a master plan for guiding future opportunity

SVSU

Saginaw Valley State University

contents

Image courtesy of svsuphotos

1 introduction

Institutional Profile, Vision and Mission

Institutional Profile

Saginaw Valley State University (SVSU) is a four-year, fully accredited, public institution located in the mid-Michigan area. The 782-acre university was established in 1965, and in 2012 has grown to an enrollment of almost 11,000. The University offers over 70 undergraduate and 12 graduate programs focusing on liberal arts, sciences, business, and education.

University Mission and Vision

First and foremost, this Campus Master Plan Update for Saginaw Valley State University reflects the philosophies, strategic mission, and vision for the University. The mission and vision are as follows:

Mission Statement
The University creates opportunities for individuals to achieve intellectual and personal development through academic, professional, and cultural programs. By fostering an environment of inquiry and openness that respects the diversity of all whom it serves, the University prepares graduates whose leadership and expertise contribute to the advancement of a pluralistic society. The University serves as a cultural and intellectual center dedicated to the pursuit and propagation of knowledge.

Vision Statement
The University will provide academic, professional, and cultural programs at the highest level of quality and service; it will achieve national recognition for its programs of distinction. The University's graduates shall distinguish themselves and their University through meritorious service, accomplishments, and leadership in the economic, cultural, and civic affairs of a diverse and global society. Through exemplary teaching, research, and engagement with the greater community, the University will also be the premier cultural and intellectual resource for the region's schools, governments, businesses, and people.

Campus Master Plan Purpose and How to Use This Report

Campus Master Plan Purpose

Due to rapid change on campus in the last several years, SVSU commissioned SmithGroupJJR Planning Team to update the existing campus master plan. While there no foreseeable program expansion in the next several years, the University wanted to ensure that when ready, an opportunities plan will be in place to illustrate the next steps in campus growth.

The Campus Master Plan Update is a collection of ideas and initiatives that will guide future campus planning. The Plan is intended to be a flexible document that can evolve as goals change over time. As new development and projects occur, this report should be use to ensure the over-arching Master Plan Guiding Principles are followed.

How to Use This Report

The result of this plan culminates many hours of dedication and input from the Master Plan Task Force and the SVSU community. It should become a living document and be used each time a campus project is initiated.

It is suggested that SVSU establish a process to review all future exterior improvements and building construction. For example, a Master Plan Implementation Committee could be involved in the initial project planning stages to ensure the Master Plan Guiding Principles and framework are adhered to.

This committee should be a wide representation of the SVSU community to obtain the best representation across campus. The Master Plan Implementation Committee could also meet intermittently throughout the year to reevaluate past projects and discuss future projects and goals.


Distinguished A

Master Plan Process

The Master Plan process was divided into four major phases: Inventory and Analysis, Campus Development Alternatives, Campus Master Plan, and Documentation.

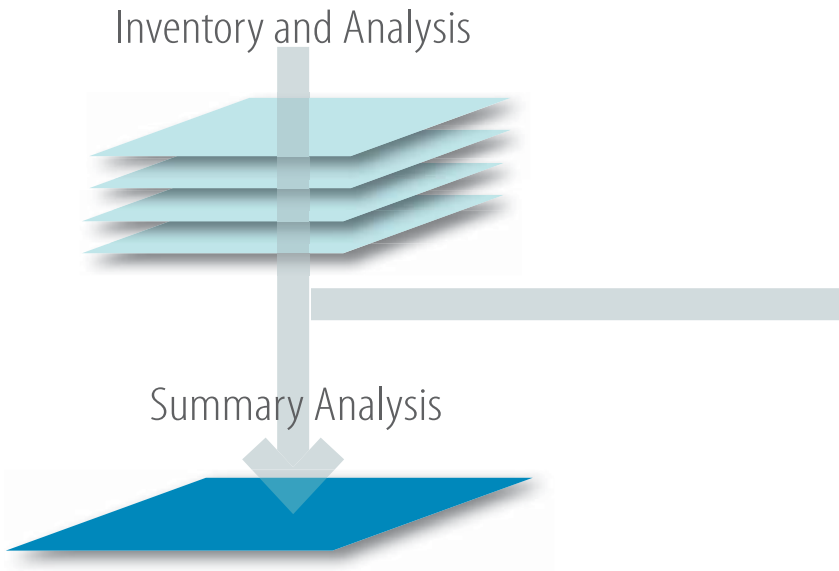
The Inventory and Analysis process included data collection of the SVSU campus and surrounds, and produced a graphic analysis of the results. Stacking of these data maps results in a summary analysis, which drives the approaches to future development on campus during the alternatives phase.

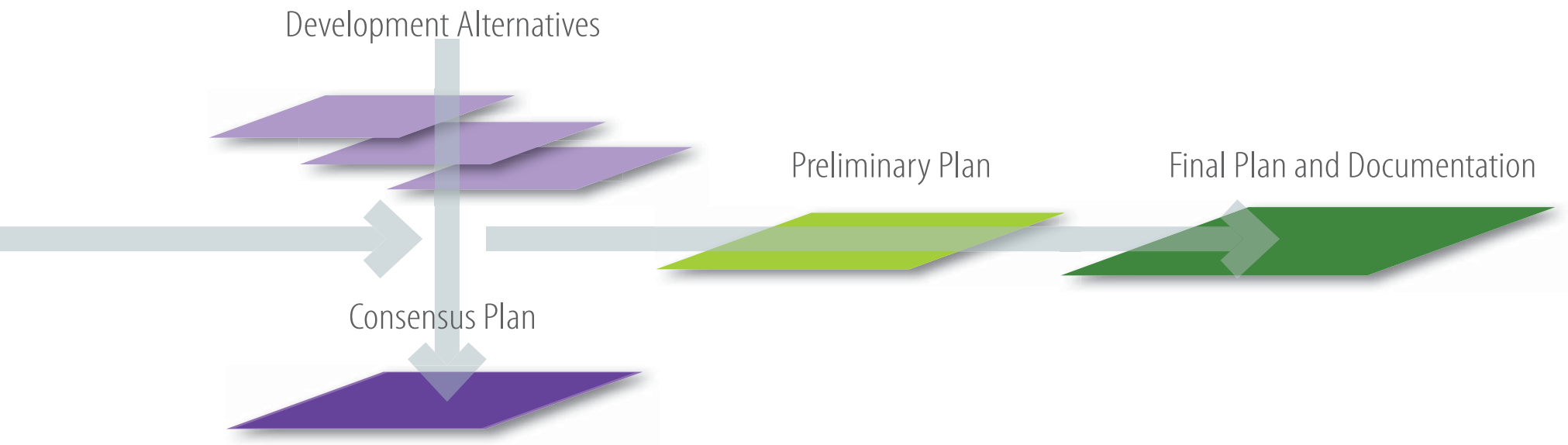
As a tool for building consensus in the SVSU community, a Master Plan Task Force was established to facilitate ideas and input from University leadership. Participation from University staff, faculty, students and alumni became invaluable during regularly scheduled workshops.

During the Campus Development Alternatives phase, two different approaches to the future campus growth were presented. These ideas were presented and vetted through the Master Plan Task Force as well as the University community.

The Campus Master Plan phase included two parts: a consensus plan that was based on comments from the alternatives phase and a draft final plan that takes the consensus plan to a pre-final document. This process provides a checks and balances system that ensures a high quality, end-result that meets the needs of the University.

Finally, the Documentation Phase includes the preparation of the final graphics and packaging of the plan, including this report.



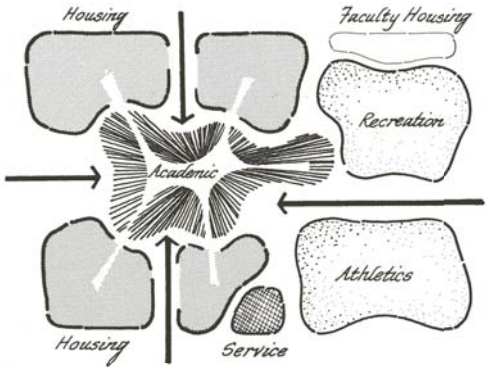

Development Alternatives
Preliminary Plan
Final Plan and Documentation
Consensus Plan

1967 Master Plan

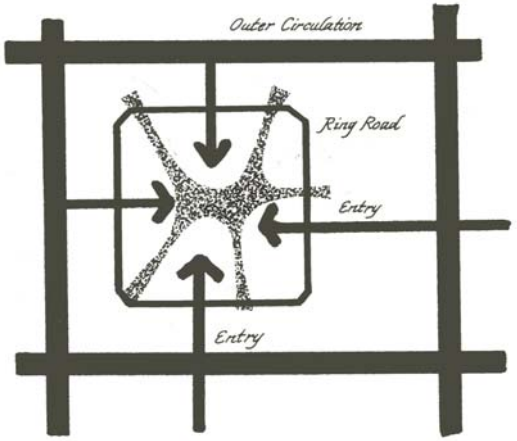
As part of the planning process, it is a good practice to study past efforts. This can result in resurrecting a previous idea or concept that is still relevant in present day.

The 1967 Master Plan, *A Guide for Physical Development*, was the first plan that was prepared for what was then Saginaw Valley College. Johnson, Johnson & Roy, Inc. developed the plan that helped guide the development of campus to what it has become today.

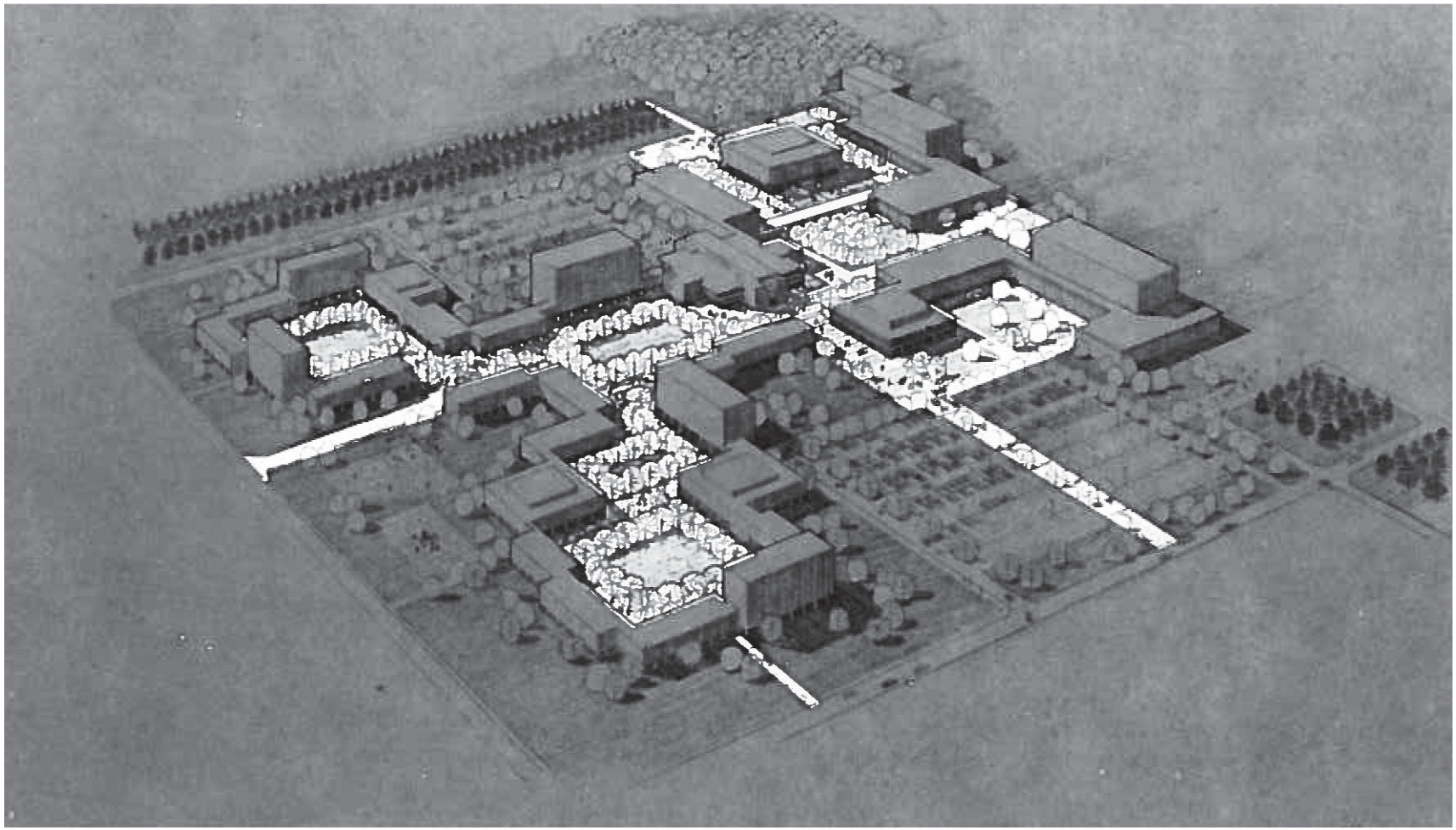
The 1967 Master Plan focused on five academic pods, each developed around a central core open space. The academic pods were surrounded by residential housing to the north and south, and recreation and athletics to the east. Parking was located at the perimeter of the academic pods, however, vehicular traffic was focused around a ring road which circulated traffic around campus. This enabled pedestrians to access the academic areas without vehicular barriers or conflicts. With the basic land organization still in place, the campus can still grow with it's original intentions.



1967 Master Plan land use organization diagram



1967 Master Plan circulation diagram



A 1967 Master Plan perspective drawing illustrating the five academic pods concept, the outer ring road and pedestrian focused central core

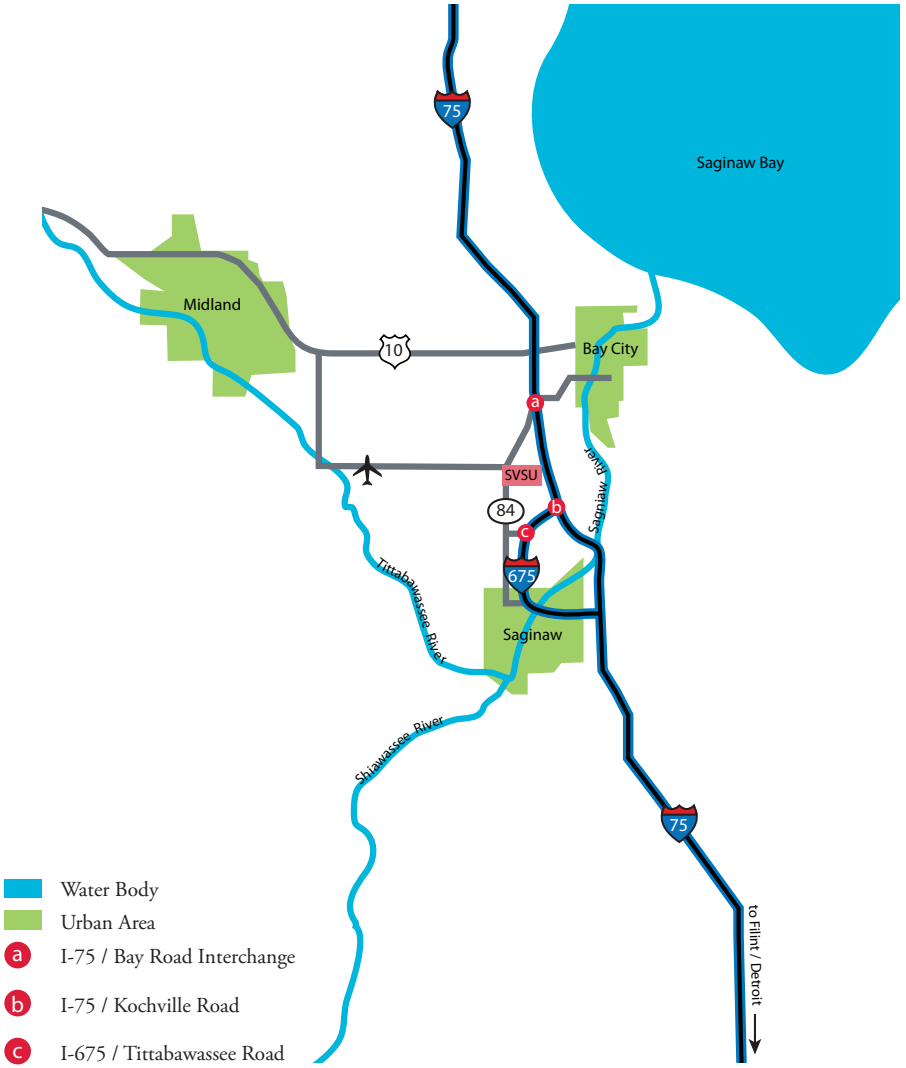
2 the campus today

Regional Context

The campus of SVSU is located in Kochville Township, Michigan, approximately 10 miles north of the City of Saginaw. Saginaw is part of the Tri-Cities area, which includes Bay City and Midland, and is located in the "Thumb" of Michigan. This central location attracts students from all over the state, and is approximately a two hour drive from Detroit, and a one hour drive from Flint.

Campus Access

SVSU is easily accessed by major highways, including I-75 and I-675. From I-75, one can access campus from two interchanges, Bay Road (M-84) to the north and Kochville Road to the south. From I-675, vehicular access is obtained from Tittabawassee Road. Bus service is provided by separate municipalities from both the City of Saginaw and Bay City. The regional airport, MBS International Airport, is approximately eight miles west from the University and is serviced by national carriers.



Community Context

The campus is surrounded by rural, agricultural character. However, several medium density residential developments have materialized in the last several years just outside of the campus boundaries. Bay Road, which serves as the western boundary of the campus, has retail services located to the south of campus. Future development on this major thoroughfare northward towards campus is inevitable as the economy recovers.

Community Planning Initiatives

The Kochville Township zoning overlay classifies the campus under the A-1, Agricultural Rural Dispersed Residential Zone. The area directly south of the campus and along Bay Road are overlaid with more intense uses. Zoning along Bay Road include commercial uses of various intensities ranging from business and office classifications.

Kochville Township Town & Gown Overlay District

The Town & Gown Overlay District occurs directly south of campus between Pierce Road and Tittabawassee Road on the east side of the Bay Road corridor. This overlay includes two sub-districts, the Town Overlay and the Gown Overlay, and both have specific guidelines for site and building design. The theme of the overlay district aims to promote a pedestrian-friendly, attractive, and sustainable commercial zone that connects the SVSU campus and the Fashion Square Mall area to the south.

Bay Road Access Management Overlay District

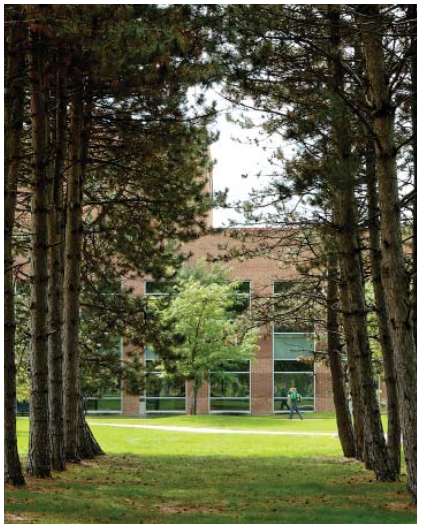
The Access Management District was created to help control curb cut access from Bay Road and promote traffic flow and vehicular safety.

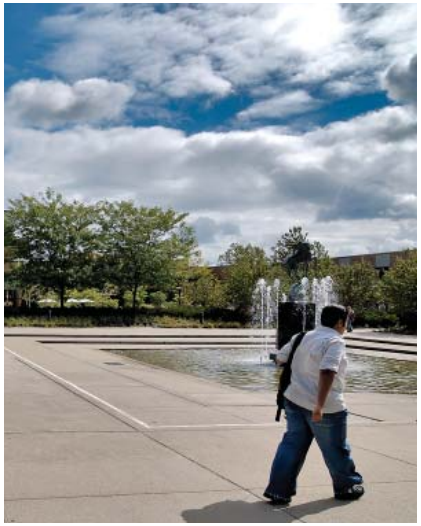
Pierce Road Improvements

Pierce Road creates the existing southern border of campus. The road is currently a two-lane paved road, which is undergoing improvements that include a landscaped median from Bay Road to Davis Road. A round-about is planned for the intersection at South Entrance Drive to help alleviate traffic congestion on the campus access road.

Campus Context

The character campus is somewhat expansive with two-four story buildings, yet easily accessible by campus roadways and pedestrian paths. The core of campus is building-dense and well manicured, while outer campus areas are naturalized with minimal building coverage. Building architecture is contemporary, and uses brick and a similar overall style to achieve unity in character.

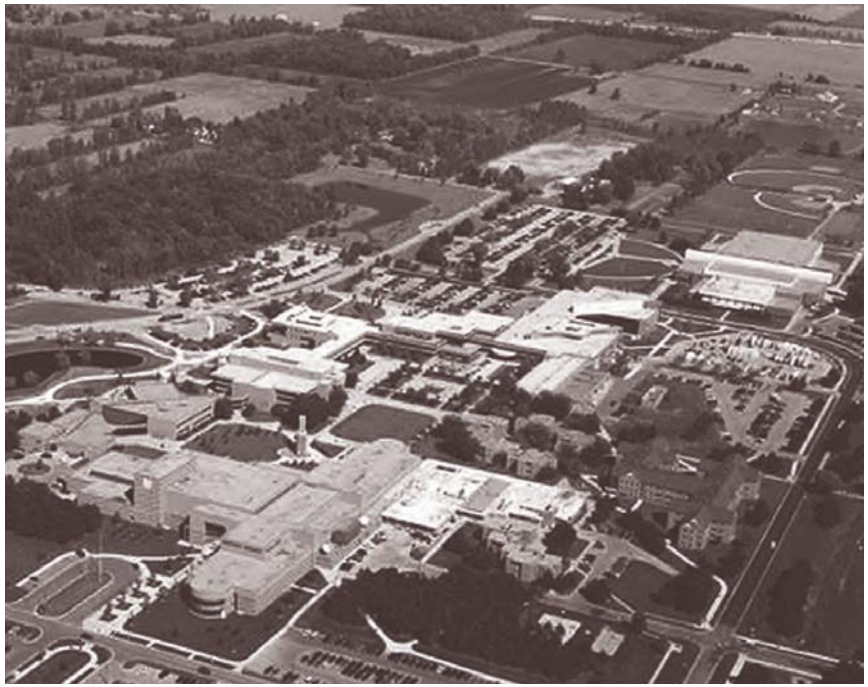

Campus at a Glance

The University began in the early 1960's as a spin-off baccalaureate institution from Delta College, and through much tribulation, became Saginaw Valley College in 1964 with a student body of 119. Just under a year later, then governor George Romney granted the school state college status, providing state funding assistance to the institution. Fund-raising dollars were used to secure land for the new campus and by 1967, academic, administrative and several residential buildings were built and occupied. The campus grew steadily through the 1970's and 1980's, and by 1987 student enrollment was almost 6,000.

The campus continued to develop at a rapid pace to accommodate growth through the 1990's and into the first decade of the new millennium. At the time of this report, the University enrollment was nearly 11,000 and has met the strategic vision for growth as set forward in the University's five-year plan.

The majority of the SVSU's student base includes those who have roots in the lower peninsula of Michigan, however, approximately 500 students, or 6% of the current enrollment, are from out of the United States, and more specifically from Saudi Arabia and China.

2011 Campus Baseline for SVSU	
Enrollment	10,790
Graduate	1,698
Undergraduate	7,373
International	550
Faculty	707
Staff	261
Campus Acreage	782
# of Campus Buildings	95
Gross Square Feet	2,368,897
Live on Campus	2,734

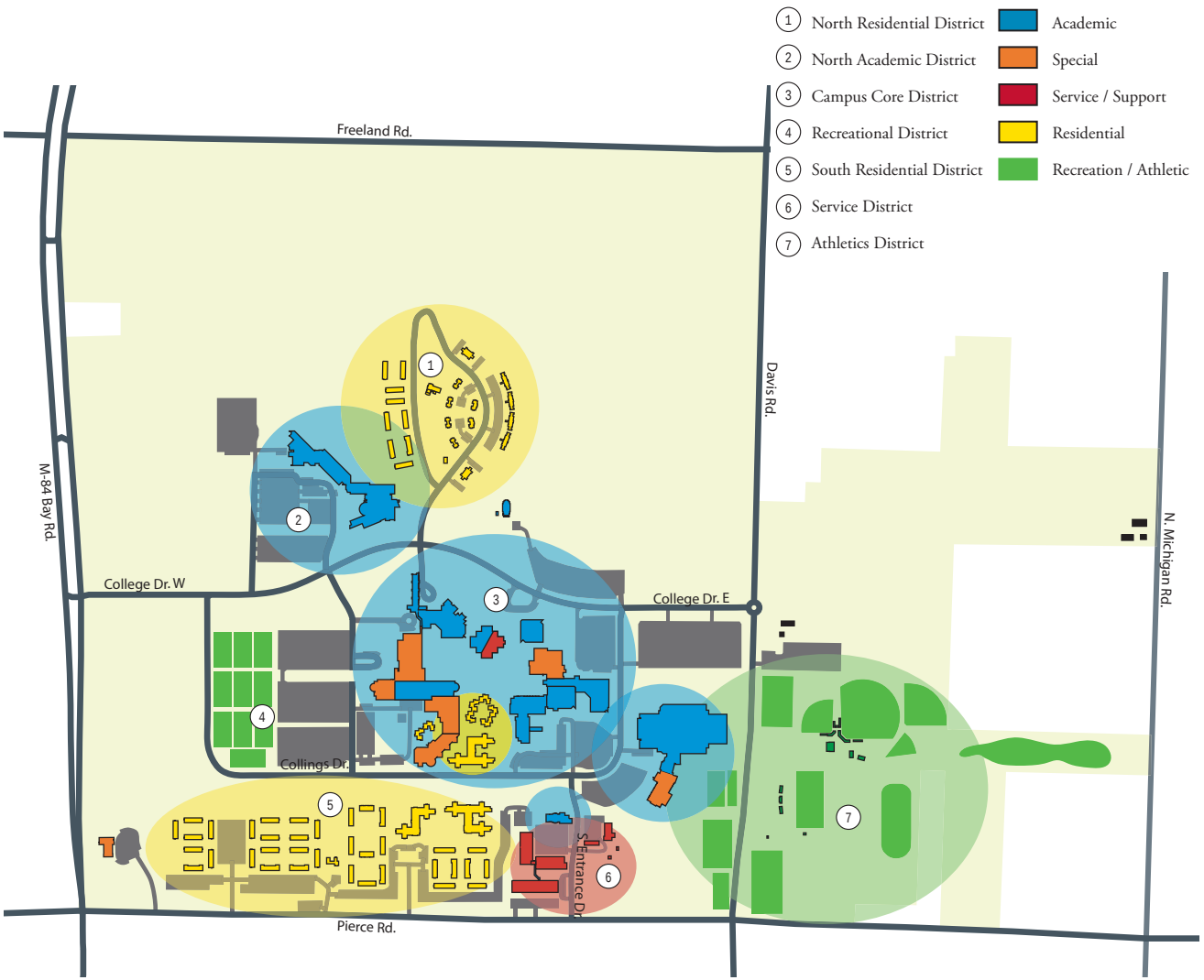


Campus Land and Building Use

The campus is arranged with a central academic and student services core in the heart of campus. Bounded by College Drive to the north, and Collins Drive to the south and east, most student and administrative functions occur here with classes concentrated on the east side of this district. Most buildings programmed for student life also occupy this area, including Zahnow Library, Groening Commons and the Doan Center. To the north of College Drive is a new academic building which houses the Health and Human Services Building and the Regional Education Center. Although these buildings are adjacent to the Campus Core District, they are separated by College Drive.

Two major residential districts occur on campus: one directly north of Pierce Road, and another directly north of the Campus Core District. A smaller residential area lies directly within the campus core.

Athletic and recreational fields are located on outlying areas of campus. Varsity athletics are east of Davis Road and intramural fields are north of the South Residential District.

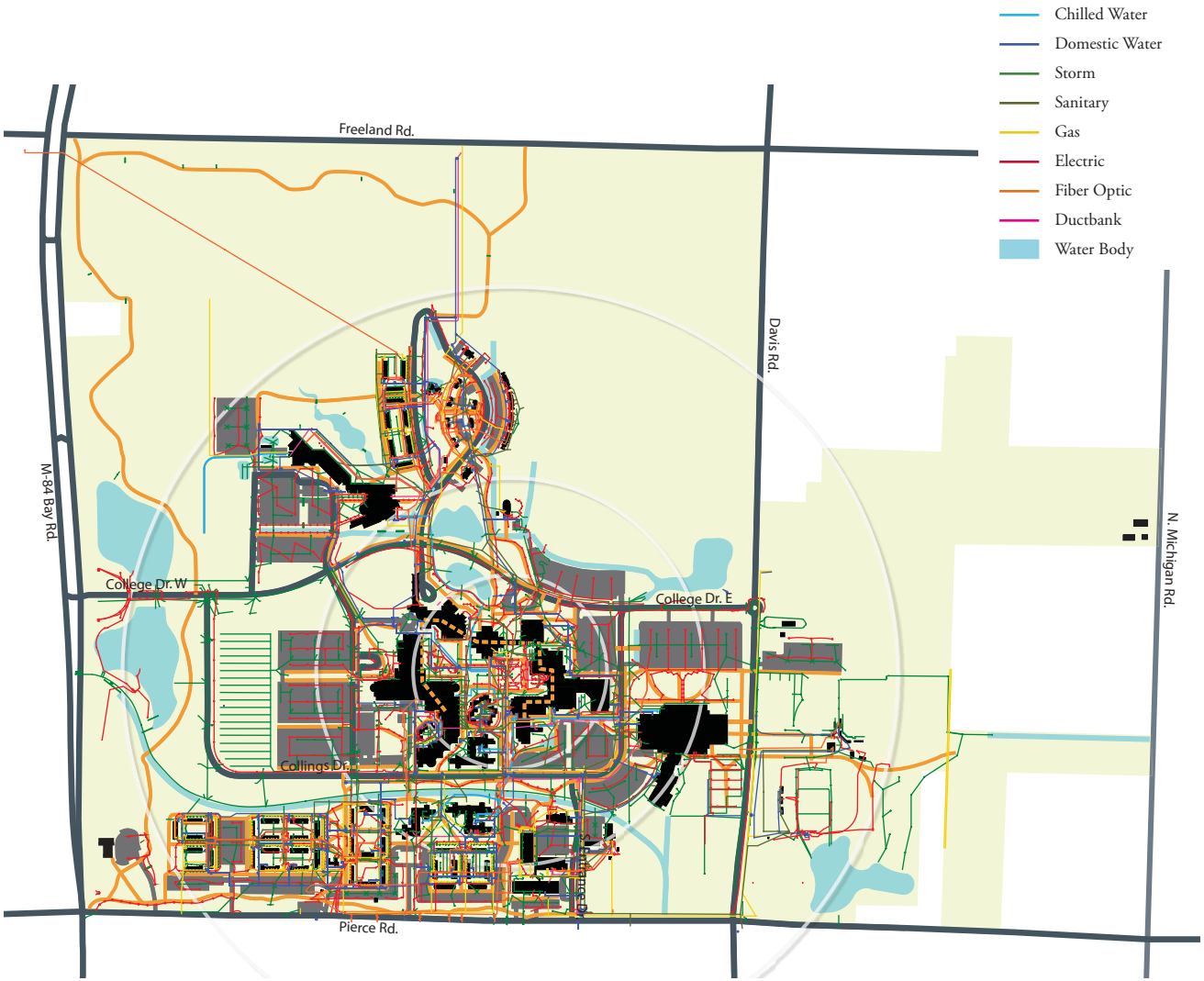


Campus Infrastructure

Although the Campus Master Plan does not study utilities in a comprehensive fashion, it is important to understand where utility infrastructure interacts with the campus fabric. As the Planning Team examined future alternative scenarios, where major infrastructure corridors were identified so that proper building placement did not interfere.

The campus does not operate off of a central power plant. All buildings are self-powered through a separate heating and cooling system specific for that building complex. The Health and Human Services Building incorporated several solar panels to supplement electrical supply. Additionally, it uses an aquathermal heating and cooling system year round.

Campus stormwater is controlled through an extensive underground pipe network that drains to several large retention ponds. Stormwater eventually outlets into the Kochville Drain and into local stormwater facilities. These large, on-campus ponds also supply all campus irrigation.

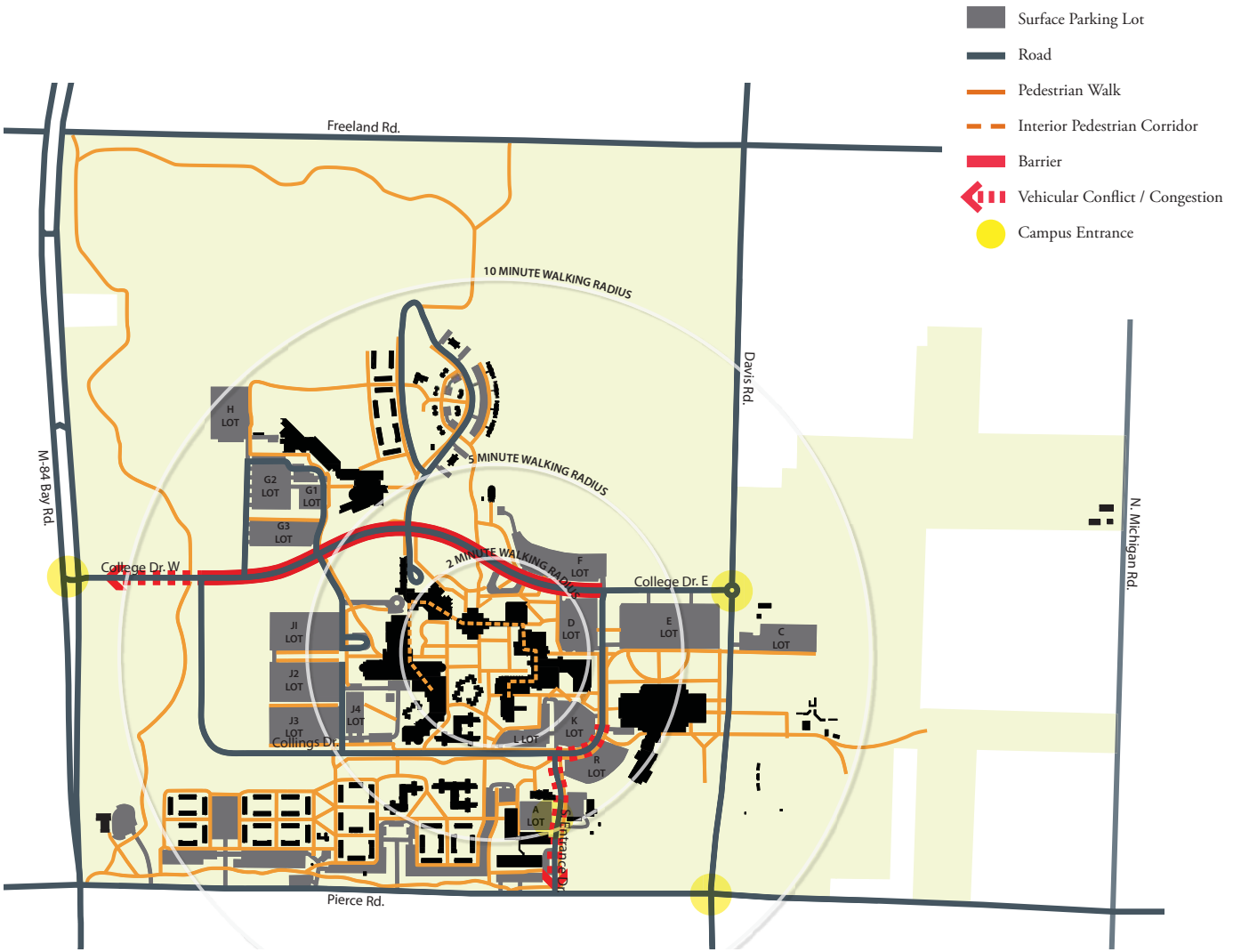


Campus Mobility: Pedestrian, Road Network and Parking

SVSU's main entrance is located on College Drive from Bay Road, although this is considered a ceremonial entrance and used primarily by visitors. Staff and faculty tend to use other secondary entrances to campus, such as South Entrance Drive from Pierce Road and College Drive East from Davis Road. Internal campus roads provide adequate circulation within campus, however, College Drive now bisects the two academic areas and causes some issues with vehicles exiting campus to Bay Road and pedestrians crossing from College Drive.

The SVSU campus has ample parking supply for visitors, all located within surface lots. Lots are generally within close proximity to building entrances and are equally distributed within the campus landscape. Parking is absent within the inner portion of the Campus Core District and this should maintained as a vehicle-free zone as planning efforts move forward.

The pedestrian network on campus is seamless between most all of the major uses on campus. However, some connectivity is lacking from the campus core to the North Academic District.

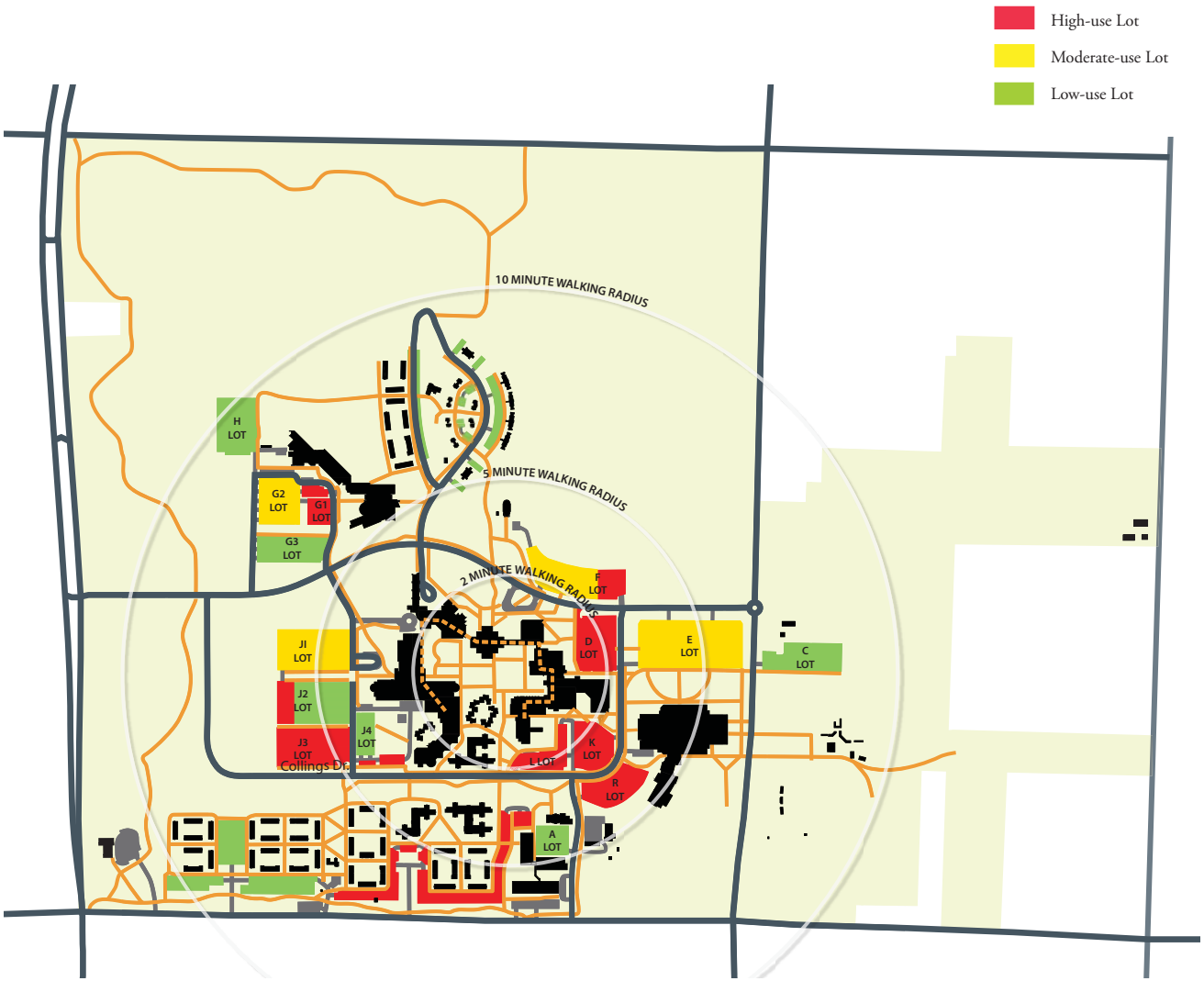


Campus Mobility: Parking Utilization

A simple utilization study was performed to determine where vehicles were parking during peak times. Peak times for this study were examined between the hours of 11:30 a.m. to 2:30 p.m. from Monday to Friday during the mid-spring 2011 and mid-fall 2011 semesters. Most lots adjacent to classroom buildings are nearly over capacity. In particular, Lots D, K, L, and R are heavily used during peak times, by both faculty and students. Outlying lots, such as Lots E, C, G2, G3 and H are within a few minutes walk to most destinations on campus, however these are the least used due to the perceived distance from popular campus buildings.

Residential parking at Pine Grove Apartments and University Village tend to empty during peak times, which may lead to the conclusion that students from these complexes are using their vehicles to park closer to class locations.

Lots are signed for staff and student use and permits are issued to insure that users are parking in the correct designated areas. Parking is free for students and a nominal fee is collected from staff and faculty.

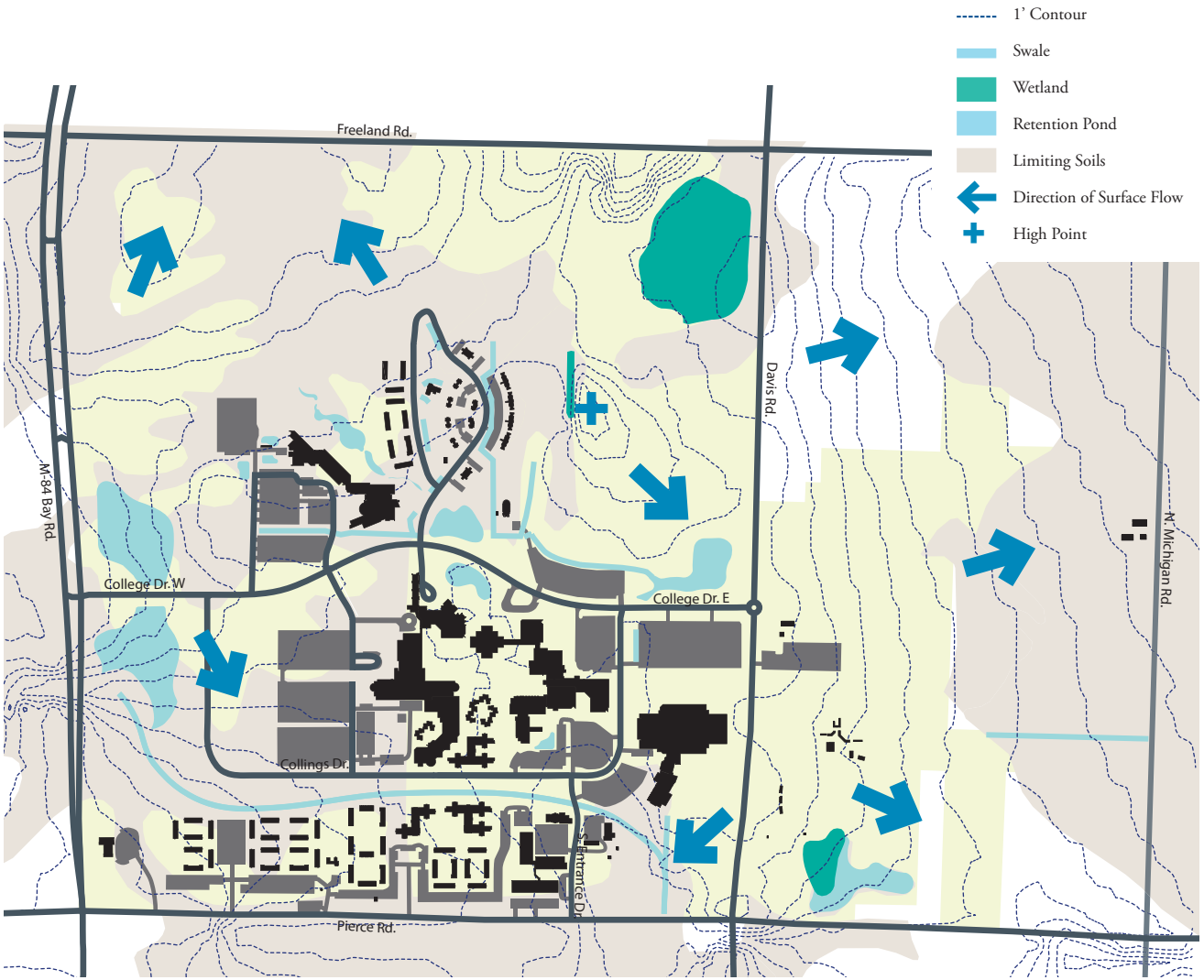


Campus Natural Systems: Topography and Surface Flow

The campus of SVSU is located at the bottom of the Saginaw River watershed, which drains about 15% of the state. Before settlement, this area was predominantly beech-maple forest with some hardwood swamp vegetative cover. Some of these hardwood wetlands still exist on campus.

Although the campus is perceived as relatively flat, a slight drop in elevation exists from west to east. Surface flow follows this pattern, but several man-made retention ponds on campus capture parking and building stormwater runoff which eventually flow into the Kochville Drain and local stormwater facilities before exiting into the Saginaw River. Flood zones do not exist directly on campus, however, the flood zone for the Saginaw River Basin is just to the east of North Michigan Road.

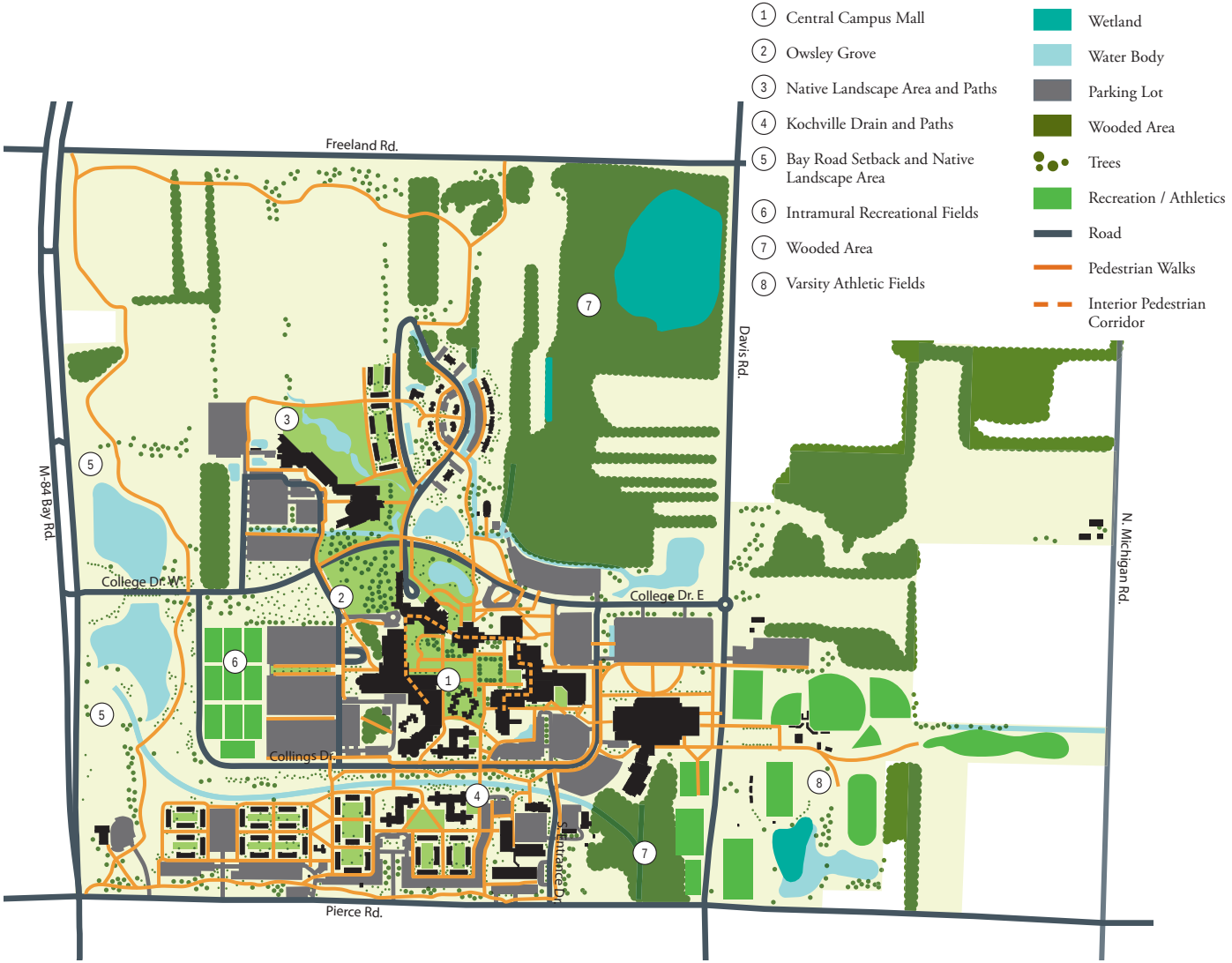
Soils are mostly of loamy sand with a 0-3% slope. Depth to ground water is approximately 3 feet from grade on most undeveloped areas of campus.



Campus Natural Systems: Vegetation and Open Space

The SVSU campus is fortunate to have a large abundance of open space. A highly manicured, central mall exists in the heart of the Campus Core District, which is framed by academic buildings. The majority of classroom and student life occurs in this district, making this the crux of campus activity. A large stand of trees, known as Owsley Grove, flanks the entry road on College Drive. As one approaches from Bay Road this grove provides a picturesque backdrop at the main campus entrance. A wide setback off of Bay Road is also an asset as this area is naturalized with native plantings and ponds. Several large woodlots remain on campus, one to the north east, surrounding a wetland area, and one to the south east, north of Pierce Road. These areas are important because they provide unique learning environments for students, and pleasant views from campus buildings.

The campus pedestrian network contributes to the connectivity of campus open spaces. As the North Academic District continues to develop, and open space expands to the north, these areas will become a natural extension of the central mall in the Campus Core District.



Community Input

An additional exercise of the inventory and analysis phase included obtaining community input on key issues pertaining to the future development of the University. Meetings were held with the Master Plan Task Force and a public meeting with the SVSU community. Attendees were asked to participate in a "Dot Game" by placing sticky dots on a map to identify likes and dislikes of campus. Green dots indicated areas to be preserved (likes), yellow dots were what should be enhanced, and red dots were placed on areas to transform (dislikes). An open discussion followed this process to better understand the dot placement. The following represents a summary of the discussion:

Green dot placement summary:

- Center of campus, where a higher level of landscape is located (sculptures, courtyards).
- The campus landscape and environment (ponds, wetlands, native plantings and trees, colorful plantings).
- The Pine Grove Apartments, north of College Drive, is a pleasant place for students housing, with common areas.
- The Athletics District has been recently renovated and provides a sense of pride on campus.
- The University Village Apartments are a new addition and have good open space adjoining the units.
- Davis Road improvements.
- Main Campus entrance.
- Internal walkways.

Yellow dot placement summary:

Note: Due to time constraints in the community meeting, yellow dots were used only in the Task Force meeting:

- The main entrance landscape needs some enhancement, possible recreation space (around pond areas).
- The Ryder Center service dock area/dumpsters needs screening.
- The R Lot and L Lot are congested at the 4-way intersection, making it difficult to cross if as a pedestrian.
- The Student Center needs meeting space in the long-term.
- Practice golf course needs rethinking in regards to land use.
- Curtiss Hall is an important amenity, however adjacent parking lots need aesthetic upgrades.
- Parking lots lack wayfinding.
- The walking trail needs wayfinding signage for safety (in progress). Overall the campus could use additional recreational amenities.
- Roads to campus need improved lighting.

Red dot placement summary:

- The northwest quad uses need to be identified. This area is predominately wetlands and beech-maple forest, and is currently being used as a teaching area.
- The intramural fields at the west side of the campus need enhancement (same as yellow dot comment above).
- The ring road, Collings Drive, needs to be studied for usefulness and aesthetics.
- Can Collings Drive be mirrored the north side of campus?
- College Drive needs to be studied for safety issues as campus development moves north, safety crossing issues will arise.
- Pedestrians at College Drive tend to back traffic up during class change times.
- Some pedestrian walk connections are missing.
- Bus improvements such as shelters and pull-offs are needed.
- 1st year suites are too dense and hinder the success of freshman students.
- South Entrance Drive is more of a back door entrance to campus and could be improved.
- The Bay Road landscape, north of the University Health Care building, needs improvement.
- A cricket pitch would be a nice addition to the intramural facilities.
- Outdoor track and field and outdoor softball are not up to standards.
- The football press box is old and the soccer and track fields do not have press boxes.
- Duplicate softball and baseball fields are needed for intramural since the athletic program will not let the intramural program use theirs.
- There are not enough classrooms on campus for peak times. Scheduling classrooms needs to be examined for efficiency during the week.

Dot Game Results

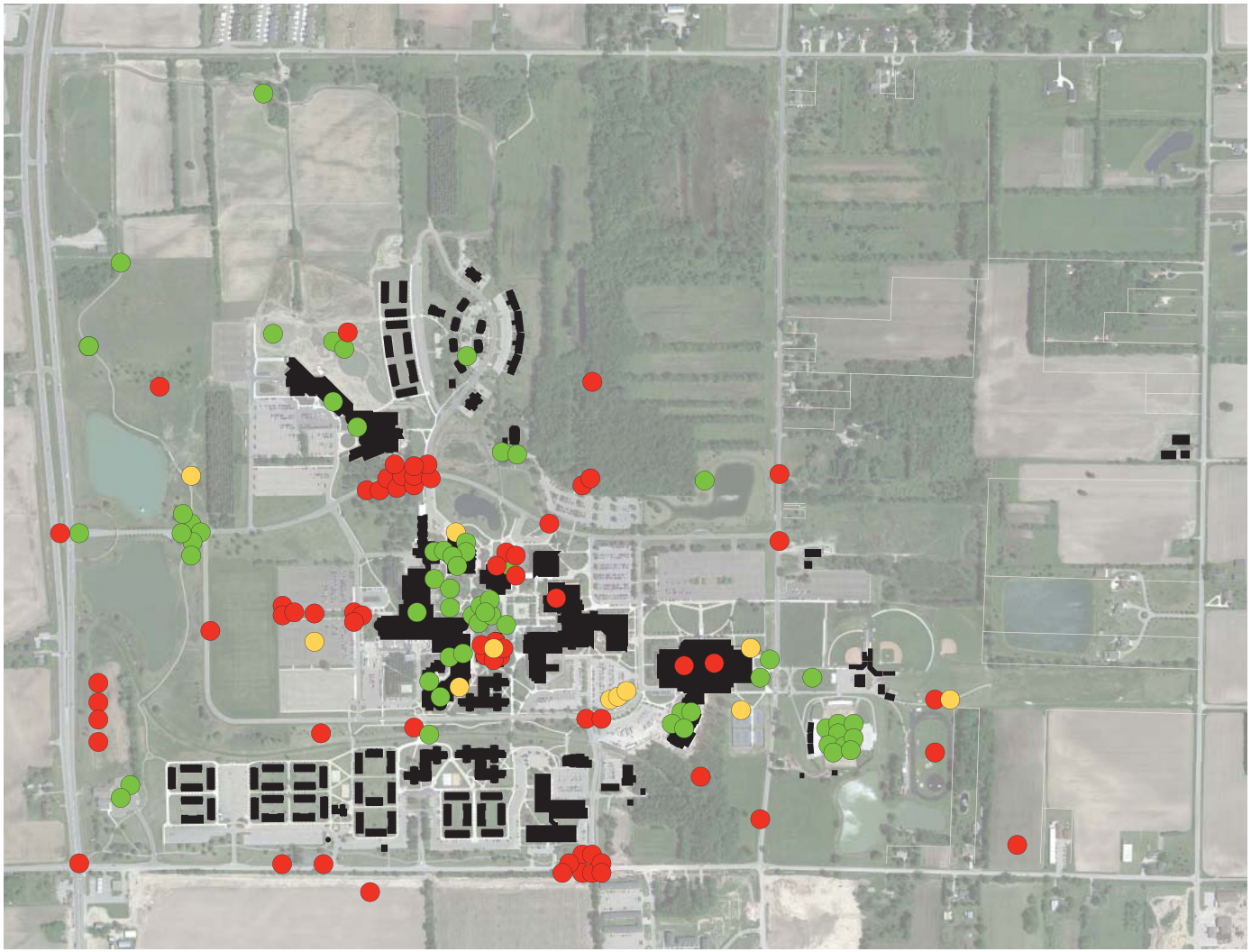


Image courtesy of svsuphotos

3 alternative campus concepts

Purpose of Alternative Concepts

The alternatives phase of the master planning process explore ideas and programming uses for campus. The scenarios developed test different facets of campus functions, such as circulation, program and land use, open space, community connectivity, and campus character. When reviewing the alternative scenarios, it is important to keep in mind the flexibility of the diagrams as they are not the final solution in the planning exercise but represent design recommendations.

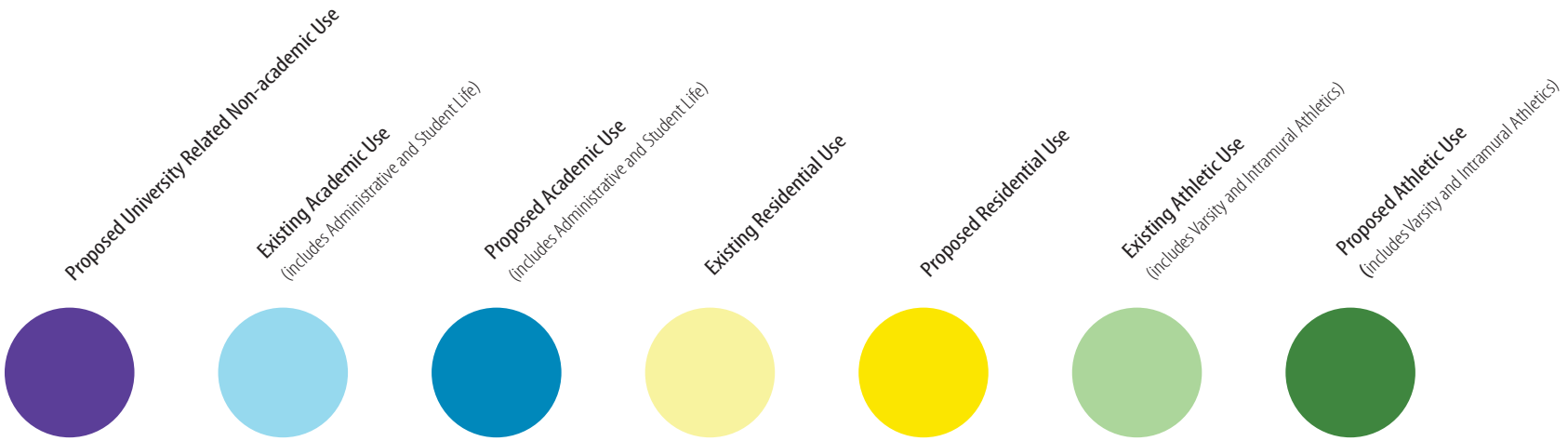
At the time of the SVSU Campus Master Plan Update, the University had not identified specific program projections or space needs. This is due in large part to the projection for enrollment remaining nearly level for the next several years. However, during the inventory phase of this process, several needs were brought to the attention of the Master Plan Task Force and will be vetted within this report. These items include athletic fields improvements, Ryder Center expansion or reconfiguration, a residential or mixed-use village, (potentially a public-private partnership), new residence hall locations, Wickes Hall administration building renovation or replacement facility and right-sizing the Regional Education Center to maximize the capacity. These aforementioned improvements will be discussed in greater detail in the Master Plan section of this report. The goal of this Campus Master Plan is to provide a visionary road map for future land use development, proper building locations, and open spaces that respond with the current landscape fabric. The Plan will serve a purpose when the University is ready to forecast growth and program development on campus.

Two alternative scenarios were developed for the SVSU campus. The bubble illustrations on the following pages present a comparative overview of each of these scenarios. The primary movable pieces are the proposed growth areas for academic, residential, university-related uses, and athletic districts. These pieces work with the current campus boundaries to create adjacencies that become sustainable for future growth.

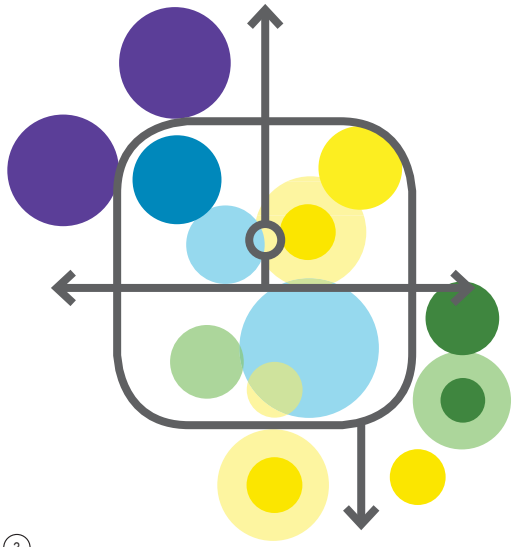
The scenarios assume a generalized program. Academic use, for the sake of this exercise, can mean future programming for any student-related use such as classrooms, administrative or student life components. University-related use can be a private business or university spin-off that needs close proximity to the campus. Athletic use can be any use related to varsity or intramural athletics.

The campus alternative scenarios were presented by the SmithGroupJJR team to both the Master Plan Task Force, and publicly at a campus community open house. Each concept was thoroughly discussed and evaluated for the preferred elements that would move forward in the refinement phase.

Program Use Bubbles



Alternative Concept 1
Conservative Development Approach



Program and Land Use:

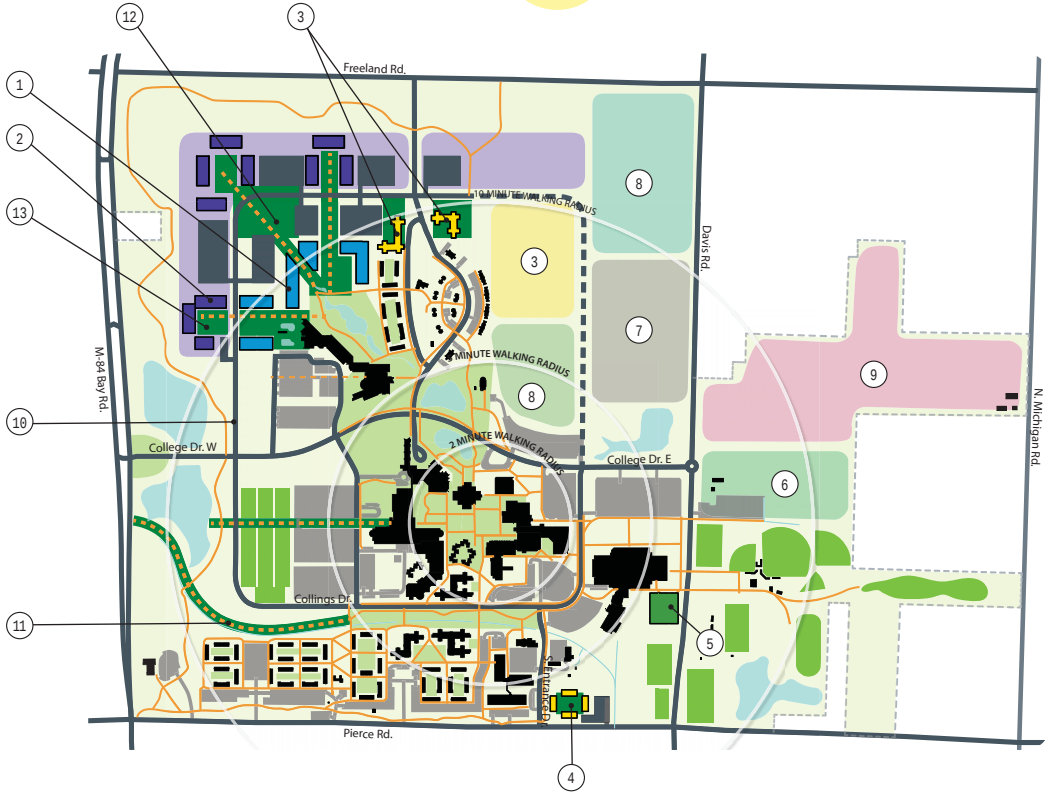
1. Extends the North Academic District to frame the existing native landscape area, and creates a new academic district like that of the Campus Core District.
2. University related uses occur on the outer side of the proposed Collings Drive (ring road) extension.
3. Residential expansion north and east of the Pine Grove Apartments.
4. A new residential pod creates additional frontage off Pierce Road.
5. Separate athletics facility, south of the Ryder Center.
6. Future athletic fields .
7. Public/private development opportunity.
8. Wooded preservation zone.
9. Proposed geothermal field.

Circulation:

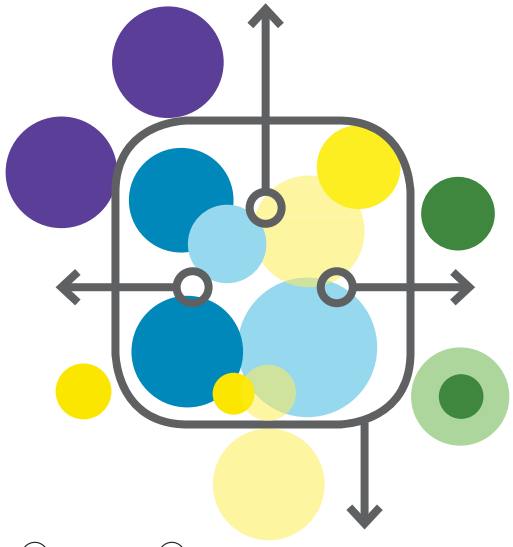
10. Collings Drive extension.
11. Recreational path extension.

Open Space:

12. Native plant and stormwater area.
13. Addition of unique courtyard, and plaza spaces.



Alternative Concept 2
Aggressive Development Approach



Program and Land Use:

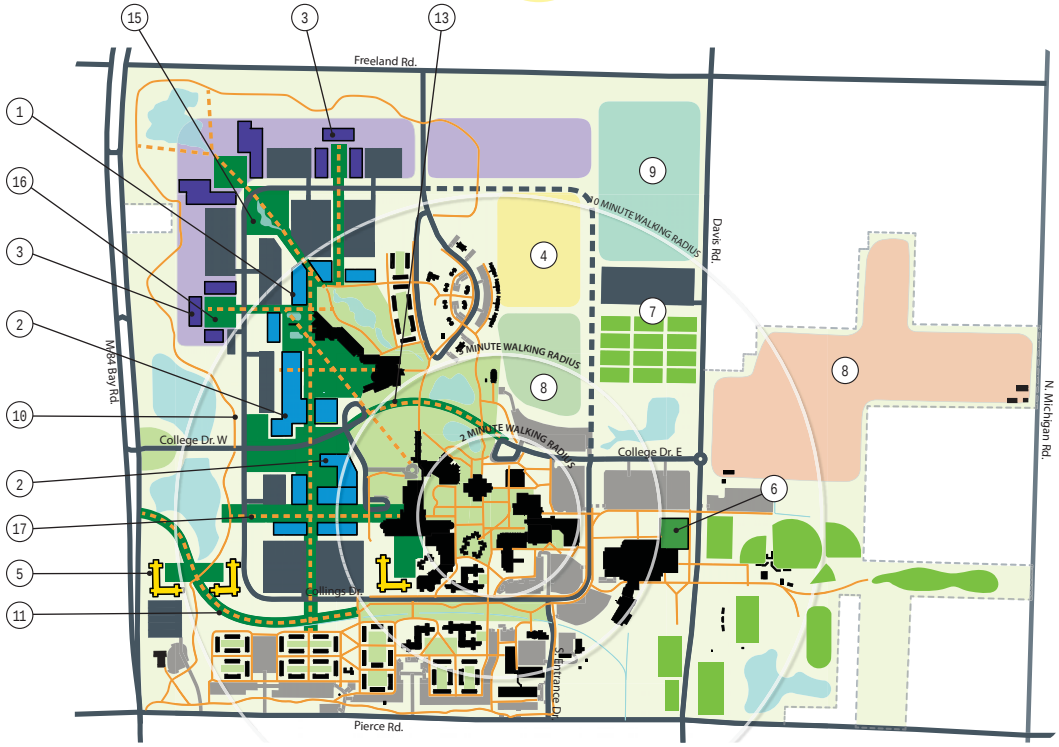
1. Extends the North Academic District to frame the existing native landscape area, and creates a new academic district like that of the Campus Core District.
2. Academic uses are placed at the campus front door.
3. University related uses occur on the outer side of proposed Collings Drive extension.
4. Residential expansion east of the Pine Grove Apartments.
5. A new residential pod expands the University Village complex north at Bay Road.
6. An athletic facility addition to the Ryder Center.
7. Intramural athletic field relocation.
8. Proposed mixed-use village will provide housing for staff and students.
9. Wooded preservation zone.

Circulation:

10. Collings Drive extension.
11. Pedestrian connection to new academic core.
12. Recreational path extension.
13. Removal of College Drive between University Drive and Pine Grove Drive with the addition of a shared use path.
14. Vehicle barriers are removed for pedestrian crossing from the Campus Core District northward.

Open Space:

15. Native plant and stormwater area.
16. Addition of unique courtyard and plaza spaces.
17. Open views from Curtiss Hall to pond.



Consolidation of the Big Ideas

SVSU and the SmithGroupJJR team identified the most desirable aspects of both alternative concepts. These ideas were consolidated into a preferred diagram shown on the following page. The refined concept respects the existing campus uses and adjacencies while remaining flexible to the proposed program elements to create a sustainable campus plan.

The SVSU community and Master Plan Task Force favored Alternative Concept 2, however aspects of both alternative concepts are present in the consolidation plan. The refined concept was based on the revised campus road framework, which eliminates the central portion of College Drive. Removing this road enables better pedestrian and open space connections for development on the North Academic District from the Campus Core District. The development of new academic and administrative uses towards the west portion of campus was also desirable because it reinforces the front door of campus and welcomes visitors with easy access to student services.

Residential within the campus ring road, as shown in Alternative Concept 2, was preferred over the alternative locations nearer to Bay Road. Expanding the Pine Grove Apartments complex to the north, and possibly to the east, was preferred, as well as maximizing the University Village complex with building additions where possible.

New building development is most likely to occur where the existing intramural fields are located. The suggested relocation of the existing intramural fields is north of the existing Athletics District. This will enable the shared use of existing infrastructure, such as restrooms, storage and parking.

Due to the partial removal of College Drive, a Collings Drive extension to the north would be needed to alleviate traffic concerns crossing through campus. An additional campus entrance from Freeland Road would also be added. The removed road would need to become a shared-use path to accommodate service vehicles and pedestrians.

Open space and pedestrian connections should be emphasized as the refinement phase moves forward, strengthening the aesthetic appeal of campus to staff and students. The extension of the native areas to the north west, courtyard and plaza spaces between buildings and recreational paths were among those favored concept elements.

- Proposed University Related Use
- Proposed Academic Use
- Proposed Residential Use
- Proposed Athletic/Recreation Use
- Existing Academic Use
- Existing Residential Use
- Existing Athletic/Recreation Use
- Pedestrian Connection
- Road Network

1. North Residential District
2. North Academic District
3. Campus Core District
4. West Academic District
5. South Residential District
6. Service District
7. Recreation District
8. Athletics District
9. University Related Use District

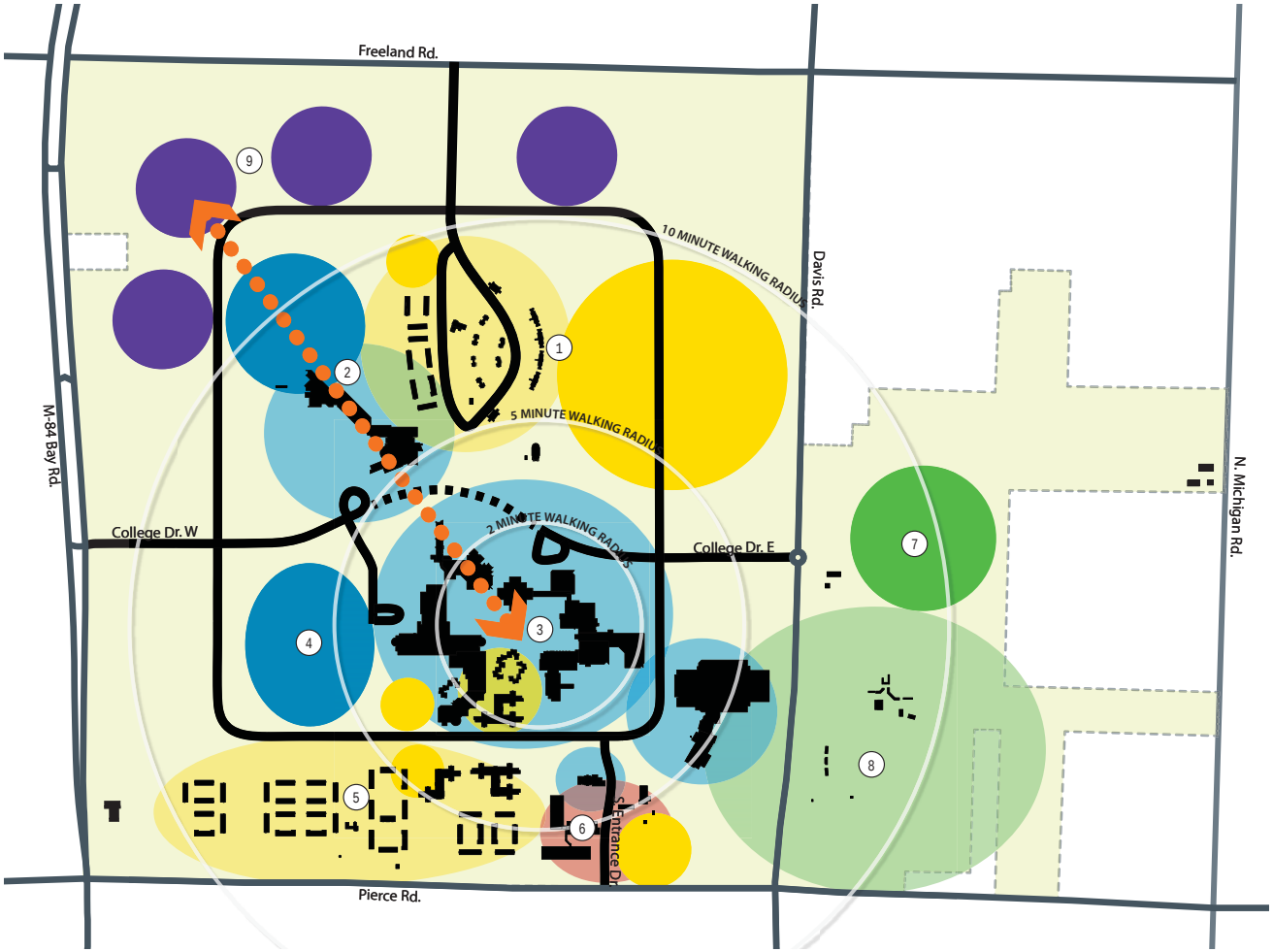


Image courtesy of svsuphotos

4 the master plan

Master Plan Guiding Principles

The below Principles were developed by the Master Plan Task Force early within the Campus Master Plan process. These statements guided the overall planning efforts of the Planning Team and drove decisions that shaped the final plans. These Guiding Principles should be reviewed and used when any new campus planning or implementation project is initiated.

1 Continue the Patterns of Growth Started in the 1967 Campus Master Plan

- Maintain a pedestrian-focused campus core with parking and roadways at the edges.
- Continue to develop sub-campus areas that are integrated and connected with each other.

2 Strive toward Environmental, Economic, and Social Sustainability

- Minimize the campus carbon footprint, energy, and water consumption.
- Be careful stewards of our scarce economic resources and be efficient with our campus space.
- Continue to create a welcoming and nurturing campus environment that attracts diversity and provides a sense of community.

3 Create an Identifiable Sense of Place Unique to SVSU

- The campus environment should reinforce the brand promise and strategic mission of the University.
- Maintain and enhance the unique character of campus.
- Create memorable places that generate a sense of pride on campus.

4 Be Visually Coherent

- Continue the sense of consistency of the campus architecture and open space environment to create unity across campus.
- Maintain consistent design standards throughout all campus environments.

5 Enhance Interaction

- Create a connected network of inviting and accessible spaces, both inside and outside, that provide places for interaction between students, faculty, staff, and alumni.
- Design campus physical spaces so that they promote greater understanding and appreciation of diverse cultures and ethnicities and actively support tolerance, civility, and respect for each person.

7 Enhance the Pedestrian Oriented Core of Campus and Balance Modes of Transportation

- Create a connected hierarchy of pedestrian walks that reduce vehicle/pedestrian conflicts and assist in the understandability of campus.
- Prioritize pedestrian and bicycle movement on campus and provide appropriate amenities to encourage the use of bicycles and walking over driving.
- Rethink the parking management system to reduce the number of intra-campus vehicle trips.

8 Increase the Sense of Safety and Accessibility on Campus

- Implement the principles of Crime Prevention through Environmental Design - CPTED (Natural Territoriality Enforcement, Natural Surveillance, Natural Access Control) to increase the safety on campus.
- Enable persons with disabilities to effectively and safely access all campus facilities and open spaces.

9 Strengthen Connections to the Local and Regional Community

- Create a welcoming environment that encourages community access and understanding of the campus.
- Encourage development and investment on and adjacent to campus that strengthens the academic mission of SVSU, the social development of students, and the recruitment and retention of quality faculty and staff.

10 Anticipate Flexibility

- Anticipate changing pedagogy, technologies, teaching methods, program offerings and user needs and design for flexibility.
- Establish and preserve opportunities for future growth.

A Vision Plan for the Future

The intent of the Campus Master Plan is to present a vision for Saginaw Valley State University that reinforces its goals and objectives for future growth on campus. The physical master plan translates these Master Plan Guiding Principles into a plan and document that SVSU can use in their decision making process. The following pages break down the plan into Campus Framework Plan diagrams, a Long-Term Opportunities Illustrative Plan, and plan details.

The Campus Framework Plan and subsequent diagrams illustrate the general land use, pedestrian and vehicular circulation, and open space zones to help guide future use areas on campus. These diagrams are intended to illustrate a comprehensive overview of the Campus Master Plan systems.

The Long-Term Opportunities Illustrative Plan shows more detail in regards to building placement and circulation within the framework plan. Although the Illustrative Plan is flexible in nature and is to be used only as a guide, future building placement should be carefully examined once a program is in place to warrant a new development. The design principles set forth in the Campus Master Plan should be followed when siting a new facility.

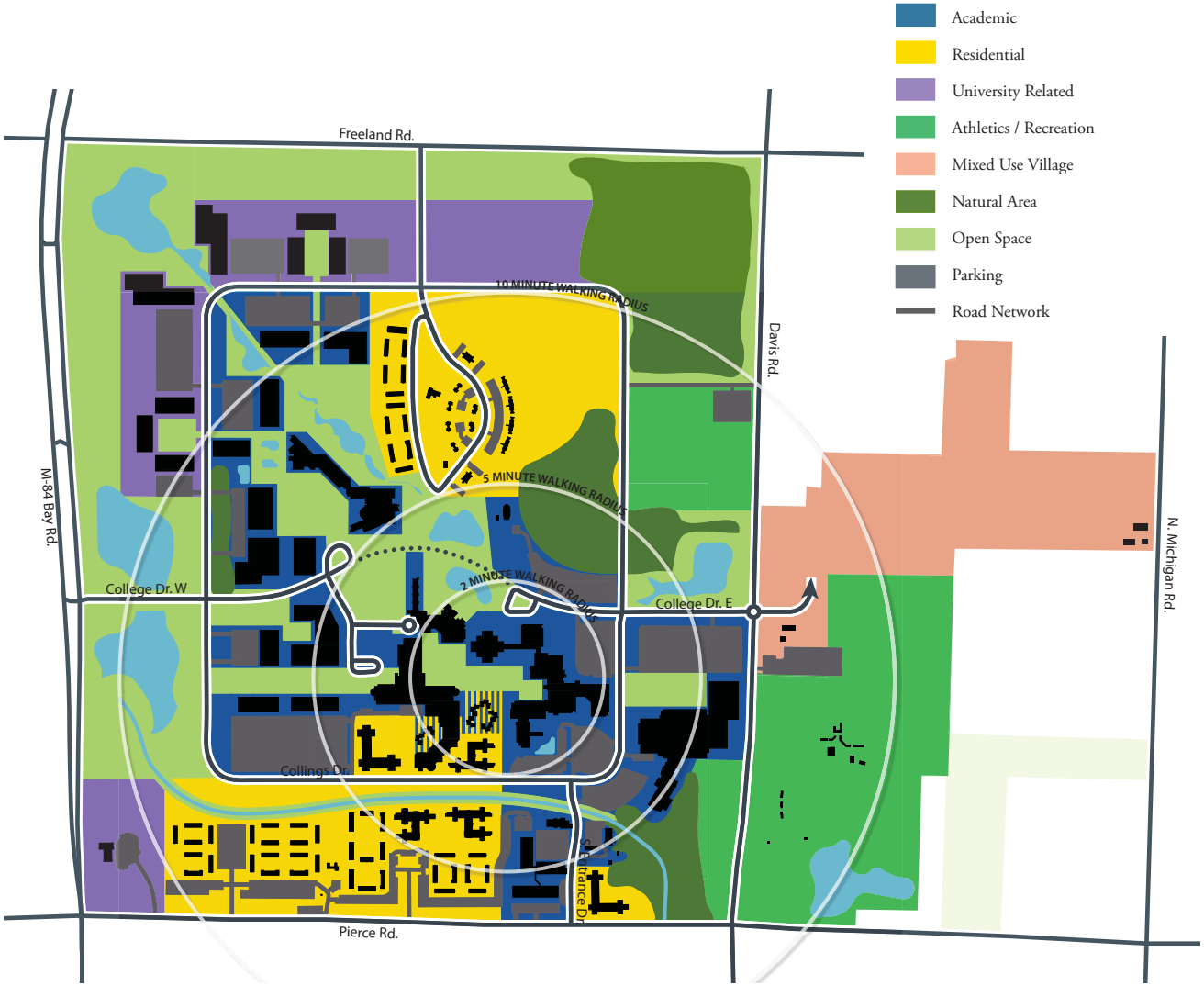
Lastly, key components of the Campus Master Plan are described in greater detail later in this section. These elements were items that were discussed in detail during planning meetings with the University and became focus items.

In the following chapter, Open Space Design Guidelines will assist with specific items related to exterior improvements and site design.

Campus Framework Plan

The full Campus Framework Plan embodies the Master Plan Guiding Principles developed for this report. The Master Plan Guiding Principles are outlined on the previous pages. These Principles should be followed as any future development occurs on campus.

The Campus Framework Plan is used to illustrate future growth areas on campus and are designed to generalize the land use area by type, whether that be academic (which includes student life and administrative functions), open space, athletics and recreation, or university related use. The framework also sets up the future road circulation and parking. These system overlays will be described in more detail within the following pages.



Campus Framework Plan Systems: Preservation Zones and Open Space

As the SVSU campus develops, it will be important to maintain and grow open and natural areas on campus. These areas, when observed as one system, become the backbone for future development.

Preservation Zones

Wooded areas on the east end of campus provide an important visual backdrop to campus buildings, enhance the user experience and provide areas for research and wildlife habitat. These areas should be maintained, as it has taken many years to obtain these mature tree stands.

Open Space

The open space in the center of campus can naturally be extended to the north west as the existing building framework in this area lends itself to do so. The native landscape that has been developed here should continue and extend stormwater amenities within this district. Open space extensions from Curtiss Hall to the west can also occur to provide improved pedestrian and view access to the ponds and natural areas on the west side of campus.

Campus Framework Plan Systems: Circulation and Parking

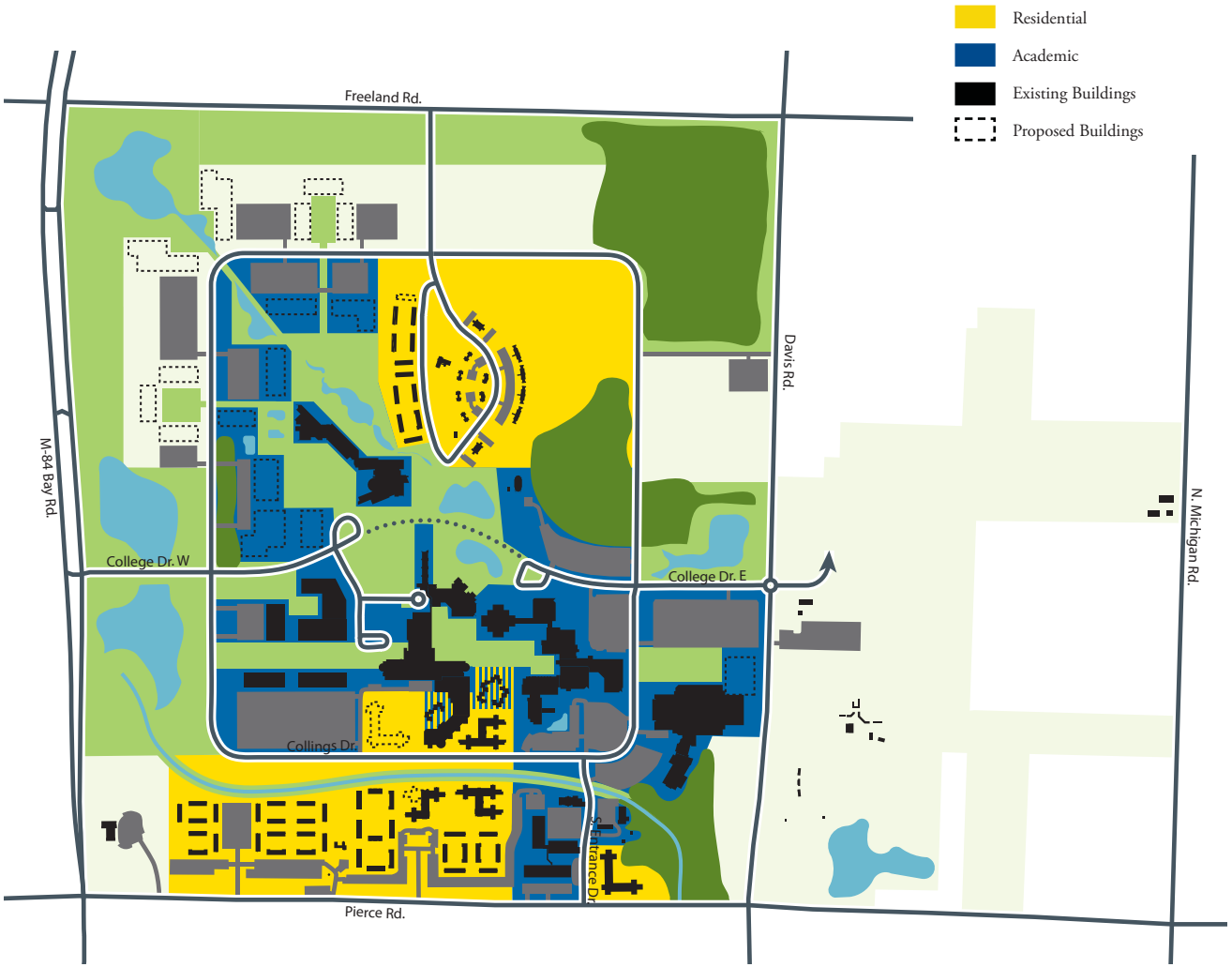
The current road network on campus allows for convenient and direct access to many parking lots and buildings. As development has migrated to the north, College Drive has become a pedestrian barrier to the North Academic District from the Campus Core District. The academic areas should remain as a continuous land use here, reinforcing pedestrian and open space connections without interruption. The removal of College Drive in the central portion of campus will allow pedestrians to flow freely between both areas and create a unified academic zone.

A new campus entrance off of Freeland Road, along with a continuation of Collings Drive north of College Drive, will create an outer ring road which will allow the flow of vehicular traffic around outlying areas. Turn-around loops at the new termini of College Drive will allow continued access to certain parking lots and service areas within the campus core.

Campus Framework Plan Systems: Academic and Residential Land Use

The heart of campus lies within the academic functions of the University buildings and their users highly contribute to these lively areas. As the University developed, the existing Campus Core District became the central active space and heart of the University. This core area became the pivot point for new campus buildings until the late 1990's, until developable area had been maximized. The North Academic District, north of College Drive, is establishing with the new Health and Human Services Building and Regional Education Center. This district is planned to reach north and west to create a second academic pod, much like what was envisioned in the original 1967 Master Plan. Academic and administrative uses are intended to be located inside the ring road to create ease of pedestrian travel across campus.

Residential use should continue to be adjacent to existing residential life components. Additionally, there is an opportunity for infill within University Village, Pine Grove Apartments, and south of Curtiss Hall. An opportunity for academic infill where first year suites exist, could create a completed internal walkway system.

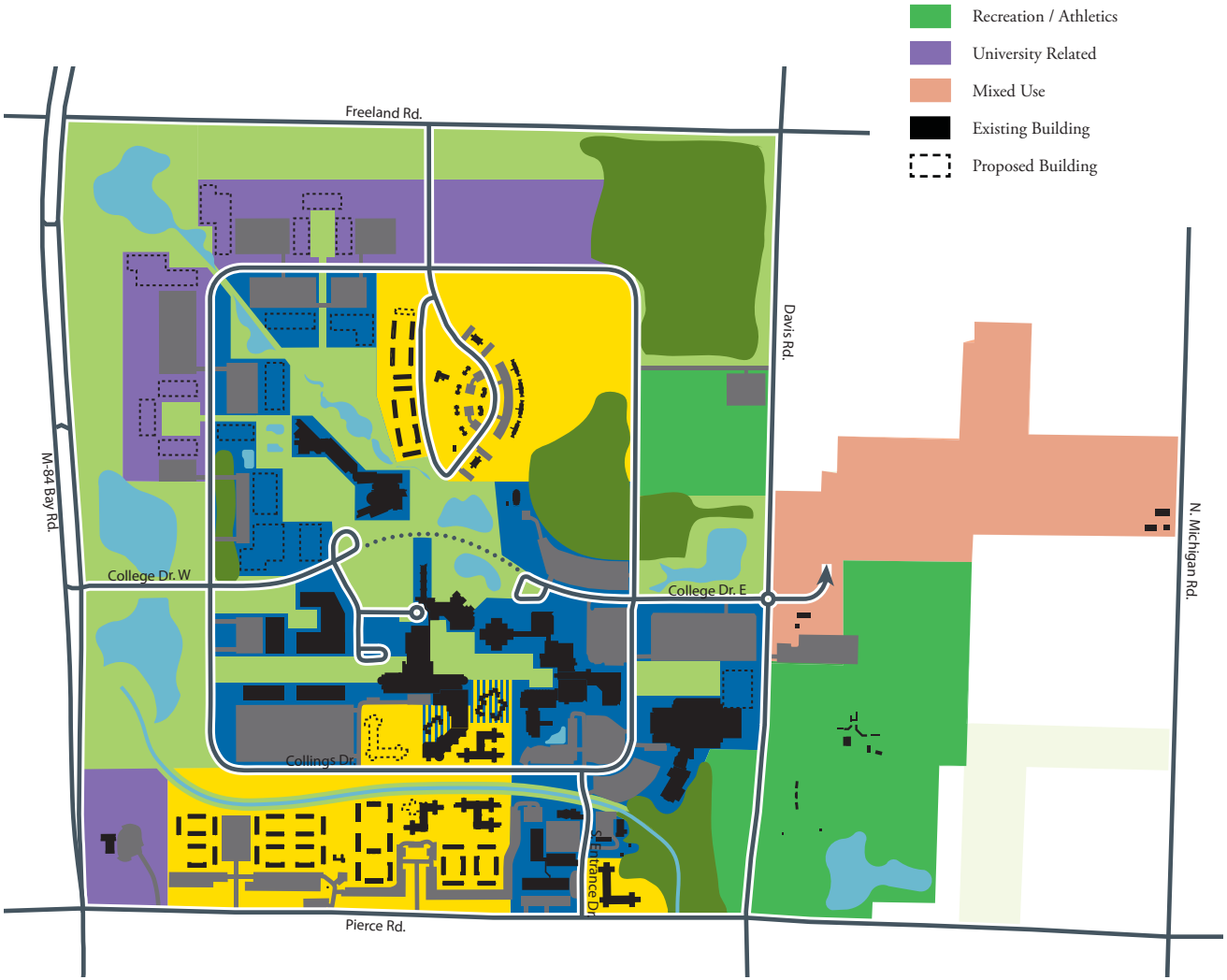


Campus Framework Plan Systems: Recreation, Athletics and University Related Land Use

With the continued demand for recreational fields, and the introduction of development on the existing intramural facilities, these fields have an opportunity to be relocated with a closer adjacency to the Athletics District. Although now located outside the ring road, this will now preserve land within the central campus areas for academic, administrative and student life building development. Additional recreational fields can also be located east of the Pine Grove Apartments off of Davis Road.

University related land uses will remain to the outside of the ring road, within the campus boundary, and should be accessed from within the campus roadway system. These uses on the north and west boundary of campus are interpreted to be developments that are driven by non-academic University developments.

A mixed-use village concept, which could consist of single and multi-family residential units and light retail uses, should be located off of the campus proper, east of Davis Road. This district could possibly be a public-private partnership.



Long-Term Opportunities, Illustrative Plan Overview

The Long-Term Opportunities Illustrative Plan provides a future vision for the SVSU campus. The plan represents the overall Master Plan Guiding Principles in a graphical manner.

The proposed plan supports and respects the existing landscape fabric of the University, while allowing growth to occur in a sustainable way. The plan is not intended to show specific building locations, uses, or floor plates, but is intended to a suggest the interaction of proposed building locations with existing structures, the continuation of the campus landscape fabric as development occurs, and the improvements to pedestrian and vehicular circulation.

The plan reflects the original 1967 Master Plan concept where academic and student life facilities were focused around a central outdoor common space. This updated Campus Master Plan takes the original concept and is replicating a new academic quad to the north and west, and creating central open spaces for student interaction and recreation.

The removal of College Drive eliminates vehicular traffic from the central campus, which allows for free pedestrian flow from this area to the north. In order to replace this circulation corridor, Collings Drive will need to extend to the north and connect to Freeland Road. This will also provide a new gateway opportunity at the north side of campus.

New building development will front both sides of College Drive strengthening the presence of the University to the community and enabling a heightened since of arrival. The university related uses to the north of the ring road also reinforce the campus edge to the community and create a face along Bay and Freeland Roads.

SVSU has enough land for surface parking and can continue to implement it in this fashion. New thinking in parking management will need to be addressed to best use existing lots and promote a pedestrian and bike friendly campus. Parking will be discussed in more detail later in this chapter.

Recreation is an important aspect of student life at SVSU. Currently, the recreation fields do not meet the needs of the existing student body. With the proposed development to occur on the west side of campus, where the existing recreation fields occur, proposed field relocation should occur north of the existing Athletics District. As an alternative location, recreation fields can also be implemented just north of Lot E off of Davis Road.

All of the plan elements above and listed on the map key, will be described in more detail in the remaining pages of this report.

1. College Drive removal, new shared use path
2. Collings Drive extension
3. Freeland Road new entrance and gateway
4. South Entrance enhanced gateway
5. Freeland / Bay Road community gateway
6. College Drive East enhanced gateway
7. University related development
8. Academic related development
9. Residential use infill / expansion
10. New campus open space
11. Recreation fields relocation
12. Recreational path extension
13. Optional recreation fields relocation
14. Preservation zone
15. Mixed use village
16. Academic infill opportunity
17. Ryder Center expansion

Future Building Opportunities

Existing Building Location


Freeland Rd.
M-84 Bay Rd.
College Dr. W.
College Dr. E
Davis Rd.
Collings Dr.
Pierce Rd.
S. Entrance Dr.
1
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17

Campus Mobility Framework

Road Network

Mobility on the SVSU campus is important for the day-to-day functions of the University, as it allows visitors, students and the community to traverse campus in an efficient and safe manner. As development has occurred rapidly during the last couple of decades, it was important at the time to create a road network that met the immediate needs of building development and function. However, as the campus population has grown and development has occurred outside of the central core it is time to reevaluate the existing road network. As previously discussed, pedestrian and vehicular issues exist on College Drive, and this has created a barrier between the Campus Core District and the North Academic District. Removal of this road will ease traffic congestion and enable the safe passage of pedestrians. Vehicles will now have a completed ring road and new entry at Freeland. These concepts will be discussed in more detail in the following pages.

Parking Network

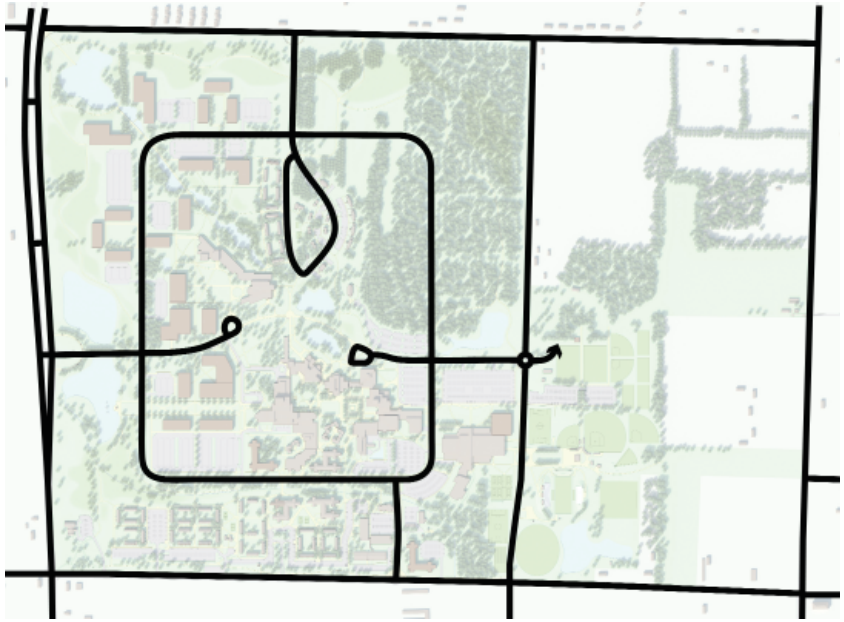
Overall parking availability at SVSU is plentiful. Most destinations are within a 5-10 minute walking radius of any existing lot. New building development that mandates additional parking facilities should be given careful consideration in regards to size and layout. If parking is determined to be a necessity, it can be located adjacent to the new building, however, buildings should be sited first to create open space areas in between building developments.

Pedestrian Network

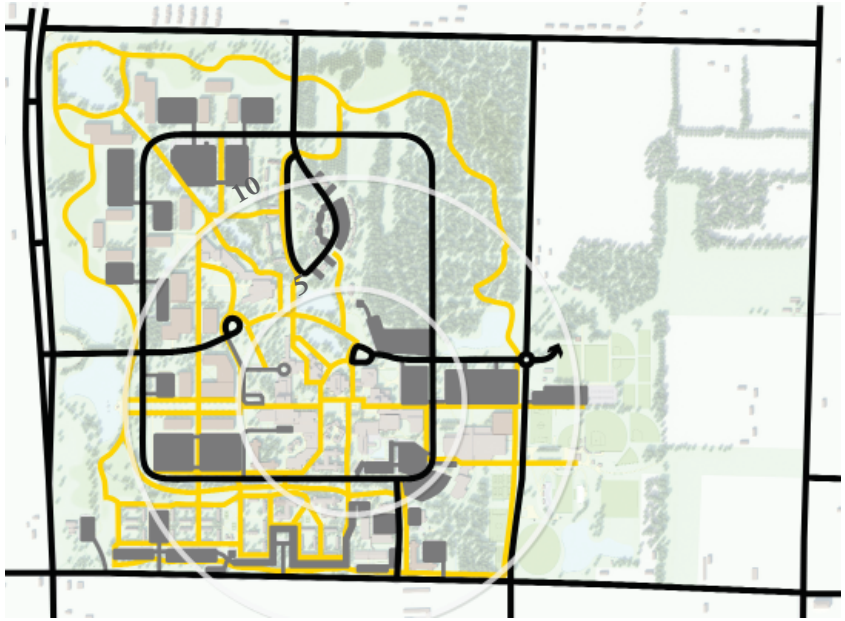
The existing pedestrian network is robust and has few, if any, missing segments. It is also important as the campus grows, that new building developments connect back to the existing landscape fabric, including sidewalks and pathways. One should have the optional ability to walk or bicycle to a destination without using a personal vehicle.

Bicycle Network

Bicycle use can help reduce on-campus vehicle trips and parking demand. By incorporating clear, marked routes, ample bicycle parking and other facilities, a robust bicycle system can be implemented. A main route on campus can be the existing and proposed extension of the recreational path. Other routes on campus can share pedestrian pathways that traverse the Campus Core and North Academic Districts. Any designated route on campus that is shared should be wide enough to accommodate both pedestrians and bicyclists. The University should follow the American Association of State Highway and Transportation Officials Guide for the Planning, Design and Operation of Bicycle Facilities when planning campus routes. See more information regarding the Bicycle System on page 52 and in the Open Space Design Guidelines section of this report.

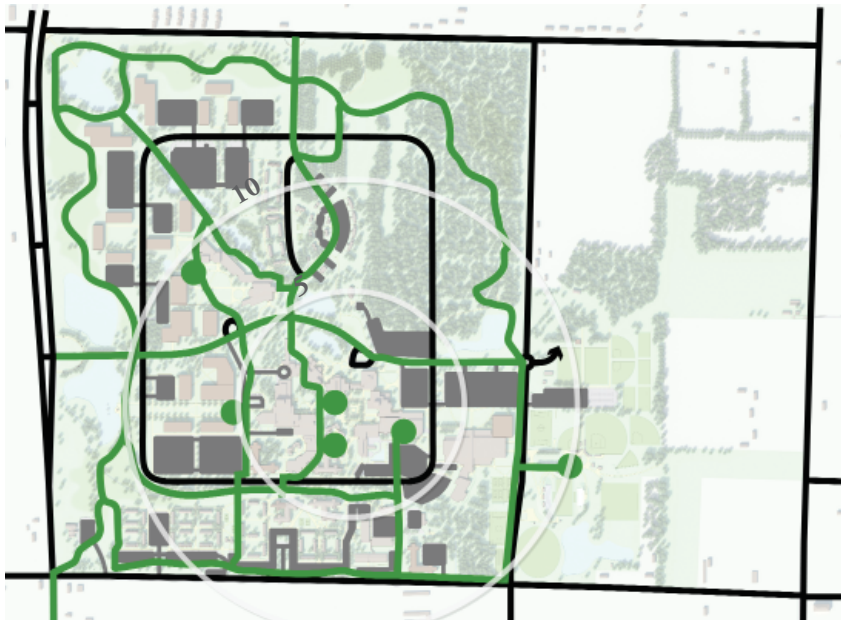


Road network



Pedestrian network

Parking network



Bicycle network and major bicycle parking areas (green dots)

Campus Mobility: Road Removals

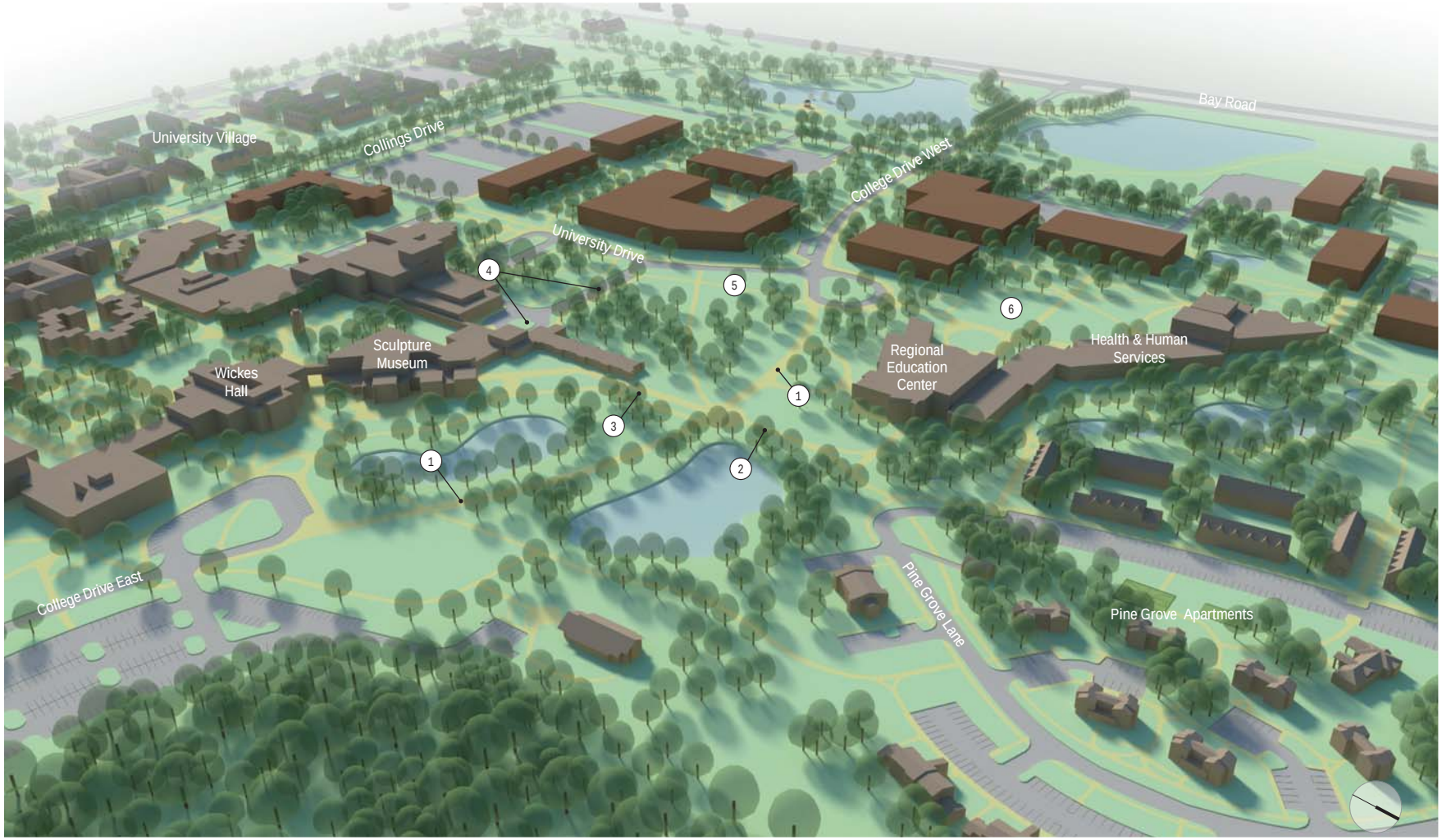
College Drive currently bisects the Central Core and the North Academic Districts and impedes pedestrian and vehicular circulation. Pedestrian foot traffic at the portion of College Drive between University Drive and Wickes Circle is very high during class change times, which in turn impedes vehicular traffic in this area. The Campus Master Plan recommends removing this portion of College Drive and converting this route into a shared-use path. This path will become a route for pedestrians from west to east and allow unimpeded pedestrian movement from north to south. The path will be accessible for service and emergency vehicles. Consideration could be given to open the path during special events such as graduation or move-in/move-out days, however this route should be pedestrian-focused under normal circumstances. The design of the shared-use path is discussed further in the Open Space Design Guidelines section of this report.

The closure of this portion of road does not come without some implications, however. Currently, a majority of the student services functions are located in Wickes Hall. Direct access to this location is now eliminated from the main campus entrance (Bay Road) as this is the most direct route for visitors. The location of student services could be moved to another location to the west in thus making it visible and easily accessed. It is possible at that time, Wickes Hall could be converted into an academic use, strengthening the main core of campus.

Fine Arts Drive will also be eliminated which connects to the existing entrance of The Marshall M. Fredericks Sculpture Museum. The entrance to the museum will need to be moved to the west side of the building, which can be accessed directly from University Drive. This new entrance for the museum will provide improvements for visitors such as a new vehicular drop-off, additional parking and a renovated building lobby. Users of the museum will be able to access the sculpture garden directly from the museum.

1. College Drive removal from Wickes Circle to University Drive. Replace with a new shared-use path
2. Pine Grove Lane removal from College Drive. Replace with pedestrian walkways
3. Removal of Fine Arts Drive
4. New museum entrance, drop-off loop and parking
5. Enhancement of Owsley Grove
6. New open space areas, removal of existing parking

Road removals

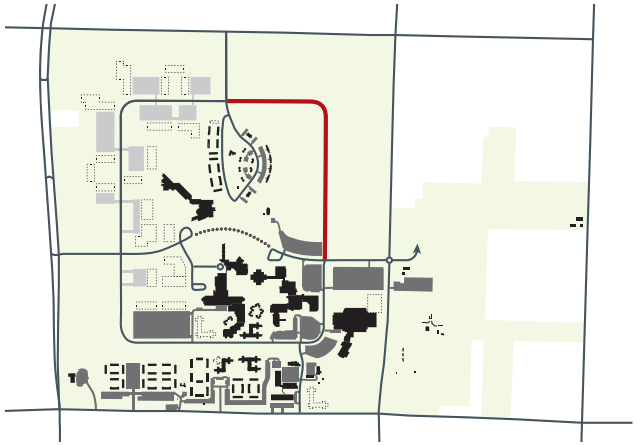

University Village
Collings Drive
Bay Road
College Drive West
University Drive
Sculpture Museum
Wickes Hall
Regional Education Center
Health & Human Services
College Drive East
Pine Grove Lane
Pine Grove Apartments
1
2
3
4
5
6

Campus Mobility: Collings Drive Extension

With the elimination of College Drive in the central portion of campus, Collings Drive should be extended to the north to create a ring road for unimpeded vehicular circulation. This new circulation pattern will enable the Campus Core District to remain vehicle-free and create pedestrian thoroughfares across campus. A new entry should also be located off Freeland Road between Davis and Bay Roads to ease egress tension from other access points. Visitors may be encouraged to use this entry as it should be a secondary gateway. The cross-section of Collings Road should be equal to the existing road cross-section.

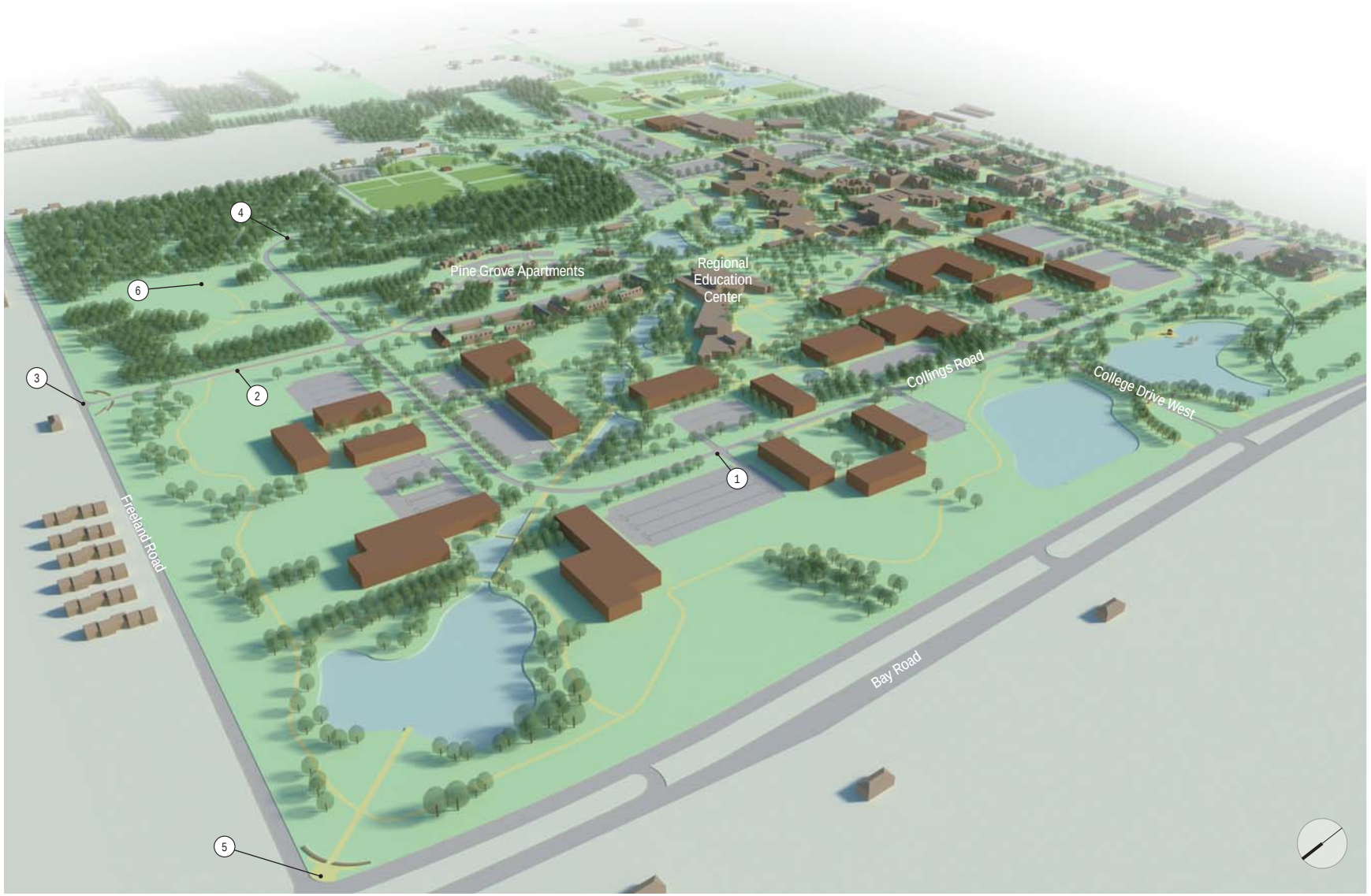
The suggested phasing of Collings Drive should extend the west portion first from College Drive West. This phase should also include the access entry to Freeland. Additionally, College Drive and the shared-use path should also be a part of this phase. The second phase should complete the ring road to the east and connect south to College Drive East.

Collings Road extension, phase 1



Collings Road extension, phase 2

1. Collings Drive extension, phase 1
2. Collings Drive extension to Freeland Road, phase 1
3. Freeland Road entrance and new gateway, phase 1
4. Collings Drive extension, phase 2
5. Community gateway at the corner of Bay and Freeland Roads
6. Recreational trail extension


4
6
3
2
5
1
Pine Grove Apartments
Regional
Education
Center
Collings Road
College Drive West
Freeland Road
Bay Road

Campus Mobility: Parking Management Strategies

As discussed in Chapter 2, parking utilization is an issue within the lots adjacent to high-use buildings, especially in the Campus Core District. The results of this study concluded that many on-campus students were driving from their respective residence halls and parking closer to their classroom buildings. Most of the residence halls are a short 5-10 minute walk to any building on campus. The University should complete a more thorough parking utilization study to have complete understanding of parking supply and demand on campus.

Although there are many options for a university to manage parking on campus, the Planning Team has suggested several options for the University to incorporate into their parking policy. These initiatives should help alleviate demand in high-use areas and promote alternative modes of transport, such as walking, biking or transit. The following strategies need not be implemented all at once and it is recommended that some of these strategies be used on a trial basis.

Paid Permit System

- Require paid permits for students. These parking fees should be in alignment with other peer institutions such as Central Michigan University and Grand Valley State University.

Utilize a "Park Once" Philosophy

- An on-campus student is supplied with one parking spot in a designated lot, either remotely or near their residence hall. The student would not be allowed to move their vehicle during normal class times, however, this rule could be lifted for evenings, weekends and during holiday breaks.
- Restructure highly desired lots to have a A, B and C priority spots for faculty and staff. Upperclassmen could also have the option to buy a more expensive permit to have this privilege.

Preferential Parking for Carpools

- Provide preferential parking for carpools, possibly in the A or B priority class or within a high demand lot such as lots K, R or D. Examine institutions that currently utilize this type of permitting system, such as UC-Santa Cruz or Washington University (St. Louis). Permit fees need to be examined to be an amount that is affordable to each riding member of the carpool, yet more expensive than a single permit for any desirable lot. Carpool permits should only be made available to commuting faculty, staff, and students.

Parking Safety

- SVSU currently provides round-the-clock safety for users of any parking lot on campus. This should continue regardless of parking strategy changes.

Improve Non-motorized Transportation Options

- Incorporate a complete bicycle system on campus, which includes marked paths and routes, ample parking options and a maintenance station.

Campus Mobility: Other Transportation Modes: Transit and Bicycle Systems

The University encourages the campus community to use public transportation and non-motorized means to arrive at campus destinations. Using these types of systems reduces on campus vehicular trips and parking demand.

Transit System

Two bus systems currently service the SVSU campus: The City of Saginaw STARS system and the Bay City Metro System. Each service has various stops on campus, however, bus stops are not easily recognized as facilities are not clearly defined in the landscape. The University should provide facilities for these stops and work with each transit authority to make these identifiable. Bus stops should be uniform in design and sized accordingly based on location demand. Seating should be provided within the shelter and be ADA accessible. The University should consider bus pull-off areas on roads with routes to ease traffic congestion. Pull-offs will allow the safe passage of vehicles as busses unload and load passengers.

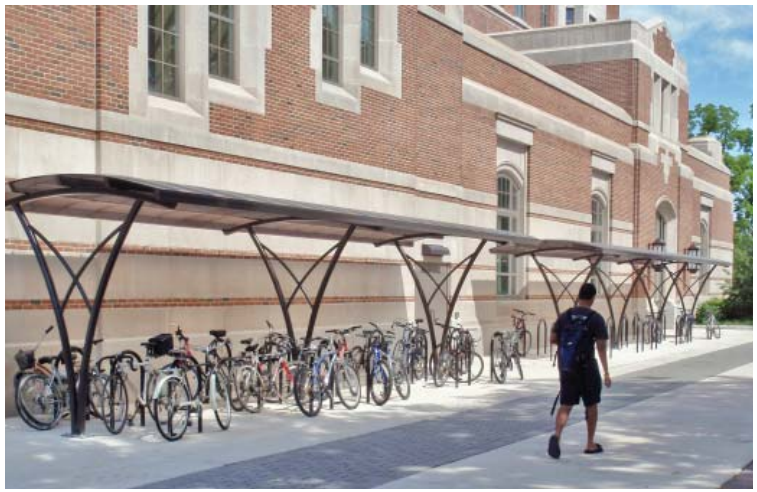
Bicycle System

The University should encourage bicycle use by providing adequate facilities. The University currently provides exterior parking for this use, however additional facilities will be needed to provide an overall, complete bicycle system.

First, the campus should incorporate a complete bicycle network (see page 45-46), which includes bicycle routes clearly marked with signage or markings on appropriate campus streets and walkways. Bicycle users can ride on walks within the campus proper and adequate bicycle parking should be addressed at high-use areas on campus, such as residence halls, academic areas or student life facilities. Consideration should be given to incorporate covered and indoor parking to promote year -round use.

Finally, a bicycle maintenance station should be provided at a central location. This station can be relatively simple as a place to fill tires or tighten brakes. More information regarding bicycle facilities is discussed in the Open Space Design Guidelines portion of this report.

Designated bicycle routes at the UC Santa Barbara campus



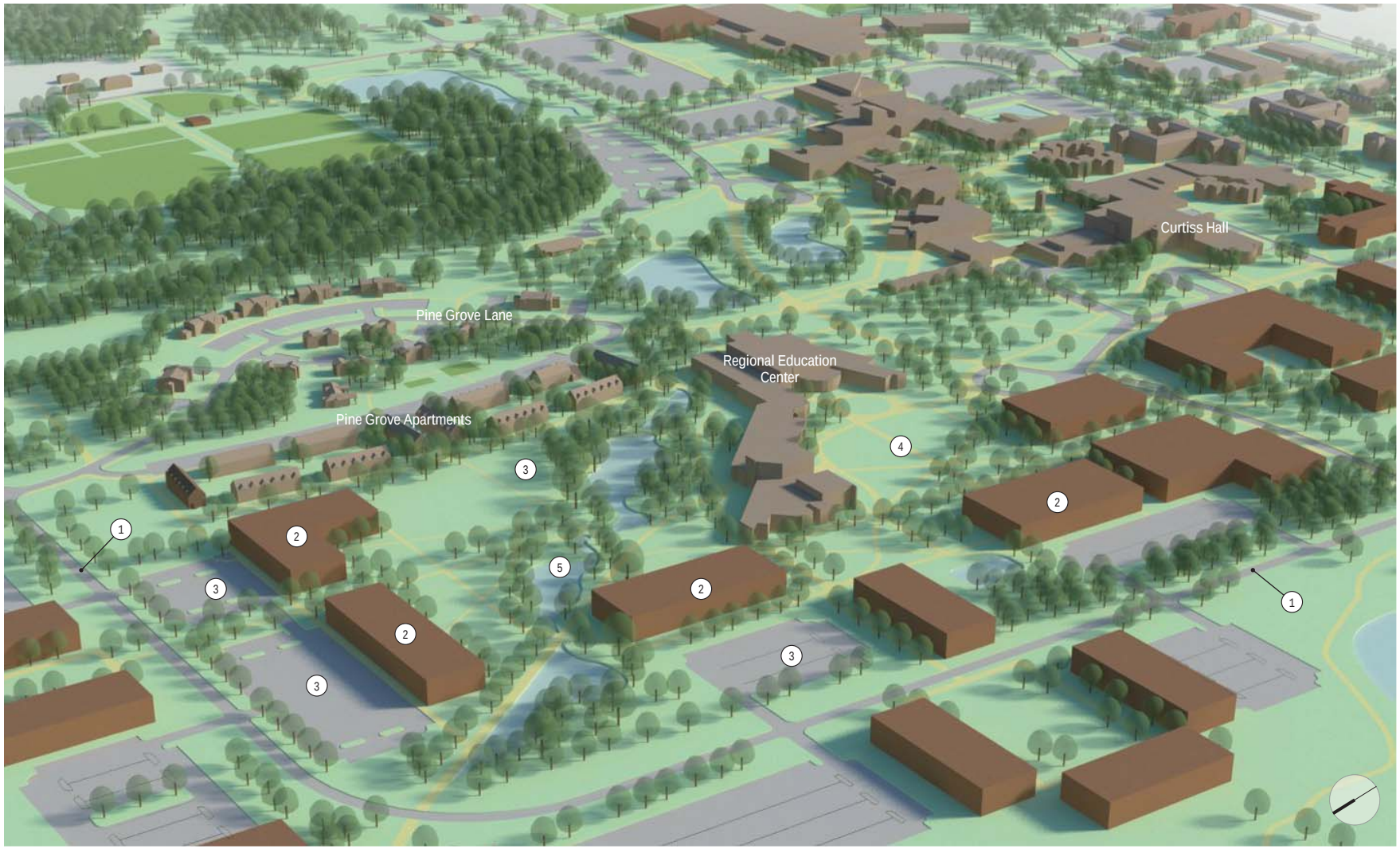
Covered bicycle parking at the University of Michigan

Campus Land Use: North Academic District

The North Academic District is the area to the north of College Drive West. Currently, one large building occupies this district, which contains the Regional Education Center and the Health & Human Services Building. A vast series of parking is west of this building complex. As building development occurs in this area, it is important to keep in mind the planning goals of the 1967 Master Plan and the Master Plan Guiding Principles discussed earlier in this report. Parking will be located off the main circulation route, here being the Collings Drive extension, and buildings are sited behind parking and facing into campus. These buildings should create open space areas that contain quads, plazas and courtyards that will engage the campus community.

In order to meet this planning goal, the parking that exists on this site will have to move to another location (see illustration, right). These areas will become important active open spaces which enhance the student experience by removing vehicles from this central portion of campus and create connective pedestrian walks that link back into the campus fabric. The native planting area that has been established here can also be extended to the north. This will allow for an extension of the stormwater ponds in this area.

1. Collings Drive extension
2. Academic building use, typical
3. New parking lots, typical
4. Removed parking, replaced with open space
5. New stormwater ponds and native landscape


Curtiss Hall
Pine Grove Lane
Regional Education Center
Pine Grove Apartments
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4
5

Campus Land Use: West Academic District

The West Academic District currently houses the intramural recreation fields and three large parking lots. Curtiss Hall, Groening Commons and the Performing Arts Center are major destinations in this District. Curtiss Hall has a unique facade with upper floors that offer views to the west, however, these views overlook massive undesirable parking lots. The Campus Master Plan recommends that the bulk of this parking be re-oriented to the south within the ring road and maintain close adjacency to the Conference and Performing Arts Center. This will open views to the west and provide an opportunity to front buildings along this open space axis. It is possible that one of these buildings could house a small parking deck if additional capacity is needed.

The West Academic District could also house the relocated student services hub, which is currently in Wickes Hall, and should be accessible directly from Bay Road.

1. Academic building use, typical
2. New or reconfigured parking
3. New open space corridor
4. Enhanced views from Curtiss Hall
5. New recreation path
6. New plaza overlooking pond


Curtiss Hall
College Drive West
Collings Drive
1
2
3
4
5
6

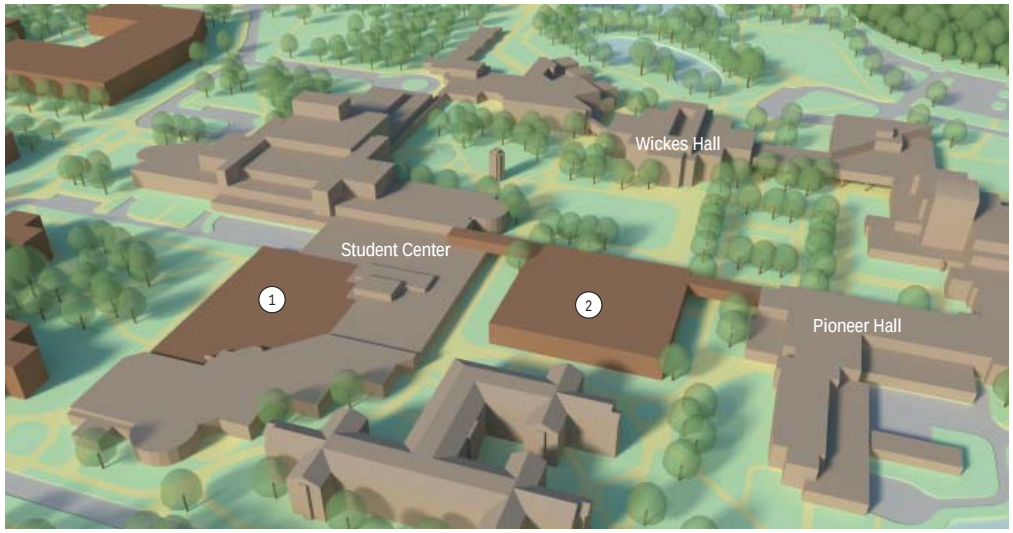
Campus Land Use: Campus Core District

The Campus Core District offers little opportunity for infill as it already has optimized land development. However, an opportunity may present itself in the future with the potential removal of the first-year suites, Great Lakes and Tranquil Residence Halls. The room configuration of these halls is not desirable for freshman students and it may be difficult to refurbish the room layouts to meet incoming students expectations. If Great Lakes Hall was removed, a new academic building could go in its place. This building could connect to the neighboring buildings, completing the interior network of pedestrian walkways. The existing pedestrian walkway stops within the Curtiss Hall and Pioneer Hall complex. Conversely, the removal of Great Lakes Hall could also become an open space, providing additional recreational area for the University Village Residence Halls.

The removal of Tranquil Residence Hall provides an opportunity to add onto the existing student center, depending on program need.

1. New academic infill building
2. Student Center expansion

Existing freshman suites within the Campus Core District



Removal of freshman suites, replaced with an academic use building and Student Center expansion

Campus Land Use: Recreation

Intramural recreation adds to the well-being of students so it is important to provide a variety of adequate spaces to play. SVSU currently offers a large area at the west side of campus for recreation, however, the existing field layout does not support the current demand for space needed or the necessary diversity in field layouts. Potential development opportunities occurring in this area requires a sensible approach to meeting recreation demand. Relocating the fields to the east side of campus would still provide close adjacency to residence halls and enough land area to accommodate different field types.

A program was identified by the Master Plan Task Force that would provide a variety of field layouts to support the intramural demand. The program is as follows:

1. 2 each club sport fields 225 feet x 360 feet.
2. 4 each intramural fields 120 feet x 240 feet.
3. 2 each intramural softball fields
4. A cricket pitch.
5. Additional parking.
6. Rest room and storage facilities

Additionally, the fields should be lighted for nighttime use, and one of the larger club sport fields should have a scoreboard and bleacher seating for competitions.

Two recreational field options have been explored for this planning effort. Option 1 provides a consolidated plan while Option 2 provides a long-term solution of additional facilities if needed. Option 1 takes advantage of consolidating uses with the Athletics District. Parking, restroom and concession facilities can be shared. Access to the proposed mixed-use village can still be obtained from the round-about on Davis Road. The consolidated field layout, however, borders residential neighbors to the west and this may cause concern with lit nighttime games. The outdoor track in this option has been removed since it is in need of upgrades. Within a separate study, it has been concluded that the outdoor track will be moved indoors to the Ryder Center, pending a reconfiguration of this building. This option also provides a cricket field in place of the existing football practice areas. Two new practice football fields are added in place of the outdoor track.
The second option, which could be developed either in conjunction with Option 1 or independently, adds recreational fields in an under-utilized area of campus. This parcel of land, west of Davis Road, is a former farm field that is now succumbing to succession. Additional parking and restrooms would be needed to accommodate users.

1. Ryder Center addition
2. Recreational fields relocation
3. Additional parking
4. Removal of outdoor track, relocation of football practice fields
5. New cricket field
6. Recreational trail extension
7. Proposed mixed use village

Recreation fields Option 1

Recreation fields Option 2

Sustainable Campus Development

The integration of sustainable practice will continue as the campus grows. The Campus Master Plan strives to give a broad overview of sustainable practices that should be included for any future campus project. SVSU realizes the importance of incorporating sustainability into future development, and has already taken initiative on several projects. Some of these recent projects include:

- In 2009, SVSU installed over 20 miles of aquathermal heating and cooling coil in a large pond on campus. The state of the art system saves the Health and Human Services Building approximately 37% in energy use per year.
- Solar panels were installed recently on the south side of the Health & Human Services Building to supplement electricity for the Regional Education Center and the Health & Human Services Building.
- The campus has an active recycling program that has bins throughout campus buildings and exterior spaces.
- LEED, the Leadership in Energy and Environmental Design, awarded the Pioneer Hall renovation a silver rating for green building through the U.S. Green Building Council.
- A carbon footprint of the campus has been completed, which identifies key areas where carbon emissions can be reduced.
- All campus irrigation water is provided by several large stormwater ponds on campus.

SVSU is a leader in the region in sustainable innovation and is committed to contributing a well-rounded palette of solutions that further enable the University to be environmental stewards. Residents, businesses and other institutions in the region can learn from the example set by SVSU environmental practices. The Campus Master Plan emphasizes several aspects of sustainability that are summarized here and should be considered in the design of new developments.

Sustainable Land Use Practices

As campus develops, and new buildings are incorporated into the landscape fabric, consideration should be given for building placement and footprint, consolidation of building functions, accessibility to campus users (by foot, bicycle or vehicle), and preservation of open space where possible. Buildings should be incorporated into a neighborhood and provide multiuse functions that minimize motorized vehicle trips.

Preservation of Natural Features

SVSU lies close to the terminus of the Saginaw River watershed. This watershed, which drains 15% of the state, leads into the Saginaw Bay which has the longest freshwater wetland coastline in the United States. Any negative impacts upstream have an effect on this delicate system. Although most of this watershed lies upstream of campus, the University can encourage preservation of its ecological systems by utilizing Best Management Practices (BMP's).

Innovative stormwater management strategies can be implemented on campus by incorporating these BMP's into campus design standards. Some of these practices include reducing impervious surfaces, treating stormwater close to where it falls, restoring and protecting natural systems (such as streams and wetlands), using native plants and adding to the campus tree canopy. Such measures will increase the ecological diversity and campus, and positively impact downstream systems. See also the Open Space Design Guidelines that explore stormwater strategies in greater detail.

Diverse Transportation Options

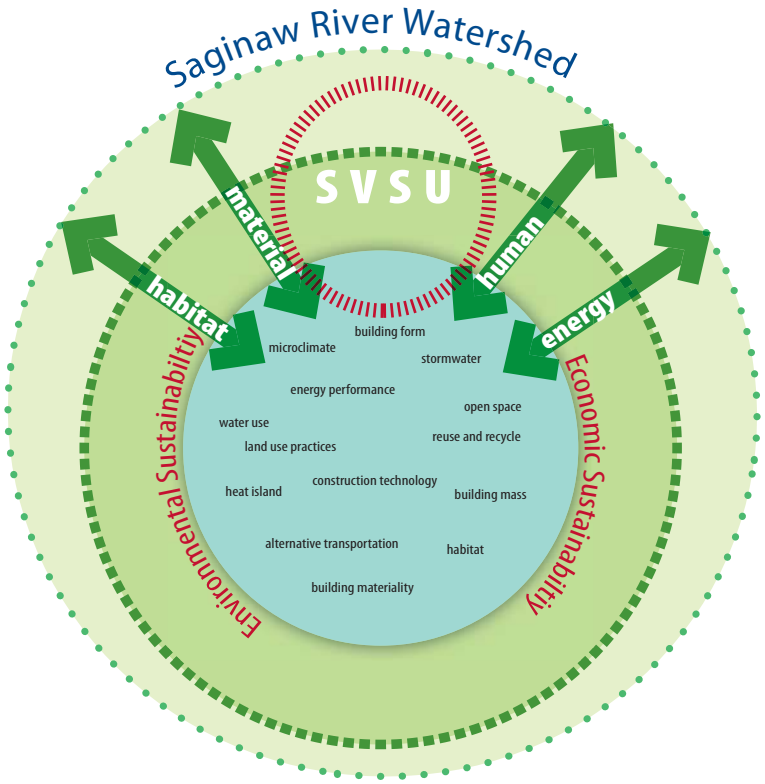
The campus community is encouraged to use alternative modes of transportation to reduce campus greenhouse gas emissions. As discussed in the Parking Management Strategies section of this report, parking utilization is an issue and multi-vehicle trips should be discouraged during peak activity. Parking should continue to be located at the campus perimeter, while keeping the interior portions dedicated to pedestrians. Bicycle commuting should be further developed which includes a complete bicycle system. This system will allow for easy travel through campus via bicycle routes, provide a variety of bicycle storage and parking options and a bicycle station for minor repairs.

Innovative Buildings and Energy Conservation

Sustainable design should be a priority for new building construction. One way of achieving that goal is to follow guidelines put forth with the U.S. Green Building Council's Leadership in Energy and Environmental Design program (LEED). These guidelines provide a variety of recommendations for sustainable site and building construction. Some of these recommendations include using recycled or regionally sourced building materials, reduce the impacts of heat island effect by utilizing new roofing technologies, maximize daylighting to lower energy consumption and saving water resources by installing cost saving fixtures. New facilities should also be considered for overall impact within the campus energy loop by evaluating building envelope thermal performance and by designing systems that reduce heating and cooling costs.

Other Initiatives

The University has a dedicated sustainability web page that describes in detail on-going, future and completed projects regarding campus sustainability policies and efforts. The website has links to the University carbon footprint analysis, recycling efforts and energy conservation. The Green Cardinal Initiative is a SVSU community based group that meets once a week to discuss sustainable strategies at a grass roots level.



Campus Safety and Security

The safety of students, faculty and staff is a priority for the University. The Campus Master Plan will address security measures that impact the physical planning in regards to the outdoor environment. SVSU currently does not have crime problem and the campus is perceived as safe. However, when moving forward with new building designs or site development, it is important to incorporate design concepts that are already instilled within the campus landscape. One way to do this is through a particular type of design philosophy called Crime Prevention Through Environmental Design (CPTED). This philosophy influences offender decisions by creating a positive use of space through site design and the built environment.

There are three specific strategies that designers use to incorporate this design method, Natural Territoriality Reinforcement, Natural Surveillance and Natural Access Control.

Natural Territoriality Reinforcement

Natural Territoriality Reinforcement is a design strategy incorporates site design principles that create a sense of ownership and define the difference between campus and non-campus space.

- Incorporate standard University design guidelines that further strengthen the University identity and branding.
- Incorporate a hierarchy of wayfinding signage on campus to help direct visitors to desired locations. Signage should be part of a wayfinding family that is easily identifiable and unique.
- Continue to enhance campus edges and entry gateways using similar materials that are unique. These materials should not be designed to keep people out or in, but become a design element that delineates major campus boundaries.
- Add exterior activity spaces that can be programmed for day and night uses. Having active spaces deters unwelcome activity.

Natural Surveillance

Natural Surveillance allows for clear visibility around campus buildings and the surrounding environment and limits hiding spaces for potential criminal activity.

- Allow clear lines of sight along pathways and around buildings
- Keep landscape clear from pathways and building entrances. Avoid trees and tall shrubs around these areas.
- Views into parking lots should allow for clear sight lines.
- Windows should be incorporated in new building designs for maximum visibility in and out of interior spaces.
- Coordinate site lighting and tree plantings so they do not interfere with each other.
- Develop a campus lighting master plan that identifies light levels and hierarchy on campus.
- Parking lots should be designed with bays perpendicular to building entrances. This will allow for maximum visibility and pedestrian safety.

Natural Access Control

Natural Access Control is a design strategy that controls users access to and from a space. Site elements are used to limit access or control flow.

- Find a balance between the proper number of building entrances. The proper number can promote user safety and avoid confusion.
- A building should only have one main entrance to encourage users to use one entry. Entrances should not double as a loading dock or another use.
- Use design elements such as bollards, planters or landscape to provide buffer areas between vehicle access points and buildings.
- Use bollards, lighting, special paving and other site elements to guide users from one destination to another.
- Consider a unified key entry system such as swipe cards or pass codes.

Main entrance defined by architecture

Site elements emphasize a direct pathway

Defined campus gateways and entrances

Active programmed exterior space

Low, maintained landscape at windows

Unobstructed views across the campus landscape

Coordinated tree plantings do not interfere with site lighting

Campus wayfinding should display a hierarchy of signage and be part of family of signs

Campus Sculpture and Art

SVSU offers the region a unique collection of exterior art and sculpture, which is varied in media, sizes and locations. The stand-out collection on campus, however, is that of Marshall M. Fredericks, whose sculpture works have become an identifying symbol of the University. Any public art installation is of value as it broadens the cultural perspective of the University community.

The University should continue its varied art collection and the distribution of art in exterior campus locations. The Campus Master Plan provides many opportunities for placement of works throughout the landscape.

Art works should be sensitively sited in relation to its context within campus and placed where viewing is accessible. Art placement can respond to building features such as windows, axis, and focal points. Art should also be placed in the landscape and respond to site amenities or topography. For example, artwork can be placed in courtyards, plazas, at the terminus of a long quadrangle view, or in the fold of a rolling landform. Public art and monuments promote social gathering, and provide a memorable touchstone or orientation feature throughout the campus context.

Some other criteria for artwork are listed below:

- Planning and strategies to maintain installations are recommended as part of a comprehensive public art maintenance plan.
- The work should be vandal-resistant, appropriately lighted, and not require on-going and significant maintenance needs.
- Signage for public art and monuments should be consistent and recognizable across the campus setting. Signage should be discrete to not obstruct nor interfere with the work of art.
- Signage should include the artist's name; the work of art's title, date, and material; a concise design statement, and donor recognition.

Although the Campus Master Plan does address possible new locations for art placement, the creation of a stand-alone Public Art and Monument Master Plan is recommended to comprehensively document existing public art and monuments and suggest specific locations for new works of various types and scales. This would provide the University with a guide to use in discussions about siting and types of new artwork and monuments. This document could also develop guidelines for displaying student and faculty art as well as artist selection policies for donor or campus funded works.

Funding for art is usually from donors of the University to memorialize an event or individual of campus significance. The University receives many requests for art, monuments, and memorials to recognize an event or individual. Additional funding may be available on a periodic or rolling basis from regional or state level programs. The Campus Art Master Plan should research this sources and document them within the report.


Freeland Rd.
M-84 Bay Rd.
College Dr. W
College Dr. E
Davis Rd.
N. Michigan Rd.
Collings Dr.
S. Entrance Dr.
Pierce Rd.
Existing Art Locations
Proposed Art Locations
Views

Image courtesy of svsuphotos

5 open space design guidelines

Purpose of Open Space Design Guidelines

The purpose of these Open Space Design Guidelines is to provide a framework for managing the development of the campus environment for Saginaw Valley State University. The goal is for the campus fabric to become unified and reinforce a distinct physical campus identity for the University.

The Guidelines are a blend of descriptive recommendations and prescriptive direction. The intent is not to dictate overall design solutions but guide decision-making for each aspect of the campus, and provide a basis for evaluating development proposals. For each development, the extent to which the Guidelines should be employed will be influenced by many factors including building function and relevance, site and existing context, and location on campus.

University policies, construction and technical performance standards are developed and documented separately, and should be referenced concurrently with these Guidelines.

The Guidelines are organized into three primary aspects of site development on campus: Landscape Areas, Pedestrian & Vehicular, and Site Amenities Standards. Landscape Areas includes open spaces and their relationship with building placement, Pedestrian & Vehicular pertains to road and pedestrian networks, and Site Amenities Standards provides recommendations for campus furnishings.

These guidelines recognize the current diversity of landscapes at SVSU. The intent of these guidelines is not to create visual homogeneity, but to provide an overall conceptual framework for the development of open spaces, establish a high level of quality in the design of open space, create an order and structure, and link building styles through common open space design. Sustainable open space techniques are incorporated into the Guidelines.

Open Space Design Guidelines Index

Landscape Areas: Significant Landscapes

Significant Landscapes

The University's first master plan was documented by the firm Johnson, Johnson and Roy in 1967 prior to any Campus development. The University has followed through on this vision and the conceptual integrity of the original plan is evident to this day. Several open space areas on the SVSU campus have special significance and have endured the development of campus throughout the decades. Some of these spaces are relatively new, but have become iconic in their own right. These areas are considered sacred and therefore, should not be encroached, redeveloped or built upon.

Gazelle Fountain Courtyard
The Gazelle Fountain Courtyard was first conceived as a conceptual plaza space in the 1967 Master Plan. With this original design intention as a template, the courtyard was developed with seating areas, a large reflecting pool, and landscape. Marshall M. Fredericks', *The Leaping Gazelle,* stands in the middle of the pool. The courtyard has become the centerpiece of the Campus Core District and part of the main quad.

Julia Stacey Edwards Bell Tower and the Central Campus Quad
The bell tower is a recent addition to the SVSU campus and has become an iconic feature within the landscape. Built in 1998, it honors the wife of William Edwards, whose committee raised funds to purchase the site for what was then Saginaw Valley College in 1965. The tower is sited at the foot of a long promenade in the Central Core of campus.

Yien International Garden
Installed in 2007, the Japanese themed garden was built in honor of Dr. Robert Yien who was Vice President of Academic Affairs for a number of years. The garden contains many specimen plants, and unique site and sculpture elements. This garden has become an important part of the Central Core District.

Owsley Grove
The forested area just east of the Bay Road entrance is considered a pivot point between the Campus Core and the North Academic Districts. This forested zone enhances the entry experience by providing a unique backdrop at the main campus arrival. Mature tree stands that exist here are significant to the overall landscape character of the University.

Natural Landscape Area
This area is north of the Regional Education Center and the Health and Human Services Building and was created as a restored wetland habitat. The naturalized area has native plantings, wetland ponds and is home to many birds and animals. The Campus Master Plan described earlier in this report extends this open space as development occurs to the north and west.

Julia Stacey Edwards Bell Tower

Gazelle Fountain Courtyard

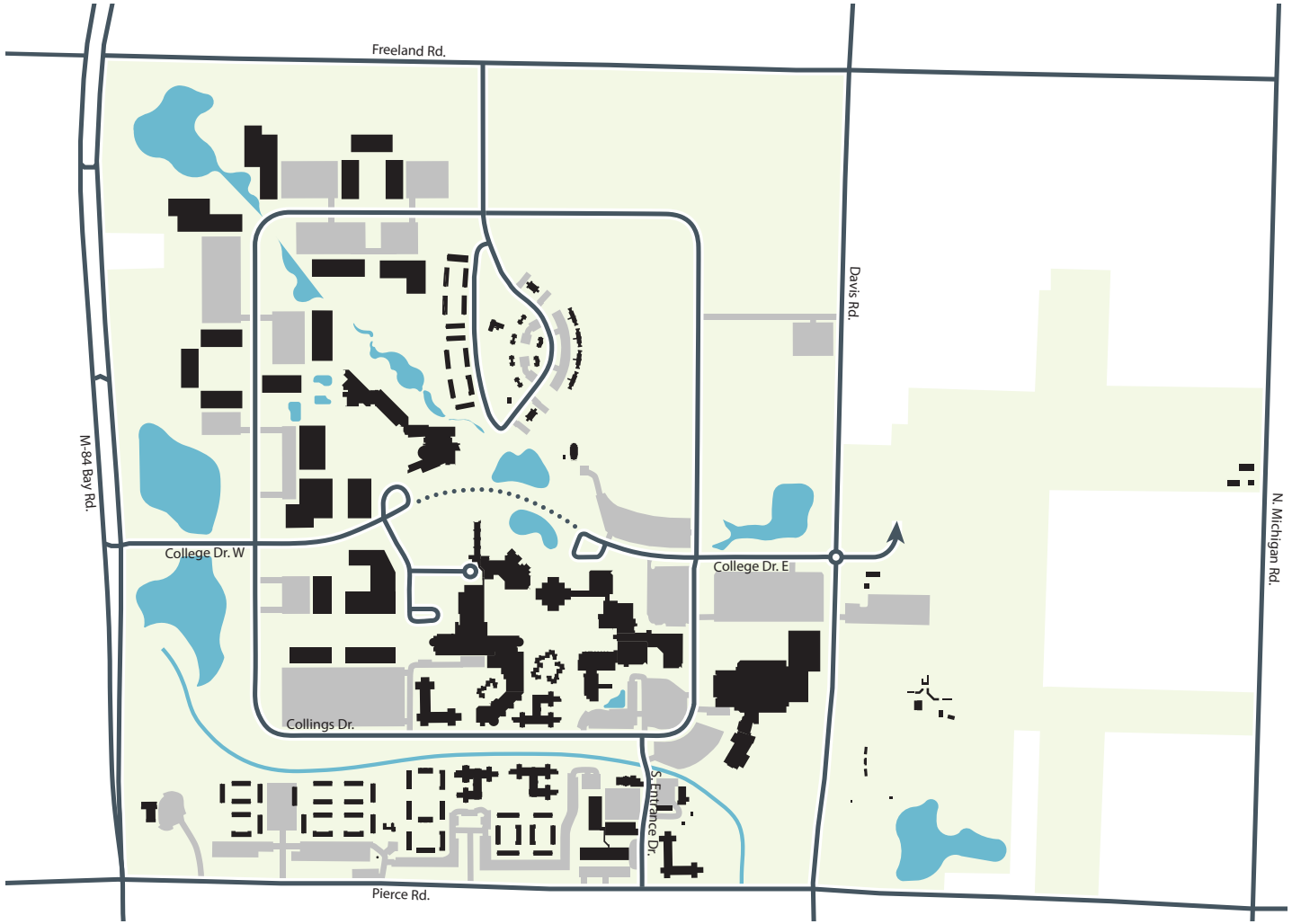
Yien International Garden

Central Campus Quad *(image courtesy suuphotos)*

Landscape Areas: Building Placement and Open Space

New facilities, buildings and open spaces combined should be located and aligned to establish the campus framework, reinforce pedestrian routes, and form clear, identifiable edges for public spaces and walks. Building and open space entries should front onto positive outdoor space and major pedestrian walks.

Wherever possible, shared programming and active uses should be located to front onto public spaces to help activate and animate gathering spaces and create more opportunities to interact. Where ever possible building placement, wherever possible, should respect the natural environment of campus, including mature tree locations, floodplains and historic campus open spaces. Building footprints, in general, should create open spaces.



Future roadway and building framework for campus

Landscape Areas: Landscape Maintenance Zones

The Landscape Maintenance Zones were developed as part of a separate study in 2004, The Landscape Master Plan. This report details specific aspects of the campus landscape and provides clear direction on improving the physical environment. The Landscape Maintenance Zones have been updated as an overlay on the proposed Campus Master Plan.

Maintenance recommendations have been developed to match the management needs required to support the desired qualities of each character zone. To simplify maintenance tasks, schedules and reduce costs, the campus has been divided into six maintenance zones. In this way, management strategies are more specifically and efficiently targeted to achieve the desired end.

Maintenance Zones

Campus Core, Highest Use Areas
Areas considered high-use and pedestrian-intense include the primary and secondary gateway entries, the Campus Core District, residential hall neighborhoods, and other proposed academic use areas.

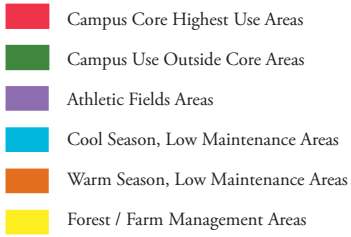
Campus Use, Outside Core Areas
Those areas that do not have intense pedestrian use are considered outside the Core Areas. These areas include roadway and parking lot landscaping, passive recreation spaces and some trail or walkway areas.

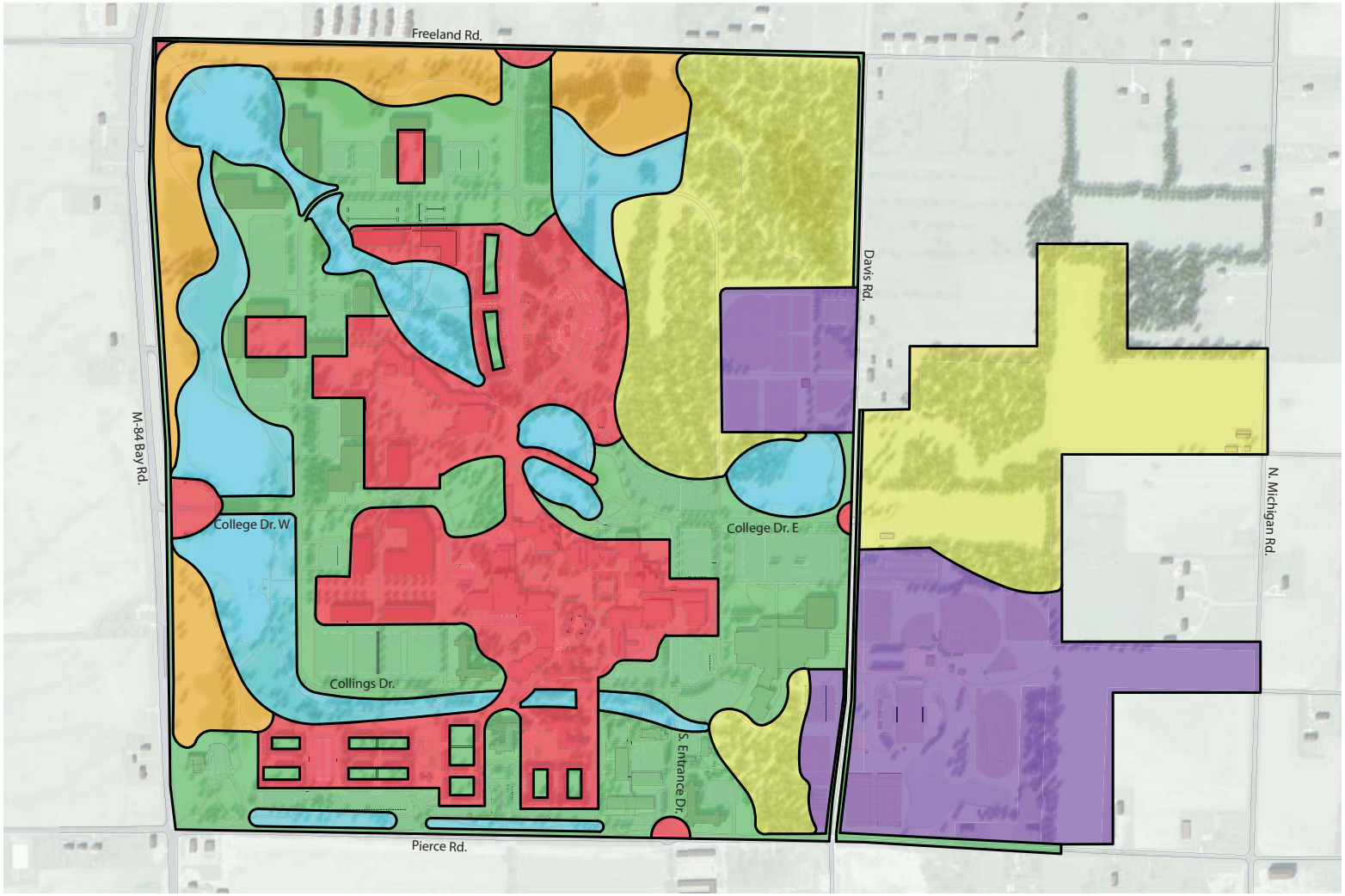
Athletic Fields Areas
These landscape maintenance zones include the intercollegiate Athletics Complex and related practice fields, as well as the existing and proposed and intramural recreational fields.

Cool Season, Low Maintenance Areas
These areas include landscape zones surrounding stormwater ponds, drainage corridors, and wetlands.

Warm Season, Low Maintenance Areas
The warm season landscape zones include the prairie restoration areas that has been established at Bay Road. As development continues, this treatment should also continue along Freeland Road.

Forest / Farm Management Areas
These areas include existing woodlands and hedgerows, active and former farm fields, and natural wooded wetland systems.





Landscape Maintenance Zones

Landscape Areas: Campus Gateways

Campus gateways are significant areas on campus that identify to the visitor and the community that one is entering University grounds. Campus entrances can be both vehicular and pedestrian oriented.

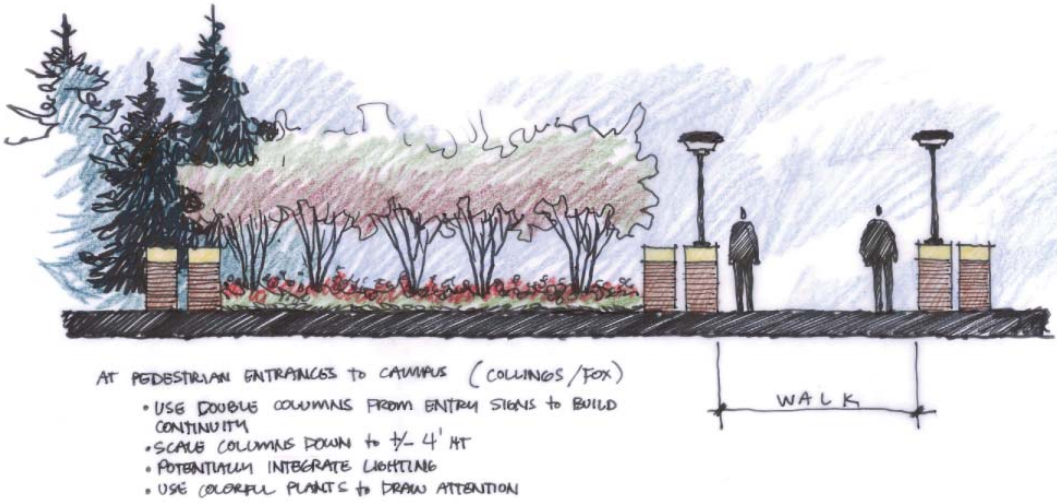
The University should enhance and beautify the landscape treatment at designated campus entrances to create significant and memorable experiences. Entrances should be appropriately reinforced with landscape and architectural features to signify an arrival on campus.

Two entrance scales should be created for campus: primary and secondary scales. A primary entrance is defined as a main pedestrian and vehicular gateway for campus, much like the entrance at Bay Road and College Drive. This entry signals a clear arrival on campus and is scaled appropriately for it's location. A secondary campus entry signifies the boundary of campus and appropriately scaled for both pedestrians and vehicles.

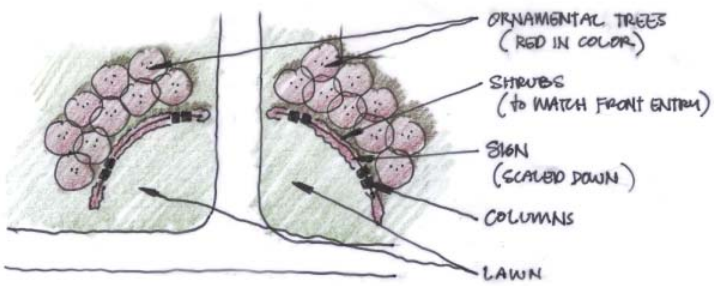
Secondary entry examples are located at South Entrance Drive at Pierce Road and College Drive East at Davis Road. A future secondary gateway should occur off of the proposed Collins Drive extension to Freeland Road.

The materials/colors should be uniform and consistent throughout campus, and work with the palette that has already been established at the Bay Road entrance. Plant material should be used in accordance with the scale of the entry and soften the hard lines of the elements.

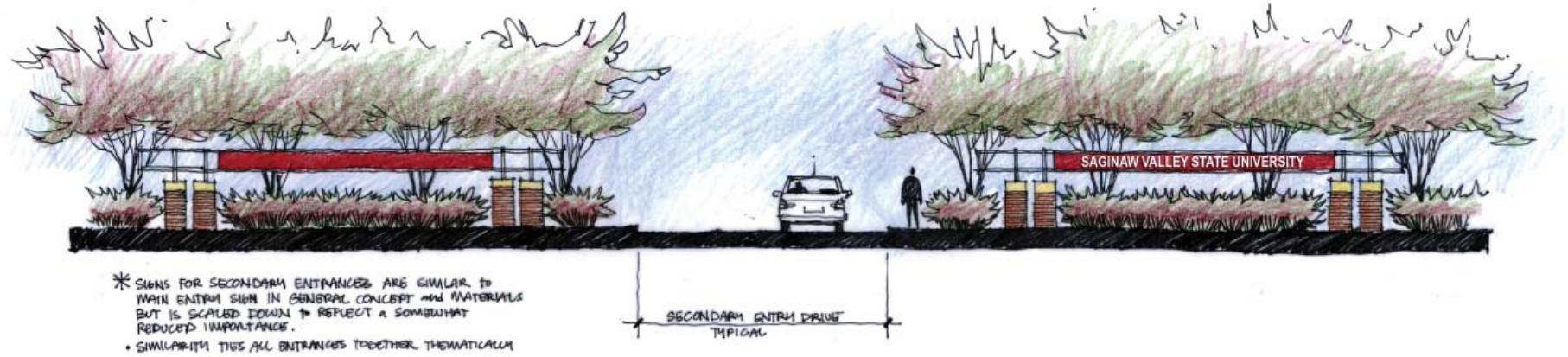
Signage at the campus entries should prominently introduce visitors to the campus. Campus entry elements are best implemented when viewed as a common system. Entry designs were developed as part of the 2004 Landscape Master Plan. These illustrations are shown to the right.



Typical pedestrian entrance to campus



Typical landscape plan entry



Typical secondary entrance to campus

Landscape Areas: Campus Edges

The image and identity of the campus is expressed in the consistency of the campus edges, and the treatment of public and campus rights-of-way. The west edge of campus along Bay Road establishes the campus identity. Campus edges should create a distinctive, positive image for the University. Each edge should have its own character, yet use materials that are complementary to each other and to the surrounding campus context.

Bay Road has a wide setback, which complements the rural and undeveloped character along this corridor. As illustrated in the Landscape Maintenance Zones section, Bay Road falls within the Warm Season/ Low Maintenance Zone, which calls for wide swaths of grassland prairie. As University development extends towards Freeland Road, this prairie character should extend from Bay Road to Davis Road.

Pierce Road is planned for development and roadway improvements. This edge could take on a more urban character and blend with the native landscape plant palette that is present on other campus edges.

An example of a native planting that could occur on the Pierce Road edge

Native grass planting at Saginaw Valley State University

Native planting at the Starr Commonwealth Albion campus

Landscape Areas: Quadrangles

The central open spaces on campus are quadrangles, locations for formal and informal outdoor circulation and activities. They form the campus' iconic and organizational open spaces.

The SVSU campus has established a main and distinctive quadrangle area within the Central Core District of campus. This area lies between the Bell Tower and The Gazelle Fountain. A new quadrangle area should be incorporated in the North Academic District as development occurs.

Landscape treatment in quads should be simple, using walkways that parallel and define the boundaries of the quadrangle and diagonal walkways respecting desire lines. Simple, open, grass areas and tree massing should reinforce the open space. Shrubs and other small pockets of landscape should be avoided in quadrangles. Tree groupings can be formally or informally spaced, but the overall treatment should be to reinforce qualities of space and place within the quadrangle. Since they form the edges of the quadrangle, individual landscape treatment of buildings should reinforce the character of the quadrangle. Features such as fountains, monuments, art, and special site furniture can occur at selected intersections of walkways and in expanded pavement areas.

Quadrangle landscaping should also reinforce significant visual straight lines, points of connections, axial relationships, and building entrances. Pedestrian lighting, site furniture, and signage should all complement and reinforce the sense of a unified open quadrangle space.

The quadrangle within the Campus Core and elements within and immediate around are regarded as an economic value to the campus. They are often used in branding SVSU's unique campus identity. Therefore, protective measures should be implemented by the University. For example, permission to host events, hang banners, place tents or accommodate groups of individuals should be permitted thorough an events committee. A designated area should be used for events to ensure protection of trees and reduce compaction of soils. Banners, signs and other items should not be hung from trees as damage can occur, which will invite disease and ultimately loss of life to these campus gems.

Quads can contain artworks located on long, axial views

The campus quad at Indiana State University

Landscape Areas: Courtyards

While quadrangles are a larger part of the campus landscape fabric, courtyards are secondary spaces that serve as adjuncts to a building or a cluster of buildings. These spaces function with a close relationship to the building landscape. Courtyards should be considered as part of the building programming for any new construction project.

Landscape treatment in these zones can be more flexible and relate more to individual building design. These areas should include seating areas for informal study and should provide areas of sun and shade. Courtyard areas should offer a variety of landscape treatments that responds to the scale and use of the space and sets it apart from quadrangles. Consistent site furnishings and signage should be included when designing these spaces.

Numerous courtyards currently exist throughout the SVSU campus. For example the courtyard between Doan Science West and East, and the area just south of the Zahnow Library.

This courtyard is detailed with landscape plantings

The courtyard at Zahnow Library

Landscape Areas: Plazas

Plazas function as primarily paved areas for gatherings in areas of heavy and frequent pedestrian use. Plazas are usually located near building entrances and at the intersections of primary pedestrian walks.

This primarily open paved area should be located where the heart of campus activity occurs, the place where students instinctively gather. It should be designed attract different kinds of people for different purposes. It should offer many choices of things to do – socializing, protesting, eating, reading, raising consciousness, rallying for an impending game, playing, and interacting with art. These areas should not impede the motion of pedestrian traffic crossing through the site.

Some of the existing plazas on the SVSU Campus include the Gazelle Fountain area, and the space at the main entrance of the Aubrey Fine Arts Center/Marshall Museum.

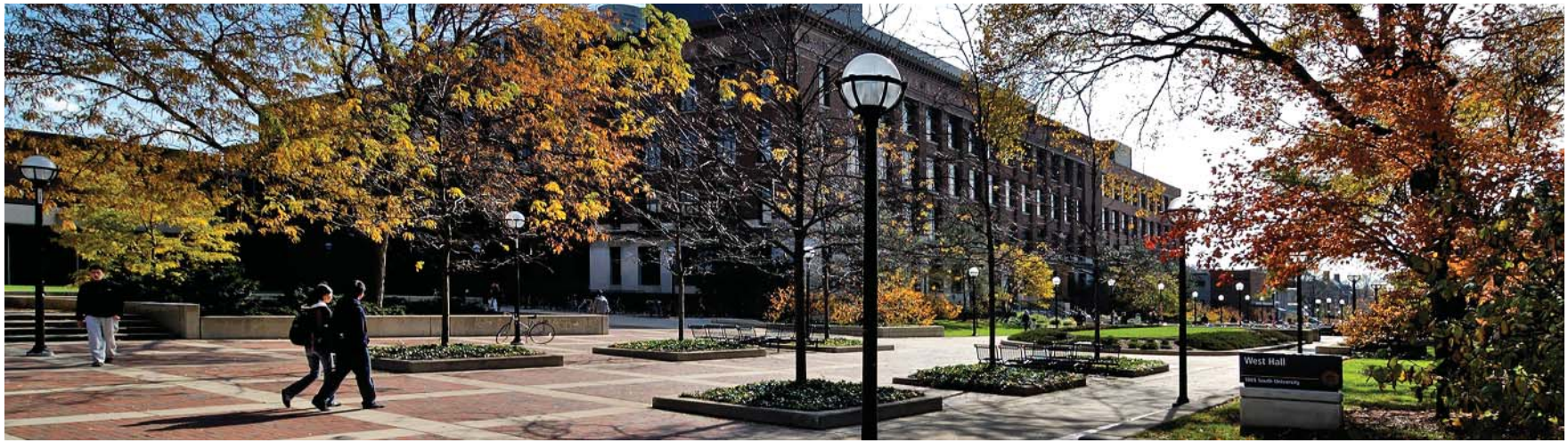
A program and intended use for the plaza should be clearly defined during the schematic design phase of the project.

Understanding how students are using or will use campus plazas is critical to designing them. All campus plazas should have:

- Clear definition of space through plantings, seating, elevation changes, or other landscape elements.
- Ability to move through plazas while maintaining the intent of the plaza activities.
- Minimal stairs.
- Views into and out of plazas, with clear sight line.
- Special surface textures and materials that define the space.
- Interactive and stimulating sculpture elements.
- Seating arrangements that support a variety of activities: intimate discussions, people-watching, quiet studying, group gatherings, etc.
- Plantings to bring a human scale and intimacy, define the space, and provide shade and incorporate stormwater infiltration strategies if conditions allow.
- Sufficient energy-efficient lighting.
- Trash and recycling containers.
- Power receptacles and internet accessibility.
- Slopes that are at least 1 percent for drainage but not more than 2 percent to meet ADA requirements.
- The relationship between the plaza and the surrounding buildings and significant landscape features should be an important consideration in the plaza design.
- The design should consider the microclimate of area, including sun exposure and seasonal conditions.

University Square, Madison, Wisconsin

Risman Plaza at Kent State University



Plazas are located at primary walk intersections

Landscape Areas: Athletic Fields

The landscaping around the athletic fields within the Athletics District and the intramural recreation fields should consist of large grassed areas defined by tree massing. Tree plantings around fields should create large, outdoor rooms that scale down the expansive open space. Deciduous tree leaves can interfere with athletic facilities, therefore, trees should be kept a minimum of 50 feet away from athletic or recreation fields. Landscaping should also serve as a transition from the fields to the adjacent neighborhoods.

SVSU currently uses stormwater ponds to irrigate the fields. If possible, this sustainable irrigation measure should be use with the addition of new athletic fields.

If site furnishings are utilized within athletic field designs, the guidelines within the Site Amenities section of this report should be followed.

Athletic fields should be buffered with tree massing.

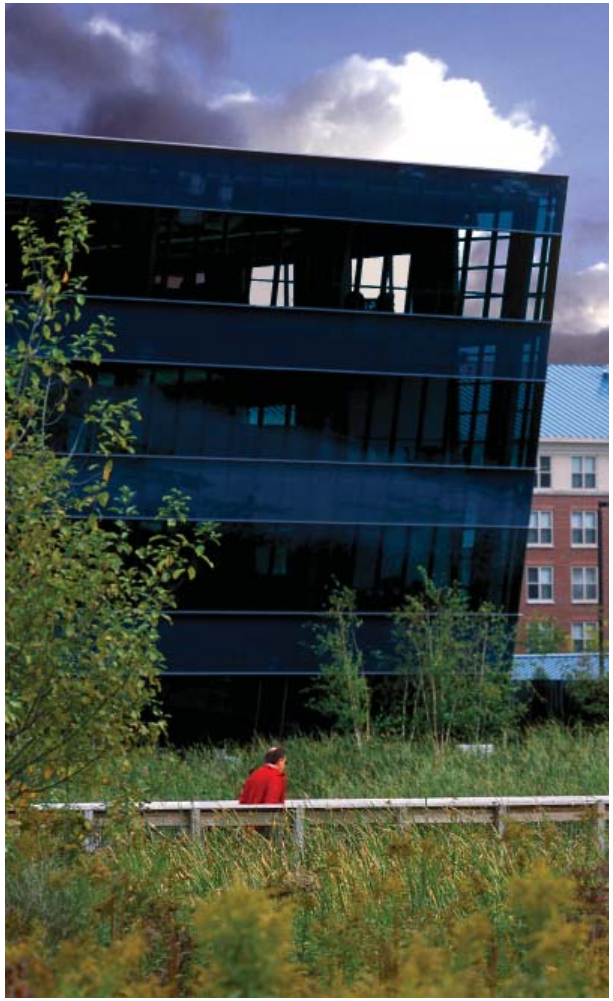
Landscape Areas: Natural Areas

SVSU is fortunate to have beautiful natural areas. As directed in the Master Plan portion of this report, the recreational path system that is in place on the northwest quadrant of campus should continue to the east. The native area just west of the Health & Human Services building is an example of how this area should be continued.

As new buildings are incorporated into the campus fabric, the architect should consider placement of low-mow, native or a prairie type ground plane instead of traditional sod. Use of these types of plants would reduce maintenance and is intended to be incorporated only in perimeter areas of campus. See the Landscape Maintenance Zones plan within this report for reference to specific landscape areas.

All recreational paths should be ADA accessible

Bike paths should be wide enough to accommodate pedestrians and bikes



Native landscapes should be used at perimeter campus areas as building development occurs

Landscape Areas: Stormwater

The quality of stormwater leaving a watershed is at its highest when the land is in a pre-developed state. The campus should use Best Management Practices (BMP's) for stormwater management for all University projects, including new and existing buildings, roads, sidewalks, and landscaping or where significant run-off is expected. Any changes to the existing stormwater run-off or the storm sewer system should also employ BMP's for stormwater management.

When planning a project, the University should consider the long-term health of regional streams and rivers, such as the Saginaw River and the Kochville Drain, as these areas eventually drain to the Saginaw Bay, which has the longest freshwater wetland coastline in the United States. Stormwater design should follow requirements at state and local levels.

Principles for stormwater management include the following:

- The infiltration of stormwater should be captured close to where it falls. Infiltration along street corridors, parking lots and buildings can provide infiltration capacity while directing heavier rainfall flows toward larger treatments systems such as detention ponds, and rain gardens.
- Untreated stormwater should not be discharged directly into the Kochville Drain, or any other water course.
- Stormwater run-off should be made into a visible and visual amenity on campus.
- Provide opportunities to collect and store rainwater for irrigation.
- Use stone and other materials to slow rainwater run-off at discharge pipe locations to settle out particulates and larger debris before subsequent treatment practices.
- Use native plantings where appropriate to further filter stormwater run-off, removing excess nutrients, contaminants, and organic materials that might impact water bodies.

Stormwater management techniques attempt to slow down the quantity of stormwater run-off from large rainfall events, mimic pre-development run-off conditions by managing small stormwater events at, or close to, where rain falls, and minimize impervious surfaces. In order to do this, several strategies are described below.

Rain Gardens

Rain gardens, infiltration planters, bioswales, and constructed wetlands are examples of infiltration facilities that will help filter stormwater from small rainfall events. By encouraging and assisting infiltration, these facilities enhance water quality, reduce run-off rates, recharge the groundwater system, and create habitat.

Pervious Pavements

Pervious pavements allow the infiltration of stormwater in areas that would otherwise be impervious. Pervious pavements allow groundwater recharge by infiltrating water directly back into the underlying soils. Pervious pavements can be applied to walks, parking lots, and plaza areas. The materials for pervious pavement can be concrete, asphalt and paver units. The design architect or engineer should insure that underlying soils can tolerate infiltration.

Green Roofs

Green roofs have proven effective at managing small rain events and slowing run-off for large rain events. These systems use plant materials on otherwise impervious surfaces. The plants capture most of the rainwater and prevent it from entering the stormwater system, mimicking pre-development conditions.

Detention Basins

Detention basins manage large storm events by providing added capacity to a drainage system. At-grade basins within open space can be designed as an added amenity on campus, while solving stormwater needs. A detention basin restricts stormwater flow, creating benefits downstream due to reduced run-off rates.

Underground Detention

Underground detention is an option when space is limited for open systems. Underground detention usually works best when covering a

larger footprint such as an athletic field or parking area. Underground detention can also be used for irrigation applications.

The methods described above are recommendation and should not limit the creativity and innovation of the designer of these stormwater systems. As new Best Management Practices are developed, these methods should be evaluated and considered as options for reductions in stormwater run-off.

Stormwater island in parking lot

Infiltration planter

Rain garden detention with native plant material

Greenroof application

Landscape Areas: Building Landscaping

Plantings should not mask building entrances, but enhance and focus attention to the entrances and other architectural features. Public entrances to buildings should be easily located and accessed.

Outdoor transition space should be designed between the building approach and indoor lobbies. This transition space should include materials that relate to the materials used in the building interior or exterior walls. This space should also provide some protection from rain, sun, and wind.

Small landscaped areas should be located near the building entrance to enhance the building occupants during who are enjoying lunch breaks outside the building entrances or gathering between classes. These areas should be relatively intimate in scale and should frame views out of the space.

Landscape treatment adjacent to buildings should be simple with a limited plant palette. Planting beds and foundation planting should be in areas that serve to transition open space areas to individual buildings. Massing and size of planted areas should be in scale with buildings and complement or reinforce the landscape of the open space areas and the campus landscape character.

Plantings should not be located in a way to create hazardous conditions or create dark pockets near entrances and along sidewalks at night. To maintain safety, tree and shrub heights should be maintained to ensure adequate sight availability.

Large plantings should be located far enough from building walls to allow for air movement. Plantings should not completely obstruct views from building windows. Plants located near windows should be near enough to filter glare and bright sunlight, but distant enough from windows to maintain views. To protect building façade from lawn mower damage provide mulched planting beds or gravel borders around buildings.

Building entrances should not be masked by plantings

Foundation plantings should be low and not obscure views

Landscape Areas: Plant Palette and Design

Tree, shrub, and perennial plantings should reflect the existing character of the campus. The campus architect should direct the design team specifically as to what plants are successful on campus based on past experience. SVSU has a high water table, so trees and shrubs that can tolerate these conditions should be considered. Native plants or cultivars of native plants should be used as a primary palette. These plants should be chosen to reflect a local and regional context. Invasive species (exotics) should never be used. The designer should refer to the state University extension and the state forest service for a current list of plants that should be avoided.

Generally, planting design should also take in to account the following considerations:

- Planting design should incorporate planting in masses, but offer enough variety that if disease should occur, replacement is economical and not devastating to the campus.
- Plant sizing should take into account safety of pedestrians and maintain clear sight lines whenever possible. For example, large shrubs that obstruct building entrances and enable hiding places should be avoided.
- Consider canopy tree growth and the placement of lighting fixtures and surveillance cameras.
- Vegetation (except lawn areas) near walkways should be designed to not encroach onto the path of pedestrian travel.
- Refer to the Building Landscaping section of this report for more information.

Color massing in plant design should be used where appropriate

Mass plantings create a bold statement that is fitting within a campus landscape

Pedestrian & Vehicular: Pedestrian Walks

The SVSU campus should be developed to prioritize pedestrian travel over other motorized transportation methods. The campus should establish a hierarchy of networks, typology, scale, consistency of materials, and structure of pedestrian walkways to help to define and articulate open spaces and enhance campus wayfinding.

Network

The pedestrian walk network should be continuous and aligned so that it connects major destinations and offers pedestrians a safe, interesting, and relatively direct means of travel across campus. Pedestrian walks should generally follow the natural desire lines between destinations, with the recognition that in most cases 90-degree turns are not comfortable and therefore not realistic for pedestrian movement. Landscaping can be used to encourage a certain pedestrian movement. It is impractical to add new walks in all such instances, but where pedestrian volume is greater than the width of the existing walk, additional pavement should be added. Conversely, walkways not being used should be removed rather than be repaired. Segments that are repetitive of other nearby paths and do not follow pedestrian desire lines should be removed.

Pedestrian walks should connect major pedestrian origin/destination points and major building entrances. Pedestrian walks should interconnect with existing and proposed quadrangles, respecting major desire lines across open spaces, but otherwise preserving large unbroken lawns.

To the extent possible, all pedestrian walks should meet ADA requirements and should not have stairs. Service drives should not cross pedestrian walks and should be minimized. Service vehicles should never park directly on walks, but instead at designated service parking spaces located adjacent to walks with appropriate landscaping to minimize the negative visual effect to pedestrians.

Hierarchy

The campus should implement a hierarchy of walks. Select few primary pedestrian walks should connect all areas of campus and collect large volumes of students. These primary walks should be given dominance over other walks in width and materials. Secondary walks should connect the primary walks with destinations.

Junctions and Crossings

Junctions of primary pedestrian paths should accommodate a significant volume of pedestrian traffic and function as major collection points. At significant intersections and connecting points, expanded plazas can serve as focal points and meeting places (see plaza design guidelines). Landscaping around junctions should be more urban in character, with tree pockets, art installations, seating and special features, such as specimen plant material, a wayfinding element, a fountain, or a kiosk.

Walks should merge when approaching roads, to condense the number of street crossings. When pedestrian walks cross vehicular roads, it should always be at a right angle with an open view of the street. Standard pavement markings or special street pavement materials should be used to highlight pedestrian movement at major pedestrian crossings, including each location where primary pedestrian walks end at a road or other vehicular route. Crosswalks and barrier-free ramps that are constructed to meet ADA, state, and local code requirements should be constructed at roadway intersections. Landscape plantings within these areas should meet requirements to maintain visual sight lines for pedestrian safety. Vegetation should be designed and installed to avoid encroachment onto walkways.

Width and Materials

The width of the pedestrian circulation routes should vary and be established by hierarchy, usage, and urban design considerations. Walks must be wide enough to accommodate anticipated pedestrian volumes. Consistent walkway widths should be maintained across campus. Primary pedestrian walks should be at least 12 feet wide, and secondary walks should be 8 feet wide. In cases where primary pedestrian walks accommodate an unusually large number of people or multiple transportation types or are an emergency vehicle access

route, the walks should be wider to accommodate these types of vehicles, it is recommended that these types of walks be at least 18 feet wide.

Consistent walkway material is a critical element for achieving campus unity. Existing paving materials and patterns should be continued as a means of maintaining visual continuity and quality. As a base material, concrete should be the dominant walkway material for durability and ease of maintenance and repair. The finish, scoring, and connection details should be consistent and uniform. Heavily articulated and patterned pavement is discouraged. Paved pedestrian building entrance areas should be simple and relate to overall campus walk pavement. Walkways and special pavements should not become subservient to individual buildings and their materials.

Paving materials of contrasting color and texture should only be used in special areas, such as junctions and termination points of primary paths and at major building entrances. Special materials, patterns, banding, etc., may be used to articulate these special areas. These special paver walks should ideally utilize a flexible base system, due to its lower initial cost, proven durability, and ease of accommodating future alterations. Brick may be use on a project-specific basis. In addition, a permeable pavement system may be use (such as brick pavers) where soils and usage allow this type of application.

All primary and some secondary pedestrian paths may be used by maintenance and emergency vehicles. In addition, walks near residence halls need to be designed to also accommodate move-in and move-out vehicle traffic. Increased pavement thickness and reinforced thickened edges should be used to support these vehicles.

Recreational trails should have different materials and widths depending on the type of recreation. However, multi-use paths and regional connecting trails should be at least 8 feet wide or wide enough to accommodate bicycles and pedestrians. These types of trails can be asphalt or crushed stone.

Campus pedestrian crossings should be perpendicular to the street and be delineated.

Pedestrian & Vehicular: Pedestrian Walks

Primary pedestrian walkways should be wide enough to accommodate a large pedestrian volume

Special paving can be used at building entrances for contrast

Pedestrian & Vehicular: Shared-use Path

As suggested in the Master Plan, a section of College Drive in the heart of campus will be converted to shared-use path to accommodate pedestrians, bicycles, service vehicles and an occasional emergency vehicle. These pathways will maintain a width to accommodate service and emergency vehicles, but be pedestrian focused with amenities that reflect the scale of the pedestrian user. Service vehicles should limit their travel time on these pathways to non-peak class changing times if possible.

These paths should be at least 18 feet wide, contain no curbs, and be delineated with a combination of special pavers and concrete, include landscape elements such as canopy trees spaced 30 to 40 feet apart. Benches, lighting and other appropriate site amenities should be included and reflect a pedestrian scale. Bench pads or seating areas must be set back at least 3 feet from the edge of the main path. Care must be executed in the design of these pathways to not inhibit the safe passage of emergency vehicles.

This pedestrian mall at Kent State University has detailed landscape and site amenities

Shared-use paths can contain special paving

Pedestrian & Vehicular: Bicycle Network

Bicycle commuting and circulation are important contributors to reducing the negative impacts from vehicle trips and parking, including impervious surfaces, emissions, and the heat island effect.

The campus should have a connected and complete bicycle network. The network should consist of off-street recreational trails (where appropriate), bicycle friendly streets with on-street bicycle lanes, and primary pedestrian walks. Bicyclists should not be permitted to use secondary pedestrian walks. The bicycle network should contain no stairs.

The bicycle network should connect major bicycle origin/destinations, outdoor bicycle parking areas, access points to indoor bicycle storage areas, and bicycle access points from off-campus (see also Bike Parking section). The bicycle network should connect directly and seamlessly to the regional system and any future bike route plans.

Bike routes and paths should employ and follow recommendations from the American Association of State Highway and Transportation Officials Guide for the Planning, Design and Operation of Bicycle Facilities.

Bike planning should also include a facility to store bikes long-term (over the summer for example, for a fee), and self-service bike maintenance stations.

Providing a complete network of routes, paths and facilities will promote a successful bike friendly campus and help reduce on-campus vehicular trips.

Delineated bike lanes on the Michigan State University Campus *(image courtesy of MSU Bikes)*

An example of an air fill-up and repair station

Pedestrian & Vehicular: Bicycle Parking

Bicycle parking should be a vital part of the design of each new building and facility, not an afterthought. The campus should have two levels of bicycle parking: short-term and long-term. Short-term bicycle parking will serve students and others making frequent stops. Students are expected to use a bike throughout the day, biking between residence halls, other campus buildings, and to off-campus services. Short-term parking should be located near each public non-residential building. All short-term parking should be secure, and at least 25 percent of short-term bicycle parking should also be weather-protected. See the Site Amenities Standards for more information on criteria and location for short-term parking.

A second type of bicycle parking is long-term parking, which provides faculty, staff, and off-campus student bike commuters a secure and weather-protected place to store their bicycles. Commuters are expected to park their bike in long-term parking once a day, walking the campus throughout the day. At least one centralized long-term bicycle parking location is needed on campus, since bicycle commuters are generally willing to walk a short distance if they are confident the parking is secure. At centralized long-term bicycle parking locations, all parking should be secure, and at least 25 percent of long-term parking should also be weather-protected.

Long-term parking should also be located at every residence hall district. Each residence hall should provide secure bicycle parking for 15 percent of hall residents, with at least 50 percent weather-protected. Long-term parking may occur within residence halls such as in a basement. Wall-mounted racks are well suited to indoor storage.

Secure bicycle parking should include a bicycle rack and will be well-lit. Additional security is possible when long-term bicycle parking is located in highly visible locations such as within view of streets and pedestrian walks. If necessary, areas enclosed by a fence with a locked gate provide additional security.

Weather-protected bicycle parking shelters bicycle frames, seats, and tires from damaging rain and sun and further encourages bicycle use. The cover should be designed to protect the bicycle from rainfall and be at least 7 feet above the floor or ground. Cover can be provided by bike lockers or locating bicycle parking under existing overhangs or awnings or under overhead building connections. Free-standing bicycle shelters are also acceptable and should be designed to withstand wind loads, be well lit, and not obstruct visibility from streets and pedestrian walks.

Interior bike parking

Weather protected exterior bike parking

Pedestrian & Vehicular: Vehicular Parking

Although this is not an issue on campus currently, surface parking should never occur within the academic cores of campus. Parking spaces within the main campus core should be limited to service and barrier free parking and all other parking should occur in perimeter parking lots. Vehicle parking should consider the following guidelines:

- Pedestrian access to and from lots should be carefully considered to minimize vehicular-pedestrian conflicts.
- Where parking lots border major sidewalks, campus roads, or residential off-campus neighborhoods, the edges of lots should be landscaped to provide a buffer zone and vegetative screening. However, vegetation and berming should allow clear views.
- The interior should incorporate wide islands with appropriately-scaled plantings to soften the visual effect of the lot. Interior landscape islands should provide shade, reduce heat of large paved area, and allow stormwater infiltration.
- Lots should be appropriately lit to increase safety. Lights should be appropriately shielded to minimize glare and light pollution.
- Entryways and vehicular circulation should be easily accessed with safe viewing angles for oncoming traffic, and clear signage should occur at each main entrance.
- Lots should have the appropriate number of service and barrier free spaces accommodate the surrounding buildings.
- Lots should be double-loaded for the most efficient parking layout.
- A typical parking space should be 9 feet wide by 18 feet 6 inches in length (to back of curb). Current ADA standards should be followed for barrier free spaces in these areas.
- Adjacent walks next to head-in parking bays should allow enough width for pedestrian passage in case of vehicle bumper overlaps.

Low berms and vegetation are a good way to disguise parking lots

Pedestrian & Vehicular: Streets & Drives

The campus should establish a consistent streetscape and street hierarchy to support identity, order, and structure for the campus. The campus should establish clarity for vehicular circulation routes by utilizing landscape treatment on the internal circulation routes. Landscape treatments should project a campus image, promote pedestrian/bicyclist visibility and safety, and encourage a lively urban texture.

In contrast to the formal tree placement along the major pedestrian walks and within major open spaces, the landscaping for on-campus streets should be informal. The street alignment should not set the landscaping pattern, but rather intrude into the campus environment. The landscaping should emphasize the predominance of the pedestrian over vehicles.

Whenever possible and as conditions allow, sidewalks should border both sides of all campus streets. Outside the vehicle and pedestrian travel paths, the ground plane should be predominantly lawn. Street landscape treatments should be coordinated with walks, lights, and signage.

Street design should consider using Best Management Practices to infiltrate stormwater on-site. Integrated stormwater treatment reduces the volume and velocity of stormwater reaching the Kochville Drain and Saginaw River, and improves water quality. When designing campus streets, the University should consider Best Management Practices for stormwater, including:

- Street design: Preserve wetlands, buffers, high-permeability soils, and minimize impervious areas.
- Swales: Infiltrate stormwater and reduce flow velocity, but ensure pedestrian convenience through design.
- Permeable pavement: In parking areas consider permeable concrete, permeable asphalt, permeable interlocking concrete pavers, and grid pavers.
- Service drives and areas should be consolidated whenever possible, and take into consideration pedestrian movements.

This campus road at Grand Valley State University has an informal landscape treatment

Site Amenities Standards: Introduction

These site amenities standards contribute to a positive campus character and achieve a unified and clearly defined campus. Site furnishings such as pedestrian and street lights, benches, trash/recycling receptacles, and bicycle racks enhance the functionality of campus. But when those site furnishings are coordinated, they contribute to a sense of orientation and achieve an increased sense of order.

Like the overall campus design guidelines, the site amenities standards, recommended design family, and specific units should be used throughout campus.

The campus should limit its site furnishings to only one family if possible. A single-family of furnishings works together in terms of their materials, style, detailing, color, and scale so that they establish a unified, cohesive image. The family of site furnishings recommended in these guidelines preserves and enhances the aesthetic characteristics of the existing campus by extending the bronze finish of existing furnishings while better coordinating design and improving materials. Some sections recommend other furnishing manufacturers as an alternative source.

Existing campus site furnishings vary in age, condition, style, and material. Existing furnishings that are outdated, vandalized, or deteriorated should be replaced as needed with the recommended style until all site furnishings conform to the design guidelines. Implementation of these recommendations will occur over time through separate physical improvement projects and regular replacement. It is important that University representatives take advantage of opportunities to replace damaged or worn-out units with the recommended replacement units so that consistency is maintained.

The site furnishing standards should increase the efficiency and efficacy of limited site facilities campus budgets. The selection and installation criteria will minimize maintenance efforts and costs. Limiting site furnishings to a single-family will reduce the need of storage of spare parts and reduce staff training needs, thus achieving a higher level of cost effectiveness.

To ensure that current site selections will be long-term investments, the site furnishing standards recommend traditional designs that are not fads and suggest styles and sources that will be available for the long-term. The standards simplify and expedite purchasing decisions.

The site furnishing standards are organized under the following headings:

Criteria

General design considerations to follow in selecting equipment.

Location

Special considerations regarding where the specific unit should be used in the campus setting.

Source

Recommended sources and styles.

Site Amenities Standards: Site Lighting Standards

Criteria

- Lighting design should organize, articulate, and enhance the campus setting and enhance safety and security.
- Pedestrian lighting should be of a different scale from street and parking lot lighting.
- In all other areas of campus, the style of the fixture should be neither traditional nor contemporary but a blend of the two to both reflect the past as well as look ahead to the future.
- Bollards are discouraged for path lighting due to potential for glare, lack of usable vertical light on faces and difficulty of maintenance. A full cutoff fixture should be utilized to reduce light pollution in the night sky and to reduce glare.
- The campus should choose lamp types that have superior lamp life ratings.
- Judicious facade lighting is encouraged.
- For pedestrian lighting, the campus should also consider a LED or induction bulb for long-term life and aesthetic reasons. This type of light emits a white light which allows better recognition of facial characteristics at greater distances and provides better color representation of architectural materials, cars, clothing, etc.
- LED lighting has many benefits, including a longer and more durable life, use of less electricity (up to 80 percent less) and are more cost effective in the long run.
- The University should complete study of the costs and benefits of each source to determine what is best for campus safety, longevity, reduced maintenance, and energy consumption.

When selecting a fixture, the maintenance and cost effectiveness considerations should include:

- Limiting the number of luminaire and pole types;
- Ease of maintaince, service, and replacement.
- Pole/luminaire height.
- To facilitate lawn maintenance, a concrete maintenance collar should be created at the base of the pole. The collar should be slightly above ground level to allow for mower overhang during lawn cutting, thus minimizing hand-trimming.
- To avoid long-term maintenance concerns, light fixtures imbedded in the ground or in paving should not be used except in extraordinary lighting designs and locations.
- Attached banner mounts should be utilized in specific areas to identify special University events, campus entry or edges, or designate other special use areas.
- Smooth, round poles are recommended since square poles are not as strong and aligning multiple square poles is difficult.

Location

- Strategic placement of units will optimize light distribution and minimize the number of units required.
- Pedestrian lighting should be located along pedestrian paths and spaced as determined by a photometric plan. Care should be taken in locating the poles to ensure consistent alignments and setbacks (5 feet) from walkway edges. All fixtures should be set plumb and level at a 14 foot height.
- Light locations should also coordinate with tree placement, as canopy trees should not interfere with light placement.
- Luminaires can be located on top of brick columns such as in gateways, in plazas, on curbs, or in paved areas.
- Multiple luminaire configurations should be utilized for special effects where a greater level of detail and attention is desired.

Source

Pedestrian areas:
Architectural Area Lighting
Largent SLVTH Series;)Pole: 3’
round aluminum; Color: black matte

Site Amenities Standards: Street and Parking Lot Lighting

Criteria

- Lighting design should articulate the campus vehicular circulation system (streets and parking lots) for user orientation and safety.
- Units with standardized style, color, height, diameter, and location should be simple and unobtrusive. Since luminaires and poles are visually prominent during the day, a coordinated system compatible with other site furnishings is needed.
- Concealed light sources for street and parking lot lighting are desired. Distracting glare is to be minimized; the lit surface is important, not the source itself.
- Light distribution should be controlled to optimize intensity and ensure uniformity of illumination.
- Illumination appropriate to the vehicular use should be selected. Driving requires recognition of vertical objects in the field of vision; therefore, vertical illumination is equally important as horizontal illumination. Intersections require higher levels of illumination.
- See the chart on the following page for recommended vehicular footcandle (FC) levels.
- Smooth round poles are recommended since square poles are not as strong and aligning multiple square poles is difficult.
- Maintenance and cost effectiveness considerations include:
  - A limited variety of luminaires is desirable to simplify maintenance requirements and stocking of replacement parts and units.
  - A quality lighting plan will improve cost effectiveness by optimizing intensity and distribution with the least number of fixtures.
  - Lighting fixtures must be safe to maintain in difficult locations.
  - The campus should choose lamp types that have superior lamp life ratings.

Location

- Streetlights are to be regularly spaced along major streets and offset from the road a consistent and safe distance.
- Parking lot lighting should be at sufficient levels of intensity for safety; the poles should be located in planting islands so they are less visually obtrusive, however to maximize parking efficiency, the poles should be set on 3 to 4 feet high concrete bases to protect them from damage by vehicles.

Source

Street and parking areas:
Kim Lighting, Archetype Series, SAR or AR Series; Pole: round aluminum pole as per manufacturer recommendation; Color: black

Site Amenities Standards: Site Lighting Specifications

Pedestrian site lighting:
Architectural Area Lighting,
Largent Series

Street and parking lots:
Kim Lighting, Archetype Series

Illuminance Guidance Chart

Area Type	**Target maintained illuminance at night**	**Max:Min not to exceed**
Building entrances	10 FC at entrance within 15 feet of entrance, 5 FC transition lighting	3:1
Building facades	0.5 - 2 FC (vertical)	8:1
Pedestrian paths and trails	1 FC min., horizontal, 0.8 FC min. vertical (not associated with parking) 6 FC, associated with parking	4:1
Parking areas and driveways	2.8 FC min. horizontal, 0.8 vertical	4:1
Maximum illuminance on paths or parking areas at night	10 FC maximum	
Maximum trespass outside perimeter of parking decks	0.5 FC maximum	
Maximum illuminance on focal objects such as art or featured landscape objects	20 FC maximum	
Unoccupied spaces	1-2 FC	6:1

Site Amenities Standards: Emergency Call Boxes

Criteria

Emergency Call Boxes (ECB's) have the following functional requirements:

- Equip ECB stanchions with a blue light strobe that is lit at night and will strobe when in alarm.
- Hardwire communication wire and cable to ECB.
- The ECB area should be lit to provide adequate illumination at night.
- Coordinate with existing and planned video coverage to ensure the ECB is under video surveillance.
- Mounting the ECB so that its easily visible (no trees or scrubs obscuring line of sight)
- Have eight hours of battery back-up.
- Each unit should be properly ground. For tall pedestal units, install a ½ inch by 8 foot grounding rod and tie it to the steel bollard
- The ECB should be activated by the push of a button, and immediately calls emergency responders.
- Coordinate with Security Management System to automatically identify location of ECB when in alarm.
- Provide hands free communication on the caller's part.
- ECB's should be located so that they can be ADA accessible per the Americans with Disabilities Act, Accessibility Guidelines for Buildings and Facilities.

Location

The placement of ECB's will depend on several factors:

- ECB's should be no further than 250' apart.
- Provide ECB's at outdoor areas such as parking lots, pedestrian walkways, and gathering areas such as courtyards and plazas.
- A person should be able to reasonably see an ECB from anywhere on campus. If a call box is not in the line of sight because of either location or visual obstruction, a new ECB shall be placed.

Source

Talk A Phone, Campus Emergency Phone Tower: Model number EPT-MT/R; Color: brown

Talk A Phone emergency call box

Site Amenities Standards: Benches

Criteria

- Style should be clean and simple, and add to the atmosphere of its surroundings.
- Benches should be structurally adequate to withstand extensive student use, inclement weather conditions, and most vandalism.
- Benches should be comfortable and functional.
- Benches should require little or no maintenance and be surface mounted.
- Benches should have backs for maximum comfort.
- Material of the bench should be powder-coated steel on a steel base for resistance to moisture, insects, splinters, cracks, and vandalism.
- Benches should contain mostly recycled material and be easily recyclable at the end of their useful life.
- If benches are placed on a separate concrete pad (adjacent to a walk for example), there should be sufficient room at the edge of the pad to accommodate a wheelchair. The bench should be offset at least 2 feet from the edge of the walk.

Location

- Along pedestrian corridors, especially where major pedestrian traffic is noted.
- In plazas and courtyards, benches should be organized with other site elements such as light poles, trash receptacles, etc.

Source

Landscapeforms:
Metal, backed, armless bench, Plexus Series; Color: black

Landscapeforms Plexus bench

Site Amenities Standards: Cafe Table Ensembles

Criteria

- Style should be clean and simple, and add to the atmosphere of its surroundings.
- Cafe tables should be structurally adequate to withstand extensive student use, inclement weather conditions, and most vandalism.
- Seat area should be comfortable and functional and can be backed or backless.
- Umbrellas can be added if the tables are in an exposed environment.
- Cafe tables should require little or no maintenance and be surface mounted.
- Material should be powder-coated steel on a steel base for resistance to moisture, insects, splinters, cracks, and vandalism.
- Cafe tables should contain mostly recycled material and be easily recyclable at the end of their useful life.
- There should be an appropriate amount of ADA accessible tables available in the dining area.
- Free standing tables and chairs are not recommended.
- Umbrellas, if used, should be metal.

Location

- In outdoor eating areas or plaza spaces directly connected to a facility that provides a food service.
- Cafe table ensembles should be coordinated with other site amenities.

Source

Landscapeforms: Carousel Series (with optional Solstice Sunshade); Color: seat and table base to be black, silver, cranberry, white or ocean. Umbrella color can match or be contrasting color listed above.

Landscapeforms Carousel Series with Solstice shade

Site Amenities Standards: Trash and Recycle Receptacles

Criteria

- Trash and recycle receptacles should be located where needed, but should remain visually inconspicuous.
- Receptacles should have a simple design style, be an appropriate size for anticipated use levels, collect trash, glass, and paper, and have an internal canister with lid for trash control and ease of trash removal.
- The unit should be sturdy and secured to discourage vandalism and to extend the life of the unit. Installation will vary according to location.
- Trash and recycle collection schedules should reflect waste receptacle capacity and use levels.
- Glass and paper recycling receptacles should be integrated into the trash receptacles or be located adjacent to trash receptacles.
- Ash urns should be part of the trash unit.

Location

- Receptacles should be located at the intersections of major pedestrian walks, in plazas, courtyards, vehicle and bicycle parking areas, at building entries, and where groups of pedestrian seating are provided.
- Receptacles within athletic areas should be located adjacent to bleachers, fence gates, restroom facilities, and other building entrances.
- The units should be placed contiguous to walks and on a concrete surface extending outward from the walk. The unit should be level and firmly secured to the ground.
- Trash and recycle bins should be located next to each to encourage recycling.

Source

Trash: Landscapeforms Plexus Series 40" with side opening; surface mount; Color: black
Recycling: Landscapeforms Plexus Series 40" with round side opening and recycling placard; surface mount; Color: silver
Residential areas: Landscapeforms Sort Series

Landscapeforms Plexus trash receptacle, color to be black

Landscapeforms Plexus recycling receptacle, color to be silver

Site Amenities Standards: Bicycle Racks

Criteria

- A simply designed bicycle rack having little visual impact is preferred. When bicycles are not present, the rack should be relatively inconspicuous.
- The rack should accommodate a wide range of bicycle frame types, sizes, wheel sizes and locking apparatuses including a U-shaped shackle lock. The unit should allow the frame and both wheels to be secured. The rack should hold the bicycle frame, not just a wheel.
- The unit must be structurally adequate to withstand most vandalism, extensive student use and inclement weather conditions. It should be covered with material that will not chip the paint of a bicycle, and not have sharp edges.
- To promote year-round biking, some bicycle parking should be covered with a roof or similar covering, using bicycle lockers, or within a building.
- Most bicycle racks should be permanently secured to the ground per manufacturer's recommendations. In some locations where bicycle usage is low, or lessens during colder seasons, bicycle racks may be removed.
- Grouping the storage units allows for a greater level of aesthetic control and policing. Grouped bicycle storage areas should utilize a contrasting paving color or texture surface differentiating it from the main pedestrian walkways.
- Bicycle parking areas are ideal environments for pervious pavement. These areas should be properly illuminated and visually screened by a low hedge or site wall.

Location

- Bicycle parking may be provided in floor, wall, or ceiling mounted racks.
- Bicycle racks need to be conveniently located, yet separate from major pedestrian walks and building entrances. Wherever feasible, bicycle racks should be located contiguous to, but set back from, major pedestrian corridors since these corridors also serve as bicycle routes. Short-term bicycle parking should be located within reasonable, convenient, and prominent proximity to building entrances.
- If a bicycle rack layout includes two or more aisles, the design should assume a bike length of 72 inches, and allow a minimum of 48 inches for aisle space.
- Aisle width should be increased to 72 inches in high traffic bicycle parking areas where many racks might be located. These large parking areas should also have at least two entrances to ease congestion during times of high turnover. Bike racks should be spaced 3 feet apart. Bike racks should have at least 3 feet of clearance at the end of each row to allow for unobstructed passage of pedestrians.

Source

Brandir International Inc. Ribbon bike rack; in-ground anchor mount; Color: hot dipped galvanized metal, no paint application.

Brandir Ribbon bicycle rack

Site Amenities Standards: Bollards

Criteria

Bollards are used to mainly control the movements of vehicular traffic. Bollard choice should be based on the design program which may include issues such as unauthorized vehicular access into a plaza space or parking area.

- Other bollard types include those for loading dock areas which should be chosen mainly for driver visibility and durability.
- Bollard criteria should meet the program requirements. The aesthetic value of the bollard should be decorative in nature especially in highly visible and public spaces.
- Bollards with incorporated lighting should not be used unless the light source is completely hidden

Location

- Used in areas to control vehicular movements and to protect pedestrians. Bollard use and placement should be assessed by the design consultant.

Source

Landscapeforms Annapolis Series, bollard, 6" or 12" diameter; Color: black

Bollards located at service dock areas can be of a different manufacturer and color to remain visible to drivers and durable for use in these types of areas.

Landscapeforms Annapolis Series bollard

Site Amenities Standards: Fences and Gates

Criteria

Fences and gates are important site items that are incorporated into areas that need to be secure when not in use, yet be aesthetically pleasing and coordinate with the campus palette.

- Fences and gate materials should take into consideration the place on campus where the fence system is to be used. For example, a fence that is being incorporated into a high visibility area, may require higher quality materials opposed to a fence that may be securing a site that is not easily visible.
- The opacity of the materials is also another factor for design consideration depending on site factors, security, and program.

Location

- Ornamental fencing should be placed in high visibility areas where definition is needed.
- Chainlink fence should be used minimally and not along campus boundaries or vehicular thoroughfares.
- Chainlink fencing may be required around certain athletic fields.

Source

- Ornamental and chainlink fence components should be locally sourced if possible.
- Ornamental fencing should be galvanized steel, primed, and painted with a Tnemic type, and black paint.
- Chainlink fence heights and color should follow regulations for the use of the field. Otherwise, chainlink fence should be black vinyl coated. Design consultants should address wind loads associated with the height of the fence.

Ornamental fence at the Athletics complex

Site Amenities Standards: Site Walls

Criteria

Walls can be an important aesthetic and functional addition in site design. The design should take into account any site security and safety issues and allow for clear site views into the area.

Seat Walls

- Seat walls are to be designed to meet structural criteria for soils and winds. Seat walls should compliment surrounding architectural features and materials.
- Most seat walls on campus are of a brick material, and this should be a continued material of choice. It is preferable that seat walls have a cap that is either cast stone or limestone. Caps should be slightly pitched to shed water.
- Seat walls can contain piers if appropriate, but must be scaled in relation to the wall.
- Concrete seat walls may be used in instances where durability or cost is an issue, however, beveled edges, surface treatments, and other detailing should be incorporated.

Free standing walls

- Free standing walls should take into consideration the bearing capacity of the soils and wind loads.
- These walls should use the same types of materials as described in the seat wall section and not block views or impede the safety of pedestrians.
- Freestanding walls can also be combined with ornamental fencing and piers.

Location

- Seat walls can frame a courtyard or plaza and retain topography.
- Free standing walls are of various heights depending on the program of the site. These walls can be used as gateway elements, serve a function of security, or delineate campus boundaries.

Source

Materials for walls should be locally sourced if possible and be coordinated with the architectural guidelines for brick and stone materials within this report.

Implementation

In addition to specific building and site improvements, the Campus Master Plan identifies goals, intents, and planning principles. In order for these goals, intents, and principles to be realized, the University must establish a process for reviewing all design and construction projects that will impact the campus' physical setting.

These Open Space Design Guidelines should be followed for all campus improvements, from major building construction to routine landscaping and maintenance.

The ambassadors of the Campus Master Plan will be campus facilities staff, grounds services, and the University architect. These staff must represent the Campus Master Plan continuously and consistently at all levels:

- In daily decision-making, campus facilities planning staff must communicate the intent, principles, and requirements of the Open Space Design Guidelines internally to campus staff and campus leadership.
- For routine campus maintenance, these staff must train campus maintenance staff and service providers regarding these guidelines so that they are integrated into the everyday work of facilities and maintenance staff.
- For major building design and constructions projects, these staff must educate and guide the members of ad hoc committees that oversee major building projects, University staff and project managers, as well as design and documentation consultants. Adherence to these guidelines should begin at a project's identification, site selection, and programming stages, extend through preliminary and final design stage, and ultimately through project construction and completion.

Even when specific design decisions are not directly addressed in these guidelines, the design character of every campus project should strive to meet the Campus Master Plan's goals, intents, and principles. Interpretation will be required periodically and consultation from SmithGroupJJR should be sought as required.

These guidelines are not intended to restrict creative expression. Rather, they are intended to guide physical planning and design to unify the campus image and enhance livability.

Image courtesy of svsuphotos

6 acknowledgements

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