

# Proposed Indoor Training Facility and Stadium Woods

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Forest Biology



# Location and Description of Stadium Woods



# Brief History of “Process”

January 20, 2011 - Virginia Tech Arboretum Committee informed but asked to “keep it quiet”

August 7, 2011 - Washington Post Article indicates plans for new facility

*“Virginia Tech’s new indoor facility **will be** located in a wooded area adjacent to the Hokies outdoor practice fields, just beyond the north end zone of lane stadium. Gabbard said part of the project **will involve removing 30 feet of elevation and moving approximately 80,000 cubic yards of dirt from the woods**” (emphasis mine)*

August 8, 2011 - Virginia Tech Arboretum Committee told it was “a done deal”; asked to provide information for remediation of canopy cover lose. This became interpreted as “tree folks are on board”

November 3, 2011 – Arboretum Committee asked for an official position

November 11, 2011 – Arboretum Committee sent their “**strongly opposes**” position

November 19, 2011 – Friends of Stadium Woods (FSW) begins on-line opposition petition

November 30, 2011 – FSW has organizational meeting in town library

# Brief History of “Process” continued

Early December, 2011 – Faculty Senator Dr. Jim Kuypers begins drafting resolution supporting protection of stadium woods.

December 6, 2011 – Dr. Sherwood Wilson sends letter to faculty senators

December 13, 2011 – Faculty Senate unanimously approves resolution supporting protection of Stadium Woods.

December 15, 2011 – Several concerned faculty meet with Athletics and University planning and walk through woods.

≈December 17, 2011 – President Steger walks through Stadium woods and orders an ecological assessment

January 5, 2012 – Dr. Seiler meets with Provost McNamee

January 19, 2012 – President Steger appoints a committee to study siting of building

# Evaluation of the values of Stadium Woods and how these values would be impacted by the proposed indoor practice facility



Eastern bluebird photographed in Stadium Woods February 23, 2012

# Location and Description of Stadium Woods

Approximately a 15 acre remnant of old growth forest.



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Over 26 white oaks in excess of 30 inches in diameter on footprint.



Numerous centuries old white oaks are found uniformly throughout Stadium Woods

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Overstory, mid-story and understory.



Age structure of Stadium Woods is that of an old-growth forest



# Location and Description of Stadium Woods

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Over 26 white oaks in excess of 30 inches in diameter on footprint.

Overstory, mid-story and understory.

Very diverse forest community

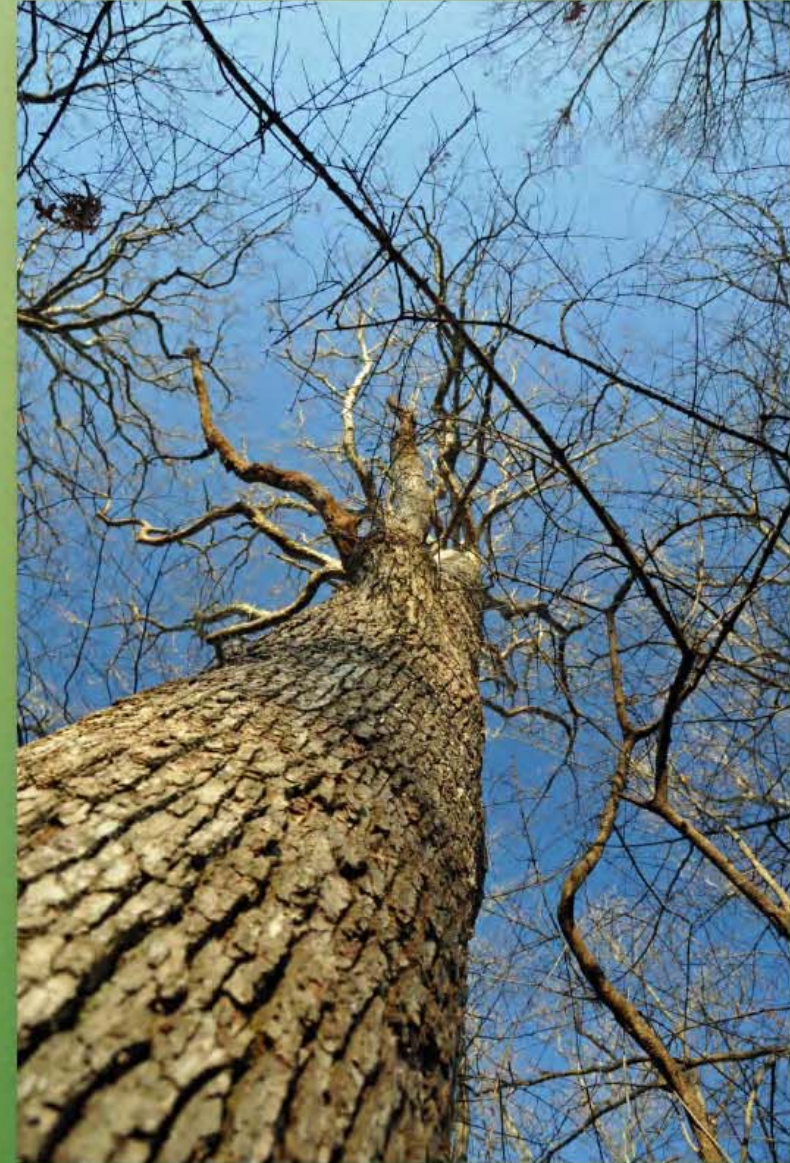


Upward Bound summer students collecting data in Stadium Woods

# What is an Old Growth Forest?

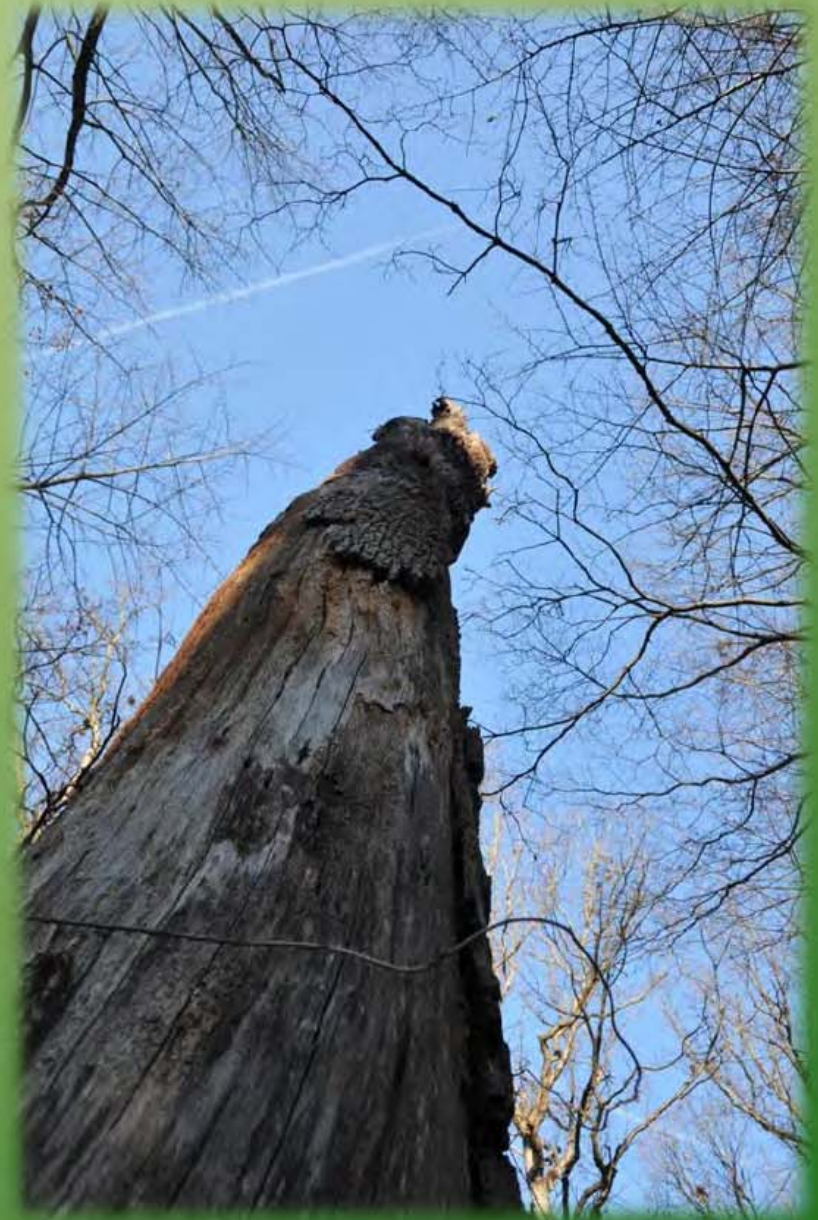
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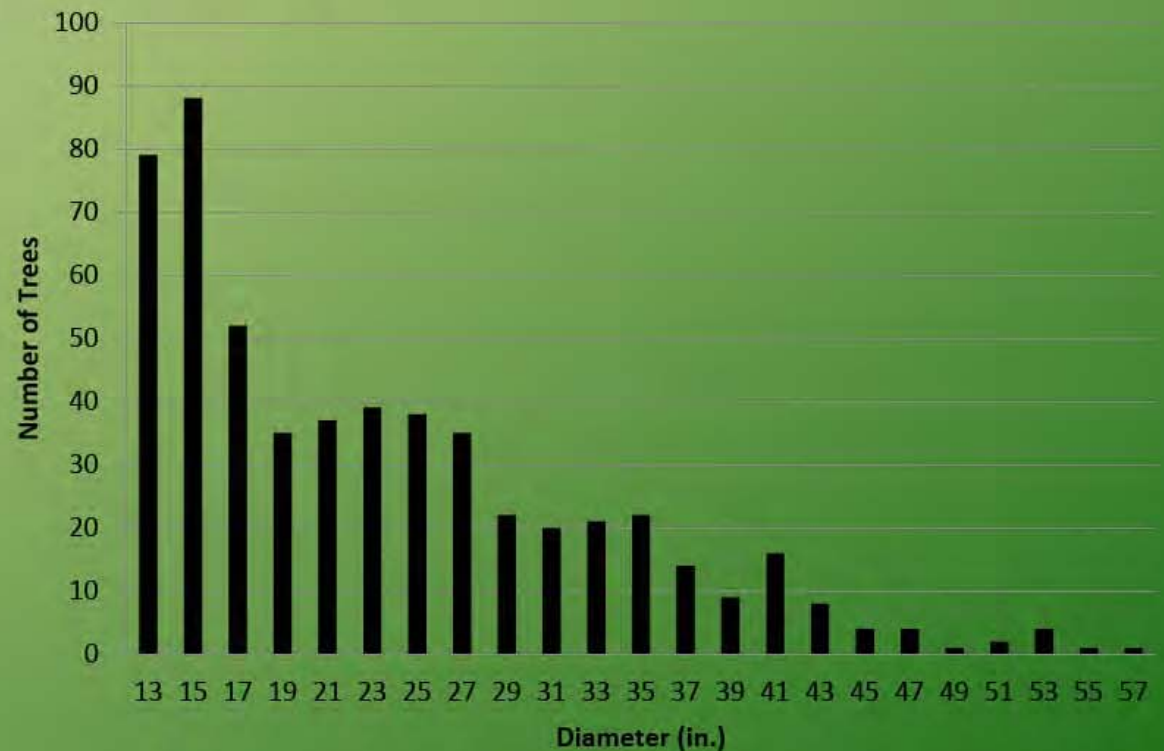
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# What is an Old Growth Forest?

Present in  
Stadium Woods

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- coarse woody debris on the forest floor
- multilayered canopies
- a mix of tree ages
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## A collection of old trees

Vet School white oaks



## Old growth Forest

Stadium Woods impact zone

# How much old growth is there in the Eastern U.S?

Old-growth forests are "**the least represented habitats on the eastern landscape.**" Less than 0.6% of the forest that remains in the East today has not been heavily logged or grazed.

# Are the remaining old-growth forests protected?

At least **50%** of the remaining old growth is still in **private hands** or controlled by agencies that may and surprisingly often do log it. Even protected sites suffer from such **human-caused disruptions as the logging of their buffers** and the incursion of **non-native species**.

















# What is the value of old growth?

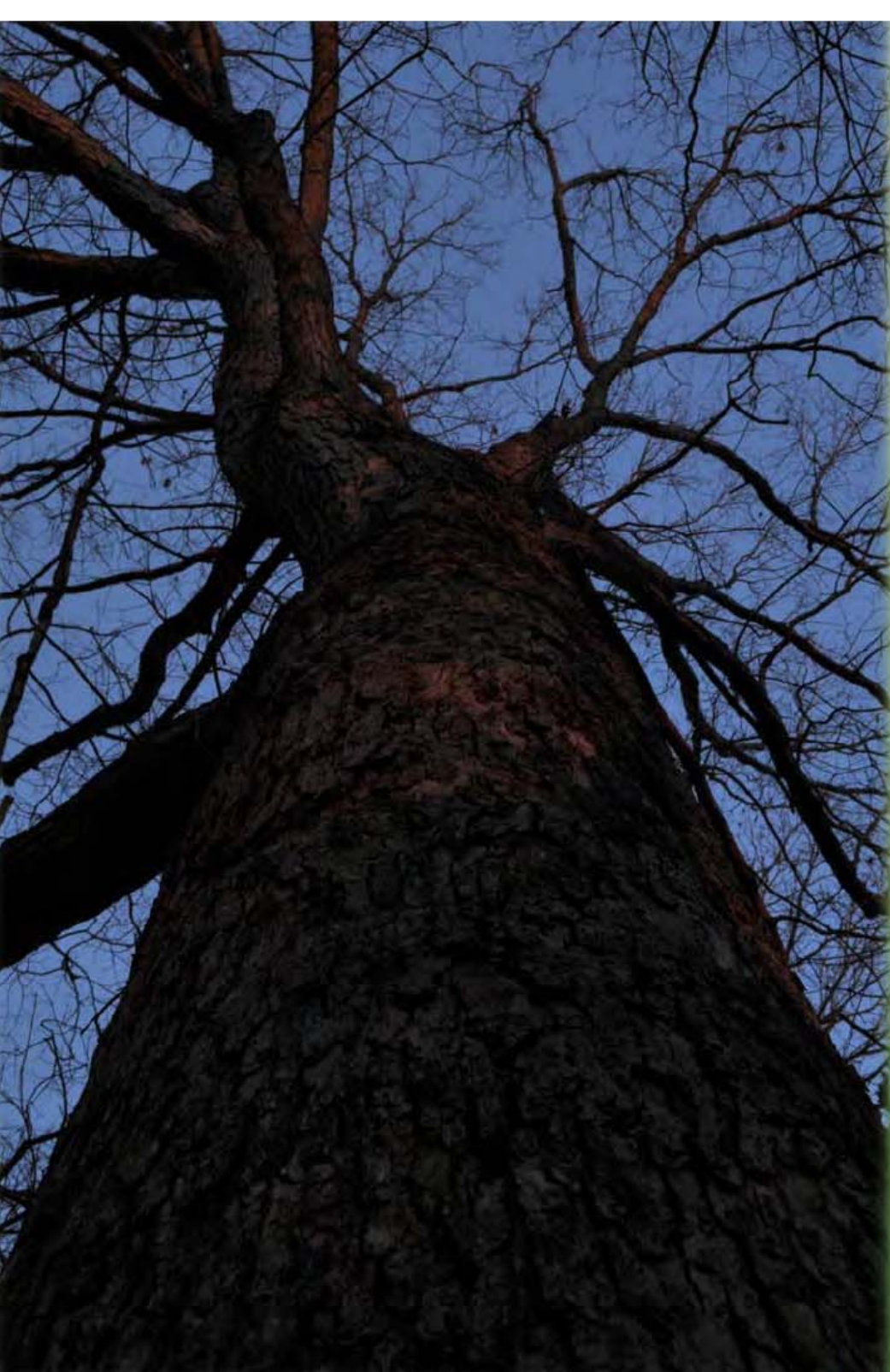
Old-growth forests have rightly been characterized as "the key" to **biodiversity**.

Unique contributions to the **gene pool**

**Harboring** native species (e.g. *Cornus alternifolia*, *Castanea dentata*)

Demonstrating natural processes and numerous **ecosystem services**

Important **carbon sinks**. Old-growth forests continue to sequester carbon for many centuries.



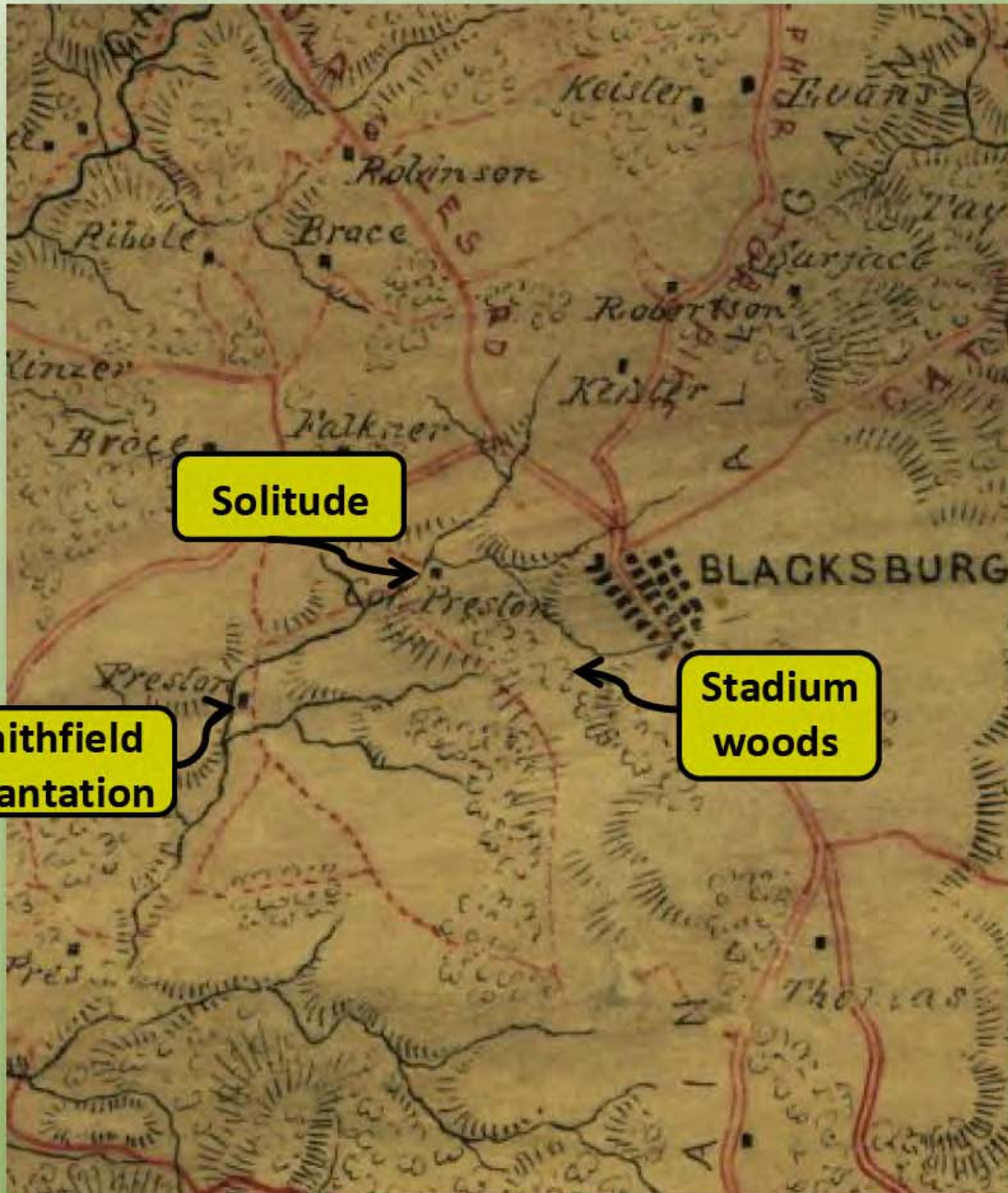
Are the trees  
in Stadium  
Woods really  
old?



# Historical events during the life of white oak tree number 101 in Stadium Woods, age 346 years



Wood core from tree 101 in Stadium Woods. The tree is a 40 inch diameter white oak on the footprint of the planned building. Core obtained was 13.75 inches long. At that point the middle of the tree was rotten. Number of rings found on the available core indicates that portion of tree grew over a period of 238 years. Another 6.25 inches of growth is needed to reach the center of the tree resulting in an estimated tree age of 346 years. Exact age is unknown; however, the tree was quite large in 1774.



Stadium Woods  
shown on 1864  
Confederate map  
of Blacksburg, Va  
area.





Is Stadium woods  
unique and rare ?

*“The uniqueness of this stand ... is that it is so easily accessible to so many people. Most of the old-growth forests on the list I sent to you are found in rugged or inaccessible areas. Hiking into Sipsey Wilderness in Alabama was not too easy. So, the value here is that, with good, environmentally-conscious development, those with limited mobility can get a sense of awe about what mature forests look like. This has to be **a rare thing in upland areas**. The only areas I am familiar with that give people with limited access to mature forests are in national parks or wetland forests (Four Holes Swamp, SC; Congaree National Park, SC; Everglades; I would bet the Okefenokee has something similar). **But because many, if not most, old white oak forests near human settlement were cut, you might have a truly rare piece of property.**”*

*“The best place that I just learned about that sounds similar [to Stadium Woods] might be the Murphy Tract in WV. **The site of yours sounds pretty unique...this sounds like a great find!**”*

Dr. Neil Pederson, Forest Ecologist and old growth expert, Tree Ring Laboratory,  
Lamont-Doherty Earth Observatory at Columbia University



Murphy tract in West Virginia has 22 white oak greater than 340 years in age. Trees, however, are considerable smaller than in Stadium Woods.

*“As an old growth forest researcher and a co-author of 5 books, I have come to fully recognize how **rare and valuable** these old growth remnants are. I urge you to preserve the remnant.”*

Robert T. Leverett, Eastern Native Tree Society Cofounder and Executive Director, Florence, Massachusetts

*“Areas with old trees such as these should be protected. There are many White Oaks in North America in the 50 – 70 year old range but the 200-500 year old trees are **extremely rare**.”*

Lawrence Tucei, Live Oaks Project Director, Native Tree Society

*“There did not seem to be any process that VT used to make this decision. The Stadium Woods is probably one of **the more important ecological sites in the state of Virginia**. Many of the trees are between 250 and 300 years of age.”*

Dr. David Wm. Smith, Former Dean of CNRE, Past President of Society of American Foresters, Appalachian hardwood expert

*“Sweetbriar College White oak Woods (Amherst County): on a flat ridge owned by the college, approximately 10 acres of White oak-mixed hardwoods-mixed herb community in which most of the dominant trees have dbhs (diameters at breast height) of 30 to 36 inches.”*

**Highlighted** in *Old growth in the East: A Survey (Online Ed.)* (Byrd 2006)

“The final paved trail wrapped carefully around all the trees without causing any damage or death to these **delicate treasures.**”

Anderson and Associates on-line portfolio with regard to protecting trees in Stadium Woods

## Are the woods used by the local and campus community?

## Do they have special significance for campus or local community life?

*“ I grew up in Blacksburg and have taken many an enjoyable walk through these woods. It would be a great thing if VT could keep Stadium Woods for public and student education and leisure. Please VT, please consider building a world class athletic training facility elsewhere on campus!”* Sarah, Radford Va

*“ I lived on Clay Circle for years and walked my dogs in the stadium woods every day. It is one of the nicest amenities about living down town. It would be terrible to see the woods gone!”*

Jeanne, Blacksburg, Va

*“ I love walking/jogging through these woods. Please don't destroy them!”*

Chris, Blacksburg, Va

*“I lived near the Stadium Woods when I was here in school in the late 1970's. I spent a great deal of time there, especially when my father was gravely ill. It meant a lot to me to be able to go sit in the woods and pray, cry, and find a moment of serenity. Please do not destroy this precious space.”*

Christine, Blacksburg, Va

*“ It seems there are many issues with turning this forest into an athletic center that could be solved by just using the tennis courts. In addition to all the ecosystems services that Stadium and Center Woods provide, many of us who are alums have very personal reasons for wanting to keep these places whole. A fellow grad student of mine died in Stadium Woods and I'd really like to see the woods remain, if for no other reason than to honor her memory. Please don't destroy these beautiful, ancient trees. ”*

Tiffany, Newport, Va

**To what extent are the woods used as a teaching tool?**  
FOR 2214, FOR 2324, FOR 2414, FOR 2984, FOR 3354,  
FOR 4454, FOR 5374, Upward Bound

## Examples of Student Use

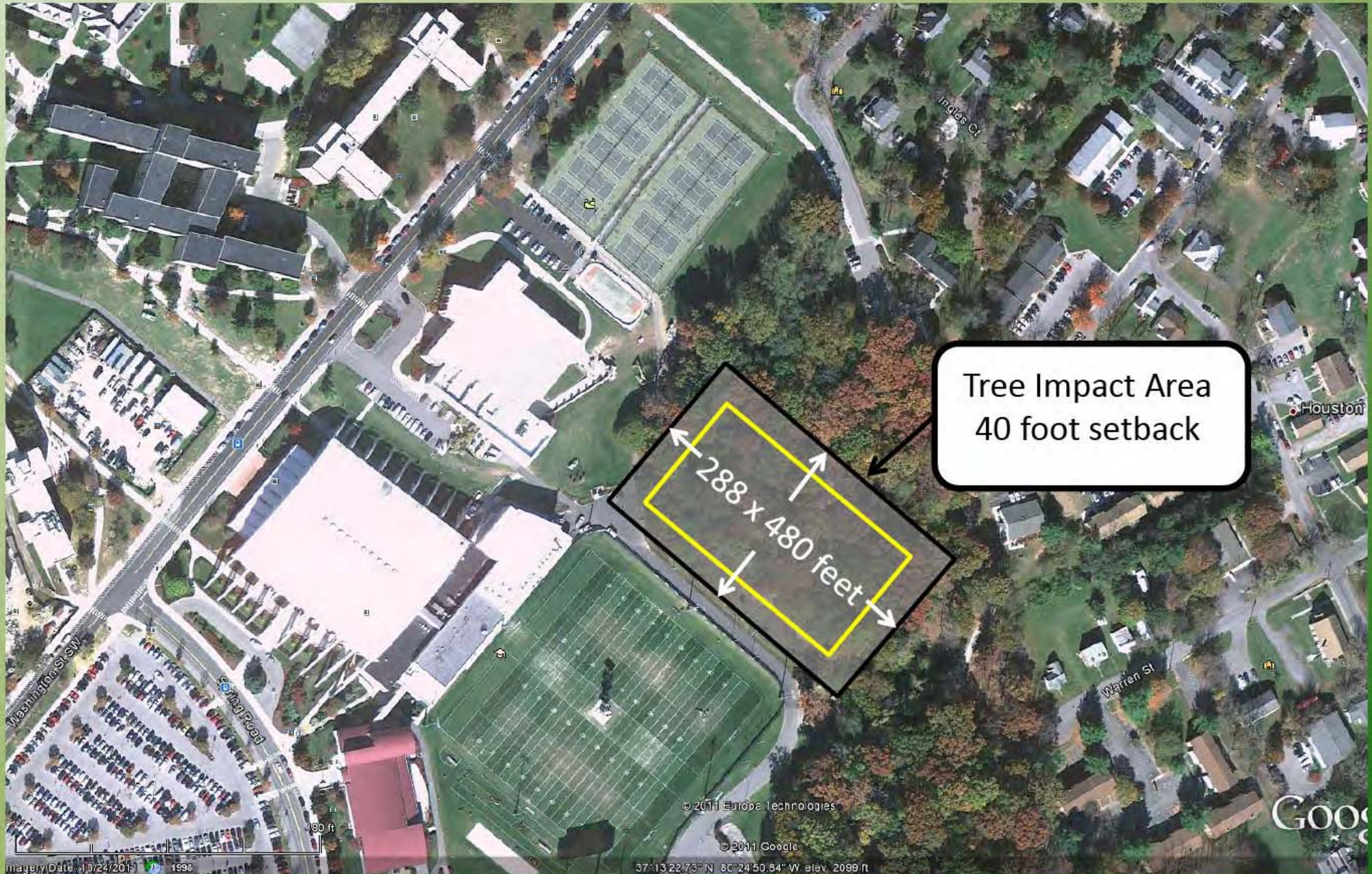


# Proposed site and siting issues





# Proposed Indoor Training Facility Location



Trees on edge develop epicormic branches;

Upper crowns begin to die back

Root trauma/death results in crown die back as tree attempts to readjust root/shoot ratio



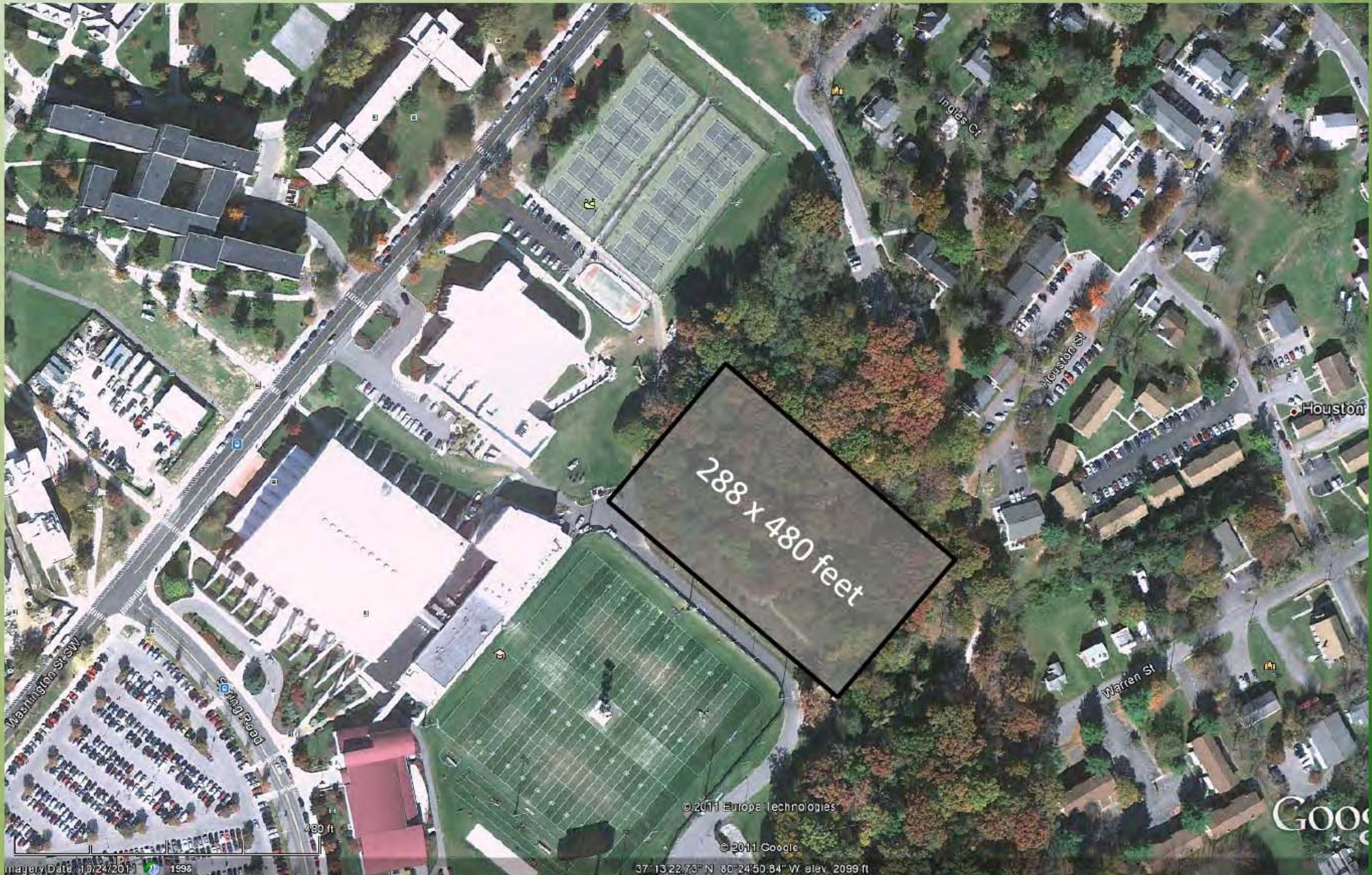


Trees on current edge of Stadium Woods with severe crown die back

# Actual limits of disturbance for basketball practice facility

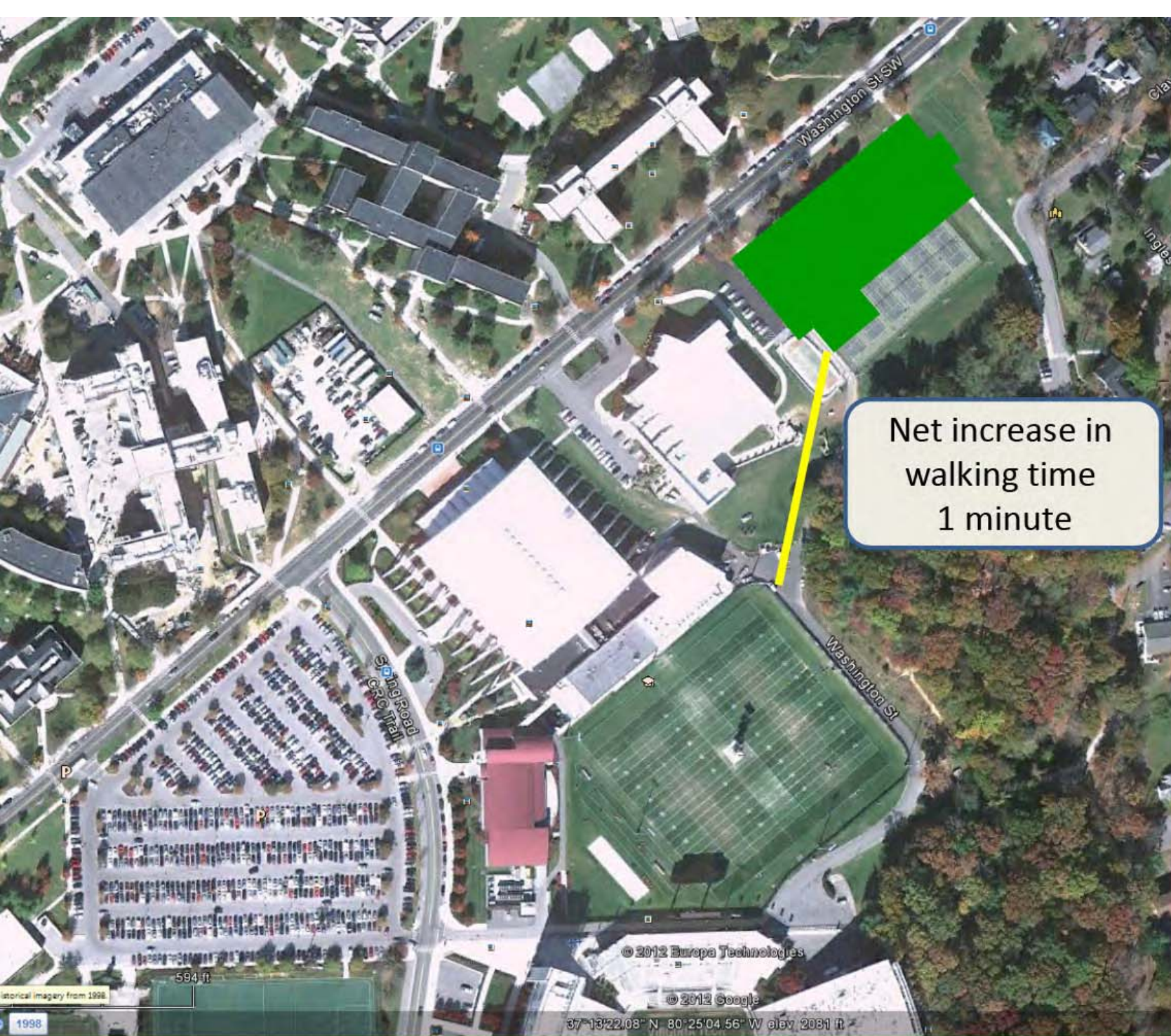
Environmental Impact Review

Capital Project Code: 208-L00005, Anderson & Associates, Inc.



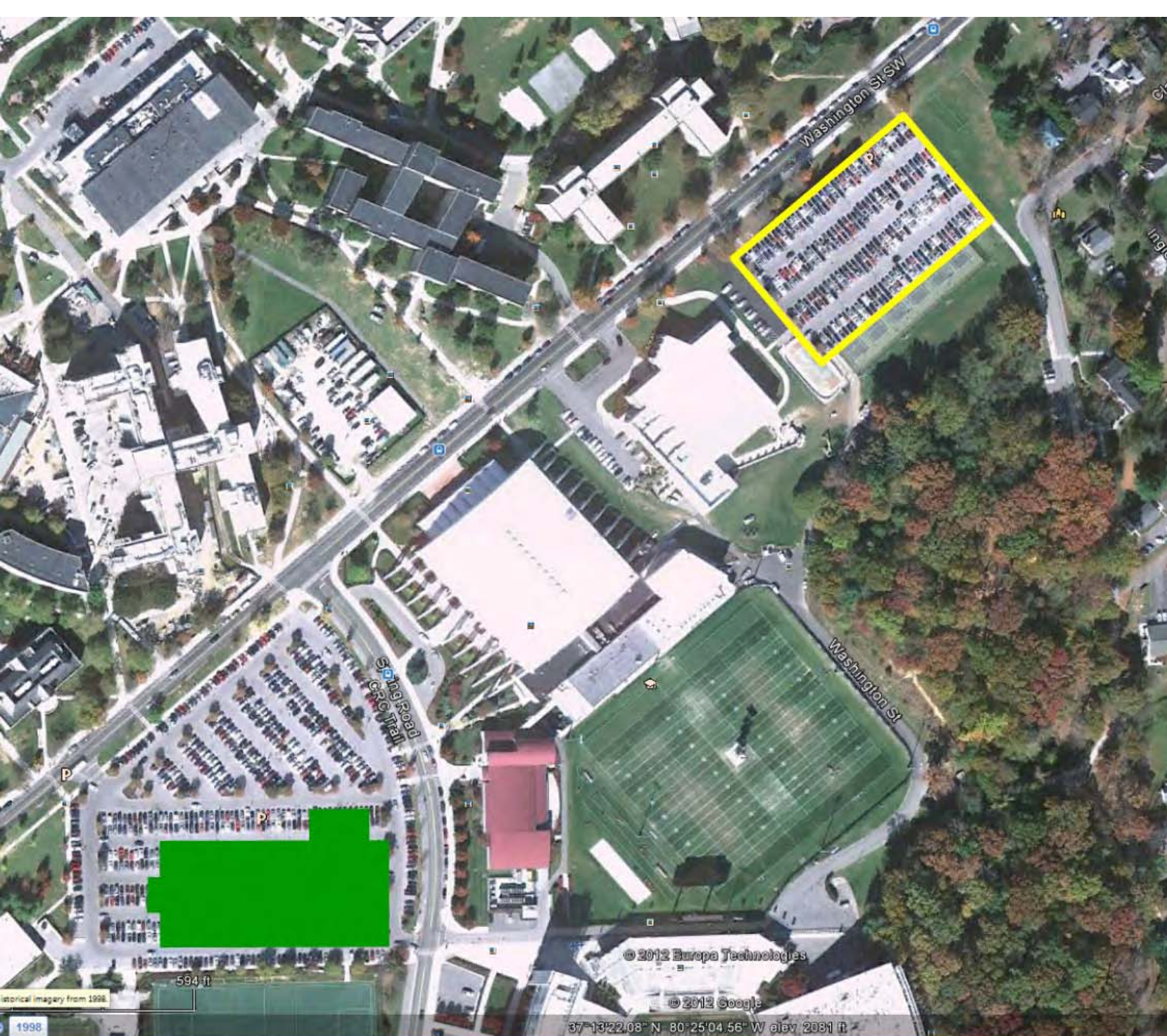
40 foot tree impact is unreasonable  
Limits of disturbance for construction unreasonable  
No ingress or egress, fire lanes, parking, etc. shown





Net increase in walking time  
1 minute

Actual building site proposed in university master plan

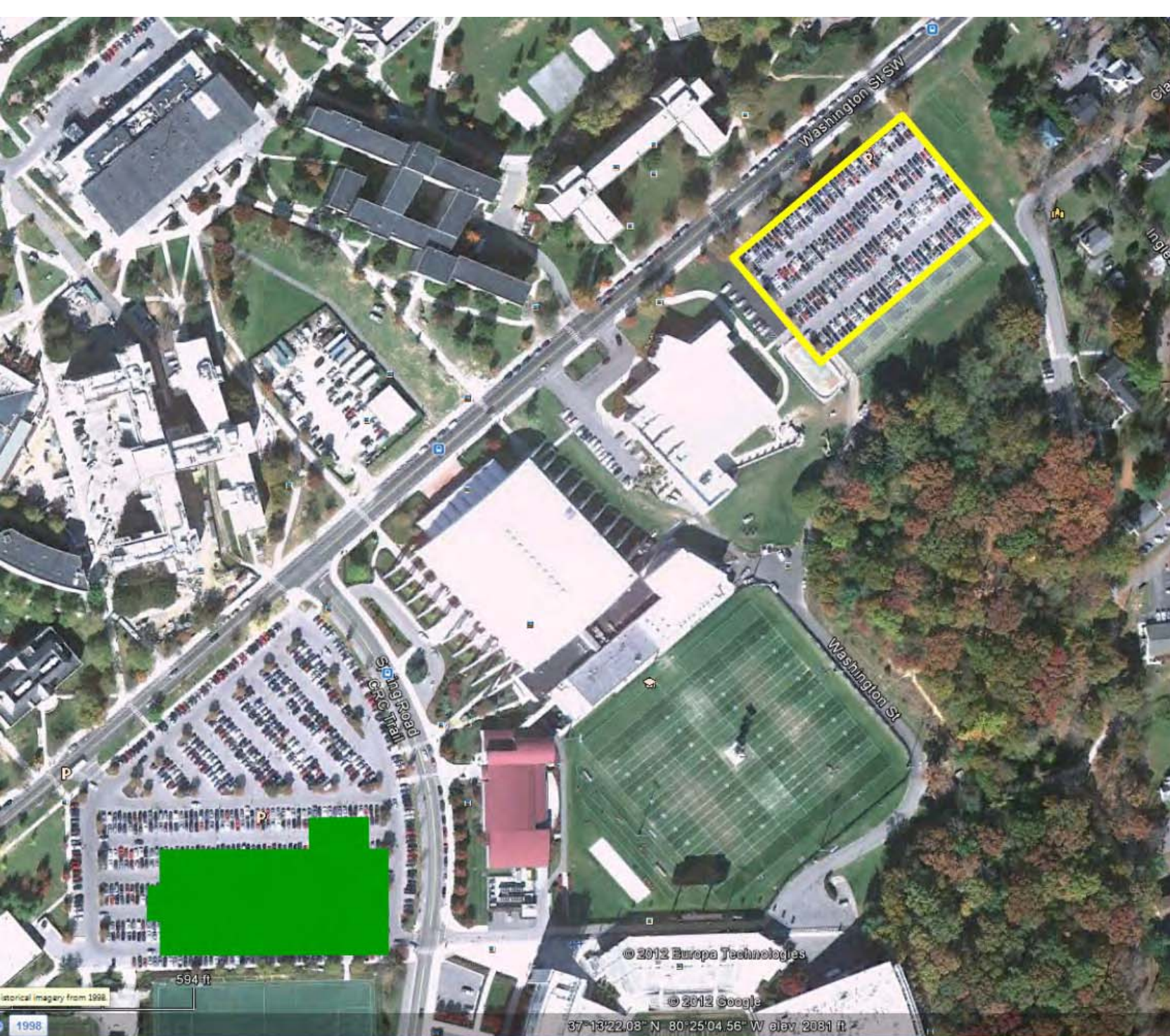


Centrally located for all sports.

Adjacent to locker room and Merryman Center

Appropriate in scale, along with other large buildings (Lane Stadium and Cassell Coliseum/ Locker Room Addition).

Location highly visible to football patrons on game day; premium tailgating in front of building



Surface already impervious

No 80,000 cubic yards of soil to remove (haul alone \$1.5 - 2 million)

No potential rock

Parking disruptions can be located at tennis courts

Easy staging area

**Large** positive public relations win for university

Strong alignment of university goals related to the Climate Action Commitment and Tree Campus USA certification.



“**Environmental greenway**... a significant reservation of lands waterways tree stands, and cultural landmarks for future generations and “best management practices” of sustainable land use.”

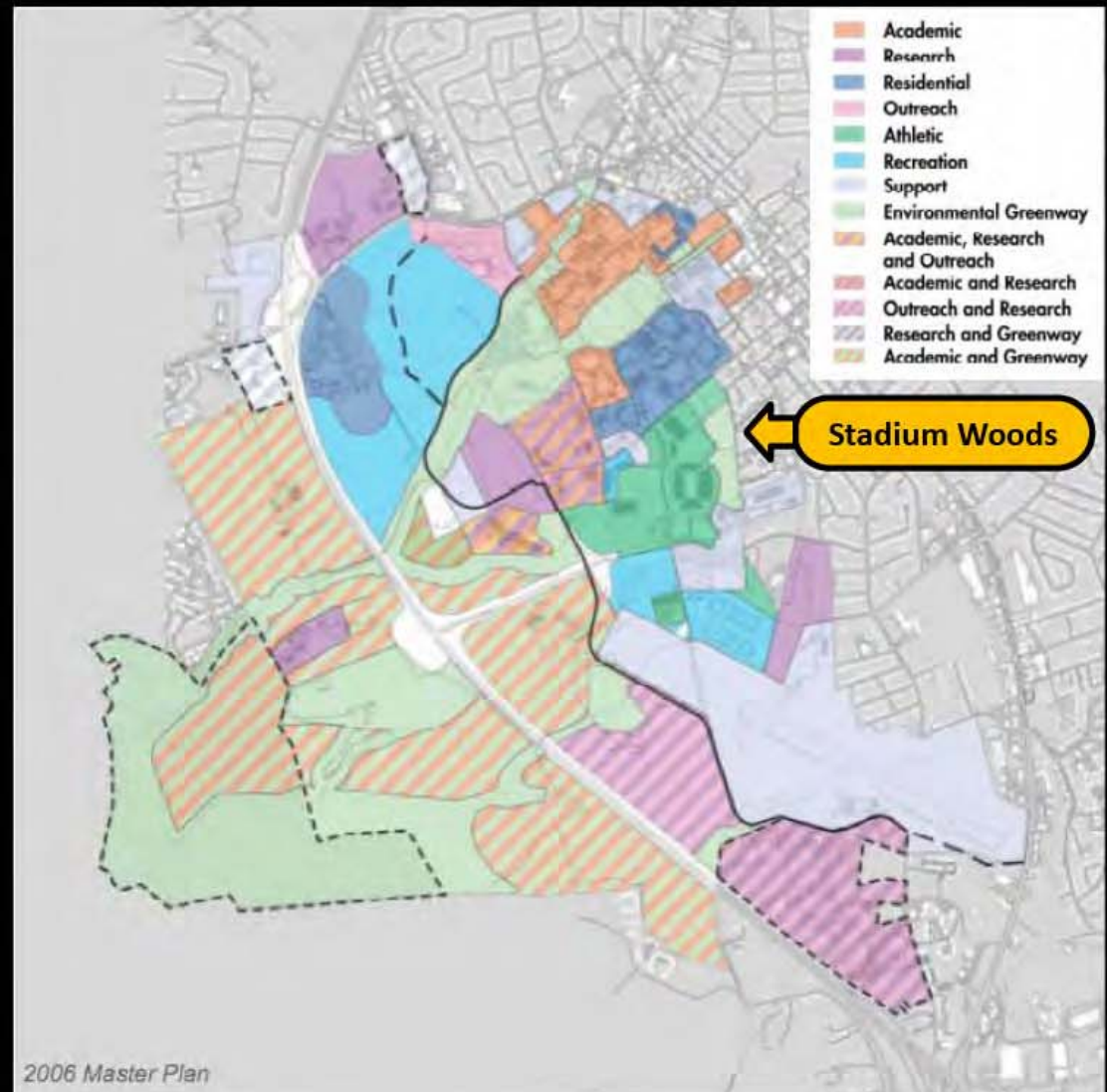
“Any land development should minimize environmental impact and should support the storm water strategies outlines in this document.”



### Existing Conditions

#### The 2006-2016 Master Plan Land Use Short Term

The Primary Program accommodation will occur in two areas; the Life Sciences District, and the northern expansion of the Core Academic Campus. Short-term development will have minimal impact on existing agricultural lands east of the bypass. Any land development should minimize environmental impact and should support the storm water strategies outlined in this document. The Golf Course will serve as a land bank for the short-term development strategies.



## Stroubles Creek designated as “impaired” by the state.

The University and the Town of Blacksburg share a drainage basin that flows through Stroubles Creek. Stroubles Creek has been designated an impaired body of water by the State. Future planning needs to embody sustainable land use practices and development patterns to preserve key assets and key drainage ways such as the Duck Pond, Drill Field, and wooded areas like the Grove.

“Future planning needs to embody sustainable land use practices and development patterns to **preserve** key assets and drainage ways...”



## “No-build Zone”

Early in the planning process, issues related to stormwater management, flood plains, and water quality prompted an additional sub-study of the drainage shed shared by Blacksburg and Virginia Tech. This study proposes the creation and preservation of an environmental corridor along the Stroubles Creek drainage ways, linking the University’s critical environmental and cultural assets together in a no-build zone, the “Environmental and Cultural Greenway.”

Planting 500 new trees would require centuries to replace the environmental services lost from Stadium Woods.



*“Surely VT can find an already cleared/developed location for this facility and not permanently destroy a forest with 300-year-old trees! VT is supposed to be a “green” university and set an example for the rest of the state. Do it!”*

Chuck, Richmond, Va

*“Destroying any part of this old growth grove is simply unconscionable for any reason,... Preserving those trees is one way Virginia Tech can demonstrate it values other things besides football. Destroying them would be just another embarrassing blot on Virginia Tech's record of eating up greenspace with inept planning and development.”*

Christopher, Blacksburg, Va

Opinions of various  
University and community  
constituencies



**University Arboretum Committee** – November 11, 2011, sent their “strongly opposes” position

**Faculty Senate** – December 13, 2011 , unanimously approves resolution supporting protection of Stadium Woods.

**Students, Town residents, Alumni, Concerned citizens** – on-line petition with over 3,700 signatures in opposition of siting in Stadium Woods. This is much broader than just the environmental community.

**Environmental Coalition of Virginia Tech** – Opposed to siting in Stadium Woods

**Student Government Association** – Considering an official position

**Army ROTC** – Opposed to siting in Stadium Woods

**Virginia Tech** – Opposed to siting in Stadium, University Master Plan





**[apfsec@vt.edu](mailto:apfsec@vt.edu)**

**[www.ipetitions.com](http://www.ipetitions.com)**

# **Questions**

**All pictures of trees were from Stadium Woods unless otherwise noted; no trees were harmed in the making of this presentation.**