

ENVIRONMENTAL STEWARDSHIP

EXISTING ENVIRONMENTAL STEWARDSHIP

Children's demonstrates a commitment to environmental stewardship through its successful Transportation Management Plan, its improvements to the environmental quality on campus, reduced energy use and conservation of natural resources.

The hospital reduces the vehicle trips of patients and caregivers to and from the hospital by providing services at clinics throughout the region, bringing care closer to the communities where its patients live. Children's aggressive, Diamond-award-winning Commute Trip Reduction program minimizes the number of single-occupant vehicle trips by its staff.

Through thoughtful, sustainable facility master planning, Children's future development will consider habitat, energy and water, which are essential to community design and reducing demand on the local infrastructure. These choices will contribute to a sustainable urban campus and, by extension, positively affect the community around it.

Children's is committed to standards by LEED or other appropriate organizations nationally recognized for best practices for healthy and sustainable buildings. Children's uses these standards where applicable during development of Major Institution Master Plan alternatives.

Hospital Campus

The campus has significant amounts of areas with impervious surfaces. The north surface parking lot contains trailers and soil planter beds set on top of the existing parking lot asphalt. The existing roofs are drained into the stormwater system. The runoff, from both the roofs and the impervious areas, flows into the storm drain and directly into Lake Washington. One water-quality facility is located on-site on the east side of the Whale Garage.

Large amounts of plantings shade some of the impervious areas and contribute to cooler areas on the campus.

Vertical plantings on the perimeter of the campus are located to minimize views of the buildings and the light leaking off of the site into the surrounding neighborhood. This screen shields the hospital and, therefore, may minimize noise in the neighborhood associated with the hospital's operations.

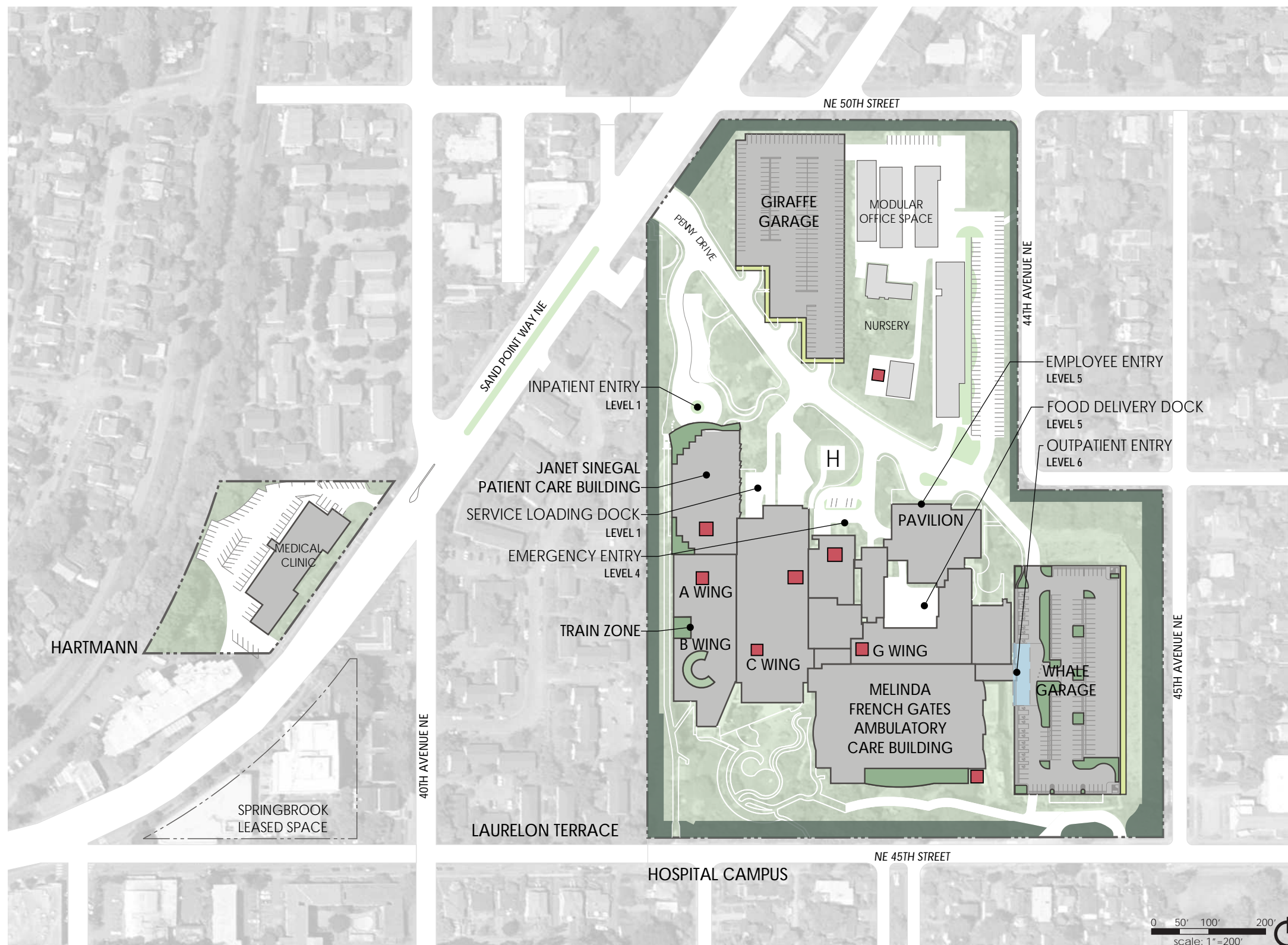
Due to the incremental growth of the campus over time, the intakes and exhausts for the buildings are spread around the campus. The main exhaust for the existing boilers is located to the east and south of the Giraffe Zone.

Improvements to pedestrian systems around and on campus, as well as enhanced transportation management techniques, will support Children's Transportation Management Program to minimize trips to the site, with improved access to transit and other modes of transportation.

Hartmann

Most of the Hartmann site is impervious and does not have water-quality facilities.

See Figure 48, Existing Environmental Stewardship.



LEGEND

- Property Line
- Campus Grounds
- Exhausts
- Impervious Area**
- Roadways and Surface Parking
- Buildings and Parking Garages
- Pervious Area**
- Gardens
- Vertical Plantings
- Roof Gardens
- Green Wall

Figure 48

EXISTING ENVIRONMENTAL STEWARDSHIP

DRAFT MASTER PLAN ALTERNATIVES: ENVIRONMENTAL STEWARDSHIP

Hospital Campus

The amount of impervious area would be offset through the construction and use of eco-roofs and roof gardens. These facilities can collect and retain rainwater and either allow it to evaporate or use it for irrigation. This would minimize the amount of stormwater flowing off the roofs and into the stormwater system.

Large amounts of plantings would be provided at roof gardens, eco-roofs and over roadways to shade absorptive surfaces from the sun. This would reduce the amount of heat absorbed and radiated on campus and into the surrounding neighborhood, and would contribute to reduced ambient temperatures.

Due to the slope of the campus, there are opportunities to treat surface runoff in surface conveyance and cleaning systems. These would be integrated into the pocket gardens, plazas and roadways on campus, with the stormwater treatment facilities developed as public amenities. Planters hung on the building face can be designed to treat stormwater vertically, from the roof to the ground, as a “green wall.”

Vertical plantings on the perimeter of the campus would continue to be located to minimize views of the buildings and the light leaking off of the site into the surrounding neighborhood. The architecture of the buildings would be designed to minimize light leakage. With the proposed installation of a new utility system, state-of-the-art low-noise, low-emission and low-energy-use equipment would be incorporated. The new equipment would reduce impacts of old technology.

As new buildings are developed, intakes and exhausts would be located to minimize the intake of unhealthy air and ensure the proper mixing of exhaust. It is desirable for both the neighborhood and the hospital for exhaust stacks to be remote from the public spaces. The standards by LEED for Healthcare or other appropriate organizations nationally recognized for best practices for healthy and sustainable buildings would be considered in the design and operation of facilities.

Hartmann

The proposed plaza and pedestrian/bike link would serve as a connection to the Burke-Gilman Trail and provide increased access to biking and pedestrian connections. This increased access would provide an incentive to use alternatives to single-occupant vehicles. The proposed garden would also provide additional filtering of stormwater. The proposed building would be built considering standards by LEED for Healthcare or other appropriate organizations nationally recognized for best practices for healthy and sustainable buildings, in order to minimize energy usage and promote healthy interior and exterior environments.

Laurelon Terrace

The orientation of the building expansion onto the site is consistent with solar control. The expanded site edges to the west are closer to additional bus stops, provide improved proximity to the Burke-Gilman Trail and provide better pedestrian access to existing neighborhood services at the western edge. Development on Laurelon Terrace would include landscaping suitable to the pedestrian/transit-friendly environment envisioned on Sand Point Way NE and 40th Avenue NE. The quality of the existing buffer landscape along NE 45th Street would be continued. Roof gardens visible to nursing unit occupants would be placed on the lower roofs. These would also provide outdoor space for patients, visitors and staff. The upper roofs would have eco-roof opportunities around any mechanical penthouses and away from the helistop.

FOUR ENVIRONMENTAL STEWARDSHIP ALTERNATIVES

ALTERNATIVE 1 - NO BUILD

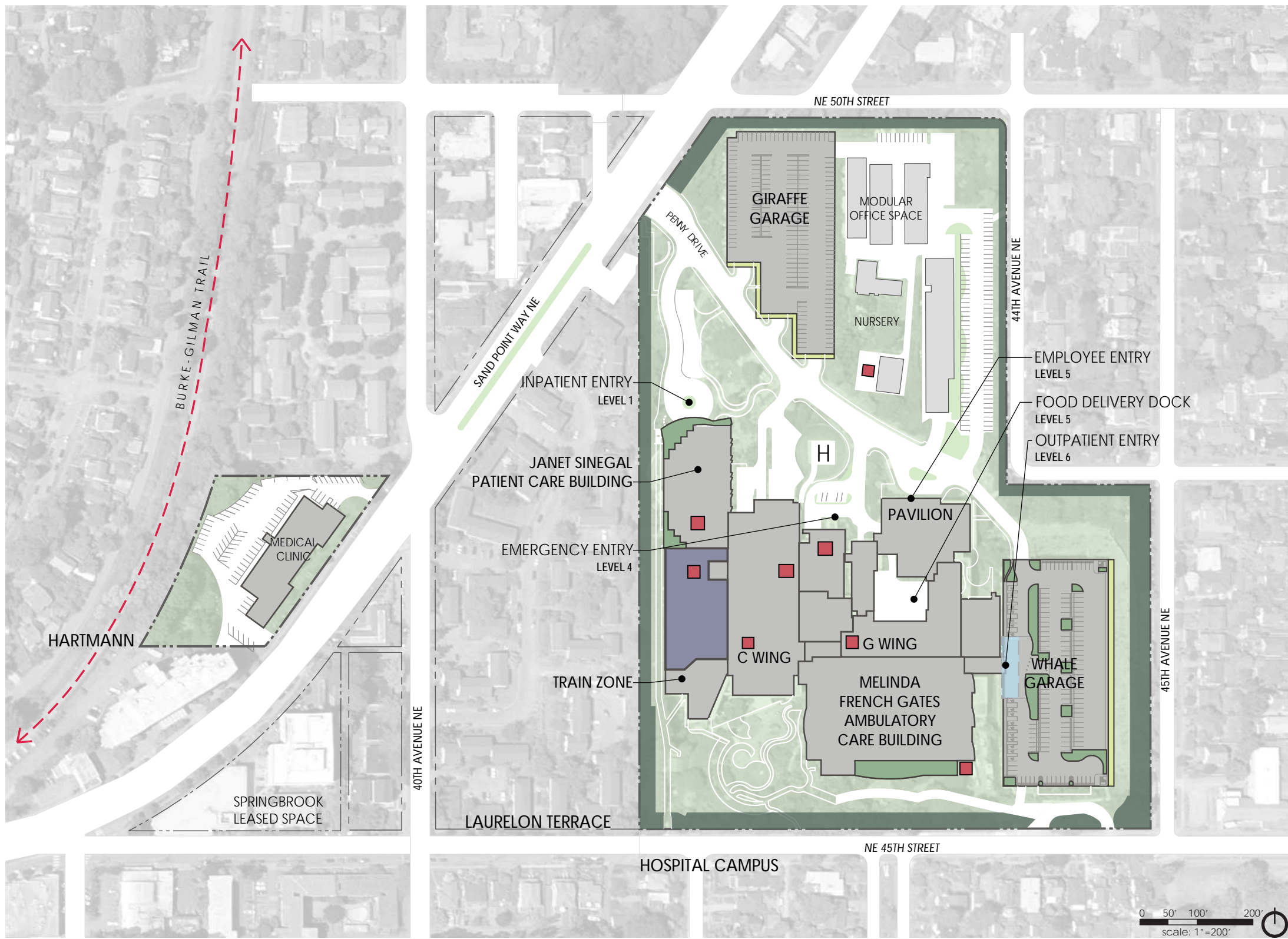
Hospital Campus

Alternative 1 - No Build would be developed to accommodate new projects using the remaining square footage allowed under Children’s current MIMP. Sustainable building measures would be used to minimize its impact during construction and future operation.

Hartmann

The Hartmann site would not be redeveloped.

See Figure 49, Alternative 1 - No Build: Environmental Stewardship.



LEGEND

- Property Line
- Campus Grounds
- Exhausts
- Impervious Area**
 - Roadways and Surface Parking
 - Existing Buildings and Parking Garages
 - Lower Buildings and Parking Garages
 - Taller Buildings
- Pervious Area**
 - Gardens
 - Vertical Plantings
 - Roof Gardens
 - Eco-Roof Opportunities
 - Green Walls
 - ➔ Surface Conveyance
 - Stormwater Treatment

Figure 49

ALTERNATIVE 1 - NO BUILD:
ENVIRONMENTAL STEWARDSHIP

ALTERNATIVE 3 - PROPOSED

Hospital Campus

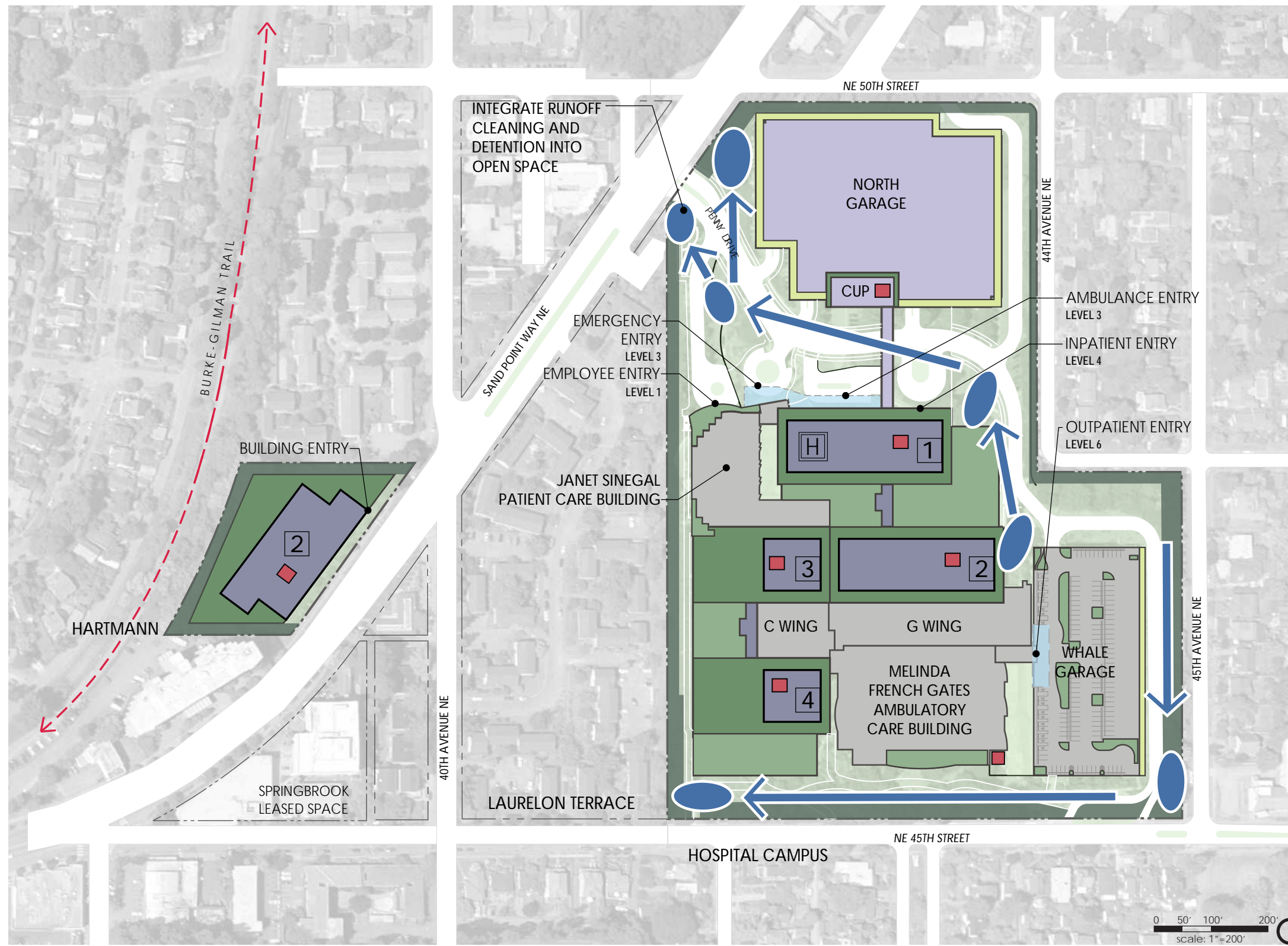
Alternative 3 - Proposed would be lower and wider than the initial Concept Plan. Alternative 3 would be shorter and wider because it has 36 beds per floor and needs fewer floors above the ancillary base. As a consequence, the rooftop mechanical and building exhausts would be higher and allow for more dilution of exhaust and sound when compared to Alternatives 6 and 7. The stacked bed units would be higher on the slope of the hospital campus, allowing less direct sunlight over its top during mid-day to public-accessible exterior spaces.

Alternative 3 would have the smallest amount of rooftop gardens and eco-roofs. It would rely on surface conveyance and cleaning of stormwater in combination with green walls around the North Garage. The surface treatment and conveyance systems would be designed as public amenities for the benefit of the hospital and surrounding neighborhood.

Hartmann

The proposed plaza and garden would serve as a connection to the Burke-Gilman Trail and provide increased access to biking and pedestrian connections. This increased access would provide an incentive to use alternatives to single-occupant vehicles. The proposed garden would also provide additional filtering of stormwater. The proposed building would be built considering standards by LEED for Healthcare or other appropriate organizations nationally recognized for best practices for healthy and sustainable buildings, in order to minimize energy usage and promote healthy interior and exterior environments.

See Figure 50, Alternative 3 - Proposed: Environmental Stewardship.



LEGEND

	Property Line
	Campus Grounds
	Exhausts
Impervious Area	
	Roadways and Surface Parking
	Existing Buildings and Parking Garages
	Lower Buildings and Parking Garages
	Taller Buildings
Pervious Area	
	Gardens
	Vertical Plantings
	Roof Gardens
	Eco-Roof Opportunities
	Green Walls
	Surface Conveyance
	Stormwater Treatment

Figure 50
 ALTERNATIVE 3 - PROPOSED:
 ENVIRONMENTAL STEWARDSHIP

ALTERNATIVE 6 - MODIFIED NORTH CAMPUS EXPANSION

Hospital Campus

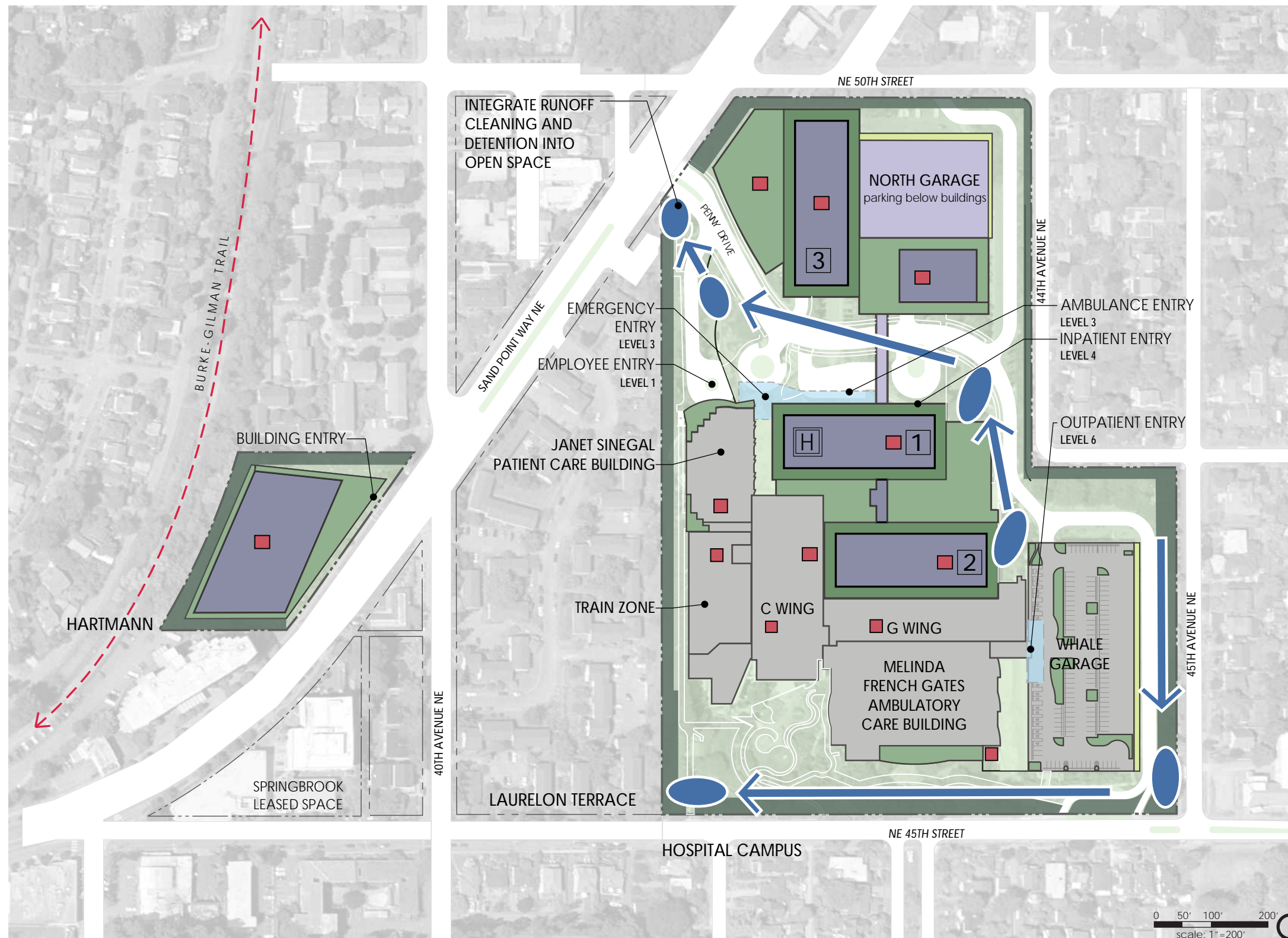
Alternative 6 - Modified North Campus Expansion is lower and wider than the initial Concept Plan because it has 36 beds per floor and needs fewer floors above the ancillary base, and it would have hospital building uses on both sides of Penny Drive. As a consequence, the rooftop mechanical and building exhausts would be lower and allow for less dilution of exhaust and sound. Because the stacked bed units would be lower, direct sunlight would be expected over its top during mid-day, providing access to sun with less shade in surrounding public areas. Excluding Alternative 7 - Expanded Boundary (Early Laurelon Development), this alternative has the most exterior building area. It allows more opportunities for daylight to extend into the diagnostic and treatment areas.

Alternative 6 would provide rooftop garden opportunities on either side of Penny Drive. Green walls could be used to clean stormwater and provide planted visual screening of North Garage. Combined with stormwater surface conveyance and treatment features, rooftop gardens and green walls contribute to stormwater quality before it is released into Lake Washington.

Hartmann

The proposed plaza and pedestrian/bike link would serve as a connection to the Burke-Gilman Trail and provide increased access to biking and pedestrian connections. This increased access would provide an incentive to use alternatives to single-occupant vehicles. The proposed roof garden would also provide additional filtering of stormwater. The proposed building would be built considering standards by LEED for Healthcare or other appropriate organizations nationally recognized for best practices for healthy and sustainable buildings, in order to minimize energy usage and promote healthy interior and exterior environments.

See Figure 51, Alternative 6 - Modified North Campus Expansion: Environmental Stewardship.



LEGEND

	Property Line
	Campus Grounds
	Exhausts
Impervious Area	
	Roadways and Surface Parking
	Existing Buildings and Parking Garages
	Lower Buildings and Parking Garages
	Taller Buildings
Pervious Area	
	Gardens
	Vertical Plantings
	Roof Gardens
	Eco-Roof Opportunities
	Green Walls
	Surface Conveyance
	Stormwater Treatment

Figure 51

ALTERNATIVE 6 - MODIFIED NORTH CAMPUS
EXPANSION: ENVIRONMENTAL STEWARDSHIP

ALTERNATIVE 7 - EXPANDED BOUNDARY (EARLY LAURELON DEVELOPMENT)

Hospital Campus

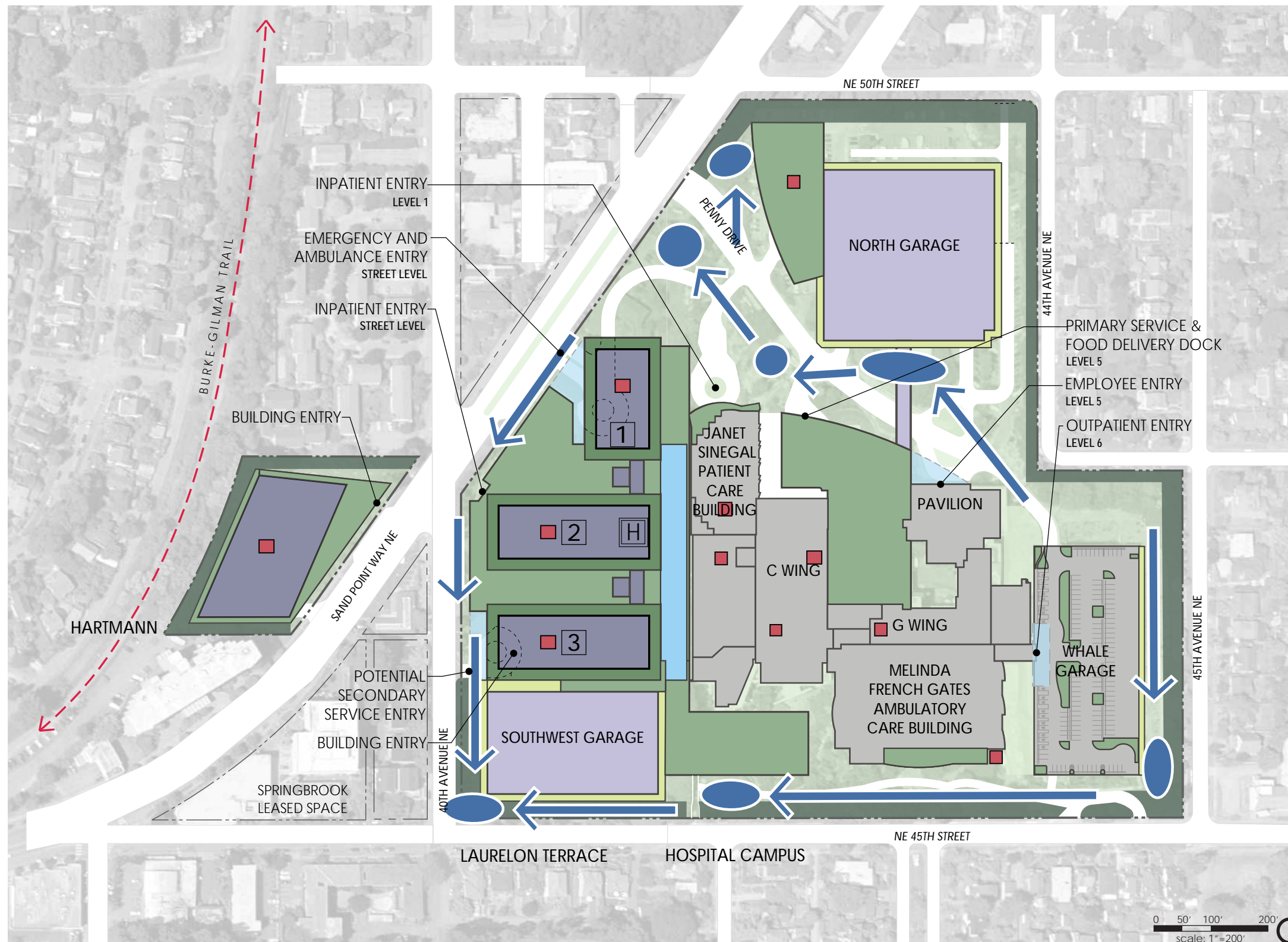
Alternative 7 - Expanded Boundary (Early Laurelton Development) is lower and wider than the initial Concept Plan. Alternative 7 would be shorter and wider because it generally has 36 beds per floor and needs fewer floors above the ancillary base than the initial concept. Unlike Alternative 6, Alternative 7 would have lower density and height, and the rooftop mechanical and building exhausts are lower and spread across the hospital campus and Laurelton Terrace. This allows for dilution of exhaust and sound over a larger horizontal area. These buildings are lower, allowing more direct sunlight over the top during mid-day. The southwest corner of the main campus development shown in Alternative 3 - Proposed would be moved to Laurelton Terrace in Alternative 7 - Expanded Boundary (Early Laurelton Development). This would provide more daylighting to the core areas of the hospital than in the initial Concept Plan or Alternatives 3 and 6.

Alternative 7 would have the largest areas for rooftop gardens, eco-roofs, green walls, surface conveyance and stormwater treatment when compared to other alternatives. Overall, the ambient temperature during summer would be significantly affected by an increase in "green" horizontal surfaces that are absorptive of heat due to plantings. These planted areas can be designed to serve as public amenities for both the hospital and the surrounding neighborhood.

Hartmann

The proposed plaza and pedestrian/bike link would serve as a connection to the Burke-Gilman Trail and provide increased access to biking and pedestrian connections. This increased access would provide an incentive to use alternatives to single-occupant vehicles. The proposed garden would also provide additional filtering of stormwater. The proposed building would be built considering standards by LEED for Healthcare or other appropriate organizations nationally recognized for best practices for healthy and sustainable buildings, in order to minimize energy usage and promote healthy interior and exterior environments.

See Figure 52, Alternative 7 – Expanded Boundary (Early Laurelton Development): Environmental Stewardship.



LEGEND

- Property Line
- Campus Grounds
- Exhausts
- Impervious Area**
 - Roadways and Surface Parking
 - Existing Buildings and Parking Garages
 - Lower Buildings and Parking Garages
 - Taller Buildings
 - Skylight
- Pervious Area**
 - Gardens
 - Vertical Plantings
 - Roof Gardens
 - Eco-Roof Opportunities
 - Green Walls
- ➔ Surface Conveyance
- Stormwater Treatment

Figure 52
 ALTERNATIVE 7 - EXPANDED BOUNDARY (EARLY LAURELON DEVELOPMENT): ENVIRONMENTAL STEWARDSHIP

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