



---

**The Boring Competition Team**

- at -

**Virginia Polytechnic Institute and State University**

# **SPONSORSHIP PACKET**

*Inventing the future of tunneling technology*

# Table of Contents

<b>EXECUTIVE SUMMARY</b>	<b>3</b>
Mission Statement	
Vision Statement	
Team History	
Competitive Advantage	
Organization and Management	
<b>THE BORING COMPANY AND COMPETITION</b>	<b>4</b>
The Boring Company	
The Competition	
Concept	
<b>KEYS TO SUCCESS</b>	<b>5</b>
The Need	
Budget	
Key Performance Indicators	
<b>SPONSORSHIP</b>	<b>6</b>
Sponsorship Tier Chart	
<b>CLOSING REMARKS</b>	<b>7</b>
Closing Remarks	
<b>CONTACTS AND INFORMATION</b>	<b>8</b>
Contacts	
Quick Info	

# Executive Summary

## MISSION STATEMENT

The Boring Competition Team at Virginia Tech, also known as The Diggeridoos, will develop the revolutionary technology to accelerate the speed of land travel, alleviate traffic congestion, and minimize costs associated with high speed subterranean travel.

## VISION STATEMENT

“To make high-speed subterranean travel more accessible and cost effective for everyone.”

## TEAM HISTORY

The Boring Competition Team at Virginia Tech was founded in September of 2020 following the announcement of The Boring Company’s Not-a Boring Competition. Shortly after that a team was formed and the design of a small scale tunnel boring machine (TBM) was started. The team developed a conceptual design which progressed to a preliminary design and then a detailed final design. Out of nearly 400 applicants, the team’s concept was chosen as 1 of 12 teams to compete in this year’s competition. Our team is developing new ways of tunnel boring which will be implemented into this year’s machine. Since the founding of the The Boring Competition Team at Virginia Tech, we have grown into a 35 member strong engineering design team.

## COMPETITIVE ADVANTAGE

The Virginia Tech College of Engineering is widely regarded as one of the most prestigious engineering programs in the world. Particularly, the University’s Mining and Minerals Engineering School is often regarded as one of the best. The team is built on an open vetting process in which anyone who is interested is able to join. Members hit the ground running and are given responsibility as soon as they join the team. Most who join possess a passion for engineering and innovation. Through this method of open recruitment we are able to have a wide range of skill sets and talent and do not limit the teams capabilities based on who joins. It also allows for our passionate and talented engineering students to have the opportunity to express their talents and interests in a unique manner compared to other engineering design teams.

## ORGANIZATION AND MANAGEMENT

The Boring Competition Team at Virginia Tech is currently comprised of 35 members, ranging in majors from engineering to business. The engineering team is led by Taylor Ransford as the Chief Engineering and Project Manager. He is accompanied by the team’s Chief Operations Officer, Zachary Collins, who oversees all financial budgeting/planning and business development. The engineering side of the team consists of 4 sub-system leads: Josh Amberg - Electronics, Austin Koontz - Tunnel Structure, Joseph O’Such - Mining, and Joseph Tomei - Navigation.

The team facilitates innovation using scrum management techniques. Every subteam meets individually to provide solutions to the team as a whole during general body meetings. This provides quick solutions to any problems that the team may face. The team uses small subteams to facilitate communication on problems associated with progress as well as safety and reliability. It is the team’s goal to ensure that every team member is safe during development. They address safety concerns by requiring all members complete a number of hazard trainings to be involved in the manufacturing of the machine. By managing the team this way, the team can not only ensure that the machine is safe, but also reliable.



# Keys to Success

## THE NEED

This is the first competition of its kind. With the help of like-minded partners, the The Boring Competition Team at Virginia Tech intends on winning this global competition; earning both Virginia Tech and the team's partners' recognition at a cutting-edge, globally renowned, and highly publicized engineering competition. The team's position on this highly sought-after competition stage provides a unique opportunity for organizations that are able to supply us with the resources necessary to compete and win. The team is looking for multiple partners to reach this goal.

## BUDGET

<u>Category</u>	<u>Projected Costs</u>
<b>Propulsion Subsystems</b>	<b>\$16,000</b>
<b>Mining Subsystems</b>	<b>\$15,000</b>
<b>Electronics Subsystems</b>	<b>\$16,000</b>
<b>Tunnel Structure</b>	<b>\$12,000</b>
<b>Cross Country Equipment Transportation</b>	<b>\$6,000</b>
<b>Competition Equipment Rentals</b>	<b>\$5,000</b>
<b>Additional Fees / Expenditures</b>	<b>\$5,000</b>
<b><u>TOTAL</u></b>	<b>\$75,000</b>

## KEY PERFORMANCE INDICATORS

The two leading indicators in gauging the success of The Boring Competition Team at Virginia Tech are: the realization of our competitive TBM design and the performance during the Not-a-Boring Competition hosted by The Boring Company.

The team's work throughout the academic year culminates in the construction of the TBM. The TBM design, processes, and performance are presented to The Boring Company judges, who will compare our TBM against the designs of other competing teams. The highly-valued nature of the Not-a-Boring Competition inspires the team to ensure that our TBM is utilizing the most groundbreaking technology in a well-organized manner. An attention to detail and quality-centric mindset is what will enable The Boring Competition Team at Virginia Tech to complete and distinguish our design from the other entrants.

Performance during the Not-a-Boring Competition is another indicator of the team's success. The immediate aim of The Boring Competition Team at Virginia Tech is to place well in this competition, which supports our long-term goal of establishing a program for the development of tunneling technology. Ultimately it comes down to key factors such as the TBM's reliability, safety, excavation speed, and accuracy:

- Reliability: TBM does not breakdown while in use.
- Safety: Has built in lock-out tag-out procedures that will shut down the machine when a safety hazard presents itself.
- Excavation Speed: The tunnel is completed in the fastest amount of time, aiming for under an hour.
- Accuracy: The TBM arrives at the predicted location upon completion of the tunnel.

# Sponsorship

Benefits	Bronze \$500 TO \$1,999	Silver \$2,000 TO \$4,999	Gold \$5,000 TO \$9,999	Partner \$10,000+
Tunnel Section on Competition Run	✓	✓	✓	✓
Website Recognition	✓	✓	✓	✓
Name on Banner for Competition and on Machine	✓	✓	✓	✓
Small Logo on Website Sponsor Page, T-Shirt, and Machine	✓	✓	✓	✓
Recognition on Team Social Media Platforms		✓	✓	✓
Medium Logo on Website Sponsor Page, T-Shirt, and Machine		✓	✓	✓
Medium Banner with Logo		✓	✓	✓
Recognition and Explanation of Contribution to Team on Website Including Logo, Targeted Media, and Branding			✓	✓
Large Logo on Website Sponsor Page, T-Shirt, and Machine			✓	✓
Large Logo on Banner for Competition			✓	✓
Formally Thanked at All Awards Ceremonies				✓
Exclusive Facilities Tour				✓

# Closing Remarks

## CLOSING REMARKS

Our team is developing the most innovative and revolutionary advancements in travel since the dawn of the automobile. The work of this team extends far beyond the core curriculum and exposes students to new concepts by developing original areas of study and different capacities to implement their knowledge on an competition that few have the opportunity to be a part of.

Sponsorship of this team is an investment in the future of transportation as well as the future of innovators. Partnering with The Boring Competition Team at Virginia Tech will present a unique offer to be a part of an innovative, creative, and competitive team that is at the forefront of developing the technology that will lead the world towards a safer, more connected tomorrow.

### VIRGINIA TECH STAFF & FACULTY PARTNERS

*DR. ERIK WESTMAN (DEPARTMENT OF MINING AND MINERAL ENGINEERING)*

*DR. CAL RIBBENS (DEPARTMENT OF COMPUTER SCIENCE)*

*DR. PAT ARTIS (DEPARTMENT OF AEROSPACE AND OCEAN ENGINEERING)*

*JIM HENDERSON (CAREER AND PROFESSIONAL SERVICES)*

*LAURA TOWNSEND (PAMPLIN COLLEGE OF BUSINESS)*

### OFFICIAL BORING SPONSORS

*DIJU AND LYNNE RAHA*

*JOAN AND CHARLES SMITH*

*ROBERT WARTHEN*

# Contacts and Additional Information

## CONTACT INFORMATION

**Taylor Ransford**

Project Lead and Chief Engineer  
taylorransford@vt.edu  
412-889-2536

**Zach Collins**

Chief Operations Officer  
zjcollins@vt.edu  
760-889-8555

**Dr. Erik Westman**

Faculty Advisor  
ewestman@vt.edu

**Dr. Pat Artis**

Faculty Advisor  
hartis@vt.edu

Sponsorships may be tax deductible. To mail checks to our mailing address listed below. Checks should be made out to *Virginia Tech Foundation.*

The Diggeridoos at Virginia Tech  
Surge Building 118A  
400 Stanger Street  
Blacksburg, VA 24061



### SOCIAL MEDIA

Connect with us at: @Diggeridoos

More information about our team and the competition can be found at:  
The Boring Company's Not-a-Boring Competition: [www.boringcompany.com/competition](http://www.boringcompany.com/competition)