



A Proposal by Chase Swearingen

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Opening Statements

Trees play an important role in the lives of all plants, animals, and humans. Without them, the air quality would be poor, vegetation would be scarce, and survival would be impossible. One of trees' most integral roles is taking harmful carbon dioxide and converting it to the oxygen that we breathe. According to the United States Department of Agriculture, an acre of forest takes roughly six tons of carbon dioxide out of the air, and converts it to roughly four tons of useable oxygen for us to breathe, or enough to fit the needs of 18 people for a year (SavATree). One place where you can enjoy, while learning about this wonderful feat of nature and other forms of flora that surround us, is at an arboretum. The purpose of this paper is to persuade the Jewell School District to consider the construction of an arboretum on the school's campus. By explaining the need, logistics, and operation of the facility, I hope my proposal will be considered.

Overview & Location

To start out with, arboretum will go by the name of Blue Jay Arboretum, after the Jewell School District's mascot.

So you might be asking yourself, "Why build this so-called arboretum?" As defined by Google Arts and Culture, an arboretum is a botanical garden specializing in trees which provides a place for scientific research, promotes conservation, educates the public, and most importantly-protects the trees. In addition to these benefits, I think this arboretum will have a positive impact on the school by providing opportunities and projects for the CTE and horticulture classes. I know first-hand that the thought of an arboretum on school grounds has been an idea for several years, but not much has been done. And if successful, it would add another line to the list of things to do in Jewell and the surrounding area, which currently only consists of the Jewell Meadows Wildlife Area, and Lee Wooden Park. The closest arboretums (or botanical gardens for that matter) are one or more hours away, and mostly in the city.

The arboretum will be located off Highway 103 above the Jewell School on Meadow Lane (refer to Figure 1). There is currently an approximately 2/3-mile trail which goes behind the houses, and potential for roughly an additional mile or more of trails to be constructed. A wide-open plot of land roughly 2.5 acres in size lies adjacent to the school fourplex which offers ample room for a visitor center, parking, etc.

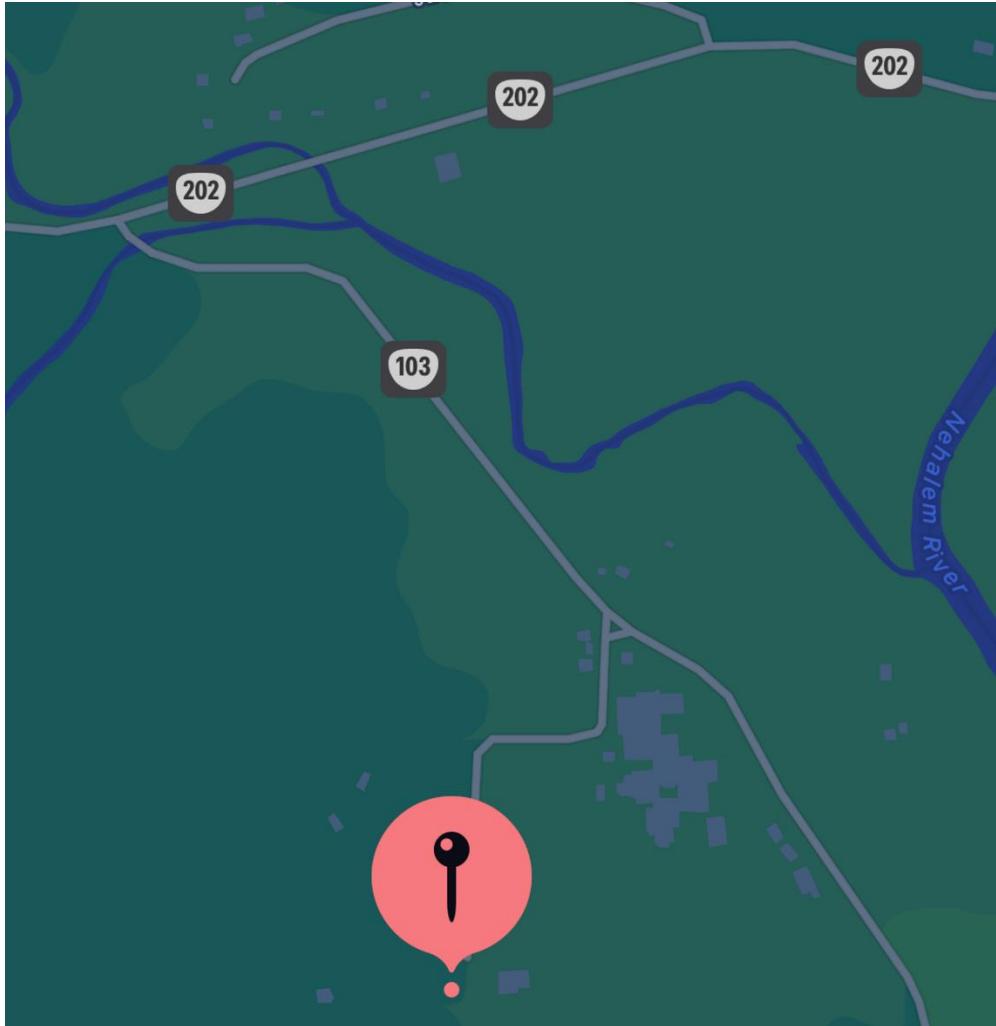


Figure 1: Location of Arboretum in relation to Highways 103 and 202. Created with Apple Maps by Chase Swearingen

Construction

The Construction of the Blue Jay Arboretum will consist of four main parts, each with several components:

- Mark perimeter with signs and fencing so visitors know where they cannot go, such as into the neighboring school housing areas. Refer to Figure 4 as a visual of outer perimeter.
- Upgrade current trail for a safer and more enjoyable visitor experience

- Place signage for slippery-when-wet areas and others where one should watch their footing on the trail.

- Steps will need to be built for several places with steep slopes which can get quite slippery when wet. They don't need to be too complex. Something similar to Figure 2 would work just fine and fit in with the environment.



Figure 2: Steps at Lee Wooden County Park. Photo taken by Chase Swearingen.

- A piece of plywood currently spans a steep ditch which gets filled with water roughly $\frac{1}{2}$ way through the existing trail, as the school's CTE program builds a proper bridge. They have gotten it engineered and are currently waiting on materials to construct it.
- Construct an additional, roughly 1 mile of new trails connecting visitors to more of the wilderness. Referring to Figure 3 on next page:
 - One trail, roughly $\frac{1}{2}$ mile in length, will connect on both ends of existing trail
 - Smaller trails will branch out to connect the two at intermediate points, leading to picnic areas and more wilderness, as well as to the parking lot and visitor center.
 - All should have necessary safety and direction signage and have sufficient bark chip laid paths
 - Paths and picnic areas should have a layer of mulch, with a total of approximately 31 cubic yards needed. With an average cost of \$40.00, including delivery, the total cost should be an average of \$1,240.00.



Figure 3: Arboretum Layout. Created with Google Earth and Microsoft Paint 3D by Chase Swearingen

- The parking, visitor center, and main picnic area will be located on the patch of land perpendicular to Meadow Lane, as seen above. The construction of these components will consist of:
 - Constructing a 1,000 square foot log cabin-style visitor center from locally sourced timber, which will also be supporting the local logging industry. Inside will be an informational kiosk, restrooms, and interactive learning opportunities. An agreement has been made that the electrical, water, and sewage connections will be provided by the school district. Total cost should be under \$100,000, which is less than what's given on the source HomeAdvisor due to a relatively open layout.
 - 10,000 square feet of parking lot should be sufficient and may be expanded if necessary. Using the calculation of cubic yards, about 92.5 cubic yards of rock

will be needed. Including delivery, rock has an average cost of \$45.00 per cubic yard, leading to an average cost of \$4,162 dollars

- The fun part, and probably least expensive will be identifying the flora within the arboretum and making the identification plaques. This part isn't included in the budget because it will be done by the horticulture and CTE classes at the school. The CTE program has a Computer Numerically Controlled (CNC) router and software which will construct the plaques labeling the trees and other plants. The district has the lumber needed for the project.

Budgeting

Below is a breakdown of the budget required for the arboretum. The majority of the initial expenses are basically the construction of the facility. Other expenses may present themselves as time goes on.

Product	Cost	Source (If Applicable)
Mulch (Delivery Included)	\$465.00-\$2,015.00	HomeGuide Editors "How Much Does It Cost To Deliver Topsoil, Fill Dirt, or Sand?"
Gravel (Delivery Included)	\$1,385.50-\$6,937.50	HomeGuide Editors "How Much Does It Cost To Deliver Topsoil, Fill Dirt, or Sand?"
Visitor Center (All Inclusive)	\$50,000.00-\$100,000.00	HomeAdvisor
Land Clearing of Roughly 1.25 Acres	\$1,875.00-\$3,750.00	HomeGuide Editors "How Much Does It Cost To Clear Land)
Tuff Shed "Premier Ranch" Utility Shed (6x10x8.5 ft)	\$3,260.00-\$3,749.00	Tuff Shed
Upkeep Equipment	\$1,000.00-\$2,000.00	Rough Estimate
Salaries*	\$76,00.00	
Total:	\$108,985.50-\$169,451.50 (avg: \$139,218.50)	

(*Salaries based on two employees paid current Oregon minimum wage of \$12.75/hour, 8 hours/day, 250 days/year. There would be several shifts, and amount does not include tax expenses.)

Facility Operations

You probably noticed above that the workforce will only be made up of two employees. This is because the majority of the maintenance will consist of volunteer opportunities. Such parties may include 4-H clubs, Scouts, the school's Horticulture and CTE classes and the general public. The paid positions will simply consist of a general manager and several people to work at the visitor center. Breakdown of the roles is provided below

- ❖ General Manager: In charge of performing day-to-day tasks (as needed) with the upkeep of the park, as well as coordinating volunteer services
- ❖ Visitor Center Employees: Responsible for collection of visitor fees, assisting visitors, and coordinating activities (when applicable)
- ❖ Volunteers: Responsible for keeping the trails and other facilities in a safe, pleasant, and educational condition.

The Arboretum will be open approximately 250 days a year, open Tuesday through Saturday 8 hours/day, and closed during the winter months. Visitor fees and services have yet to be determined. Essentially, visitors will have access to serene nature, picnic areas and educational/interactive opportunities for all ages.

Conclusion

If the Blue Jay Arboretum can be built, I believe with it will come great potential in several forms. First of all, few places around offer a place for people to come out and enjoy what the natural world has to offer, while all around us forests are being managed for multiple purposes. Secondly, it would offer volunteer experience for local youth and anyone else interested. Finally, and most importantly, it would preserve a patch of wilderness from logging and industrialization happening all around us, while providing a source of education about what good these natural wonders of the world do. The project would have a relatively low start-up budget, minimal operating expenses, and involvement from the school and community. Any excess profit could support a multitude of causes, even within the local areas. With all this being said, I would greatly appreciate the construction of, and any funding for, the Blue Jay Arboretum being taken into consideration in the coming months. Thank you.

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