



## PSU Students/Food for Thought Café “Sustain Urth”

A community ‘cob’ structure in the PSU Park Blocks adjacent to the Food for Thought Café. With the objective of “platemaking,” the structure includes a pizza/bread producing oven for the Cafe (a student-initiated and maintained café focused on local and organic cuisine), benches for socializing, a “dialogue dome” that reveals the area’s social history, an herb garden, and ecoroofs.

### Project Highlights

- Ecoroof
- Local materials
- Plant-based wood stains
- FSC certified and reclaimed wood
- Machine-free construction techniques

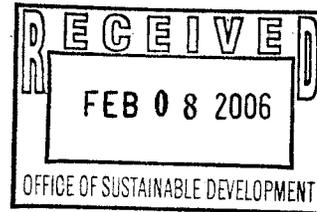
### Portfolio Contents

[Final Report](#)

[Project Website \(External Link\)](#)

## Green Investment Fund





**PROJECT INFORMATION**

Name of Primary Contact: Heidi Moore  
Company or Organization: Project Sustain Urth

Address: 106 NE 22<sup>nd</sup>

City, State & Zip: Portland, Oregon 97232

Phone: (503) 236.0012 Fax: \_\_\_\_\_  
E-mail: hmoore@pdx.edu

**PROJECT DETAILS**

Project Name: Project Sustain Urth

Project Owner: Portland State University

Project Address: SW Park and Harrison (PSU campus)

City, State, ZIP: Portland, Oregon 97207

Directions to Site: N. Park Blocks between Smith/Neuberger Hall

Date Project Started: May 05

Date of Completion: September 05

**Design and Construction Team**

Architect or Designer: David Tomlinson - Architect, Designer - Heidi Moore + Project Sustain Urth  
General Contractor: Phillip Wilson

Landscape Architect:

Project Sustain Urth

Structural Engineer:

Civil Engineer:

Howard Thurston

Mechanical Engineer:

Electrical Engineer:

Interior Designer:

Environmental Building Consultant:

Energy Modeler:

Additional:

Natural Builders, Heidi Moore, Jodie Emmett / PSurth + volunteers.

### Building Details

*If building has mixed use, please include the sq. ft of each type of use*

Gross Floor Area: Dialogue dome 120<sup>+</sup> sq. ft / oven 75 sq. ft.

#### Building Type

- Single-family Residential
- Multi-family Residential
- Commercial
- Industrial
- Institutional
- Mixed-Use
- Other (describe) Place of dialogue, contemplation and classroom gatherings.

#### Site Conditions (check all that apply)

- Previously Undeveloped Land
- Previously Developed Land
- Brownfield Site
- Preexisting Structure(s)

#### Project Type

- Renovation
- New
- Addition

**Green Products & Materials:** Must include projected performance, efficiency ratings, equipment ratings or product certifications for all green building products outlined in Exhibit 1, for example, FSC wood, Energy Star Appliances, Green Seal etc..

Locally collected clay<sup>oven/bench</sup> sand for oven and benches. Local stone for foundation and spiraling foundation. FSC or reclaimed wood used for frame of dialogue dome and ecoroofs. No machines used in mixing of cob. All plant-based products, free of synthetic solvents were used in staining the ecoroof - from the German Aqalaia line from Envir. Bldg. Supply; 100% Natural. 100% natural pigments used to fresco the oven and benches, as well from the Aqalaia line. Organic soil, mulch and herbs: Oregon Tilth Certified. Organic Straw.

### Green Vendors & Suppliers Used

Environmental Building Supply

AGLAIA

Local PDX Earth, Sand, straw, clay, stone - collected.

Re. building center.

Portland Nursery / Peoples Food Co.op.

**PROJECT HIGHLIGHTS**

**List Innovative Sustainable Technologies & Practices**

The use of sand, straw and clay, mixed as the indigenous have done for thousands of years, using only feet and hands - no mixing machines. All natural stone foundation using no road base, asphalt or other synthetic, toxic substance. This technology is known as 'natural building'

**Project Costs**

Land Acquisition:

Site Clearing/Deconstruction:

Site Development:

Public Improvements:

Design Fees:

Permits:

System Development Charges:

Construction:

Green Technologies:

Other Costs:

Total:

**Project Cost by measure** (as listed in Exhibit 1, Green Building Practices and Features)  
Attach additional pages with the following format to accommodate additional measures as needed.

Measure Framing/ Construction of dialogue dome  
Materials

Cost: \$300

Equipment

Cost: \_\_\_\_\_

Design

Costs: \_\_\_\_\_

Associated Labor

Costs: \_\_\_\_\_

Measure Metal welding

Materials

Cost: \$ 250

Equipment

Cost: \_\_\_\_\_

Design

Costs: \_\_\_\_\_

Associated Labor

Costs: \_\_\_\_\_

\* **Financial Savings & Benefits** *The remaining money will be use by Project Sustain Urth to purchase mulch, plants for eco.roots and herbs for gardens and/or signage for project.*

*Energy:*

Hard Cost Savings and/or Cost Tradeoffs: \_\_\_\_\_

Projected Or Actual (Circle One) Operational Cost Savings: \_\_\_\_\_

Incentives: Grants, Tax Credits, Below Market Loans: \_\_\_\_\_

Other: \_\_\_\_\_

*Water:*

Hard Cost Savings and/or Cost Tradeoffs: \_\_\_\_\_

Projected Or Actual (Circle One) Operational Cost Savings: \_\_\_\_\_

Incentives: Grants, Tax Credits, Below Market Loans: \_\_\_\_\_

Other: \_\_\_\_\_

*Stormwater:*

Hard Cost Savings and/or Cost Tradeoffs: \_\_\_\_\_

Projected Or Actual (Circle One) Operational Cost Savings: \_\_\_\_\_

Incentives: Grants, Tax Credits, Below Market Loans: \_\_\_\_\_

Other: \_\_\_\_\_

*Materials:*

Hard Cost Savings and/or Cost Tradeoffs: \_\_\_\_\_

Projected Or Actual (Circle One) Operational Cost Savings: \_\_\_\_\_

Incentives: Grants, Tax Credits, Below Market Loans: \_\_\_\_\_

Other: \_\_\_\_\_

**Environmental Benefits**

*Please be as specific as possible as compared against code or a similar conventional building as relevant.*

Annual or Modeled Energy Savings (beyond code): \_\_\_\_\_

Materials Savings: \_\_\_\_\_

Annual CO2 Emissions Savings: No CO2 emissions

Annual Water Savings (beyond code): \_\_\_\_\_  
Construction Waste Diversion (% and by weight): \_\_\_\_\_  
Annual Reduced Rainwater Runoff (beyond code): \_\_\_\_\_  
Enhanced Habitat (amount of restored or new): \_\_\_\_\_  
Other: \_\_\_\_\_

### Community Benefits

The benefits to the community are that, every day, thousands of people have the opportunity to see and interact with natural building. This is important to the greater community because with the use of natural building verses convention building, humanity has an opportunity to leave more forest acreage intact and thus reduce the effects of global warming.

### DESIGN & CONSTRUCTION

Provide a short description of how the green technology or practice was incorporated into the project process. What were the qualitative and quantitative (measurable) objectives and why? If possible, describe by phase: Pre-Design, Design, Construction, Operations and Maintenance.

In the pre-design phase, 3 student forums were held, in order to incorporate many visions into the project. A shaman came to bless the site when construction phase began, as was done by ancient Egyptians in all building processes. Operations are virtually maintenance free, except minor repairs to the cob each season.

### IMAGES AND GRAPHICS

Please attach drawings and photos that describe the project and the green technology or practice.

### BUILDING CERTIFICATION

If project has received LEED, Earth Advantage, or other Green Building certification, please describe.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### LESSONS LEARNED

Describe key outcomes from this project. How has the project has changed from its original scope and why? Would you recommend the green technology or practice to other projects? Were there any zoning or building code related issues that affected the project?

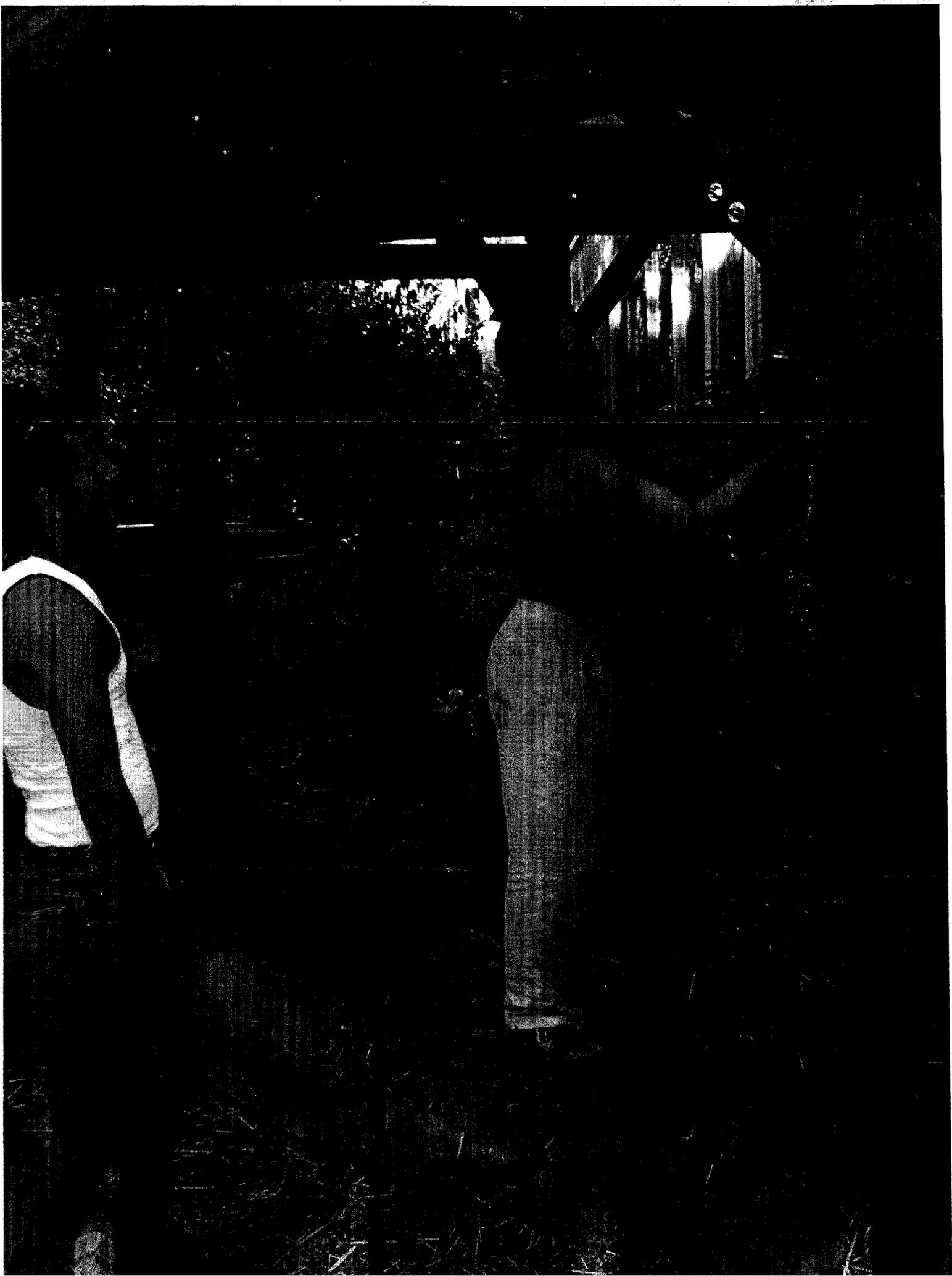
The project turned out beautifully. The project changed from its original scope in that many students have become inspired to do continual work on its improvement as well as its growth on campus. I would recommend this green technology and practice to other projects. The hardest part of the project was pressure to fulfill timelines of Parks and Rec., PSU and other involved groups, however we all worked together and though rough, PSU and community now have a great example of a lovely and natural green technology.

Questions? Please contact Kyle Diesner, 503-823-4166 or Terry Miller, 503-823-7418 at OSD. Thank you for taking the time to share what you've learned!

Kyle, thank for your patience and Kindness in working with me, and for the opportunity to work with OSD. Hope you are well.

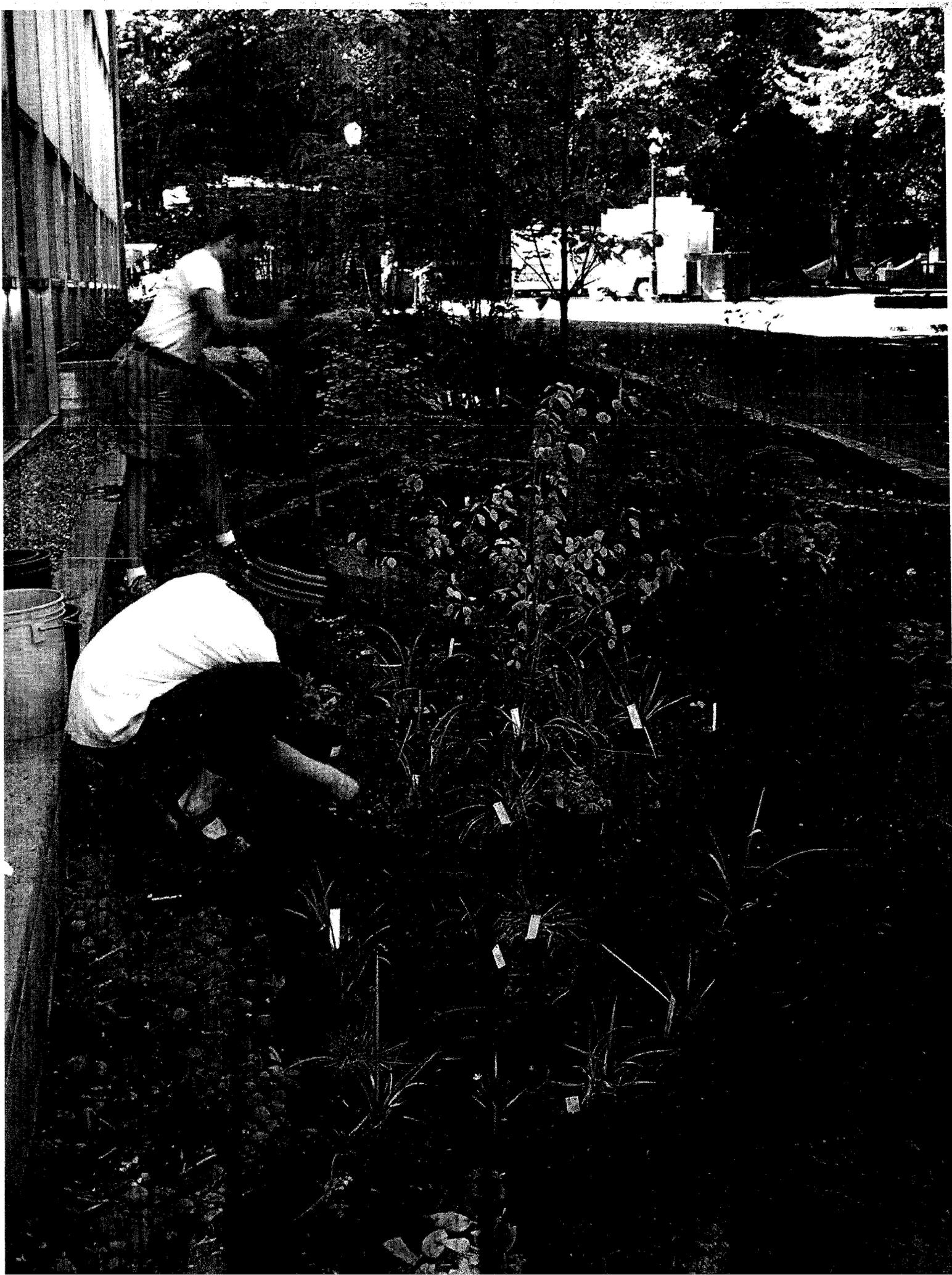
Kindly,

Heidi ~~More~~

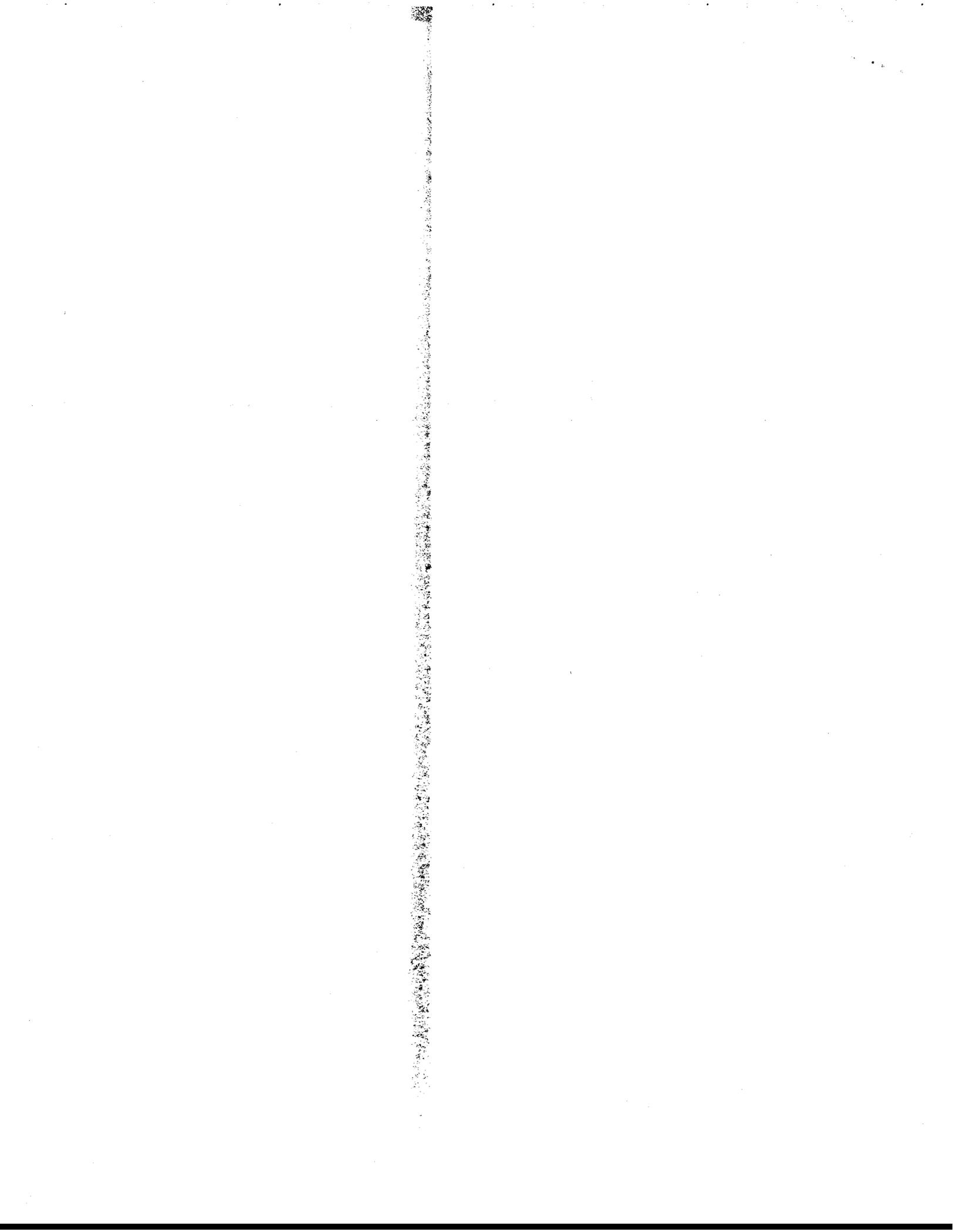


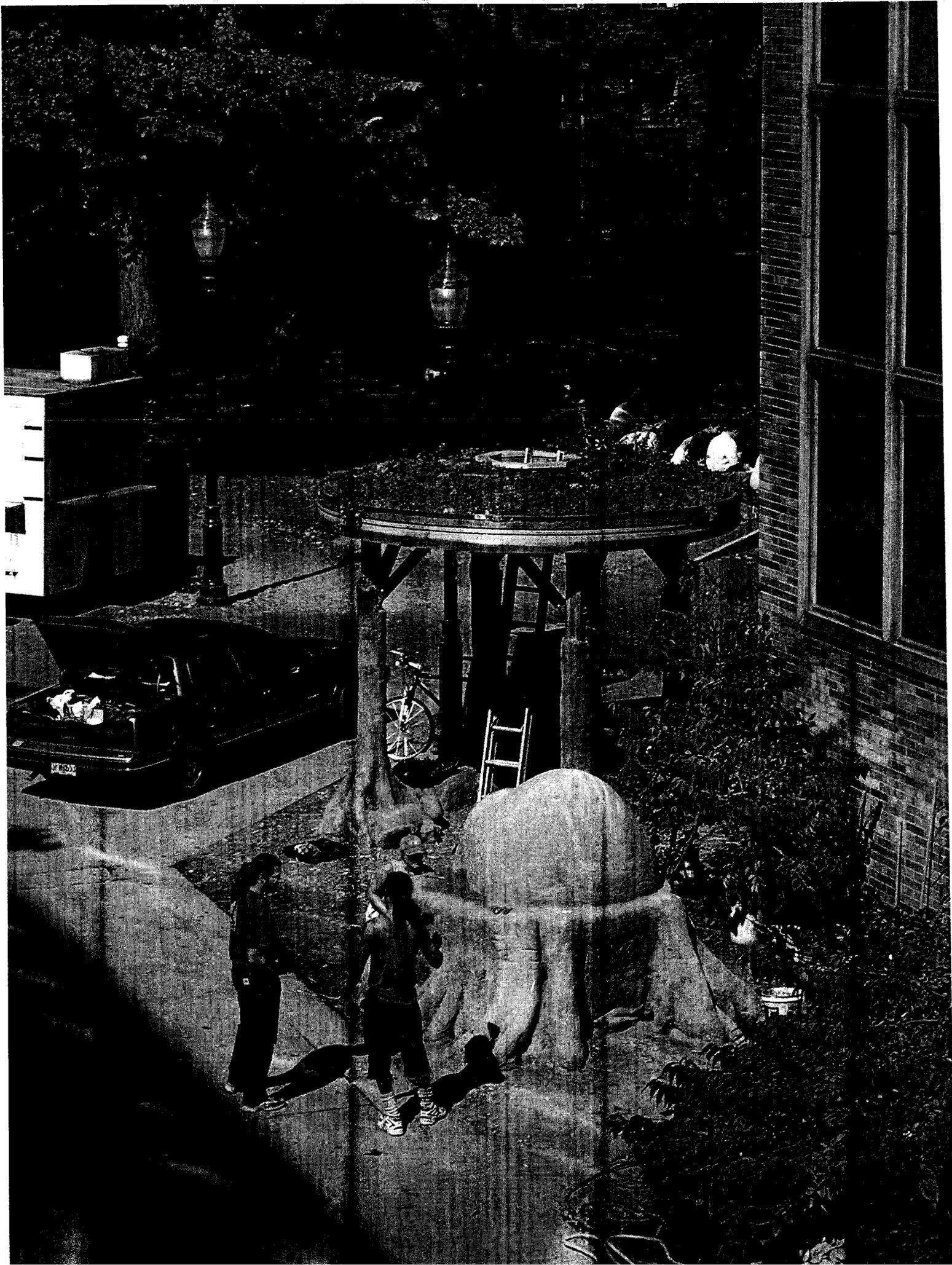
*Building the Press.*





*Praxim. lirsualis and planting.*





Don't mind.

