Campus Development Plan

Concept
The general concept for the Campus Development Plan builds upon the 2003 Plan in that it recognizes and enhances the urban character of the existing campus by aligning development predominantly with the street grid. The plan provides opportunities to strengthen a sense of UW Tacoma’s community as a full, four-year institution by providing a central open space, various smaller green spaces throughout the campus, pedestrian connections up the hill, and an integration of uses between residential, student life, and academics.

A significant difference of the 2008 Campus Development Plan from the 2003 Plan is that Market Street remains open through the campus. As described in more detail in following pages, traffic-calming measures, particularly in proximity to the central open space, will be implemented along Market Street, and 19th Street between Market and Fawcett will be closed to vehicular traffic to promote a more pedestrian-friendly environment.

While providing for Market Street to remain open, the plan also will accommodate closing Market Street in the future, if deemed feasible.

The Campus Development Plan shows the amount of built square footage needed to accommodate 10,000 student FTEs (with new construction built to an average of four stories).

Parking may be built below new buildings and potentially underneath the recreational playfield. Retail locations may be located at street level primarily along Pacific Avenue and Tacoma Avenue, with a lesser presence on Market Street.
Campus Development Plan

Alternative

With a campus presently constrained to a 46-acre area, real estate becomes a precious commodity for the full range of services needed to support the scope of the University. And, if the rate of students seeking higher education degrees continues to increase, UW Tacoma may potentially face total enrollments greater than 10,000 FTEs.

An alternative to the Campus Development Plan is to increase the amount of academic buildings and housing facilities on campus and locate elements such as the recreational playfield, structured parking, and facilities management off-site. With average building heights of four stories, this will allow for an increased on-site capacity of 12,000 FTEs.

Figure 16 describes the space needs for functions and services that could potentially be located off-site (built as dedicated UW Tacoma space or shared through community partnerships).

Figure 17 reflects the on-site configuration for 12,000 FTEs.

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Figure 16 | Potential Off-site Functions
Figure 17 | UW Tacoma Campus Development Plan Alternative

Legend

**Academics & Services**
- Existing UW Tacoma
- Future UW Tacoma
- Facilities - Warehouse/CP
- Japanese Language School Memorial Garden
- Retail

**Transportation**
- Existing Public Transit
- Potential Public Transit
- Potential Parking (underground)

NOTE: Health services, event space, parking, grounds and fleet storage, and recreation field located off-site
Campus Development Plan

Scale
In order to strengthen a sense of campus community, provide convenience, and relate to the context of the existing campus, it’s important that the non-residential functions dedicated to UW Tacoma remain ground-related. While the actual height of new buildings will vary, an average height of four stories is ideal for academic uses. This scale allows people to retain contact with the campus, neighboring buildings, and open spaces, and thus reinforces a sense of place for the campus community. Having functions in close proximity to one another and lower to the ground orients the campus to the pedestrian and facilitates navigation and management of class schedules and meetings.

Due to the increasing development of downtown Tacoma and the potential for density around UW Tacoma to increase as the campus reaches its full build-out potential, some buildings west of Market Street (and outside of the historic overlay zone) could be built as high as eleven stories with the upper stories developed through public/private partnerships. An increase in the height limit for the Downtown Mixed Use zone portion of campus (currently set at 100 feet) will be required. (See zoning information on page 17.)

The potential for increased density also supports the location of housing above academic spaces. Building to a campus average of six to eight stories (with potential heights ranging from nine to eleven stories outside of the historic overlay zone) could allow the capacity of the campus to grow to 15,000 FTEs. Buildings should be sited carefully to minimally affect the view corridors of adjacent neighborhoods.

The following sections show the scale of the campus buildings at approximately four stories (10,000 FTEs) and the scale of the buildings with mixed use development, ranging in heights up to eleven stories west of Market Street.

Figure 18 | Massing Study (building heights at four stories)
Figure 20 | Section B - Mixed Use Development above Market Street (15,000 FTEs)

Figure 19 | Section A - 10,000 FTEs
Mixed Use
The plan is designed to be flexible so that as the campus needs change over time, buildings may be assigned to different uses. The academic, community and student activity, and housing zones reflect preferred adjacencies identified by UW Tacoma’s Building Advisory and Design Review Committee and community groups.

The central open space is to be fronted by academic buildings, student activity, recreation facilities, and other common use spaces. A potential student center and recreation facility is sited on the south side of 19th Street in anticipation of possibly using adjacent existing buildings in that area as student activity and community space. Housing is proposed along the western edge of campus, but within close proximity to the campus core.
Gateways and View Corridors

Reminiscent of the first urban universities of Europe (ex. Bologna, the Sorbonne) where learning and work were intertwined with city life, UW Tacoma is a campus that is integrated within the fabric of downtown Tacoma. The campus streets follow the city grid, and traffic runs through as a connection point to Downtown and greater Tacoma. The streets themselves act as sequential, continuous entrances into campus and should be improved with landscaping, street trees, pedestrian walkways, lighting and signage to strengthen UW Tacoma campus identity and environment. Future development at these intersections should also contribute to the identity to the University and the spirit of a campus entrance.

**Gateways**

There are five key intersections that are strong entry points to the campus:

1. **Pacific Gateway** (Pacific Avenue and South 19th Street) – an existing and successful entrance with signage on Pacific Avenue.

2. **Tacoma Gateway** (Tacoma Avenue and South 19th Street) - the 19th Street axis serves as the “spine” of campus, and the intersection at Tacoma Ave should also be developed as a major entrance into campus.
3. **Takomah Grove Gateway** (Tacoma Avenue and South 17th Street) - should be developed in conjunction with the introduction of the Rainier Vista at this intersection including a pedestrian space opening into the vista diagonal. The 2003 Master Plan located the Japanese Language School Memorial Garden at this site, but the Master Plan Update has relocated the memorial east of Market Street to become part of the central open space. This gateway may still incorporate the elements and spatial organization of a grove as outlined in the 2003 Master Plan and integrate with the design of the Rainier Hillclimb as described on page 68.

4. **Market Gateways** - anchors the north/south axis through campus serving as a connector from the Brewery/Arts District to Downtown. The intersection of Jefferson Avenue, Market Street, and South 21st Street (4a) should be planned to include open space as well as recognition of the potential mixed use, commercial, academic and housing that may exist in this vicinity (see Market Plaza, page 68).

5. **Jefferson/Prairie Trail Gateway** (Pacific Avenue, South 17th Street, the future Prairie Line Pedestrian/Bike Trail, and the streetcar corridor) - this is the most complex entry and requires consideration in concert with the potential extension of the trail across Pacific Avenue, possible reconsideration of the open spaces to the north at the convention center and the art museum, and modification of the vehicular circulation. The goal is to provide safe pedestrian and bicycle access into and from the campus, to provide visibility into the campus and create an environment of landscape, public art and buildings celebrating the presence of the University as a neighbor to downtown Tacoma.

**View Corridors**

There are three important view corridors identified in the 2003 Master Plan. All are included in the 2008 Master Plan Update. These include the South 19th Street axis, the Mt. Rainier Vista and the Power House Vista. The development and refinements of the plan for the central open space on campus contribute to framing all three vistas. The development of the Pacific Gateway and Takomah Grove Gateway should be conceived to function as gateways to both the campus and the vistas.

**Community Access - “Porous Borders”**

Community access is provided through the open street system and the Prairie Line Pedestrian/Bike Trail that crosses campus. The streets allow to and through access for automobiles, service, emergency, pedestrians, bicyclists and public transportation, including Pierce County Transit and the Sound Transit Link Light Rail. It will be especially important to improve these streets to serve pedestrian circulation by repairing sidewalks and adding street trees and landscape buffers between traffic and pedestrians (see description of South 21st Street setback on page 62). The improvement of perimeter streets will also provide benefits to neighboring communities (see description of Tacoma Avenue on page 62).

UW Tacoma’s existing buildings are now located on active streets, and in many cases, retail activity occupies the street level with academic uses above. This mix will continue with the full build-out of the campus, particularly within new development on Tacoma Avenue and in the
The planned central open space at the heart of the campus, including the Japanese Language School Memorial Garden, will be open and attractive to both the University and larger community. The terraced design of the open spaces may provide a venue for amphitheater seating for outdoor performances and activities.

The campus will strive to maintain porous borders, a mix of retail, open spaces and trails, as well as educational programs, lectures, events, and activities. This will be reinforced with the development of a student and recreation center that will maintain the integration of campus and community that is highly valued at UW Tacoma.
Landscape Design and Open Space
The following summarizes the open space elements as defined in the 2003 Campus Master Plan (shown in quotes, modified in boldface) and includes relevant updates including a setback on South 21st Street, a new plan for Market Street, the conversion of the railroad right-of-way into an urban pedestrian and bike trail, and the additions of the Japanese Language School Memorial Garden and a recreational playfield.

**Streetscapes**

**Perimeter Streets - Tacoma Avenue, South 17th Street, South 21st Street, and Pacific Avenue**

“The perimeter streets while under the jurisdiction of the City, are important to the Campus in that they define the edge of the city/campus interface....The campus side of the street should include street trees and broad sidewalks. Parking is provided....North-south perimeter streets feature important building entries. With some exceptions along Pacific Avenue, perimeter streets will not have loading docks or garage entrances.”

**Tacoma Avenue - Boulevard with Potential for Mass Transit**

“Tacoma Avenue is envisioned as a grand boulevard with street trees planted along each curbside and a central planted median. It forms an important campus edge and an important gateway to and from downtown.” It is also a major north/south transit route and possibly may include a future streetcar line.

**South 21st Street - New Plan for Setback**

“South 21st Street is a significant gateway to the University and the City via its connection to Highway 705 and Route 509 Waterway Bridge.” However, this steep street doesn’t currently portray the character of a significant portal to the University or the City. As future development occurs up the hill (west), the buildings should be set back from the north curb line to allow for wider sidewalks, planting areas and a double row of street trees providing a consistent and inviting edge to the campus (see Street Section A).

**Thoroughfares - Jefferson Avenue, Market Street, and Fawcett Avenue**

Jefferson Avenue, Market Street, and Fawcett Avenue “provide the primary vehicular circulation routes through campus and remain open to public traffic. Parking is maintained. Building frontages along thoroughfares may have primary entrances and orientations. Except for the east side of Jefferson Ave, driveways and loading docks are excluded from thoroughfares.”

**Market Street - New Plan**

The Master Plan Update shows that Market Street will remain open to vehicular circulation. Since Market Street runs through the middle of the campus’ central open space, the character of the street should respond, respect and enhance its surroundings. Market Street should not be a barrier, but rather seamless, promoting a strong and safe pedestrian connection between the upper portion of the open space (University Terrace) and the lower portion (Japanese Language School Memorial Garden). Wider sidewalks and a narrow roadway for vehicles are recommended as street-calming measures.

The street is to be animated with trees and planting areas/raingardens, pedestrian amenities such as seating, pedestrian-scaled lighting, kiosks/wayfinding elements and special paving. The design should encourage outdoor dining, artworks, vendors and be enhanced with
Figure 24 | Street Section A - S. 21st Street Looking West
Campus Development Plan

Figure 25 | Street Section B - Market Street Looking South, between S. 17th Street and University Terrace

Figure 26 | Street Section C - Market Street Looking South at University Terrace
Market Street contd.
seasonal events and displays (see Street Sections B & C).

When location of transit stops on Market Street are determined, transit shelters should be provided or integrated into new buildings conveniently accessible to the transit stops. It is ideal to place transit stops proximately to the north and south of the central open space.

South 19th Street
(“Tacoma Gateway” in the 2003 Master Plan)
19th Street between Fawcett Avenue and Jefferson Avenue will close to vehicles, so that the east-west axis, or spine, through the middle of campus may continue from the Snoqualmie Hillclimb that begins on Pacific Avenue and become integrated as part of the central open space (see Street Section D).

Courts
“Courts are conceived to be functional but friendly urban spaces mixing pedestrian movement with mid-block loading and servicing functions, bicycle storage, as well as some short term or assigned parking. Secondary building entrances and windows open onto the courts.”
The Prairie Line Trail Burlington
Northern Santa Fe Railroad Right-of-Way
The deactivated 80’ wide railroad right-of-way (R.O.W.) is an incredible asset and component to the overall open space framework of the campus. Transecting the campus along the north/south grain of the hillside, the corridor provides a relatively level and wide green space that could be designed as an urban park. A 20’ wide trail will be maintained through the R.O.W. for a public pedestrian and bicycle trail that extends north toward the Thea Foss Waterway and extends south through the Brewery District and beyond.

The abandoned track alignment articulates a gentle curve or sweep through the R.O.W., which becomes the armature of the design. The trail is to be reflective of the historic industrial character of the R.O.W., interspersed with rhythmic and complementary native plantings. The typical section of the corridor includes: narrow pedestrian walks paralleling buildings that line the edge to provide access to the buildings; linear plantings that reinforce the linearity of the trail; and the 20’ wide trail which will accommodate both pedestrians and bicycle traffic (see Street Section E).

The City of Tacoma and UW Tacoma must work together in the design and development of this corridor, so that the design respects and reflects the past function and history of the corridor, and the design elements integrate well with the existing context of the campus. The intersection of the trail and South 21st Street needs particular attention due to the heavy vehicular traffic that travels on South 21st Street to and from the interstate. An underpass developed at this site would be ideal to allow the trail to continue across South 21st Street without pedestrian and vehicle conflicts.

An important element to be incorporated into the design of the trail is the use of water and its role in the overall stormwater management program to be implemented on the campus. The Prairie Line Trail is an ideal stormwater treatment collection corridor for water coming down and through the steep slopes of the campus. Water features and a runnel running the length of the trail will display the water systems, enriching the experience of the user. Linear raingardens will filter and clean water, improving its quality prior to its release into the Thea Foss Waterway.

Site furnishings such as seating areas, bike racks, wayfinding/signage, lighting, art and paving should be developed to campus standards. The trail corridor should feel safe and inviting to the user. The south and north entries of the trail onto the campus should inform the user that they are entering the UW Tacoma campus, and the design of the north entry should be looked at holistically with the realignment and narrowing of 17th Street, improvements to Tollefson Plaza and the intersection crossings at Pacific Avenue.
Figure 28 | Street Section E - Prairie Trail (BNSF RR R.O.W.)

Campus Development Plan

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**Hillclimbs**

“The Rainier Hillclimb and the (existing) Snoqualmie Hillclimb connect the two main pedestrian upper and lower gateways to the central open space in the heart of campus.”

**Rainier Hillclimb**

“The Rainier Hillclimb is envisioned as a series of broad stairways surrounded by greenery. Located specifically to afford spectacular views...columnar trees will reinforce view corridors and continue into a new pedestrian belvedere that forms the northern boundary of the University Terrace. The use of access ramps that “zig-zag” up the slope will be limited or altogether eliminated in the design. Universal accessibility is to be accommodated through a series of elevators and bridges along the north side of the open space to be incorporated into the design of future buildings and define the edge of the hillclimb.

**Passages**

“Passages are secondary pedestrian routes up and down the campus. These pedestrian stairways link the service courts, are adjacent to academic and residential buildings, and provide east-west alternative routes to the University Terrace and hillclimbs. They are predominantly green and intimately scaled corridors in keeping with their function as alternative routes through campus.”

**Plazas**

Complementing the large open spaces are a number of smaller plazas, located throughout the hillside campus. Generally these plazas provide places for students, faculty and others to meet, gather for events or just sit to study or relax. Each plaza will have its own character, some more garden-like and green, and some more urban and hardscaped. In all cases, the plazas must be inviting, safe and offer a degree of flexibility and comfort for an individual or informal group.

**Market Plaza**

Market Plaza is located at the south end of Jefferson Avenue and is created by the realignment of Jefferson Avenue as it intersects into Market Street mid-way between South 19th and 21st Streets. The plaza is in the heart of the retail district along Market Street. It is a place of respite with a variety of seating and tables. A canopy of light and lacy trees provide soft and filtered sunlight to the predominantly hardscaped plaza.

**Academic Plazas**

Small plazas may be formed by the shape of new academic buildings. Plazas of this type are shown on the west side of Jefferson Avenue, north of the Japanese Language School Memorial Garden, and at Fawcett Avenue and South 17th Street. The space should be integrated with the streetscape character while creating a forecourt for new structures.

**Library Square (Gillenwater Plaza)**

“Library Square has been constructed as part of the lower campus development and forms an outdoor seating and meeting place in front of the Library building, with a convenient adjacency to Philip Assembly Hall.” The only change to the structure of the square is to perhaps evaluate the square planting bed in the center of the space. Reconfiguring the planting bed may allow for better flow of pedestrian traffic and flexibility of use.
**Student Center Plaza/Court**

The Student Center Plaza is somewhat of a hybrid, a combination of plaza and court. Since it is aligned with Court D, limited vehicular access may be allowed. However, it is to be predominantly pedestrian-oriented. The space is a major outdoor room surrounded by the student center and recreation facilities. In fact the design of the plaza should reflect the quality of a strong interior/exterior connection.

**Joy Plaza**

The Joy Plaza will be developed along the Prairie Trail, across from the Joy Building and adjacent to the Dougan Building. As the Joy building is renovated and the development of the Prairie Trail begins, the Joy Plaza should be designed as an integral component of the campus’ open space system. This plaza, unlike many of the hardscaped plazas on campus, will predominantly be composed of a soft, green space/lawn. The Joy Plaza is seen as a major part of the gateway experience into the campus from the north along the Prairie Trail, therefore the quality of its design and use of materials should speak to the quality of the University.
Campus Development Plan

Recreational Playfield
A recreational playfield is an important component of student life on campus, yet it is not an easy thing to accommodate on a site with steep topography. A recreational playfield may be located along Fawcett Avenue between 19th and 21st Streets. This location will provide a desirable adjacency to the student center, recreation facilities, and student housing. And to facilitate building a large level surface on the sloping site, the field will be built over a structured parking garage. The size of the field (180 ‘x 300’), is large enough to accommodate informal field games, but does not meet NCAA requirements for intercollegiate athletics.

Central Open Space - the ‘Heart of Campus’
As with the earlier plans, there continues to be the desire to establish a large open space or “heart of campus” central to the campus buildings and services. The establishment of this space will be a link from the existing UW Tacoma spaces below Jefferson Avenue to the west side of campus. The central open space is composed of two types of spaces. The space on the east side of Market Street includes the Japanese Language School Memorial Garden, and the space west of Market street will be the University Terrace.

Japanese Language School Memorial Garden
Built in 1922, a Japanese Language School was located at Tacoma Avenue and South 17th Street, the heart of ‘Japan town’ in Tacoma before World War II. The school was a place for Japanese children to study language and Japanese culture. During the war, the building was also used to gather people of Japanese descent before sending them to internment camps.

While this building served as a significant historical landmark for Tacoma, it fell into disrepair and had to be removed. In order to preserve its heritage, UW Tacoma has planned for a Japanese Language School Memorial Garden to be featured prominently on the campus.

The design, by Nakano Associates, is a composition of three large Japanese gates and ten meditation benches, through which one enters to a gathering space for ceremonies or quiet reflection. On three granite plaques, the history of the school, its teachers and the school song will be engraved, and a water feature will also be incorporated into the design of the garden.
University of Washington Tacoma    |  

Japanese Language School Memorial Garden  

**University Terrace**  
The open space above Market Street will serve as a large, active outdoor gathering space (though more modest in size than the space proposed in the 2003 plan) that includes a flat grassy area for students, which could also serve as a stage for an outdoor amphitheater aligned with the Mt. Rainier Vista. A bell or clock tower could also be included to serve as a ‘touchstone’ for the campus. The open space slopes toward Market Street in a series of level terraces and grander stairs. The terraces could be planted with native vegetation (refer to planting guidelines in the 2003 plan) to provide smaller and more intimate gathering spaces for students. A light and lacy canopy of trees gives the space a sense of volume, while allowing filtered sunlight to penetrate into the space. As part of the campus-wide stormwater management program, water should be introduced into the space and expressed in a series of cascading runnels/weirs. The student center, recreation facilities, and academic buildings will frame this space, and it will be no more than a five to ten minute walk from student housing.
Campus Development Plan

Figure 31 | University Terrace Study - Plan

Figure 32 | University Terrace Study - Section
Figure 33 | University Terrace Study - Perspective Drawing
Evaluation of Transportation Needs
Summary

The Campus Master Plan Update includes, as a supplemental section at the end of this document, an Evaluation of Transportation Needs prepared by Fehr & Peers/Mirai. This study includes an evaluation of existing conditions, future conditions and proposed improvements to transportation systems including, streets, parking, vehicles, transit service, and pedestrian and bicycle circulation.

The focus of this study is to evaluate the impacts of the Campus Master Plan Update on the surrounding transportation system. The analysis looks at the context of the Campus Development Plan within its surrounding environment—examining not only the effect of the campus on the surrounding transportation system, but also how the development of the surrounding land uses will affect the operation of the campus.

The analysis of existing and future transportation needs is an important part of the master plan process, establishing the existing challenges for the transportation system and identifying the strategies and actions that will be needed to provide a transportation system that supports travel by auto, bicycle, pedestrian and transit.

Proposed improvements to existing roadways include:
- Widening South 21st Street between Market Street and Tacoma Avenue;
- Modifying Pacific Avenue to better support vehicular and public transit circulation;
- Installing traffic lights on South 17th Street;
- Building an underpass where the Prairie Line Trail meets South 21st Street;
- Creating a bicycle corridor along Fawcett Avenue;
- Developing a transit corridor along Market Street;
- Pedestrian improvements on all streets within and bordering UW Tacoma.
Circulation
“A comprehensive network providing multiple connections and clarity of wayfinding is critical to the circulation of the campus.” The existing street grid geometry determines to a great extent the overall circulation of the campus. In the north-south direction the existing streets and mid-block courts form the framework for all levels of circulation including vehicular, service, emergency, pedestrian, and bicycle access.

Vehicular Circulation and Parking
“An initial assumption in the conception of the University of Washington Tacoma was its role as a commuter campus serving the south Puget Sound region. Consistent with this role, the challenge continues to be responding to a changing set of conditions and use patterns over time.”

Current parking demand exceeds supply, and with the addition of on-campus housing, residents will want dedicated parking options.

“Current development in the City of Tacoma suggests that future campus growth will parallel a new civic focus on activating the city core as a pedestrian-friendly place.”
“In particular, the construction of new urban housing and a light rail system can potentially reduce automobile commuters, and reinforce the campus as an urban district within a walkable, bike-able city.”

UW Tacoma’s current mix of surface and structured parking provides approximately 550 spaces for 2,173 FTEs, or a 25% ratio of parking to student FTEs.

It is difficult to predict parking needs for the full build-out of the campus. UW Tacoma will plan for a 15% - 30% ratio of parking spaces to student FTEs (1,500 - 3,000 parking spaces). The actual number of spaces will depend on a range of factors including the financial feasibility of structured parking, the cost of commuting by single-occupancy vehicle, the number of on-campus residents, availability of offsite parking options, and growth in public transit service. It is assumed that most parking structures will include University uses above them such as housing, student services or academic uses.

Approximately 200-300 spaces could be available as street parking (depending upon final street designs/upgrades), and potential locations for structured parking include:

- **Between Tacoma Avenue and Fawcett Avenue**
  - 950 spaces (4 floors built under the playfield and housing west of the playfield)
  - 830 spaces (4 floors built under housing and court)
  - 800 (4 floors built under housing, and Rainier hillclimb)

- **Between Fawcett Avenue and Market Street**
  - 330 spaces (3 floors built under housing at South 21st Street)
  - 110 spaces (3 floors built under building at Market Street and South 19th Street)
  - 200 spaces (3 floors built under building on east side of Fawcett)
  - 300 spaces (3 floors built under building at South 17th Street)

- **Between Market Street and Pacific Avenue**
  - 180 spaces (3 floors built under Court 17 apartments, existing)
  - 110 spaces (3 floors built under building adjacent to Pinkerton)
  - 240 spaces (3 floors built under building on C street (replaces existing surface parking)
**Service and Emergency Circulation**

Service and emergency vehicles will mainly be able to access buildings and loading zones via mid-block courts. This form of access is similar to the mid-block alleys existing in most of the blocks. This allows main entrances of buildings and street parking to be located along major thoroughfares.

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**Legend**

- Service & Emergency Access
- Service Zones

**Figure 35 | Service and Emergency Circulation Diagram**
Pedestrian and Bicycle Circulation

A hierarchy of pedestrian circulation is established through the variety of open spaces developed through the site.

Major pedestrian routes include the 19th street axis, which functions as the central spine of campus, the Snoqualmie and Rainier hillclimbs that lead pedestrians through the central open space and along the Mt. Rainier Vista corridor, and the Prairie Line pedestrian and bicycle trail.

Minor pedestrian routes include the various links between the streets (running east-west) established in “an array of walkways, stairs, inclined paths, bridges, and ramps that climb or traverse diagonally up and down the slope, providing much of the unique character of the open space on campus.”

“The steep topography of the campus and prevalent vehicular traffic on surrounding streets combine to make bicycle commuting a challenge. Nevertheless, the City of Tacoma and UW Tacoma can work together to improve bike access.” The conversion of the railroad right-of-way into a pedestrian and bike trail, and street improvements such as dedicated bicycle lanes on Fawcett Avenue will greatly improve bicycle circulation through campus.
Barrier-Free Accessibility

The campus must be accessible to the wide variety of users that visit, work, and live there. This is a challenge, given that each block includes a fifty-foot change in grade from east to west, totaling two hundred feet between Tacoma Avenue at the high point of the campus and Pacific Avenue towards the waterfront. The open space that exists between the railroad right-of-way and Jefferson Avenue includes a wheelchair-accessible ramp system, but it is inconvenient for users and a detriment to the quality of the open space. It is recommended that this ramp solution not be continued further up the hill as the campus grows. Rather, as modeled by an existing bridge that connects the Keystone Building to the Science Building, a series of semi-public, transparent corridors/bridges within and between buildings and accessible by elevator is a reasonable solution to provide east-west access throughout the campus.

North-south streets and mid-block corridors will provide access, and sidewalks will be designed to meet ADA requirements. It is important that the central open space is accessible as well. The University Terrace studies show a level gathering area that can be accessed from the
north and south. Accessible parking spaces will be included in all new parking structures, along public streets and in mid-block courts.

Sustainability
In developing policies and plans to advance sustainability on the campus the following should be considered:

- The design of new buildings and adaptive reuse of existing buildings will meet a minimum LEED® silver rating.
- Reduction of energy use by utilizing more efficient building and infrastructure systems and alternative energy sources.
- With increased public transportation access to the campus, less dependence on the automobile will be encouraged. The City of Tacoma is initiating metered parking on city streets, and the amount of on-campus parking will be kept to a minimum with the goal of providing “Park & Ride” access on Sound Transit light rail or Pierce County Transit from the Tacoma Dome and other transportation centers near the campus.
- The topographic conditions and proximity to the Thea Foss waterway provide the opportunity for a stormwater management system to collect water from streets and roofs, store and filter the water through the landscape, and reuse and distribute portions to the waterway. This stormwater management system will be a visible, positive part of the streets and open spaces and be incorporated into landscape design.

As a member of the “American College and University Presidents’ Climate Commitment,” the UW is committed to developing a comprehensive plan to achieve climate neutrality. The following chart shows the variety of strategies UW Tacoma could employ to reach carbon neutral status by year 2040. Significant savings could be achieved by making buildings more energy efficient, utilizing alternative energy sources, and purchasing green power for electricity needs not met by on-campus generation.

Figure 38 | Carbon Campus Neutral Strategy, courtesy of PAE Consulting Engineers, Inc.
**Infrastructure Master Plan**

A new Infrastructure Master Plan (IMP) has been developed in a parallel effort to the Campus Master Plan Update. Prepared by PAE Consulting Engineers, Luma Lighting, and Magnusson Klemencic Associates, the IMP addresses the most recent development strategies for the growth of the campus, focuses on application of sustainable systems, and includes life-cycle cost assessments.

The goals of the Infrastructure Master Plan are:

- Robust, reliable, redundant systems;
- Inform strategies for energy distribution (central or distributed) and how these systems should be sized and located;
- Understand interim servicing of existing buildings to inform construction phasing;
- Reduce carbon footprint;
- Develop a carbon-neutral (or carbon-negative) master plan option with innovative and informative sustainable strategies;
- Consider campus security (exterior lighting);
- Explore alternative fuel options;
- Use natural systems to mitigate run-off;
- Demonstrate innovations of systems to promote leadership and education within the campus community.

**Utilidor System**

Campus utilities are currently routed through walkable utility tunnels. These tunnels house water, electrical, and telecommunications piping and cable. Not only does this series of tunnels allow for the orderly distribution of campus infrastructure, but it also enhances the security and connectivity of the campus as a whole. The utilidor system (as shown on page 82) should expand as the campus develops and should be utilized as recommended by the civil, mechanical, electrical, telecommunications, and lighting infrastructure plans.

**Civil Infrastructure**

In order to maintain reliable water service to the campus over the next twenty years, older pipes are recommended to be replaced as roadwork occurs in those locations. Four fire hydrants should also be added to designated locations on Fawcett Avenue and Market Street.

To significantly reduce waste generation, mitigate stormwater runoff, and provide alternatives to purchasing potable water, the capture and reuse of stormwater and grey water is highly recommended. This means that for demands such as toilet flushing or grounds irrigation, stormwater or greywater (sink and shower wastewater) could be used instead of potable water.

A centralized water balance option is recommended, which combines each building’s rain leaders and flow fixture waste lines into one location at the end of campus on Hood Street. This location provides flexibility to handle all possible stormwater from on and off the campus. The utilidor can then be used to route the grey water back to each building.

Road, sidewalk, and curb conditions are also part of the campus stormwater management system. Recommendations for road improvements include:

- Permeable paving at sidewalk areas and parking areas along north-south corridors;
- Cleansing swales and curbless street edges at north-south corridors;
Campus Development Plan

**Mechanical Infrastructure**
The recommendation for mechanical infrastructure development is the implementation of a condenser water loop. In this system, condenser water circulates through piping powered by a central pump station, and buildings draw heat from, or reject heat to the loop. Supply and return campus water loops would be installed to serve all campus buildings through the utility tunnel system. This option, compared to others, has a low life cycle cost, is energy efficient, and the infrastructure to support this option can be phased.

**Electrical Infrastructure**
Normal electrical power recommendations include:

- Bringing two utility feeders to the campus from the Nisqually substation;
- Looping the existing radial feeder;
- Establishing a primary selective loop configuration for future development west of Market Street;

For emergency electrical power, the plan recommends a semi-distributed system of 480 volt generators, strategically located to serve groups of buildings.

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*The utilidor should be placed on the east or west side of Market street (not under the street right-of-way) and connect to UW Tacoma buildings. The location will be determined with phasing.*
Telecommunications Infrastructure
The existing main router room (MRR) for Qwest, Comcast and Click! Networks is in the Walsh Gardner Building. As the campus expands west, additional Hub Centers will be placed on campus for telecommunications support and will be connected to the MRR through the utilidor system. A second MRR should be developed to serve as a redundant back up and a second campus point of presence for utility providers.

Lighting Infrastructure
Because existing lighting on campus is too varied, the lighting plan makes recommendations to unify lighting equipment and source selection and minimize maintenance. Additional consideration is given to lamp color, glare, performance and application. It is recommended that the campus development utilize one type of luminaire to unify pedestrian spaces. As the campus is expanded to the west, a new contemporary luminaire could be selected to define the new campus. Lighting fixtures should be energy efficient and not cause light pollution. (More lighting design guidelines are listed on page 91.)

Interior and exterior daylighting is important to campus development, and should be given careful consideration. Interior daylighting is subject to building orientation and architecture. The campus orientation is not necessarily conducive towards “easy” daylighting as most of the buildings may be north-south oriented on the long axis. Careful consideration should be given to maximize the use of natural light in buildings. Exterior daylighting and the interplay of buildings on the campus is also an important consideration. Building adjacencies need to accommodate solar access and preserve views.