

DRAFT
COMMISSION ON UNIVERSITY SUPPORT
MEETING MINUTES
November 20, 2014
325 Burruss Hall

MEMBERS

Members Present: Richard Ashley, Cynthia Bonner, Mary Christian, Felicia Etzkorn, William Dougherty (for Scott Midkiff), Kathy Hosig, Joseph Jajonie, Ed Lener, Gary Long (for Lay Nam Chang), Maxine Lyons, Henry Murray, John Seiler, Savita Sharma (for Dwight Shelton), Linda Woodard (for Sherwood Wilson)

Members Absent: Betsy Flanagan, Chris Kiwus (with notice), Christina Lapel, Ken Smith, Ryan Speer, Tom Tillar

Guests: Steve Mouras, Jason Soileau

Recorder: Vickie Chiocca

1. Approval of agenda

Ms. Lyons called the meeting to order at 2:00 p.m. Ms. Lyons asked for motion to approve the agenda. Mr. Jajonie moved to approve the agenda. The motion was seconded by Mr. Dougherty and approved unanimously.

2. Announcement of approval of October 16, 2014 minutes

These minutes were approved electronically in advance of the meeting by the Commission membership.

3. Presentation on Campus Master Plan

Jason Soileau, Assistant Vice President for the Office of University Planning gave a presentation on the Campus Master Plan, with focus on Transportation Planning Initiatives (Attachment A). Detailed plans for the North Campus Precinct, Alumni Mall, Life Sciences District, CRC/Research District and Drillfield were included. The Bike Parking Master Plan was also reviewed.

Plans in the North Precinct include a new Classroom Building and a Multi-Modal Transit Facility (MMTF) with two bus transfer hubs to be located on either side of the existing parking garage. A traffic engineer was consulted to determine optimal conditions for routing traffic through the precinct. There will not be the need for an additional traffic light on Prices Fork; instead, based on traffic models, a roundabout, to be installed at Perry and Stanger Streets, was found to be the best option for improving traffic flow and pedestrian experience. The MMTF facility will serve the Blacksburg Transit and alternative transportation.

Key discussion points included:

- The Transportation and Parking Master Plan, including impacts of development on accessible parking(ADA)
- The necessity of new building projects versus renovations and leasing
- Incorporation of aesthetic elements such as foliage and water features

A parking study will be conducted in the first half of 2015 to look at ways to improve parking on campus. Mr. Soileau agreed to give the Commission regular updates on how the study progresses, in addition to other updates, as requested.

4. New Business

2014 Sustainability Plan – First Reading (Attachment B).

Steve Mouras gave an update on the 2014 Sustainability Plan and approval process.

The 2014 plan is an update of the existing Sustainability Plan, which is an implementation document to the 2009 Climate Action Commitment (CAC). The CAC was updated in 2013 and the sustainability plan needs to be updated to match the CAC. This addendum to the sustainability plan adds the Association for the Advancement of Sustainability in Higher Education (AASHE) assessment tracking tool called “Sustainability Tracking, Assessment, and Rating System” (STARS) as the university’s sustainability management tool. It is very comprehensive. Discussion followed and key points included:

- metrics included in the plan;
- emission reduction and alternatives to coal-fired power, such as, use of scrubbers, gas, and windmills;
- potential collaboration between university operations and the College of Engineering for reducing emissions and exploring alternative power sources.

The Sustainability Plan Update was sent to Commission members with the November meeting materials and will be re-sent by the recorder, at the request of several members. Members were asked to review the plan and discuss with their constituent groups, in preparation for the second reading and consideration for approval at the next meeting. Steve Mouras agreed to attend the next Commission meeting to address any questions.

5. Reports from Committee Chairs/Representatives

The Campus Development Committee met on October 16, 2014. Main topics included updates on construction and the Drillfield paths, the Parking and Transportation Master Plan, and the North Academic Precinct Pedestrian Study.

The Energy and Sustainability Committee met on October 27 and November 17, 2014. Topics included the Sustainability Plan, the STARS rating (VT is in top 8 percent

of all participating institutions), and programs to engage students in sustainability efforts, such as, “green” tailgating.

The Transportation and Parking Committee met on October 21 and November 18, 2014. Main topic of discussion revolved around a CRC employee who became a student and then had to pay a fee for parking. CRC employees park on campus under an agreement between the university and the related corporation, when acting in their professional capacity, but are expected to purchase a parking pass once enrolled as a student. The issue has been directed to administration for resolution. The recent Parking Survey has had a very high response rate.

6. Acceptance of Committee Minutes

The following minutes were accepted electronically in advance of the meeting:

Campus Development Committee

October 16, 2014

Energy & Sustainability Committee Minutes

September 29, 2014

Transportation & Parking Committee

September 23, 2014

7. Next meeting date

December 18, 2014 – 325 Burruss Hall

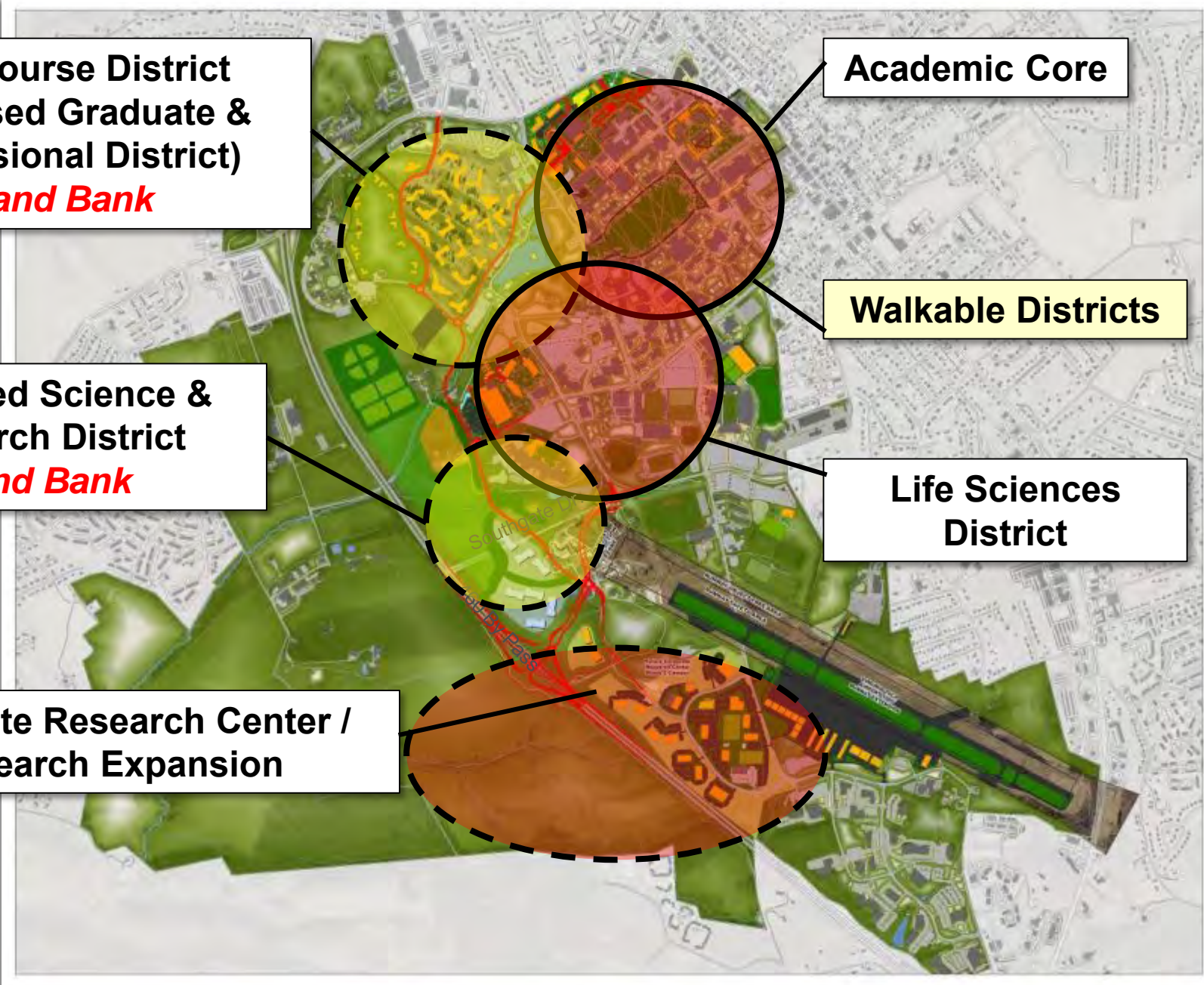
Adjourned at 3:05 pm.

Respectfully submitted,

Vickie Chiocca

***Master Plan Update
And
Campus Enhancements***

***Transportation Planning
Initiatives***



**Golf Course District
(Proposed Graduate &
Professional District)**
Land Bank

Academic Core

Walkable Districts

**Proposed Science &
Research District**
Land Bank

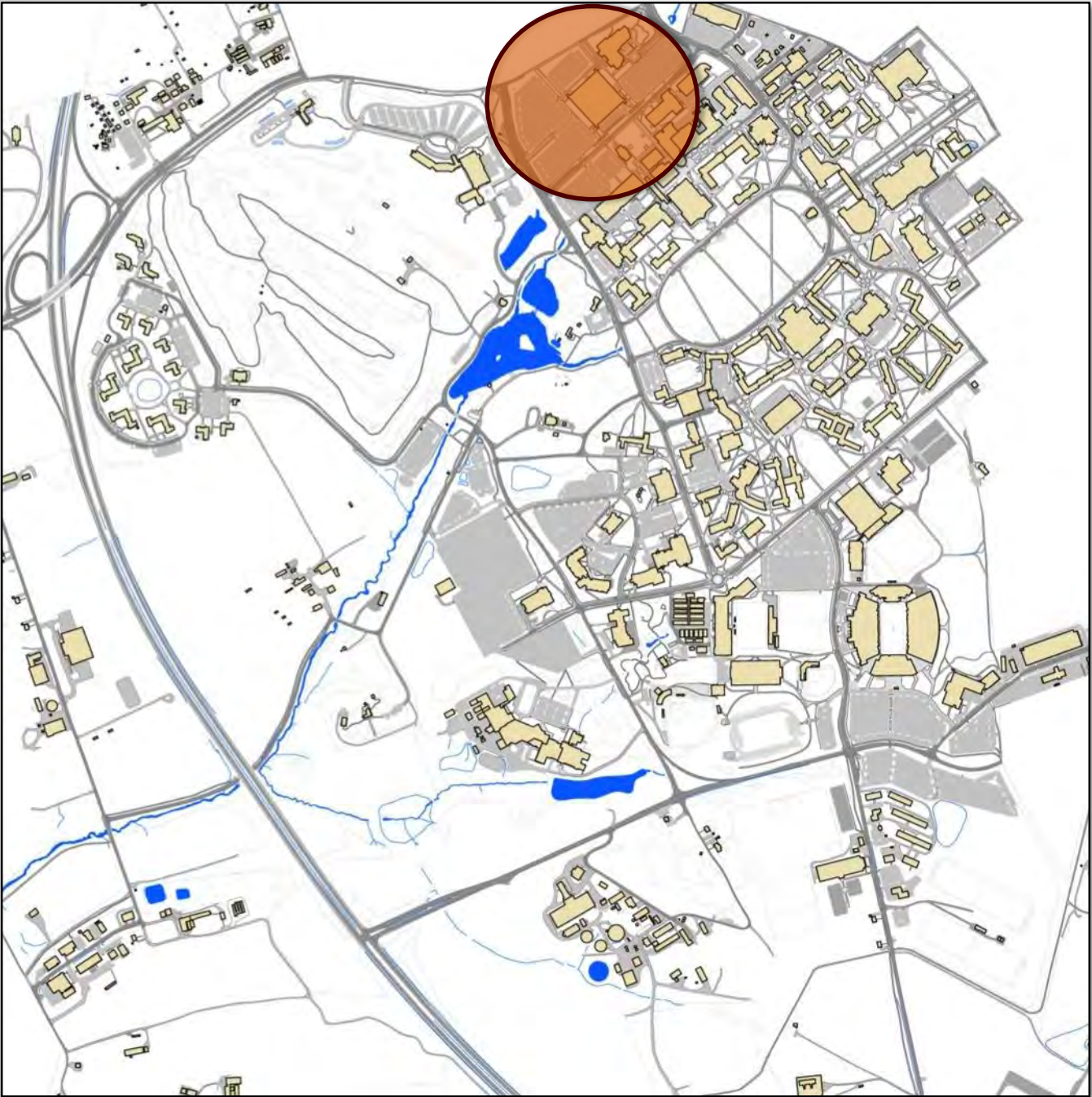
**Life Sciences
District**

**Corporate Research Center /
Research Expansion**

CAMPUS MASTER PLAN - Overview

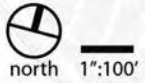
Academic Core

Upcoming Changes

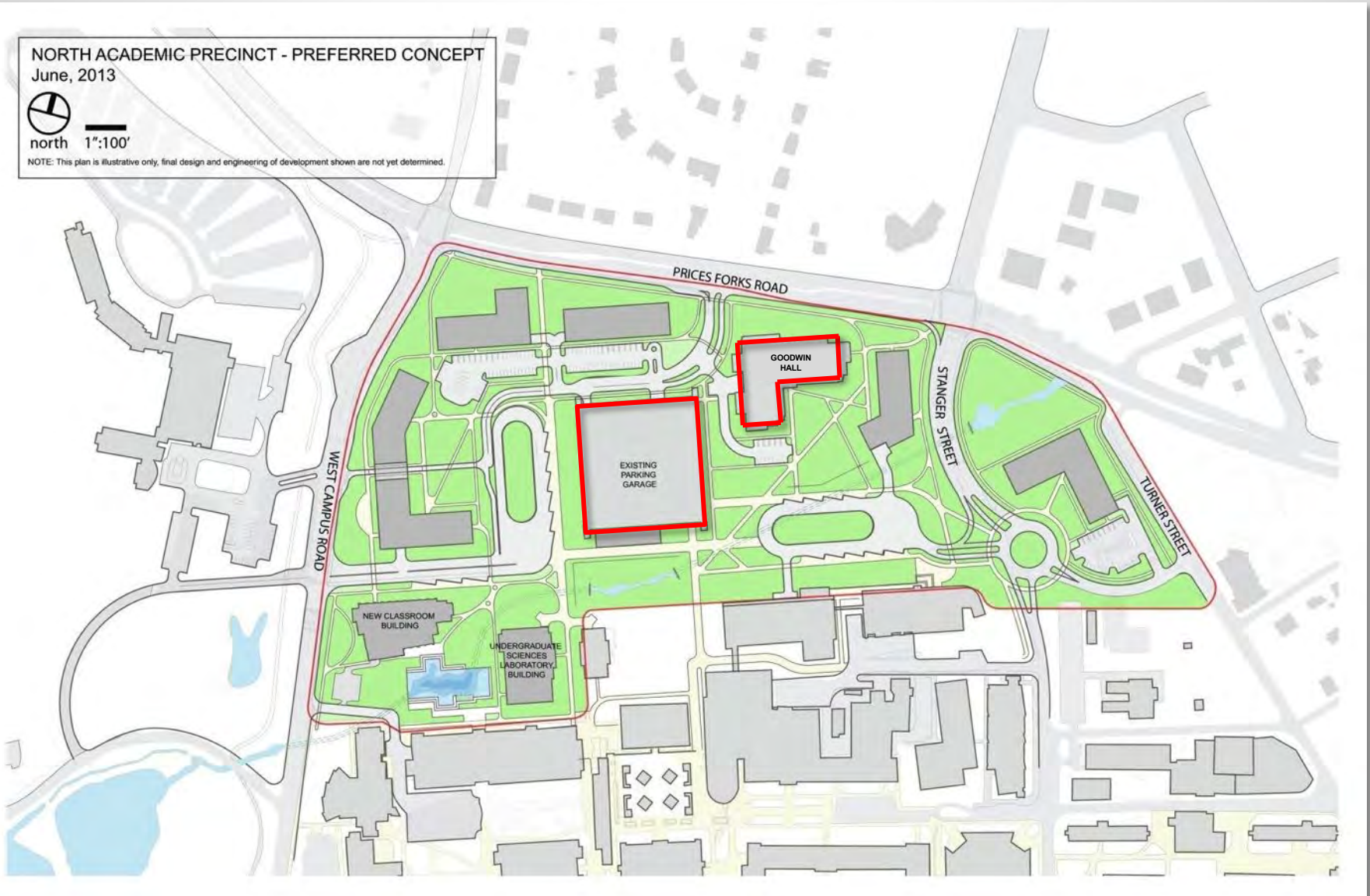


ACADEMIC CORE: North Campus Precinct

NORTH ACADEMIC PRECINCT - PREFERRED CONCEPT
June, 2013



NOTE: This plan is illustrative only, final design and engineering of development shown are not yet determined.



ACADEMIC CORE: North Campus Precinct



ACADEMIC CORE: Goodwin Hall

Campus Edge Identity



Openspace Network



Stormwater Management



Efficient Road Network



Minimize Conflicts



Pedestrian Connections



Creating Arrival



Address Service Access



Garage Access

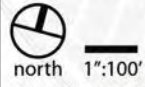


Optimize Buildable Area

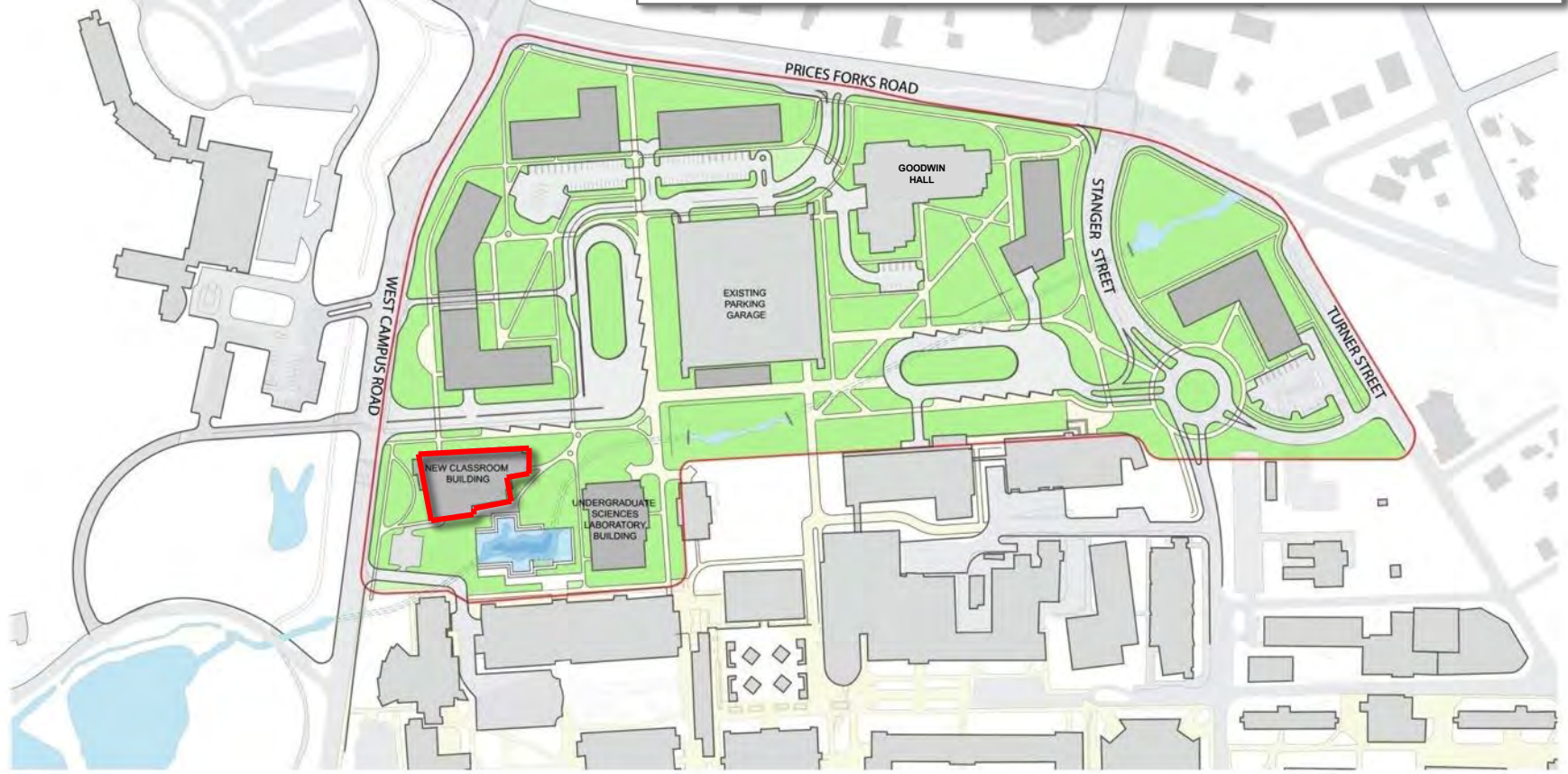


NORTH ACADEMIC PRECINCT - PREFERRED CONCEPT

June, 2013



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ACADEMIC CORE: North Campus Precinct

CLASSROOM BUILDING

Northwest Perspective



Southwest Perspective



West Entrance



Campus Edge Identity



Openspace Network



Stormwater Management



Efficient Road Network



Minimize Conflicts



Pedestrian Connections



Creating Arrival



Address Service Access



Garage Access

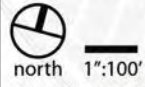


Optimize Buildable Area

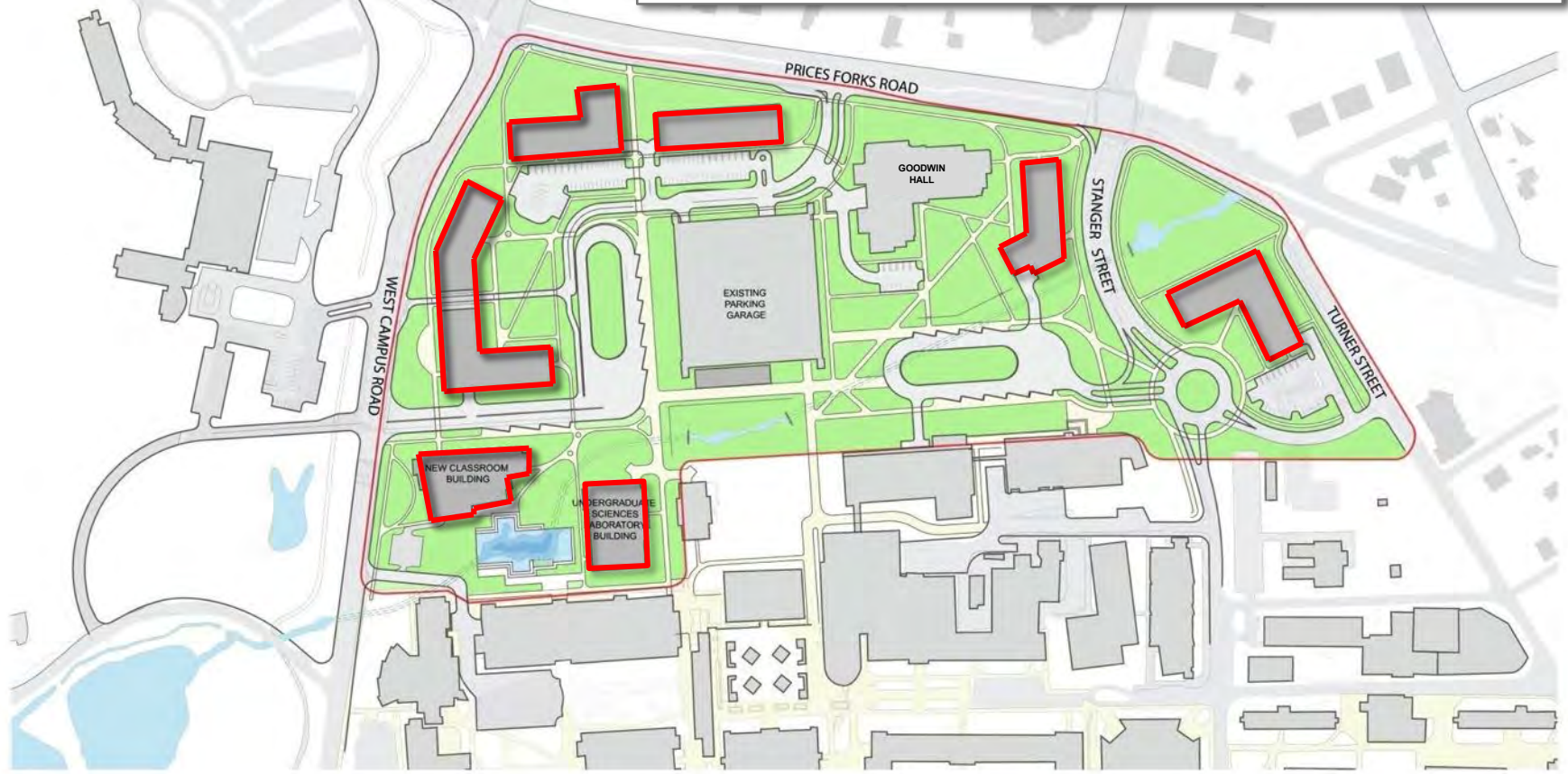


NORTH ACADEMIC PRECINCT - PREFERRED CONCEPT

June, 2013

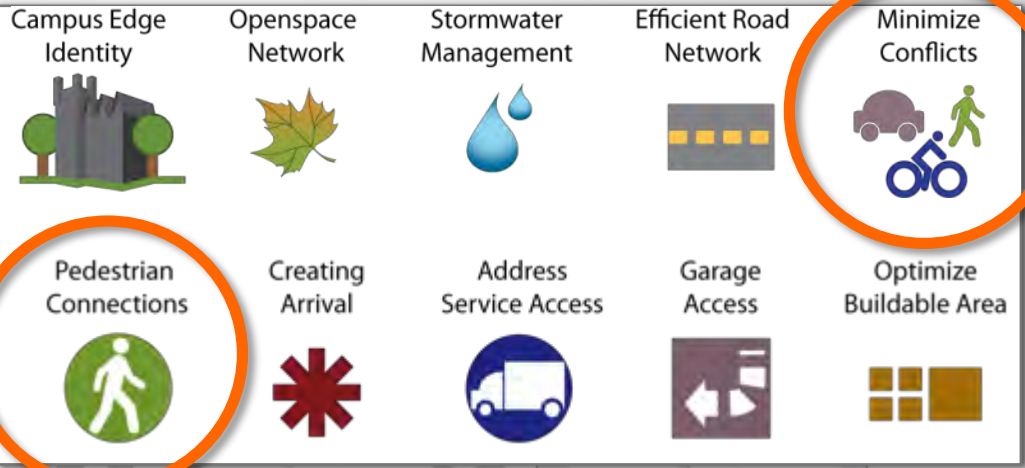


NOTE: This plan is illustrative only, final design and engineering of development shown are not yet determined.

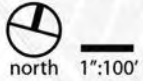


ACADEMIC CORE: North Campus Precinct

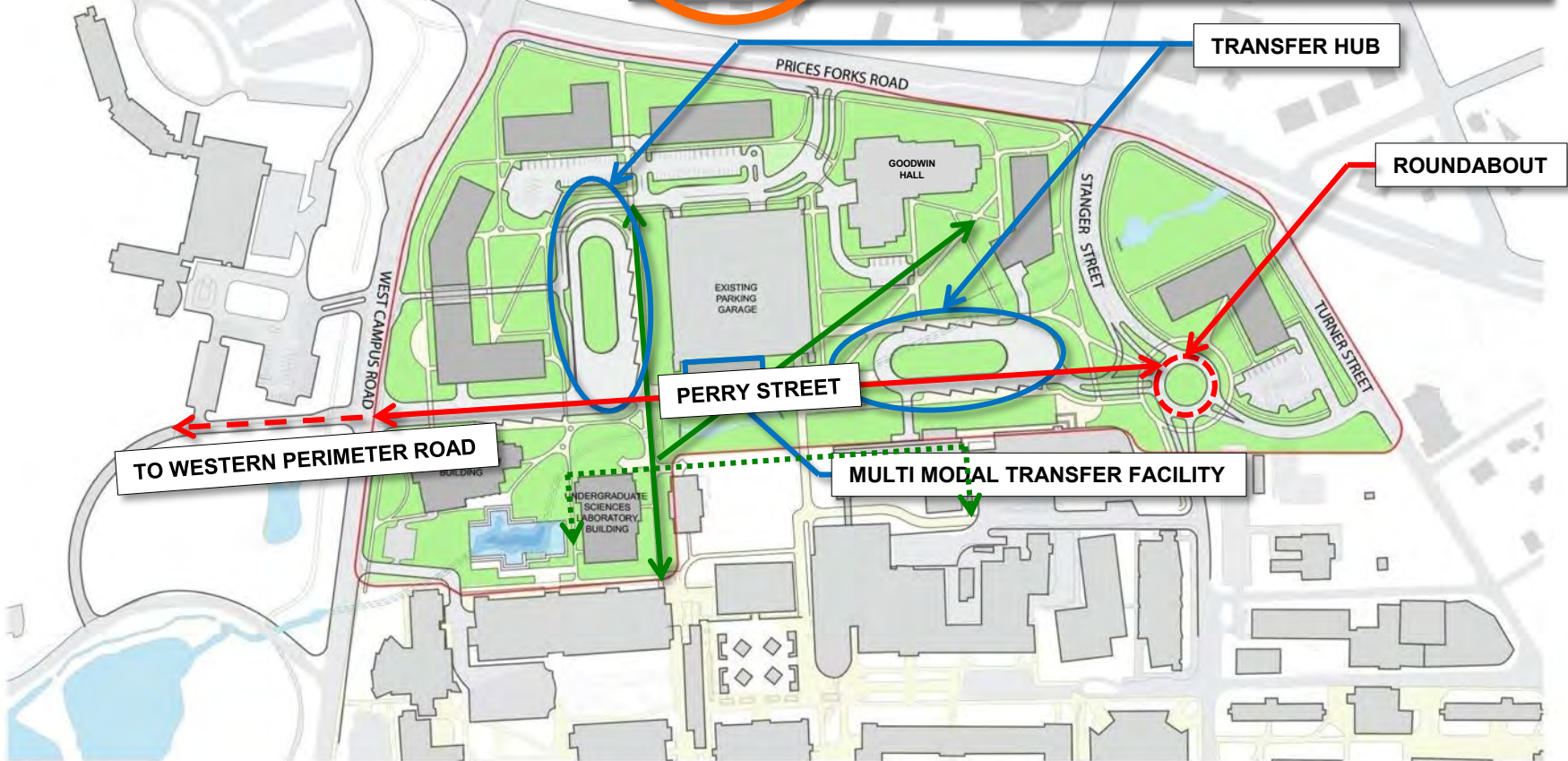
So...What type of Pedestrian Experience will this Create?



NORTH ACADEMIC PRECINCT - PREFERRED CONCEPT
June, 2013



NOTE: This plan is illustrative only, final design and engineering of development shown are not yet determined.



ACADEMIC CORE: North Campus Precinct

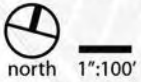






ACADEMIC CORE: North Campus Precinct

NORTH ACADEMIC PRECINCT - PREFERRED CONCEPT
June, 2013



NOTE: This plan is illustrative only, final design and engineering of development shown are not yet determined.

Campus Edge Identity



Openspace Network



Stormwater Management



Efficient Road Network



Minimize Conflicts



Pedestrian Connections



Creating Arrival



Address Service Access



Garage Access



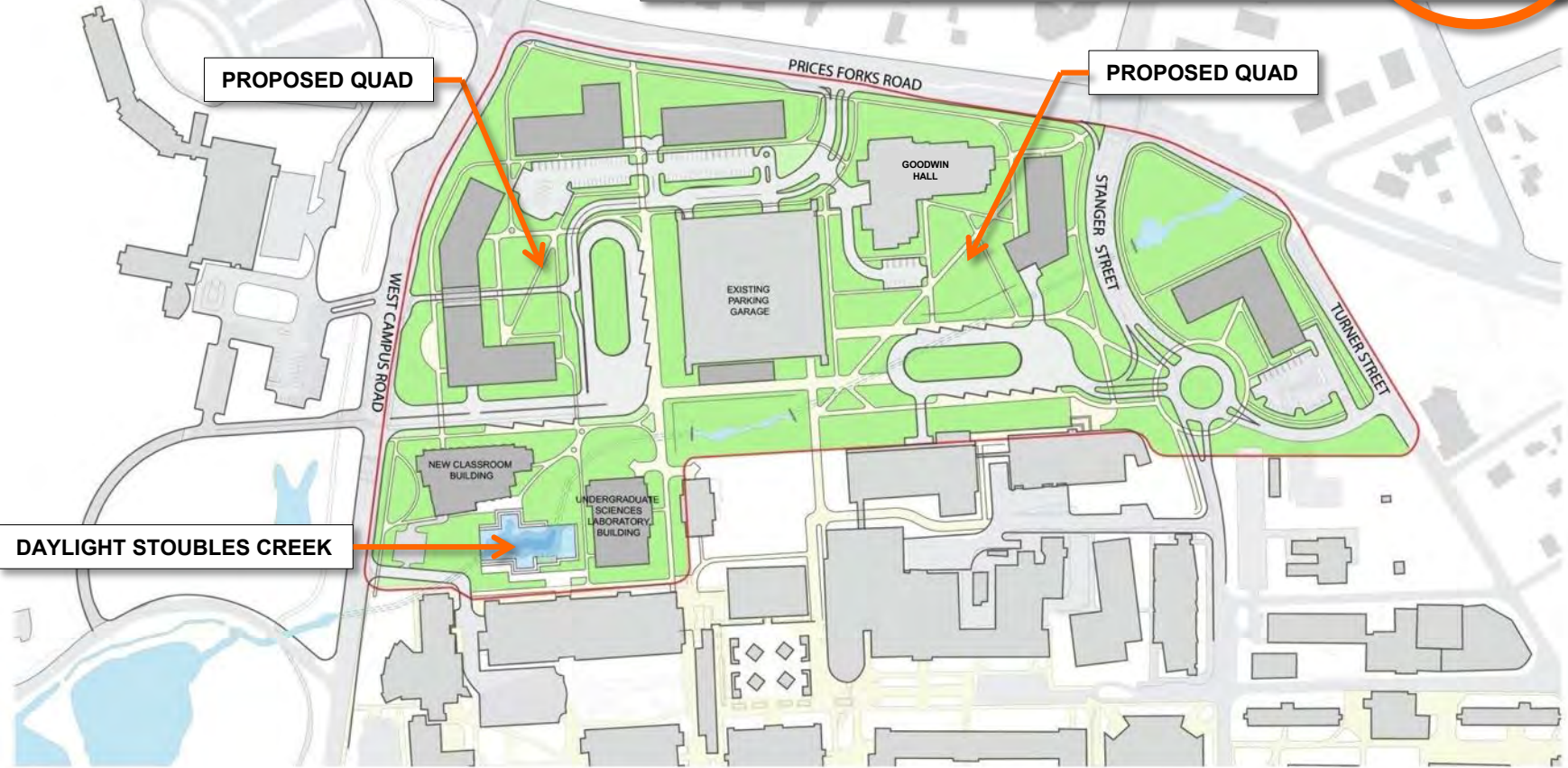
Optimize Buildable Area



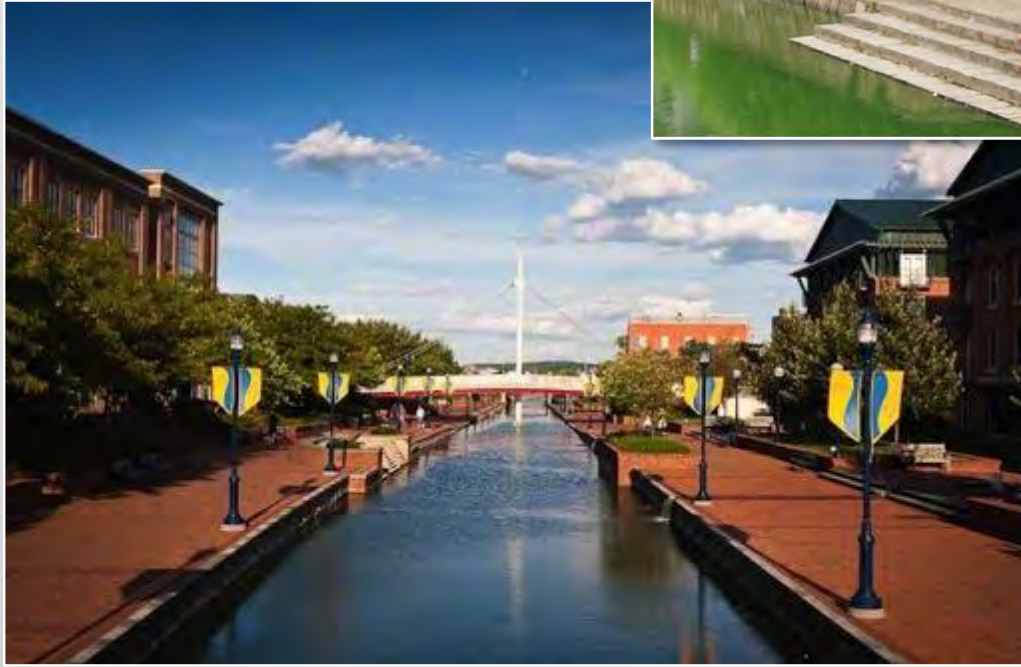
PROPOSED QUAD

PROPOSED QUAD

DAYLIGHT STOUBLES CREEK



ACADEMIC CORE: North Campus Precinct

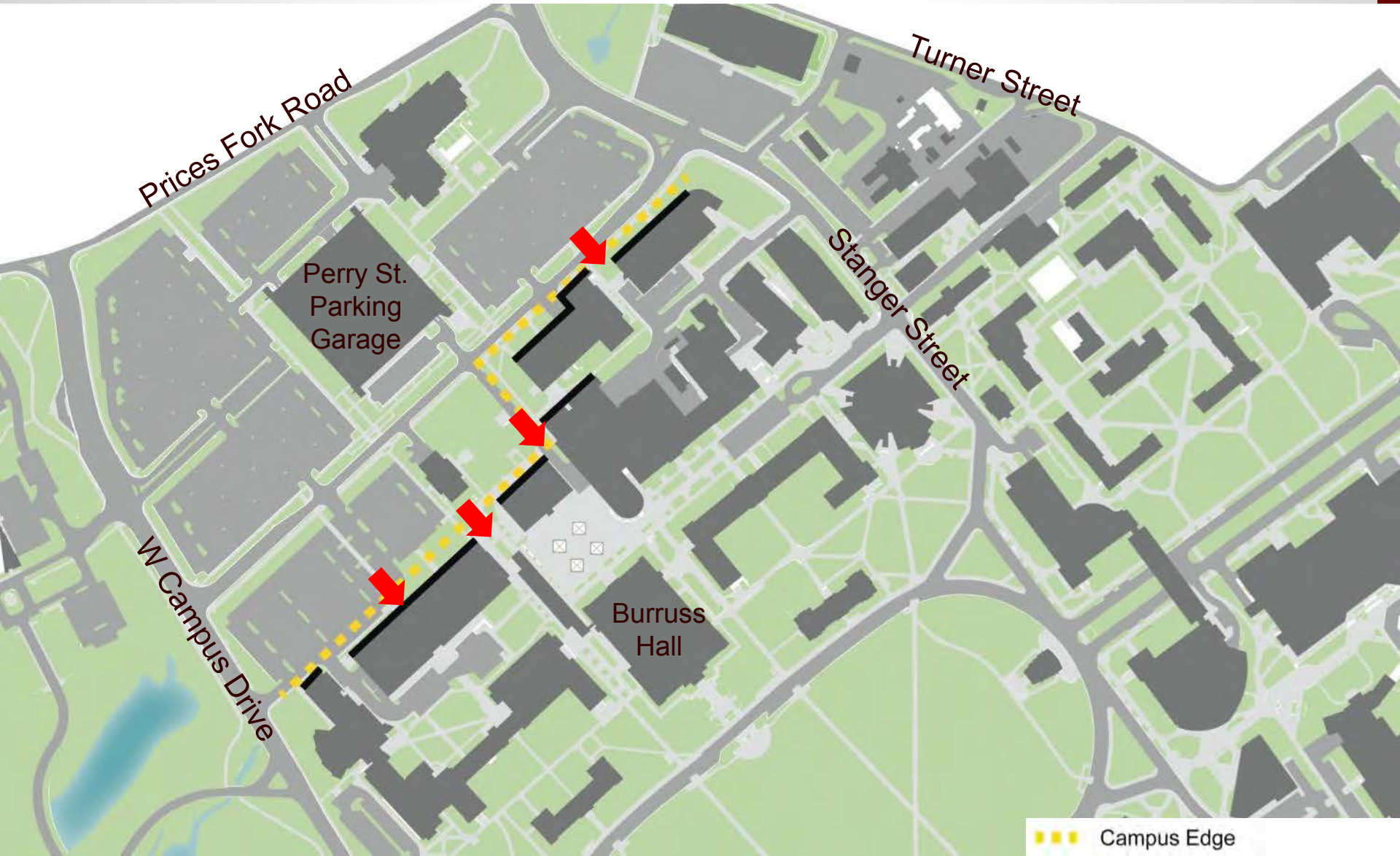


DAYLIGHTING STROUBLES CREEK - Opportunities



ACADEMIC CORE: North Academic Precinct Pedestrian

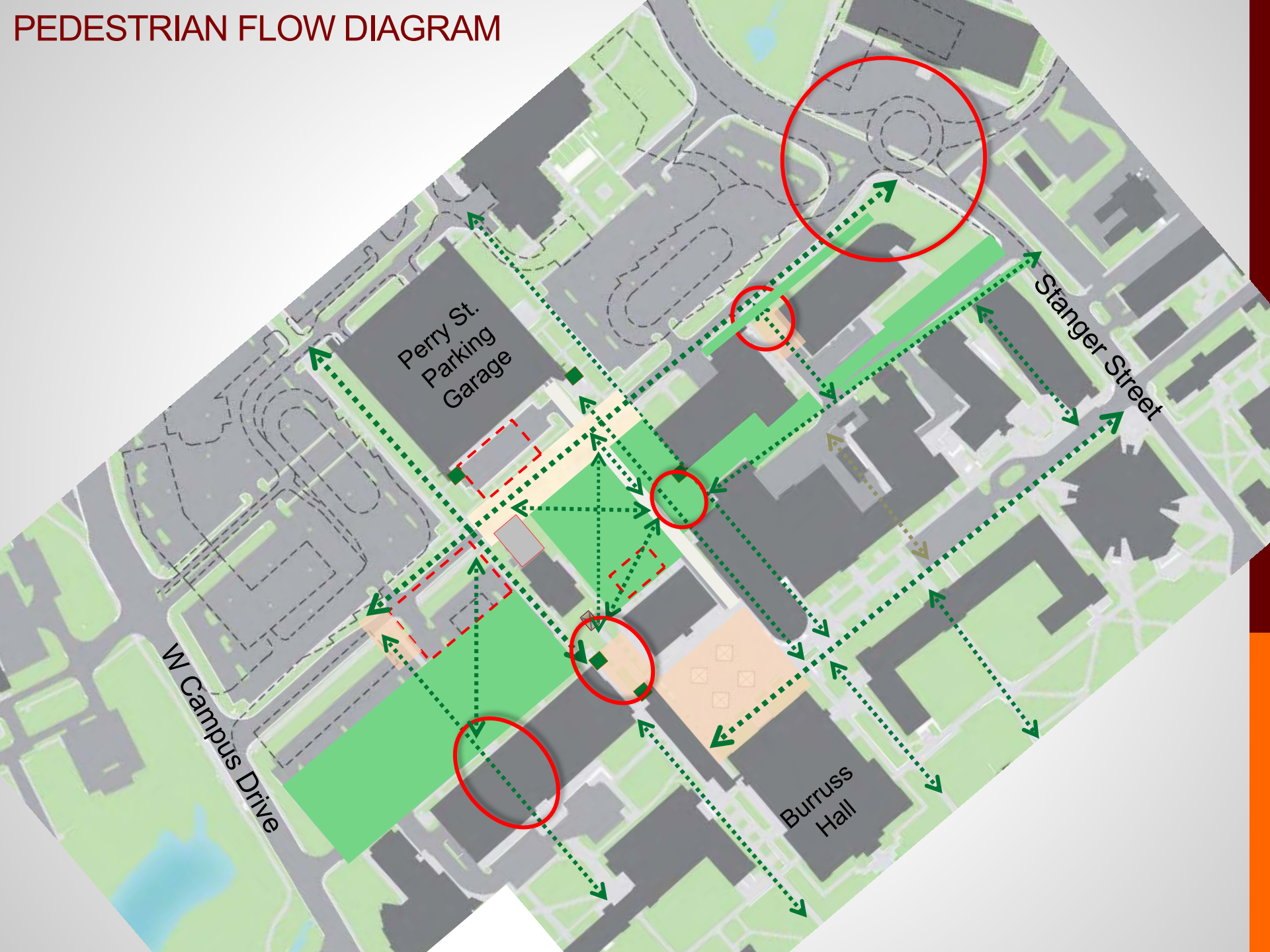
CAMPUS EDGE, THRESHOLD, AND PORTAL CONDITIONS



EXISTING PRIMARY THRESHOLD CONDITIONS



PEDESTRIAN FLOW DIAGRAM





Spatial Branding

Existing Lawn Behind Cowgill Hall

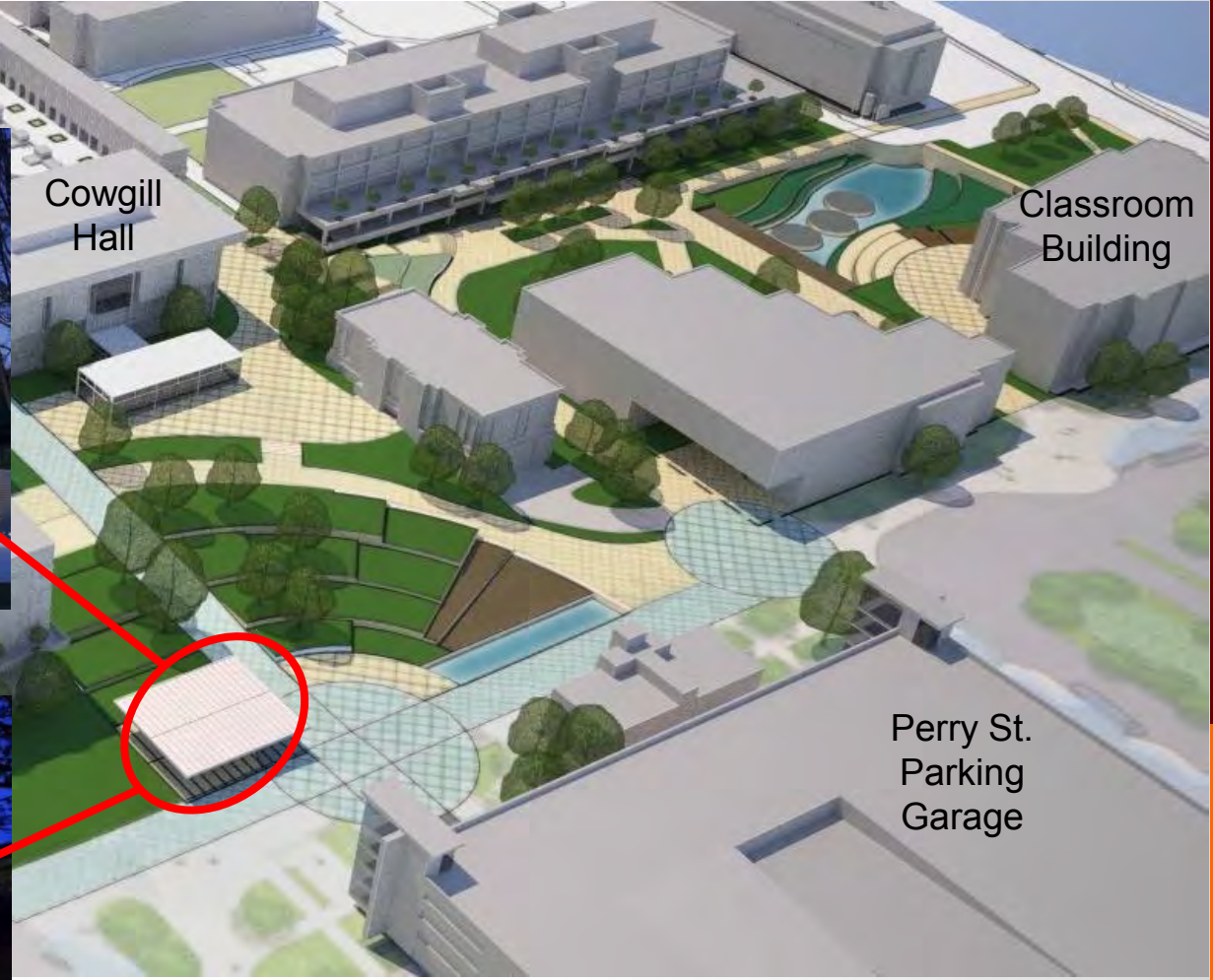


**Project
Opportunities.....**

San Diego State University,

Image sourced from estradalandplan.com

CONCEPT – BIRD'S EYE PERSPECTIVE



Cowgill Hall

Classroom Building

Perry St. Parking Garage

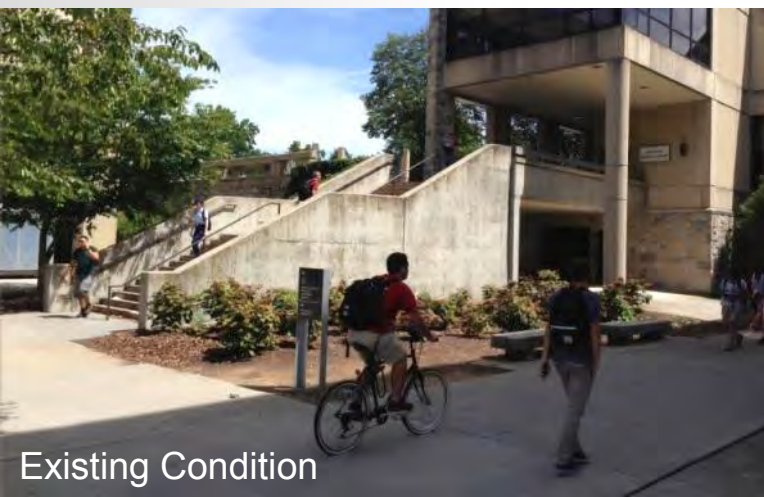
OPENING SIGHTLINES AND ENHANCING THE PEDESTRIAN EXPERIENCE



Existing Condition



Conceptual Sketch



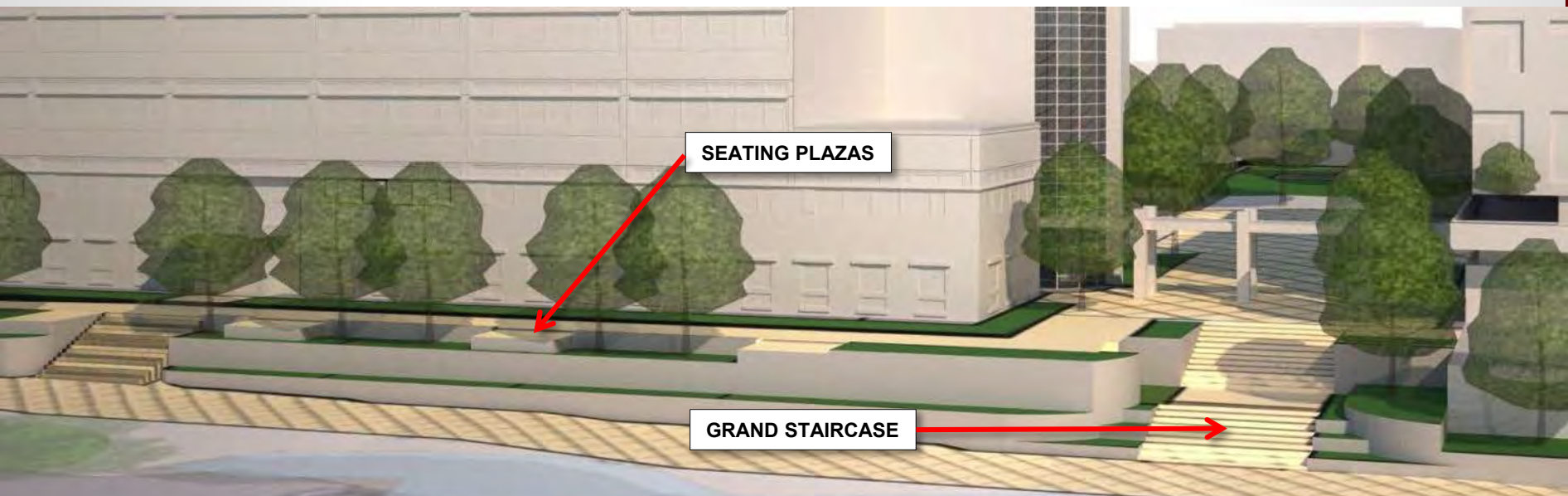
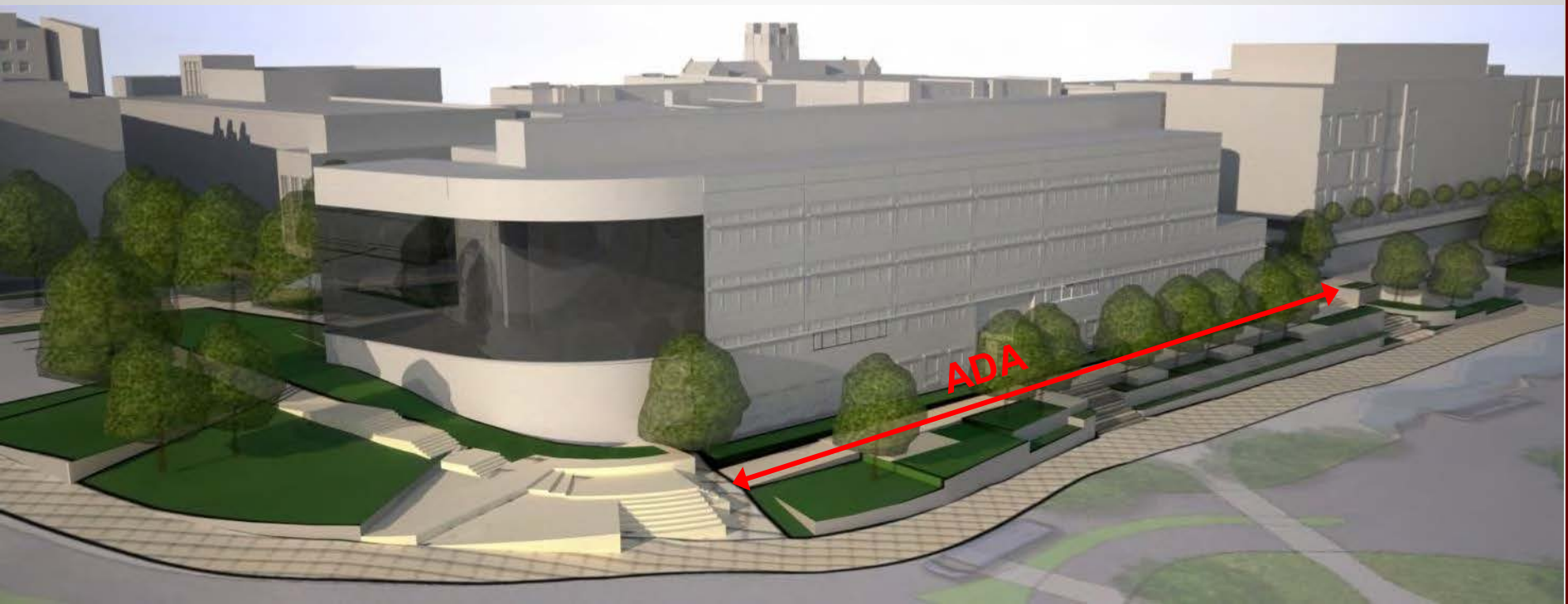
Existing Condition



View of Durham Hall looking south



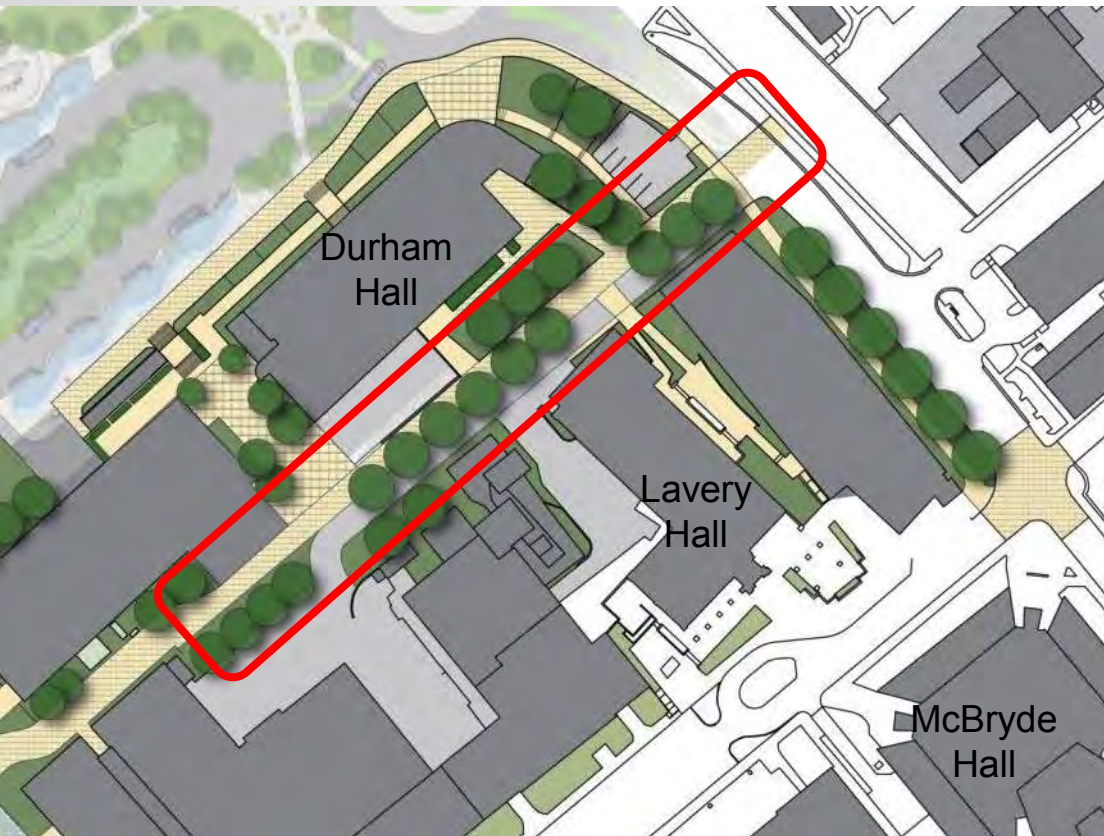
DURHAM AND WHITTEMORE – ENHANCING PEDESTRIAN CONNECTIONS



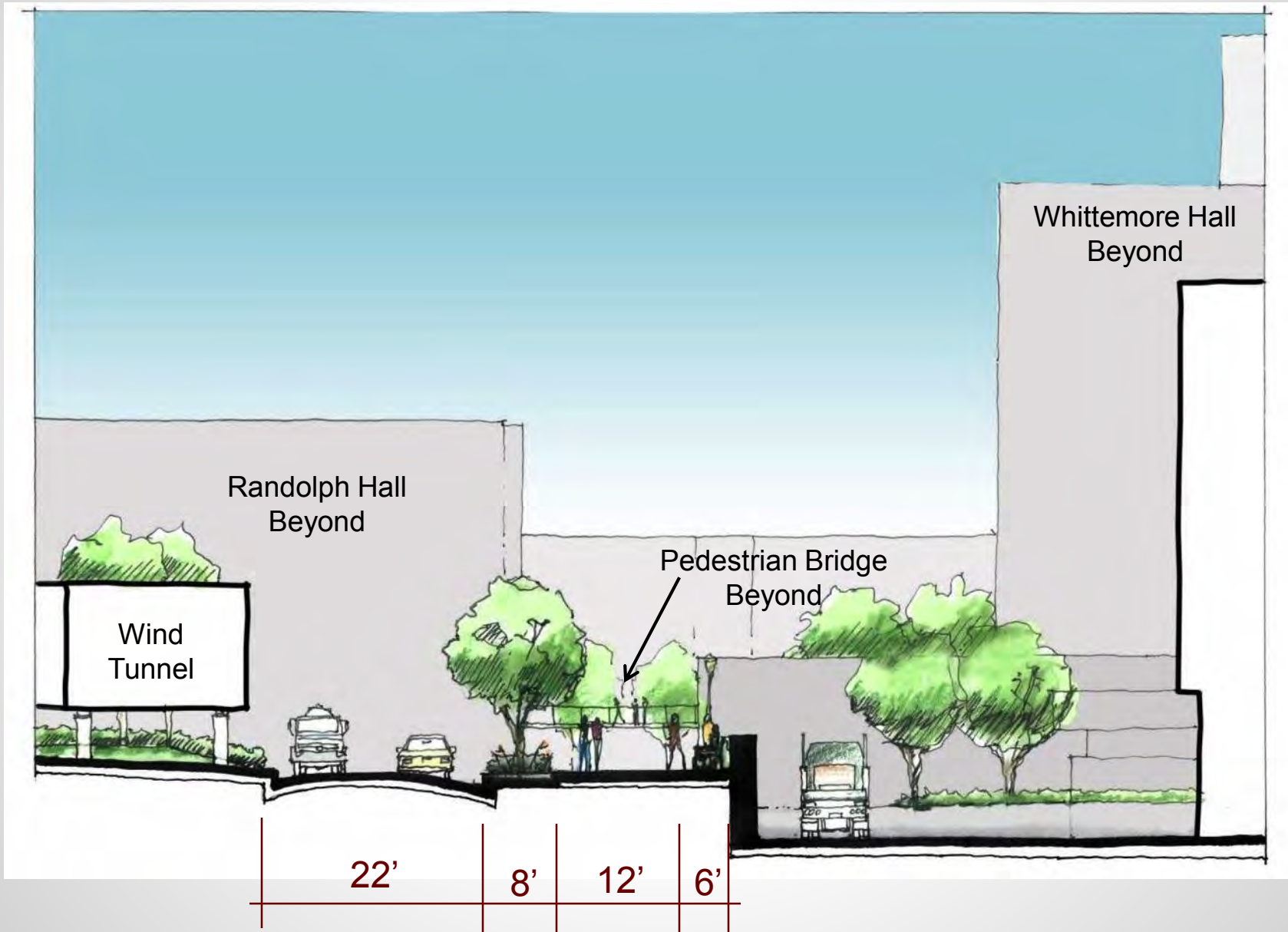


Service corridor behind Durham Hall

PEDESTRIAN CORRIDOR WITH SERVICE ACCESS



PROPOSED SECTION THROUGH SERVICE CORRIDOR





Existing Service Corridor



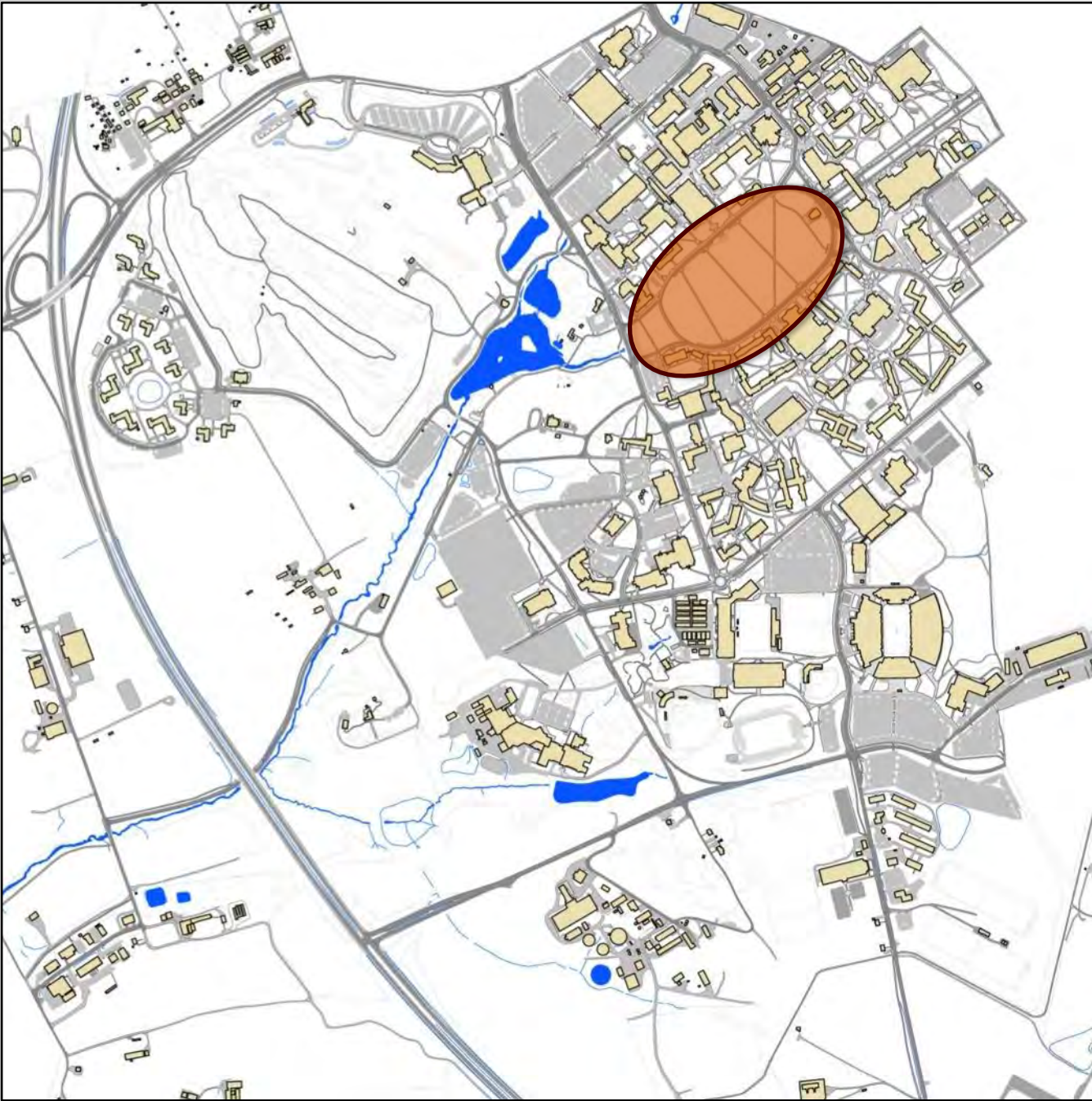
Conceptual Sketch



College Ave., Downtown Blacksburg

RECAPTURING LOST SPACE





ACADEMIC CORE: Drillfield



Academic

Drillfield

**Student
Life**



Corps of Cadets



Events



Education / Small Groups



Recreation

User Groups



Transition Space

Modified Edge Parking

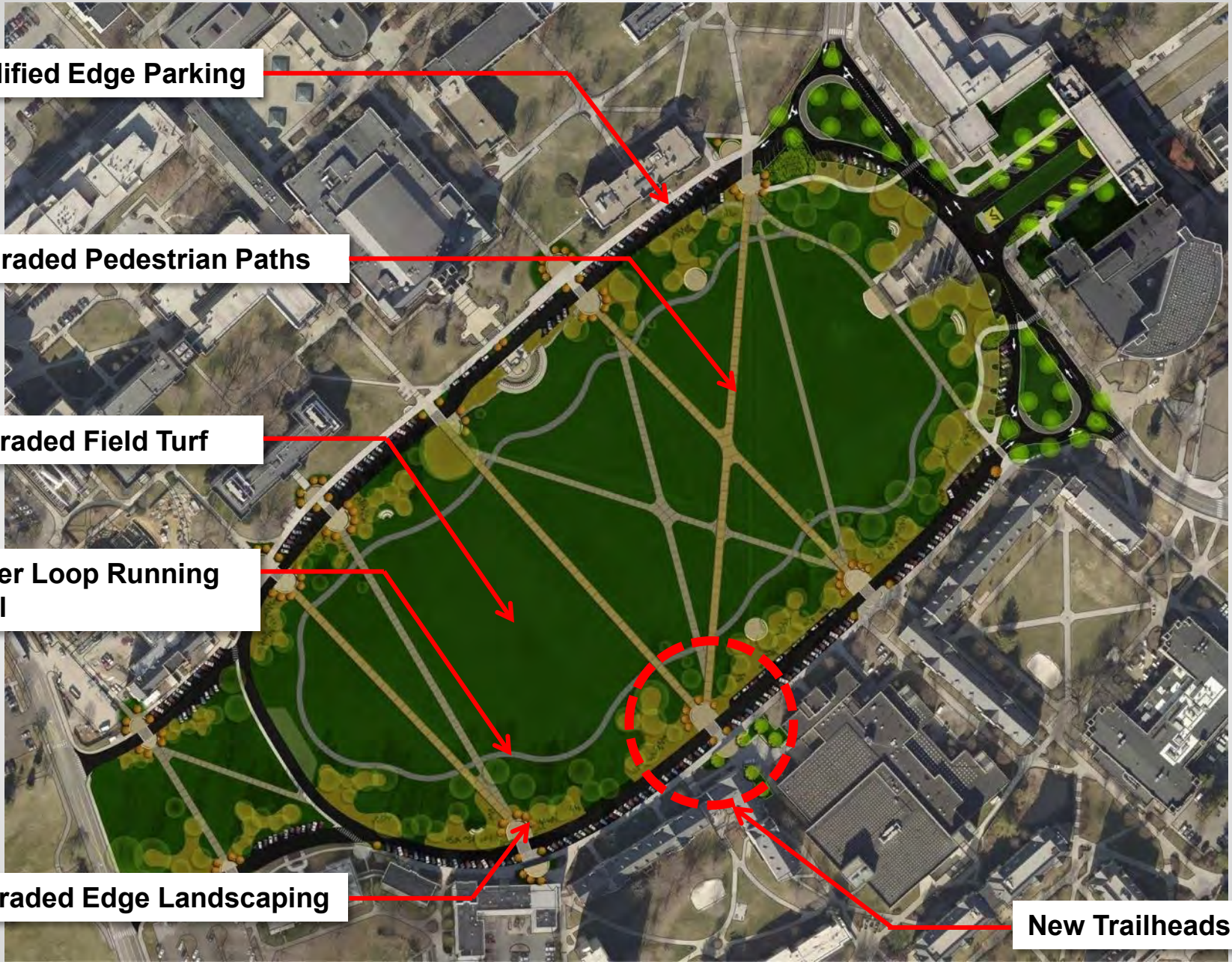
Upgraded Pedestrian Paths

Upgraded Field Turf

Outer Loop Running Trail

Upgraded Edge Landscaping

New Trailheads



ACADEMIC CORE: Drillfield



- Improved Seating Opportunities
- Upgraded Paths
- Upgraded Crosswalks and Lighting
- Consistent, Upgraded Site Furniture
- Improved Amenities, Including Wi-Fi
- Upgraded Landscape Treatment

ACADEMIC CORE: Drillfield – Typical Trailhead



**Enhanced Lighting
&
Wi-Fi Availability
Being Explored**

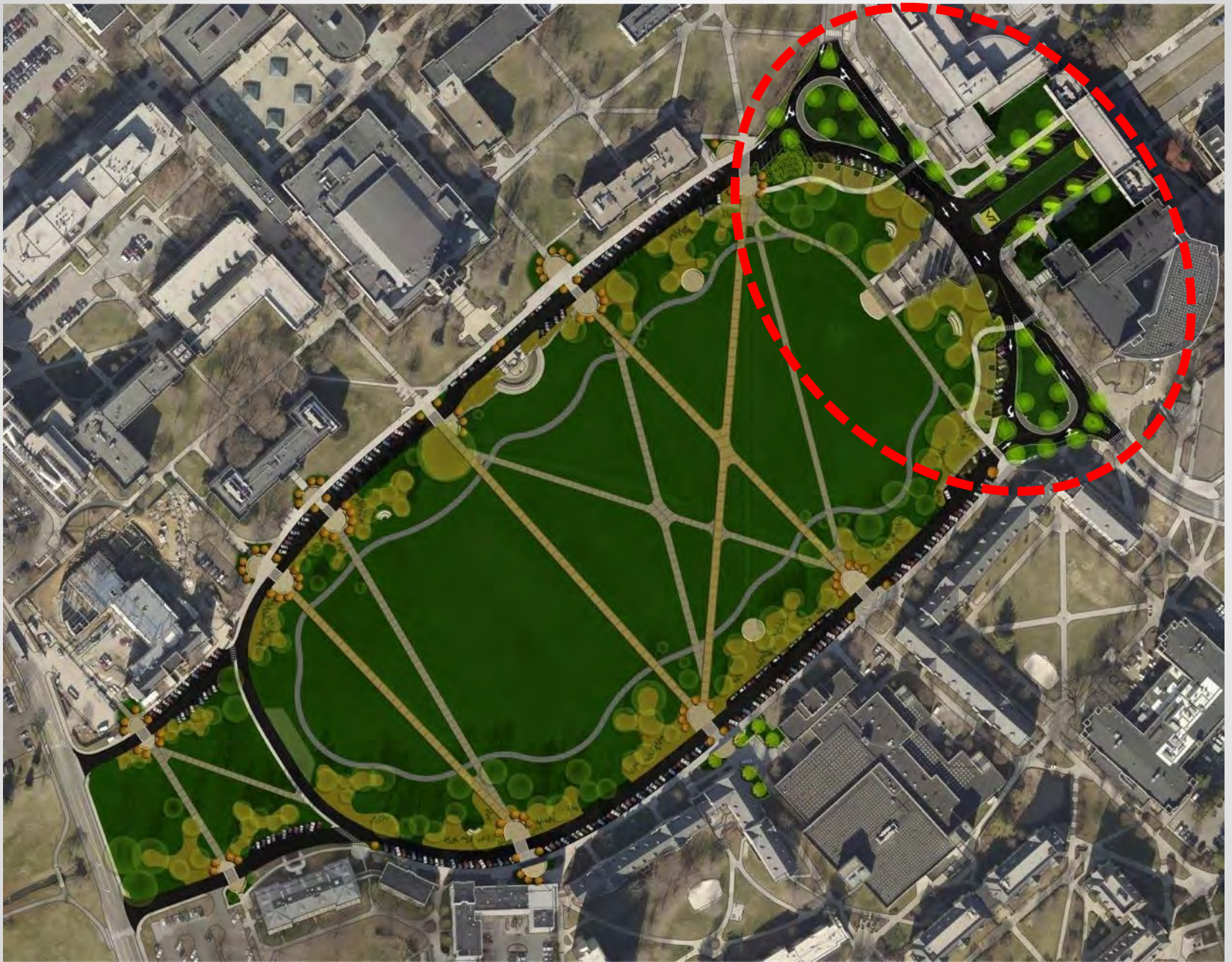
ACADEMIC CORE: Drillfield – Enhanced Seating

Drillfield Paths Committee Charge

Explore (invent if necessary), test, and evaluate all weather and ADA compliant solutions to paths on the Drillfield in an effort to enhance the green-space aesthetic and multi-use purpose of this iconic area and provide a recommendation.

Interdisciplinary group includes representatives from:

- Student Representation
 - Undergraduate
 - Graduate
 - Civil Engineering / Sustainable Land Development Club
- College of Engineering
- Corps of Cadets
- College of Agricultural Sciences - Crop and Soil Environment Sciences
- College of Architecture and Urban Studies - Landscape Architecture
- College of Agricultural Sciences - Horticulture
- Human Resources – ADA
- Recreational Sports
- Facilities – Grounds Maintenance
- Office of University Planning (Chair)



ACADEMIC CORE: Drillfield



DRILLFIELD ROAD IMPROVEMENTS – Existing Aerial Photo

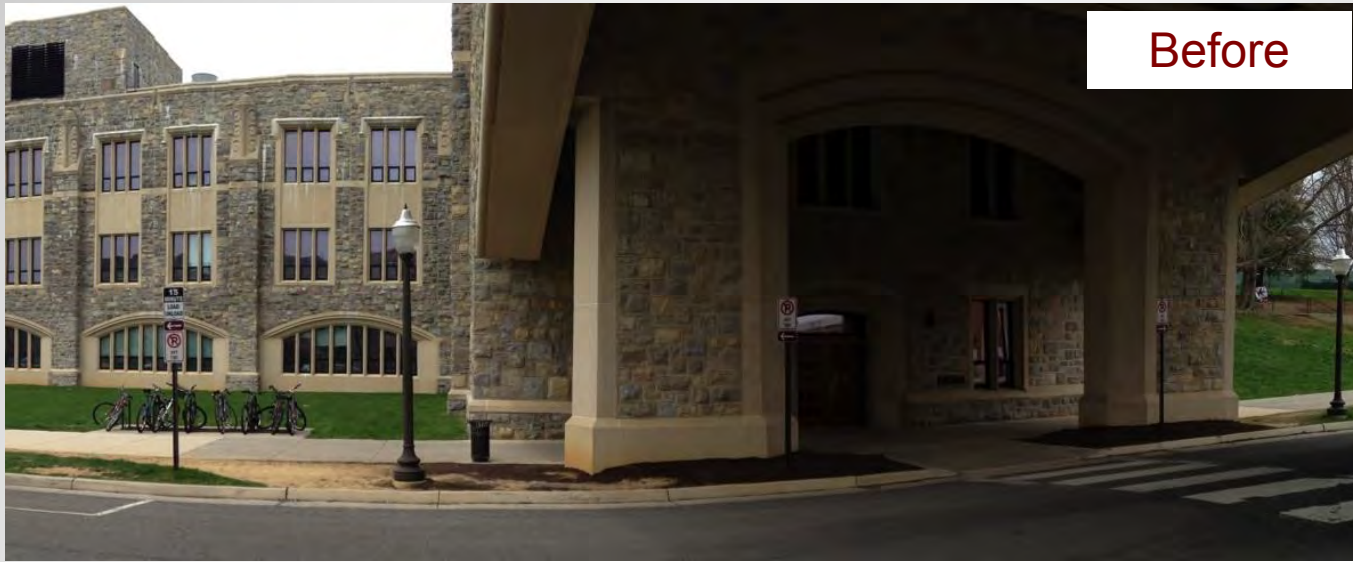


Collaborative review with stakeholders including:

- Parking & Transportation Office
- Site & Infrastructure Development Office
- Town of Blacksburg
- Blacksburg Transit
- Town of Blacksburg Traffic Engineers
- Arboretum Committee
- Others



ACADEMIC CORE: Alumni Mall – Parking Enhancements



Before



After

Life Sciences District

Upcoming Changes

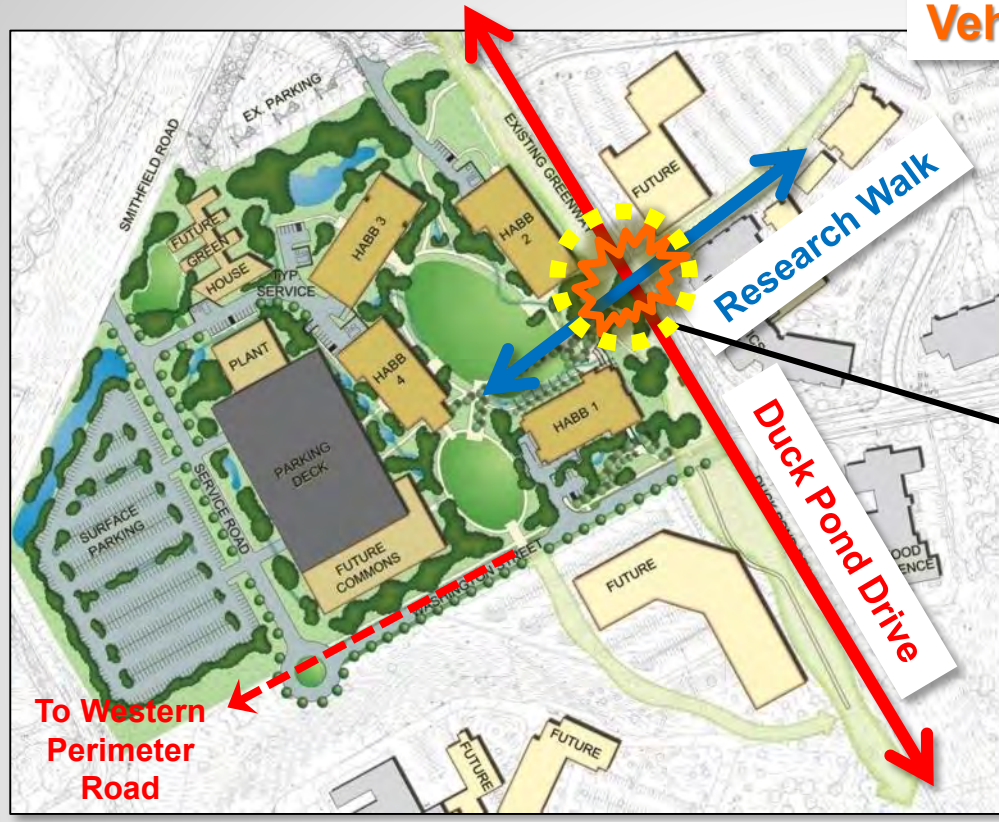
Vehicle/ Pedestrian CONFLICT



**To Western
Perimeter
Road**

LIFE SCIENCES District MP (The "CAGE")

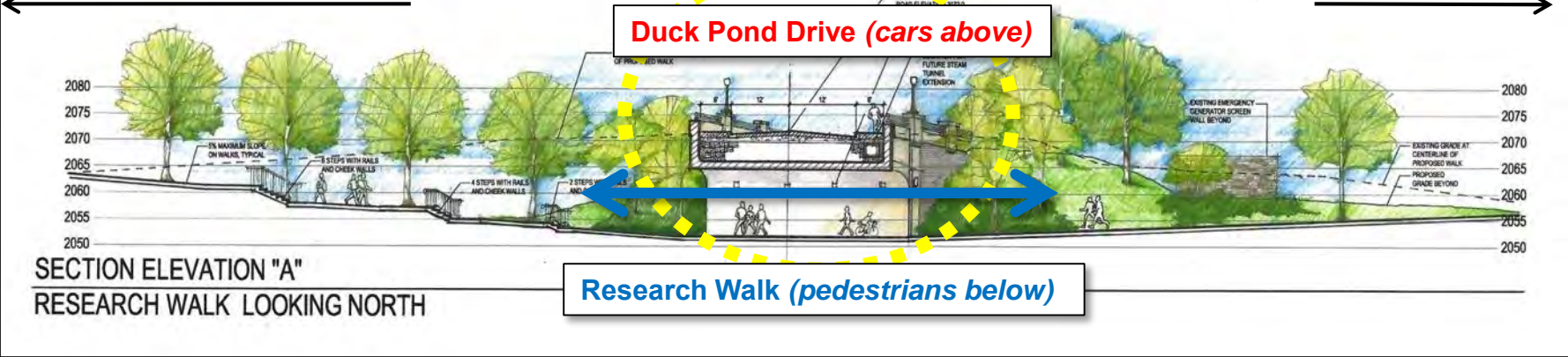
Vehicle/ Pedestrian SOLUTION



Grade Separated Paths

To The Life Science Precinct

To Main Campus



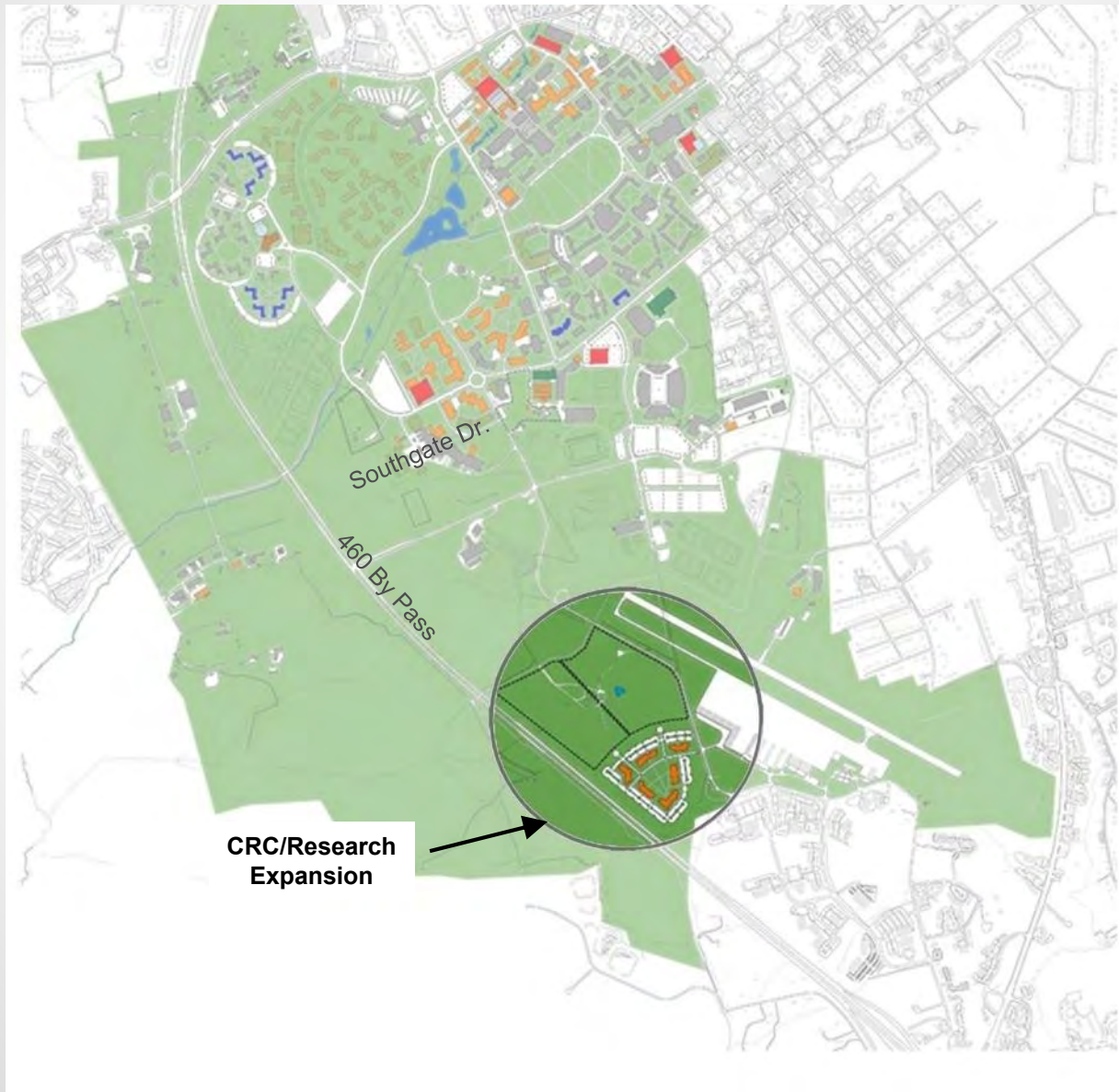
LIFE SCIENCES DISTRICT: Research Walk

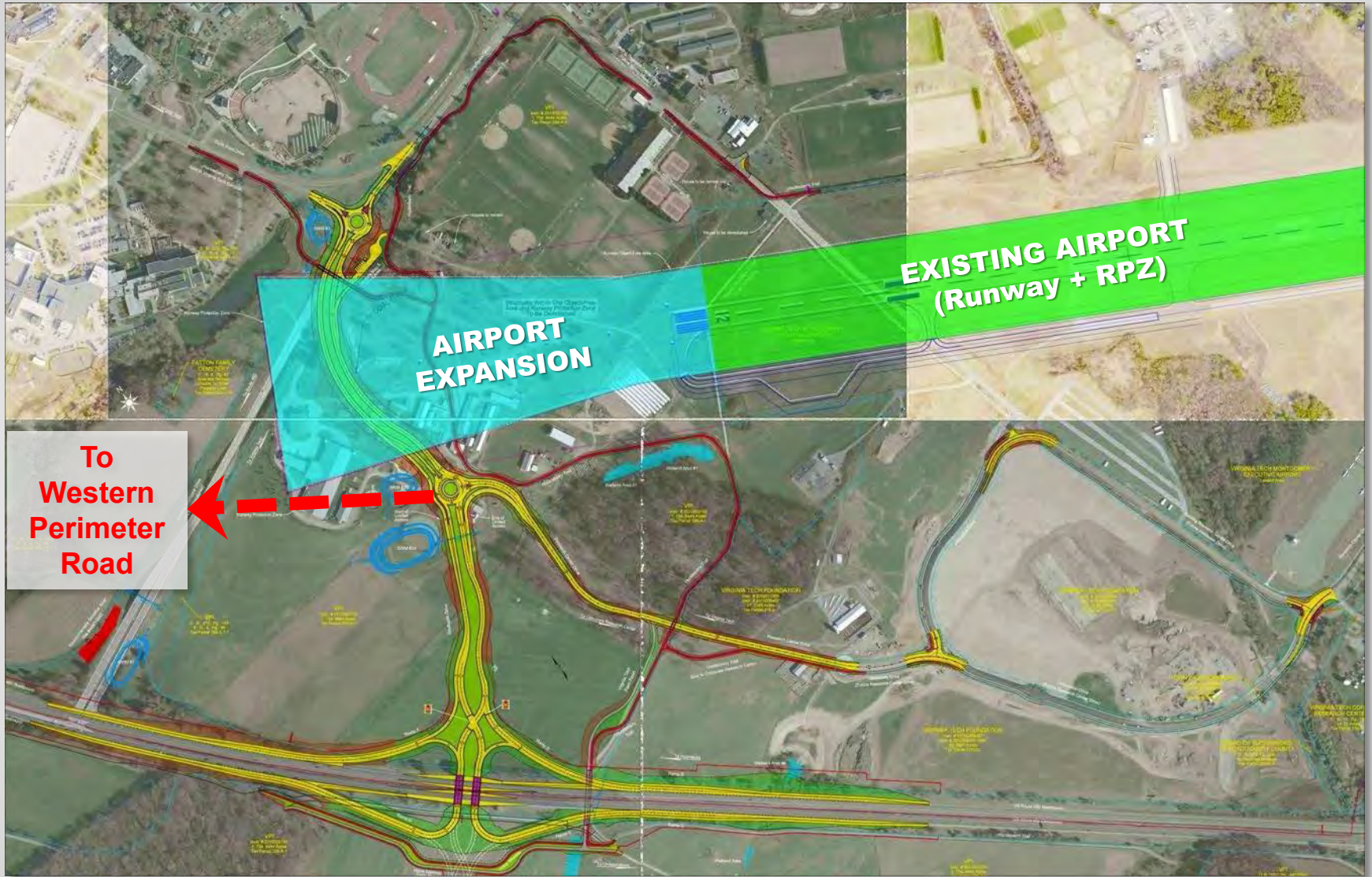


VT can do better!
-Include Plazas
-Banners
-Other

Texas A&M Pedestrian Tunnel

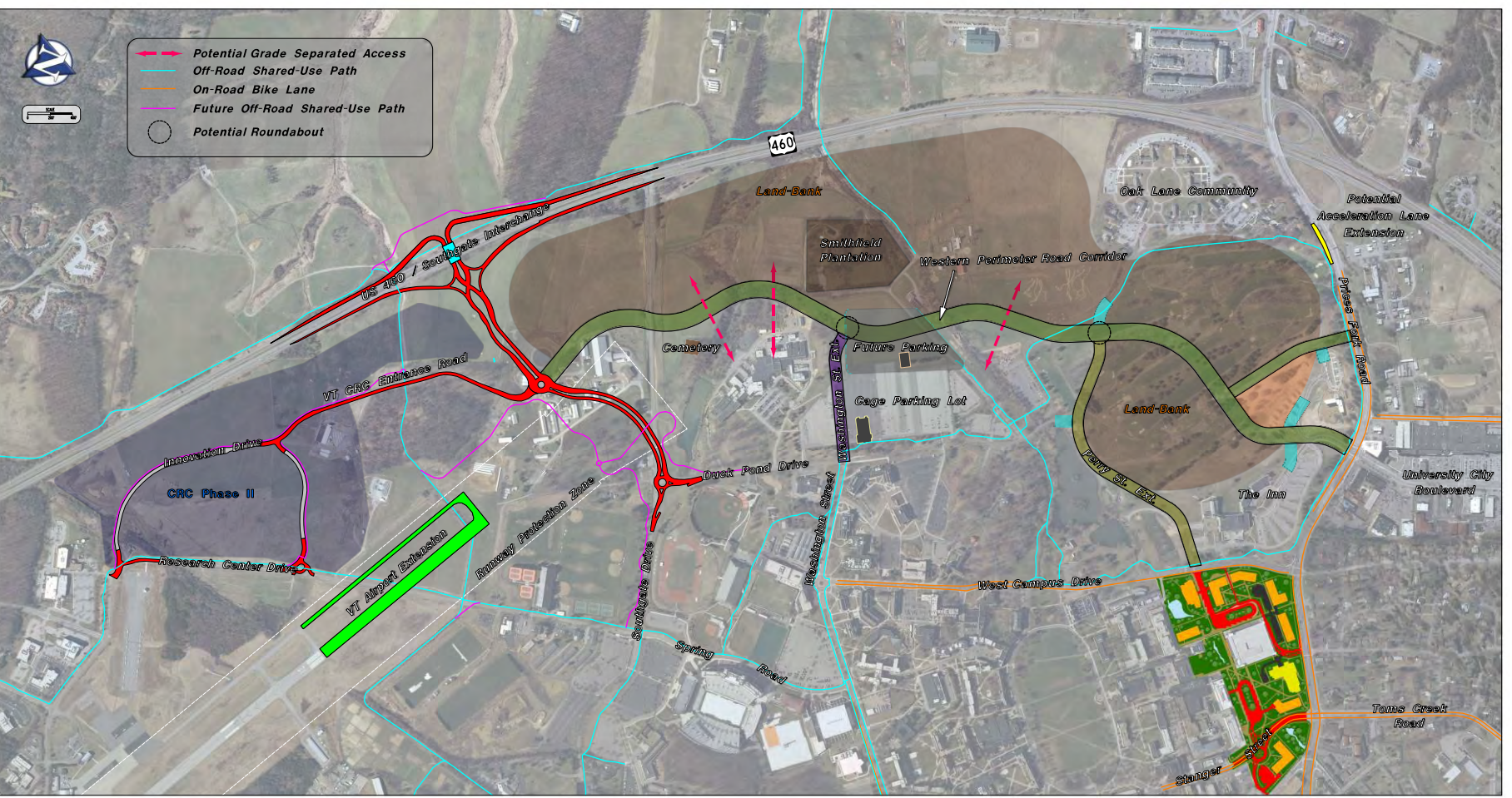
CRC / Research District ***Upcoming Changes***





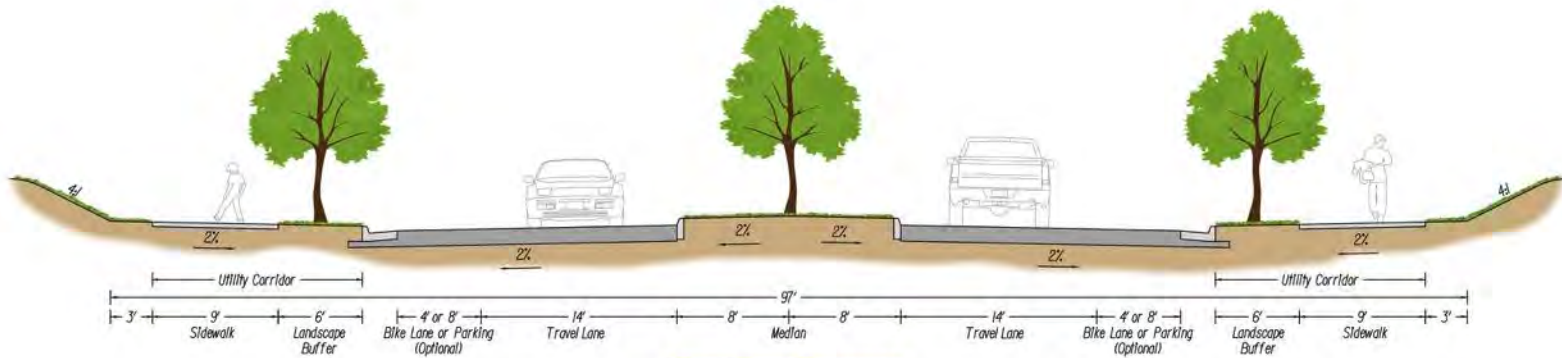
CRC / RESEARCH DISTRICT: Transportation Enhancements



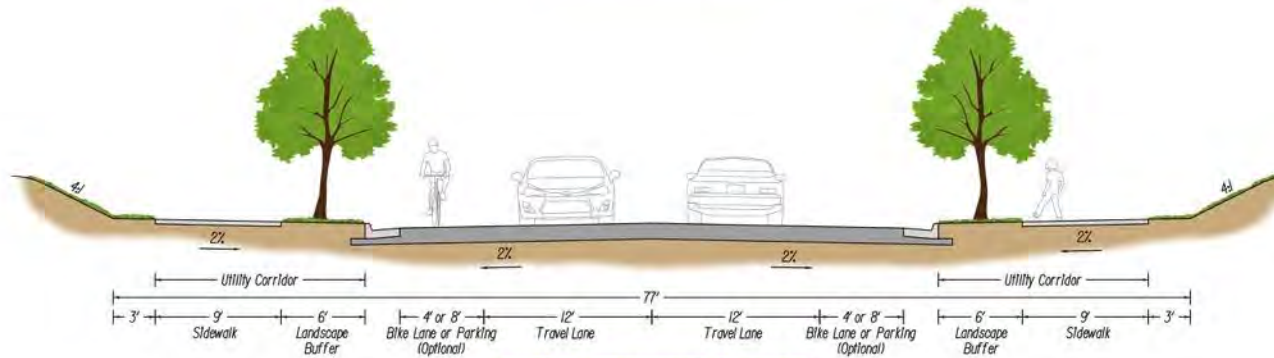


LIFE SCIENCES DISTRICT: Western Perimeter Road

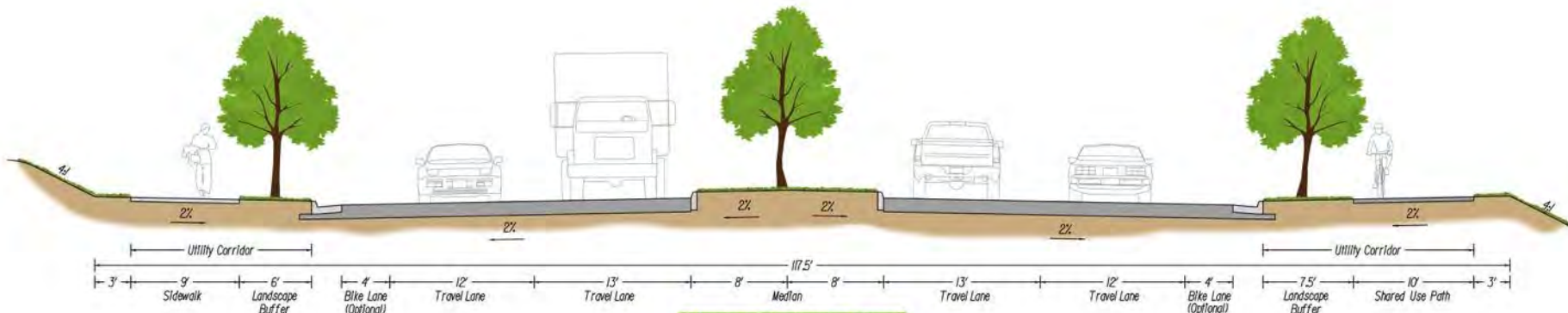
Typical Sections



Perry Street Extension



Washington Street Extension



Western Perimeter Road

Campus-Wide Initiatives



Lighting Improvements

ENHANCING THE OUTDOOR ENVIRONMENT- Crosswalks

Wayfinding

Successful wayfinding:

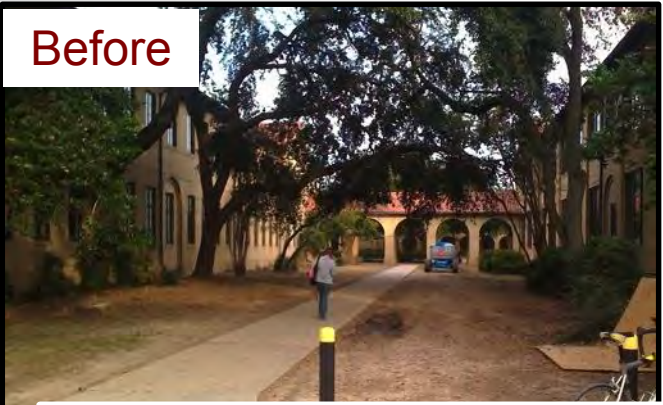
- Is **Easy** to understand & use
- Reflects **Virginia Tech's Culture** and reinforces our **Brand**
- **Compliments** our unique **Architecture** and campus **Landscapes**



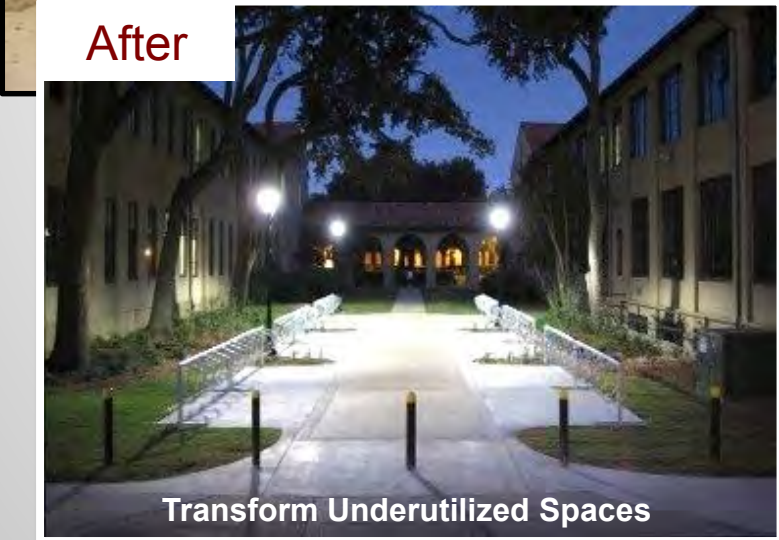
Bike Parking Master Plan

GOALS

- QUANTITY
- LOCATION
- DESIGN STANDARD



Before



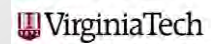
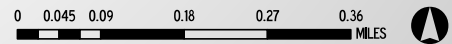
After

Transform Underutilized Spaces



BICYCLE PARKING DISTRICTS

UPPER QUAD ZONE	DOWNTOWN CAMPUS ZONE
NORTH DRILLFIELD ZONE	WEST CAMPUS ZONE
SOUTH DRILLFIELD ZONE	ATHLETIC ZONE



UNIVERSITY BICYCLE PARKING PLAN, 2013
 DATA SOURCE: VIRGINIA TECH GIS DATABASE
 CREATED BY: KATHRYN ZERINGUE, 7.1.13

Before



After

Virginia Tech Reinventing Its Future

***Initial Scope Being Developed
for the***

2016/2017

Master Plan Update

Questions / Comments

History of Approvals for the Virginia Tech Climate Action Commitment and Sustainability Plan

Original Virginia Tech Climate Action Commitment (VT CAC)

- Approved by the Commission on University Support: March 19, 2009
 - Note: The Sustainability Plan was included as an attachment to the VT CAC at this level of approval, and was “endorsed,” but was not forwarded to University Council.
- Approved by University Council: April 22, 2009
- Approved by the President: April 22, 2009
- Approved by the Board of Visitors: June 1, 2009
- Effective Date: June 1, 2009
- Became Presidential Policy Memorandum No. 262

Update to the Virginia Tech Climate Action Commitment (VT CAC)

- Approved by the Commission on University Support: April 18, 2013
- Approved by University Council: May 6, 2013
- Approved by the President: May 6, 2013
- Effective Date: Upon Approval by the President
- Revision 1 to Presidential Policy Memorandum No. 262

Update to the Sustainability Plan

- Approved by the Energy & Sustainability Committee: October 27, 2014
- Approved by the Commission on University Support: *TBD*



Virginia Tech Sustainability Plan: 2014 Update and Supplement to the 2009 VTCAC&SP

Energy & Sustainability Committee

September 2014

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Appendices

- A. 2009 VT Climate Action Commitment
- B. Commission on University Support Resolution 1012-13D: 2013 VTCAC
- C. 2013 VT Climate Action Commitment, Presidential Policy Memo 262
- D. VTCAC&SP Status Report, July 2012
- E. 2010 Sustainability Annual Report
- F. 2011 Sustainability Annual Report
- G. 2012 Sustainability Annual Report
- H. 2013 Sustainability Annual Report
- I. STARS Cross-walk with VTCAC&SP spreadsheet
- J. VT Sustainability Plan Update with Progress To-date

Cover photos from left:

Presentation of 2011 Governor’s Gold Environmental Excellence Award to Virginia Tech for its Sustainability Plan, VMI, April 6, 2011

Student interns in the Office of Energy & Sustainability Internship Program, Fall 2013

Lavery Hall, LEED Silver, one of nine Virginia Tech LEED certified buildings

Earth Day 2011 Tree Campus USA Tree Planting with President Steger, Virginia Secretary of Natural Resources Douglas Domenech, VPAS and OES Staff, and students

Acknowledgements: This Update of the Virginia Tech Sustainability Plan was conducted under direction of Steve Mouras, Director of Transportation Planning and Sustainability, by the Committee on Energy & Sustainability’s Sustainability Plan Subcommittee, Denny Cochrane, John Randolph, and Rob Lowe, with participation of Kayla Smith, Rial Tombes, Eric Margiotta, Mark DiDilippo, Drew Gallagher, Richard Hirsch, Emily Schosid, Stephanie Smith, and Angie DeSoto.

DRAFT

I. THE VIRGINIA TECH CLIMATE ACTION COMMITMENT

A. Historical Perspective

Virginia Tech has long embraced recycling efforts, waste reduction, energy savings, and other sustainability measures, but a formal commitment or program was lacking until December 2007. That is when Virginia Tech students, led by their group The Environmental Coalition, met with Virginia Tech President Charles W. Steger to encourage him to sign the American College and University Presidents Climate Commitment (PCC). The PCC Mission Statement declares “colleges and universities must exercise leadership in their communities and throughout society by modeling ways to eliminate global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality.” President Steger told the students he would review the PCC before making a decision. In addition, he said he would only commit the university to do what is achievable given limited resources.

In April 2008, President Steger announced his decision to not sign the generic Presidents Climate Commitment, and provided his rationale for why the university would be better served by developing a commitment and sustainability plan that is specific to Virginia Tech and outlines clear, measurable, and realistic goals. He therefore charged the newly formed Energy and Sustainability Committee with the responsibility to develop a Virginia Tech climate commitment and a sustainability plan to achieve it. Furthermore, President Steger directed the commitment be placed in resolution format and forwarded through the university governance system.

During the 2009 Spring Semester the resolution was successfully advanced through the university governance process. On Earth Day April 22, 2009, the University Council approved the “Virginia Tech Climate Action Commitment” (VTCAC) and accepted the accompanying Sustainability Plan.

On June 1, 2009, the Virginia Tech Board of Visitors unanimously approved The Virginia Tech Climate Action Commitment. It subsequently became the President’s Policy Memorandum No. 262 The Virginia Tech Climate Action Commitment Resolution on July 31, 2009. The policy is shown in Appendix A.

B. The 2009 Virginia Tech Climate Action Commitment

The 2009 Virginia Tech Climate Action Commitment contained 14 distinct points. Among the features it committed the university to do the following:

- Be a Leader in Campus Sustainability.
- Represent the Virginia Tech Climate Action Commitment and Sustainability Plan (VTCAC&SP) in the Virginia Tech Strategic Plan.
- Establish a target for the reduction of campus greenhouse gas (GHG) emissions to 80% below the 1990 emission level by 2050, with interim targets for 2012 and 2025.

DRAFT

- Improve energy efficiency and the reduction of energy waste.
- Engage students, faculty, and staff to reduce energy, water, and materials consumption through education and involvement.
- Pursue US Green Building Council Leadership in Energy and Environmental Design (LEED) Silver certification or better for all new buildings and major renovations.
- Establish an Office of Sustainability to oversee the implementation of the VTCAC, to monitor annual energy usage and GHG emissions, to coordinate campus sustainability efforts.
- Prepare an annual “report card” showing sustainability progress.

C. 2013 Update to the Virginia Tech Climate Action Commitment

Point 13 in the VTCAC states that periodic reviews of the resolution would be conducted and adjustments made as appropriate. During the Academic Year 2012-2013, the Energy and Sustainability Committee conducted a detailed review of the language contained in each of the VTCAC fourteen points. In addition, the Committee reviewed the status of the implementation of the actions and measures in the Immediate Phase of the Sustainability Plan.

The Energy and Sustainability Committee prepared a detailed spreadsheet that contained the original language for the 14 points in the VTCAC, and provided recommended changes to that language along with the rationale for those recommended changes.

In April 2013 the Energy and Sustainability Committee forwarded the proposed revisions to the Commission on University Support. The Commission created the Resolution to Update the Virginia Tech Climate Action Commitment, which included the detailed spreadsheet, and forwarded it to the University Council for action. The Commission on University Support Resolution 2012-2013D is shown in Appendix B.

The University Council approved the proposed revisions to the VTCAC on May 6, 2013, and Virginia Tech President Steger subsequently signed Presidential Policy Memorandum No. 262 (Revision 1) on May 9, 2013. The Update to the Virginia Tech Climate Action Commitment is shown in Appendix C.

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II. VIRGINIA TECH SUSTAINABILITY PLAN IMPLEMENTATION

A. Overview

The 2009 Virginia Tech Sustainability Plan that accompanied the VTCAC was developed as a working document to provide actions and measures that, when implemented, would position the university to achieve the goals in the VTCAC. The Sustainability Plan also contains the first greenhouse gas (GHG) emissions inventory for the university. The Plan is organized into six action categories and subcategories, which contain a number of proposed actions and measures for implementation. The six categories are as follows:

- Administrative Structure and Governance
- Facilities Infrastructure
- Facilities Operations
- Transportation
- Behavior and Campus Life
- Academic Programs

The Sustainability Plan is organized into three implementation phases. The Immediate Phase (2009-2012) identifies a number of no-cost and low-cost modifications to campus operations that can have an immediate impact and result in substantial savings. The Sustainability Plan looks beyond three years and identifies potential goals and strategies for the Mid-Term Phase (2013-2025), and the Long-Term Phase (2026-2050). The primary focus of implementation is with the Immediate Phase.

The Sustainability Plan contains 119 separate proposed actions and measures for implementation. There are 85 identified for the Immediate Phase, 27 for the Mid-Term Phase, and 7 for the Long-Term Phase. The full Plan is given at <https://www.facilities.vt.edu/documents/sustainability/VTCACwithAppendices.pdf>.

B. Sustainability Plan Progress

In accordance with VTCAC point 5, the Office of Energy and Sustainability was established on June 1, 2009 to oversee the implementation of the Sustainability Plan. In order to measure our sustainability progress, the VTCAC&SP Status Report was created to track the status of the 85 actions and measures identified in the Immediate Phase (2009-2012). The Status Report is a detailed spreadsheet, which is organized and aligned using the six action categories shown above. Actions and measures are listed in the same order as they appear in the Sustainability Plan. For each action and measure, the spreadsheet contains a brief description or rationale for that item, the status details, and the contact information of the person most responsible for oversight of the item. The overall status of each item is summarized using a color code as follows:

- Green indicates the action or measure has been completed or implemented.

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- Yellow indicates the action or measure is in the process of being implemented.
- Red indicates the action or measure is either on hold or it has been cancelled.

The VTCAC&SP Status Report was updated on a quarterly basis and served as an effective management tool. The final Status Report was completed on July 17, 2012 and is shown in Appendix D. As shown in the upper right hand corner, 64% of the 85 actions and measures were coded green, indicating they were complete, 25% were coded yellow, indicating they were being implemented, and 11% were coded red, indicating they were on hold or canceled. The significant point is that three years after approval of the VTCAC, over 89% of the actions and measures identified for the Immediate Phase had been completed, or were in the process of being implemented.

C. Sustainability Annual Reports

In accordance with VTCAC point 13, the Office of Energy and Sustainability has the responsibility for preparing annual sustainability reports for presentation to the Virginia Tech Board of Visitors. The 2010 *Annual Report on Campus Sustainability at Virginia Tech* was the first such publication and it may be viewed at Appendix E. The report includes an Executive Summary and progress to date for each of the VTCAC's 14 points.

The *Campus Sustainability at Virginia Tech 2011 Annual Report* is shown in Appendix F. The format for this report was changed to align with the six action categories in the VTCAC&SP.

The format for the 2012 annual report was significantly modified with measurements and metrics displayed using six bar charts with comments, and some narrative highlights as shown in Appendix G.

The *Virginia Tech Sustainability Annual Report 2012-2013* utilized the same six bar charts with comments, and expanded the highlights section to capture significant sustainability achievements and programs as shown in Appendix H.

D. Virginia Tech Sustainability Program Recognition

The Virginia Tech Sustainability Program formally began during the Academic Year 2007-2008 and it quickly gained recognition at the local, state, and national levels. The university, the Town of Blacksburg, and the local citizens group, Sustainable Blacksburg formed a green partnership for sustainability collaboration and education. Consisting of over 30 separate events, Sustainability Week 2007 was launched the last week in October and included national, state, and local level guest speakers, educational activities, practical workshops, a Campus Sustainability Fair and a Town of Blacksburg Sustainability Fair. The Commonwealth of Virginia Secretary of Natural Resources proclaimed this event as a model program that should be adopted on a state-wide basis.

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Item 1 in the VTCAC states: Virginia Tech will be a Leader in Campus Sustainability. Here is a representative listing of the notable achievements and accomplishments the university has received:

- Association for the Advancement of Sustainability in Higher Education’s “Sustainability Tracking, Assessment, and Rating System (STARS)” Silver Rating.
- Five “Governor’s Environmental Excellence Awards” (2 Gold and 3 Bronze) (2008, 2009, 2011, 2013 and 2014).
- Featured in the Princeton Review’s “*Guide to Green Colleges*” in 2011 (inaugural year) and for three consecutive years (2012-2014).
- Sixteen US Green Building Council Leadership in Energy and Environmental Design (LEED) registered new construction and major renovation projects representing nearly 1.3 million gross square feet (GSF). Specifically:
 - Nine projects LEED Certified (4 Gold, 4 Silver, 1 Certified)
 - Two projects awaiting LEED certification
 - Three projects under construction
 - Two projects in design
- “Best of Green Schools” in 2013 by the US Green Building Council for best collaboration (Celebrate Sustainability 2013 Program – formally Sustainability Week).
- “Tree Campus USA” Accreditation by the National Arbor Day Foundation in 2008 (inaugural year) with Reaccreditation each year for five consecutive years (2009-2013).
- “Bicycle Friendly University” designation from the League of American Bicyclists.
- Best Workplaces for Commuters designation by the US EPA for five consecutive years.
- “Campus Sustainability Report Card” B+ overall rating in 2011 from the Sustainable Endowments Institute (program began in 2008 and concluded in 2011).

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III. Changes in Tracking Campus Sustainability

Since the release of the Virginia Tech Sustainability Plan, the national movement for campus sustainability has evolved. The Association for the Advancement of Sustainability in Higher Education (AASHE) has become the leading organization for promoting campus sustainability, and its Sustainability Tracking, Assessment & Rating System (STARS) has become the accepted tool for evaluating and comparing campus progress towards sustainability. Virginia Tech was an early member of AASHE and participated in the STARS assessment in 2011 and 2013.

Because AASHE STARS has become the national standard for tracking and assessing university sustainability progress, the university chose to use STARS as its primary monitoring and management tool in lieu of using the campus Report Card.

A. Overview of the Sustainability Tracking, Assessment, and Rating System (STARS)

The Sustainability Tracking, Assessment & Rating System (STARS) is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. STARS was created by the higher education community for use by the same. STARS is a comprehensive management tool that encompasses the environmental, economic, and social dimensions of sustainability. STARS is designed to:

- Provide a framework of understanding sustainability in all sectors of higher education.
- Enable meaningful comparisons over time and across institutions using a common set of measurements developed with broad participation from the campus sustainable community.
- Create incentives for continual improvement toward sustainability.
- Facilitate information sharing about higher education sustainability practices and performance.
- Build a stronger, more diverse campus sustainability community.

STARS is a Rating System that uses a 100 point scale. The minimum score required for a specific STARS Rating is as follows: Bronze: 25; Silver: 45; Gold: 65; and Platinum: 85.

STARS contains 135 separate subject areas called “Credits.” There are two types of credits which are called “Tier 1 and Tier 2 Credits.”

- Tier 1 Credits focus on performance. Credits are based on measurements of sustainability performance and are typically quantitative. Tier 1 credits have point values from 1 to 14.
- Tier 2 Credits focus on strategies. Credits target approaches or processes that can be implemented to improve an institution’s performance. All Tier 2 credits have a point value of 0.25.
- STARS strives to prioritize performance over strategy.

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The STARS Technical Manual provides a detailed description of the information and data requirements for each of the 135 STARS credits; the manual can be found at (http://www.aashe.org/files/documents/STARS/stars_1.2_technical_manual.pdf).

The Credits are placed in one of the following three broad categories:

- Education & Research (ER) Category (20% of the credits):
- Operations (OP) Category (53% of the credits):
- Planning, Administration & Engagement (PAE) Category (27% of the credits):

While the number of credits in each of the three categories is different, the total point value for each of the three categories is 100. The Operations Category has over half of the total credits.

STARS has a fourth category - the *Innovation Category*. An institution can receive one additional point towards its overall score for having implemented an innovation credit that is not covered by any of the STARS credits. An innovation credit requires a Letter of Affirmation from a subject matter expert at the institution confirming its uniqueness. The institution can earn up to four innovation credits, which are added to the average score of the points earned in the three primary categories.

The information and data submitted for a STARS rating must be accompanied by a letter from the institution's president that affirms the accuracy of all of the documentation. A STARS rating is good for 3 years. If, during the 3 year period following the STARS submission, an institution wishes to submit additional documentation and seek a new STARS rating, it must re-register with STARS. Changes to the submitted information can be made at any time by designated personnel. When appropriate, the institution can then re-submit their new documentation for a new STARS rating.

In conclusion, STARS provides the university with a reporting tool to manage 135 sustainability topics areas (credits). STARS is used by our peer institutions and is nationally recognized as the best sustainability product available to measure the university's sustainability performance.

B. Virginia Tech STARS Results

Table III-1 gives Virginia Tech's summary results for submitted in August 2011. The university earned 75 percent of the total available points in the Education & Research Category, 73 percent of the total available points in the Planning, Administration, & Engagement Category, and 29 percent of the total available points in the Operations Category. The total of 61.91 points earned Virginia Tech a Silver rating.

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Table III-1 Virginia Tech STARS submission, August 2011

Category	Points Earned	Category Score
Education & Research	75.01	75.01%
Operations	29.14	29.14%
Planning, Administration & Engagement	72.40	72.58%
Provisional Score		58.91
Innovation Credits (3)		3.00
TOTAL SCORE for STARS		61.91

Table III-2 gives a summary of the results for latest STARS rating submitted in 2013. Scores were similar to the initial submission.

Table III-2 Virginia Tech STARS submission, March 2013

Category	Points Earned	Category Score
Education & Research	75.01	75.01%
Operations	30.76	30.76%
Planning, Administration & Engagement	72.13	72.13%
Provisional Score		59.30
Innovation Credits (4)		4.00
TOTAL SCORE for STARS		63.30

Table III-3 gives more detailed results showing category and subcategory available points and points earned by Virginia Tech. A particular challenge in earning points under the Operations Category is STARS uses a base year of 2005 to determine progress in a particular item.

Table III-3a STARS Education & Research and Virginia Tech Points Earned

Sub-Category	Points Available	Points Earned
Co-Curricular Education	18.00	12.25
Curriculum	55.00	35.76
Research	27.00	27.00
Total Points	100.00	75.01
Overall SCORE for ER		75.01%

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Table III-3b STARS Operations and Virginia Tech Points Earned

Sub-Category	Points Available	Points Earned
Buildings	13.00	1.89
Climate	16.50	2.25
Dining Services	8.50	2.82
Energy	16.50	1.58
Grounds	3.25	1.57
Purchasing	7.50	3.97
Transportation	12.00	5.15
Waste	12.50	8.28
Water	10.25	3.25
Total Points	100	30.76
Overall SCORE for OP		30.76%

Table III-3c STARS Planning, Administration, Engagement and Virginia Tech Points Earned

Sub-Category	Points Available	Points Earned
Coordination & Planning	18.00	18.00
Diversity & Affordability	13.75	13.75
Human Resources	19.75	16.30
Investment	16.75	0.43
Public Engagement	31.50	23.47
Total Points	99.75*	71.95
Overall SCORE for PAE		72.13%

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C. Process of Converting to STARS

As discussed in Section II, the Office of Energy & Sustainability has continually monitored progress in implementing the 2009 Plan in the Sustainability Plan Status Report that tracked 119 different items. The process of converting the Sustainability Plan to STARS involved cross-checking the 119 Sustainability Plan Status Report items to the 135 STARS credits. OES staff developed a spreadsheet for this cross-check. A portion of the spreadsheet is shown in Table III-4, which shows the Education & Research category. The process aligned the STARS credits with the Status Report items, and Status Report items that did not align were identified as VT-Unique items. The E&SC subcommittee working on the Plan update reviewed these VT-Unique items, decided which were still valid and of those which needed to be updated. The complete spreadsheet is shown in Appendix I.

Table III-4 Aligning STARS Credits and VTCAC Education & Research

EDUCATION AND RESEARCH (ER)						
Fall Semester 2013						
STARS Credit Number and Title	Points Possible	STARS v 1.2 Rating 3/19/2013	Credits Pursued STARS v 1.2	VTCAC&SP Status Report Item	VTCAC Component No.	Comments: Credit maintenance or new programs needed to claim points in future STARS Report(s)
Co-Curricular Education						
ER-1: Student Sustainability Educators Program	5	0	Not Pursuing	#45, 60		Could claim points if a "Sustainability Advisors/Eco Rep" peer-to-peer program is initiated
ER-2: Student Sustainability Outreach Campaign	5	5	Pursuing	#10, 72		
ER-3: Sustainability in New Student Orientation	2	2	Pursuing	#46		
ER-4: Sustainability Materials and Publications	4	4	Pursuing	#47, 50		May need to reinstate newsletter to claim full points in future
Tier2-1: Student Group	0.25	0.25	Pursuing			
Tier2-2: Organic Garden	0.25	0.25	Pursuing			
Tier2-3: Model Room in Residence Hall	0.25	0	Not Pursuing	#61		Could pursue in the future
Tier2-4: Themed Housing	0.25	0	Not Pursuing			Could pursue in the future
Tier2-5: Sustainable Enterprise	0.25	0	Not Pursuing			Could pursue in the future
Tier2-6: Sustainability Events	0.25	0.25	Pursuing	#33		
Tier2-7: Outdoors Program	0.25	0.25	Pursuing			
Tier2-8: Themed Semester or Year	0.25	0.25	Pursuing			Have claimed in past w/"Common Book Project" (09-10 and 10-11). Will need new program or common book that emphasizes sustainability to claim these points in the future
Curriculum						
ER-5: Sustainability Course Identification	3	3	Pursuing	#78		Course inventory will need to be updated, currently dated Summer 2012 (can cover 1, 2, or 3 years)
ER-6: Sustainability-Focused Courses	10	8.83	Pursuing	#78	12	Course inventory will need to be updated, currently dated Summer 2012 (can cover 1, 2, or 3 years)
ER-7: Sustainability-Related Courses	10	2.00	Pursuing	#78	12	Course inventory will need to be updated, currently dated Summer 2012 (can cover 1, 2, or 3 years)
ER-8: Sustainability Courses by Department	7	5.47	Pursuing	#78		Course inventory will need to be updated, currently dated Summer 2012 (can cover 1, 2, or 3 years)
ER-9: Sustainability Learning Outcomes	10	6.46	Pursuing	#78		Currently calculated from AY 09-10. Will need to be updated
ER-10: Undergraduate Program in Sustainability	4	4	Pursuing	#79		
ER-11: Graduate Program in Sustainability	4	4	Pursuing			
ER-12: Sustainability Immersive Experience	2	2	Pursuing	#77		
ER-13: Sustainability Literacy Assessment	2	0	Not Pursuing			Could pursue in the future
ER-14: Incentives for Developing Sustainability Courses	3	0	Not Pursuing			Could pursue in the future
Research						
ER-15: Sustainability Research Identification	3	3	Pursuing	#82		Research inventory will need to be updated
ER-16: Faculty Involved in Sustainability Research	10	10	Pursuing	#82		Research inventory will need to be updated
ER-17: Departments Involved in Sustainability Research	6	6	Pursuing	#82		Research inventory will need to be updated
ER-18: Sustainability Research Incentives	6	6	Pursuing	#82		
ER-19: Interdisciplinary Research in Tenure and Promotion	2	2	Pursuing	#82		
Total	100	75.01				
VT Unique Items						
			I	#81		Promote new research in energy efficiency and sustainability using undergraduate research and the university campus as a living laboratory.
			O	#85		Career Services provides information on Green Jobs to career counselors.

The subcommittee also identified additional goals, objectives, and strategies (GOS) that should be considered as VT-Unique GOS in the Sustainability Plan update. The results of this effort are presented in the next section.

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D. 2014 Update of 2009 Virginia Tech Sustainability Plan

This 2014 Update of the 2009 Virginia Tech Sustainability Plan integrates the goals, objectives and strategies of the 2013 Update to the Virginia Tech Climate Action Commitment (VT CAC) and adopts the AASHE STARS program as its primary monitoring and management tool. It also includes Plan goals, objectives and strategies (GOS) that go beyond the STARS protocol, what we call VT-Unique GOS.

This section presents the Plan, organized by the 2013 VT CAC. The section shows how STARS credits and VT-Unique GOS relate to the 14 points of the VT CAC. Relevant STARS credits are listed under each CAC point. More detailed STARS strategies and metrics are found in the Virginia Tech AASHE STARS documentation. VT-Unique GOS are given for each VT CAC point, including updated elements of the 2009 Plan (marked with * below) as well as new elements (marked with ** below). Appendix J uses this format to give a summary of progress for each CAC point, based on the March 2013 STARS submission or current (April 2014) status of VT-Unique GOS.

The Virginia Tech Climate Action Commitment Update 2013 Presidential Policy Memorandum No. 262 (Revision 1)

1. Virginia Tech will be a Leader in Campus Sustainability. Sustainability is an integral part of the fabric of the university as it pursues enhanced economic stability and affordability, diversity and inclusion, environmental stewardship, expansion of knowledge, and education of future leaders.

- STARS Credits
 - All Planning, Administration, Engagement (PAE) Sub-Categories:
 - Operations: Grounds
 - Operations: Water
 - Operations: Dining Services
- VT-Unique GOS:
 - 1.1. Achieve and maintain a STARS Gold Rating. **
 - 1.2. Work towards continuing to be recognized in the Princeton Review's "Guide to Green Colleges." **
 - 1.3. Work towards continuing to be recognized in Governor's Environmental Excellence Awards and other state and national programs. **
 - 1.4. Provide environmental stewardship of campus, balancing physical development, recreational, and agricultural needs with protection of ecological, vegetative, air quality, water, and other natural resources. **
 - 1.5. Be a Leader in Campus Dining Services Sustainability. **

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1.6. Continue to implement Policy 5505: Campus Energy, Water and Waste Reduction. *

1.7. Continue to develop and implement innovative sustainability programs including those that result in quantifiable and measurable cost savings. **

2. Virginia Tech will represent the VTCAC&SP in the university Strategic Plan.

- STARS Credits:
 - PAE-2 Strategic Plan
- VT-Unique GOS: None Applicable

3. Virginia Tech will establish a target for reduction of campus GHG emissions to 80% below 1990 emission level of 188,000 tons by 2050, and interim targets from 2006 emissions of 316,000 tons for 2012, 295,000 tons (on path to 2025 target); for 2025, 255,000 tons (2000 emission level); and for 2050, 38,000 tons (80% below 1990 emission level).

- STARS Credits:
 - Operations (OP) OP-5 (GHG reductions)
- VT-Unique GOS:
 - 3.1. Continuing progress toward GHG target. *

4. Virginia Tech will work toward these emission reduction targets through improved energy efficiency, reduction of energy waste, replacement of high-carbon fuels, and other measures identified in the VTCAC&SP.

- STARS Credits: Operations
 - OP-7 Building Energy
 - OP-8 Clean and Renewable Energy
 - Tier 2-13 to 2-18: Timers, sensors, metering, LED lighting, energy management
- VT-Unique GOS:
 - 4.1. Strive to reduce electricity and energy consumption per gross square foot and per enrolled student. *
 - 4.2. Continue enhancements and upgrades to central chilled water system to improve efficiency. *
 - 4.3. Explore the feasibility of additional Energy Service Company (ESCO) contracts, based on experience with current 5-building contract, to improve energy efficiency of campus buildings. **
 - 4.4. Study the long-term feasibility of replacing high-carbon coal and fuel oil in the steam plant with lower-carbon natural gas and biomass fuels. **
 - 4.5. Develop demand-side energy efficiency and load management programs on campus and in VTES municipal service area. *

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4.6. Develop plan for future VTES electricity that includes on-campus and VTES municipal service area demand-side management, smart grid infrastructure, and distributed sources. *

4.7. Continue to implement Policy 5505: Campus Energy, Water and Waste Reduction. *

5. Virginia Tech will maintain a sustainability office to:

- a. Coordinate programs for campus sustainability;**
- b. Oversee implementation of the VTCAC&SP;**
- c. Monitor annual electricity and other energy use and GHG emissions;**
- d. Working with faculty and departments, manage a campus-wide student internship and undergraduate research program using the campus as a sustainability laboratory; and**
- e. Coordinate communication regarding campus sustainability initiatives and programs to the university community and external audiences.**

- STARS Credits: Planning, Administration, and Engagement (PAE)
 - PAE-1 Sustainability Coordination
 - PAE-3 Physical Campus Plan
 - PAE-4 Sustainability Plan
 - PAE-5 Climate Plan
- VT-Unique GOS:
 - 5.1. Campus-wide student internship and undergraduate research program. *
 - 5.2. Maintain University Sustainability Website. *

6. Virginia Tech will improve the sustainability of its built environment by:

- a. Achieving LEED Silver certification or better for all eligible and applicable new buildings and major renovations;**
- b. Evaluating the feasibility of LEED for Existing Buildings certification for its existing buildings.**

- STARS credits:
 - OP-1 Building Operations and Maintenance:
 - OP-2 Building Design and Construction:
 - OP-3 Indoor Air Quality:
- VT-Unique GOS:
 - 6.1. Implement LEED Silver or better certification for new buildings and major renovations. *
 - 6.2. Identify cost and potential funding strategies to pursue LEED certification for Existing Buildings to include cost savings. **

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7. Virginia Tech will improve electricity and heating efficiency of campus facilities and their operations by:

- a. **Exceeding the most current version of ASHRAE 90.1 energy performance by 10% for all new buildings and major renovations. Capital budgets should account for future energy price, life cycle cost of building operation, and environmental benefits of achieving this level of performance;**
 - b. **Improving the heating and cooling infrastructure and operation, lighting efficiency, equipment efficiency, and metering and controls of its existing buildings.**
- STARS credits:
 - OP-1 Building Operations and Maintenance:
 - OP-2 Building Design and Construction:
 - OP-3 Indoor Air Quality:
 - OP-22 Water Consumption:
 - Tier 2-44 to 46 Waterless urinals, Water metering, Non-potable water use
 - VT Unique GOS:
 - 7.1. Explore means to integrate life-cycle economic and environmental operating costs in capital budgets. *
 - 7.2. In addition to LEED certification, evaluate energy performance of new buildings and major renovations to exceed ASHRAE 90.1 energy performance standard by 10% or more. *
 - 7.3. Improve water-use efficiency of new and existing buildings. *

8. Virginia Tech will minimize waste and achieve a 50% recycle rate by 2020.

- STARS Credits:
 - Dining Services Waste Tier 2-3,2-7 to 2-12: Trayless dining, Pre-consumer food waste compost, Post-consumer food waste compost, Food donation, Recycled content napkins, Reusable mug discounts, Reusable to-go containers
 - OP-17 Waste Reduction:
 - OP-18 Waste Diversion:
 - OP-19 Construction/Demo. Waste Diversion
 - OP-20 Electronic Waste Recycling
 - OP-21 Hazardous Waste Management
 - Waste Tier 2-38 to 2-43 Materials exchange, Limiting Printing, Materials on-line, Chemical reuse inventory, Move-in waste reduction, Move-out waste reduction
- VT-Unique GOS:
 - 8.1. Achieve 50% recycle rate by 2020. *
 - 8.2. Participation and recognition in national Recycle-Mania competition. *

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8.3. Enhance quality and recognition of Dining Services Sustainability waste minimization.
*

8.4. Continue to implement Policy 5505: Campus Energy, Water and Waste Reduction. *

8.5. Work with the YMCA at Virginia Tech and other groups to complement VT Recycling with move-in/move-out reuse programs like Y-Toss. *

9. Virginia Tech will:

a. Require purchase or lease of Energy Star rated equipment and maximum practicable recycled content paper, in accordance with University Policy 5505, with exceptions for special uses;

b. Consider a product's life cycle cost and impact when making purchasing decisions.

- STARS Credits:

- OP-10 Computer Purchasing
- OP-11 Cleaning Products Purchasing
- OP-12 Office Paper Purchasing
- OP-13 Vendor Code of Conduct
- Tier 2-24,25 Historically Underutilized Businesses, Local Businesses

- VT-Unique GOS:

9.1. Continue to implement Policy 5505: Campus Energy, Water and Waste Reduction. *

9.2. Continue to make sustainability a priority in the procurement department. *

10. Virginia Tech will engage students, faculty, and staff through education and involvement to develop and implement innovative strategies for efficient and sustainable use of energy, water, and materials in all university-owned facilities.

- STARS Credits:

- Planning, Administration, Engagement (PAE)-1 Sustainability Coordination
- PAE-13 Staff Professional Development in Sustainability
- PAE-14 Sustainability in New Employee Orientation
- PAE-15 Employee Sustainability Educators Program
- PAE-20 Inter-Campus Coordination on Sustainability
- PAE-22 Community Service Participation
- PAE-23 Community Service Hours
- PAE-24 Sustainability Policy Advocacy
- Education and Research (ER)-2 Student Sustainability Outreach Campaign
- ER-3 Sustainability in Student Orientation

- VT-Unique GOS:

10.1. Develop and implement programs to engage students, faculty and staff in the implementation of the VTCAC and Sustainability Plan. *

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11. Virginia Tech will improve transportation energy efficiency on campus through parking, fleet, and alternative transportation policies and practices. The university will continue to implement programs that encourage the use of alternative transportation methods and will continue to implement programs and services that promote eco-responsible fleet management.

- STARS Transportation Credits:
 - OP-14 Campus Fleet
 - OP-15: Student Commute Modal Shift
 - OP-16: Employee Commute Modal Shift
 - Tier 2-26 to 2-37 Bike sharing, Bicyclists facilities, Bicycle plan, Mass transit, Condensed work week, Telecommuting, Carpool/vanpool matching, Cash-out of parking, Carpool discount, Local housing, Prohibiting idling, Car sharing
- VT-Unique GOS:
 - 11.1. Continue to promote Alternative Transportation Program to reduce commuting vehicle miles traveled and related emissions. *
 - 11.2. Develop multi-modal transit facility on campus. **
 - 11.3. Blacksburg Transit should continue replacing old buses with more fuel-efficient buses to reduce their dependency on fossil fuels. *

12. Virginia Tech will continue to develop and implement innovative sustainability-related academic programs in instruction, research, and outreach, and will coordinate and communicate these programs to the university community and external audiences.

- STARS Education, Research and Outreach Credits
 - ER-1 Student Sustainability Educators
 - ER-2 Student Sustainability Outreach
 - ER-3 Sustainability in New Student Orientation
 - ER-4 Sustainability Material & Publications
 - Tier 2-1 to 2-8 Student group, Organic garden, Model residence room, Themed housing, Sustainable enterprise, Sustainability events, Outdoors program, Themed semester or year
 - ER-5 Sustainability Course Identification
 - ER-6 Sustainability-Focused Courses
 - ER-7 Sustainability-Related Courses
 - ER-8 Sustainability Courses by Department
 - ER-9 Sustainability Learning Outcomes
 - ER-10 Undergraduate Program in Sustainability
 - ER-11 Graduate Program in Sustainability

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- ER-12 Sustainability Immersive Experience
- ER-13 Sustainability Literacy Assessment
- ER-14 Incentives for Developing Sustainability Courses
- ER-15 Sustainability Research Identification
- ER-16 Faculty Involved in Sustainability Research
- ER-17 Departments Involved Sustainability Research
- ER-18 Sustainability Research Incentives
- PAE-19 Community Sustainability Partnership
- PAE-21 Sustainability in Continuing Education
- VT-Unique GOS:
 - 12.1. Promote new research in energy efficiency and sustainability. *
 - 12.2. Use undergraduate research, the university campus and the surrounding community as a living laboratory. *
 - 12.3. Continue to develop innovative sustainability related academic courses and programs. *
 - 12.4. Career Services provides information on Green Jobs to career counselors. *
 - 12.5. In community outreach and engagement, continue to work with, surrounding jurisdictions, especially the Town of Blacksburg, and community organizations to promote common interests in advancing sustainability. *

13. Virginia Tech will monitor energy use and GHG emissions as well as changing internal and external conditions, prepare an annual 'report card' showing progress towards targets, and periodically re-evaluate targets, making adjustments to targets as appropriate based on changing internal and external conditions and evolving technologies.

- STARS Credits: None Applicable
- VT-Unique GOS:
 - 13.1. Monitor progress in all 14 VTCAC elements and produce an annual report for presentation to the campus community and Board of Visitors. *
 - 13.2. At approximately five year intervals, re-evaluate the VTCAC and Sustainability Plan and update as needed. **
 - 13.3. Use AASHE STARS as a sustainability management tool to monitor progress. **
 - 13.4. Accommodate STARS updated versions and submit new data as appropriate. **

14. Virginia Tech will work to provide funding to support sustainability programs. With regard to all the items in this resolution, major personnel and investment decisions, including capital projects, associated with implementing the VTCAC&SP will be based on a joint review of costs and benefits by university financial and facilities staff and be subject to availability of funds.

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- STARS Credits: None Applicable
- VT-unique GOS:
 - 14.1. Work to integrate life-cycle costs into both capital and operating budgets, especially for building efficiency and energy systems to better manage long-term costs. **
 - 14.2. Continue annual Green RFP funding, or a similar funding mechanism, to support student-initiated proposals for sustainability-related projects consistent with this Sustainability Plan. **

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IV. Looking Ahead: Implementation of 2014 Virginia Tech Sustainability Plan

A. Framework for Implementation: the VTCAC 14 Points

The implementation of the 2014 Virginia Tech Sustainability Plan Update will focus on the VTCAC 14 points and improving progress toward the STARS credits and VT-Unique GOS given for each point. Progress should be reported in the Sustainability Annual Report to the Board of Visitors. Former submittal of STARS reported data should be done on about a three-year cycle and should consider evolving versions of the STARS protocol. The Virginia Tech Climate Action Commitment and Sustainability Plan should be updated on about a five-year cycle.

B. STARS as a Sustainability Management Tool

AASHE STARS protocol has become the national standard for monitoring university progress toward sustainability. The data is used by other organizations rating university sustainability, such as the Princeton Review's "*Guide to Green Colleges.*" Using STARS as a management tool for Virginia Tech's sustainability planning and management provides efficiency in monitoring sustainability progress, comparison with other peer institutions, and a more systematic means of tracking compliance and progress toward VT's Climate Action Commitment.