – quantity and design standards for access and off-street parking. Though the SAO established no parking maximums and eliminated minimum parking requirements, it makes sense to use the minimum parking requirements for elsewhere in the city as a guide to what might be the most parking that the city would want to approve for these new developments. In multifamily or commercial zones, the minimum parking requirement for all uses may be reduced by 20 percent when the use is located within 800 feet of a street with midday transit service headways of 15 minutes or less.

Land Use Type	Minimum Parking Requirement
Multifamily residential uses: for each dwelling unit rented to and occupied by a household with an income at time of its initial occupancy at or below 30 percent of the median income for the life of the building	0.33 space for each dwelling unit with 2 or fewer bedrooms, and 1 space for each dwelling unit with 3 or more bedrooms
Multifamily residential uses: for each dwelling unit rented to and occupied by a household with an income at time of its initial occupancy of between 30 and 50 percent of the median income for the life of the building	0.75 spaces for each dwelling unit with 2 or fewer bedrooms, and 1 space for each dwelling unit with 3 or more bedrooms
Low-income elderly multifamily residential uses (not located in urban centers or within SAO)	1 space for each 6 dwelling units
Low-income disabled multifamily residential uses (not located in urban centers or within SAO)	1 space for each 4 dwelling units
Low-income elderly/low-income disabled multifamily residential use (not located in urban centers or within SAO)	1 space for each 5 dwelling units
Multifamily residential uses except otherwise...	1 space per dwelling unit
LIVE-WORK UNITS	0 spaces for units with 1,500 square feet or less; 1 space for each unit greater than 1,500 square feet; 1 space for each unit greater than 2,500 square feet, plus the parking that would be required for any nonresidential activity classified as a principal use
Medical services	1 space for each 500 square feet
Offices	1 space for each 1,000 square feet
General sales and services	1 space for each 500 square feet
Eating and drinking establishments	1 space for each 250 square feet
Parking Waivers for P Zone Designation	
Land Use Type	Parking Waivers
General sales and services	Parking waived for first 5,000 square feet of each business establishment
Eating and drinking establishments	Parking waived for first 2,500 square feet of each business establishment

- 2007 Neighborhood Business District Strategy (NBDS) – for residential parking supply and ratios that increase as unit building size (bedrooms), the city no longer escalates the residential parking requirement by the number of bedrooms. Analysis for the NBDS project found that Seattle’s previous multifamily parking requirements of 1.1 to 1.5 stalls per unit generally provided more parking than households in urban centers and villages typically used. In buildings with five or more units, the average number of cars per household was 0.8, with a decreasing number of cars per household as the number of units increased. Data indicated that City regulations that required more parking in larger buildings were inverse to the actual patterns of auto ownership. Resident’s of larger buildings are more likely to have fewer cars than other residents of Seattle. This is certainly true when considering the proximity to numerous alternative modes of transportation (Link Light Rail, First Hill Streetcar, Metro buses, and bicycle and pedestrian amenities) that will exist in the Capitol Hill neighborhood.

BICYCLE PARKING

- **Code and Policy Requirements:** Seattle Municipal Code – Land Use Code, CH 23.54 – quantity and design standards for access and off-street parking. Bicycle parking required for residential uses must be located on-site. Bicycle parking facilities shared by more than one use are encouraged. Required bicycle parking shall be provided in a safe, accessible and convenient location. (See table below.)
- 2001 PSRC estimates for long-term bicycle parking demand: 169 recommended spaces for light rail opening and an estimated 336 spaces by 2020. (The estimates do take into account estimated daily Link boardings, a baseline number of bicycle trips, bicycle commuting in the travel shed, potential number of bicycle trips, and adjusted number of bicycle trips, estimated bicycle parking demand). (See table and assumptions on the next two pages.)

Land Use Type	Bicycle Requirements	
	Long-Term	Short-Term
Eating and drinking establishments	1 per 12,000 sq ft	1 per 2,000 sq ft within SAO
Offices	1 per 2,000 sq ft within SAO	1 per 40,000 sq ft
General Sales and Services	1 per 12,000 sq ft	1 per 2,000 sq ft within SAO
Multifamily Structures	1 per 4 units	none
Rail transit facilities	At least 20	none
	Retail = 21 stalls (.64 stalls/1000 sq ft)	
	Office = 11 stalls (.9 stalls/1000 sq ft)	

Station	Estimated Daily Sound Transit Boardings	Baseline # of Bike Trips	Bicycle Commuting Rate in Travel Shed (1990 Census)	Potential # Bike Trips to Station	Adjusted # Bike Trips to Stations	Estimated Bike Parking Demand Per Station (Spaces Needed)	Recommended # Spaces Available When Rail Operations Commence	Estimated Bike Parking Demand in 2020
NE 45th	8,700	109	3.9%	339	218	171	115	228
Pacific St.	10,400	130	3.3%	346	260	205	137	273
Capitol Hill	12,800	160	3.0%	390	320	252	169	336
First Hill	6,700	84	1.8%	121	121	95	64	127
Westlake	18,300	229	1.5%	275	275	216	145	288
Intern'l District	9,200	115	NA	NA	NA	30	20	40
Royal Brougham	400	NA3	NA	NA	NA	30	20	40
Lander	2,400	NA	NA	NA	NA	30	20	40
McClellan	3,300	41	0.8%	26	38	30	20	40
Edmunds	2,100	26	0.4%	8	38	30	20	40
Graham	2,200	28	0.7%	15	38	30	20	40
Henderson	3,700	46	0.3%	11	38	30	20	40

This table and the Summary of Data Sources and Assumptions on page 12 are from the *Bike Parking Need at Sound Transit Stations: Seattle Transportation Bicycle Program Evaluation* paper, 1999.

Summary of Data Sources and Assumptions:

1. Daily Boardings estimate comes from the Sound Transit DEIS
2. Base line number of bike trips is estimated to be 1.25% of daily boardings at each station - this rate is identical with the bike use rate associated with the Metro bike rack program
3. Bicycle commuting rates are from the 1990 Census Journey-to-Work. This number is a proxy for utilitarian bicycling within the bicycling travel shed. For most stations, the bicycling travel shed is a one-half to one mile radius surrounding the stations. Size and shape of travel shed varies with local topography and relative accessibility of station.
4. Potential # of bike trips: This number is the product of the bike commuting rate for the travel shed times the estimated daily Sound Transit boardings for each station.
5. Adjusted number of bike trips is a controlled variance from baseline. Those stations in areas with high bike commuter rates are adjusted upward, but are capped at 2.5% of estimated daily boardings. Conversely, a floor is set for low bike commuting areas under the assumption that new bike trips are certain to be generated by the light rail system even in areas where bicycling rates are comparatively low at present.
6. Estimated parking demand is based on the adjusted bike trips and an expected 60-40% split between long-term and shorter-term bike parking needs. These numbers are then adjusted again to reflect an expected turnover rate. The formula is as follows:

$$\text{Bike parking needed} = \text{Adjusted\# bike trips} * (60\% \text{ long term}) * 0.8 + \text{Adjusted \# bike trips} * (40\% \text{ short term}) * 0.5$$
7. Due to uncertainties in estimating bike trips, the recommended number of parking spots available when Sound Transit begin operating is 33% less than estimated demand.
8. Demand in 2020 is estimated to be 33% higher than the estimated demand.

This approach to bike trip estimation is appropriate for stations that are surrounded by significant residential neighborhoods. This obviously is not the case with the Royal Brougham and Lander stations, but we still believe it is appropriate to meet the minimum bike parking recommendation.

STREETSCAPE

Code and Policy Requirements:

- Right of Way Improvements Manual (ROWIM) – ch. 4.11.2 – states that sidewalks in the vicinity of transit stations, the block adjacent to the transit station, shall be 18-25 feet wide: a frontage zone of 3 feet, pedestrian zone of 10-12 feet and a landscape/furniture zone plus curb of 5-10 feet wide. Additional improvements, within ¼ mile of station entrances, should entail curb ramps with tactile warning strips at legal crosswalks and smooth accessible sidewalks.

Street Types: There are five streets, of varying character and function, which encompass the Sound Transit owned parcels:

Main Streets are arterial streets located within the most pedestrian-oriented sections of neighborhood business districts. These arterial streets and adjacent properties have a pedestrian zone designation (P Zone designation) in the Seattle Municipal Code that requires new development to have pedestrian-friendly features. Adjacent land uses are neighborhood commercial with a pedestrian zone designation. Broadway and E John St (between Broadway and 10th Ave E) are main streets.

Priority design features

- Wide sidewalks and planting strip
- Curb bulbs in locations where there is on-street parking

- Street trees and landscaping
- Pedestrian scaled lighting
- Street furniture
- Awnings and weather protection
- Bike parking in business districts
- Short-term, on-street parking
- Signed and/or striped bike lanes on designated bicycle routes
- Broadway and E John St are required to have at least 18' sidewalks as they are either in front of or adjacent to the LRT entrances. Currently, both sidewalks do not have planting strips or trees. These are important features to incorporate into the P Zone designation. These streets are envisioned as a main street with curb bulbs, wide sidewalks, and some growing space at edge (raingardens) and plaza space

Festival Streets are flexible use streets that may be easily closed for specified time periods, such as street fairs. Street design needs to allow ways to close down to auto traffic, transforming from road to open space. Paving, curbs (or lack of curbs), or removable bollards may help signal this dual purpose. Though a festival street does not need any special design in considerations either, just a street that the community would like to have the option to close for events. E Denny Way and Nagle Place were recommended to be designated as festival streets in the 2010 Development Guidelines and Urban Design Recommendations Report.

SDOT is in the process of writing legislation that will provide criteria to guide neighborhoods about how to choose and designate streets as a festival street. There is no need to design the street to incorporate special features, unless there is funding to do so. Some of the design criteria that could be implemented are as follows:

- Curbless environment
- Pedestrian scaled lighting
- Street furniture
- Awnings and weather protection
- Utility (water/electric) hook-up
- E Denny Way and Nagle Place were recommended to be designated as festival streets. If a festival street designation is the direction that the neighborhood wants to strive for, then in 2012 they will be able to do just that, once the legislation passed through City Council. Until that time, it is important to envision the character and function of the streets so that they can be built with the new developments.

Neighborhood Green Streets (Bicycle Boulevard) are low intensity, non-arterial, streets that prioritize pedestrian and bike mobility over automobiles. Some green streets may have an ecological focus, capturing rainwater, providing habitat for native species, and/or providing a significant canopy trees. Traffic calming measures are encouraged, as is an emphasis on pedestrians, biking, and landscape amenities. A bicycle boulevard contains similar features to a neighborhood green street. It is a non-arterial

street that is designed to allow bicyclists to travel at a consistent, comfortable speed along low-traffic roadways and to cross arterials conveniently and safely. This is achieved by introducing treatments that allow bicyclists to travel along the bicycle boulevard with minimal stopping while discouraging motor vehicle traffic. Traffic calming and traffic management treatments such as traffic circles, chicanes, and diverters are used to discourage motor vehicles from speeding and using the bicycle boulevard as a cut-through. Quick-response traffic signals, median islands, or other crossing treatments are provided to facilitate bicycle crossings of arterial roadways. 10th Ave E is designated as a bicycle boulevard street, which encompasses many of the qualities of a neighborhood green street.

- 10th Ave E is envisioned as a residential street, with low volumes of slower moving traffic, a narrow street section with curb bulbs, bicycle priority, parallel parking, wide sidewalks, residential units with stoops and raingardens.

Woonerf Streets substantially reduces auto capacity of a street to emphasize the pedestrian or bicycle user. They may act as linear open spaces, utilizing the ROW for active or agricultural uses like P-Patches. These are primarily residential corridors or areas where limited auto use is expected. The “gray” area north of Nagle Plaza and south of E John St, between LRT Station entrance, and adjacent to sites A and B could be envisioned as a woonerf type of street, though with the expectation of a shared street that is designed to allow for vehicular, pedestrian, and bicyclist interaction.

- Nagle Plaza alley could act as a woonerf type of street to allow for a shared environment for pedestrians/bicyclists and vehicles. This “gray” area needs to be more than just a vehicular access point, for service/maintenance vehicles and parking, for the development. The potential for live/work artist units on the ground floor of site B could help activate the awkward space.



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